

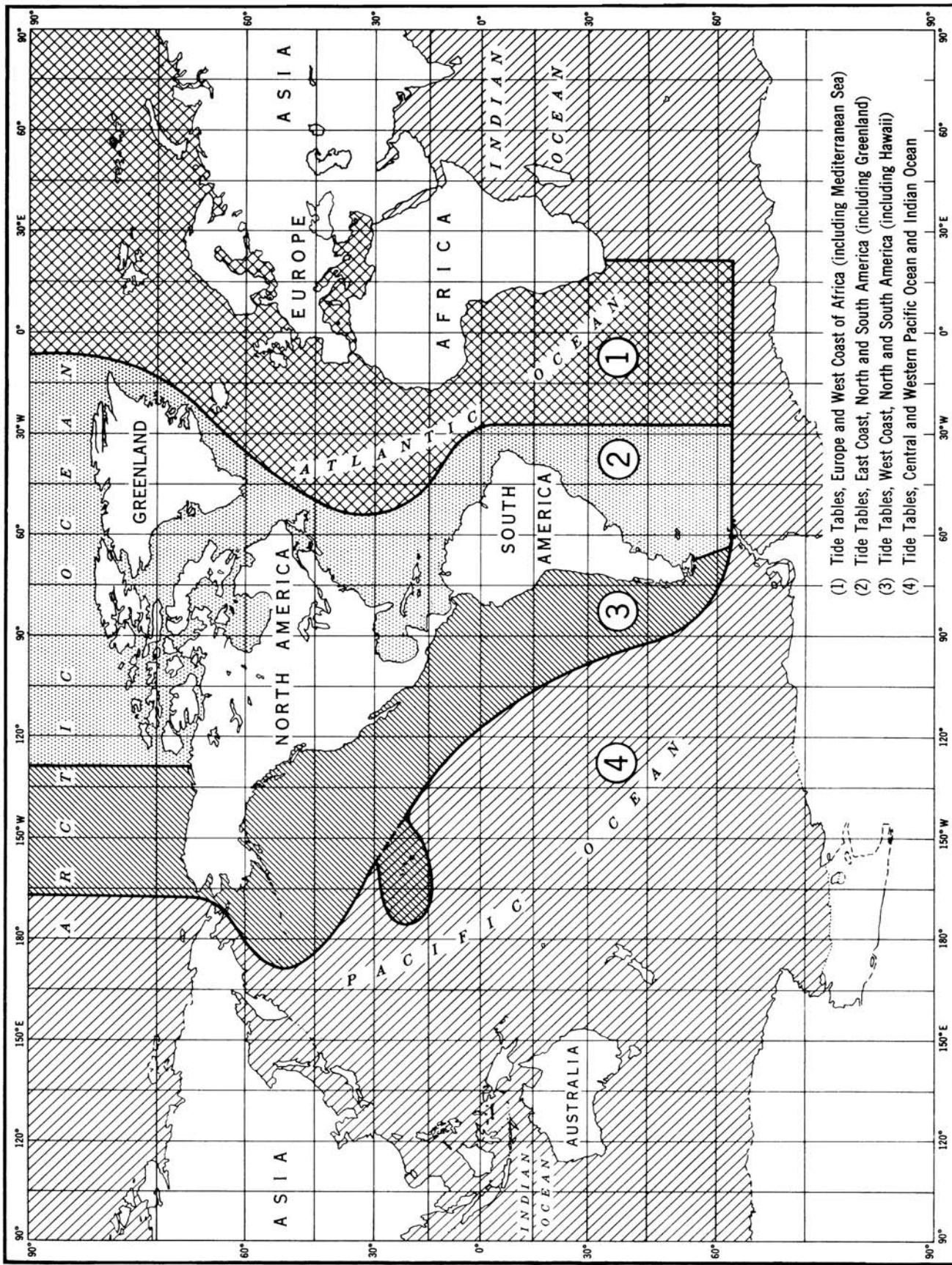
**Tide Tables 2008 – Central and Western Pacific Ocean and Indian Ocean**

**Tide Tables 2008** HIGH AND LOW WATER PREDICTIONS

# **Central and Western Pacific Ocean and Indian Ocean**



## INDEX OF TIDE TABLE COVERAGE



**Tide Tables 2008 HIGH AND LOW WATER PREDICTIONS**

# **Central and Western Pacific Ocean and Indian Ocean**

**Issued 2007**



## SOURCES OF ADDITIONAL INFORMATION

### **THE NATIONAL OCEAN SERVICE IS NO LONGER PRINTING AND DISTRIBUTING THE TIDE AND TIDAL CURRENT TABLES**

Tide and Tidal current data continue to be updated, generated and published by the NOAA/National Ocean Service; however, the printing and distribution in book-form is now done by private companies working from information provided by NOS.

NOS now offers two new vehicles for obtaining predictions. First, the complete set of Tables as camera-ready page-images will be available on CD-ROM. The CD-ROM vehicle is primarily intended for use by private printers who wish to print in book-form the full set of Tables for distribution to resellers and the general public. Second, for domestic tide reference stations, limited predictions are available on the NOS, Center for Operational Oceanographic Products and Services (CO-OPS), web site, (<http://tidesandcurrents.noaa.gov>).

In addition to predictions, the web site provides updated information on the status of the Tables as they are finalized each year. Notices concerning the most recent Table updates and publication cut-off dates are included.

For the names of companies printing and distributing the Tables, please call or write to:

National Ocean Service  
Products and Services Division, N/OPS3  
1305 East-West Highway  
Silver Spring, MD 20910  
301-713-2815, fax 301-713-4500

#### **PUBLICATIONS:**

*United States Coast Pilots, Distance Tables, and Nautical Charts may be ordered from:*

FAA, National Aeronautical Charting Office  
Distribution Division, AJW-3550  
10201 Good Luck Road  
Glenn Dale, MD 20769-9700  
(301) 436-8301  
(800) 638-8972 toll free, U.S. Only  
<http://naco.faa.gov>

*A list of authorized sales agents is published in the Nautical Chart Catalogs or may be obtained on request from the National Ocean Service. The publications may also be purchased across-the-counter at the NOAA, Distribution Branch office listed above.*

#### **TECHNICAL ASSISTANCE:**

*Technical questions relating to **tide and current predictions**, as well as requests for **special predictions**, should be addressed to:*

National Ocean Service  
Products and Services Division, N/OPS3  
1305 East-West Highway  
Silver Spring, MD 20910  
(301) 713-2815

## SOURCES OF ADDITIONAL INFORMATION

Technical questions relating to ***actual tide observations, tidal datums, and other information necessary for engineering projects*** should be addressed to:

National Ocean Service  
Products and Services Division, N/OPS3  
1305 East-West Highway  
Silver Spring, MD 20910  
(301) 713-2877

Technical questions relating to *other publications and nautical charts* should be addressed to:

National Ocean Service  
Customer Affairs Branch  
1315 East-West Highway.  
Silver Spring, MD 20910  
(301) 713-2729

## WEBSITES

Center for Operational Oceanographic Products and Services  
(PORTS® \* Predictions \* Observations \* Bench Marks \* Tides Online \* Great Lakes Online)

<http://tidesandcurrents.noaa.gov>

Coastal Services Center - <http://www.csc.noaa.gov>  
Marine Chart Division - <http://www.chartmaker.ncd.noaa.gov>  
Ocean Predictions Center - <http://www.opc.ncep.noaa.gov>  
National Centers for Environmental Predictions - <http://www.ncep.noaa.gov>  
National Climatic Data Center - <http://www.ncdc.noaa.gov>  
National Data Buoy Center - <http://www.ndbc.noaa.gov>  
National Geodetic Survey - <http://www.ngs.noaa.gov>  
National Geophysical Data Center - <http://www.ngdc.noaa.gov>  
National Ocean Service - <http://www.nos.noaa.gov>  
National Oceanic and Atmospheric Administration - <http://www.noaa.gov>  
National Oceanographic Data Center - <http://www.nodc.noaa.gov>  
National Weather Service - <http://www.nws.noaa.gov>  
U.S. Coast Guard - <http://www.uscg.mil>  
U.S. Geological Survey - <http://www.usgs.gov>  
U.S. Naval Observatory - <http://www.usno.navy.mil>  
U.S. Naval Oceanographic Office - <https://www.navo.navy.mil>

## CORRECTIONS:

Corrections to this publication, after the date of printing, may appear in the Notice to Mariners. They may also appear in the Local Notice to Mariners, published weekly, by the various United States Coast Guard Districts.

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## IMPORTANT NOTICES

For the most part, tide predictions for U.S. reference stations are based upon analyses of tide observations for periods of at least one year. Since the extremes of meteorological conditions have been excluded from the analyses and predictions, the predicted tidal heights should be considered as those expected under average weather conditions. During times when weather conditions differ from what is considered average for the area, the mariner must take note of the corresponding differences between predicted levels and those actually observed. Generally, prolonged onshore winds or a low barometric pressure can produce higher levels than predicted, while the opposite can result in lower levels than those predicted. Exclusive of weather conditions, the astronomical tide is subject to range variations which should be noted. Decreased ranges may be expected near the times when the Moon is in apogee (apogean tides) or in quadrature (neap tides), and increased ranges may be expected when the Moon is in perigee (perigean tides) or in a new or full position (spring tides). A larger diurnal range may also result when the Moon is in its maximum declination (tropic tides). The actual range will depend upon the extent to which combinations of these positions reinforce or detract one from the other. The effect of these astronomical lineups is included in the predictions and may be apparent upon inspection.

The mariner may be kept aware of the times of these astronomical events by referring to the astronomical data listed in this book. He should realize, however, that there is generally a time lag from a few hours to several days from the time of the astronomical event to the time of the resultant tide. During times of storm surges or when extreme weather conditions are imminent, the mariner should closely follow local weather forecasts as they relate to the effects upon the tide levels.

**DAYLIGHT-SAVING TIME IS NOT USED IN THIS PUBLICATION.** All daily tide predictions and predictions compiled by the use of Table 2 data are based on the standard time meridian indicated for each location. Predicted times may be converted to daylight-saving times, where necessary, by adding 1 hour to these data. In converting times from the Astronomical Data on the inside back cover, it should be noted that daylight-saving time is based on a meridian 15° east of the normal standard meridian for a particular place.

Predicted heights for all reference stations in table 1 are given in both feet and centimeters. Predicted values from the use of table 2 and 3 will be in the English system, but can be converted to metric units by the use of table 6.

**The daily tide predictions for** the Philippine locations, JOLO, LEGASPI PORT, and SAN FERNANDO HARBOR do not appear in this publication. Daily tide predictions for the Philippine locations are normally supplied to the National Ocean Service by the Bureau of Coast and Geodetic Survey, Republic of the Philippines in accordance with cooperative arrangements for the exchange of tidal predictions. Their predictions were not forwarded in time to appear in this publication. Those predictions usually appear on pages 172 through 175 and 188 through 195. These pages have been omitted from this publication.

NOS, in partnership with other agencies and institutions, has established a series of Physical Oceanographic Real Time Systems (PORTS®) in selected areas. These PORTS® sites provide constantly updated information on tide and tidal current conditions, water temperature, and weather conditions. This information is updated every six minutes. PORTS® sites are currently in operation at several major harbors with future sites to be added. The information is accessible through a computer data connection or by a voice response system at the following numbers:

PORTS® SITES	VOICE ACCESS	INTERNET ACCESS
NARRAGANSETT BAY	866-75-PORTS (866-757-6787)	<a href="http://www.tidesandcurrents.noaa.gov">www.tidesandcurrents.noaa.gov</a>
NEW HAVEN		"
NEW YORK/NEW JERSEY	866-21-PORTS (866-217-6787)	"
DELAWARE RIVER & BAY	866-30-PORTS (866-307-6787)	"
CHESAPEAKE BAY	866-CH-PORTS (866-247-6787)	"
TAMPA BAY	866-TB-PORTS (866-827-6787)	"

## IMPORTANT NOTICES

<b>PORTS® SITES</b>	<b>VOICE ACCESS</b>	<b>INTERNET ACCESS</b>
HOUSTON/GALVESTON	866-HG-PORTS (866-447-6787)	"
SAN FRANCISCO BAY	866-SB-PORTS (866-727-6787)	"
LOS ANGELES/LONG BEACH		"
LOWER COLUMBIA RIVER		"
TACOMA		"
PORT OF ANCHORAGE	866-AK-PORTS (866-257-6787)	"
SOO LOCKS		"

## INTRODUCTION

Tide tables for the use of mariners have been published by the National Ocean Service (formerly the Coast and Geodetic Survey) since 1853. For a number of years these tables appeared as appendixes to the annual reports of the Superintendent of the Survey, and consisted of detailed instructions enabling the mariner to make his own prediction of tides as the occasion arose.

The first tables to give predictions for each day were those for the year 1867. They gave the times and heights of high waters only and were published in two separate parts, one for the Atlantic coast and the other for the Pacific coast of the United States. Together they contained daily predictions for 19 stations and tidal differences for 124 stations. A few years later predictions for the low waters were also included, and for the year 1896 the tables were extended to include the entire maritime world, with full predictions for 70 ports and tidal differences for about 3,000 stations.

The tide tables are now issued in four volumes, as follows: Europe and West Coast of Africa (including the Mediterranean Sea); East Coast of North and South America (including Greenland); West Coast of North and South America (including the Hawaiian Islands); Central and Western Pacific Ocean and Indian Ocean. Together, they contain daily predictions for 269 reference ports and differences and other constants for about 6,000 stations.

This edition of the Tide Tables, Central and Western Pacific Ocean and Indian Ocean contains full daily predictions for 95 reference stations and differences and other constants for more than 1,932 stations. It also contains a table for obtaining the approximate height of the tide at any time, a table of local mean time of sunrise and sunset for every 5th day of the year for different latitudes, a table for the reduction of local mean time to standard time, a table for converting feet to centimeters, a table of the Greenwich mean time of the Moon's phases, apogee, perigee, greatest north and south and zero declination, and the time of the solar equinoxes and solstices, and a glossary of terms.

Up to and including the tide tables for the year 1884, all the tide predictions were computed by means of auxiliary tables and curves constructed from the results of tide observations at the different ports. From 1885 to 1911, inclusively, the predictions were generally made by means of the Ferrel tide-predicting machine. From 1912 to 1965, inclusively, they were made by means of the Coast and Geodetic Survey tide predicting machine No. 2. Since 1966, predictions have been made by electronic computer.

In the preparation of these tables all available observations were used. In some cases, however, the observations were insufficient for obtaining final results, and as further information becomes available it will be included in subsequent editions. All persons using these tables are invited to send information or suggestions for increasing their usefulness to the National Ocean Service, Products and Services Division, 1305 East-West Highway, N/OPS3, Silver Spring, Maryland 20910, U.S.A.

In accordance with cooperative arrangements between the National Ocean Service and the authorities listed below, predictions for the following stations appear in this issue:

*Hydrographic Office, Japan.*—O. Paramushir Island, Kamaisi, Yokohama, Kobe, Kure, Moji, Sasebo, and Naha.

*Hydrographic Department, Admiralty, England.*—Musi River, Surabaja Strait, Kutei River entrance, Barito River, Shatt al Arab, Mina Salman, Aden, Karachi, Dar es Salaam, Dreger Harbor, Mina Al Ahmadi, Musay'id Outer Channel Entrance, Mina Jebel Ali, Manila, Cebu and Davao.

*Department of Lands and Survey, New Zealand.*—Wellington and Auckland.

*Geodetic and Research Branch, Survey of India, India.*—Mergui, Rangoon, Sagar, Madras, Colombo, Bombay, and Suez.

*Service Hydrographique, France.*—Do Son, Mui Vung Tau.

*Hydrographic Department, Thailand.*—Bangkok Bar.

*Maritime Headquarters, Republic of South Africa.*—Durban.

*Instituto Hidrografico, Portugal.*—Beira.

## INTRODUCTION

*Hydrographic Office, Australia.*—Sydney, Darwin, Port Phillip, Townsville, Brisbane Bar, Port Adelaide, Port Lincoln, and Port Hedland.

*Port of Singapore Authority.*—Singapore.

*National Mapping & Resource Information Authority, Republic of the Philippines.*—Legaspi Port, San Fernando Harbor, Jolo.

*National Marine Data and Information Service, Peoples Republic of China.*—Hong Kong, Dalian, Qinhuangdao, Tanggu, Yantai, Qingdao, Lianyungang, Wusong, Zhongjun, Kanmen, Xiamen, Shantou, Huangpu, Haikou, and Beihai.

*Marine Meteorological Center, Central Weather Bureau, Taiwan.*—PengHu, Keelung.

## LIST OF REFERENCE STATIONS

Name of station	Page	Datum below mean sea-level	Updated	Data Series
Aden, Yemen.....	360	4.4		
Apia, Samoa Islands .....	252	1.6		
Auckland, New Zealand .....	268	5.8		
Bangkok Bar, Thailand** .....	140	7.7		
Barito River, Borneo .....	168	4.3		
Beihai, China .....	128	8.4		
Beira, Mozambique .....	372	11.4		
Belawan Channel, Sumatra.....	148	4.9		
Bombay, India .....	328	8.2		
Brisbane Bar, Australia .....	284	4.0		
Cebu, Philippines .....	180	2.4		
Ch'ang Chiang Approach, China .....	92	9.7		
Chuuk, Moen Island, Caroline Islands ....	204	3.56	2003	6 years (1981-1986)
Colombo, Sri Lanka .....	324	1.2		
Dalian, China .....	60	5.3		
Dar Es Salaam, Tanzania .....	368	5.0		
Darwin, Australia .....	276	13.5		
Davao, Philippines .....	176	2.5		
Diego Garcia Island.....	380	2.70		
Djakarta, Java .....	156	2.0		
Do Son, Vietnam .....	132	6.1		
Dreger Harbor, New Guinea .....	272	3.8		
Durban, South Africa.....	376	3.6		
Guam, Mariana Islands .....	196	1.4	2002	5 years (1994-2000)
Haikou, China.....	124	4.9	2002	5 years (1994-1998)
Hilo, Hawaii Island, Hawaii.....	240	1.19	2002	5 years (1994-1998)
Hong Kong, China.....	120	4.5		
Honolulu, Hawaii .....	228	0.8	2003	5 years (1996-2000)
Huangpu, China .....	116	5.1		
Inch'on, Korea .....	52	15.2		
Jolo, Philippines** .....	172	1.1		
Johnston Island.....	244	1.07	2002	5 years (1994-1998)
Kahului, Maui Island, Hawaii .....	236	1.16	2002	5 years (1994-1998)
Kamaisi, Japan.....	16	2.8		
Kanmen, China.....	96	10.8		
Karachi, Pakistan .....	332	5.4		
Keelung (Chi-lung Chiang), Taiwan.....	112	1.9		
Kobe, Japan .....	24	3.1		
Kure, Japan .....	32	6.6		
Kutei River Entrance, Borneo.....	164	4.6		
Kwajalein Atoll, Marshall Islands.....	216	3.0	2001	5 years (1994-1998)
Legaspi Port, Philippines** .....	192	2.4		
Lianyun Gang, China.....	80	9.5		
Madras, India .....	320	2.1		
Malakal Harbor, Palau Islands .....	200	3.6		
Manila, Philippines .....	184	1.6		
Mergui, Burma .....	308	9.1		
Mina Al Ahmadi, Kuwait .....	340	5.64		
Mina Jebel Ali, United Arab Emirates.....	356	3.34		
Mina Salman, Bahrain .....	348	4.2		

## LIST OF REFERENCE STATIONS Cont.

Name of station	Page	Datum below mean sea-level	Updated	Data Series
Moji, Japan.....	36	4.6		
Moku O Loe, Oahu Island, Hawaii .....	232	1.07	2002	4 years (1993-1996)
Mui Vung Tau, Vietnam.....	136	7.9		
Musay'id Outer Channel Entrance, Qatar	352	3.84		
Musi River, Sumatra.....	152	6.2		
Naha, Japan.....	44	3.9		
Namp'Ohang, Korea .....	56	10.0		
Nawiliwili, Kauai Island, Hawaii.....	224	0.85	2002	4 years (1993-1996)
O. Paramushiru, Kuril Islands.....	8	3.8		
Otomari, Sakhalin Island .....	4	2.4		
Pago Pago, American Samoa.....	260	1.34	2002	3 years (1989-1991)
Papeete Harbor, Tahiti Island* .....	248	0.73	2003	5 years (1994-1998)
PengHu (Ma-Kung Kang), Pescadores ..	108	5.1		
Pohnpei Harbor, Caroline Island .....	208	2.3		
Port Adelaide, Australia .....	296	4.9		
Port Hedland, Australia .....	304	10.0		
Port Lincoln, Australia .....	300	2.9		
Port Phillip, Australia.....	292	2.9		
Pusan, Korea .....	48	2.1		
Qingdao (Da Gang), China .....	76	7.8		
Qinhuangdao, China .....	64	3.0		
Rangoon, Burma.....	312	10.2		
Ras at Tannurah, Saudi Arabia .....	344	4.1		
Sagar, India .....	316	9.7		
Sakate, Japan .....	28	3.3		
San Fernando Harbor, Philippines .....	188	1.0		
Sand Island, Midway Islands .....	220	0.65	2002	5 years (1994-1998)
Sasebo, Japan .....	40	5.4		
Shantou, China .....	104	4.5		
Shatt al Arab, Iraq .....	336	5.7		
Singapore, Malaysia .....	144	5.2		
Suez, Egypt.....	364	3.7		
Surabaja Strait, Java .....	160	3.6		
Suva, Suva Harbor .....	256	2.15	2003	8 years (1990-1997)
Sydney, Australia .....	288	3.0		
Tanggu, China .....	68	7.9		
Townsville, Australia .....	280	5.2		
Wake Island.....	212	1.17	2002	5 years (1994-1998)
Wellington, New Zealand .....	264	2.9		
Wusong, China.....	84	6.6		
Xiamen, China.....	100	10.8		
Yamato Wan, Matsuwa To.....	12	2.6		
Yantai, China.....	72	4.8		
Yokohama, Japan .....	20	3.8		
Zhongjun, China.....	88	7.4		

\*New Reference Station.

\*\*Daily predictions for this station were omitted.

Each datum figure above represents the difference in elevation between the local mean sea (or river) level and the reference level from which the predicted heights in table 1 were calculated.



## TABLE 1.—DAILY TIDE PREDICTIONS

### EXPLANATION OF TABLE

This table contains the predicted times and heights of the high and low waters for each day of the year at a number of places which are designated as *reference stations*. By using tidal differences from table 2, one can calculate the approximate times and heights of the tide at many other places which are called *subordinate stations*. Instructions on the use of the tidal differences are found in the explanation of table 2.

High water is the maximum height reached by each rising tide, and low water is the minimum height reached by each falling tide. High and low waters can be selected from the predictions by the comparison of consecutive heights. Because of diurnal inequality at certain places, however, there may be a difference of only a few tenths of a foot between one high water and low water of a day, but a marked difference in height between the other high water and low water. Therefore, in using the Tide Tables it is essential, to note carefully the heights as well as the times of the tides.

**Time.**—The kind of time used for the predictions at each reference station is indicated by the time meridian at the bottom of each page.

**Datum.**—The datum from which the predicted heights are reckoned is the same as that used for the charts of the locality. In this table a datum approximating to mean low water springs, Indian spring low water, or the lowest possible low water is generally used. The depression of the datum below mean sea level for each of the reference stations of this volume is given on the preceding page.

**Depth of water.**—The nautical charts published by the United States and other maritime nations show the depth of the water as referred to a low water datum corresponding to that from which the predicted tidal heights are reckoned. To find the actual depth of water at any time, the height of the tide should be added to the charted depth. If the height of the tide is negative—that is, if there is a minus sign (−) before the tabular height—the height should be subtracted from the charted depth. For any time between high and low water, the height of the tide may be estimated from the heights of the preceding and following tides, or table 3 may be used. The reference stations in table 1 contain the heights in centimeters as well as feet.

**Variation in sea level.**—Changes in winds and barometric conditions cause variations in sea level from day to day. In general, with onshore winds or a low barometer the heights of both the high and low waters will be higher than predicted, while with offshore winds or a high barometer they will be lower. There are also seasonal variations in sea level, but these variations have been included in the predictions for each station. At ocean stations the seasonal variation in sea level is usually less than half a foot.

At stations on tidal rivers the average seasonal variation in river level due to freshets and droughts may be considerably more than a foot. The predictions for these stations include an allowance for this seasonal variation representing average freshet and drought conditions. Unusual freshets or droughts, however, will cause the tides to be higher or lower, respectively, than predicted.

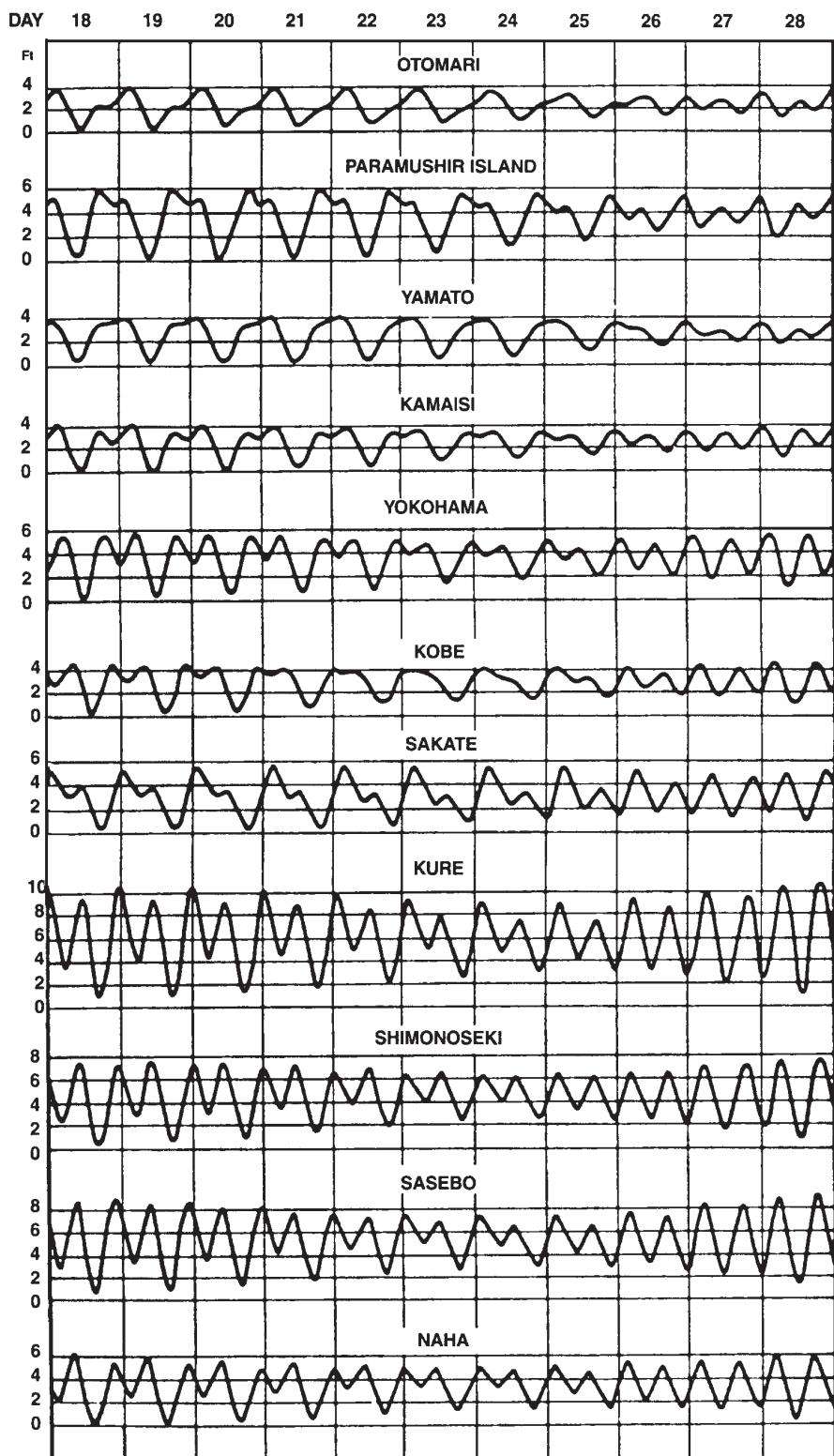
**Number of tides.**—There are usually two high and two low waters in a day. Tides follow the Moon more closely than they do the Sun, and the lunar or tidal day is about 50 minutes longer than the solar day. This causes the tide to occur later each day, and a tide that has occurred near the end of one calendar day will be followed by a corresponding tide that may skip the next day and occur in the early morning of the third day. Thus, on certain days of each month only a single high or a single low water occurs. At some stations, during portions of each month, the tide becomes diurnal—that is, only one high and one low water will occur during the period of a lunar day.

**Relation of tide to current.**—In using these tables of tide predictions bear in mind that they give the times and heights of high and low waters and not the times of turning of the current or slack water. For stations on the outer coast there is usually a small difference between the time of high or low water and the beginning of ebb or flood current, but for places in narrow channels, landlocked harbors, or on tidal rivers,

the time of slack water may differ by several hours from the time of high or low water stand. The relation of the times of high and low water to the turning of the current depends upon a number of factors, so no simple or general rule can be given. For the predicted time of slack water, and other current data, reference should be made to the Tidal Current Tables prepared by the National Ocean Service, for the Atlantic and the Pacific coast of North America and Asia.

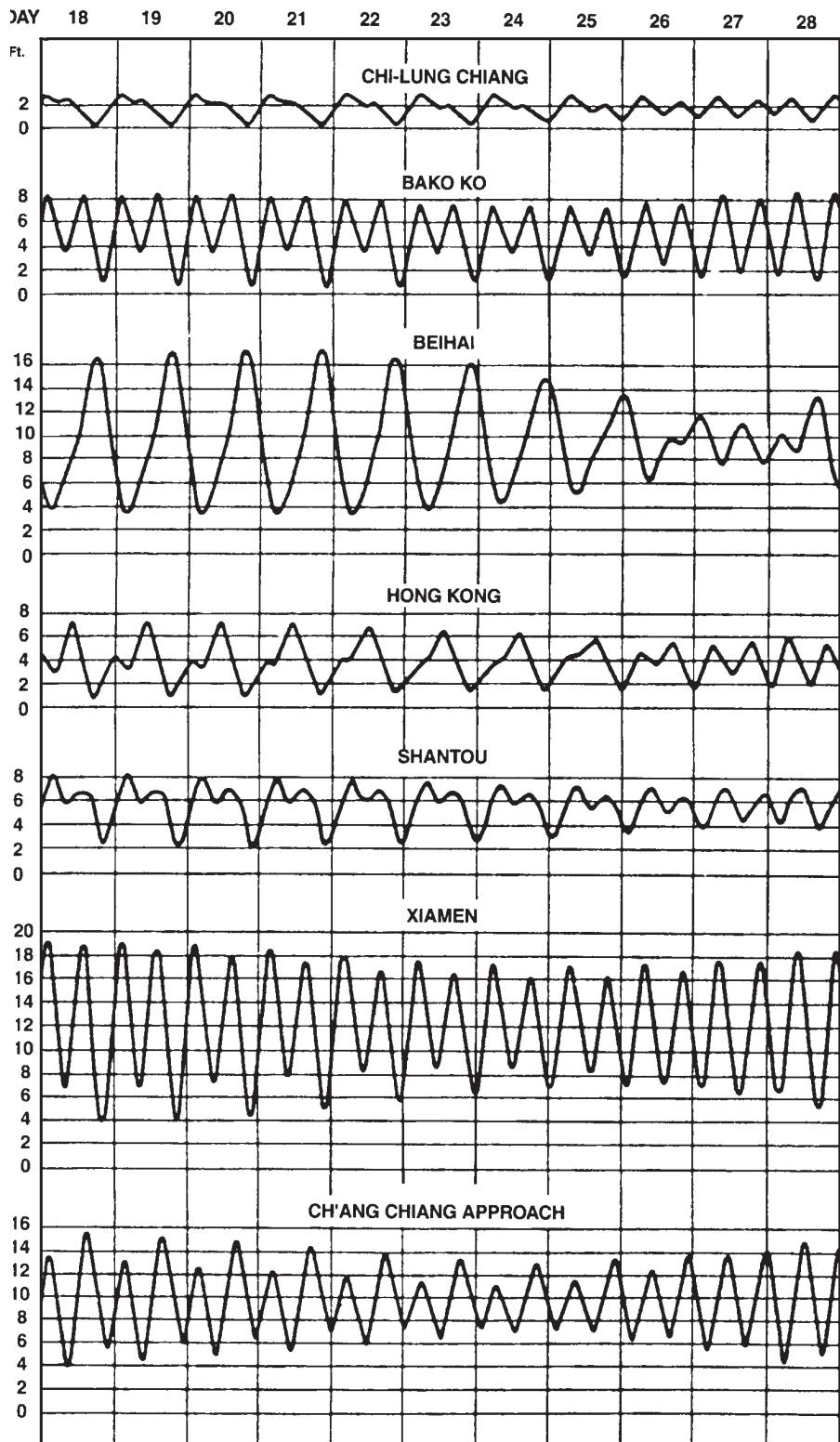
**Typical tide curves.**— The principal variations in the tide are illustrated by the curves for 25 stations on pages 3, 3a and 3b. These stations are on the Japan and China coasts, but similar variations will be found in other localities. The tide at Pusan is uniformly semidiurnal with the variations following the Moon's phase. The tides for the remainder of the group exhibits considerable inequality. By reference to the curves it is seen that where the inequality is large the tide at some places becomes diurnal around the times of the Moon's maximum declination, whereas at other places there is just a few tenths of a foot difference between the heights of successive high and low waters. It is essential therefore in using tide tables to carefully note the heights as well as the times of the tide.

## TYPICAL TIDE CURVES



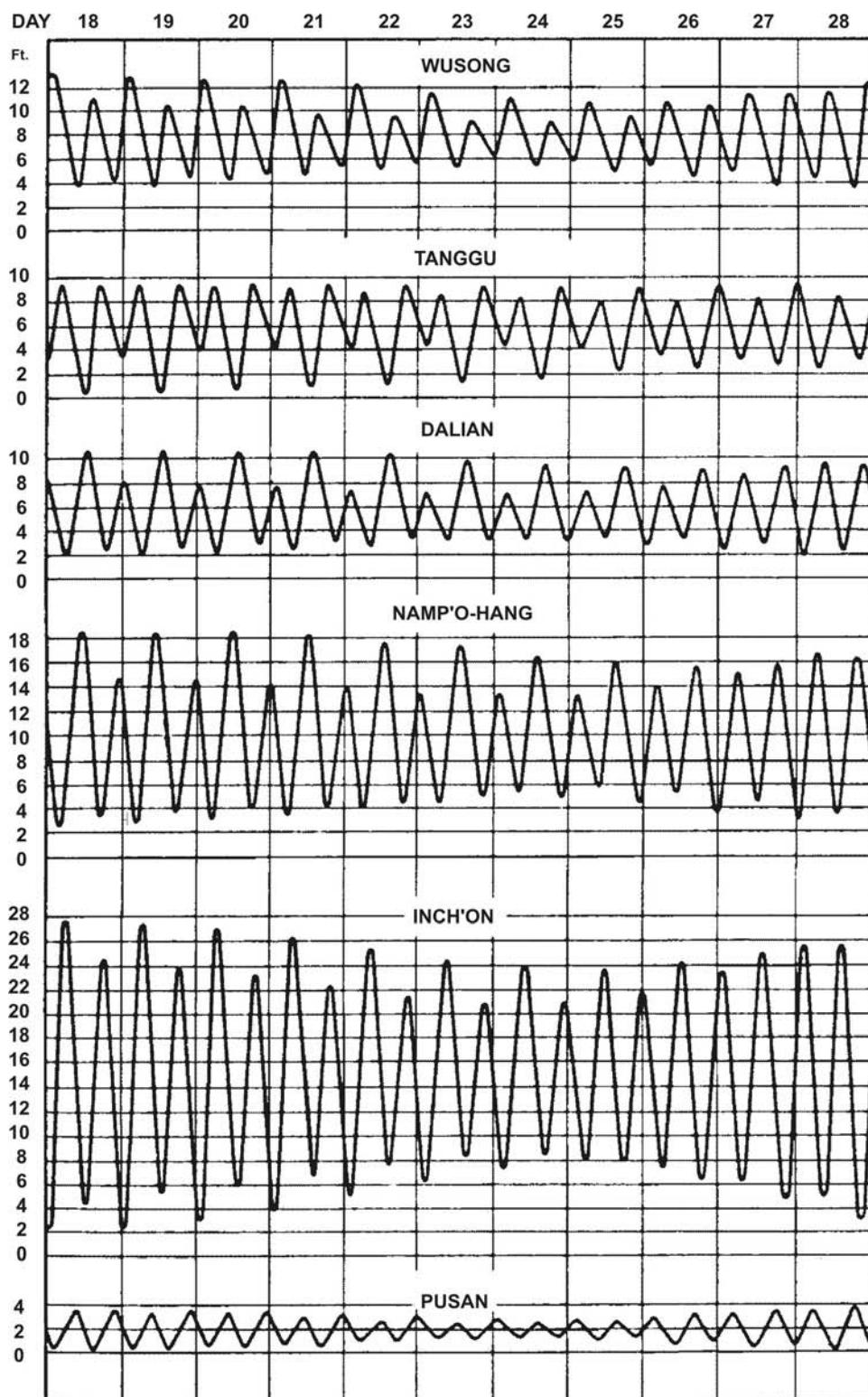
Lunar Data: On Equator, 12th; full Moon, 16th; maximum south declination, 20th; last quarter, 24th; on Equator, 27th; new Moon, 31st.

## TYPICAL TIDE CURVES



Lunar Data: On Equator, 12th; full Moon, 16th; maximum south declination, 20th; last quarter, 24th; on Equator, 27th; new Moon, 31st.

## TYPICAL TIDE CURVE



Lunar Data: On Equator, 12th; full Moon, 16th; maximum south declination, 20th; last quarter, 24th; on Equator, 27th; new Moon, 31st.

# Otomari, Sakhalin Island, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0357	2.1	64	16 W 0242	2.0	61	1 F 1101	3.9	119	1 Sa 0955	3.7	113
1057	3.5	107	0946	3.8	116	2105	1.5	46	2035	1.3	40
1816	2.1	64	1732	1.9	58	2145	0.8	24	16 Su 1033	3.9	119
2324	2.5	76	● 2235	2.3	70	Sa			2123	0.6	18
2 W 0352	2.3	70	17 Th 0206	2.2	67	2 2211	4.0	122	2 Su 1113	3.6	110
1135	3.8	116	1027	4.1	125	2208	1.3	40	2147	1.1	34
2002	1.8	55	1952	1.5	46	17 Su 1226	4.3	131	17 M 1234	3.7	113
3 Th 1220	3.9	119	18 F 1125	4.4	134	3 Su 1332	4.1	125	2223	3.6	110
2117	1.5	46	2130	1.0	30	18 M 1406	4.3	131	18 Tu 1418	3.7	113
2248			Sa			2309	0.5	15	2236	0.6	18
4 F 1312	4.1	125	19 Sa 1239	4.6	140	4 M 1441	4.2	128	4 Tu 1418	3.8	116
2209	1.3	40	2228	0.7	21	2321	0.8	24	2249	0.8	24
5 Sa 1406	4.3	131	20 Su 1359	4.8	146	5 Tu 1535	4.4	134	19 W 0530	2.2	67
2251	1.0	30	2314	0.4	12	2350	0.7	21	0838	2.0	61
2329	0.9	27	W			20 W 0636	2.4	73	1529	3.7	113
6 Su 1458	4.4	134	21 M 1512	5.0	152	6 Tu 1621	4.5	137	2259	0.8	24
2329	0.9	27	2355	0.3	9	W			0509	2.4	73
7 M 1545	4.6	140	22 Tu 1614	5.1	155	7 Th 0016	0.7	21	0954	1.6	49
1028			Tu			0657	2.6	79	1624	3.6	110
●			● 1702	4.5	137	1006	2.3	70	2317	1.0	30
8 Tu 0004	0.7	21	23 W 0030	0.3	9	1755	4.1	125	0513	2.7	82
1628	4.7	143	0738	2.5	76	F			1047	1.2	37
●			0939	2.4	73	0026	0.8	24	1711	3.5	107
9 W 0038	0.7	21	○ 1707	5.0	152	0628	2.8	85	2334	1.1	34
1707	4.8	146	0730	2.5	76	1124	1.6	49	0526	3.0	91
●			1100	2.1	64	1753	3.9	119	1132	0.9	27
10 Th 0109	0.7	21	1741	4.4	134	1755	0.9	27	○ 2350	3.3	101
0808	2.6	79	24 Tu 0102	0.5	15	F			0526	3.0	91
1029	2.5	76	0732	2.6	79	0102	1.2	37	1753	3.3	101
1744	4.8	146	1059	2.3	70	0642	3.0	91	● 2350	1.3	40
●			1756	4.9	149	1214	1.4	43	0013	1.1	34
11 F 0138	0.7	21	1821	4.2	128	1835	3.8	116	0013	1.1	34
0822	2.7	82	25 Tu 0129	0.7	21	1835	3.8	116	0004	1.5	46
1119	2.5	76	0743	2.8	85	F			0604	3.0	107
1820	4.6	140	1201	2.1	64	0121	1.1	34	1251	0.6	18
●			1840	4.6	140	0723	3.0	91	1912	2.8	85
12 Sa 0204	0.9	27	1901	3.9	119	1242	1.7	52	0004	1.5	46
0834	2.7	82	W			1344	1.2	37	0604	3.5	107
1211	2.4	73	2001	3.7	113	1901	3.1	94	1329	0.5	15
1856	4.4	134	1353	1.9	58	W			1949	2.5	76
●			1436	1.4	43	0115	1.5	46	0017	1.6	49
13 Su 0225	1.2	37	2030	2.8	85	0718	3.5	107	0625	3.6	110
0846	2.9	88	1201	2.1	64	1914	3.5	107	1329	0.5	15
1310	2.3	70	1840	4.6	140	0125	1.7	52	1949	2.5	76
1934	4.0	122	W			0739	3.7	113	0026	1.7	52
●			0820	3.9	119	Tu			0648	3.7	113
14 M 0240	1.5	46	1450	1.9	58	1429	1.2	37	1409	0.6	18
0859	3.1	94	2042	3.2	98	1944	3.4	104	2026	2.2	67
1418	2.2	67	2125	2.7	82	2029	2.7	82	0026	1.7	52
2017	3.5	107	W			F			0648	3.7	113
●			0842	3.5	107	0134	1.4	43	1345	0.7	21
15 Tu 0247	1.8	55	1553	1.8	55	0737	3.3	101	2107	2.0	61
0918	3.5	107	2125	2.7	82	M			0035	1.8	55
1541	2.1	64	W			0136	1.9	58	0714	3.7	113
2109	2.9	88	0905	3.7	113	0820	3.9	119	1453	0.7	21
●			Tu			0820	3.9	119	0035	1.8	55
15 W 0232	2.0	61	1553	1.8	55	1733	1.3	40	0744	3.7	113
0934	3.8	116	2125	2.7	82	W			1548	0.9	27
1713	1.8	55	W			0113	2.0	61	0027	1.8	55
●			0934	3.8	116	0853	4.2	128	0744	3.7	113
1541	2.1	64	1713	1.8	55	1733	1.4	43	1555	0.7	21
2225	2.3	70	W			0104	1.9	58	1443	0.6	18
●			0934	3.8	116	0906	3.7	113	2101	2.1	64
15 F 0234	1.9	58	1713	1.8	55	1758	1.4	43	0021	1.8	55
0905	3.7	113	2125	2.7	82	W			0714	3.7	113
●			Tu			0939	4.3	131	1443	0.6	18
15 W 0232	2.0	61	1553	1.8	55	2010	1.1	34	2101	2.1	64
0934	3.8	116	2125	2.7	82	W			0021	1.8	55
●			1713	1.8	55	W			0914	4.1	125
1541	2.1	64	2225	2.3	70	W			2001	0.7	21
2225	2.3	70	W			0939	4.3	131	0914	4.1	125
●			1010	3.9	119	W			1914	1.1	34
15 F 0210	2.1	64	1907	1.7	52	W			1021	3.3	101
0920	3.9	119	W			W			2040	1.0	30

Time meridian 165° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Otomari, Sakhalin Island, 2008

Times and Heights of High and Low Waters

April					May					June													
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height									
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm								
<b>1</b> Tu	1206 2122	3.2 0.9	98 27	<b>16</b> W	0406 0748	2.2 2.0	67 61	<b>1</b> Th	0258 0637	2.2 2.0	67 61	<b>16</b> F	0223 0919	3.0 1.3	91 40	<b>1</b> Su	0136 0933	3.6 0.9	110 27	<b>16</b> M	0222 1044	4.1 0.8	125 24
<b>2</b> W	1343 2150	3.2 0.9	98 27	<b>17</b> Th	0348 0913	2.4 1.5	73 46	<b>2</b> F	0243 0827	2.5 1.6	76 49	<b>17</b> Sa	0245 1008	3.3 0.9	101 27	<b>2</b> M	0215 1030	4.1 0.3	125 9	<b>17</b> Tu	0303 1123	4.2 0.7	128 21
<b>3</b> Th	0431 0819 1457 2213	2.2 1.9 3.3 0.9	67 58 101 27	<b>18</b> F	0354 1008 1626 2211	2.8 1.1 2.8 1.5	85 34 85 46	<b>3</b> Sa	0253 0933	2.9 1.0	88 30	<b>18</b> Su	0311 1048 1735 2102	3.6 0.6 2.4 2.1	110 18 73 64	<b>3</b> Tu	0300 1123	4.5 0.0	137 0	<b>18</b> W	0345 1201	4.3 0.6	131 18
<b>4</b> F	0420 0932 1558 2234	2.4 1.5 3.3 1.1	73 46 101 34	<b>19</b> Sa	0409 1051 1715 2227	3.1 0.7 2.7 1.6	94 21 82 49	<b>4</b> Su	0315 1027	3.3 0.5	101 15	<b>19</b> M	0340 1125	3.8 0.4	116 12	<b>4</b> W	0348 1215	4.8 -0.2	146 -6	<b>19</b> Th	0426 1237	4.4 0.5	134 15
<b>5</b> Sa	0427 1027 1654 2253	2.7 1.0 3.2 1.3	82 30 98 40	<b>20</b> Su	0429 1130	3.4 0.5	104 15	<b>5</b> M	0343 1118	3.8 0.0	116 0	<b>20</b> Tu	0410 1201	4.0 0.3	122 9	<b>5</b> Th	0439 1307	5.0 -0.3	152 -9	<b>20</b> F	0505 1313	4.5 0.6	137 18
<b>6</b> Su	0443 1117 1748 ●	3.1 0.5 3.0 1.6	94 15 91 49	<b>21</b> M	0452 1206 1840 2300	3.6 0.3 2.5 1.8	110 9 76 55	<b>6</b> Tu	0417 1209	4.2 -0.3	128 -9	<b>21</b> W	0443 1238 1943 2211	4.1 0.3 2.3 2.2	125 9 70 67	<b>6</b> F	0531 1357	5.0 -0.1	152 -3	<b>21</b> Sa	0541 1348	4.5 0.6	137 18
<b>7</b> M	0504 1206 1842 2320	3.5 0.2 2.7 1.8	107 6 82 55	<b>22</b> Tu	0516 1242 1919 2315	3.7 0.2 2.4 1.9	113 6 73 58	<b>7</b> W	0455 1301	4.5 -0.4	137 -12	<b>22</b> Th	0516 1316 2026 2229	4.1 0.3 2.2 2.1	125 9 67 64	<b>7</b> Sa	0623 1445	4.9 0.1	149 3	<b>22</b> Su	0616 1420	4.4 0.7	134 21
<b>8</b> Tu	0530 1257 1939 2326	3.9 -0.1 2.4 1.9	119 -3 73 58	<b>23</b> W	0543 1319 1958 2327	3.8 0.2 2.2 1.9	116 6 67 58	<b>8</b> Th	0538 1356	4.7 -0.3	143 -9	<b>23</b> F	0550 1355	4.1 0.4	125 12	<b>8</b> Su	0715 1530	4.6 0.5	140 15	<b>23</b> M	0650 1450 2148	4.3 0.9 2.5	131 27 76
<b>9</b> W	0601 1350 2044 2321	4.2 -0.1 2.0 1.9	128 -3 61 58	<b>24</b> Th	0611 1358 2041 2333	3.8 0.4 2.0 1.9	116 12 61 58	<b>9</b> F	0624 1454	4.6 -0.1	140 -3	<b>24</b> Sa	0624 1437	4.1 0.5	125 15	<b>9</b> M	0809 1611 2306	4.1 0.9 2.4	125 27 73	<b>24</b> Tu	0021 0726 1515 2201	2.4 4.0 1.1 2.6	133 73 34 79
<b>10</b> Th	0637 1450	4.3 0.0	131 0	<b>25</b> F	0641 1442	3.8 0.5	116 15	<b>10</b> Sa	0713 1556	4.4 0.2	134 6	<b>25</b> Su	0659 1519	4.0 0.7	122 21	<b>10</b> Tu	0215 0905	2.3 3.6	70 110	<b>25</b> W	0131 0806 1535 2215	2.4 3.7 1.4 2.8	73 113 43 85
<b>11</b> F	0718 1601	4.3 0.2	131 6	<b>26</b> Sa	0715 1534	3.7 0.7	113 21	<b>11</b> Su	0807 1700	4.1 0.5	125 15	<b>26</b> M	0735 1601	3.9 0.8	119 24	<b>11</b> W	0415 1013 1710 2359	2.2 3.1 1.6 3.0	67 94 49 91	<b>26</b> Th	0258 0854 1549 2234	2.3 3.3 1.7 3.1	70 101 52 94
<b>12</b> Sa	0807 1731	4.1 0.5	125 15	<b>27</b> Su	0752 1637	3.6 0.8	110 24	<b>12</b> M	0910 1800	3.7 0.8	113 24	<b>27</b> Tu	0817 1640	3.6 1.0	110 30	<b>12</b> Th	0620 1145 1728	2.0 2.6 1.9	61 79 58	<b>27</b> F	0445 1002 1554 2303	2.2 2.7 2.0 3.5	67 82 61 107
<b>13</b> Su	0908 1911	3.8 0.6	116 18	<b>28</b> M	0838 1750	3.5 0.9	107 27	<b>13</b> Tu	1032 1850	3.2 1.1	98 34	<b>28</b> W	0910 1716	3.3 1.3	101 40	<b>13</b> F	0031 0802 1354 1738	3.3 1.7 2.3 2.1	101 52 70 64	<b>28</b> Sa	0646 1213 1535 2344	1.8 2.3 2.2 3.9	55 70 67 119
<b>14</b> M	1036 2022	3.4 0.7	104 21	<b>29</b> Tu	0939 1856	3.2 1.0	98 30	<b>14</b> W	0203 0612 1219 1928	2.3 2.1 2.8 1.4	70 64 85 43	<b>29</b> Th	0028 0420 1027 1747	2.5 2.3 2.9 1.6	76 70 88 49	<b>14</b> Sa	0105 0911	3.6 1.3	110 40	<b>29</b> Su	0829	1.3	40
<b>15</b> Tu	1236 2104	3.2 0.9	98 27	<b>30</b> W	1111 1944	3.0 1.1	91 34	<b>15</b> Th	0206 0811 1406 1956	2.7 1.7 2.6 1.7	82 52 79 52	<b>30</b> F	0040 0650 1225 1813	2.8 2.0 2.5 1.8	85 61 76 55	<b>15</b> Su	0142 1002	3.9 1.0	119 30	<b>30</b> M	0035 0943	4.3 0.8	131 24
													<b>31</b> Sa	0103 0826 1442 1833	3.2 1.4 2.4 2.1	98 43 73 64							

Time meridian 165° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Otomari, Sakhalin Island, 2008

Times and Heights of High and Low Waters

July					August					September					
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height	
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm
<b>1</b> Tu	0135 1041	4.7 0.4	143 12	<b>16</b> W	0242 1121	4.3 0.9	131 27	<b>1</b> F	0346 1210	5.0 0.3	152 9	<b>16</b> Sa	0410 1158	4.3 0.8	131 24
	1220	5.1	155		0419	4.5	137		1827 2201	2.6 2.2	79 67		1221 1814	1.1 3.1	125 94
<b>2</b> W	0238 1132	4.9 0.1	149 3	<b>17</b> Th	0333 1156	4.4 0.8	134 24	<b>2</b> Sa	0444 1242	5.0 0.5	152 15	<b>17</b> Su	0450 1221	4.4 0.9	134 27
	1227	0.7	21		1227	2.5	76		1835 2253	2.7 2.1	82 64		1238 1833	1.4 3.4	116 104
<b>3</b> Th	0340 1220	5.1 0.0	155 0	<b>18</b> F	0419 1227	4.5 0.7	137 21	<b>3</b> Su	0537 1310	4.8 0.7	146 21	<b>18</b> M	0529 1241	4.3 1.0	131 30
	1227	0.7	21		1227	2.7	82		1846 2344	2.9 2.0	88 61		1252 1854	1.6 3.6	104 116
<b>4</b> F	0438 1303	5.2 0.1	158 3	<b>19</b> Sa	0459 1257	4.6 0.7	140 21	<b>4</b> M	0624 1333	4.5 1.0	137 30	<b>19</b> Tu	0607 1259	4.1 1.2	125 37
	1257	2.6	79		1945 2230	2.6 2.4	79 73		1858	3.0	91		0746 1918	3.1 3.8	94 116
<b>5</b> Sa	0534 1343	5.1 0.3	155 9	<b>20</b> Su	0536 1323	4.6 0.8	140 24	<b>5</b> Tu	0044 0710	1.8 4.1	55 125	<b>20</b> W	0028 0646	1.7 3.8	52 116
	1343	2.4	73		1958 2321	2.6 2.4	79 73		1353 1956	1.3 3.3	40 101		0827 1912	2.7 3.3	82 101
<b>6</b> Su	0625 1418	4.9 0.6	149 18	<b>21</b> M	0611 1347	4.4 0.9	134 27	<b>6</b> W	0142 0753	1.7 3.6	52 110	<b>21</b> Th	0118 0728	1.5 3.3	46 101
	1418	2.6	79		2011	2.8	85		1408 2020	1.6 3.5	49 107		0309 1929	1.1 3.6	34 110
<b>7</b> M	0020 0715 1448 2108	2.2 4.5 0.9 2.8	67 137 27 85	<b>22</b> Tu	0011 0646	2.3 4.2	70 128	<b>7</b> Th	0240 0838	1.7 3.1	52 94	<b>22</b> F	0212 0813	1.4 2.9	43 88
	1448	1.2	27		1406 2024	1.2 2.9	37 88		1416 2045	1.9 3.7	58 113		0412 1952	1.3 3.9	40 116
<b>8</b> Tu	0133 0803 1511 2132	2.2 4.0 1.3 3.1	67 122 40 94	<b>23</b> W	0104 0723	2.2 3.9	67 119	<b>8</b> F	0343 0926	1.6 2.7	49 82	<b>23</b> Sa	0317 0906	1.3 2.3	40 70
	1511	1.3	40		1420 2037	1.4 3.1	43 94		1415 2115	2.1 3.9	64 119		0546 2023	1.4 4.2	43 128
<b>9</b> W	0249 0852 1529 2159	2.1 3.5 1.7 3.3	64 107 52 101	<b>24</b> Th	0204 0803	2.1 3.4	64 104	<b>9</b> Sa	0459 1033	1.7 2.3	52 70	<b>24</b> Su	0444 2105	1.3 4.3	40 131
	1529	1.7	52		1428 2053	1.7 3.4	52 104		1352 2151	2.1 3.9	64 119		0803 2151	1.4 3.9	43 116
<b>10</b> Th	0412 0948 1537 2230	2.1 2.9 2.0 3.6	64 88 61 110	<b>25</b> F	0314 0851	2.0 2.9	61 88	<b>10</b> Su	0642 2242	1.6 3.9	49 119	<b>25</b> M	0702 2207	1.2 4.3	37 131
	1537	2.0	61		1425 2118	2.0 3.8	61 116		2242 2118	61 116	49 116		0921 W	1.2	37
<b>11</b> F	0548 1106 1530 2307	1.9 2.5 2.1 3.8	58 76 64 116	<b>26</b> Sa	0444 0958	1.8 2.4	55 73	<b>11</b> M	0839 2353	1.5 3.9	46 119	<b>26</b> F	0046 0959	3.6 1.1	110 34
	1530	2.1	64		1403 2154	2.1 4.1	64 125		2353 2154	64 125	46 119		0139 2009	3.7 2.2	113 67
<b>12</b> Sa	0731 2351	1.7 3.9	52 119	<b>27</b> Su	0646 2245	1.5 4.3	46 131	<b>12</b> Tu	0950	1.3	40	<b>27</b> W	1003 2001	0.6 2.3	18 70
	2351	3.9	119		2245	4.3	131		2001	2.3	70		0208 2001	3.7 113	113 52
<b>13</b> Su	0857	1.5	46	<b>28</b> M	0848 2356	1.1 4.5	34 137	<b>13</b> W	0117 1033	4.0 1.1	122 34	<b>28</b> Sa	0307 1049	3.8 0.9	116 27
					1033	1.1	34		1033 2118	2.5 2.0	64 61		1048 2118	1.2 3.6	110 40
<b>14</b> M	0045 0957	4.1 1.2	125 37	<b>29</b> Tu	1001	0.8	24	<b>14</b> Th	0229 1106	4.1 0.9	125 27	<b>29</b> F	0250 1113	4.4 0.6	134 18
	0957	1.2	37		1106	2.4	24		1106 2036	2.4 2.3	73 70		1113 2036	2.4 2.3	134 70
<b>15</b> Tu	0144 1043	4.2 1.0	128 30	<b>30</b> W	0119 1051	4.7 0.5	143 15	<b>15</b> F	0324 1133	4.3 0.8	131 24	<b>15</b> Sa	0355 1139	4.4 0.7	134 21
	1043	1.0	30		1051	2.5	143		1133 1830	2.5 2.4	76 70		1129 2204	1.1 1.9	116 58
				<b>31</b> Th	0238 1133	4.9 0.3	149 9		1753 2305	2.5 1.6	76 49		1201 2305	0.9 1.6	116 49

Time meridian 165° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Otomari, Sakhalin Island, 2008

Times and Heights of High and Low Waters

October					November					December							
Time	Height		Time	Height	Time	Height		Time	Height	Time	Height		Time	Height			
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm			
<b>1</b> W 0622 1136 1739	3.1 1.8 3.8	94 55 116	<b>16</b> Th 0623 1050 1704	2.8 2.0 4.1	85 61 125	<b>1</b> Sa 0108 0754 1103 1756	0.4 2.4 2.2 4.2	12 73 67 128	<b>16</b> Su 0132 1758 5.0 152	-0.1 5.0 152	-3	<b>1</b> M 0144 1816 4.4	0.7 4.4 134	21	<b>16</b> Tu 0219 1852 5.0 152	0.3 5.0 152	9
<b>2</b> Th 0039 0704 1150 1803	0.6 2.8 1.9 3.9	18 85 58 119	<b>17</b> F 0034 0719 1056 1734	0.1 2.5 2.1 4.4	3 76 64 134	<b>2</b> Su 0148 0837 1111 1828	0.5 2.2 2.1 4.1	15 67 64 125	<b>17</b> M 0227 1846 4.9 149	0.1 4.9 149	3	<b>2</b> Tu 0222 1850 4.3 131	0.8 4.3 131	24	<b>17</b> W 0301 0958 1216 1943	0.6 2.4 2.3 4.5	18 73 70 137
<b>3</b> F 0118 0744 1200 1828	0.5 2.6 2.0 4.0	15 79 61 122	<b>18</b> Sa 0125 0824 1050 1809	0.1 2.2 2.1 4.6	3 67 64 140	<b>3</b> M 0231 1902 4.0 122	0.7 4.0	21 122	<b>18</b> Tu 0325 1938 4.5 137	0.4 4.5 137	12	<b>3</b> W 0300 1925 4.1 125	0.9 4.1 125	27	<b>18</b> Th 0338 1019 1347 2037	1.0 2.6 2.4 4.0	30 79 73 122
<b>4</b> Sa 0159 0826 1205 1856	0.6 2.3 2.0 4.0	18 70 61 122	<b>19</b> Su 0222 1849 4.6 140	0.2 4.6	6 140	<b>4</b> Tu 0321 1939 3.9 119	0.9 3.9	27 119	<b>19</b> W 0424 2036 4.1 125	0.7 4.1 125	21	<b>4</b> Th 0336 2002 3.9 119	1.1 3.9 119	34	<b>19</b> F 0409 1046 1535 2137	1.4 2.9 2.4 3.4	43 88 73 104
<b>5</b> Su 0244 0913 1200 1928	0.8 2.1 2.0 3.9	24 64 61 119	<b>20</b> M 0328 1935 4.4 134	0.4 4.4	12 134	<b>5</b> W 0418 2022 3.7 113	1.1 3.7	34 113	<b>20</b> Th 0521 2148 3.6 110	1.1 3.6 110	34	<b>5</b> F 0409 1130 1340 2046	1.3 2.6 2.5 3.5	40 79 76 107	<b>20</b> Sa 0431 1118 1741 2304	1.8 3.3 2.2 2.8	55 101 67 85
<b>6</b> M 0340 2005	1.0 3.7	30 113	<b>21</b> Tu 0451 2031 4.1 125	0.6 4.1	18 125	<b>6</b> Th 0522 2119 3.4 104	1.2 3.4	37 104	<b>21</b> F 0610 1332 2.6 79	1.4 2.6 79	43	<b>6</b> Sa 0439 1145 2.8 85	1.6 2.8 85	49	<b>21</b> Su 0443 1154 3.6 110	2.1 3.6 110	64 58
<b>7</b> Tu 0458 2054	1.2 3.6	37 110	<b>22</b> O W 2149	0.8 3.7	24 113	<b>7</b> F 0622 2245 3.2	1.3 3.2	40 98	<b>22</b> Sa 0649 1336 3.0 91	1.7 3.0 91	52	<b>7</b> Su 0505 1336 2.0 61	1.8 3.0 61	55 91	<b>22</b> M 0139 0433 2.3 70	2.4 2.3 70	73 101
<b>8</b> W 0648 2207	1.2 3.4	37 104	<b>23</b> Th 0741 2347 3.4 104	0.9 3.4	27 104	<b>8</b> Sa 0709 1425 2.3	1.5 2.6 79	46 79	<b>23</b> Su 0138 0718 3.3 101	2.7 2.0 61	82	<b>8</b> M 0526 1233 3.4	2.1 61	64	<b>23</b> Tu 1319 2159 1.2 37	4.1 1.2	125
<b>9</b> Th 0809 2354	1.2 3.3	37 101	<b>24</b> F 0828 1544 1919 2.3	1.1 2.4 73	34 70	<b>9</b> Su 0038 0744 1.6 49	2.9 1.6 49	88	<b>24</b> M 0323 0741 2.2 67	2.6 1.6 67	79	<b>9</b> Tu 0219 0539 2.4 73	2.5 3.8 73	76	<b>24</b> W 1405 2242 1.0 30	4.3 1.0	131
<b>10</b> F 0852	1.2	37	<b>25</b> Sa 0143 0859 1520 2056	3.2 1.4 2.7 1.8	98 43 82 53	<b>10</b> M 0220 0812 1.9 58	2.8 1.9 58	85	<b>25</b> Tu 0441 0804 2.4 73	2.6 2.4 73	79	<b>10</b> W 1350 0804 4.0 21	4.3 2.4 0.7 21	131	<b>25</b> Th 1452 2320 0.8 24	4.4 2.4 0.8 24	134
<b>11</b> Sa 0130 0921 1556 2021	3.3 1.2 2.5 2.0	101 37 76 61	<b>26</b> Su 0306 0921 1.6 49	3.1 1.6	94 49	<b>11</b> Tu 0342 0836 2.1	2.8 2.1	85 64	<b>26</b> W 0540 0828 2.5	2.6 76	79	<b>11</b> Th 1436 2306 0.3	4.7 143	9	<b>26</b> F 1537 2355 0.7 21	4.5 0.7 21	137
<b>12</b> Su 0243 0944 1552 2124	3.3 1.3 2.7 1.6	101 40 82 49	<b>27</b> M 0410 0939 1.8 55	3.0 1.8	91 55	<b>12</b> W 0453 0856 2.3 70	2.7 2.3	82 70	<b>27</b> Th 0626 0856 2.5 76	2.6 2.5 76	79	<b>12</b> F 1526 2356 5.0 0.1	5.0 152	3	<b>27</b> Sa 1620 2356 4.6 140	4.6 140	140
<b>13</b> M 0342 1005 1602 2214	3.3 1.4 3.0 1.2	101 43 91 37	<b>28</b> Tu 0504 0957 1.9 58	2.9 1.9	88 58	<b>13</b> Th 0559 0913 2.4	2.7 2.4	82 73	<b>28</b> F 0703 0926 2.5 76	2.6 2.5 76	79	<b>13</b> Sa 1618 1630 4.5 137	5.3 4.5 137	162	<b>28</b> Su 0029 1700 4.7 143	0.7 143	21
<b>14</b> Tu 0437 1023 1618 2301	3.2 1.6 3.4 0.7	98 49 104 21	<b>29</b> W 0550 1014 2.1 64	2.8 2.1	85 64	<b>14</b> F 0705 0924 4.8	2.5 2.4	76 73	<b>29</b> Sa 0029 0737 2.5 76	0.5 2.5 76	15	<b>14</b> Su 0046 1709 5.3	0.0 5.3	162	<b>29</b> M 0102 0803 2.6 76	0.7 2.6 76	21
<b>15</b> W 0530 1039 1639 2347	3.0 1.9 3.8 0.4	91 58 116 12	<b>30</b> Th 0633 1032 2.1 64	2.6 2.1	79 64	<b>15</b> Sa 0039 1657 4.1	-0.1 125	-3 125	<b>30</b> Su 0106 0812 2.5 76	0.6 2.4 73	18	<b>15</b> M 0134 1021 2.4 137	0.1 2.4 137	3	<b>30</b> Tu 0133 0823 2.6 1811	0.8 2.6 2.5 4.6	24 76 140
			<b>31</b> F 0031 0714 2.5 76	0.3 2.5	9 76										<b>31</b> W 0202 0844 2.7 82	0.9 4.4	27
			1049 1725	2.2 4.2	67 128										1146 1843	2.5 4.4	76 134

Time meridian 165° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# O. Paramushiru (Zaliv Tukharka), Kuril Islands, 2008

Times and Heights of High and Low Waters

January				February				March				
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm	
1 Tu 0258	2.6	79	16 W 0256	3.3	101	1 F 0047	4.6	140	1 Sa 0911	5.9	181	
0949	5.7	174	W 0924	5.8	177	F 0308	4.5	137	Sa 1758	1.0	31	
1648	2.5	76	1649	1.9	57	0926	6.0	186				
2248	4.2	129	● 2344	4.4	134	1750	1.1	34				
2 W 0333	3.4	103	17 Th 0324	4.0	121	2 Sa 0954	6.0	182	2 Su 0903	5.8	176	
1008	5.7	175	0946	5.9	179	1850	0.9	26	17903	0.9	27	
1741	1.9	57	1744	1.4	43				Su 1809	1.1	33	
3 Th 0050	4.3	132	18 F 1010	5.9	181	3 Su 1031	5.9	180	3 M 1041	5.7	173	
0408	4.1	124	1841	1.0	30	1950	0.6	19	2004	0.8	25	
1031	5.8	176							3 M 1917	5.5	169	
1835	1.3	40							18 Tu 0955	1.1	34	
4 F 0309	4.7	144	19 Sa 1040	6.0	182	4 M 0531	5.6	172	19 Tu 0502	5.6	170	
0445	4.7	143	1937	0.6	19	0746	5.6	170	0852	5.3	161	
1057	5.8	178				1128	5.8	177	1213	5.5	168	
1928	0.8	25				2045	0.5	15	2100	0.8	25	
5 Sa 1128	5.9	180	20 Su 1119	5.9	181	5 Tu 0538	5.8	176	20 W 0516	5.6	172	
2019	0.4	13	2031	0.4	11	0931	5.4	165	0951	4.9	149	
						1250	5.6	172	1351	5.4	165	
						2136	0.5	14	2151	0.9	28	
6 Su 0534	5.6	171	21 M 0549	5.8	176	6 W 0554	5.8	177	21 W 0516	5.6	172	
0800	5.5	168	0846	5.6	171	1026	5.1	154	0951	4.9	149	
1208	5.9	180	1214	5.8	178	1416	5.5	169	1351	5.4	165	
2107	0.1	3	2121	0.2	6	2222	0.6	17	2115	1.3	39	
7 M 0604	5.9	180	21 Tu 0607	5.9	181	7 Th 0612	5.8	177	21 Sa 0533	5.6	171	
0936	5.6	171	1008	5.5	167	1107	4.6	141	1032	4.4	134	
1259	5.9	179	1326	5.7	175	1532	5.5	168	1512	5.4	165	
2153	-0.1	-2	2208	0.1	4	● 2305	0.8	23	2236	1.1	34	
8 Tu 0632	6.0	184	23 W 0627	6.0	182	8 F 0630	5.7	175	21 M 0533	5.6	171	
1043	5.5	167	1100	5.2	158	1144	4.1	125	0958	4.2	127	
1400	5.8	176	1441	5.6	172	1639	5.5	167	1452	5.3	161	
● 2237	-0.1	-3	○ 2251	0.3	8	2345	1.1	34	2204	1.5	45	
9 W 0657	6.1	186	24 Th 0648	6.0	182	9 Sa 0647	5.7	174	21 F 0449	5.4	166	
1133	5.2	160	1141	4.8	146	1221	3.5	108	1034	3.6	109	
1505	5.7	173	1551	5.5	169	1740	5.4	165	1621	5.4	165	
2319	0.0	1	2332	0.5	15				2317	1.4	43	
10 Th 0720	6.1	185	25 F 0707	5.9	180	10 M 0022	1.6	48	2248	1.8	55	
1215	4.9	149	1220	4.3	131	0705	5.7	173	21 W 0559	5.5	167	
1610	5.5	168	1656	5.4	165	1259	3.0	91	1222	1.9	57	
2359	0.3	9				1840	5.3	162	1916	5.4	165	
11 F 0743	6.0	183	26 Sa 0011	0.9	27	11 M 0030	2.4	72	20 M 0003	2.6	80	
1256	4.5	136	0726	5.8	178	0723	5.7	174	10 Tu 0559	5.5	167	
1714	5.3	163	1258	3.8	115	1339	2.5	75	1833	5.6	175	
			1759	5.3	161	1940	5.2	158				
12 Sa 0038	0.7	22	27 Su 0448	1.4	42	12 Tu 0129	2.7	83	10 Tu 0011	3.4	104	
0803	5.9	180	0745	5.8	176	0741	5.7	175	0534	5.5	168	
1337	4.0	121	1339	3.2	99	1422	2.0	61	1225	1.1	33	
1818	5.1	156	1901	5.1	156	2044	5.0	152	1926	5.7	174	
13 Su 0115	1.3	39	28 M 0123	2.0	61	12 W 0133	3.4	105	25 W 0011	3.4	104	
0824	5.8	178	0803	5.8	176	0719	5.7	175	0534	5.5	168	
1420	3.4	104	1421	2.7	83	1423	1.4	43	1225	1.1	33	
1924	4.9	149	2006	4.9	149	1511	1.2	37	1926	5.7	174	
14 M 0151	1.9	59	● 2336	4.7	143	2240	5.0	151				
0843	5.8	176				2121	5.1	155				
1506	2.9	88				2049	5.4	164				
2036	4.6	141				1949	5.5	168				
15 Tu 0224	2.6	80	29 Tu 0156	2.6	80	11 W 0109	3.6	111	27 W 0044	4.6	140	
0903	5.8	176	0822	5.8	176	0637	5.7	173	0617	5.7	174	
1556	2.4	72	1507	2.2	68	1342	1.1	34	1346	0.7	21	
2200	4.4	135	2119	4.7	143	2049	5.4	164	2122	5.5	167	
15 Tu 0226	2.6	80	29 Th 0225	3.9	120	12 W 0109	3.6	111	27 Th 0116	4.3	130	
0903	5.8	176	0842	5.8	178	0740	5.8	178	0617	5.7	174	
1556	2.4	72	1557	1.8	55	1511	1.2	37	1346	0.7	21	
2200	4.4	135	● 2246	4.6	139	2157	5.2	159	2232	5.3	163	
15 ● 0252	3.9	120	31 Th 0903	5.9	180	13 W 0148	4.5	138	28 F 0148	4.6	140	
			1651	1.4	43	1740	5.8	176	0641	5.7	175	
									1431	0.7	21	
									2232	5.3	163	
15 ● 0236	4.9	148	31 Th 0903	5.9	180	14 W 0207	4.5	138	29 M 0223	4.9	148	
			1651	1.4	43	0722	5.8	177	0709	5.7	174	
						1515	0.9	28	1522	0.9	26	
						● 2322	5.1	156	2353	5.2	160	
15 ● 0236	4.9	148	31 Th 0903	5.9	180	16 W 0207	4.5	138	30 M 0312	5.0	153	
			1651	1.4	43	0749	5.8	176	0742	5.5	169	
						1610	1.0	31	1619	1.1	33	
15 ● 0236	4.9	148							● 31	0113	5.2	160
									M 0444	5.0	153	
									0829	5.3	161	
									1724	1.4	43	

Time meridian 165° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# O. Paramushiru (Zaliv Tukharka), Kuril Islands, 2008

Times and Heights of High and Low Waters

April				May				June			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0206	5.2	160	16 W 0135	5.2	159	1 Th 0105	5.2	158	1 Su 0033	5.3	163
0648	4.8	146	0722	4.1	125	0729	3.3	101	0819	1.0	32
1000	5.0	151	1130	4.5	138	1250	4.4	133	1608	5.0	153
1835	1.7	52	1846	2.2	67	1854	2.8	85	2007	4.5	137
2 W 0240	5.2	159	17 Th 0206	5.2	157	2 F 0133	5.2	157	2 M 0101	5.4	166
0802	4.3	131	0810	3.5	106	0812	2.6	80	0901	0.5	14
1214	4.8	145	1330	4.6	141	1429	4.7	142	1708	5.4	166
1944	2.0	61	1954	2.6	79	2001	3.2	99	2114	4.9	148
3 Th 0305	5.2	158	18 F 0231	5.1	156	3 Sa 0159	5.2	157	3 Tu 0132	5.5	169
0847	3.7	113	0850	2.8	86	0852	1.9	56	0943	0.0	0
1402	4.9	148	1458	4.9	150	1544	5.1	154	1759	5.7	175
2045	2.3	69	2054	3.0	90	2101	3.6	111	2213	5.1	155
4 F 0327	5.2	157	19 Sa 0254	5.1	156	4 Su 0223	5.2	159	4 W 0206	5.6	171
0925	3.1	93	0927	2.1	65	0930	1.2	38	1024	-0.3	-10
1521	5.2	157	1606	5.3	161	1645	5.4	166	1843	6.0	182
2138	2.6	79	2146	3.3	101	2153	4.0	122	2306	5.2	158
5 Sa 0347	5.2	158	20 Su 0317	5.2	158	5 M 0248	5.3	162	5 Th 0244	5.6	172
1001	2.4	72	1004	1.5	45	1008	0.7	21	1104	-0.5	-15
1626	5.4	166	1703	5.6	170	1739	5.7	175	1813	5.9	179
2224	2.9	89	2232	3.7	112	2240	4.4	133	2250	4.9	149
6 Su 0407	5.2	159	21 M 0339	5.3	162	6 Tu 0314	5.4	166	6 W 0254	5.6	170
1037	1.7	53	1040	0.9	28	1046	0.2	7	1054	-0.2	-7
1722	5.7	173	1756	5.8	177	1829	5.9	181	1900	6.0	184
● 2305	3.3	101	2313	4.0	123	2322	4.6	141	2336	5.1	154
7 M 0428	5.3	162	22 Tu 0402	5.4	166	7 W 0341	5.6	170	7 Th 0224	5.5	167
1113	1.2	37	1118	0.5	14	1124	-0.1	-2	1015	0.1	2
1814	5.8	177	1847	5.9	181	1917	6.0	184	1813	5.9	179
2343	3.7	113	2351	4.4	133	● 2240	4.4	133	2250	4.9	149
8 Tu 0449	5.4	166	23 W 0426	5.5	169	8 Th 0003	4.9	148	8 F 0254	5.6	171
1150	0.8	23	1156	0.2	6	0410	5.6	172	1145	-0.5	-14
1906	5.9	179	1937	6.0	182	1204	-0.2	-6	2000	6.1	185
9 W 0018	4.1	125	24 Th 0029	4.7	142	2005	6.0	184	2003	5.9	181
0511	5.6	170	0453	5.6	172	● 2240	4.4	133	2003	5.9	181
1229	0.5	15	1235	0.1	2	2028	5.9	180	2033	6.0	182
1958	5.8	178	2028	5.9	180	● 2240	4.4	133	2033	6.0	182
10 Th 0053	4.4	135	25 F 0107	4.9	148	10 Sa 0130	5.0	153	10 W 0147	4.4	133
0535	5.7	173	0521	5.6	172	0517	5.5	169	0503	5.3	161
1309	0.4	11	1316	0.1	4	1325	0.1	3	1305	0.1	3
2053	5.7	174	2120	5.8	177	2136	5.8	178	2104	5.8	178
11 F 0128	4.7	144	26 Sa 0150	5.0	151	11 Su 0223	4.9	150	11 W 0147	4.4	133
0601	5.7	174	0553	5.6	170	0558	5.3	162	0529	5.3	162
1352	0.4	13	1400	0.4	11	1409	0.5	15	1336	0.3	8
2152	5.6	170	2213	5.7	173	2219	5.7	173	2140	5.8	177
12 Sa 0207	4.9	150	27 Su 0243	5.0	151	12 M 0327	4.7	143	12 W 0323	3.4	103
0630	5.6	172	0630	5.4	164	0649	5.0	153	0802	4.4	133
1438	0.6	19	1446	0.7	22	1455	1.0	30	1434	1.2	37
2257	5.4	166	2305	5.5	168	● 2259	5.5	168	2140	5.6	170
13 Su 0300	5.0	152	28 M 0355	4.8	146	13 Tu 0440	4.3	132	11 W 0415	2.8	86
0705	5.4	166	0718	5.1	154	0803	4.6	140	0930	4.1	125
1530	1.0	29	1538	1.2	37	1546	1.6	49	1512	2.5	76
● 2352	5.4	164	2352	5.4	164	2334	5.4	164	● 2203	5.5	167
14 M 0001	5.3	163	29 Tu 0523	4.5	136	14 W 0549	3.8	116	27 F 0508	2.2	68
0421	4.9	150	0836	4.7	142	0952	4.3	130	1114	4.0	121
0751	5.2	157	1637	1.7	53	1644	2.2	68	1550	3.2	98
1628	1.3	41	● 2352	5.4	164	2339	5.3	162	2225	5.5	167
15 Tu 0055	5.3	161	30 W 0032	5.3	161	15 Th 0006	5.3	161	27 F 0508	2.2	68
0606	4.6	141	0637	3.9	120	0645	3.2	97	1213	4.0	123
0916	4.8	146	1041	4.4	133	1546	2.1	64	1642	3.3	102
1735	1.8	55	1744	2.3	70	2312	5.4	164	2313	5.4	165
16 W 0735	5.3	161	● 2352	5.4	164	2334	5.4	164	2249	5.4	165
1735	1.8	55	1744	2.3	70	1748	2.9	87	1244	5.5	167
15 Th 0648	2.4	73	15 Th 0557	3.1	93	14 Th 0650	1.6	50	1244	5.4	165
1735	1.8	55	15 Th 1107	4.0	123	14 Th 1412	4.3	132	1114	4.0	121
1735	1.8	55	15 Th 1646	2.8	85	14 Th 1740	4.0	123	1550	3.2	98
1735	1.8	55	15 Th 2339	5.3	162	14 Th 2339	5.4	166	2225	5.5	167
15 Th 0735	5.3	161	15 Th 0735	1.7	52	14 Th 0735	1.6	50	27 F 0508	2.2	68
1735	1.8	55	15 Th 1451	4.6	139	14 Th 1451	4.6	139	1213	4.1	126
1735	1.8	55	15 Th 1856	4.0	123	14 Th 1856	4.6	140	1630	3.9	119
1735	1.8	55	15 Th 3100	5.3	162	14 Th 3100	5.3	162	2249	5.5	168

Time meridian 165° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

## O. Paramushiru (Zaliv Tukharka), Kuril Islands, 2008

## Times and Heights of High and Low Waters

July					August					September																	
Time		Height			Time		Height			Time		Height			Time		Height			Time		Height					
	Time	ft	cm		Time	ft	cm		Time	ft	cm		Time	ft	cm		Time	ft	cm		Time	ft	cm		Time		
<b>1</b> Tu	0834	0.1	3		<b>16</b> W	0846	-0.1	-2	<b>1</b> F	0106	5.3	163		<b>16</b> Sa	0204	5.1	155		<b>1</b> M	0412	5.1	155		<b>16</b> Tu	0454	5.2	158
	1737	5.4	166		1755	5.5	168		0950	0.0	0		1004	0.4	12		1100	1.3	39		1110	11.10	2.1	63			
	2030	5.3	161		2109	5.3	162		1808	5.5	169		1748	5.3	162		1740	5.1	155		1713	5.0	152				
<b>2</b> W	0028	5.6	172		<b>17</b> Th	0033	5.5	169	<b>2</b> Sa	0228	5.2	159		<b>17</b> Su	0322	5.1	155		<b>2</b> Tu	0512	5.2	158		<b>17</b> W	0549	5.3	162
	0921	-0.2	-7		0935	-0.2	-7		1035	0.1	3		1048	0.6	19		1139	1.7	51		1147	2.5	76				
	1811	5.7	174		1817	5.7	173		1826	5.5	168		1805	5.3	161		1757	5.1	155		1731	5.1	155				
	2154	5.3	163		2223	5.2	158		2321	4.3	131		2323	3.5	108												
<b>3</b> Th	0117	5.6	171		<b>18</b> F	0141	5.4	166	<b>3</b> Su	0341	5.2	157		<b>18</b> M	0430	5.1	156		<b>3</b> W	0000	2.1	64		<b>18</b> Th	0001	1.3	39
	1006	-0.4	-12		1020	-0.3	-8		1117	0.3	10		1129	1.0	29		1215	2.2	66		1222	3.0	90				
	1841	5.8	178		1839	5.7	174		1844	5.4	166		1822	5.2	160		1815	5.2	157		1751	5.2	158				
<b>4</b> F	2257	5.2	159		O	2314	4.9	149	2358	3.8	116		2359	3.0	91												
	0215	5.5	169		<b>19</b> Sa	0252	5.3	163	<b>4</b> M	0447	5.1	156		<b>19</b> Tu	0531	5.1	156		<b>4</b> Th	0037	1.6	48		<b>19</b> F	0039	0.9	26
	1049	-0.4	-13		1103	-0.2	-5		1156	0.7	21		1206	1.4	42		1248	2.7	82		1254	3.4	105				
<b>5</b> Sa	1908	5.9	179		1901	5.7	174		1902	5.4	165		1840	5.2	159		1834	5.2	160		1811	5.3	162				
	2346	5.0	152		2355	4.5	137																				
	0317	5.4	165		<b>20</b> Su	0400	5.2	159	<b>5</b> Tu	0036	3.2	99		<b>20</b> W	0036	2.4	74		<b>5</b> F	0116	1.2	36		<b>20</b> Sa	0119	0.6	18
<b>6</b> Su	1130	-0.3	-9		1144	0.1	3		0549	5.0	153		0628	5.1	154		0800	5.1	154		0833	5.2	158				
	1933	5.8	178		1921	5.6	172		1233	1.1	35		1241	1.9	58		1319	3.2	98		1325	3.9	118				
									1920	5.3	163		1857	5.2	160		1853	5.3	163		1833	5.4	165				
<b>7</b> M	0029	4.7	142		<b>21</b> M	0035	4.0	123	<b>6</b> W	0115	2.7	82		<b>21</b> Th	0115	1.9	58		<b>6</b> Sa	0158	0.9	26		<b>21</b> Su	0202	0.4	13
	0420	5.2	160		0505	5.1	155		0649	4.9	149		0726	5.0	151		0902	4.9	149		0937	5.1	154				
	1210	0.0	0		1222	0.5	16		1307	1.7	53		1314	2.5	75		1348	3.7	113		1356	4.2	129				
	1956	5.8	176		1941	5.5	169		1938	5.3	163		1916	5.3	162		1915	5.4	166		1857	5.4	166				
<b>8</b> Tu	0111	4.2	129		<b>22</b> Tu	0114	3.5	107	<b>7</b> Th	0156	2.2	67		<b>22</b> F	0156	1.4	44		<b>7</b> Su	0244	0.7	21		<b>22</b> M	0249	0.5	14
	0523	5.1	154		0608	4.9	149		0751	4.7	143		0827	4.8	146		1015	4.7	144		1052	4.9	150				
	1249	0.5	14		1259	1.0	32		1340	2.4	72		1344	3.1	93		1415	4.1	126		1430	4.5	138				
<b>9</b> W	2018	5.6	172		2000	5.5	167		1957	5.4	165		1935	5.4	165		1938	5.5	167		1924	5.4	165				
	0153	3.7	114		<b>23</b> W	0155	3.0	91	<b>8</b> F	0240	1.7	52		<b>23</b> Sa	0241	1.1	34		<b>8</b> M	0334	0.6	19		<b>23</b> Tu	0341	0.6	18
	0627	4.8	146		0712	4.7	143		0859	4.5	137		0936	4.6	140		1148	4.7	142		1222	4.9	148				
<b>10</b> Th	1326	1.0	31		1334	1.6	50		1409	3.0	91		1411	3.6	110		1441	4.5	137		1517	4.7	144				
	2039	5.6	170		2019	5.4	166		2016	5.4	166		1956	5.5	167		2005	5.4	166		1958	5.2	160				
<b>11</b> F	0238	3.2	97		<b>24</b> Th	0239	2.4	74	<b>9</b> Sa	0328	1.3	41		<b>24</b> Su	0330	0.9	27		<b>9</b> Tu	0432	0.7	21		<b>24</b> W	0441	0.8	25
	0736	4.5	138		0819	4.5	136		1018	4.3	132		1103	4.5	136		1103	4.5	136		1345	4.9	149				
	1403	1.7	51		1407	2.3	71		1436	3.6	109		1434	4.1	125		2019	5.5	169		1657	4.8	145				
<b>12</b> Sa	2059	5.5	168		2038	5.4	166		2037	5.5	169						2038	5.3	162		2046	5.0	152				
<b>13</b> Su	0325	2.7	81		<b>25</b> F	0326	1.9	59	<b>10</b> Su	0420	1.0	31		<b>25</b> M	0425	0.8	23		<b>10</b> W	0536	0.8	24		<b>25</b> Th	0548	1.1	33
	0851	4.3	130		0936	4.3	130		1205	4.3	131		1310	4.5	138		1516	4.9	149		1434	4.9	150				
	1437	2.4	72		1437	3.0	91		1454	4.1	125		1444	4.5	137		1723	4.9	148		1907	4.5	137				
<b>14</b> F	2119	5.5	167		2058	5.5	168		2100	5.6	170		2045	5.5	168		2129	5.1	155		2222	4.7	142				
<b>15</b> M	0416	2.1	64		<b>26</b> Sa	0418	1.5	45	<b>11</b> M	0518	0.8	23		<b>26</b> Tu	0526	0.7	20		<b>11</b> Th	0645	0.9	27		<b>26</b> F	0659	1.3	40
	1021	4.1	124		1110	4.1	126		2128	5.6	170		2120	5.4	165		1540	5.0	152		1503	4.9	150				
	1510	3.1	94		1504	3.6	111									1949	4.6	141		2308	4.8	147					
<b>16</b> Tu	2140	5.5	168		2119	5.6	170																				
<b>17</b> W	0510	1.6	48		<b>27</b> Su	0513	1.1	33	<b>12</b> Tu	0620	0.6	18		<b>27</b> W	0632	0.6	19		<b>12</b> F	0752	1.0	31		<b>27</b> Sa	0033	4.5	138
	1212	4.1	124		1323	4.3	130		2204	5.5	168		2214	5.2	159		1600	5.0	152		0806	1.6	48				
	1539	3.7	114		1517	4.2	128		1715	5.2	157		1634	5.1	156		2055	4.2	128		1526	4.9	149				
<b>18</b> M	2203	5.6	170		2143	5.6	171		1909	5.1	156		2030	4.8	146		2137	3.6	111		2102	3.4	105				
									2301	5.3	163		2352	5.0	152												
<b>19</b> Tu	0605	1.1	33		<b>28</b> M	0611	0.7	22	<b>13</b> W	0723	0.4	13		<b>28</b> F	0737	0.6	19		<b>13</b> Sa	0108	4.7	144		<b>28</b> Su	0215	4.7	142
	2228	5.6	171		2212	5.6	172		1715	5.2	157		1634	5.1	156		1852	1.2	36		1547	4.9	149				
									1909	5.1	156		2030	4.8	146		2139	2.8	85								
<b>20</b> W	0755	0.2	7		<b>29</b> Tu	0710	0.4	13	<b>14</b> M	0822	0.3	10		<b>29</b> F	0837	0.7	20		<b>14</b> Th	0240							

Time meridian 165° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

# O. Paramushiru (Zaliv Tukharka), Kuril Islands, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm		h m	ft	cm		h m	ft	cm	
1 W	0530	5.4	164	16	0605	5.6	170	1 Sa	0726	5.9	179
	1118	2.9	88	Th	1126	3.7	113		1214	4.7	142
	1646	5.1	154		1620	5.2	159	1 Su	1627	5.5	168
	2327	1.0	30		2331	0.3	10				
2 Th	0623	5.5	168	17	0655	5.7	173	2 Su	0016	-0.2	-7
	1155	3.3	101	F	1203	4.1	124		0815	5.8	178
	1706	5.2	158		1644	5.3	163		1255	4.8	146
3 F	0004	0.6	18	18 Sa	0009	0.1	2		1657	5.5	168
	0715	5.5	168		0746	5.7	174	3 M	0057	-0.2	-5
	1229	3.7	114		1239	4.4	133		0903	5.8	176
	1728	5.3	162		1709	5.4	166		1339	4.9	148
4 Sa	0043	0.3	9	19 Su	0049	0.0	-1		1731	5.4	165
	0808	5.5	167		0838	5.6	172	4 Tu	0139	0.1	2
	1302	4.1	125		1316	4.6	140		0951	5.6	172
	1751	5.4	165		1737	5.4	166		1433	4.8	147
5 Su	0124	0.2	6	20 M	0130	0.0	1		1811	5.2	159
	0905	5.3	163		0933	5.5	168	5 W	0224	0.5	14
	1336	4.4	134		1358	4.7	144		1037	5.5	168
	1817	5.4	166		1808	5.4	164		1540	4.6	141
6 M	0207	0.2	7	21 O	0144	0.3	10		1902	4.9	149
	1008	5.2	159	Tu	1030	5.4	164	6 Th	0233	0.9	26
	1415	4.6	141		1452	4.8	145		1031	5.6	170
	1845	5.4	164	O	1844	5.2	158		1615	4.2	128
7 Tu	0255	0.4	13	21 O	0215	0.3	8		1948	4.6	139
	1118	5.1	156	Tu	1126	5.2	160	6 W	0224	1.0	30
	1507	4.7	144		1608	4.6	141		1119	5.3	163
O	1919	5.2	159		1932	4.9	149		1658	4.3	130
8 W	0349	0.8	23	23 Th	0358	1.1	33	6 Th	0312	1.0	30
	1228	5.0	153		1216	5.2	157		1103	5.4	166
	1633	4.7	143		1742	4.3	131		1720	3.7	112
	2007	4.9	150		2054	4.5	137		2128	4.2	128
9 Th	0451	1.1	34	23 O	0406	1.6	48	6 Sa	0320	1.5	45
	1322	5.0	152	Tu	1126	5.2	160		1042	5.5	168
	1825	4.4	134		1608	4.6	141		1726	3.1	93
	2136	4.6	139		1932	4.9	149	O	2238	4.1	125
10 F	0600	1.5	47	23 Sa	0406	1.6	48	21 O	0326	2.1	64
	1400	4.9	150		1228	5.1	154	Tu	1020	5.6	172
	1939	3.9	119		1742	4.3	131		1729	2.4	73
	2351	4.4	133		2054	4.5	137	O	2340	4.2	127
11 Sa	0711	1.9	58	23 Th	0358	1.1	33	7 Su	0413	2.8	86
	1429	4.9	149		1216	5.2	157		1108	5.5	167
	2025	3.3	100		1742	4.3	131		1819	2.4	73
12 Su	0146	4.5	136		2054	4.5	137	22 M	0409	3.5	106
	0816	2.2	68	27 O	0243	4.6	140	Tu	1043	5.6	172
	1453	4.9	149	M	0824	3.0	91		1822	1.8	55
	2104	2.6	80		1420	5.0	151	O	2218	-0.2	-7
13 M	0309	4.8	145		2106	1.8	55	27 Sa	0618	6.0	182
	0913	2.6	79	27 Th	0436	5.2	160		1011	5.5	169
	1515	4.9	149		0926	4.1	126		1335	5.8	178
	2141	1.9	59		1416	5.3	161	O	2218	-0.2	-7
14 Tu	0415	5.1	156		2149	0.5	15	27 O	0618	6.0	182
	1002	3.0	90	29 W	0454	5.3	163	Tu	0948	5.3	161
	1537	5.0	151		1010	3.7	114		1337	5.8	176
	2217	1.3	40		1508	5.2	157	O	2218	-0.2	-7
15 W	0512	5.4	164		2221	0.6	18	28 M	0652	5.8	177
	1046	3.3	101	O	0637	5.8	177	Tu	0948	5.3	161
	1558	5.1	155		1135	4.4	134		1337	5.8	176
	2254	0.8	23		1559	5.4	165	O	2218	-0.2	-7
16 F					2337	-0.1	-4	28 Sa	0605	5.8	178
								Tu	1029	5.1	154
									1425	5.6	172
									2328	-0.3	-8
17 W								28 O	0634	6.0	184
								Tu	1047	5.4	164
									1418	5.8	176
								O	2247	-0.4	-11
18 O								28 O	0650	6.1	186
								Tu	1110	5.4	166
									1430	5.8	176
									2301	-0.2	-7
19 O											
20 O											
21 O											
22 O											
23 O											
24 O											
25 O											
26 O											
27 O											
28 O											
29 O											
30 O											
31 O											

Time meridian 165° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Yamato Wan, Matsuwa To, Kuril Islands, 2008

Times and Heights of High and Low Waters

January				February				March			
	Time	Height			Time	Height			Time	Height	
	h m	ft cm			h m	ft cm			h m	ft cm	
<b>1</b> Tu	0326	1.8 55	<b>16</b> W	0243	1.9 58	<b>1</b> F	0942	3.9 119	<b>16</b> Sa	0915	4.5 137
	1041	3.5 107		0936	3.7 113		1903	1.1 34		1905	0.4 12
	1757	2.0 61		1701	1.6 49						
	2305	2.4 73	<b>O</b>	2316	2.5 76						
<b>2</b> W	0322	2.2 67	<b>17</b> Th	0225	2.4 73	<b>2</b> Sa	1008	4.0 122	<b>17</b> Su	0959	4.5 137
	1053	3.6 110		0949	4.0 122		2014	0.9 27		2025	0.2 6
	1908	1.6 49		1818	1.1 34						
<b>3</b> Th	1108	3.7 113	<b>18</b> F	1012	4.2 128	<b>3</b> Su	1047	4.0 122	<b>18</b> M	1104	4.4 134
	2007	1.2 37		1933	0.6 18		2114	0.7 21		2131	0.1 3
<b>4</b> F	1129	3.9 119	<b>19</b> Sa	1045	4.4 134	<b>4</b> M	1145	4.0 122	<b>19</b> Tu	1241	4.2 128
	2057	0.9 27		2041	0.2 6		2204	0.5 15		2225	0.2 6
<b>5</b> Sa	1159	4.0 122	<b>20</b> Su	1134	4.6 140	<b>5</b> Tu	1300	4.1 125	<b>20</b> W	1422	4.1 125
	2143	0.6 18		2142	-0.2 -6		2245	0.3 9		2310	0.3 9
<b>6</b> Su	1240	4.1 125	<b>21</b> M	1241	4.6 140	<b>6</b> W	1413	4.1 125	<b>21</b> Th	0730	3.3 101
	2224	0.4 12		2235	-0.3 -9		2321	0.3 9		1018	3.2 98
<b>7</b> M	1330	4.1 125	<b>22</b> Tu	1358	4.6 140	<b>7</b> Th	1518	4.1 125	<b>21</b> O	1544	4.0 122
	2303	0.2 6		2323	-0.3 -9		2353	0.3 9		2347	0.5 15
<b>8</b> Tu	1421	4.2 128	<b>23</b> W	1512	4.5 137	<b>8</b> F	0813	3.3 101	<b>22</b> F	0714	3.2 98
	2339	0.1 3					1044	3.2 98		1120	2.8 85
<b>9</b> W	1511	4.3 131	<b>24</b> Th	0006	-0.2 4.3	<b>9</b> Sa	0023	0.5 15	<b>23</b> Sa	0019	0.8 24
				1619	-6		0757	3.2 98		0712	3.2 98
<b>10</b> Th	0013	0.0 0	<b>25</b> F	0043	0.1 3	<b>9</b> Sa	1145	2.9 88	<b>23</b> O	1208	2.4 73
	1558	4.2 128		0846	3.4 104		1716	3.9 119		1751	3.7 113
<b>11</b> F	0045	0.1 3	<b>25</b> Su	0043	0.1 3	<b>10</b> M	0050	0.7 21	<b>24</b> M	0046	1.2 37
	1646	4.2 128		0846	3.4 104		0751	3.3 101		0715	3.3 101
<b>12</b> Sa	0115	0.2 6	<b>27</b> Su	0143	0.9 101	<b>10</b> Su	0153	1.6 49	<b>24</b> Su	0614	3.2 98
	0935	3.4 104		0846	3.3 101		1237	2.5 76		1146	1.9 58
	1217	3.2 98		1353	2.5 76		1815	3.7 113		1755	3.6 110
	1736	4.0 122		1914	3.4 104						
<b>13</b> Su	0143	0.5 15	<b>28</b> M	0206	1.3 40	<b>11</b> M	0115	1.1 34	<b>26</b> Tu	0127	2.0 61
	0927	3.3 101		0852	3.4 104		0750	3.4 104		0728	3.5 107
	1326	3.0 91		1448	2.1 64		1329	2.0 61		1413	1.4 43
	1832	3.7 113		2015	3.1 94		1919	3.4 104		2040	3.1 94
<b>14</b> M	0209	0.9 27	<b>29</b> Tu	0222	1.8 55	<b>14</b> Th	0141	2.5 76	<b>29</b> F	0808	3.9 119
	0925	3.4 104		0900	3.5 107		0820	4.1 125		1642	1.1 34
	1435	2.6 79		1544	1.8 55		1627	0.8 24			
	1937	3.3 101		2128	2.8 85	<b>O</b>					
<b>15</b> Tu	0231	1.4 43	<b>30</b> W	0227	2.2 67	<b>15</b> F	0843	4.3 131	<b>14</b> F	0721	4.4 134
	0928	3.5 107		0910	3.6 110		1743	0.6 18		1602	0.3 9
	1546	2.1 64		1644	1.6 49						
	2102	2.8 85	<b>O</b>	2320	2.5 76						
<b>31</b> Th	0158	2.4 73	<b>31</b> Th	0158	2.4 73						
	0923	3.8 116		1751	1.4 43						

Time meridian 165° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.

Heights are referred to the chart datum of soundings.

\* Neither a high or low water but an intermediate value to show the period of an approximate stand.

# Yamato Wan, Matsuwa To, Kuril Islands, 2008

Times and Heights of High and Low Waters

April					May					June														
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height										
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm										
<b>1</b> Tu	0848 1925	3.8 1.0	116 30	<b>16</b> W	0424 0800 1135 2014	3.2 3.1 3.2 1.4	98 94 98 43	<b>1</b> Th	0315 0724 1015 1903	3.2 3.0 3.1 1.5	98 91 94 46	<b>16</b> F	0155 0904 1515 1935	3.4 1.9 2.7 2.4	104 58 82 73	<b>1</b> Su	0045 0850	3.6 1.1	110 34	<b>16</b> M	0052 0952	3.9 0.6	119 18	
<b>2</b> W	1013 2028	3.5 1.1	107 34	<b>17</b> Th	0354 0917 1414 2106	3.2 2.6 3.1 1.7	98 79 94 52	<b>2</b> F	0244 0832 1327 1957	3.2 2.5 2.9 1.9	98 76 88 58	<b>17</b> Sa	0206 0943 1705 2019	3.5 1.4 2.9 2.8	107 43 88 85	<b>2</b> M	0102 0936	3.9 0.4	119 12	<b>17</b> Tu	0119 1030	4.0 0.4	122 12	
<b>3</b> Th	0533 0822 1254 2118	3.2 3.1 3.3 1.3	98 94 101 40	<b>18</b> F	0351 1001 1557 2149	3.2 2.0 3.1 2.0	98 61 94 61	<b>3</b> Sa	0237 0915 1536 2046	3.2 1.9 3.0 2.4	98 58 91 73	<b>18</b> Su	0220 1017 1824 2100	3.6 0.9 3.2 3.1	110 27 98 94	<b>3</b> Tu	0129 1023	4.3 -0.1	131 -3	<b>18</b> W	0152 1106	4.1 0.2	125 6	
<b>4</b> F	0448 0927 1451 2200	3.1 2.6 3.3 1.5	94 79 101 46	<b>19</b> Sa	0356 1037 1712 2225	3.3 1.5 3.2 2.4	101 46 98 73	<b>4</b> Su	0240 0955 1711 2127	3.4 1.2 3.2 2.8	104 37 98 85	<b>19</b> M	0236 1050 1925 2135	3.8 0.6 3.3 3.2	116 18 101 98	<b>4</b> W	0205 1110	4.5 -0.5	137 -15	<b>19</b> Th	0230 1142	4.1 0.1	125 3	
<b>5</b> Sa	0434 1011 1617 2236	3.1 2.1 3.4 1.8	94 64 104 55	<b>20</b> Su	0405 1110 1814 2256	3.5 1.1 3.3 2.7	107 34 101 82	<b>5</b> M	0251 1037 1832 2159	3.7 0.5 3.5 3.2	113 15 107 98	<b>20</b> Tu	0255 1122	3.9 0.4	119 12	<b>5</b> Th	0250 1158	4.7 -0.7	143 -21	<b>20</b> F	0309 1217	4.2 0.1	128 3	
<b>6</b> Su	0431 1052 1731 ●	3.2 1.5 3.5 2.3	98 46 107 70	<b>21</b> M	0415 1141 1908 2322	3.6 0.8 3.4 2.9	110 24 104 88	<b>6</b> Tu	0309 1120 1951 2218	4.0 0.0 3.6 3.5	122 0 110 107	<b>21</b> W	0317 1154	4.0 0.2	122 6	<b>6</b> F	0339 1246	4.8 -0.7	146 -21	<b>21</b> Sa	0348 1251	4.2 0.1	128 3	
<b>7</b> M	0436 1133 1840 2333	3.5 0.9 3.5 2.7	107 27 107 82	<b>22</b> Tu	0428 1211 1959 2341	3.7 0.6 3.4 3.1	113 18 104 94	<b>7</b> W	0336 1205 1205 -0.4	4.3 -12	131	<b>22</b> Th	0343 1227	4.1 0.2	125 6	<b>7</b> Sa	0431 1333	4.8 -0.5	146 -15	<b>22</b> Su	0428 1323	4.2 0.1	128 3	
<b>8</b> Tu	0448 1216 1951 2351	3.8 0.3 3.5 3.1	116 9 107 94	<b>23</b> W	0443 1243 2053 2351	3.8 0.4 3.4 3.2	116 12 104 98	<b>8</b> Th	0410 1252 1302 -0.6	4.6 -18	140	<b>23</b> F	0412 1302	4.1 0.1	125 3	<b>8</b> Su	0524 1418	4.6 -0.2	140 -6	<b>23</b> M	0508 1354	4.1 0.3	125 9	
<b>9</b> W	0506 1302 2109 2355	4.1 0.0 3.5 3.3	125 0 107 101	<b>24</b> Th	0501 1316	3.9 0.4	119 12	<b>9</b> F	0449 1341	4.7 -15	143	<b>24</b> Sa	0442 1338	4.2 0.2	128 6	<b>9</b> M	0617 1500 2340	4.2 0.3 3.4	128 9 104	<b>24</b> Tu	0551 1424 2246	3.9 0.5 3.3	119 15 101	
<b>10</b> Th	0531 1351	4.4 -0.2	134 -6	<b>25</b> F	0523 1353	4.0 0.4	122 12	<b>10</b> Sa	0531 1432	4.7 -0.3	143	<b>25</b> Su	0514 1415	4.1 0.3	125 9	<b>10</b> Tu	0222 0715 1537 2339	3.3 3.7 0.8 3.3	101 113 24 101	<b>25</b> W	0206 0642 1452 2241	3.2 3.6 0.9 3.3	98 110 27 101	
<b>11</b> F	0603 1444	4.5 -0.1	137 -3	<b>26</b> Sa	0548 1434	4.0 0.5	122 15	<b>11</b> Su	0616 1524	4.5 0.0	137 0	<b>26</b> M	0548 1452	4.0 0.5	122 15	<b>11</b> W	0427 0827 1609 2346	2.9 3.2 1.4 3.4	88 98 43 104	<b>26</b> Th	0335 0750 1517 2241	2.8 3.2 1.3 3.4	85 98 40 104	
<b>12</b> Sa	0639 1542	4.6 0.0	140 0	<b>27</b> Su	0617 1519	4.0 0.6	122 18	<b>12</b> M	0704 1616	4.1 0.5	125 15	<b>27</b> Tu	0625 1530	3.8 0.7	116 21	<b>12</b> Th	0617 1022 1633 2358	2.4 2.7 1.9 3.5	73 82 58 107	<b>27</b> F	0501 0931 1534 2246	2.4 2.7 1.9 3.6	73 82 58 110	
<b>13</b> Su	0719 1647	4.4 0.3	134 9	<b>28</b> M	0647 1610	4.0 0.8	122 24	<b>13</b> Tu	0758 1708	3.6 1.0	110 30	<b>28</b> W	0710 1608	3.5 1.0	107 30	<b>13</b> F	0735 1333 1636	1.9 2.4 2.3	58 73 70	<b>28</b> Sa	0618 1224 1522 2258	1.8 2.5 2.4 3.8	55 76 73 116	
<b>14</b> M	0805 1759	4.1 0.7	125 21	<b>29</b> Tu	0721 1705	3.8 1.0	116 30	<b>14</b> W	0151 0630 0931 1759	3.3 3.0 3.1 1.5	101 91 94 46	<b>29</b> Th	0041 0522 0826 1646	3.3 3.0 3.1 1.5	101 91 94 46	<b>14</b> Sa	0012 0829	3.7 1.4	113 43	<b>29</b> Su	0725 2318	1.1 4.1	98 125	
<b>15</b> Tu	0906 1910	3.7 1.0	113 30	<b>30</b> W	0805 1804	3.5 1.2	107 37	<b>15</b> Th	0148 0814 1235 1848	3.3 2.4 2.7 2.0	101 73 82 61	<b>30</b> F	0034 0705 1110 1722	3.3 2.5 2.7 2.0	101 76 82 61	<b>15</b> Su	0030 0913	3.8 1.0	116 30	<b>30</b> M	0825 2349	0.5 4.4	15 134	
													<b>31</b> Sa	0036 0802 1434 1751	3.4 1.8 2.6 2.5	104 55 79 76								

Time meridian 165° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.

Heights are referred to the chart datum of soundings.

\* Neither a high or low water but an intermediate value to show the period of an approximate stand.

# Yamato Wan, Matsuwa To, Kuril Islands, 2008

Times and Heights of High and Low Waters

July				August				September															
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height												
h m 0921	ft 0.0	cm 0	16 W	0019 1012	4.1 0.4	125 12	1 F	0125 1059	4.6 -0.3	140 -9	16 Sa	0208 1107	3.9 0.5	119 15	1 M	0438 1156	3.8 1.0	116 30	16 Tu	0444 1129	3.6 1.5	110 46	
1 Tu				●																			
2 W	0034 1014	4.6 -0.4	140 -12	17 Th	0112 1053	4.1 0.3	125 9	2 Sa	0246 1144	4.5 -0.2	137 -6	17 Su	0314 1139	3.9 0.5	119 15	2 Tu	0542 1225	3.7 1.4	113 43	17 W	0546 1744	3.5 3.4	107 104
3 Th	0130 1105	4.8 -0.6	146 -18	18 F	0208 1130	4.1 0.2	125 6	3 Su	0400 1223	4.3 0.1	131 3	18 M	0412 1207	3.9 0.7	119 21	3 W	0033 0643	1.8 3.5	55 107	18 Th	0010 0648	1.3 3.5	40 107
●				○																			
4 F	0233 1154	4.8 -0.6	146 -18	19 Sa	0301 1203	4.1 0.2	125 6	4 M	0506 1257	4.1 0.5	125 15	19 Tu	0509 1232	3.8 1.0	116 30	4 Th	0115 0741	1.4 3.3	43 101	19 F	0053 0754	0.8 3.4	24 104
5 Sa	0337 1239	4.7 -0.5	143 -15	20 Su	0351 1234	4.1 0.2	125 6	5 Tu	0036 0609	2.7 3.8	82 116	20 W	0022 0606	2.3 3.6	70 110	5 F	0157 0842	1.2 3.1	37 94	20 Sa	0138 0911	0.5 3.2	15 98
6 Su	0439 1320	4.5 -0.2	137 -6	21 M	0440 1302	4.0 0.4	122 12	6 W	0134 0711	2.3 3.5	70 107	21 Th	0109 0707	1.9 3.4	58 104	6 Sa	0239 0954	1.0 3.0	30 91	21 Su	0229 1848	0.3 4.4	9 134
7 M	0000 0539	3.3 4.2	101 128	22 Tu	0014 0530	3.1 3.9	94 119	7 Th	0229 0816	1.9 3.1	58 94	22 F	0157 0816	1.5 3.2	46 98	7 Su	0326 1944	1.0 3.9	30 119	22 M	0327 1921	0.2 4.5	6 137
1356 2150	0.2 3.3	6 101		1328 2101	0.6 3.3	18 101	1407 2033	1.9 3.6	58 110	1328 1935	2.2 3.7	67 113	○										
8 Tu	0130 0640	3.0 3.8	91 116	23 W	0115 0624	2.8 3.6	85 110	8 F	0324 0930	1.6 2.8	49 85	23 Sa	0250 0942	1.1 2.9	34 88	8 M	0422 2009	1.0 3.9	30 119	23 Tu	0434 2000	0.3 4.4	9 134
1428 2153	0.7 3.4	21 104		1352 2059	1.0 3.3	30 101	1413 2045	2.3 3.7	70 113	1950 2045	2.6 4.0	79 122	○										
9 W	0250 0745	2.7 3.3	82 101	24 Th	0215 0727	2.5 3.3	76 101	9 Sa	0421 1121	1.4 2.6	43 79	24 Su	0350 2012	0.8 4.3	24 131	9 Tu	0532 2040	1.0 3.9	30 119	24 W	0553 2049	0.4 4.2	12 128
1453 2200	1.3 3.5	40 107		1412 2101	1.4 3.5	43 107	2100 2101	1.4 3.8	76 116	○													
10 Th	0407 0904	2.3 2.9	70 88	25 F	0317 0844	2.0 2.9	61 88	10 Su	0525 2121	1.2 3.9	37 119	25 M	0500 2043	0.6 4.4	18 134	10 W	0654 2124	1.0 3.8	30 116	25 Th	0714 2211	0.6 3.9	18 119
1510 2211	1.8 3.6	55 110		1425 2108	1.9 3.7	58 113	2108 2108	1.9 3.7	58 113	○													
11 F	0523 1055	1.9 2.5	58 76	26 Sa	0423 1035	1.6 2.6	49 79	11 M	0637 2149	1.1 3.9	34 119	26 Tu	0620 2126	0.4 4.5	12 137	11 Th	0810 2240	1.0 3.7	30 113	26 F	0826	0.7	21
1508 2225	2.2 3.7	67 113		1417 2121	2.4 3.9	73 119	○																
12 Sa	0634 2242	1.5 3.8	46 116	27 Su	0535 2142	1.1 4.2	34 128	12 Tu	0751 2230	0.9 4.0	27 122	27 W	0743 2228	0.3 4.4	9 134	12 F	0908	0.9	27	27 Sa	0041 0923	3.6 0.9	110 27
2225	3.7	113		1417 2121	2.4 3.9	73 119	○																
13 Su	0739 2305	1.2 3.9	37 119	28 M	0650 2214	0.7 4.4	21 134	13 W	0856 2331	0.8 3.9	24 119	28 Th	0855	0.2	6	13 Sa	0042 0953	3.6 0.9	110 27	28 Su	0244 1009	3.4 1.2	104 37
2336	4.0	122		1417 2300	4.6	140	14 Th	0949	0.6	18	29 F	0003 0954	4.2 0.2	128 6	14 Su	0221 1029	3.6 1.0	110 30	29 M	0411 1047	3.4 1.6	104 49	
1502 2304	0.9 2.3	27 134		1042 1858	0.4 3.3	12 101	15 F	0051 1031	3.9 0.5	119 15	30 Sa	0153 1042	4.1 0.4	125 12	15 M	0338 1101	3.6 1.2	110 37	30 Tu	0521 1118	3.4 2.0	104 61	
1502 2304	0.6 2.3	18 134		1858 2151	3.3 3.1	101 94	○																
15 Tu				31 Th	0005 1008	4.6 -0.2	140 -6									13 Su	0323 1122	3.9 0.6	119 18	27 Sa	0441 1710	3.4 3.2	104 85
2341				2257 ●												13 Tu	0250 2257	2.7 2.7	82 82	28 Su	0244 1700	3.4 3.2	104 67

Time meridian 165° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.

Heights are referred to the chart datum of soundings.

\* Neither a high or low water but an intermediate value to show the period of an approximate stand.

# Yamato Wan, Matsuwa To, Kuril Islands, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 W 0622	3.4	104	16 Th 0631	3.5	107	1 Sa 0031	0.3	9	16 Su 0029	-0.6	-18
1145	2.3	70	1105	2.8	85	0859	3.4	104	1622	4.8	146
1717	3.5	107	1617	3.8	116	1125	3.3	101	1640	4.0	122
			2355	0.3	9						
2 Th 0017	0.9	27	17 F 0739	3.5	107	2 Su 0105	0.2	6	17 M 0117	-0.6	-18
0718	3.4	104	1122	3.2	98	1704	4.1	125	1706	4.8	146
1207	2.6	79	1636	4.1	125						
1728	3.7	113									
3 F 0051	0.7	21	18 Sa 0038	-0.1	-3	3 M 0141	0.3	9	18 Tu 0206	-0.5	-15
0813	3.3	101	0856	3.5	107	1730	4.1	125	1752	4.6	140
1223	2.9	88	1126	3.4	104						
1742	3.8	116	1701	4.4	134						
4 Sa 0126	0.6	18	19 Su 0125	-0.3	-9	4 Tu 0220	0.4	12	19 W 0256	-0.1	-3
0913	3.2	98	1732	4.6	140	1759	4.0	122	1840	4.3	131
1229	3.0	91									
1758	3.9	119									
5 Su 0204	0.6	18	20 M 0215	-0.3	-9	5 W 0303	0.6	18	20 Th 0345	0.3	9
1818	3.9	119	1808	4.6	140	1828	3.9	119	1934	3.7	113
6 M 0246	0.7	21	21 Tu 0311	-0.1	-3	6 Th 0349	0.8	24	21 F 0433	0.9	27
1842	4.0	122	1848	4.5	137	1858	3.7	113	1311	3.3	101
									1737	3.0	91
									2055	3.2	98
7 Tu 0335	0.8	24	22 W 0412	0.2	6	7 F 0439	1.0	30	21 O 0341	1.1	34
1909	3.9	119	1933	4.2	128	1930	3.4	104	1202	3.3	101
									1656	2.9	88
									2004	3.0	91
8 W 0435	0.9	27	23 Th 0518	0.6	18	8 Sa 0531	1.3	40	21 M 0359	1.9	58
1940	3.8	116	2027	3.7	113	1430	3.2	98	1119	3.6	110
									1858	3.5	107
9 Th 0545	1.1	34	24 F 0627	1.0	30	9 Su 0625	1.6	49	22 O 0437	2.0	61
2017	3.6	110	1546	3.3	101	1410	3.2	98	1203	3.4	104
			1932	3.1	94	2030	2.4	73	2042	1.8	55
			2241	3.2	98						
10 F 0658	1.2	37	25 Sa 0731	1.4	43	10 M 0112	2.7	82	23 M 0601	2.0	61
2137	3.4	104	1516	3.2	98	0717	2.0	61	1318	3.4	104
			2056	2.5	76	1406	3.3	101	2042	1.8	55
						2104	1.8	55			
11 Sa 0800	1.3	40	26 Su 0145	3.0	91	11 Tu 0331	2.9	88	8 M 0437	2.0	61
1639	3.2	98	0827	1.8	55	0806	2.5	76	1203	3.4	104
2043	3.0	91	1514	3.3	101	1410	3.5	107	1943	1.8	55
			2141	1.9	58	2141	1.2	37			
12 Su 0047	3.2	98	27 M 0343	3.0	91	12 W 0509	3.1	94	10 W 1230	3.9	119
0851	1.5	46	0914	2.2	67	0848	2.9	88	2117	0.5	15
1610	3.1	94	1520	3.4	104	1421	3.7	113			
2125	2.5	76	2219	1.4	43	2219	0.5	15	2202	0.8	24
13 M 0246	3.2	98	28 Tu 0507	3.1	94	13 O 1432	4.0	122	12 F 1337	4.5	137
0933	1.7	52	0953	2.5	76	0920	3.3	101	2250	-0.5	-15
1601	3.2	98	1531	3.6	110	1441	4.1	125			
2201	1.9	58	2253	0.9	27	O 2300	0.0	0	23 O 1424	4.7	143
14 Tu 0412	3.3	101	29 W 0613	3.3	101				2338	-0.7	-21
1009	2.0	61	1026	2.8	85	14 F 1508	4.4	134			
1600	3.3	101	1545	3.7	113	2344	-0.4	-12	29 Sa 1516	4.9	149
2237	1.4	43	2326	0.6	18				M 1546	4.2	128
15 W 0524	3.4	104	30 Th 0710	3.4	104	15 M 0018	0.1	3	0009	0.1	3
1040	2.4	73	1054	3.1	94	1600	4.2	128			
1605	3.5	107	1601	3.8	116				1610	4.8	146
O 2315	0.8	24	2358	0.4	12						
16 W 0804	3.4	104	31 F 1114	3.3	101				1708	0.2	6
			1619	3.9	119						

Time meridian 165° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.

Heights are referred to the chart datum of soundings.

\* Neither a high or low water but an intermediate value to show the period of an approximate stand.

# Kamaisi, Japan, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0208	2.0	62	16 W 0134	2.1	63	1 F 0843	4.0	122	16 Sa 0815	4.1	125
0852	4.1	124	0808	4.1	126	1751	1.3	40	1806	0.7	20
1619	2.0	60	1535	1.4	43	Sa			Sa		
2215	2.8	86	● 2159	2.9	89						
2 W 0237	2.5	76	17 Th 0152	2.6	79	2 Sa 0940	3.9	118	17 Su 0946	3.9	119
0926	4.1	125	0838	4.2	128	1902	1.0	31	1923	0.4	12
1737	1.6	50	1658	1.1	33	Sa			Su		
3 Th 0130	2.9	89	18 F 0920	4.2	129	3 Su 0410	3.4	104	18 M 0404	3.5	108
0328	2.9	88	1819	0.7	20	0556	3.4	103	0714	3.4	104
1010	4.1	125	Su			1112	3.8	117	1214	3.9	119
1840	1.3	39				1955	0.7	21	2019	0.2	5
4 F 0254	3.2	99	19 Sa 1026	4.2	129	4 M 0403	3.6	109	19 Tu 0400	3.6	111
0505	3.2	97	1927	0.3	8	0741	3.3	100	0823	3.0	91
1105	4.1	125	Su			1238	3.9	120	1339	4.1	125
1929	0.9	28				2038	0.4	12	2102	0.1	2
5 Sa 0331	3.5	108	20 Su 0419	3.7	113	5 Tu 0417	3.7	113	20 W 0411	3.7	113
0638	3.3	102	0625	3.7	112	0833	3.1	94	0905	2.6	78
1204	4.2	127	1158	4.3	131	1340	4.1	126	1437	4.3	131
2012	0.6	19	2024	-0.1	-2	2115	0.2	5	2139	0.1	2
6 Su 0401	3.7	114	21 M 0430	3.8	117	6 W 0434	3.8	116	21 Th 0426	3.8	116
0748	3.3	102	0806	3.5	107	0912	2.8	86	0942	2.1	64
1259	4.3	130	1319	4.5	136	1430	4.3	132	1524	4.4	133
2051	0.4	11	2113	-0.3	-8	2149	0.0	1	○ 2211	0.2	7
7 M 0430	3.9	118	22 Tu 0450	3.9	120	7 Th 0452	3.9	118	22 F 0442	3.9	119
0839	3.3	100	0904	3.2	99	0948	2.5	77	1016	1.7	52
1348	4.4	134	1423	4.6	140	1515	4.5	136	1607	4.3	132
2128	0.1	4	○ 2156	-0.3	-9	● 2221	0.0	1	2240	0.5	15
8 Tu 0457	3.9	120	23 W 0512	3.9	120	8 F 0511	3.9	119	23 Sa 0458	4.0	122
0920	3.2	97	0948	2.9	89	1022	2.2	67	1050	1.4	42
1432	4.5	138	1515	4.7	143	1558	4.5	137	1647	4.2	128
● 2203	0.0	1	2233	-0.2	-6	2251	0.2	6	2306	0.8	25
9 W 0524	4.0	121	24 Th 0532	4.0	121	9 Sa 0529	4.0	121	24 M 0516	4.1	125
0957	3.0	92	1029	2.6	78	1058	1.8	56	1124	1.1	34
1513	4.6	141	1603	4.6	141	1641	4.4	134	1726	4.0	121
2237	0.0	0	2307	0.1	2	2320	0.5	15	2330	1.2	36
10 Th 0550	4.0	121	25 F 0551	4.0	122	10 Su 0547	4.0	123	25 M 0534	4.2	128
1034	2.9	87	1108	2.2	68	1135	1.5	45	1158	1.0	30
1554	4.6	141	1646	4.4	135	1726	4.2	128	1805	3.7	112
2310	0.1	2	2337	0.4	12	2346	0.9	28	2352	1.5	47
11 F 0615	4.0	121	26 Sa 0610	4.1	124	11 M 0604	4.1	125	10 Tu 0450	4.1	125
1111	2.7	81	1148	2.0	60	1214	1.2	37	1113	0.4	13
1635	4.5	138	1728	4.2	127	1813	3.9	119	1731	4.0	123
2341	0.3	8	Sa			Tu			2316	1.5	46
12 Sa 0639	4.0	121	27 Su 0003	0.8	25	12 Tu 0010	1.4	43	12 W 0529	4.3	132
1151	2.5	75	0630	4.1	126	0623	4.2	128	0615	4.2	128
1718	4.3	132	1228	1.8	54	1258	1.0	30	1311	1.0	31
Su			1811	3.8	116	1906	3.5	106	1933	3.0	92
13 Su 0012	0.6	18	28 M 0027	1.2	38	13 W 0030	1.9	58	27 Th 0529	4.3	132
0701	4.0	122	0650	4.2	128	0642	4.3	130	1235	0.2	5
1234	2.2	67	1311	1.7	51	1349	0.9	27	1914	3.3	101
1805	4.0	122	1856	3.4	104	2012	3.1	93	2353	2.3	71
14 M 0041	1.0	31	29 Tu 0048	1.7	52	14 Th 0042	2.3	71	13 Th 0553	4.4	133
0722	4.0	123	0713	4.2	128	0706	4.3	131	1325	0.3	9
1323	2.0	60	1400	1.6	49	1455	0.9	27	2026	2.9	89
1900	3.6	111	1951	3.0	92	● 2218	2.7	83	2357	2.6	79
15 Tu 0109	1.5	47	30 W 0105	2.1	64	15 F 0012	2.7	82	14 F 0619	4.3	131
0743	4.1	124	0738	4.2	127	0734	4.2	129	1429	0.5	16
1422	1.7	52	1501	1.6	48	1626	0.8	25	○		
2010	3.2	99	● 2117	2.7	83				15 Sa 0651	4.1	125
16			31 Th 0106	2.5	76				1601	0.7	22
			0806	4.1	125						
			1621	1.5	45						

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Kamaisi, Japan, 2008

Times and Heights of High and Low Waters

April				May				June			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0229 3.1 96	16 W 0129 3.3 100	1 Th 0042 3.3 101	16 F 0023 3.7 113	1 Su 0002 4.0 121	16 M 0026 4.2 128						
0600 3.0 92	0710 2.2 67	0630 2.2 67	0720 1.3 40	0722 0.6 19	0811 0.7 21						
0948 3.2 97	1246 3.2 99	1149 3.1 95	1351 3.3 100	1428 3.7 112	1541 3.8 115						
1831 1.0 30	1909 1.2 37	1821 1.4 43	1855 2.2 66	1903 2.8 86	1952 3.2 97						
2 W 0220 3.3 100	17 Th 0147 3.4 105	2 F 0103 3.5 106	17 Sa 0054 3.9 118	2 M 0038 4.2 128	17 Tu 0110 4.3 131						
0714 2.6 80	0752 1.6 50	0714 1.6 49	0759 0.9 27	0809 0.1 2	0850 0.5 14						
1208 3.2 99	1353 3.4 105	1316 3.4 103	1446 3.5 107	1531 3.9 119	1619 3.9 120						
1924 0.9 26	1952 1.3 41	1912 1.6 49	1942 2.3 71	1954 3.1 94	2041 3.2 98						
3 Th 0229 3.4 104	18 F 0206 3.6 111	3 Sa 0124 3.6 111	18 Su 0124 4.0 122	3 Tu 0118 4.5 136	18 W 0153 4.4 134						
0753 2.1 64	0827 1.1 35	0754 0.9 111	0834 0.5 112	0857 -0.4 -11	0927 0.3 10						
1325 3.5 108	1443 3.6 111	1420 3.7 112	1531 3.7 112	1626 4.0 123	1654 4.0 122						
2006 0.9 26	2029 1.5 46	1957 1.9 57	2024 2.5 76	2041 3.3 100	2123 3.2 97						
4 F 0242 3.5 108	19 Sa 0227 3.8 117	4 Su 0147 3.9 118	19 M 0155 4.1 126	4 W 0201 4.7 142	19 Th 0233 4.5 137						
0827 1.5 46	0900 0.7 21	0833 0.3 9	0908 0.3 8	0945 -0.6 -18	1003 0.3 8						
1423 3.8 116	1527 3.7 114	1516 3.9 119	1612 3.8 116	1718 4.0 123	1727 4.0 122						
2044 1.0 29	2102 1.7 51	2037 2.2 66	2103 2.6 80	2125 3.3 102	2200 3.1 96						
5 Sa 0257 3.7 113	20 Su 0248 4.0 121	5 M 0212 4.1 125	20 Tu 0225 4.2 129	5 Th 0246 4.8 146	20 F 0311 4.6 139						
0901 0.9 28	0931 0.4 11	0913 -0.3 -8	0941 0.1 3	1032 -0.6 -19	1038 0.3 8						
1514 4.0 123	1608 3.8 116	1609 4.0 122	1651 3.8 117	1807 4.0 121	1759 4.0 122						
2118 1.2 36	2134 1.9 58	2113 2.5 75	2139 2.8 84	2209 3.3 101	2236 3.1 94						
6 Su 0315 3.9 118	21 M 0310 4.1 125	6 Tu 0240 4.4 133	21 W 0256 4.3 131	6 F 0333 4.8 147	21 Th 0349 4.6 139						
0937 0.3 10	1002 0.1 4	0955 -0.6 -19	1014 0.0 1	1119 -0.4 -13	1113 0.3 10						
1602 4.1 125	1646 3.8 116	1702 4.0 121	1728 3.8 116	1850 3.8 117	1830 4.0 121						
● 2149 1.5 46	2203 2.1 64	2146 2.7 83	2211 2.8 86	2255 3.2 97	2312 3.0 92						
7 M 0334 4.1 124	22 Tu 0334 4.2 127	7 W 0311 4.6 139	22 Th 0327 4.3 132	7 Sa 0422 4.7 144	22 F 0427 4.5 137						
1014 -0.1 -4	1033 0.0 1	1039 -0.8 -23	1048 0.1 2	1205 -0.1 -3	1146 0.5 15						
1650 4.1 124	1724 3.7 114	1755 3.8 117	1805 3.7 114	1928 3.7 114	1901 3.9 120						
2218 1.9 58	2231 2.3 70	2218 2.9 89	2242 2.9 87	2345 3.0 92	2351 2.9 89						
8 Tu 0356 4.3 130	23 W 0358 4.2 129	8 Th 0346 4.7 142	23 F 0359 4.3 132	8 Su 0513 4.5 136	23 M 0507 4.4 133						
1053 -0.4 -12	1104 0.0 1	1124 -0.7 -20	1123 0.2 5	1248 0.3 10	1220 0.7 21						
1740 3.9 118	1802 3.6 109	1850 3.6 110	1844 3.6 111	2002 3.7 113	1929 3.9 120						
2244 2.3 69	2256 2.5 75	2250 3.0 91	2314 2.9 88								
9 W 0420 4.4 135	24 Th 0424 4.2 128	9 F 0423 4.6 140	24 M 0432 4.3 130	9 M 0042 2.9 87	24 Tu 0035 2.8 85						
1134 -0.5 -14	1136 0.1 4	1212 -0.4 -11	1158 0.3 108	0607 4.1 125	0551 4.1 126						
1832 3.6 109	1842 3.4 104	1948 3.4 104	1925 3.5 108	1331 0.8 25	1253 1.0 30						
2307 2.5 77	2321 2.6 79	2327 3.0 92	2349 2.9 89	2033 3.7 113	1957 3.9 120						
10 Th 0447 4.5 137	25 F 0451 4.1 126	10 Sa 0505 4.4 134	25 Su 0506 4.1 126	10 Tu 0149 2.7 81	25 W 0125 2.6 80						
1220 -0.3 -10	1211 0.3 9	1928 3.2 99	1303 0.0 1	0710 3.7 112	0644 3.9 118						
1932 3.2 99	2344 2.7 83	2048 3.3 100	2099 3.5 106	1412 1.3 41	1328 1.4 42						
2326 2.7 83				2104 3.8 115	2024 4.0 121						
11 F 0518 4.4 134	26 Sa 0519 4.0 123	11 Su 0016 3.0 91	26 M 0032 2.9 89	11 W 0309 2.4 73	26 Th 0226 2.4 73						
1311 0.0 0	1250 0.5 16	0553 4.1 124	0545 3.9 120	0829 3.3 100	0750 3.6 109						
2055 3.0 91	2028 3.1 94	1357 0.5 16	1316 0.8 24	1455 1.8 55	1406 1.8 56						
2339 2.9 87		2145 3.2 98	2054 3.5 106	2137 3.9 118	2051 4.0 123						
12 Sa 0553 4.2 127	27 Su 0010 2.8 86	12 M 0132 2.9 89	27 Tu 0131 2.9 88	12 W 0433 2.1 64	27 F 0336 2.1 63						
1414 0.4 12	0550 3.8 117	0653 3.6 111	0634 3.7 112	1021 3.0 92	0920 3.3 101						
	1338 0.8 24	1458 1.0 30	1403 1.0 32	1545 2.3 69	1448 2.3 71						
	2154 3.0 92	2234 3.2 99	2138 3.5 106	2214 4.0 121	2121 4.1 125						
13 Su 0636 3.8 117	28 M 0050 2.9 89	13 Tu 0331 2.7 83	28 W 0255 2.8 84	13 M 0546 1.7 52	28 F 0448 1.6 49						
1535 0.8 23	0629 3.6 110	0828 3.2 98	0745 3.4 103	1229 3.1 94	1125 3.2 99						
○ ○ 2330 3.1 94	1439 1.0 31	1603 1.4 42	1457 1.4 43	1644 2.6 80	1538 2.8 86						
	2330 3.1 94	2315 3.4 103	2218 3.5 108	2255 4.1 124	2157 4.2 129						
14 M 0752 3.4 103	29 Tu 0246 3.0 91	14 W 0524 2.3 71	29 Th 0426 2.4 73	14 Sa 0643 1.3 40	29 Su 0556 1.1 34						
1704 1.0 30	0731 3.3 100	1047 3.0 91	0930 3.1 95	1358 3.3 101	1338 3.5 106						
	1559 1.2 36	1706 1.7 51	1600 1.8 54	1749 2.9 88	1644 3.3 100						
		2350 3.5 108	2254 3.6 111	2340 4.1 126	2243 4.4 133						
15 Tu 0116 3.1 95	30 W 0016 3.2 97	15 F 0632 1.8 55	30 Th 0537 1.9 57	15 Su 0729 1.0 30	30 M 0659 0.6 19						
0601 2.7 83	0520 2.7 83	1239 3.1 94	1133 3.1 96	1456 3.6 109	1504 3.8 115						
1050 3.1 95	0938 3.1 93	1804 1.9 59	1705 2.1 65	1854 3.1 94	1803 3.6 110						
1816 1.1 34	1717 1.3 40		2327 3.8 115		2341 4.5 138						
			31 Sa 0633 1.2 38								
			1313 3.4 103								
			1807 2.5 76								

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Kamaisi, Japan, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0757 1600 1921	0.2 4.0 3.7	6 122 114	16 W 0837 1618 2030	4.4 0.8 3.5	133 24 107	1 F 0934 1650 2127	4.9 4.3 3.2	150 6 99	16 Sa 0932 1629 2134	4.7 4.3 2.9	143 24 88
2 W 0045 0851 1644 2029	4.7 -0.1 4.1 3.7	143 -4 126 113	17 Th 0916 1644 2113	4.5 4.2 3.4	137 19 103	2 Sa 1015 1709 2209	5.0 4.3 2.9	153 9 87	17 Su 1003 1647 2208	4.8 4.4 2.6	147 24 78
3 Th 0148 0941 1720 2124	4.9 -0.3 4.2 3.5	148 59 127 108	18 F 0952 1709 2150	4.6 4.2 3.2	141 16 98	3 Su 1050 1728 2250	5.1 4.4 2.5	154 17 76	18 M 1032 1705 2241	4.9 4.5 2.2	149 136 68
4 F 0246 1028 1751 2213	5.0 -0.2 4.2 3.3	152 15 127 100	19 Sa 1026 1732 2226	4.8 4.2 3.0	145 15 92	4 M 1121 1747 2330	4.9 4.5 2.2	149 28 66	19 Tu 1100 1722 2316	4.8 4.5 1.9	147 36 58
5 Sa 0340 1110 1818 2300	5.0 0.0 4.1 3.0	152 0 126 92	20 Su 1057 1755 2302	4.8 4.3 2.8	146 18 86	5 Tu 1149 1806	4.7 4.6	142 41 139	20 W 1126 1739 2353	4.7 4.6 1.6	143 48 49
6 Su 0432 1149 1842 2347	4.9 0.4 4.1 2.7	148 11 126 83	21 M 1127 1817 2338	4.7 4.3 2.6	144 23 79	6 W 0606 1214 1827	2.0 4.3 4.7	60 131 142	21 Th 1150 1757 1827	4.5 2.0 4.7	136 61 144
7 M 0522 1223 1905	4.6 0.8 4.2	140 24 127	22 Tu 1156 1837	4.6 4.3	140 32 132	7 Th 0653 1236 1849	1.8 2.3 4.7	56 120 143	22 F 0646 1211 1817	4.5 2.5 4.8	43 75 146
8 Tu 0035 0612 1254 1928	2.5 4.2 1.3 4.3	76 129 39 130	23 W 0555 1224 1857	2.4 1.4 4.4	72 133 43 133	8 F 0749 1255 1914	1.8 2.7 4.7	55 109 142	23 Sa 0747 1226 1840	1.3 2.9 4.8	40 114 147
9 W 0128 0706 1323 1953	2.3 3.8 1.8 4.3	70 117 55 132	24 Th 0646 1251 1918	2.1 1.9 4.4	65 124 57 135	9 Sa 0910 1304 1943	1.8 3.0 4.6	56 100 139	24 Su 0921 1222 1907	1.3 3.2 4.8	40 99 146
10 Th 0227 0811 1351 2020	2.1 3.4 2.3 4.4	65 105 69 133	25 F 0748 1316 1940	1.9 2.4 4.5	58 114 72 137	10 Su 0347 2018	1.8 4.4	56 135	25 M 1944	1.3 4.7	41 142
11 F 0335 0946 1421 2053	2.0 3.1 2.7 4.4	60 96 83 133	26 Sa 0252 0912 1337	1.7 3.4 2.9	51 104 87 139	11 M 0516 2113	1.8 4.3	54 131	26 Tu 0519 2056	1.3 4.5	39 136
12 Sa 0451 1234 1458 2133	1.8 3.1 3.1 4.3	54 96 95 132	27 Su 0408 2043	1.4 4.6	44 140	12 Tu 0636 1540 1749 2249	1.6 3.9 3.8 4.2	48 118 117 128	27 W 0646 1548 1824 2330	1.0 4.0 4.0 4.4	32 123 121 134
13 Su 0602 1438 1622 2227	1.5 3.4 3.4 4.3	47 105 104 131	28 M 0532 2138	1.1 4.6	35 140	13 W 0735 1540 1931	1.3 4.0 3.7	40 123 113	28 Th 0748 1535 1953	0.9 4.1 3.6	26 126 126 109
14 M 0702 1520 1811 2334	1.3 3.7 3.6 4.3	39 114 110 131	29 Tu 0649 2311	0.8 4.6	25 140	14 Th 0824 1555 2022	4.3 4.2 3.5	131 33 106	29 F 0836 1545 2039	4.6 4.2 3.1	140 22 94
15 Tu 0753 1550 1622 1933	1.0 3.9 3.4 3.6	31 120 110 110	30 W 0754 1612 1930	0.5 4.1 3.9	15 126 126 119	15 F 0130 0858	4.5 0.9	137 27 97	30 Sa 0215 0916 1559	4.8 0.8 4.3	146 23 131
			31 Th 0848 1630 2038	0.3 4.2 3.6	144 8 111				31 Su 0306 1615 2155	4.9 4.4 2.1	150 28 65

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Kamaisi, Japan, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
1 W	0433 4.5 138	16 Th	0430 4.6 140	1 Sa	0553 4.1 125	16 Su	0627 4.1 124	1 M	0632 4.0 121	16 Tu	0703 3.9 120
1012 2.2 67	0952 2.6 78	1039 3.1 93	1026 3.4 105	1002 3.2 97	1102 3.2 97	1102 3.2 95	1121 3.1 95	1102 3.2 97	1121 3.1 95	1121 3.1 95	1121 3.1 95
1557 4.8 146	1530 4.9 149	1604 4.8 146	1600 5.1 155	1600 5.1 155	1617 4.6 140	1617 4.6 140	1617 4.6 140	1617 4.6 140	1617 4.6 140	1650 4.8 145	1650 4.8 145
2239 0.9 26	2230 0.1 4	2322 0.5 16	2348 -0.2 -5	2348 -0.2 -5	2344 0.5 14	2344 0.5 14	2344 0.5 14	2344 0.5 14	2344 0.5 14	1742 4.4 133	1742 4.4 133
2 Th	0512 4.4 134	17 F	0518 4.4 135	2 Su	0634 3.9 120	17 M	0722 3.9 118	2 Tu	0709 3.9 118	17 W	0024 0.2 6
1038 2.5 76	1018 2.9 88	1105 3.2 97	1103 3.4 105	1105 3.2 97	1103 3.4 105	1103 3.4 105	1103 3.4 105	1103 3.4 105	1103 3.4 105	1215 2.9 89	1215 2.9 89
1618 4.9 148	1554 5.0 153	1632 4.7 143	1641 4.9 150	1641 4.9 150	1641 4.9 150	1641 4.9 150	1641 4.9 150	1641 4.9 150	1641 4.9 150	1742 4.4 133	1742 4.4 133
2311 0.8 24	2310 0.0 1	2357 0.7 22	2354 0.1 4	2354 0.1 4	2354 0.1 4	2354 0.1 4	2354 0.1 4	2354 0.1 4	2354 0.1 4	1840 3.9 119	1840 3.9 119
3 F	0552 4.2 128	18 Sa	0609 4.2 128	3 M	0720 3.8 115	18 Tu	0036 0.2 7	3 W	0018 0.7 21	18 Th	0104 0.7 22
1101 2.8 84	1042 3.1 96	1131 3.3 100	1150 3.4 103	1131 3.3 100	1150 3.4 103	1150 3.4 103	1150 3.4 103	1150 3.4 103	1150 3.4 103	1317 2.7 82	1317 2.7 82
1641 4.9 148	1621 5.1 155	1701 4.5 138	1727 4.6 140	1701 4.5 138	1727 4.6 140	1727 4.6 140	1727 4.6 140	1727 4.6 140	1727 4.6 140	1840 3.9 119	1840 3.9 119
2344 0.9 26	2354 0.1 4	2354 0.1 4	2354 0.1 4	2354 0.1 4	2354 0.1 4	2354 0.1 4	2354 0.1 4	2354 0.1 4	2354 0.1 4	1840 3.9 119	1840 3.9 119
4 Sa	0633 4.0 121	19 Su	0708 3.9 118	4 Tu	0034 1.0 29	19 W	0128 0.7 21	4 Th	0053 1.0 29	19 F	0141 1.2 38
1122 3.0 91	1103 3.3 101	1652 5.0 153	0817 3.6 111	1201 3.3 102	0912 3.6 111	1300 3.3 101	1822 4.1 126	1315 3.1 95	1432 2.5 75	1432 2.5 75	1951 3.4 103
1705 4.8 146	1705 4.8 146	1731 4.3 132	1731 4.3 132	1731 4.3 132	1731 4.3 132	1731 4.3 132	1731 4.3 132	1731 4.3 132	1731 4.3 132	1951 3.4 103	1951 3.4 103
5 Su	0019 1.0 31	20 M	0044 0.4 13	5 W	0118 1.2 37	20 Th	0224 1.2 36	5 F	0132 1.2 38	20 Sa	0218 1.8 55
0721 3.7 113	0825 3.6 110	1119 3.4 105	0933 3.6 109	1248 3.4 105	0959 3.6 111	1450 3.1 95	1945 3.6 111	0906 3.8 116	1432 3.0 91	1559 2.1 65	1559 2.1 65
1139 3.1 96	1119 3.4 105	1726 4.8 147	1807 4.0 123	1807 4.0 123	1911 3.5 108	1911 3.5 108	1911 3.5 108	1911 3.5 108	1911 3.5 108	2137 3.0 92	2137 3.0 92
1730 4.7 142	1730 4.7 142	1903 3.7 112	2204 3.3 100	2204 3.3 100	2046 3.2 98	2046 3.2 98	2046 3.2 98	2046 3.2 98	2046 3.2 98	2123 3.1 53	2123 3.1 53
6 M	0100 1.3 39	21 Tu	0143 0.8 25	6 Th	0213 1.5 45	21 F	0325 1.6 50	6 Sa	0217 1.6 49	21 Su	0259 2.3 70
0830 3.5 106	1807 4.5 136	1807 4.5 136	1055 3.6 110	1448 3.4 105	1040 3.7 114	1653 2.7 82	1903 3.7 112	0944 3.8 117	1605 2.7 81	0938 4.1 125	0938 4.1 125
1146 3.3 101	1146 3.3 101	1903 3.7 112	2204 3.3 100	2204 3.3 100	2046 3.2 98	2046 3.2 98	2046 3.2 98	2046 3.2 98	2046 3.2 98	1723 3.1 53	1723 3.1 53
1757 4.5 136	1757 4.5 136	1903 3.7 112	2204 3.3 100	2204 3.3 100	2046 3.2 98	2046 3.2 98	2046 3.2 98	2046 3.2 98	2046 3.2 98	2123 3.1 53	2123 3.1 53
7 Tu	0152 1.5 47	22 W	0258 1.2 37	7 F	0325 1.7 52	22 Sa	0428 2.1 63	7 Su	0311 2.0 60	22 M	0015 3.0 90
1827 4.2 129	1913 4.0 122	1913 4.0 122	1144 3.7 113	1718 3.1 96	1116 3.9 119	1811 2.1 65	1722 2.2 66	1020 3.9 119	1722 2.2 66	0352 2.7 83	0352 2.7 83
●	●	●	2106 3.4 103	2106 3.4 103	2259 3.1 95	2259 3.1 95	2259 3.1 95	2259 3.1 95	2259 3.1 95	1020 4.2 127	1020 4.2 127
8 W	0309 1.7 53	23 Th	0426 1.5 46	8 Sa	0442 1.9 57	23 Su	0017 3.3 101	8 M	0416 2.4 73	23 Tu	0206 3.2 98
1912 3.9 120	1245 3.7 112	1726 3.3 102	1213 3.8 117	1822 2.6 80	0530 2.4 72	1151 4.1 124	1818 1.5 47	1056 4.0 122	1109 4.2 128	1109 4.2 128	0507 3.1 93
2200 3.6 111	2200 3.6 111	2330 3.4 103	1902 1.6 49	1902 1.6 49	1902 1.6 49	1902 1.6 49	1902 1.6 49	1902 1.6 49	1902 1.6 49	1920 1.0 30	1920 1.0 30
9 Th	0449 1.8 55	24 F	0542 1.7 51	9 Su	0549 2.0 62	24 M	0141 3.5 107	9 Tu	0058 3.3 101	24 W	0303 3.5 107
1351 3.8 115	1259 3.8 117	1845 2.8 84	1236 4.0 121	1903 2.0 62	0626 2.6 80	1225 4.3 130	1944 1.1 34	0524 2.8 84	1132 4.2 127	1202 4.3 130	0627 3.2 99
1808 3.5 108	1808 3.5 108	1845 2.8 84	1903 2.0 62	1903 2.0 62	1944 1.1 34	1906 0.9 27	1906 0.9 27	1906 0.9 27	1906 0.9 27	2004 0.7 20	2004 0.7 20
2132 3.6 111	2132 3.6 111	2132 3.6 111	2132 3.6 111	2132 3.6 111	2132 3.6 111	2132 3.6 111	2132 3.6 111	2132 3.6 111	2132 3.6 111	2043 0.4 12	2043 0.4 12
10 F	0606 1.7 52	25 Sa	0018 3.7 113	10 M	0101 3.6 110	25 Tu	0238 3.7 114	10 W	0218 3.6 111	25 Th	0344 3.8 115
1351 3.9 119	0639 1.8 55	1317 4.0 122	0642 2.2 67	1259 4.1 126	0716 2.8 86	1259 4.4 134	2020 0.7 22	0628 3.1 94	1211 4.4 134	0736 3.3 101	0736 3.3 101
1906 3.1 113	1317 4.0 122	1929 2.1 65	1939 1.4 42	1939 1.4 42	1939 1.4 42	1939 1.4 42	1939 1.4 42	1939 1.4 42	1939 1.4 42	2043 0.4 12	2043 0.4 12
2355 3.7 113	2355 3.7 113	2355 3.7 113	2355 3.7 113	2355 3.7 113	2355 3.7 113	2355 3.7 113	2355 3.7 113	2355 3.7 113	2355 3.7 113	2120 0.2 7	2120 0.2 7
11 Sa	0659 1.6 50	26 Su	0133 3.9 119	11 Tu	0205 3.9 120	26 W	0325 4.0 121	11 Th	0320 3.9 120	26 F	0418 3.9 120
1402 4.0 123	0724 2.0 60	1337 4.2 128	0728 2.4 74	1322 4.4 133	0803 3.0 90	1333 4.5 138	2055 0.4 13	0725 3.3 101	1254 4.4 135	0831 3.3 100	0831 3.3 100
1940 2.6 79	1337 4.2 128	2006 1.6 48	2015 0.7 22	2015 0.7 22	2055 0.4 13	2055 0.4 13	2055 0.4 13	2039 -0.2 -6	2039 -0.2 -6	1341 4.4 135	1341 4.4 135
●	●	●	●	●	●	●	●	●	●	●	●
12 Su	0112 4.0 121	27 M	0228 4.1 125	12 W	0300 4.2 128	27 Th	0406 4.1 125	12 F	0413 4.1 125	27 Sa	0449 4.0 122
0741 1.6 49	0803 2.2 66	1359 4.4 134	0809 2.7 82	1347 4.6 140	1406 4.6 140	1406 4.6 140	1406 4.6 140	1406 4.6 140	1406 4.6 140	1423 4.5 137	1423 4.5 137
1415 4.2 127	1415 4.2 127	2040 1.1 33	2054 0.2 5	2054 0.2 5	2129 0.3 8	2129 0.3 8	2129 0.3 8	2129 0.3 8	2129 0.3 8	2155 0.1 4	2155 0.1 4
2011 2.0 62	2011 2.0 62	2040 1.1 33	2054 0.2 5	2054 0.2 5	2129 0.3 8	2129 0.3 8	2129 0.3 8	2129 0.3 8	2129 0.3 8	2155 0.1 4	2155 0.1 4
13 M	0207 4.3 130	28 Tu	0314 4.2 129	13 Th	0351 4.3 132	28 F	0444 4.1 126	13 F	0502 4.2 127	28 Su	0519 4.0 123
0818 1.7 52	0838 2.4 72	1422 4.6 139	0846 3.0 90	1416 4.8 147	1439 4.7 142	1439 4.7 142	1439 4.7 142	1439 4.7 142	1439 4.7 142	1502 4.6 139	1502 4.6 139
1431 4.3 132	1431 4.3 132	2113 0.7 22	2134 -0.2 -7	2134 -0.2 -7	● 2203 0.2 5	● 2203 0.2 5	● 2203 0.2 5	● 2203 0.2 5	● 2203 0.2 5	● 2229 0.1 4	● 2229 0.1 4
2043 1.4 44	2043 1.4 44	2113 0.7 22	2134 -0.2 -7	2134 -0.2 -7	● 2203 0.2 5	● 2203 0.2 5	● 2203 0.2 5	● 2203 0.2 5	● 2203 0.2 5	● 2229 0.1 4	● 2229 0.1 4
14 Tu	0256 4.5 136	29 W	0356 4.3 132	14 F	0442 4.4 133	29 Sa	0520 4.1 126	14 M	0547 4.1 126	29 M	0547 4.0 122
0851 1.9 59	0911 2.6 78	1446 4.7 143	0920 3.2 97	1447 5.0 153	1511 4.7 143	1511 4.7 143	1511 4.7 143	1511 4.7 143	1511 4.7 143	1540 4.6 139	1540 4.6 139
1448 4.5 138	1448 4.5 138	2117 0.9 27	● 2145 0.5 15	2217 -0.4 -13	2236 0.2 6	2236 0.2 6	2236 0.2 6	2236 0.2 6	2236 0.2 6	2301 0.2 6	2301 0.2 6
2117 0.9 27	● 2145 0.5 15	2217 -0.4 -13	2236 0.2 6	2236 0.2 6	2236 0.2 6	2236 0.2 6	2236 0.2 6	2236 0.2 6	2236 0.2 6	2301 0.2 6	2301 0.2 6
15 W	0343 4.6 140	30 Th	0436 4.3 131	15 Sa	0533 4.3 130	30 Su	0556 4.1 124	15 M	0627 4.0 123	30 Tu	0614 4.0 122
0923 2.2 68	0942 2.8 84	1511 4.8 146	0953 3.3 102	1522 5.1 156	1514 4.7 142	1514 4.7 142	1514 4.7 142	1514 4.7 142	1514 4.7 142	1616 4.5 137	1616 4.5 137
1508 4.7 143	1508 4.7 143	2217 0.4 12	2301 -0.4 -12	2301 -0.4 -12	2310 0.3 9	2310 0.3 9	2310 0.3 9	2310 0.3 9	2310 0.3 9	2331 0.3 10	2331 0.3 10
●	●	●	●	●	●	●	●	●	●	●	●
15 O	0243 4.6 140	31 F	0514 4.2 129	16 F	1011 2.9 89	31 W	1135 2.8 84	16 W	1654 4.4 133	31 W	0637

# Yokohama, Japan, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
<b>1</b> Tu 1009 1758	0348 5.2 2.6	2.7 159 78	<b>16</b> W 0941 1659 02340	0324 5.3 4.3	2.6 163 130	<b>1</b> F 0341 1014 1941	0133 4.9 1.9	3.9 149 58	<b>16</b> Sa 1946	1004 1.1	4.8 147 34
<b>2</b> W 0429 1046 1920	0002 5.2 2.1	4.0 157 64	<b>17</b> Th 1017 1835	0407 1.5	3.4 159 46	<b>2</b> Sa 0347 1136 2038	0708 4.7 1.5	4.3 143 45	<b>17</b> Su 0842 1251 2052	0420 4.7 0.7	4.8 146 20
<b>3</b> Th 0546 1142 2013	0156 5.1 1.6	4.2 154 49	<b>18</b> F 0149 0522 1114 1952	0419 4.0 5.1 1.0	4.4 123 155 29	<b>3</b> Su 0854 1327 2121	0419 4.8 1.0	4.7 145 32	<b>18</b> M 0934 1443 2143	0358 5.1 0.2	4.7 142 7
<b>4</b> F 0744 1254 2055	0316 5.1 1.2	4.5 154 36	<b>4</b> M 0342 0759 1249 2053	0447 4.3 5.1 0.4	4.8 130 155 12	<b>4</b> Tu 0503 0940 1441 2200	1010 3.6 5.1 0.7	5.5 111 155 20	<b>19</b> Tu 0419 0927 1433 2226	0422 3.4 4.8 0.0	5.3 163 103 -1
<b>5</b> Sa 0856 1401 2134	0411 5.2 0.8	4.9 158 25	<b>5</b> Su 0440 0921 1422 2146	0513 4.1 5.3 -0.1	5.2 124 162 -3	<b>5</b> Tu 1016 1530 2235	1016 5.4 0.3	5.4 165 9	<b>5</b> W 0526 1044 1624 2304	0526 2.6 5.9 -0.1	5.7 174 179 -3
<b>6</b> Su 0945 1453 2210	0451 5.4 0.5	5.2 165 16	<b>6</b> M 0519 1013 1527 2234	0539 3.7 5.6 -0.4	5.6 114 172 -12	<b>6</b> W 1049 1612 2309	2.9 5.8 0.1	5.7 173 176 2	<b>20</b> Th 1021 1619 2212	0442 1.8 0.5	5.5 169 175 21
<b>7</b> M 1025 1536 2245	0526 3.5 0.3	5.5 168 172	<b>21</b> M 0519 1013 1527 2234	0547 3.7 5.6 -0.4	5.6 114 172 -12	<b>21</b> W 1115 1704 2337	2.1 6.1 0.0	5.9 179 185 1	<b>21</b> F 1050 1656 2308	0501 5.9 0.9	5.7 174 180 27
<b>8</b> Tu 1100 1614 ● 2319	0557 3.3 0.1	5.7 174 178 3	<b>7</b> Tu 1055 1618 O 2318	0605 3.3 5.9 -0.5	5.9 102 181 -16	<b>22</b> F 1146 1651 ● 2342	1.7 6.0 0.0	6.0 182 185 0	<b>7</b> F 1059 1650 2320	0527 5.9 0.4	5.8 178 185 11
<b>9</b> W 1134 1650 2353	0628 3.1 6.0	5.8 178 183 1	<b>8</b> W 0622 1133 1703 2358	0630 3.0 6.1 -0.4	6.0 183 186 -13	<b>23</b> Sa 0626 1153 1731	0.3 2.2 6.1	0.3 182 187	<b>8</b> Sa 1130 1215 1817	0549 1.3 5.9	6.0 182 185 18
<b>10</b> Th 1207 1726	0657 3.0 6.0	5.9 181 184	<b>9</b> W 0648 1208 1743	0014 2.6 6.1	6.0 184 186	<b>24</b> Sa 0653 1226 1813	0.1 1.9 6.1	3 184 185	<b>9</b> Su 1203 1243 1853	0611 1.2 5.6	6.0 183 190 18
<b>11</b> F 1242 1805	0027 2.9 5.9	0.1 181	<b>10</b> F 0033 0712 1242 1822	-0.2 6.0 2.3 5.9	-5 184 71 180	<b>25</b> M 0046 0716 1300 1858	0.4 6.0 1.6 5.9	13 182 48 179	<b>10</b> M 0059 0700 1310 1931	1.3 5.9 1.1 5.3	1.3 181 35 161
<b>12</b> Sa 1319 1847	0102 5.9 2.7	0.3 174	<b>11</b> M 0104 0733 1314 1901	0.3 6.0 2.2 5.6	9 182 66 170	<b>26</b> Tu 0118 0737 1336 1947	0.9 5.9 1.4 5.5	28 179 42 168	<b>11</b> Tu 0123 0717 1339 2013	1.8 5.8 1.2 4.9	1.6 181 38 149
<b>13</b> Su 1359 1938	0136 5.7 2.5	0.7 163	<b>12</b> Tu 0132 0752 1347 1943	0.9 5.9 2.1 5.2	26 179 63 157	<b>27</b> W 0148 0756 1416 2043	1.6 5.7 1.3 5.0	48 175 40 153	<b>12</b> W 0145 0737 1410 2103	2.4 5.7 1.5 4.5	2.2 173 45 136
<b>14</b> M 1445 2042	0211 2.4 4.9	1.2 150	<b>13</b> M 0158 0810 1422 2031	1.5 5.8 2.1 4.7	45 176 63 143	<b>27</b> W 0207 0759 1450 2208	2.3 5.4 1.8 4.1	87 165 54 124	<b>13</b> Th 0152 0728 1439 2150	2.9 5.6 0.9 4.6	88 170 26 139
<b>15</b> Tu 1542 2201	0247 2.2 4.5	1.9 138	<b>14</b> Tu 0222 0830 1502 2132	2.1 5.6 2.1 4.2	64 171 65 129	<b>29</b> F 0243 0837 1613 ● 2326	3.0 5.4 1.5 4.1	92 164 46 126	<b>14</b> F 0227 0827 1557 ● 2336	3.3 5.1 2.1 4.1	102 155 63 126
<b>16</b> Tu 1542 2201	0247 2.2 4.5	1.9 138	<b>15</b> W 0246 0855 1600 ● 2258	2.7 5.4 2.2 3.9	83 165 68 119	<b>15</b> F 0306 0906 1805	3.7 5.1 1.5	113 156 45	<b>15</b> Sa 0228 0814 1747	4.0 4.9 1.5	122 149 46
<b>17</b> Th 1757	0311 2.2	3.3 67	<b>31</b> Th 0311 0927 1757	101 5.2 2.2	101 158 67				<b>31</b> M 0223 0658 1643	4.3 4.1 1.9	130 125 59

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
 Heights are referred to the chart datum of soundings.

# Yokohama, Japan, 2008

Times and Heights of High and Low Waters

April				May				June						
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height			
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm			
1 Tu	0302	4.6	141	16 W	0301	5.0	153	1 Th	0213	5.0	151			
0825	3.6	110	0852	2.5	76	0814	2.6	80	16 F	0213	5.1	156		
1233	4.2	127	1439	4.8	147	1346	4.6	140	16 Sa	0848	1.5	46		
2006	1.6	49	2045	1.5	47	1958	2.0	60	17 Su	1507	5.0	152		
								2041	2.7	82	17 M	2103	3.2	99
2 W	0328	5.0	152	17 Th	0325	5.2	159	2 F	0245	5.2	158			
0858	3.0	91	0922	1.8	55	0850	1.8	54	17 Sa	0242	5.3	161		
1414	4.6	141	1525	5.2	159	1450	5.1	156	17 M	0921	1.0	30		
2054	1.3	40	2126	1.6	49	2052	2.0	61	17 Tu	1554	5.3	161		
								2125	2.8	86	17 Tu	2125	3.4	104
3 Th	0351	5.2	160	18 F	0346	5.4	165	3 Sa	0313	5.4	165			
0928	2.3	70	0952	1.2	36	0924	0.9	36	18 Su	0309	5.4	166		
1510	5.2	158	1607	5.5	168	1544	5.6	172	18 M	0953	0.6	168		
2136	1.1	33	2202	1.7	53	2138	2.1	64	18 Tu	1638	5.5	168		
								2205	2.9	89	18 Tu	2205	3.5	107
4 F	0414	5.5	168	19 Sa	0407	5.5	169	4 Su	0340	5.6	171			
0959	1.5	47	1021	0.7	21	1000	0.2	5	19 M	0337	5.6	170		
1557	5.7	173	1646	5.7	173	1636	6.0	183	19 Tu	1024	0.3	10		
2215	1.0	32	2235	1.9	59	2221	2.3	71	19 W	1720	5.6	172		
								2242	3.0	92	19 O	2330	3.6	109
5 Sa	0437	5.7	174	20 Su	0427	5.7	173	5 M	0408	5.8	178			
1030	0.8	24	1049	0.3	10	1038	-0.4	-13	20 Tu	0406	5.7	174		
1643	6.1	185	1724	5.8	176	1727	6.2	189	20 M	1055	0.2	7		
2252	1.2	37	2307	2.1	65	2302	2.6	79	20 Tu	1759	5.7	174		
								2316	3.1	94	20 Th	1912	6.1	186
6 Su	0500	5.9	179	21 M	0448	5.8	176	6 Tu	0437	6.0	182			
1104	0.2	5	1117	0.2	5	1117	-0.7	-22	21 W	0434	5.8	176		
1729	6.3	191	1802	5.8	176	1818	6.2	189	21 F	1126	0.2	7		
2327	1.5	46	2337	2.4	72	2341	2.9	88	21 F	1836	5.7	174		
								2349	3.1	96	21 F	1956	6.0	182
7 M	0523	6.0	182	22 Tu	0509	5.8	178	7 W	0507	6.1	185			
1138	-0.3	-8	1145	0.1	4	1159	-0.8	-23	22 Th	0504	5.8	177		
1816	6.3	191	1839	5.7	173	1910	6.0	184	22 Sa	1157	0.4	11		
								1912	5.6	172	22 Sa	1333	0.1	3
8 Tu	0002	1.9	59	23 W	0005	2.6	79	8 Th	0020	3.2	97			
0546	6.0	183	0532	5.8	178	0538	6.0	184	23 F	0021	3.2	98		
1214	-0.4	-13	1212	0.3	8	1245	-0.5	-14	23 F	0533	5.8	176		
1905	6.0	184	1916	5.5	168	2001	5.7	175	23 F	1230	0.5	16		
								1948	5.5	169	23 F	1948	5.6	170
9 W	0035	2.4	74	24 Th	0034	2.9	87	9 F	0100	3.5	106			
0609	6.0	182	0556	5.7	175	0611	5.8	178	24 M	0054	3.3	102		
1254	-0.3	-9	1241	0.5	15	1335	0.0	0	24 M	0604	5.6	172		
1955	5.6	172	1954	5.3	161	2053	5.4	164	24 M	1306	0.8	23		
								2025	5.4	165	24 M	2025	5.4	165
10 Th	0107	3.0	90	25 F	0102	3.1	94	10 Sa	0144	3.7	112			
0632	5.8	177	0622	5.6	170	0648	5.5	167	25 Su	0132	3.5	106		
1338	0.1	2	1314	0.8	24	1432	0.6	17	25 Tu	0913	4.7	144		
2051	5.2	158	2036	5.0	153	2148	5.1	155	25 Tu	1347	1.0	30		
								2106	5.3	161	25 Tu	2229	5.3	161
11 F	0139	3.4	104	26 Sa	0134	3.3	102	11 M	0216	3.6	109			
0656	5.5	169	0649	5.3	163	0735	5.0	153	11 M	0716	5.1	156		
1432	0.6	19	1353	1.1	35	1533	1.1	34	11 M	1434	1.3	39		
2156	4.7	143	2125	4.8	146	2251	4.9	149	11 M	2151	5.2	157		
								2306	5.2	159	26 O	2306	5.2	159
12 Sa	0217	3.8	117	27 Su	0213	3.6	110	12 M	0214	2.7	81			
0724	5.1	156	0720	5.0	152	0858	4.5	137	12 M	1225	4.4	134		
1545	1.1	35	1446	1.5	45	1639	1.6	49	12 M	1526	1.6	49		
2336	4.4	135	2227	4.6	140	●			12 M	2240	5.1	154		
									12 M	2346	5.2	158		
13 Su	0327	4.1	126	28 M	0316	3.9	118	13 F	0314	3.6	110			
0807	4.6	140	0806	4.6	140	0612	3.5	106	13 F	0815	4.8	145		
1721	1.5	46	1556	1.7	53	1115	4.2	129	13 F	1526	1.6	49		
			○			1749	2.0	61	13 F	2240	5.1	154		
14 M	0149	4.5	138	29 Tu	0003	4.5	138	14 W	0100	4.9	149			
0727	3.9	120	0523	3.9	118	0729	2.9	87	29 Th	1137	4.4	134		
1056	4.1	126	0945	4.2	129	1308	4.4	133	29 Th	1733	2.4	73		
1853	1.6	48	1721	1.9	59	1855	2.3	70	14 Sa	0610	3.0	92		
								1851	2.8	84	14 Sa	1451	4.9	148
15 Tu	0234	4.8	146	30 W	0130	4.7	144	15 F	0029	5.1	155			
0819	3.2	98	0730	3.3	102	0812	2.2	66	15 F	0719	2.3	69		
1338	4.4	134	1203	4.2	127	1414	4.7	143	15 F	1316	4.7	143		
1957	1.5	47	1849	2.0	60	1952	2.5	76	15 F	1851	2.8	84		
								31 Sa	0117	5.2	158			
								31 Sa	0807	1.4	44			
								31 Sa	1430	5.1	156			
								31 Sa	2003	3.0	92			

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Yokohama, Japan, 2008

Times and Heights of High and Low Waters

July				August				September						
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height			
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm			
1 Tu	0148	5.6	171	16 W	0231	5.4	166	1 F	0358	6.2	189			
0918	0.2	7	0955	1.1	34	1056	0.1	4	16 Sa	0359	6.0	184		
1648	5.8	177	1715	5.7	175	1802	6.4	195	1 M	1051	1.0	30		
2145	4.1	126	2217	3.9	118	2316	3.3	102	16 Sa	1745	6.3	193		
2 W	0252	5.8	178	17 Th	0322	5.7	173	2 O	2307	3.0	92			
1010	-0.1	-4	1033	0.9	28	448	6.4	196	17 Tu	0527	6.6	201		
1739	6.1	186	1746	5.9	181	1139	0.2	5	16 M	1148	1.1	33		
2238	4.0	121	2253	3.6	111	1830	6.5	198	1806	6.6	201			
3 Th	0349	6.1	185	18 F	0404	5.9	180	2353	2.9	89	2359	1.7	53	
1101	-0.3	-9	1108	0.8	24	1217	0.4	13	17 O	2338	2.7	81		
1822	6.3	191	1814	6.1	186	1855	6.5	198	2 O	0607	6.5	198		
● 2326	3.7	114	○ 2326	3.4	104	1155	1.0	30	17 Tu	1218	1.5	47		
4 F	0442	6.3	191	19 Sa	0443	6.1	185	1831	6.5	199	1807	6.6	201	
1151	-0.3	-8	1142	0.7	22	0029	2.6	78	19 M	0010	2.3	70		
1900	6.3	192	1842	6.2	190	0617	6.4	195	19 Tu	0559	6.5	197		
			2359	3.2	98	1251	0.9	27	2028	1226	1.2	38		
5 Sa	0009	3.5	106	20 Su	0520	6.2	188	1917	6.5	199	1842	6.6	197	
0531	6.3	192	1215	0.8	23	0103	2.3	70	20 W	0042	2.0	61		
1236	0.0	-1	1909	6.3	192	0701	6.1	187	20 O	0129	1.6	49		
1933	6.3	191				1322	1.4	44	20 Tu	0813	5.5	168		
6 Su	0051	3.2	98	21 M	0032	3.0	92	1936	6.4	195	1335	3.1	96	
0619	6.1	187	0559	6.1	187	0137	2.2	66	20 F	0813	5.5	168		
1318	0.4	12	1247	0.9	28	0746	5.7	175	20 Sa	1331	3.5	106		
2003	6.2	188	1934	6.3	191	1349	2.1	64	1906	6.3	191			
7 M	0131	3.0	92	21 W	0032	3.0	92	1954	6.3	192	2128	6.0	183	
0708	5.9	179	0642	6.0	183	0137	2.2	66	21 O	0202	1.8	56		
1355	0.9	28	1320	1.2	37	0731	6.1	186	21 Tu	0905	5.1	156		
2030	6.1	185	1959	6.2	190	1328	2.2	68	21 Sa	1359	3.6	111		
8 Tu	0212	2.9	87	22 Th	0116	1.8	54	1933	6.3	193	1942	6.0	184	
0759	5.5	167	0559	6.1	187	0825	5.7	175	2128	6.0	184			
1429	1.6	48	1247	0.9	28	1415	2.8	84	21 W	0202	1.8	56		
2053	5.9	181	1934	6.3	191	2013	6.2	188	21 O	0927	5.3	161		
9 W	0256	2.8	84	23 F	0250	2.2	68	2036	6.0	182	21 Sa	1358	4.0	123
0859	5.1	154	0223	2.5	75	0935	5.0	151	2028	1210	4.6	140		
1502	2.3	69	0828	5.5	167	1441	3.3	102	20 M	1451	4.5	138		
2116	5.8	177	1428	2.3	69	2036	6.0	182	2051	2051	5.3	163		
10 Th	0348	2.7	81	24 Sa	0237	1.7	52	2036	6.0	184	2128	6.0	183	
1009	4.7	144	0310	2.3	70	0928	5.3	162	2028	1210	4.6	140		
1534	2.9	89	0936	5.2	158	1427	3.6	109	20 O	1451	4.5	138		
● 2141	5.7	173	1504	3.0	90	2014	6.0	184	2028	2051	5.3	163		
11 F	0457	2.5	77	25 Su	0506	2.5	76	2111	5.4	166	2055	2055	3.8	116
1137	4.5	138	0701	2.1	65	1251	4.6	140	25 W	0505	1.9	59		
1612	3.5	108	1056	4.9	150	1547	4.4	134	25 O	0740	2.4	72		
2212	5.5	168	1543	3.6	111	2148	5.4	166	25 Tu	0801	1.6	49		
12 Sa	0627	2.3	71	26 M	0701	2.4	73	2259	5.2	158	25 Th	1532	5.6	172
1317	4.6	139	0532	1.9	58	1508	4.9	149	26 F	0041	5.0	151		
1710	4.1	124	1240	4.9	148	1840	4.7	144	26 Sa	0852	1.4	42		
2256	5.4	164	1636	4.3	131	2204	4.5	137	26 O	1554	5.9	180		
13 Su	0736	2.0	61	27 Tu	0810	2.1	63	2259	5.2	158	26 Tu	2127	3.1	93
1449	4.8	147	0901	1.5	47	1556	5.2	160	27 W	0214	5.2	160		
1909	4.4	133	1449	5.1	155	1627	5.6	170	27 O	0313	5.9	180		
			1848	4.8	145	2128	4.1	126	27 Tu	0934	1.3	40		
			2341	5.5	167	2146	3.8	117	27 Sa	1616	6.1	186		
14 M	0000	5.2	160	28 M	0052	5.1	156	2222	3.2	97	27 O	2159	2.3	71
0829	1.6	50	0701	1.5	47	0901	1.7	53	28 W	0814	1.3	41		
1555	5.2	157	1449	5.1	155	0901	1.0	30	28 O	1618	5.9	180		
2039	4.3	131	1848	4.8	145	1636	6.0	182	28 Tu	2142	3.4	103		
15 Tu	0123	5.2	160	1449	5.1	155	2146	3.8	117	28 Sa	0913	1.7	51	
0914	1.3	41	1848	4.8	145	1627	5.6	170	28 O	1618	5.9	180		
1640	5.5	167	2341	5.5	167	2128	4.1	126	28 Tu	2142	3.4	103		
2135	4.1	125	2150	4.3	130	2204	3.8	115	28 Sa	2241	2.3	70		
16 Th	0256	5.8	178	2049	4.6	141	2204	3.8	115	28 O	2259	1.3	39	
17 Th	1008	0.3	9	1611	5.5	168	2204	3.8	115	29 F	0437	6.4	196	
1731	6.2	189	2049	4.6	141	1654	5.9	179	29 M	1045	1.6	48		
			2236	3.8	117	2204	3.8	115	29 O	1656	6.4	195		
18 F	0446	6.6	200	1611	5.5	168	2222	3.2	97	● 2259	1.3	39		
1746	6.5	199	1611	5.8	178	2222	3.2	97						
1746	6.5	199	1746	6.2	189	2222	3.2	97						
1746	6.5	199	2236	3.8	117	2222	3.2	97						

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Yokohama, Japan, 2008

Times and Heights of High and Low Waters

October				November				December							
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height				
h m	ft	cm		h m	ft	cm		h m	ft	cm					
1 W	0555	6.4	195	16 Th	0552	6.6	202	1 Sa	0000	0.6	17	1 M	0022	-0.3	-10
1145	2.3	69		1135	2.6	78		0705	5.9	179		0737	6.1	185	
1733	6.5	199		1721	6.5	199		1218	3.3	102		1233	3.7	113	
2357	0.9	26		2351	0.1	3		1738	6.2	190		1749	6.3	192	
2 Th	0634	6.2	189	17 F	0641	6.5	197	2 Su	0030	0.8	25	17 M	0111	0.0	1
1213	2.7	82		1209	3.0	91		0744	5.6	172		0828	5.7	175	
1752	6.5	198		1744	6.5	199		1247	3.6	109		1317	3.9	119	
								1805	6.1	185		1825	6.0	183	
3 F	0025	0.9	28	18 Sa	0030	0.1	4	3 M	0104	1.1	34	18 Tu	0206	0.6	17
0714	5.9	181		0732	6.2	188		0826	5.4	165		0921	5.4	166	
1239	3.1	94		1242	3.4	105		1319	3.8	115		1409	4.1	124	
1813	6.4	195		1809	6.4	195		1833	5.8	176		1909	5.5	168	
4 Sa	0054	1.1	35	19 Su	0114	0.4	13	4 Tu	0143	1.5	45	19 W	0304	1.1	34
0756	5.6	171		0827	5.7	174		0912	5.2	158		1019	5.2	159	
1305	3.4	105		1315	3.9	118		1358	4.0	123		1521	4.1	124	
1835	6.2	189		1834	6.2	188		1904	5.4	166		2019	5.0	151	
5 Su	0125	1.5	45	20 M	0207	0.9	28	5 W	0232	1.8	56	20 Th	0406	1.7	51
0842	5.2	160		0930	5.3	161		1010	5.0	152		1123	5.1	156	
1331	3.8	116		1353	4.3	130		1459	4.2	129		1557	3.8	117	
1900	5.9	181		1903	5.8	176		1946	5.0	152		2225	4.5	137	
6 M	0204	1.9	57	21 Tu	0316	1.4	43	6 Th	0335	2.1	65	21 F	0512	2.1	65
0939	5.0	151		1056	5.0	152		1130	5.0	151		1225	5.1	156	
1401	4.1	126		1455	4.6	139		1654	4.2	129		1902	3.2	98	
1928	5.6	170		● 1944	5.3	161		● 2117	4.6	139		● 2255	4.3	131	
7 Tu	0301	2.3	69	22 W	0443	1.8	55	7 F	0450	2.3	71	22 Sa	0035	4.5	138
1104	4.7	144		1304	5.0	153		1257	5.1	155		0621	2.5	77	
1450	4.5	137		1812	4.5	138		1915	3.7	114		1311	5.2	159	
● 2006	5.2	157		2200	4.7	144		2334	4.4	134		1953	2.5	75	
8 W	0434	2.5	77	23 Th	0614	2.0	60	8 Sa	0613	2.5	75	23 Su	0153	4.8	146
1348	4.9	149		1402	5.2	160		1345	5.3	161		0724	2.8	86	
1837	4.6	141		1951	3.8	117		2000	3.0	92		1347	5.3	163	
2141	4.8	145									2031	1.8	54		
9 Th	0629	2.5	76	24 F	0059	4.8	147	9 Su	0124	4.7	144	24 M	0251	5.1	156
1434	5.2	158		0724	2.0	61		0727	2.5	76		0818	3.0	92	
2009	4.1	125		1433	5.4	166		1418	5.5	168		1419	5.5	168	
				2028	3.1	93		2033	2.2	68		2106	1.2	36	
10 F	0012	4.7	142	25 Sa	0211	5.2	159	10 M	0229	5.2	159	10 Tu	0341	5.4	165
0740	2.3	69		0816	2.0	62		0823	2.5	77		0905	3.1	96	
1502	5.5	168		1459	5.7	173		1447	5.7	174		1449	5.6	172	
2042	3.5	107		2101	2.3	69		2106	1.4	42		2139	0.7	22	
11 Sa	0154	5.0	153	26 Su	0302	5.6	171	11 Tu	0323	5.7	174	11 W	0427	5.6	172
0829	2.0	62		0900	2.1	65		0911	2.6	80		0948	3.2	99	
1526	5.8	176		1522	5.8	178		1515	5.9	181		1519	5.8	177	
2111	2.8	86		2132	1.6	48		2140	0.6	19		2212	0.4	13	
12 Su	0249	5.5	168	27 M	0347	5.9	180	12 W	0413	6.1	186	12 Th	0512	6.0	183
0910	1.9	57		0938	2.3	69		0955	2.8	85		1026	3.3	101	
1549	6.0	183		1544	6.0	183		1543	6.1	187		1549	5.9	181	
2140	2.1	64		2202	1.0	32		2216	0.0	0		2244	0.3	8	
13 M	0336	6.0	182	28 Tu	0428	6.1	185	13 Th	0504	6.4	194	28 F	0549	5.9	179
0948	1.8	56		1014	2.5	75		1036	3.0	91		1101	3.3	102	
1612	6.2	189		1605	6.1	187		1612	6.3	193		1619	6.0	184	
2210	1.4	42		2232	0.7	20		● 2255	-0.4	-12		● 2316	0.3	8	
14 Tu	0421	6.4	194	29 W	0509	6.2	188	14 F	0555	6.4	195	29 Sa	0626	5.9	179
1025	1.9	59		1047	2.7	82		1115	3.2	99		1134	3.4	103	
1635	6.4	194		1627	6.2	190		1643	6.4	196		1649	6.1	185	
2242	0.8	23		● 2302	0.5	14		2336	-0.5	-15		2348	0.4	11	
15 W	0506	6.6	201	30 Th	0549	6.2	188	15 Sa	0646	6.3	192	30 M	0700	5.8	177
1101	2.2	67		1118	2.9	89		1154	3.5	106		1206	3.4	104	
1657	6.5	197		1649	6.3	192		1715	6.5	197		1719	6.0	184	
● 2316	0.3	9		2331	0.4	13									
16 W	0627	6.0	184	31 F	1148	3.1	96					31 M	0045	0.5	14
				1713	6.3	192						31 Tu	0743	5.8	177

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Kobe, Japan, 2008

## Times and Heights of High and Low Waters

January				February				March				
	Time	Height			Time	Height			Time	Height		
	h m	ft	cm		h m	ft	cm		h m	ft	cm	
<b>1</b> Tu	1238 2205	3.5 1.8	108 54		<b>16</b> W	0025 1215 2020	2.9 3.7 1.3	89 74 40	<b>1</b> F	0858 2232	3.7 1.0	112 31
<b>2</b> W	1223 2236	3.5 1.4	108 42		<b>17</b> Th	1246 2128	3.6 0.9	111 26	<b>2</b> Sa	0826 2318	3.8 0.7	115 22
<b>3</b> Th	1159 2307	3.6 1.0	110 32		<b>18</b> F	0652 0844 1047 2229	3.6 3.6 3.6 0.4	111 110 111 11	<b>3</b> Su	0718 2356	3.9 0.4	118 13
<b>4</b> F	0817 2340	3.7 0.7	113 22		<b>19</b> Sa	0716 2320	4.0 -0.1	123 -3	<b>4</b> M	0714 1207 1450	4.0 3.3 3.4	123 100 104
<b>5</b> Sa	0731 1139 1358	3.9 3.6 3.7	119 110 112		<b>20</b> Su	0729 1136 1623	4.3 3.6 3.9	130 109 118	<b>5</b> Tu	0027 0723 1219 1725	0.2 4.1 3.0 3.7	5 126 92 114
<b>6</b> Su	0012 0731 1200 1536	0.4 4.1 3.5 3.8	13 125 106 115		<b>21</b> M	0005 0720 1207 1727	-0.5 4.4 3.3 4.2	-15 135 101 127	<b>6</b> W	0053 0735 1242 1811	-0.1 4.3 2.7 4.1	-2 130 81 126
<b>7</b> M	0044 0744 1224 1704	0.2 4.3 3.3 3.9	5 130 101 120		<b>22</b> Tu	0046 0732 1242 1819	-0.8 4.6 3.0 4.5	-23 139 90 136	<b>7</b> Th	0118 0751 1313 1853	-0.2 4.4 2.3 4.4	-7 134 70 135
<b>8</b> Tu	0113 0803 1252 ● 1802	-0.1 4.4 3.1 4.1	-2 133 94 126		<b>23</b> W	0124 0758 1319 1905	-0.9 4.7 2.6 4.6	-26 142 80 140	<b>8</b> F	0145 0813 1348 1935	-0.3 4.5 1.9 4.6	-9 138 59 141
<b>9</b> W	0141 0825 1326 1850	-0.2 4.5 2.9 4.3	-6 136 88 131		<b>24</b> Th	0201 0828 1357 1948	-0.7 4.6 2.4 4.5	-22 138 72 138	<b>9</b> Sa	0215 0839 1427 2018	-0.2 4.6 1.6 4.6	-6 140 49 140
<b>10</b> Th	0210 0850 1403 1935	-0.3 4.5 2.7 4.4	-8 137 83 133		<b>25</b> F	0236 0859 1438 2029	-0.4 4.5 2.2 4.3	-11 138 67 130	<b>10</b> Su	0247 0908 1511 2103	0.1 4.5 1.4 4.4	4 138 42 133
<b>11</b> F	0241 0920 1445 2020	-0.2 4.5 2.6 4.3	-6 136 79 130		<b>11</b> M	0309 0931 1521 2109	0.2 4.3 2.1 3.8	6 132 64 117	<b>26</b> Tu	0320 0939 1600 2152	0.7 4.4 1.2 4.0	21 133 37 121
<b>12</b> Sa	0315 0953 1533 2107	0.0 4.4 2.5 4.0	1 134 76 123		<b>12</b> Tu	0337 1000 1611 2150	0.8 4.1 2.0 3.3	25 125 62 102	<b>27</b> W	0353 1009 1657 2251	1.4 4.1 1.1 3.5	43 126 33 106
<b>13</b> Su	0349 1029 1629 2159	0.5 4.2 2.3 3.7	14 129 71 112		<b>13</b> W	0359 1024 1717 2238	1.5 3.9 2.0 2.9	45 118 60 88	<b>28</b> Th	0422 1034 1806 1822	2.2 3.9 1.0 1.3	67 118 30 40
<b>14</b> M	0426 1105 1740 2300	1.0 4.1 2.1 3.2	31 124 64 99		<b>14</b> Th	0406 1039 1906 2353	2.1 3.7 1.8 2.5	64 112 55 76	<b>29</b> F	0018 0246 1039 1927	3.0 2.9 3.7 0.9	92 88 113 26
<b>15</b> Tu	0502 1141 1903	1.7 3.9 1.8	52 118 54		<b>15</b> F	0130 1042 2027	2.5 3.6 1.5	75 110 47	<b>15</b> O	0858 2059	3.8 0.7	115 20
					<b>31</b> Th	1023 2136	3.6 1.3	110 39				

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Kobe, Japan, 2008

## Times and Heights of High and Low Waters

April				May				June								
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height					
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm					
1 Tu	0544	4.0	122	16 W	0512	4.0	121	1 Th	0440	4.1	125					
1332	2.9	87	1214	2.4	73	1102	2.4	74	16 F	0417	4.0	123				
1516	2.9	88	1629	3.5	106	1558	3.5	106	1121	1.8	54					
2242	1.2	36	2257	1.6	49	2218	1.9	57	1719	3.7	114					
2 W	0550	4.0	123	2 Th	0445	4.2	127	2250	3.0	90	2250	3.0	90			
1141	2.7	81	1134	1.9	59	1106	1.8	56	1737	4.7	142					
1621	3.3	102	1713	3.8	116	1649	4.0	122	1802	4.0	123					
2313	1.1	33	2328	1.8	54	2257	2.0	60	2324	3.1	95					
3 Th	0550	4.1	125	18 F	0532	4.1	126	1131	1.1	35	1210	1.0	31			
1137	2.2	67	1154	1.4	44	1736	4.6	139	1843	4.3	131	1843	4.3	131		
1706	3.9	118	1754	4.1	125	2335	2.1	64	2358	3.2	98	2358	3.2	98		
2341	1.0	31	2358	2.0	60											
4 F	0600	4.3	130	4 Sa	0531	4.6	139	1205	0.4	13	1243	0.7	22			
1158	1.6	48	1224	1.0	31	1822	5.0	152	1923	4.5	138	1923	4.5	138		
1748	4.4	135	1834	4.3	132											
5 Sa	0010	1.0	30	20 Su	0028	2.1	65	0013	2.3	70	0030	3.3	100			
0620	4.5	137	0621	4.3	132	M	0601	4.8	146	0553	4.4	133	0646	5.1	155	
1229	0.9	27	1257	0.7	21	M	1245	-0.1	-4	1318	0.6	17	1410	-0.5	-14	
1831	4.9	149	O	1914	4.5	136	●	1910	5.2	160	2002	4.7	143	2056	5.3	162
6 Su	0042	1.1	34	21 M	0057	2.3	71	0634	4.9	150	0103	3.3	101	0203	3.7	113
0645	4.7	144	M	1331	0.5	15	Tu	1328	-0.5	-15	0616	4.4	135	0732	5.0	152
●	1914	5.2	157	1954	4.5	138	2000	5.3	161	1355	0.5	16	1501	-0.2	-7	
7 M	0116	1.4	42	22 Tu	0125	2.5	77	0130	2.9	88	0135	3.4	103	0251	3.8	116
0714	4.8	147	Tu	0705	4.3	132	0707	4.9	150	0641	4.4	135	0820	4.7	144	
1344	-0.2	-5	1407	0.4	13	1416	-0.6	-18	1432	0.6	17	1551	0.2	7		
2000	5.2	158	2036	4.5	136	2054	5.1	156	2123	4.6	141	2237	4.8	146		
8 Tu	0151	1.8	56	23 W	0153	2.8	84	0210	3.2	99	0210	3.5	106	0348	3.9	118
0743	4.8	146	W	0723	4.3	130	0739	4.8	145	0705	4.4	133	0911	4.3	132	
1428	-0.4	-11	1443	0.5	14	1508	-0.4	-13	1510	0.7	21	1642	0.8	25		
2050	5.0	151	2122	4.3	131	2154	4.8	146	2209	4.5	137	2335	4.5	138		
9 W	0227	2.4	73	24 Th	0222	3.0	92	0253	3.6	110	0251	3.6	110	0806	3.7	114
0811	4.6	141	Th	0738	4.2	127	F	0807	4.5	136	0726	4.2	129	1011	3.9	46
1517	-0.3	-9	1523	0.6	19	1604	0.0	-1	1550	0.9	28	1550	0.9	28		
2147	4.5	137	2216	4.1	124	2307	4.4	134	2302	4.4	133	1732	1.5	46		
10 Th	0302	3.0	91	25 F	0253	3.3	100	0344	3.9	119	0344	3.7	114	0440	3.6	110
0834	4.3	132	F	0747	4.0	122	Sa	0641	4.1	126	0715	4.0	123	0944	4.1	126
1613	0.0	-1	1606	0.9	26	1705	0.5	15	1633	1.2	36	0906	3.3	100		
2302	4.0	122	2333	3.9	118				1128	3.4	105	1128	3.4	105		
11 F	0332	3.5	108	26 Sa	0330	3.5	108	0217	4.2	128	0014	4.2	129	0611	3.4	105
0818	4.0	123	0727	3.9	118	Su	1809	1.0	32	1717	1.4	44	1049	3.9	118	
1718	0.4	11	1655	1.1	33				1822	2.2	66	1724	2.1	65		
12 Sa	0644	4.0	123	27 Su	0223	3.8	117	0338	4.2	128	0211	4.2	129	0023	4.5	138
1834	0.8	23	Su	0439	3.8	115	M	1921	1.6	48	1807	1.8	54	0752	3.1	93
			0636	3.8	117				1706	3.4	104	1210	3.7	112		
			1750	1.3	41	●			2012	3.3	101	1812	2.7	81		
13 Su	0515	4.1	126	28 M	0349	4.0	122	0412	4.1	126	0214	4.1	125	0102	4.5	136
2004	1.1	33	M	1856	1.6	48	Tu	1111	2.8	86	1022	2.5	75	0836	2.6	78
●			O				1408	3.1	93	1902	3.2	104	1354	3.7	112	
14 M	0532	4.2	127	29 Tu	0424	4.1	125	2035	2.0	61	1906	2.1	65	1912	3.2	98
1233	2.9	87	Tu	2026	1.7	52	1127	2.5	75	2011	2.7	83	2028	3.7	113	
1411	2.9	88					1535	3.2	98	1419	3.3	102	0140	4.4	135	
2126	1.3	39					2132	2.4	73	2016	2.5	75	0917	2.0	62	
15 Tu	0545	4.1	124	30 W	0442	4.1	125	0408	4.0	123	0258	4.2	128	1558	4.0	121
1225	2.6	80	W	1132	2.8	85	1127	2.1	65	1011	2.2	68	1050	1.0	29	
1538	3.1	96	1451	3.1	93	1632	3.5	106	1539	3.7	113	1827	4.9	149		
2220	1.4	44	2133	1.8	55	2214	2.7	83	2121	2.8	85	2303	4.0	123		
31 Sa	0335	4.3	131						2216	3.1	93					
	1031	1.6	49													
	1641	4.2	127													
	2216	3.1	93													

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

Kobe, Japan, 2008

## Times and Heights of High and Low Waters

July						August						September							
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height	
<b>1</b> Tu	0358	4.8	145	<b>16</b>	0217	4.5	137	<b>1</b>	0020	4.0	121	<b>16</b>	0029	3.7	114	<b>1</b>	0117	2.5	77
	1140	0.5	14	W	1226	1.2	38	F	0557	5.4	166	Sa	0558	5.0	153	M	0717	5.8	176
	1855	5.2	160		1928	5.1	154		1301	0.3	9		1301	1.2	37		1342	1.5	45
	2343	4.2	127					●	1934	5.6	172		1932	5.4	164		1953	5.6	172
<b>2</b> W	0456	5.0	152	<b>17</b>	0017	4.2	127	<b>2</b>	0058	3.6	109	<b>17</b>	0058	3.3	102	<b>2</b>	0156	2.2	68
	1228	0.1	2	Th	0439	4.6	140	Sa	0646	5.7	173	Su	0638	5.3	163	Tu	0758	5.6	171
	1926	5.5	167		1259	1.1	33		1339	0.4	12		1326	1.2	36		1412	2.0	61
					1948	5.2	157		2004	5.7	173	O	1952	5.5	168		2020	5.5	168
<b>3</b> Th	0028	4.0	123	<b>18</b>	0044	3.9	120	<b>3</b>	0137	3.2	99	<b>18</b>	0131	3.0	91	<b>3</b>	0236	2.1	64
	0553	5.2	159	F	0554	4.8	146	Su	0731	5.7	174	M	0718	5.5	169	W	0839	5.2	160
	1315	-0.2	-5		1329	1.0	29		1416	0.7	22		1353	1.2	38		1439	2.6	78
	●	2001	5.6	170	O	2010	5.2	160		2036	5.6	171		2017	5.6	171		2044	5.3	162
<b>4</b> F	0111	3.8	117	<b>19</b>	0116	3.7	114	<b>4</b>	0219	3.0	92	<b>19</b>	0208	2.7	81	<b>4</b>	0318	2.1	64
	0647	5.3	163	Sa	0642	5.0	152	M	0814	5.5	168	Tu	0800	5.6	171	Th	0923	4.8	147
	1400	-0.1	-4		1358	0.9	28		1451	1.3	39		1424	1.5	46		1501	3.1	96
	2037	5.5	169		2034	5.3	161		2107	5.4	166		2044	5.6	171		2102	5.1	155
<b>5</b> Sa	0154	3.7	112	<b>20</b>	0151	3.5	107	<b>5</b>	0303	2.9	87	<b>20</b>	0249	2.4	73	<b>5</b>	0406	2.1	65
	0737	5.3	163	Su	0726	5.1	156	Tu	0857	5.1	156	W	0843	5.5	167	F	1014	4.4	134
	1444	0.2	5		1427	1.0	30		1522	1.9	59		1456	2.0	60		1514	3.7	112
	2115	5.4	164		2101	5.3	162		2137	5.2	159		2113	5.5	168		2110	4.9	149
<b>6</b> Su	0239	3.6	109	<b>21</b>	0230	3.4	103	<b>6</b>	0353	2.8	85	<b>21</b>	0336	2.2	67	<b>6</b>	0505	2.2	67
	0825	5.2	157	M	0809	5.1	156	W	0942	4.6	141	Th	0931	5.2	158	Sa	2058	4.8	145
	1526	0.7	20		1457	1.2	36		1549	2.7	81		1530	2.6	79		1514	4.4	134
	2154	5.2	157		2131	5.3	161		2203	5.0	152		2143	5.3	162		2001	4.9	148
<b>7</b> M	0329	3.5	106	<b>22</b>	0315	3.2	98	<b>7</b>	0456	2.8	84	<b>22</b>	0430	2.1	63	<b>7</b>	0617	2.3	69
	0913	4.8	146	Tu	0854	5.0	151	Th	1034	4.1	126	F	1028	4.8	145	Su	1943	4.8	146
	1606	1.3	41		1530	1.5	47		1604	3.3	101		1603	3.3	100		2209	5.1	154
	2232	4.9	150		2203	5.2	158		2220	4.8	146		2209	5.1	154	O			
<b>8</b> Tu	0431	3.4	104	<b>23</b>	0407	3.1	94	<b>8</b>	0626	2.6	80	<b>23</b>	0534	2.0	60	<b>8</b>	0742	2.3	70
	1003	4.3	131	W	0943	4.7	144	F	2221	4.7	142	Sa	1145	4.3	132	M	1910	4.9	148
	1642	2.1	63		1605	2.0	62					1628	4.0	122		2225	4.9	148	
	2309	4.7	143		2237	5.1	154									0752	5.1	156	
<b>9</b> W	0716	3.2	97	<b>24</b>	0509	2.9	88	<b>9</b>	0743	2.5	75	<b>24</b>	0647	1.9	57	<b>9</b>	0912	2.2	68
	1102	3.8	116	Th	1040	4.4	134	Sa	2150	4.7	143	Su	2051	4.8	147	Tu	1820	5.0	151
	1710	2.8	85		1642	2.7	81	O								0920	5.2	157	
	2340	4.5	137		2311	4.9	149									1806	5.2	157	
<b>10</b> Th	0819	2.8	86	<b>25</b>	0620	2.6	79	<b>10</b>	0852	2.3	70	<b>25</b>	0810	1.8	54	<b>10</b>	1017	2.1	63
	1353	3.5	106	F	1153	4.1	125	Su	2021	4.8	146	M	1832	5.0	153	W	1803	5.0	153
	1714	3.4	104		1721	3.3	102									0305	4.1	125	
	2359	4.4	133		2343	4.7	144									1020	1.6	48	
<b>11</b> F	0908	2.5	76	<b>26</b>	0729	2.3	69	<b>11</b>	0956	2.1	65	<b>26</b>	0935	1.5	47	<b>11</b>	1103	1.9	58
	2348	4.4	133	Sa	1517	4.0	122	M	1955	4.9	149	Tu	1840	5.2	159	Th	1813	5.1	155
					1808	4.0	121									2349	3.9	120	
				O												0410	4.5	137	
<b>12</b> Sa	0952	2.2	67	<b>27</b>	0010	4.6	141	<b>12</b>	1048	1.9	58	<b>27</b>	1037	1.3	39	<b>12</b>	0425	4.3	130
	2310	4.5	136	Su	0836	1.9	57	Tu	1852	5.0	151	W	1847	5.3	161	F	1136	1.8	54
					1806	4.5	138									1823	5.2	157	
					1944	4.5	137									2351	3.6	110	
<b>13</b> Su	1032	1.9	59	<b>28</b>	0944	1.5	46	<b>13</b>	1131	1.7	52	<b>28</b>	0118	4.4	134	<b>13</b>	0507	4.7	142
	2031	4.6	139	M	1842	5.0	151	W	1849	5.1	155	Th	0405	4.7	143	Sa	1201	1.6	50
								2354	4.3	132		1123	1.0	32		1832	5.2	160	
																1826	5.3	163	
<b>14</b> M	1112	1.7	52	<b>29</b>	1045	1.1	33	<b>14</b>	0152	4.4	135	<b>29</b>	0504	5.1	156	<b>14</b>	0009	3.1	96
	1935	4.7	144	Tu	1859	5.2	159	Th	1206	1.5	46	F	1202	0.9	28	Su	0546	5.1	155
					2313	4.6	140		1901	5.2	158		1835	5.4	166		1225	1.6	48
																1846	5.4	164	
<b>15</b> Tu	1151	1.4	44	<b>30</b>	0342	4.8	145	<b>15</b>	0007	4.1	124	<b>30</b>	0006	3.5	106	<b>15</b>	0035	2.6	80
	1915	4.9	149	W	1135	0.7	21	F	0514	4.7	143	Sa	0552	5.5	168	M	0625	5.5	167
	2353	4.4	133		1856	5.4	164		1235	1.3	41		1237	1.0	29		1251	1.6	48
					2345	4.3	132		1916	5.3	161		1858	5.6	171	O	1907	5.6	170
<b>31</b> Th	0500	5.1	155		1220	0.4	13					<b>31</b>	0040	3.0	90		0057	1.7	53
					1909	5.5	169					Su	0635	5.7	175		0704	5.5	167
													1310	1.1	34		1307	2.3	70
													●	1925	5.7	173		1909	5.4	165

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

# Kobe, Japan, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
1 W	0133 1.5 45	16 Th	0122 0.6 18	1 Sa	0229 0.8 24	16 Su	0242 -0.4 -13	1 M	0256 0.4 13	16 Tu	0323 -0.5 -16
0745 5.4 164	0739 5.8 176		0913 4.8 145		0927 5.1 155		0953 4.5 136		1005 4.6 141		
1336 2.7 82	1325 2.7 81		1403 3.6 110		1427 3.7 113		1434 3.5 107		1516 3.3 102		
1933 5.3 162	1916 5.5 169		1913 4.7 143		1948 4.9 148		1905 4.2 128		2050 4.3 131		
2 Th	0210 1.3 41	17 F	0204 0.3 9	2 Su	0309 1.0 29	17 M	0336 -0.1 -4	2 Tu	0333 0.7 20	17 W	0410 0.1 2
0826 5.2 157	0827 5.6 171		1007 4.6 139		1030 4.7 144		1040 4.3 131		1053 4.3 131		
1402 3.1 94	1400 3.1 95		1432 3.8 117		1514 4.0 122		1521 3.6 110		1618 3.3 101		
1952 5.2 157	1945 5.4 165		1915 4.5 138		2006 4.5 137		1901 4.0 122		2143 3.8 115		
3 F	0249 1.4 42	18 Sa	0250 0.3 9	3 M	0352 1.2 36	18 Tu	0433 0.4 11	3 W	0409 0.9 28	18 Th	0456 0.8 24
0912 4.9 148	0921 5.3 161		1121 4.3 132		1158 4.4 134		1137 4.1 126		1145 4.0 123		
1425 3.5 107	1436 3.6 111		1504 4.0 123		1625 4.2 127		1631 3.7 113		2022 3.0 91		
2004 5.0 151	2010 5.2 157		1853 4.4 134		1816 4.2 129		1829 3.8 115		2245 3.2 98		
4 Sa	0330 1.5 46	19 Su	0344 0.5 15	4 Tu	0439 1.4 44	19 W	0534 0.9 28	4 Th	0447 1.2 38	19 F	0541 1.5 47
1007 4.5 138	1030 4.8 147		1410 4.3 131		1500 4.4 133		1326 4.1 124		1240 3.8 117		
1444 3.9 118	1510 4.1 126		1606 4.3 130		1810 4.3 131				2122 2.5 75		
2005 4.8 146	2011 4.9 148								O		
5 Su	0419 1.7 52	20 M	0448 0.8 25	5 W	0532 1.7 52	20 Th	0642 1.5 46	5 F	0528 1.6 48	20 Sa	0023 2.8 84
1203 4.3 130	1841 4.7 144		1841 4.7 144		1535 4.4 135		1435 4.0 123		0623 2.3 69		
1452 4.2 128						2244 3.0 90			1326 3.7 113		
1937 4.7 142						O			2208 2.0 60		
6 M	0517 1.9 58	21 Tu	0601 1.2 37	6 Th	0633 1.9 59	21 F	0107 3.1 95	6 Sa	0616 2.0 60	21 Su	1400 3.6 110
1841 4.7 142	1635 4.8 146		1607 4.5 137		0758 2.0 62		1441 4.0 121		2242 1.6 48		
O					1555 4.2 128		2221 2.5 76		O		
7 Tu	0628 2.1 64	22 W	0726 1.5 47	7 F	0755 2.2 66	22 Sa	0318 3.2 98	7 Su	0142 2.9 87	22 M	1426 3.6 110
1731 4.7 144	1657 4.9 148		1627 4.5 137		1627 4.5 137		0904 2.5 75		0722 2.4 72		
O			2332 3.0 91		2332 3.0 91		1543 4.1 125		1445 4.0 121		
8 W	0807 2.2 67	23 Th	0851 1.8 54	8 Sa	0238 3.2 97	23 Su	0434 3.4 105	8 M	0332 3.1 96	23 Tu	0751 3.7 112
1705 4.8 147	1713 4.8 145		1734 3.2 98		0908 2.3 70		0952 2.9 87		0840 2.7 83		
O			1630 4.5 136		1630 4.5 136		1555 4.1 125		1507 4.0 122		
9 Th	0931 2.2 66	24 F	0311 3.7 113	9 Su	0348 3.5 108	24 M	0530 3.7 113	9 Tu	0445 3.6 110	24 W	0800 3.9 119
1719 4.9 149	0951 2.0 60		1655 4.6 141		0954 2.4 73		1030 3.1 95		0946 3.0 91		
O			2352 2.9 88		1628 4.5 136		1618 4.2 127		1538 4.1 126		
10 F	0107 3.5 108	25 Sa	0408 4.0 122	10 M	0437 4.0 122	25 Tu	0609 4.0 121	10 W	0539 4.1 125	25 Th	0741 4.1 124
0317 3.6 110	1031 2.2 67		1031 2.2 67		1033 2.5 77		1106 3.3 101		1040 3.2 97		
1021 2.1 64	1651 4.7 142		1651 4.7 142		1642 4.6 140		1644 4.3 130		1615 4.3 132		
1730 4.9 149	2324 2.4 74		2324 2.4 74		2321 1.5 46		2335 1.2 38		2335 0.1 4		
2342 3.3 102											
11 Sa	0410 4.0 121	26 Su	0454 4.3 132	11 Tu	0522 4.5 137	26 W	0001 0.9 26	11 Th	0625 4.6 139	26 F	0032 0.3 9
1053 2.1 63	1104 2.4 74		1104 2.4 74		1110 2.6 80		0644 4.3 130		1128 3.3 100		
1733 4.9 149	1709 4.8 145		1709 4.8 145		1706 4.8 146		1141 3.4 103		1655 4.6 139		
2332 2.9 89	2339 1.9 58		2339 1.9 58		2350 0.8 24		1710 4.3 132		1215 3.4 105		
O									1654 3.9 119		
12 Su	0451 4.4 134	27 M	0537 4.6 140	12 W	0607 5.0 151	27 Th	0034 0.6 17	12 F	0017 -0.4 -13	27 Sa	0105 0.1 3
1119 2.1 63	1135 2.6 80		1135 2.6 80		1147 2.8 84		0719 4.5 137		0757 4.4 134		
1740 5.0 152	1733 4.9 148		1733 4.9 148		1735 5.0 152		1216 3.4 103		1247 3.3 100		
2346 2.4 72							1736 4.4 134		1739 4.8 145		
O											
13 M	0531 4.9 149	28 Tu	0008 1.4 43	13 Th	0026 0.2 5	28 F	0108 0.4 11	13 Sa	0102 -0.8 -25	28 Su	0138 0.0 0
1146 2.1 63	0618 4.8 147		0618 4.8 147		0653 5.3 161		0755 4.6 141		0751 5.1 155		
1757 5.2 158	1206 2.8 86		1206 2.8 86		1226 2.9 89		1249 3.4 103		1257 3.3 101		
O			1758 4.9 150		1808 5.2 157		1801 4.4 135		1825 4.9 149		
14 Tu	0012 1.7 52	29 W	0041 1.0 32	14 F	0107 -0.3 -9	29 Sa	0144 0.3 8	14 Su	0149 -1.0 -31	29 M	0209 0.0 -1
0612 5.3 163	0700 5.0 151		0700 5.0 151		0741 5.4 165		0832 4.7 143		0834 5.1 154		
1217 2.1 65	1236 3.0 91		1236 3.0 91		1305 3.1 96		1322 3.4 103		1340 3.3 101		
1820 5.4 164	● 1823 5.0 151		1823 5.0 151		1842 5.2 159		1824 4.4 135		1912 4.9 149		
O											
15 W	0045 1.1 33	30 Th	0116 0.8 25	15 Sa	0153 -0.5 -15	30 Su	0220 0.3 9	15 M	0236 -0.9 -27	30 Tu	0239 0.1 2
0654 5.6 172	0742 5.0 152		0742 5.0 152		0832 5.3 163		0911 4.6 141		0919 4.9 149		
1250 2.3 71	1306 3.2 97		1306 3.2 97		1345 3.4 104		1356 3.4 105		1426 3.3 101		
O	1848 5.5 168	1845 4.9 149		1916 5.1 156		1846 4.4 133		2000 4.7 142		1950 4.1 124	
O											
31 F	0152 0.7 22	31 F	0826 4.9 150								
1335 3.4 103	1335 3.4 103		1335 3.4 103								
1902 4.8 146	1902 4.8 146		1902 4.8 146								

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Sakate, Shodo Shima, Japan, 2008

Times and Heights of High and Low Waters

January				February				March					
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height		
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm		
1 Tu 0600	3.6	110	16 W 0449	3.8	116	1 F 0005	0.6	18	16 Sa 0810	4.8	146		
1120	2.1	64	W 1030	2.1	64	800	4.4	134	Sa 1352	2.7	82		
1722	4.0	122	1602	3.9	119	1416	2.6	79	1658	2.8	85		
● 2311	0.5	15	1757	2.9	88								
2 W 0015	0.8	24	17 Th 0635	4.1	125	2 Sa 0106	0.4	12	2 Su 0018	0.7	21		
0727	4.0	122	1210	2.7	82	905	4.7	143	823	4.8	146		
1252	2.4	73	1641	3.5	107	1541	2.5	76	1512	2.5	76		
1811	3.6	110	1912	2.8	85	1841	2.9	88	1846	2.8	85		
3 Th 0106	0.6	18	18 F 0012	0.2	6	2001	0.3	9	125	0.6	18		
0838	4.4	134	0813	4.5	137	Su 0953	5.0	152	M 0208	0.0	0		
1426	2.5	76	1412	2.9	88	1627	2.4	73	1009	5.4	165		
1901	3.3	101	1728	3.2	98	2006	2.8	85	1643	2.7	82		
4 F 0152	0.3	9	19 Sa 0115	-0.1	-3	19 M 0245	0.1	3	2017	3.1	94		
0933	4.7	143	0925	5.0	152	Tu 1031	5.1	155	0304	0.0	0		
1543	2.5	76	1551	2.9	88	1654	2.5	76	1048	5.5	168		
1945	3.1	94	1833	3.0	91	2039	2.9	88	1703	2.6	79		
5 Sa 0232	0.2	6	20 Su 0213	-0.3	-9	2115	3.4	104	2115	3.4	104		
1017	4.9	149	1019	5.4	165	5 Tu 0321	0.0	0	0349	0.0	0		
1636	2.6	79	1646	2.9	88	1101	5.1	155	1118	5.4	165		
2014	3.0	91	1939	3.1	94	1711	2.5	76	1721	2.5	76		
6 Su 0305	0.1	3	21 M 0304	-0.5	-15	2103	3.1	94	2200	3.6	110		
1053	5.1	155	1103	5.5	168	6 W 0351	0.0	0	0300	0.4	12		
1711	2.6	79	1721	2.9	88	1124	5.1	155	1023	5.2	158		
2030	3.0	91	2034	3.2	98	1724	2.6	79	1630	2.3	70		
7 M 0334	0.0	0	21 Th 0421	-0.5	-15	2243	3.4	104	2114	3.5	107		
1123	5.1	155	1141	5.6	171	6 Th 0428	0.3	9	0344	0.9	27		
1733	2.8	85	1749	2.9	88	1142	5.2	158	1040	5.1	155		
2046	3.1	94	○ 2124	3.4	104	1740	2.3	70	1644	1.9	58		
8 Tu 0401	-0.1	-3	22 W 0350	-0.5	-15	○ 2243	3.9	119	2223	4.1	125		
1149	5.1	155	1216	5.5	168	7 F 0421	0.0	0	0421	1.2	37		
1751	2.9	88	1817	2.8	85	1144	5.1	155	1057	4.9	149		
● 2113	3.3	101	2216	3.5	107	1739	2.5	76	1700	1.7	52		
9 W 0431	-0.2	-6	8 F 0433	-0.4	-12	● 2208	3.7	113	2145	3.8	116		
1214	5.1	155	1203	5.0	152	23 Th 0505	0.6	18	21	1.2	37		
1813	2.8	85	1802	2.3	70	1202	5.0	152	0454	1.5	46		
2153	3.4	104	2256	3.9	119	1803	2.0	61	1108	4.7	143		
10 Th 0507	-0.2	-6	8 Sa 0455	0.1	3	2328	4.0	122	1718	1.5	46		
1241	5.1	155	1216	5.5	168	23 Th 0543	1.0	30	○ 2333	4.6	140		
1843	2.7	82	1817	2.8	85	1222	4.8	146	2304	4.5	137		
2245	3.5	107	2216	3.5	107	1830	1.7	52	23	0529	1.9	58	
11 F 0548	-0.1	-3	8 Sa 0442	0.8	24	● 2304	4.5	137	1119	4.5	137		
1311	5.2	158	23 W 0515	-0.2	-6	24 F 0018	4.2	128	1740	1.2	37		
1920	2.4	73	1247	5.3	162	1226	5.0	152	0522	1.1	34		
2345	3.6	110	1848	2.6	79	1832	1.9	58	0012	4.7	143		
12 Sa 0634	0.0	0	2313	3.6	110	2351	4.1	125	0607	2.2	67		
1344	5.1	155	1247	5.3	162	1226	5.0	152	0607	2.2	67		
2000	2.0	61	1848	2.6	79	1832	1.9	58	1136	4.3	131		
● 2113	3.3	101	2313	3.6	110	2351	4.1	125	1809	0.9	27		
13 Su 0634	0.0	0	27 Th 0158	4.3	131	12 Sa 0018	4.2	128	25	0056	4.9	149	
1344	5.1	155	0736	1.0	30	0708	1.0	30	0653	2.4	73		
2000	2.0	61	1417	4.7	143	1323	4.7	143	1202	4.1	125		
● 2113	3.3	101	2043	1.4	43	1949	1.0	30	1844	0.7	21		
14 M 0052	3.6	110	27 W 0158	4.3	131	26 Tu 0210	4.4	134	26	0145	4.9	149	
0724	0.4	12	0830	1.5	46	0805	2.0	61	0747	2.6	79		
1418	5.0	152	1449	4.4	134	1340	4.2	128	1235	3.9	119		
2043	1.6	49	2126	1.1	34	2021	0.8	24	1926	0.6	18		
15 M 0202	3.7	113	28 M 0236	3.8	116	13 Th 0212	4.4	134	27	0241	5.0	152	
0817	0.8	24	0930	1.9	58	0904	2.1	64	0848	2.7	82		
1452	4.7	143	1523	4.1	125	1425	4.0	122	1315	3.7	113		
2127	1.2	37	2213	0.8	24	2124	0.4	12	2014	0.6	18		
15 Tu 0319	3.7	113	14 Th 0439	4.3	131	28 Th 0422	4.4	134	28	0344	4.9	149	
0917	1.4	43	1044	2.3	70	1018	2.6	79	F 1000	2.8	85		
1527	4.3	131	1602	3.6	110	1453	3.5	107	1400	3.4	104		
2216	0.9	27	○ 2305	0.7	21	2201	0.7	21	2109	0.6	18		
16 Su 0639	4.1	125	31 Th 0639	4.1	125	2047	0.2	6	29	0457	4.9	149	
1344	2.0	61	1222	2.6	79	1024	2.7	82	1127	2.8	85		
● 2113	3.3	101	1650	3.2	98	1540	3.1	94	1454	3.1	94		
17 Tu 0629	4.5	137	1521	3.3	101	○ 2305	0.7	21	2213	0.8	24		
0917	1.4	43	2337	0.2	6	14	0438	4.9	149	31	0727	5.0	152
1527	4.3	131	1044	2.3	70	1154	2.7	82	1416	2.5	76		
2216	0.9	27	1452	3.1	94	1540	3.1	94	1814	2.9	88		
18 Sa 0621	4.9	149	1521	3.3	101	○ 2153	0.3	9	● 2327	0.9	27		
1344	2.0	61	2337	0.2	6	1521	3.3	101	31	0727	5.0	152	
● 2113	3.3	101	1650	3.2	98	1521	3.3	101	1416	2.5	76		
19 Tu 0616	4.9	149	1650	3.2	98	1521	3.3	101	1814	2.9	88		
0917	1.4	43	1650	3.2	98	1521	3.3	101	● 2327	0.9	27		
1527	4.3	131	1650	3.2	98	1521	3.3	101	31	0727	5.0	152	
2216	0.9	27	1650	3.2	98	1521	3.3	101	1416	2.5	76		
18 Sa 0616	4.9	149	1650	3.2	98	1521	3.3	101	1814	2.9	88		
1344	2.0	61	1650	3.2	98	1521	3.3	101	● 2327	0.9	27		
● 2113	3.3	101	1650	3.2	98	1521	3.3	101	31	0727	5.0	152	
19 Tu 0616	4.9	149	1650	3.2	98	1521	3.3	101	1416	2.5	76		
0917	1.4	43	1650	3.2	98	1521	3.3	101	1814	2.9	88		
1527	4.3	131	1650	3.2	98	1521	3.3	101	● 2327	0.9	27		
2216	0.9	27	1650	3.2	98	1521	3.3	101	31	0727	5.0	152	
18 Sa 0616	4.9	149	1650	3.2	98	1521	3.3	101	1416	2.5	76		
1344	2.0	61	1650	3.2	98	1521	3.3	101	1814	2.9	88		
● 2113	3.3	101	1650	3.2	98	1521	3.3	101	● 2327	0.9	27		
19 Tu 0616	4.9	149	1650	3.2	98	1521	3.3	101	31	0727	5.0	152	
0917	1.4	43	1650	3.2	98	1521	3.3	101	1416	2.5	76		
1527	4.3	131	1650	3.2	98	1521	3.3	101	1814	2.9	88		
2216	0.9	27	1650	3.2	98	1521	3.3	101	● 2327	0.9	27		
18 Sa 0616	4.9	149	1650	3.2	98	1521	3.3	101	31	0727	5.0	152	
1344	2.0	61	1650	3.2	98	1521	3.3	101	1416	2.5	76		
● 2113	3.3	101	1650	3.2	98	1521	3.3	101	1814	2.9	88		
19 Tu 0616	4.9	149	1650	3.2	98	1521	3.3	101	● 2327	0.9	27		
0917	1.4	43	1650	3.2	98	1521	3.3	101	31	0727	5.0	152	
1527	4.3	131	1650	3.2	98	1521	3.3	101	1416	2.5	76		
2216	0.9	27	1650	3.2	98	1521	3.3	101	1814	2.9	88		
18 Sa 0616	4.9	149	1650	3.2	98	1521	3.3	101	● 2327	0.9	27		
1344	2.0	61	1650	3.2	98	1521	3.3	101	31	0727	5.0	152	
● 2113	3.3	101											

# Sakate, Shodo Shima, Japan, 2008

Times and Heights of High and Low Waters

April				May				June														
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height											
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm											
1 Tu	0040	0.9	27	16 W	0145	1.3	40	1 Th	0058	1.4	43											
0822	5.1	155	0855	5.2	158	0757	5.0	152	16 F	0230	2.3	70										
1457	2.3	70	1520	1.9	58	1423	1.8	55	16 Sa	0832	4.6	140										
1937	3.1	94	2103	3.9	119	2013	3.9	119	16 M	1459	1.2	37										
								2151	4.8	146	1 Su	0240	2.7	82								
2 W	0142	0.9	27	17 Th	0246	1.5	46	2 F	0200	1.6	49	2 M	0339	3.0	91							
0903	5.2	158	0928	5.0	152	0829	4.8	146	17 Sa	0328	2.6	79	17 Tu	0809	4.1	125						
1522	2.1	64	1544	1.6	49	1448	1.5	46	1524	1.0	30	1503	0.3	9	1540	0.8	24					
2031	3.5	107	2153	4.3	131	2104	4.5	137	2231	5.1	155	2234	5.9	180	2330	5.7	174					
3 Th	0232	0.9	27	18 F	0335	1.8	55	3 Sa	0253	1.9	58	18 Su	0415	2.8	85	18 W	0539	3.6	110			
0932	5.1	155	0951	4.7	143	0851	4.6	140	1510	1.1	34	1544	0.8	24	18 M	0841	3.8	116				
1541	1.9	58	1604	1.4	43	2147	5.0	152	2305	5.3	162	2322	6.1	186	2358	5.7	174					
2112	4.0	122	2232	4.6	140																	
4 F	0314	1.1	34	19 Sa	0414	2.1	64	4 Su	0341	2.2	67	19 M	0453	3.1	94	19 W	0524	3.6	110			
0951	4.9	149	1004	4.5	137	0907	4.4	134	1534	0.7	21	1603	0.7	21	1619	-0.2	-6	1634	0.7	21		
1556	1.7	52	1620	1.2	37	2229	5.4	165	2334	5.4	165	●				O						
2148	4.4	134	2304	4.9	149																	
5 Sa	0353	1.3	40	20 Su	0448	2.4	73	5 M	0427	2.5	76	20 Tu	0526	3.3	101	20 Th	0013	6.2	189			
1005	4.7	143	1010	4.2	128	0922	4.2	128	1602	0.3	9	1624	0.6	18	20 F	0632	3.7	113				
1614	1.4	43	1636	1.0	30	●	2314	5.7	174	2334	5.7	174	O	0929	4.2	128	0940	4.0	122			
2226	4.9	149	2334	5.0	152																	
6 Su	0432	1.6	49	21 M	0521	2.7	82	6 Tu	0515	2.9	88	21 W	0002	5.4	165	21 F	0108	6.2	189			
1019	4.6	140	1016	4.1	125	0941	4.2	128	1637	0.0	0	0934	3.9	119	21 Sa	0707	3.6	110				
1636	0.9	27	1656	0.8	24																	
●	2309	5.2	158																			
7 M	0515	2.0	61	22 Tu	0005	5.1	155	7 W	0006	5.9	180	22 Th	0034	5.5	168	22 Sa	0203	6.1	186			
1036	4.4	134	0558	2.9	88	0608	3.2	98	1006	4.1	125	1006	3.9	119	22 Su	0748	3.4	104				
1706	0.5	15	1030	4.0	122	1724	0.6	18	1719	-0.2	-6	1728	0.5	15	1136	4.0	122	1839	0.7	21		
2359	5.4	165																				
8 Tu	0603	2.4	73	23 W	0042	5.2	158	8 Th	0104	5.9	180	23 F	0114	5.5	168	23 M	0255	6.1	186			
1059	4.2	128	0642	3.0	91	0711	3.5	107	1040	4.0	122	1052	3.8	116	23 Su	0832	3.1	94				
1744	0.2	6	1058	3.9	119	1810	-0.2	-6	1813	0.4	12	1813	0.4	12	1250	3.8	116	1244	4.0	122		
			1759	0.5	15																	
9 W	0056	5.5	168	24 Th	0127	5.3	162	9 F	0208	5.9	180	24 Sa	0158	5.6	171	9 M	0344	5.9	180			
0700	2.8	85	0735	3.0	91	0824	3.5	107	1126	3.9	119	1150	3.7	113	1014	3.0	91	0916	2.8	85		
1129	4.1	125	1137	3.8	116	1908	0.0	0	1904	0.5	15	1904	0.5	15	1430	3.7	113	1355	4.0	122		
1831	0.0	0	1843	0.5	15																	
10 Th	0201	5.5	168	25 F	0218	5.3	162	10 Sa	0314	5.8	177	25 Su	0246	5.6	171	10 Tu	0430	5.7	174			
0807	3.1	94	0836	3.0	91	0942	3.4	104	1230	3.6	110	1257	3.6	110	1105	2.5	76	1000	2.4	73		
1205	3.9	119	1225	3.6	110	2013	0.3	9	2053	0.6	18	2118	1.7	52	1615	3.8	116	1510	4.1	125		
1924	0.0	0	1934	0.5	15																	
11 F	0315	5.4	165	26 Sa	0314	5.3	162	11 Su	0419	5.7	174	26 M	0334	5.6	171	11 Tu	0515	5.4	165			
0927	3.3	101	0942	2.9	88	0942	3.4	104	1400	3.4	104	1409	3.5	107	1157	2.1	64	1045	2.1	64		
1245	3.7	113	1321	3.4	104	2122	0.7	21	2122	0.7	21	2053	0.9	27	●	2324	2.3	70	1633	4.2	128	
2025	0.2	6	2029	0.6	18														O	2223	2.3	70
12 Sa	0435	5.3	162	27 Tu	0415	5.3	162	12 M	0520	5.5	168	27 W	0422	5.6	171	12 Th	0601	5.0	152			
1110	3.3	101	1053	2.8	85	1206	2.8	85	1607	3.3	101	1530	3.4	104	1247	1.7	52	1133	1.7	52		
1332	3.4	104	1427	3.2	98	●	2237	1.2	37	2153	1.2	37				1930	4.4	134	1806	4.5	137	
2136	0.4	12	2130	0.8	24																	
13 Su	0559	5.3	162	28 M	0518	5.2	158	13 Tu	0618	5.3	162	28 W	0510	5.4	165	13 F	0049	2.8	85			
2259	0.8	24	1205	2.6	79	1302	2.4	73	1815	3.4	104	1702	3.5	107	1153	2.2	67	0648	4.7	143		
●			1553	3.1	94	2358	1.7	52	2300	1.6	49	2043	4.8	146	1333	1.3	40	1222	1.4	43		
			2237	1.0	30															1936	4.9	149
14 M	0712	5.3	162	29 Tu	0620	5.2	158	14 W	0711	5.1	155	29 Th	0558	5.1	155	14 Sa	0215	3.1	94			
1412	2.7	82	1305	2.4	73	1349	1.9	58	1950	3.9	119	1835	3.9	119	0731	4.3	131	0603	4.3	131		
1804	3.0	91	1737	3.1	94															1413	1.1	34
			2348	1.2	37															2139	5.3	162
15 Tu	0027	1.1	34	30 W	0714	5.1	155	15 Th	0119	2.0	61	30 F	0015	2.1	64	15 Su	0329	3.2	98			
0810	5.2	158	1350	2.1	64	0756	4.9	149	1428	1.5	46	1420	4.8	146	0641	4.8	146	0642	4.1	125		
1450	2.3	70	1908	3.4	104	2059	4.4	134	2059	4.4	134	1953	4.4	134	1447	0.9	27	1358	0.6	18		
1955	3.4	104																	2149	6.0	183	

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Sakate, Shodo Shima, Japan, 2008

Times and Heights of High and Low Waters

July				August				September				
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm	
1 Tu 0354	3.7	113	16 W 0511	3.6	110	1 F 0524	4.0	122	1 M 0512	3.6	110	
0720	4.1	125	W 0830	3.9	119	F 0904	4.5	137	Sa 0934	4.6	140	
1443	0.3	9	1526	1.0	30	1611	0.7	21	1612	1.4	43	
2240	6.3	192	2317	6.0	183	● 2353	6.6	201	2328	6.2	189	
2 W 0449	3.8	116	17 Th 0534	3.7	113	2 Sa 0551	3.9	119	17 Su 1005	3.6	110	
0758	4.2	128	0848	4.0	122	Sa 1656	0.9	27	1642	1.5	46	
1528	0.1	3	1555	1.0	30	○ 2344	6.1	186	● 2344	6.1	186	
2327	6.5	198	2343	6.0	183							
3 Th 0535	4.0	122	18 F 0549	3.8	116	3 Su 0024	6.4	195	18 M 1045	3.4	104	
0839	4.3	131	0911	4.2	128	Su 1056	3.7	113	1717	5.1	155	
1613	0.1	3	1624	1.0	30	1741	1.3	40		1.7	52	
● ○												
4 F 0012	6.5	198	19 Sa 0006	6.0	183	4 M 0054	6.2	189	19 Tu 0002	6.0	183	
0617	4.0	122	0605	3.8	116	M 0656	3.4	104	Tu 0609	3.0	91	
0928	4.4	134	0948	4.4	134	1200	5.0	152	1758	2.0	61	
1701	0.2	6	1656	1.0	30	1828	1.8	55		1.7	64	
5 Sa 0056	6.4	195	20 Su 0028	6.0	183	5 Tu 0123	6.0	183	4 Th 0043	5.4	165	
0701	3.9	119	0629	3.7	113	0735	3.0	91	M 0715	2.1	64	
1030	4.4	134	1036	4.5	137	1308	5.0	152	1932	3.4	104	
1752	0.5	15	1734	1.1	34	1919	2.3	70	1952	3.3	101	
6 Su 0138	6.3	192	21 M 0053	6.1	186	6 W 0153	5.8	177	6 Sa 0150	4.9	149	
0746	3.7	116	0701	3.4	104	0816	2.5	76	Su 0846	1.8	55	
1144	4.4	134	1134	4.6	140	1419	5.1	155	1608	5.7	174	
1846	0.9	27	1817	1.3	40	2014	2.7	82	2209	3.8	116	
7 M 0217	6.2	189	22 Tu 0122	6.1	186	7 Th 0225	5.5	168	7 Su 0232	4.5	137	
0832	3.3	101	0738	3.0	91	0900	2.2	67	M 0940	1.7	52	
1308	4.3	131	1237	4.7	143	1531	5.2	158	1731	5.9	180	
1941	1.4	43	1905	1.5	46	2115	3.2	98	● 2343	3.8	116	
8 Tu 0255	6.0	183	23 W 0154	6.0	183	8 F 0259	5.2	158	8 M 0324	4.2	128	
0917	2.8	85	0817	2.6	79	0947	1.9	58	10208	4.2	128	
1433	4.4	134	1343	4.8	146	1649	5.3	162	Tu 1033	1.3	40	
2039	1.9	58	1957	1.9	58	2227	3.5	107	1904	6.0	183	
9 W 0331	5.7	174	24 Th 0226	5.8	177	9 Sa 0337	4.8	146	9 Tu 0131	3.7	113	
1003	2.3	70	0859	2.2	67	Su 1039	1.8	55	M 0452	3.9	119	
1559	4.5	137	1453	4.9	149	1813	5.4	165	1158	1.8	55	
2141	2.5	76	2053	2.4	73	● 2332	4.2	128	1959	5.9	180	
10 Th 0408	5.3	162	25 F 0300	5.4	165	10 Su 0001	3.8	116	10 W 0247	3.5	107	
1051	2.0	61	0944	1.8	55	0424	4.4	134	0641	3.9	119	
1728	4.6	140	1611	5.0	152	Su 1139	1.7	52	1308	1.7	52	
● 2253	3.0	91	2159	3.0	91	1936	5.6	171	2054	6.1	186	
11 F 0449	4.9	149	26 Sa 0333	5.0	152	11 M 0155	3.8	116	10 Th 0229	3.3	101	
1142	1.7	52	1034	1.6	49	0534	4.1	125	0755	4.0	122	
1857	4.9	149	1745	5.2	158	M 1244	1.6	49	1405	1.7	52	
● ○	2325	3.6	110	2325	3.6	110	2044	5.9	180	2135	6.2	189
12 Sa 0022	3.4	104	27 Su 0408	4.6	140	12 Tu 0324	3.6	110	11 F 0329	3.3	101	
0535	4.5	137	1132	1.3	40	0659	3.9	119	0819	4.3	131	
1236	1.5	46	1926	5.5	168	1344	1.5	46	F 1428	1.6	49	
2015	5.3	162				2136	6.1	186	2144	6.2	189	
13 Su 0204	3.6	110	28 M 0118	4.0	122	27 W 0341	4.0	122	12 F 0356	3.2	98	
0629	4.2	128	0449	4.3	131	0544	4.1	125	0842	4.3	131	
1328	1.3	40	1236	1.1	34	1331	1.2	37	1449	1.6	49	
2117	5.6	171	2049	6.0	183	2137	6.5	198	2205	6.2	189	
14 M 0333	3.5	107	2217	6.2	189				2212	6.0	183	
0723	3.9	119	2217	6.2	189							
1415	1.2	37	2217	6.2	189							
2205	5.9	180	2217	6.2	189							
15 Tu 0433	3.5	107	2237	6.6	201	14 Th 0442	3.5	107	29 F 0433	3.7	113	
0805	3.8	116	0808	4.3	131	0843	4.1	125	0850	4.5	137	
1454	1.1	34	1436	0.7	21	1512	1.4	43	1524	1.2	37	
2245	6.0	183	2237	6.6	201	2248	6.3	192	2251	6.5	198	
● ○												
16 W 0455	4.0	122	31 Th 0455	4.0	122	15 Sa 0500	3.6	110	14 M 0427	3.1	94	
1526	0.6	18	0808	4.3	131	0909	4.3	131	0943	4.9	149	
2318	6.7	204	1526	0.6	18	1543	1.4	43	1555	1.8	55	
			2318	6.7	204	2311	6.2	189	2239	5.9	180	
17 Th 0514	3.4	104	31 Th 0514	3.4	104	30 F 0418	4.0	122	15 O 0439	2.9	88	
1027	5.1	155	1027	5.1	155	0703	4.2	128	1013	5.2	158	
1647	1.8	55	1526	0.6	18	1543	1.4	43	1627	2.0	61	
● 2338	6.1	186	2318	6.7	204	2311	6.4	195	2250	5.8	177	

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Sakate, Shodo Shima, Japan, 2008

Times and Heights of High and Low Waters

October				November				December				
Time	Height	Time	Height									
1 W	0518 1.9 58	16 Th	0441 1.1 34	1 Sa	0540 0.8 24	16 Su	0540 -0.2 -6	1 M	0557 0.2 6	16 Tu	0629 -0.4 -12	
1200 5.7 174	1136 6.0 183	1316 5.6 171	1335 5.9 180	1344 5.3 162	1422 5.6 171	1428 5.4 165	1422 5.6 171	1422 5.6 171	1422 5.6 171	2037 3.0 91	2037 3.0 91	
1754 3.2 98	1739 3.1 94	1924 3.5 104	1946 3.6 110	2003 3.0 91	2329 3.5 107	2329 3.5 107	2329 3.5 107	2329 3.5 107	2329 3.5 107			
2309 5.0 152	2228 4.8 146	2306 4.0 122	2253 4.0 122	2329 3.5 107								
2 Th	0546 1.7 52	17 F	0515 0.7 21	2 Su	0623 0.8 24	17 M	0636 -0.1 -3	2 Tu	0645 0.3 9	17 W	0013 3.5 107	
1244 5.8 177	1229 6.1 186	1406 5.6 171	1440 5.8 177	2026 3.4 104	2102 3.5 107	2102 3.5 107	2055 2.8 85	1428 5.4 165	0728 0.0 0	1510 5.4 165	1510 5.4 165	
1840 3.4 104	1832 3.5 107	2356 3.9 119	2352 3.8 116	2217 3.3 101	2147 2.5 76	2147 2.5 76	2132 2.6 79	2147 2.5 76	1513 5.3 162	2225 2.1 64	2225 2.1 64	
2332 4.8 146	2255 4.7 143			18 Tu	0738 0.2 6	18 W	0738 0.4 12	18 Th	0147 3.4 104	0830 0.6 18	1555 5.1 155	1555 5.1 155
3 F	0621 1.5 46	18 Sa	0559 0.5 15	3 M	0714 0.8 24	18 M	0738 0.4 12	18 W	0147 3.4 104	0830 0.6 18	1555 5.1 155	1555 5.1 155
1334 5.8 177	1330 6.1 186	1501 5.6 171	1543 5.7 174	2132 3.2 98	2217 3.3 101	2217 3.3 101	2147 2.5 76	2147 2.5 76	2147 2.5 76	2225 2.1 64	2225 2.1 64	
1935 3.6 110	1936 3.7 113											
2330 4.5 137												
4 Sa	0005 4.6 140	19 Su	0650 0.5 15	4 Tu	0057 3.6 110	19 W	0115 3.5 107	4 Th	0152 3.2 98	19 F	0330 3.3 101	
0704 1.4 43	1440 6.1 186	0810 0.9 27	0845 0.5 15	0833 0.6 18	1643 5.5 168	1643 5.5 168	1643 5.5 168	1643 5.5 168	1643 5.5 168	1639 4.8 146	1639 4.8 146	
1430 5.8 177	2053 3.9 119	2240 3.0 91	2324 2.9 88	2238 2.2 67	2328 1.9 58	2328 1.9 58	2319 1.6 58	2319 1.6 58	2319 1.6 58	2319 1.6 58	2319 1.6 58	
2040 3.6 110												
5 Su	0046 4.4 134	20 M	0010 4.3 131	5 W	0212 3.4 104	20 Th	0312 3.3 101	5 F	0312 3.2 98	20 Sa	0518 3.4 104	
0753 1.4 43	0750 0.6 18	0911 1.1 34	0958 1.0 30	0931 1.0 30	1740 5.3 162	1740 5.3 162	1740 5.3 162	1740 5.3 162	1740 5.3 162	1049 1.8 55	1049 1.8 55	
1533 5.8 177	1557 5.9 180	1658 5.5 168	1644 5.0 152	1644 5.0 152	2345 2.8 85	2345 2.8 85	2345 2.8 85	2345 2.8 85	2345 2.8 85	1725 4.4 134	1725 4.4 134	
2154 3.6 110	2227 3.9 119											
6 M	0136 4.1 125	21 Tu	0100 4.0 122	6 Th	0343 3.3 101	21 F	0023 2.4 73	6 Sa	0442 3.2 98	21 Su	0012 1.2 37	
0850 1.4 43	0858 0.8 24	1017 1.3 40	1056 3.4 104	1036 3.4 104	1755 5.4 165	1755 5.4 165	1755 5.4 165	1755 5.4 165	1755 5.4 165	0700 3.8 116	0700 3.8 116	
1642 5.7 174	1716 5.9 180											
2319 3.5 107												
○												
7 Tu	0240 3.8 116	22 W	0013 3.6 110	7 F	0042 2.5 76	22 Sa	0115 1.9 58	7 Su	0015 1.5 46	22 M	0105 0.8 24	
0955 1.5 46	0219 3.7 113	1017 1.2 37	0527 3.3 101	0615 3.5 107	1128 1.5 46	0716 3.7 113	1124 2.0 61	0615 3.5 107	0822 4.2 128	0822 4.2 128	1355 2.6 79	
1755 5.7 174	1830 5.8 177			1150 1.8 55	1922 4.8 146		1813 4.4 134	1813 4.4 134	1902 3.6 110	1902 3.6 110		
○												
8 W	0046 3.4 104	23 Th	0128 3.3 101	8 Sa	0128 2.2 67	23 Su	0159 1.4 43	8 M	0058 1.1 34	23 Tu	0152 0.5 15	
0417 3.6 110	0503 3.5 107	1143 1.5 46	0657 3.6 110	0835 4.3 131	1238 1.8 55	1404 2.3 70	2003 4.5 137	0736 3.9 119	0925 4.7 143	1521 2.6 79	1521 2.6 79	
1108 1.7 52	1143 1.5 46	1932 5.7 174	1932 5.1 155					1309 2.2 67	1521 2.6 79	1946 3.4 104	1946 3.4 104	
1902 5.8 177								1852 4.1 125	1922 2.4 73	2019 3.2 98	2019 3.2 98	
○												
9 Th	0151 3.1 94	24 F	0213 2.8 85	9 Su	0203 1.9 58	24 M	0235 1.0 30	9 Tu	0136 0.7 21	24 W	0232 0.3 9	
0610 3.7 113	0715 3.8 116	1307 1.8 55	0804 4.1 125	1343 2.0 61	1512 2.6 79	1512 2.6 79	2034 4.2 128	0840 4.5 137	1013 5.0 152	1625 2.7 82	1625 2.7 82	
1222 1.7 52	1307 1.8 55	2020 5.6 171	2006 4.9 149					1422 2.4 73	1422 2.4 73	2019 3.2 98	2019 3.2 98	
1958 5.8 177								1924 3.8 116	1924 3.8 116			
○												
10 F	0234 2.9 88	25 Sa	0248 2.4 73	10 M	0231 1.5 46	25 Tu	0305 0.7 21	10 W	0211 0.3 9	25 Th	0306 0.1 3	
0732 3.9 119	0835 4.3 131	1417 2.0 61	0854 4.6 140	1438 2.2 67	2030 4.7 143	1019 5.1 155	1606 2.8 85	0931 5.0 152	1052 5.1 155	1711 2.7 82	1711 2.7 82	
1326 1.8 55	2057 5.4 165			2030 4.7 143		2054 3.9 119	1949 3.6 110	1524 2.6 79	2037 3.1 94	2037 3.1 94		
2040 5.8 177												
○												
11 Sa	0303 2.6 79	26 Su	0317 2.0 61	11 Tu	0254 1.1 34	26 W	0330 0.5 15	11 Th	0244 -0.1 -3	26 F	0334 0.1 3	
0827 4.3 131	0931 4.8 146	1513 2.3 70	0936 5.1 155	1526 2.4 73	1526 2.4 73	1056 5.3 162	1649 3.0 91	1017 5.4 165	1124 5.2 158	1741 2.8 85	1741 2.8 85	
1418 1.8 55	2124 5.1 155			2046 4.4 134		2102 3.7 113	2102 3.7 113	1617 2.8 85	2047 3.1 94	2047 3.1 94		
2110 5.7 174								2012 3.6 110				
○												
12 Su	0324 2.4 73	27 M	0341 1.6 49	12 W	0316 0.7 21	27 Th	0351 0.4 12	12 F	0320 -0.4 -12	27 Sa	0400 0.0 0	
0908 4.7 143	1016 5.2 158	1558 2.6 79	1015 5.5 168	1610 2.7 82	1724 3.1 94	1128 5.3 162	1755 3.2 98	1102 5.7 174	1152 5.1 155	1802 2.9 88	1802 2.9 88	
1501 1.9 58	2141 4.8 146			2059 4.3 131		2105 3.6 110	2105 3.6 110	2037 3.7 113	2104 3.2 98	2104 3.2 98		
2131 5.5 168												
○												
13 M	0340 2.2 67	28 Tu	0401 1.4 43	13 Th	0342 0.3 9	28 F	0413 0.3 9	13 Sa	0359 -0.7 -21	28 Su	0428 0.0 0	
0942 5.1 155	1053 5.4 165	1637 2.9 88	1056 5.8 177	1654 3.0 91	2116 4.2 128	1157 5.3 162	1755 3.2 98	1149 5.8 177	1218 5.1 155	1823 2.9 88	1823 2.9 88	
1539 2.2 67	2149 4.6 140			2116 4.2 128		2118 3.6 110	2118 3.6 110	2110 3.7 113	2110 3.7 113	2137 3.3 101	2137 3.3 101	
2143 5.3 162												
○												
14 Tu	0355 1.9 58	29 W	0419 1.2 37	14 F	0413 0.0 0	29 Sa	0440 0.3 9	14 Su	0443 -0.7 -21	29 M	0500 0.0 0	
1015 5.5 168	1125 5.5 168	1712 3.2 98	1142 5.9 180	1742 3.3 101	2139 4.2 128	1235 6.0 183	1830 3.3 101	1239 5.8 177	1245 5.1 155	1850 2.8 85	1850 2.8 85	
1615 2.5 76	2154 4.4 134			2139 4.2 128		2146 3.6 110	2146 3.6 110	2154 3.7 113	2225 3.4 104	2225 3.4 104		
2154 5.1 155												
○												
15 W	0415 1.5 46	30 Th	0439 1.0 30	15 Sa	0452 -0.2 -6	30 Su	0514 0.2 6	15 M	0533 -0.6 -18	30 Tu	0539 0.0 0	
1052 5.8 177	1157 5.6 171	1748 3.4 104	1235 6.0 183	1839 3.5 107	2210 4.1 125	1913 3.2 98	2231 3.6 110	1940 3.2 98	1314 5.1 155	1926 2.6 79	2323 3.4 104	
1654 2.8 85	2205 4.3 131			2210 4.1 125		2231 3.6 110	2231 3.6 110	2255 3.7 113	2255 3.7 113	2323 3.4 104	2323 3.4 104	
○	2207 4.9 149											
31 F	0506 0.9 27	31 F	1233 5.6 171									
1832 3.5 107	1832 3.5 107											
2229 4.2 128	2229 4.2 128											

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Kure, Japan, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0321	7.8	238	16 0251	8.9	271	1 F 0532	7.7	236	1 Sa 0551	8.7	265
0907	4.4	135	W 0848	3.7	112	1052	6.1	187	1201	5.9	179
1523	8.8	268	1453	9.4	285	1556	7.3	223	1650	7.3	224
2217	3.5	106	● 2136	2.3	69	2327	3.2	99	1439	7.1	215
2 W 0456	7.8	237	17 0415	8.7	264	0707	8.3	254	2200	3.6	110
1024	5.3	161	Th 1003	4.8	147	1313	5.8	178	0404	7.7	236
1621	8.3	254	1552	8.6	263	1747	7.2	219	0928	6.2	189
2327	3.1	95	2254	2.1	63	1847	7.7	235	1216	5.6	172
3 Th 0625	8.3	252	18 0556	9.0	273	0051	2.7	83	1439	7.1	215
1205	5.5	169	F 1152	5.3	163	0805	9.1	276	2200	3.6	110
1734	8.1	246	1716	8.2	251	1410	5.2	158	0546	8.8	269
4 F 0030	2.7	81	● 0016	1.6	48	1908	7.6	232	1707	7.0	214
0728	9.0	273	Sa 0718	9.7	296	0150	2.0	61	16 1216	5.6	172
1320	5.3	163	1323	5.1	156	0845	9.7	297	0856	8.8	269
1837	8.1	248	1841	8.3	254	1446	4.6	139	1444	8.0	252
5 Sa 0121	2.1	63	● 0127	0.9	26	2004	8.3	254	2038	9.8	300
0816	9.6	293	Su 0822	10.5	320	0236	1.2	37	0117	1.9	58
1412	5.0	151	1427	4.5	138	0919	10.3	314	Tu 0759	10.1	307
1929	8.4	256	1951	8.8	268	1517	3.9	119	1408	3.6	109
6 Su 0205	1.5	45	● 0227	0.1	3	2048	9.1	277	1954	8.9	271
0856	10.2	310	M 0913	11.2	340	0236	1.2	37	0117	1.9	58
1453	4.6	139	1516	3.9	119	0950	10.8	329	0210	1.2	38
2014	8.8	268	2048	9.4	287	1548	3.3	100	0837	10.6	323
7 M 0246	1.0	29	● 0227	0.1	3	2128	9.8	298	1444	2.7	81
0932	10.6	322	Tu 0956	11.6	353	0315	0.5	14	2038	9.8	300
1528	4.2	128	1558	3.3	101	1013	11.5	350	0210	1.2	38
2055	9.2	280	● 2138	10.0	304	1616	2.0	60	0910	10.9	333
8 Tu 0325	0.5	15	● 0403	-0.8	-25	○ 2210	10.7	327	0252	0.8	24
1006	10.9	331	W 1036	11.8	359	0350	-0.4	-12	0910	10.9	333
1603	3.9	118	1637	2.9	87	1043	11.5	351	0941	11.1	338
● 2135	9.6	292	2222	10.3	315	1621	2.7	81	1548	1.3	39
9 W 0403	0.1	4	● 0444	-0.8	-25	● 2207	10.4	316	2113	10.3	313
1040	11.1	338	Th 1111	11.7	358	0428	-0.4	-13	0328	0.6	19
1637	3.5	108	1714	2.5	76	1052	11.5	350	1009	11.1	338
2214	9.9	301	2302	10.5	319	1654	2.1	63	1617	0.9	26
10 Th 0440	-0.1	-3	● 0521	-0.5	-14	2246	10.9	332	○ 2225	11.2	341
1113	11.3	343	F 1145	11.6	353	0503	-0.5	-14	0401	0.8	23
1713	3.2	98	1749	2.3	69	1124	11.6	354	1009	11.1	338
2253	10.0	306	2340	10.3	315	1728	1.6	48	1645	0.6	19
11 F 0517	-0.1	-4	● 0555	0.2	5	2325	10.9	333	2257	11.2	341
1147	11.4	346	Sa 1215	11.3	343	0539	-0.1	-4	0432	1.1	34
1750	2.9	89	1822	2.1	65	1015	11.5	352	1035	11.0	335
2334	10.1	307	● 1839	1.0	31	1112	11.4	347	1645	0.6	19
12 Sa 0554	0.1	2	● 0017	10.0	305	1112	11.4	347	● 2231	11.5	352
1222	11.3	345	Su 0627	1.0	32	0458	0.0	1	0443	-0.1	-3
1827	2.7	81	1243	10.8	330	1052	11.6	353	0501	1.6	50
1855	2.2	66	1857	1.1	33	1138	11.1	339	1059	10.8	328
13 Su 0015	9.9	303	● 0658	9.5	289	1718	1.3	39	1712	0.6	17
0632	0.6	17	M 1309	10.2	312	2320	10.8	330	2328	11.0	335
1256	11.1	338	1927	2.3	71	1727	1.1	33	0519	0.4	13
1907	2.5	75	● 1959	1.4	42	0529	1.4	44	0529	2.2	68
14 M 0100	9.7	295	● 2053	1.9	57	1022	10.7	327	1123	10.4	318
0712	1.4	42	Th 0229	8.9	271	1202	10.7	327	1738	0.7	20
1332	10.7	325	1335	9.6	292	1803	1.2	37	2350	11.6	355
1949	2.3	71	2002	2.6	79	0005	10.8	330	1125	11.5	349
15 Tu 0150	9.3	284	● 2053	1.9	57	0615	0.6	17	1736	0.0	-1
0755	2.5	75	Th 0133	8.9	271	1227	10.2	311	1842	1.4	44
1410	10.1	307	0729	3.2	97	0025	10.1	309	1842	0.3	9
2037	2.3	70	1335	9.6	292	0625	2.3	71	1854	1.4	44
16 Sa 0220	8.3	252	2002	2.6	79	1225	10.2	311	1854	1.4	44
0805	4.3	132	● 2053	1.9	57	1842	1.4	44	1854	1.4	44
1404	8.8	268	Th 0330	7.7	236	0025	10.1	309	1854	1.4	44
1444	8.0	243	0856	5.4	165	0625	2.3	71	1854	1.4	44
2149	3.2	99	1444	8.0	243	1248	9.5	290	1854	1.4	44
17 0313	8.9	271	2149	3.2	99	1911	1.8	56	1854	1.4	44
0732	3.2	97	● 2053	1.9	57	1911	1.8	56	1854	1.4	44
1314	8.7	266	1959	1.4	42	1911	1.8	56	1854	1.4	44
1945	2.4	74	1959	1.4	42	1911	1.8	56	1854	1.4	44
14 0229	9.3	282	● 2053	1.9	57	1911	1.8	56	1854	1.4	44
0808	5.3	163	1959	1.4	42	1911	1.8	56	1854	1.4	44
1345	7.9	240	● 2053	1.9	57	1911	1.8	56	1854	1.4	44
2032	3.1	94	1959	1.4	42	1911	1.8	56	1854	1.4	44
0118	10.5	319	● 2053	1.9	57	1911	1.8	56	1854	1.4	44
0715	3.7	112	1959	1.4	42	1911	1.8	56	1854	1.4	44
1259	9.4	287	● 2053	1.9	57	1911	1.8	56	1854	1.4	44
1931	1.0	30	1959	1.4	42	1911	1.8	56	1854	1.4	44
0215	9.5	291	● 2053	1.9	57	1911	1.8	56	1854	1.4	44
0805	5.0	151	1959	1.4	42	1911	1.8	56	1854	1.4	44
1336	8.4	256	● 2053	1.9	57	1911	1.8	56	1854	1.4	44
2026	1.9	58	1959	1.4	42	1911	1.8	56	1854	1.4	44
0343	8.8	268	● 2053	1.9	57	1911	1.8	56	1854	1.4	44
0938	5.9	181	1959	1.4	42	1911	1.8	56	1854	1.4	44
1438	7.4	226	● 2053	1.9	57	1911	1.8	56	1854	1.4	44
2201	2.7	82	1959	1.4	42	1911	1.8	56	1854	1.4	44
0513	8.2	249	● 2053	1.9	57	1911	1.8	56	1854	1.4	44
1159	5.8	177	1959	1.4	42	1911	1.8	56	1854	1.4	44
1605	6.7	205	● 2053	1.9	57	1911	1.8	56	1854	1.4	44
2315	3.6	110	1959	1.4	42	1911	1.8	56	1854	1.4	44

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Kure, Japan, 2008

Times and Heights of High and Low Waters

April				May				June			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0640 8.7 266	16 W 0049 2.7 83	1 Th 0624 9.5 291	16 F 0105 3.8 115	1 Su 0114 3.8 116	16 M 0213 5.1 154						
1301 5.0 151	0719 9.9 301	1246 3.5 108	0710 9.7 295	0705 10.1 307	0742 9.3 283						
1817 7.4 225	1334 3.1 96	1843 8.9 272	1332 2.3 71	1333 1.1 35	1413 1.9 58						
	1934 9.2 279		1953 10.0 304	2003 11.4 346	2055 10.9 331						
2 W 0045 2.9 89	17 Th 0142 2.4 72	2 F 0056 2.9 87	17 Sa 0153 3.7 113	2 M 0209 3.7 113	17 Tu 0254 4.9 149						
0728 9.4 288	0759 10.2 311	0712 10.0 306	0748 9.8 299	0753 10.3 313	0822 9.5 289						
1339 3.9 120	1411 2.3 69	1330 2.4 73	1409 1.7 52	1420 0.3 9	1450 1.6 48						
1922 8.5 260	2018 10.0 305	1938 10.1 309	2034 10.6 322	2054 12.1 368	2132 11.2 341						
3 Th 0140 2.0 62	18 F 0225 2.1 65	3 Sa 0149 2.4 73	18 Su 0234 3.7 112	3 Tu 0300 3.7 112	18 W 0331 4.7 144						
0806 10.1 309	0832 10.4 317	0754 10.5 320	0822 9.9 301	0840 10.4 317	0859 9.7 295						
1414 2.8 86	1445 1.5 47	1410 1.2 38	1442 1.2 38	1507 -0.3 -10	1526 1.3 40						
2009 9.7 297	2056 10.7 325	2026 11.2 341	2110 11.0 335	2143 12.5 380	2207 11.4 346						
4 F 0224 1.3 40	19 Sa 0301 2.1 63	4 Su 0235 2.1 65	19 M 0310 3.7 113	4 W 0348 3.8 115	19 Th 0405 4.6 140						
0840 10.7 327	0903 10.5 321	0833 10.8 329	0853 9.9 303	0926 10.5 320	0935 9.9 301						
1448 1.7 53	1516 1.0 31	1450 0.2 7	1514 1.0 29	1553 -0.6 -19	1601 1.2 36						
2051 10.8 330	2130 11.1 338	2111 12.0 366	2145 11.3 343	2232 12.6 383	2242 11.4 348						
5 Sa 0304 0.9 26	20 Su 0335 2.2 67	5 M 0318 2.2 66	20 Tu 0344 3.8 115	5 Th 0435 3.9 118	20 W 0440 4.5 136						
0914 11.2 340	0931 10.5 321	0911 10.9 332	0924 10.0 304	1012 10.5 319	1012 10.0 305						
1523 0.8 23	1545 0.7 20	1529 -0.5 -15	1545 0.8 24	1640 -0.6 -17	1637 1.1 34						
2132 11.6 355	2203 11.3 344	2155 12.5 380	2218 11.3 345	2321 12.4 379	2316 11.5 349						
6 Su 0343 0.7 22	21 M 0406 2.5 75	6 Tu 0401 2.4 74	21 W 0416 3.9 118	6 F 0522 4.0 123	21 Th 0515 4.4 133						
0947 11.4 346	0957 10.5 319	0949 10.9 331	0954 9.9 303	1100 10.4 316	1050 10.1 307						
1558 -0.1 -2	1613 0.5 14	1610 -0.9 -27	1616 0.8 23	1728 -0.2 -7	1714 1.1 35						
2212 12.2 371	2235 11.3 345	2240 12.6 383	2251 11.3 344	2351 11.5 349							
7 M 0421 1.0 30	22 Tu 0436 2.8 85	7 W 0443 2.9 88	22 Th 0449 4.0 122	7 Sa 0008 12.1 370	22 W 0552 4.3 130						
1021 11.3 345	1024 10.3 314	1028 10.6 324	1026 9.9 301	0610 4.1 126	1129 10.0 305						
1634 -0.6 -18	1640 0.5 14	1651 -0.9 -27	1647 0.9 24	1149 10.1 308	1751 1.3 41						
2254 12.3 376	2307 11.2 342	2326 12.3 375	2326 11.2 340	1815 0.4 12							
8 Tu 0459 1.6 48	23 W 0506 3.2 97	8 Th 0527 3.5 106	23 F 0523 4.2 127	8 Su 0056 11.7 356	23 M 0026 11.4 348						
1054 11.1 337	1050 10.1 307	1108 10.3 313	1059 9.7 296	0659 4.2 128	0630 4.1 126						
1711 -0.8 -24	1708 0.6 18	1734 -0.5 -15	1721 1.1 33	1239 9.7 296	1210 9.9 302						
2336 12.1 369	2339 11.0 334			1904 1.2 38	1830 1.6 50						
9 W 0539 2.4 73	24 Th 0536 3.6 110	9 F 0014 11.8 360	24 Sa 0001 10.9 333	9 M 0142 11.2 341	24 Tu 0103 11.3 344						
1128 10.6 322	1118 9.7 296	0614 4.1 124	0600 4.4 133	0751 4.2 129	0711 4.0 123						
1749 -0.6 -17	1737 0.9 28	1151 9.7 297	1134 9.4 288	1334 9.3 282	1254 9.7 296						
		1820 0.2 7	1757 1.4 43	1953 2.3 69	1911 2.2 66						
10 Th 0021 11.6 353	25 F 0013 10.6 323	10 Sa 0106 11.2 340	25 Su 0040 10.7 326	10 Tu 0229 10.6 324	25 W 0141 11.1 337						
0620 3.4 103	0610 4.1 125	0707 4.6 140	0641 4.6 139	0846 4.2 129	0756 3.9 119						
1203 9.9 301	1148 9.3 282	1239 9.1 277	1213 9.1 278	1436 8.8 268	1344 9.5 289						
1829 0.1 3	1809 1.4 42	1912 1.2 36	1837 1.8 36	2047 3.3 102	1956 2.9 88						
11 F 0110 10.8 329	26 Sa 0051 10.1 308	11 Su 0205 10.5 320	26 M 0122 10.4 317	11 W 0319 10.1 307	26 Th 0223 10.7 327						
0707 4.4 134	0647 4.6 141	0811 4.9 150	0728 4.8 145	0948 4.1 124	0845 3.7 113						
1241 9.1 276	1221 8.7 265	1339 8.4 257	1258 8.7 266	1551 8.5 260	1444 9.3 284						
1915 1.0 31	1845 2.0 60	2013 2.2 67	1923 2.4 73	2150 4.3 131	2049 3.7 114						
12 Sa 0211 9.9 302	27 Su 0136 9.6 292	12 M 0310 9.9 303	27 Tu 0210 10.1 308	12 W 0414 9.6 293	27 F 0309 10.3 314						
0808 5.3 161	0734 5.2 157	0929 5.0 151	0824 4.8 146	1054 3.8 116	0943 3.4 104						
1329 8.1 248	1301 8.1 247	1500 7.9 242	1356 8.4 256	1717 8.7 264	1600 9.3 284						
2017 2.1 64	1931 2.7 81	0218 3.1 94	2019 3.0 90	2306 5.0 152	2158 4.6 140						
13 Su 0337 9.3 282	28 M 0235 9.1 277	13 Tu 0421 9.6 292	28 W 0305 9.9 301	13 F 0513 9.3 283	28 Tu 0405 9.9 301						
0955 5.6 171	0844 5.5 168	1050 4.5 138	0931 4.6 140	1156 3.3 102	1050 3.0 90						
1455 7.3 224	1400 7.5 230	1638 7.9 242	1510 8.3 252	1831 9.2 279	1728 9.7 297						
0214 2.9 89	0203 3.3 100	2250 3.6 110	0217 3.5 107		2325 5.2 157						
14 M 0514 9.2 279	29 Tu 0356 8.9 271	14 W 0528 9.5 289	29 Th 0408 9.7 296	14 Sa 0022 5.2 160	29 M 0511 9.6 293						
1145 5.1 155	1030 5.3 163	1158 3.8 117	1042 4.0 123	0609 9.2 279	0620 9.6 292						
1708 7.3 224	1536 7.3 223	1803 8.5 258	1640 8.6 262	1248 2.8 86	1303 1.5 47						
2336 3.0 92	2213 3.6 109		2248 3.9 118	1928 9.8 299	1950 11.3 344						
15 Tu 0628 9.4 288	30 W 0521 9.1 277	15 Th 0005 3.8 116	30 F 0513 9.7 297	15 Su 0123 5.2 159	30 M 0048 5.2 160						
1250 4.1 126	1152 4.6 140	0624 9.5 291	1147 3.2 97	0659 9.2 279	0620 9.6 292						
1837 8.2 249	1728 7.8 239	1250 3.1 93	1803 9.4 286	1333 2.3 71	1303 1.5 47						
	2348 3.3 102	1905 9.2 281		2015 10.4 317	1950 11.3 344						
16 Sa 0008 3.9 119			31 Sa 0613 9.9 301								
			1243 2.2 66								
			1908 10.4 317								

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

## Kure, Japan, 2008

Times and Heights of High and Low Waters

July				August				September					
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height		
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm		
1 Tu	0155	5.1	155	16 W	0249	5.5	168	1 F	0336	4.3	132		
0723	9.8	298	0803	9.2	280	0916	10.8	330	16 Sa	0335	4.3	132	
1401	0.8	25	1436	2.2	67	1541	0.3	8	1 M	0916	10.7	325	
2047	11.9	364	2123	11.2	342	● 2214	12.8	389	1537	1.4	44		
						2204	12.1	369	2204	12.5	382		
2 W	0252	4.8	146	17 Th	0323	5.1	156	2 Sa	0417	3.7	114		
0822	10.1	308	0847	9.7	295	1003	11.4	347	17 Su	0405	3.7	114	
1456	0.2	7	1515	1.8	54	1624	0.2	5	16 O	0953	11.3	343	
2139	12.4	378	2157	11.5	351	2251	12.8	391	2233	12.4	377		
3 Th	0343	4.5	136	18 F	0356	4.7	144	3 Su	0454	3.2	99		
0916	10.5	319	0926	10.1	309	1046	11.6	355	18 M	0436	3.1	96	
1547	-0.1	-4	1553	1.4	42	1704	0.5	14	19 Su	1029	11.6	355	
● 2227	12.6	385	○ 2228	11.7	358	2326	12.7	388	1645	1.0	32		
4 F	0430	4.2	127	19 Sa	0428	4.4	133	4 M	1126	11.6	355		
1008	10.8	328	1005	10.5	321	1126	11.6	355	19 Tu	1107	11.9	362	
1635	-0.2	-6	1628	1.1	35	1740	1.1	33	1719	1.3	40		
2311	12.7	386	2300	11.9	364	2358	12.4	379	2333	12.5	381		
5 Sa	0514	3.9	119	20 Su	0500	4.0	122	5 Tu	0605	2.8	84		
1056	10.9	333	1043	10.8	329	1205	11.4	347	20 W	0542	2.2	68	
1720	0.0	1	1704	1.1	33	1814	2.0	61	1145	11.9	362		
2353	12.5	381	2331	12.1	369	1847	3.1	94	1754	1.9	58		
6 Su	0556	3.7	112	21 M	0534	3.6	111	6 W	0027	12.0	365		
1142	10.9	332	1121	10.9	333	0639	2.8	84	21 Th	0004	12.2	373	
1803	0.6	19	1739	1.2	37	1243	10.9	332	0616	2.0	61		
						1847	3.1	94	1225	11.7	356		
7 M	0031	12.2	372	22 Tu	0003	12.1	370	7 Th	0054	11.4	347		
0637	3.5	108	0609	3.3	102	0712	2.9	89	22 F	0034	11.7	358	
1227	10.6	323	1201	10.9	333	1323	10.3	314	0652	2.0	61		
1843	1.5	45	1815	1.6	49	1919	4.2	129	1308	11.3	343		
8 Tu	0108	11.7	358	23 W	0036	12.0	366	8 F	0120	10.7	325		
0717	3.5	106	0646	3.1	94	0746	3.2	99	23 Sa	0105	11.1	337	
1312	10.2	310	1242	10.8	329	1410	9.7	295	0826	3.7	112		
1922	2.6	78	1852	2.3	69	1955	5.4	165	1515	9.1	278		
9 W	0142	11.2	340	24 Th	0108	11.7	356	● 2043	0147	9.9	301		
0759	3.5	108	0724	3.0	90	0826	3.7	112	0819	2.7	82		
1400	9.6	293	1327	10.5	321	1515	9.1	278	1509	10.0	306		
2002	3.7	114	1931	3.2	98	● 2043	6.5	198	● 2054	6.4	195		
10 Th	0217	10.5	320	25 F	0142	11.2	340	10 Su	0222	9.1	276		
0844	3.7	112	0806	2.9	88	0922	4.1	126	25 M	0224	10.5	321	
1459	9.1	277	1420	10.2	310	1710	9.0	274	0657	2.8	85		
● 2047	5.0	151	2017	4.4	133	2236	7.3	221	1329	10.1	309		
11 F	0254	9.8	298	26 Su	0220	10.5	320	11 M	0325	8.3	252		
0938	3.8	116	0856	3.0	90	1059	4.3	132	1848	9.4	288		
1620	8.8	269	1529	9.8	300	● 2118	5.5	168	● 2118	5.5	168		
2152	6.0	182											
12 Sa	0343	9.1	278	27 Su	0307	9.7	297	12 Tu	0106	6.9	211		
1047	3.8	116	1002	3.0	91	0525	8.0	244	27 W	0059	6.4	196	
1754	9.1	276	1704	9.9	301	1234	4.0	122	0601	8.7	264		
2334	6.5	198	2255	6.3	193	1950	10.1	309	1249	2.7	82		
13 Su	0453	8.7	264	28 M	0419	9.2	279	27 F	0158	5.4	166		
1159	3.6	109	1127	2.8	84	0658	8.5	258	0726	9.5	290		
1907	9.6	294	1837	10.4	317	1337	3.3	102	1354	1.9	57		
14 M	0105	6.4	194	29 Tu	0043	6.3	193	2031	10.8	328	2035	11.9	363
0610	8.6	261	0553	9.0	275	0755	9.2	280	0823	10.5	321		
1300	3.2	97	1248	2.2	67	1423	2.6	80	F 1445	1.1	35		
2002	10.3	313	1950	11.2	341	2105	11.3	344	2114	12.4	378		
15 Tu	0206	6.0	182	30 W	0158	5.7	175	29 F	0241	4.5	136		
0712	8.8	268	0716	9.4	288	0838	9.9	303	0823	10.5	321		
1351	2.7	82	1356	1.4	44	1501	2.0	60	1527	0.8	24		
2046	10.8	329	2046	11.9	364	2134	11.7	358	2149	12.7	386		
16	0252	5.1	154	31 Th	0252	5.1	154	31 F	0354	2.9	89		
0822	10.1	309	1453	0.7	22	0950	11.9	364	0909	11.4	362		
1453	0.7	22	2133	12.5	380	● 2221	12.7	387	1527	12.2	371		

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

Kure, Japan, 2008

## Times and Heights of High and Low Waters

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

# Moji, Japan, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0235	4.9	150	16 W 0202	5.4	165	1 F 0435	4.3	132	1 Sa 0538	4.6	141
0824	2.6	80	W 0804	2.1	65	F 0926	3.7	113	Sa 1051	3.7	113
1441	5.4	166	1357	5.8	177	1540	4.9	149	1615	5.0	153
2140	2.3	70	● 2111	1.4	42	2310	2.1	65	2351	1.3	39
2 W 0359	4.7	143	17 Th 0324	5.0	153	2 Sa 0640	4.6	140	17 Su 0728	5.2	157
0929	3.1	96	0909	2.9	87	1207	3.6	111	1247	3.2	98
1544	5.4	164	1501	5.6	170	1722	5.0	152	1814	5.3	162
2256	2.1	63	2233	1.2	38						
3 Th 0535	4.8	146	18 F 0521	5.0	151	3 Su 0033	1.7	53	18 M 0108	0.7	21
1106	3.4	103	1054	3.3	100	0748	5.1	154	0821	5.7	174
1656	5.4	165	1631	5.5	168	1315	3.2	97	1345	2.4	74
			2358	0.9	27	1828	5.3	162	1928	5.9	179
4 F 0004	1.7	52	19 M 0707	5.3	162	4 M 0127	1.2	36	19 Tu 0203	0.1	2
0654	5.1	155	Sa 1237	3.1	96	0830	5.4	166	0901	6.2	188
1229	3.2	99	1801	5.7	174	1358	2.7	81	1429	1.7	52
1758	5.6	170				1919	5.7	175	2023	6.3	193
5 Sa 0058	1.3	39	20 Su 0108	0.3	10	5 Tu 0210	0.6	18	20 W 0247	-0.4	-12
0750	5.4	166	0817	5.8	177	0904	5.8	176	0934	6.5	197
1325	3.0	90	1345	2.7	81	1433	2.1	65	1507	1.1	34
1849	5.8	178	1913	6.1	185	2002	6.2	188	2108	6.7	203
6 Su 0142	0.9	26	21 M 0206	-0.3	-8	6 W 0247	0.1	2	21 Th 0324	-0.6	-19
0833	5.8	176	0908	6.2	190	0936	6.1	185	1004	6.6	202
1408	2.6	80	1436	2.1	65	1507	1.6	49	1541	0.7	21
1932	6.1	187	2012	6.4	196	2044	6.5	198	● 2147	6.8	208
7 M 0222	0.5	14	22 Tu 0256	-0.7	-21	7 Th 0323	-0.4	-12	22 F 0358	-0.6	-18
0912	6.0	182	0951	6.5	198	1005	6.3	193	1028	6.7	203
1446	2.3	71	1520	1.6	50	1542	1.1	35	1613	0.4	13
2012	6.4	194	● 2104	6.7	205	● 2125	6.8	206	2220	6.8	207
8 Tu 0300	0.1	3	23 W 0340	-0.9	-28	8 F 0357	-0.7	-20	23 Sa 0428	-0.4	-11
0947	6.1	187	1028	6.7	203	1034	6.5	198	1047	6.7	203
1521	2.1	63	1559	1.3	39	1616	0.8	23	1643	0.3	10
● 2049	6.6	201	2149	6.9	209	2205	6.9	210	2249	6.6	202
9 W 0336	-0.2	-6	24 Th 0418	-0.9	-28	9 Sa 0431	-0.7	-21	24 Su 0455	0.1	2
1021	6.3	191	1100	6.7	203	1059	6.6	202	1101	6.6	201
1556	1.8	55	1636	1.1	33	1651	0.5	14	1711	0.3	10
2126	6.7	204	2229	6.8	207	2245	6.9	210	2317	6.4	195
10 Th 0412	-0.4	-12	25 F 0453	-0.7	-20	10 Su 0505	-0.5	-14	25 M 0520	0.6	18
1052	6.3	193	1126	6.6	201	1122	6.7	203	1114	6.5	199
1632	1.6	49	1710	1.0	30	1727	0.3	9	1738	0.5	15
2203	6.8	206	2304	6.6	202	2324	6.7	205	2344	6.1	186
11 F 0447	-0.4	-13	26 Sa 0525	-0.2	-7	11 M 0539	0.0	1	26 Tu 0545	1.2	36
1121	6.4	194	1146	6.5	197	1141	6.6	201	1131	6.4	195
1708	1.4	44	1742	1.0	31	1804	0.3	8	1805	0.8	23
2241	6.7	204	2336	6.3	192						
12 Sa 0522	-0.3	-8	27 Su 0553	0.4	11	12 Tu 0004	6.4	195	27 W 0014	5.7	174
1148	6.3	193	1202	6.3	193	0612	0.8	23	0609	1.8	56
1746	1.3	41	1814	1.1	34	1200	6.5	197	1153	6.1	187
2323	6.5	199				1844	0.5	14	1835	1.1	34
13 Su 0558	0.1	2	28 M 0009	5.9	180	13 W 0047	5.9	180	28 Th 0048	5.2	160
1213	6.3	192	0620	1.0	32	0648	1.6	48	0635	2.5	76
1826	1.3	40	1219	6.2	188	1226	6.2	189	1218	5.7	175
			1846	1.3	41	1931	0.8	24	1912	1.6	49
14 M 0008	6.2	190	29 Tu 0045	5.5	167	14 Th 0139	5.3	162	14 F 0133	4.7	144
0635	0.6	19	0646	1.7	53	0728	2.5	75	0706	3.1	95
1239	6.2	189	1242	5.9	181	1304	5.8	177	1252	5.2	160
1911	1.3	40	1923	1.6	49	● 2032	1.2	37	● 2005	2.1	64
15 Tu 0100	5.8	178	30 W 0130	5.0	152	15 F 0259	4.8	145	15 Sa 0300	4.7	143
0716	1.3	41	0717	2.5	75	0828	3.3	100	0821	3.6	111
1312	6.0	184	1314	5.6	171	1406	5.3	162	1344	5.1	154
2005	1.3	41	● 2012	1.9	59	2204	1.5	45	2150	1.8	54
16 Th 0236	4.5	138	31 Th 0757	3.1	96						
			1404	5.2	158						
			2125	2.2	67						

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Moji, Japan, 2008

## Times and Heights of High and Low Waters

April						May						June							
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height	
<b>1</b> Tu	0632	4.9	150	<b>16</b> W	0023	1.7	52	<b>1</b> Th	0558	5.6	172	<b>16</b> F	0029	2.4	74	<b>1</b> Su	0031	2.5	76
	1211	3.2	97		0710	5.8	178		1207	2.2	68		0637	6.2	188		0616	6.7	205
	1729	5.1	154		1259	1.9	58		1753	5.8	178		1301	1.5	45		1305	0.7	20
					1908	5.9	180					1925	6.1	187		1935	6.8	207	
<b>2</b> W	0016	1.8	56	<b>17</b> Th	0114	1.4	43	<b>2</b> F	0018	1.8	54	<b>17</b> Sa	0116	2.3	71	<b>2</b> M	0130	2.4	74
	0715	5.4	165		0744	6.2	188		0642	6.1	186		0709	6.4	195		0703	7.0	214
	1258	2.4	72		1339	1.2	37		1255	1.3	41		1339	1.0	32		1356	0.0	1
	1832	5.6	172		1956	6.3	191		1856	6.3	193		2010	6.4	194		2036	7.1	216
<b>3</b> Th	0108	1.2	37	<b>18</b> F	0154	1.2	36	<b>3</b> Sa	0112	1.4	44	<b>18</b> Su	0156	2.3	69	<b>3</b> Tu	0222	2.4	72
	0749	5.9	179		0812	6.4	195		0719	6.5	199		0739	6.6	202		0750	7.3	221
	1336	1.5	46		1413	0.7	21		1339	0.5	15		1414	0.7	22		1445	-0.4	-11
	1927	6.2	190		2036	6.5	198		1955	6.8	207		2048	6.6	200		2131	7.3	222
<b>4</b> F	0151	0.7	20	<b>19</b> Sa	0229	1.1	34	<b>4</b> Su	0159	1.2	38	<b>19</b> M	0232	2.2	68	<b>4</b> W	0311	2.4	72
	0820	6.3	193		0835	6.6	201		0755	6.9	209		0807	6.8	207		0838	7.4	226
	1414	0.7	20		1445	0.3	10		1421	-0.2	-7		1447	0.5	16		1533	-0.6	-17
	2017	6.7	205		2110	6.6	202		2049	7.2	218		2123	6.7	203		2221	7.3	223
<b>5</b> Sa	0231	0.3	9	<b>20</b> Su	0301	1.2	36	<b>5</b> M	0243	1.2	38	<b>20</b> Tu	0306	2.3	69	<b>5</b> O	0357	2.4	73
	0849	6.7	204		0855	6.7	205		0830	7.1	217		0837	6.9	211		0927	7.4	227
	1451	-0.1	-2		1515	0.1	3		1503	-0.7	-22		1519	0.4	13		1621	-0.5	-15
	2106	7.1	216		2142	6.7	204		2139	7.3	222		2156	6.7	205		2309	7.2	220
<b>6</b> Su	0309	0.2	6	<b>21</b> M	0330	1.3	40	<b>6</b> Tu	0326	1.4	43	<b>21</b> W	0339	2.3	71	<b>6</b> F	0443	2.5	76
	0918	7.0	212		0914	6.8	208		0905	7.3	221		0908	7.0	212		1015	7.4	225
	1528	-0.6	-19		1544	0.0	1		1546	-0.9	-28		1551	0.4	13		1707	-0.2	-6
	2151	7.3	221		2212	6.7	203		2226	7.3	222		2228	6.7	203		2355	7.0	214
<b>7</b> M	0347	0.4	11	<b>22</b> Tu	0359	1.5	47	<b>7</b> W	0408	1.7	52	<b>22</b> Th	0411	2.5	75	<b>7</b> Sa	0528	2.6	79
	0945	7.1	216		0936	6.9	209		0940	7.3	222		0939	7.0	212		1105	7.2	218
	1606	-0.9	-28		1612	0.1	2		1630	-0.9	-26		1623	0.5	16		1753	0.3	9
	2234	7.2	220		2241	6.6	200		2311	7.1	215		2258	6.6	200		2352	6.8	206
<b>8</b> Tu	0424	0.8	23	<b>23</b> W	0428	1.8	56	<b>8</b> Th	0450	2.1	63	<b>23</b> F	0444	2.6	79	<b>8</b> Su	0039	6.8	207
	1010	7.1	216		1001	6.8	208		1018	7.1	217		1010	6.9	210		0615	2.7	83
	1645	-0.9	-28		1641	0.2	7		1714	-0.5	-15		1657	0.7	22		1158	6.8	208
	2315	7.0	213		2309	6.4	195		2357	6.7	205		2329	6.4	196		1839	0.9	28
<b>9</b> W	0501	1.3	41	<b>24</b> Th	0457	2.2	66	<b>9</b> F	0533	2.5	76	<b>24</b> Sa	0518	2.8	85	<b>9</b> M	0121	6.5	199
	1035	7.0	213		1027	6.7	203		1059	6.9	209		1043	6.7	205		0705	2.8	86
	1725	-0.6	-19		1711	0.5	16		1801	0.1	3		1732	1.0	30		1256	6.4	196
	2357	6.6	200		2338	6.2	188						1926	1.6	49		1926	1.5	47
<b>10</b> Th	0539	2.0	60	<b>25</b> F	0528	2.5	77	<b>10</b> Sa	0045	6.3	192	<b>25</b> Su	0000	6.2	190	<b>10</b> Tu	0203	6.3	192
	1104	6.7	204		1055	6.4	196		0621	2.9	87		0555	3.0	90		0801	2.9	89
	1808	-0.1	-2		1743	0.9	28		1147	6.4	196		1120	6.5	198		1401	6.0	184
									1852	0.8	24		1811	1.3	39		2015	2.3	70
<b>11</b> F	0041	6.0	183	<b>26</b> Sa	0008	5.8	178	<b>11</b> Su	0140	5.9	180	<b>26</b> M	0036	6.0	184	<b>11</b> W	0248	6.2	188
	0621	2.7	81		0601	2.9	88		0718	3.2	97		0638	3.1	96		0906	2.9	89
	1140	6.3	191		1127	6.1	186		1251	5.9	180		1205	6.2	189		1513	5.8	176
	1858	0.7	21		1821	1.3	41		1951	1.5	46		1855	1.6	50		2113	2.9	89
<b>12</b> Sa	0137	5.4	166	<b>27</b> Su	0044	5.5	167	<b>12</b> M	0249	5.6	172	<b>27</b> Tu	0122	5.9	179	<b>12</b> Th	0338	6.1	186
	0713	3.2	99		0641	3.3	100		0833	3.3	100		0734	3.2	99		1016	2.7	83
	1231	5.7	173		1208	5.7	174		1425	5.5	168		1307	5.9	180		1630	5.7	173
	2002	1.4	44		1908	1.8	56		2101	2.1	64		1949	2.0	61		2221	3.3	101
<b>13</b> Su	0312	5.0	153	<b>28</b> M	0141	5.2	157	<b>13</b> Tu	0402	5.6	170	<b>28</b> W	0223	5.8	177	<b>13</b> F	0431	6.1	187
	0841	3.6	111		0743	3.6	109		1002	3.1	94		0846	3.1	96		1122	2.4	74
	1412	5.1	155		1313	5.3	161		1603	5.4	166		1429	5.7	174		1746	5.8	176
	2134	1.9	59		2014	2.2	68		2218	2.4	74		2055	2.3	71		2334	3.5	106
<b>14</b> M	0510	5.1	155	<b>29</b> Tu	0327	5.0	153	<b>14</b> W	0505	5.7	174	<b>29</b> Th	0332	5.9	179	<b>14</b> Sa	0523	6.3	191
	1049	3.4	103		0931	3.6	109		1118	2.6	80		1004	2.8	84		1218	2.1	63
	1638	5.1	155		1505	5.1	155		1724	5.6	170		1554	5.8	177		1853	6.0	184
	2312	2.0	60		2145	2.4	72		2330	2.5	76		2209	2.5	77				
<b>15</b> Tu	0623	5.4	166	<b>30</b> W	0500	5.2	160	<b>15</b> Th	0556	5.9	181	<b>30</b> F	0434	6.1	186	<b>15</b> Su	0037	3.4	105
	1209	2.7	81		1106	3.1	93		1216	2.0	62		1113	2.1	65		0611	6.4	196
	1807	5.5	167		1641	5.3	163		1831	5.8	178		1712	6.1	185		1305	1.7	51
					2312	2.1	65						2324	2.6	78		1946	6.3	192
												<b>31</b>	0527	6.4	195				
												<b>Sa</b>	1212	1.4	42				
												<b>Sa</b>	1826	6.4	196				

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Moji, Japan, 2008

Times and Heights of High and Low Waters

July				August				September											
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height								
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm								
1 Tu	0113	3.4	105	16 W	0157	3.7	113	1 F	0256	2.8	86								
0634	7.1	216	W 0715	6.9	210	Sa 0838	7.8	238	Sa 0825	2.9	88								
1340	0.6	19	M 1410	1.7	52	1 M	1505	1.1	35	M 1610	0.9	28							
2034	7.1	215	2101	6.8	208	● 2207	7.7	235	2145	7.4	226	2229	7.9	240					
2 W	0212	3.2	97	17 Th	0236	3.4	103	2 Sa	0338	2.4	73	17 Tu	0426	1.4	42				
0734	7.3	224	0757	7.2	218	Sa 0931	8.0	244	Su 0905	7.8	238	Tu 1037	7.9	240					
1435	0.2	6	1448	1.4	42	1559	0.2	7	1538	0.9	27	1640	1.3	41					
2130	7.3	223	2136	7.0	213	● 2242	7.8	238	○ 2212	7.6	232	2245	7.8	238					
3 Th	0303	2.9	88	18 F	0311	3.1	94	3 Su	0417	2.1	63	18 W	0456	1.4	43				
0832	7.6	231	0836	7.4	225	M 1017	8.0	244	M 0945	7.9	242	Th 1108	7.6	231					
1526	-0.1	-2	1524	1.1	33	1637	0.5	14	1611	0.9	26	1707	1.9	59					
● 2219	7.5	228	○ 2209	7.1	217	2311	7.8	237	2237	7.7	235	2258	7.7	235					
4 F	0350	2.6	80	19 Sa	0345	2.8	86	4 M	0454	1.9	59	4 Th	0525	1.6	49				
0927	7.7	235	0914	7.5	230	1057	7.9	240	Tu 1025	7.9	242	F 1135	0518	0.8	23				
1613	-0.1	-3	1559	0.9	27	1711	0.9	27	1644	1.0	31	1135	7.5	230					
2303	7.5	229	2239	7.2	220	2335	7.7	234	2259	7.8	237	1728	2.4	74					
5 Sa	0434	2.5	75	20 Su	0418	2.6	80	5 Tu	0529	1.9	58	5 F	0554	1.9	58				
1019	7.7	235	0952	7.6	232	1133	7.6	231	W 1104	7.8	239	20 Sa	0557	1.1	33				
1656	0.1	3	1632	0.8	25	1742	1.5	46	1717	1.4	43	1216	7.1	215					
2341	7.4	227	2307	7.3	223	2353	7.5	229	2317	7.8	237	1804	3.2	97					
6 Su	0516	2.4	72	21 M	0453	2.4	74	6 W	0602	2.0	62	6 Sa	0625	2.3	70				
1108	7.6	231	1031	7.6	232	1207	7.2	219	1810	2.2	68	1243	6.4	195					
1737	0.5	16	1706	0.9	28	● 2332	7.3	224	2335	7.7	234	1826	3.8	117					
7 M	0014	7.3	223	22 Tu	0528	2.3	70	7 Th	0008	7.3	224	7 F	0620	1.6	50				
0557	2.4	72	1110	7.5	229	0635	2.3	69	1224	7.2	219	20 Su	0004	6.9	211				
1153	7.3	222	1740	1.2	37	1243	6.8	206	1825	2.8	84	0741	0006	6.9	211				
1814	1.1	35	2355	7.3	224	1838	3.0	90	● 1901	4.5	136	M 1424	2.2	67					
8 Tu	0043	7.1	217	23 W	0606	2.2	68	8 F	0029	7.2	218	● 1951	5.9	181					
0637	2.4	74	1152	7.3	223	0712	2.6	79	23 Sa	0704	1.9	58	2213	0042	6.3	193			
1237	6.9	211	1815	1.7	51	1326	6.3	191	Sa 1313	6.7	204	23 M	0757	3.3	101				
1850	1.9	57	1909	3.7	112	1904	3.6	109	1421	6.2	188	Tu 1519	5.5	169					
9 W	0108	6.9	211	24 Th	0017	7.3	223	● 1949	4.4	133	● 1957	4.3	132	2233	5.0	152			
0720	2.6	79	0647	2.2	67	9 Sa	0059	6.8	208	● 1957	4.3	132	23 W	0205	5.9	179			
1323	6.5	197	1238	7.0	214	0757	3.0	90	Su 1421	6.2	188	1100	0351	6.0	183				
1926	2.6	80	1852	2.3	70	1428	5.9	179	1421	6.2	188	1831	3.6	192					
10 Th	0135	6.7	205	25 F	0045	7.2	220	● 1949	4.4	133	1759	5.7	174	2220	0435	5.8	178		
0808	2.8	84	0734	2.3	69	10 Su	0146	6.4	196	● 1957	4.3	132	1907	0001	4.1	124			
1419	6.1	185	1332	6.7	203	0904	3.3	100	25 M	0131	6.7	204	1921	0544	6.4	196			
● 2006	3.3	102	1935	3.0	92	1616	5.6	172	2147	4.9	148	1921	1220	2.2	66				
11 F	0212	6.5	199	26 Sa	0123	7.0	214	2113	4.9	148	2147	4.9	148	1921	1907	6.1	187		
0906	2.9	89	0831	2.4	72	1045	3.4	103	11 F	0322	6.3	193	1921	0001	4.1	124			
1530	5.8	176	1441	6.3	192	1816	5.8	178	1104	2.6	78	1921	0544	6.4	196				
2102	4.0	121	● 2030	3.7	114	2350	4.9	148	1838	6.3	191	1921	1220	2.2	66				
12 Sa	0307	6.3	193	27 Su	0218	6.8	207	12 Tu	0502	6.1	187	11 F	0441	4.3	132				
1019	2.9	89	0944	2.4	72	1214	3.1	93	1928	6.2	190	11 F	0552	6.3	191				
1701	5.7	174	1618	6.1	186	1944	6.8	207	1944	6.8	207	11 F	0552	6.3	191				
2229	4.4	133	2155	4.3	132	● 2300	6.1	187	1944	6.8	207	11 F	0552	6.3	191				
13 Su	0420	6.2	190	28 M	0339	6.6	201	13 W	0102	4.4	134	13 F	0119	3.7	112				
1134	2.8	84	1110	2.2	66	0611	6.5	197	28 Th	0003	4.6	139	27 F	0140	2.4	72			
1828	5.9	181	1813	6.3	191	1312	2.6	79	0529	6.5	199	27 F	0746	7.4	226				
2350	4.4	134	2350	4.4	134	2012	6.6	202	1230	2.1	63	1328	2.2	67	2350	1358	1.3	40	
14 M	0006	4.3	132	29 Tu	0514	6.7	204	14 Th	0144	3.9	118	2012	6.9	211	2031	7.5	228		
0530	6.4	194	1230	1.7	52	0702	6.9	210	29 F	0200	3.0	92	2031	0140	2.4	72			
1236	2.4	74	1938	6.7	204	1355	2.1	63	1419	1.0	29	2031	0746	7.4	226				
1933	6.3	191	2046	6.9	211	2046	6.9	211	2106	7.6	232	2031	1358	1.3	40				
15 Tu	0111	4.1	124	15 W	0219	3.3	102	1431	1.6	48	2029	7.3	222	2031	2121	7.7	235		
0628	6.6	201	0633	7.1	215	0745	7.3	221	1500	0.7	20	2040	7.3	221	2031	2121	7.7	235	
1327	2.1	63	1336	1.1	35	1431	1.6	48	2116	7.2	219	2107	7.5	230	2031	2121	7.7	235	
2021	6.6	200	2039	7.2	218	2116	7.2	219	2139	7.8	238	● 2206	7.9	241	2031	2121	7.7	235	
16 Th	0209	3.4	103	31 Th	0209	3.4	103	● 2206	7.9	241	31 Su	0318	1.8	56	2031	2121	7.7	235	
1430	0.6	19	0739	7.4	227	1430	0.6	19	● 2206	7.9	241	31 Su	0924	8.1	246	2031	2121	7.7	235
2126	7.5	229	2126	7.5	229	2126	7.5	229	● 2206	7.9	241	31 Su	1537	0.7	20	2031	2121	7.7	235

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Moji, Japan, 2008

## Times and Heights of High and Low Waters

October				November				December							
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height				
h m	ft	cm		h m	ft	cm		h m	ft	cm					
1 W	0355	0.9	26	16 Th	0341	0.0	-1	1 Sa	0426	0.7	21	1 M			
1015	7.6	232		1006	7.9	240		1055	6.8	208	0450	-0.5	-14		
1609	1.8	56		1558	1.7	51		1643	2.8	84	1131	7.0	212		
2153	7.7	235		2136	7.9	240		2208	7.2	218	1709	2.6	78		
2 Th	0424	0.9	28	17 F	0419	-0.1	-3	2 Su	0457	1.0	30	17 M			
1044	7.4	225		1048	7.6	233		1124	6.6	200	0537	0.0	0		
1636	2.3	69		1636	2.1	65		1714	3.1	94	1219	6.6	200		
2210	7.6	233		2203	7.8	237		2238	6.9	210	1756	2.9	88		
3 F	0451	1.1	34	18 Sa	0500	0.1	3	3 M	0530	1.3	41	18 Tu			
1112	7.1	217		1130	7.3	222		1156	6.2	190	1313	6.2	188		
1703	2.8	84		1714	2.7	82		1748	3.4	104	1850	3.1	96		
2233	7.4	227		2234	7.5	229		2312	6.5	199	1927	0.6	19		
4 Sa	0519	1.4	44	19 Su	0543	0.6	17	4 Tu	0607	1.8	55	19 W			
1141	6.8	206		1215	6.8	207		1234	5.9	180	0019	6.3	191		
1730	3.2	99		1756	3.3	100		1829	3.7	113	0723	1.3	40		
2259	7.2	219		2312	7.1	216		2353	6.1	186	1417	5.9	179		
5 Su	0550	1.9	58	20 M	0633	1.2	36	5 W	0652	2.2	68	20 Th			
1213	6.4	194		1310	6.2	190		1329	5.6	170	0147	5.8	176		
1800	3.8	115		1848	3.8	117		1929	4.0	121	0827	1.9	59		
2329	6.8	206								1527	5.8	176			
6 M	0627	2.4	73	21 Tu	0003	6.5	199	6 Th	0055	5.6	172	0038	5.7	174	
1254	5.9	180		0734	1.9	58		0753	2.6	80	0720	1.8	54		
1837	4.3	130		1437	5.8	177		1510	5.4	165	1350	5.6	172		
	●	2006	4.2	128		○	2110	4.0	121	2015	3.0	91	2021	2.2	67
7 Tu	0007	6.2	190	22 W	0133	5.9	181	7 F	0245	5.4	164	21 M			
0715	3.0	90		0858	2.4	73		0917	2.8	86	0328	5.5	169		
1412	5.5	167		1629	5.8	177		1640	5.6	171	0941	2.4	72		
● 1941	4.7	143		2204	4.0	123		2245	3.5	106	1633	5.8	178		
8 W	0116	5.7	174	23 Th	0359	5.8	177	8 Sa	0424	5.5	169	21 Th			
0836	3.4	103		1032	2.5	77		1043	2.7	82	0455	5.6	171		
1655	5.5	168		1745	6.1	187		1735	6.0	182	1056	2.6	78		
2231	4.7	142		2333	3.3	102		2346	2.7	82	1728	6.0	183		
9 Th	0349	5.5	169	24 F	0532	6.1	187	9 Su	0534	6.0	182	20 M			
1037	3.3	101		1148	2.3	70		1151	2.4	72	0039	1.5	45		
1809	5.9	179		1835	6.5	198		1816	6.4	195	0708	6.1	186		
2355	4.0	122				○	2346	2.7	82	1254	2.5	76			
10 F	0517	5.9	181	25 Sa	0029	2.5	77	10 Tu	0033	1.8	55	1848	6.5	197	
1156	2.8	86		0638	6.6	200		0634	6.5	197	0121	1.0	30		
1849	6.3	192		1244	2.0	62		1245	2.0	62	0756	6.3	193		
				1913	6.8	208		1852	6.8	207	1338	2.4	73		
11 Sa	0039	3.2	98	26 Su	0112	1.8	54	10 W	0041	0.6	19	1920	6.6	202	
0615	6.5	197		0729	6.9	210		0729	6.9	210	0711	6.2	189		
1246	2.3	69		1328	1.8	56		1332	1.8	55	0830	2.5	73		
1921	6.7	205		1944	7.1	215		1925	7.1	217	1403	2.4	74		
12 Su	0116	2.4	73	27 M	0150	1.2	36	11 Th	0159	0.6	19	1926	6.2	189	
0704	7.0	212		0813	7.1	217		0816	6.9	210	0812	6.6	200		
1327	1.7	53		1406	1.7	53		1332	1.8	55	1357	2.2	68		
1950	7.1	217		2009	7.2	220		1925	7.1	217	1925	6.9	210		
13 M	0151	1.6	49	28 Tu	0225	0.8	23	26 W	0159	0.6	19	2004	6.4	195	
0751	7.4	226		0851	7.2	220		0836	6.5	199	0132	-0.1	-2		
1406	1.4	42		1441	1.8	55		1417	2.3	71	0807	6.1	186		
2018	7.4	227		2030	7.3	223		1950	6.8	207	1442	2.4	74		
14 Tu	0227	0.9	27	29 W	0257	0.5	16	11 Th	0132	-0.1	-2	2024	6.4	195	
0837	7.7	235		0925	7.2	220		0911	7.4	226	0222	-0.6	-19		
1443	1.2	38		1513	2.0	60		1459	1.8	55	0907	6.8	208		
2045	7.7	234		● 2050	7.4	225		○ 2033	7.5	230	1447	2.1	64		
15 W	0303	0.3	10	30 Th	0327	0.5	14	12 F	0157	0.2	6	2012	7.1	217	
0922	7.9	240		0957	7.2	218		0821	7.2	220	0234	0.4	12		
1521	1.3	41		1543	2.2	67		1416	1.7	53	0912	6.6	202		
○ 2111	7.8	239		2113	7.4	225		1958	7.4	225	1453	2.3	71		
16 F	0357	0.5	16							2019	6.9	210	1517	2.3	69
1613	2.5	75								1950	6.8	207	● 2039	6.6	200
2139	7.3	223													

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Sasebo, Japan, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0204	5.9	181	16 0132	6.7	205	1 0441	5.5	167	16 Sa 0518	6.3	193
0749	3.6	109	W 0725	3.0	92	0856	5.0	151	Sa 1037	5.0	153
1410	6.8	207	1335	7.3	221	1447	6.0	184	1554	6.2	188
2108	3.1	94	● 2029	2.0	60	2237	2.7	81	2310	1.6	48
2 W 0346	5.7	175	17 0306	6.4	195	2 0623	6.0	183	17 Su 0642	7.0	214
0856	4.2	129	Th 0836	3.9	120	Sa 1140	4.9	149	1228	4.4	134
1508	6.6	202	1441	6.9	210	1643	6.1	185	1738	6.6	202
2221	2.7	83	2150	1.7	52	2354	2.1	65			
3 Th 0524	6.0	183	18 0459	6.6	200	3 Su 0711	6.7	203	18 M 0023	0.9	27
1031	4.6	139	F 1022	4.5	136	Su 1247	4.4	134	0730	7.7	236
1619	6.6	201	1608	6.8	207	1756	6.5	198	1318	3.6	110
2325	2.3	69	2312	1.2	36				1842	7.4	225
4 F 0630	6.5	199	19 0628	7.2	220	4 M 0044	1.5	45	3 M 0649	6.5	199
1154	4.5	136	Sa 1206	4.3	132	0745	7.3	221	1232	4.4	135
1722	6.8	206	1731	7.1	215	1326	3.9	118	1734	6.2	190
						1845	7.1	216	1931	8.1	247
5 Sa 0016	1.7	52	20 0021	0.5	15	5 Tu 0124	0.8	24	20 0158	-0.3	-8
0717	7.1	215	Su 0729	7.9	241	0814	7.8	237	W 0837	8.7	266
1251	4.2	127	1314	3.8	117	1359	3.3	100	1430	2.1	64
1814	7.1	216	1836	7.6	231	1926	7.7	234	2012	8.6	263
6 Su 0058	1.2	36	21 0118	-0.2	-6	6 W 0200	0.2	6	21 0236	-0.5	-15
0754	7.5	230	M 0817	8.5	260	0842	8.3	252	Th 0904	9.0	273
1334	3.9	118	1403	3.3	100	1430	2.7	83	1501	1.6	48
1857	7.4	227	1930	8.1	248	2004	8.2	251	● 2049	8.9	271
7 M 0136	0.7	21	22 0207	-0.7	-22	7 Th 0235	-0.3	-8	22 F 0310	-0.4	-12
0828	8.0	243	Tu 0857	8.9	272	0909	8.6	263	0928	9.0	275
1411	3.5	108	1445	2.7	83	1501	2.2	66	1531	1.2	37
1937	7.8	239	○ 2017	8.6	262	● 2040	8.7	264	2124	8.9	272
8 Tu 0213	0.2	7	23 0250	-1.0	-30	8 F 0309	-0.5	-16	23 Sa 0341	0.0	-1
0859	8.3	252	W 0932	9.1	278	0936	8.9	272	0951	8.9	272
1445	3.2	99	1523	2.3	70	1533	1.6	50	1559	1.0	31
● 2013	8.1	248	2059	8.8	269	2118	8.9	272	2157	8.7	265
9 W 0248	-0.1	-3	24 0329	-0.9	-28	9 Sa 0343	-0.5	-16	24 Su 0410	0.6	17
0930	8.5	259	Th 1004	9.1	278	1003	9.0	275	1012	8.7	266
1518	3.0	90	1558	2.0	62	1606	1.2	37	1627	1.0	30
2050	8.4	256	2139	8.8	268	2156	9.0	273	2229	8.3	253
10 Th 0323	-0.3	-8	25 0406	-0.6	-17	10 Su 0417	-0.2	-6	25 M 0437	1.2	38
1001	8.6	263	1031	8.9	272	1031	9.0	274	1033	8.4	257
1552	2.7	83	1631	1.9	57	1641	0.9	28	1654	1.1	33
2126	8.5	259	2216	8.5	260	2236	8.8	267	2300	7.8	237
11 F 0358	-0.3	-8	26 0439	0.1	2	11 M 0452	0.4	13	26 Tu 0503	2.0	61
1031	8.6	263	1056	8.6	263	1059	8.7	266	1055	8.1	246
1627	2.5	76	Sa 1703	1.8	56	1718	0.8	25	1722	1.3	41
2204	8.4	257	2251	8.0	245	2320	8.3	252	2334	7.2	219
12 Sa 0434	0.0	-1	27 0509	0.9	26	12 Tu 0528	1.3	41	12 W 0529	2.8	86
1102	8.6	261	Su 1120	8.3	252	1129	8.3	254	Th 1118	7.6	233
1704	2.3	70	1734	1.9	59	1759	1.0	29	1754	1.7	53
2245	8.2	250	2327	7.4	227						
13 Su 0511	0.4	13	28 0538	1.7	53	13 W 0009	7.6	231	28 Th 0013	6.5	198
1134	8.4	255	M 1143	7.8	239	0607	2.4	74	0555	3.6	109
1744	2.2	66	1808	2.1	64	1202	7.8	237	1143	7.1	217
2330	7.8	237	1846	2.4	72	1847	1.2	38	1833	2.2	68
14 M 0550	1.1	35	29 0006	6.8	206	14 Th 0112	6.8	207	29 F 0109	5.8	178
1209	8.0	245	0607	2.6	80	0651	3.5	108	0626	4.4	133
1829	2.1	64	Tu 1209	7.4	226	1241	7.2	218	1213	6.5	199
			1846	2.4	72	● 1950	1.7	51	● 1932	2.7	83
15 Tu 0024	7.3	221	30 0055	6.1	186	15 F 0254	6.2	188	15 Sa 0307	6.3	192
0634	2.0	62	W 0639	3.5	106	0759	4.6	140	0802	5.1	155
1247	7.7	234	1239	6.9	211	1344	6.5	198	1323	6.2	189
1923	2.0	62	● 1936	2.6	80	2124	1.9	58	2114	2.2	67
16 31 0214	5.5	169	Th 0721	4.3	131						
			1322	6.4	196						
			2052	2.8	86						

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Sasebo, Japan, 2008

Times and Heights of High and Low Waters

April					May					June					
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height	
<b>1</b> Tu	0553	6.6	202	<b>16</b> W	0621	7.7	234	<b>1</b> Th	0519	7.5	228	<b>16</b> F	0553	7.8	239
	1148	4.4	133	1227	2.9	88	1130	3.2	98	1220	2.3	69	1220	1.0	32
	1659	6.2	190	1822	7.5	228	1721	7.3	222	1844	7.8	238	1215	8.9	272
	2335	2.3	70		2334	2.4	74					1849			
<b>2</b> W	0627	7.3	221	<b>17</b> Th	0029	2.0	60	<b>2</b> F	0556	8.0	245	<b>17</b> Sa	0032	3.3	100
	1224	3.5	106	0650	8.0	245	1210	2.2	66	0625	8.1	246	0628	8.9	271
	1758	7.1	215	1300	2.1	64	1816	8.1	248	1254	1.7	52	1303	0.2	7
				1905	8.0	245				1925	8.2	250	1944	9.5	290
<b>3</b> Th	0023	1.6	50	<b>18</b> F	0108	1.9	57	<b>3</b> Sa	0024	2.1	65	<b>18</b> Su	0113	3.3	101
	0655	7.9	241	0715	8.3	253	0631	8.6	261	0656	8.3	252	0714	9.2	280
	1256	2.5	76	1330	1.4	44	1249	1.1	33	1326	1.2	38	1351	-0.3	-10
	1844	7.9	242	1943	8.4	257	1905	8.9	272	2002	8.5	259	2038	9.8	300
<b>4</b> F	0103	1.1	33	<b>19</b> Sa	0143	1.9	57	<b>4</b> Su	0111	2.0	60	<b>19</b> M	0150	3.3	102
	0722	8.5	259	0739	8.5	260	0706	9.0	274	0726	8.4	257	0801	9.4	285
	1328	1.5	45	1358	1.0	29	1329	0.1	4	1358	1.0	29	1440	-0.6	-18
	1927	8.8	267	2017	8.7	265	1953	9.5	291	2037	8.7	265	2130	9.9	303
<b>5</b> Sa	0142	0.8	23	<b>20</b> Su	0216	2.0	62	<b>5</b> M	0156	2.0	62	<b>20</b> Tu	0225	3.4	105
	0751	9.0	274	0804	8.6	263	0743	9.3	283	0757	8.5	260	0849	9.4	285
	1401	0.5	16	1426	0.6	19	1410	-0.6	-17	1429	0.8	24	1529	-0.6	-17
	2009	9.4	287	2050	8.8	268	2042	9.9	301	2110	8.8	268	2221	9.8	299
<b>6</b> Su	0221	0.7	21	<b>21</b> M	0247	2.3	69	<b>6</b> Tu	0240	2.3	70	<b>21</b> W	0259	3.5	108
	0821	9.3	283	0829	8.7	264	0821	9.4	285	1501	0.8	23	0937	9.2	281
	1437	-0.2	-7	1454	0.5	14	1453	-0.9	-27	2144	8.8	267	1618	-0.2	-6
	2052	9.8	298	2122	8.8	268	2131	9.9	302				2310	9.5	289
<b>7</b> M	0259	1.0	29	<b>22</b> Tu	0317	2.6	79	<b>7</b> W	0325	2.7	82	<b>22</b> Th	0332	3.7	113
	0852	9.4	287	0855	8.6	262	0901	9.3	282	0901	8.5	259	1026	8.9	271
	1514	-0.7	-22	1523	0.5	14	1537	-0.9	-26	1535	0.9	26	1707	0.4	13
	2136	9.8	299	2154	8.6	263	2222	9.6	293	2217	8.6	262	2358	9.1	276
<b>8</b> Tu	0339	1.5	45	<b>23</b> W	0347	3.0	90	<b>8</b> Th	0411	3.2	98	<b>23</b> F	0406	3.9	119
	0925	9.3	283	0922	8.5	258	0942	9.0	273	0934	8.4	255	1117	8.4	256
	1553	-0.8	-25	1552	0.6	19	1624	-0.5	-14	1609	1.0	32	1756	1.2	38
	2223	9.4	288	2226	8.3	254	2315	9.1	277	2252	8.4	255	1756	1.2	38
<b>9</b> W	0419	2.2	68	<b>24</b> Th	0417	3.3	102	<b>9</b> F	0459	3.8	115	<b>24</b> Sa	0440	4.1	126
	0958	8.9	272	0949	8.2	250	1027	8.5	258	1008	8.1	248	1646	1.4	42
	1635	-0.5	-16	1623	0.9	28	1714	0.3	8	2330	8.1	246	2330	2.1	65
	2312	8.8	269	2300	7.9	241				1845	2.1	65			
<b>10</b> Th	0500	3.1	94	<b>25</b> F	0448	3.8	115	<b>10</b> Sa	0012	8.5	258	<b>25</b> Su	0519	4.3	132
	1034	8.4	255	1019	7.8	239	0552	4.3	130	1046	7.8	238	0736	4.1	125
	1720	0.1	4	1657	1.3	41	1117	7.9	240	1726	1.8	54	1322	7.3	222
				2339	7.4	227	1809	1.1	34				1938	3.0	92
<b>11</b> F	0008	8.0	244	<b>26</b> Sa	0522	4.2	129	<b>11</b> Su	0115	7.9	240	<b>26</b> W	0014	7.8	237
	0546	4.0	121	1051	7.4	226	0656	4.6	140	0605	4.5	137	0842	4.0	121
	1114	7.7	234	1737	1.9	57	1220	7.2	220	1131	7.4	226	1444	7.0	212
	1813	1.0	30				1911	2.0	60	1812	2.2	67	2038	3.7	114
<b>12</b> Sa	0121	7.2	220	<b>27</b> Su	0028	7.0	212	<b>12</b> M	0228	7.5	228	<b>27</b> W	0105	7.5	230
	0646	4.7	143	0607	4.7	142	0819	4.6	141	0705	4.6	139	0948	3.6	111
	1207	6.9	210	1131	6.9	210	1349	6.7	205	1231	7.1	215	1610	6.9	211
	1922	1.9	57	1827	2.4	73	2026	2.7	81	1909	2.7	81	2146	4.3	131
<b>13</b> Su	0305	6.8	207	<b>28</b> M	0141	6.6	202	<b>13</b> Tu	0339	7.3	224	<b>28</b> F	0207	7.5	228
	0835	5.1	154	0719	5.0	151	0947	4.2	129	0818	4.3	132	1048	3.2	98
	1348	6.2	190	1235	6.4	195	1533	6.6	202	1354	6.8	208	1725	7.2	218
	2100	2.4	74	1939	2.9	87	2144	3.1	93	2017	3.1	93	2255	4.6	139
<b>14</b> M	0443	6.9	211	<b>29</b> Tu	0319	6.6	201	<b>14</b> W	0435	7.4	227	<b>29</b> Th	0310	7.6	231
	1045	4.6	139	0915	4.9	148	1054	3.6	110	0931	3.8	115	1138	2.7	83
	1604	6.3	192	1428	6.1	187	1654	6.9	211	1526	7.0	213	1824	7.6	231
	2237	2.4	74	2113	3.0	91	2252	3.2	98	2132	3.3	101	2357	4.6	141
<b>15</b> Tu	0542	7.3	223	<b>30</b> W	0432	7.0	212	<b>15</b> Th	0518	7.6	232	<b>30</b> F	0406	7.8	238
	1147	3.7	114	1040	4.2	127	1142	2.9	88	1033	3.0	90	1221	2.3	69
	1726	6.9	209	1612	6.5	199	1755	7.3	224	1644	7.5	230	1911	8.0	244
	2342	2.2	67	2234	2.8	84	2347	3.3	100						
<b>31</b> Sa	0456	8.2	249												
	1126	2.0	61												
	1750	8.2	251												
	2346	3.4	103												

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Sasebo, Japan, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0031	4.6	140	16 W 0121	5.0	153	1 F 0218	4.0	123	1 M 0212	4.1	124
0605	8.7	266	0643	8.3	253	0752	9.8	299	0746	9.4	286
1249	0.7	22	1323	2.0	61	1426	0.3	9	1416	1.4	43
1945	9.4	287	2015	8.8	268	● 2108	10.3	314	2047	9.7	297
2 W 0132	4.4	134	17 Th 0159	4.7	143	2 0259	3.5	107	17 Su 0242	3.5	108
0701	9.1	278	0724	8.7	265	0838	10.1	309	0822	9.8	298
1343	0.2	5	1400	1.6	49	1509	0.3	8	1449	1.2	36
2037	9.9	301	2047	9.1	278	2142	10.4	316	○ 2113	10.0	305
3 Th 0225	4.1	125	18 F 0233	4.4	133	3 Su 0337	3.1	95	18 M 0312	3.1	93
0754	9.5	289	0801	9.0	275	0921	10.2	311	0857	10.0	306
1434	-0.2	-5	1435	1.3	40	1548	0.6	18	1521	1.2	36
● 2125	10.1	308	○ 2117	9.4	285	2213	10.2	312	2139	10.1	309
4 F 0313	3.8	117	19 Sa 0306	4.1	125	4 M 0412	2.9	88	19 Tu 0344	2.6	80
0844	9.7	296	0837	9.3	283	1001	10.0	304	0934	10.1	308
1522	-0.2	-5	1510	1.1	35	1623	1.2	38	1554	1.4	44
2209	10.1	309	2145	9.5	290	2240	10.0	304	2206	10.1	309
5 Sa 0358	3.6	111	20 Su 0338	3.8	116	5 Tu 0447	2.8	86	20 W 0417	2.3	71
0932	9.7	297	0912	9.4	288	1040	9.5	290	1013	9.9	303
1607	0.1	4	1543	1.1	34	1657	2.1	63	1629	2.0	60
2249	9.9	303	2214	9.6	293	2305	9.6	293	2233	10.0	304
6 Su 0440	3.5	108	21 M 0411	3.6	109	6 W 0521	2.9	89	21 Th 0453	2.2	66
1018	9.5	290	0949	9.4	288	1120	8.9	271	1055	9.6	292
1650	0.7	22	1617	1.3	39	1728	3.0	92	1704	2.8	84
2325	9.6	293	2243	9.6	292	2330	9.2	279	2303	9.6	294
7 M 0522	3.5	107	22 Tu 0445	3.3	102	7 Th 0555	3.1	96	22 F 0532	2.2	68
1104	9.1	276	1027	9.3	283	1201	8.2	250	1143	9.0	274
1730	1.5	47	1652	1.7	51	1759	4.0	121	1742	3.7	113
2358	9.2	280	2312	9.5	289	2355	8.7	266	2335	9.2	280
8 Tu 0603	3.5	108	23 W 0523	3.2	97	8 F 0634	3.4	105	23 Sa 0618	2.5	76
1150	8.5	258	1110	9.0	274	1253	7.5	229	1242	8.3	236
1808	2.5	76	1729	2.3	69	1832	4.9	148	1825	5.8	178
2344	9.3	282	2344	9.3	282	● 1917	5.7	173	● 1927	5.7	174
9 W 0030	8.8	267	24 Th 0604	3.1	94	9 Sa 0025	8.2	251	24 Tu 0014	8.6	262
0646	3.6	111	1159	8.6	261	0723	3.8	115	0717	2.9	87
1242	7.8	238	1809	3.1	93	1413	7.0	213	1412	7.7	234
1847	3.5	106	2344	9.3	282	● 1917	5.7	173	● 1927	5.7	174
10 Th 0103	8.3	254	25 F 0019	9.0	273	10 M 0108	7.7	236	25 M 0111	8.0	243
0735	3.7	114	0652	3.1	93	0835	4.0	122	0842	3.1	96
1347	7.2	220	1259	8.1	247	1625	6.9	211	1625	7.6	233
● 1931	4.4	134	1855	4.0	121	2053	6.3	191	2133	6.3	191
11 F 0143	7.9	242	26 Sa 0102	8.6	261	11 M 0232	7.3	223	26 Tu 0305	7.6	232
0835	3.8	115	0750	3.1	93	1017	3.9	120	1027	3.0	90
1515	6.9	211	1420	7.7	235	1803	7.4	225	1800	8.2	251
2030	5.2	157	● 1955	4.9	148	2324	6.2	188	2344	5.8	178
12 Sa 0236	7.6	233	27 Su 0159	8.2	250	12 Tu 0427	7.3	224	27 W 0459	7.9	242
0946	3.7	112	0904	2.9	89	1136	3.5	106	1147	2.3	70
1654	7.0	214	1605	7.7	234	1852	7.9	242	1854	9.0	273
2157	5.6	171	2125	5.5	169	● 1955	9.0	273	● 1954	9.5	289
13 Su 0346	7.5	229	28 M 0319	8.0	244	13 W 0030	5.7	173	28 Th 0043	5.0	153
1058	3.3	102	1028	2.6	78	0540	7.8	237	0609	8.7	265
1810	7.4	226	1744	8.1	248	1228	2.9	88	1244	1.6	48
2331	5.6	171	2318	5.6	172	1926	8.5	259	1934	9.6	292
14 M 0457	7.6	233	29 Tu 0449	8.1	248	1409	5.2	157	29 F 0124	4.2	127
1156	2.9	89	1145	1.9	59	0630	8.3	254	0701	9.4	288
1902	7.9	242	1854	8.8	269	1308	2.3	71	1330	1.1	33
2029	10.0	305	1946	9.5	290	1955	9.0	273	2007	10.0	305
15 Tu 0035	5.3	163	30 W 0038	5.2	159	15 F 0142	4.6	140	30 Th 0201	3.4	104
0555	7.9	241	0602	8.7	264	0710	8.9	271	0745	10.0	305
1243	2.5	75	1247	1.2	38	1343	1.8	55	1410	0.8	25
1941	8.4	256	1946	9.5	290	2022	9.4	286	2037	10.3	313
16 Th 0133	4.6	141	31 Th 0701	9.3	283	● 2104	10.4	316	31 Su 0826	10.3	315
1340	0.6	19	1340	0.6	19	● 2104	10.4	316	● 2104	10.4	316
2029	10.0	305	2029	10.0	305	● 2104	10.4	316	● 2104	10.4	316

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Sasebo, Japan, 2008

Times and Heights of High and Low Waters

October				November				December								
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height					
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm					
1 W	0305	1.4	42	16 Th	0246	0.2	6	1 Sa	0336	1.0	32					
0921	9.9	301	0908	10.4	318	1013	8.8	268	16 M	0357	-0.5	-15				
1523	2.7	82	1510	2.5	75	1603	4.0	122	1046	9.4	287					
2109	9.7	296	2055	10.0	306	2132	8.7	264	1631	3.8	116					
2 Th	0333	1.4	43	17 F	0325	0.0	0	2 Su	2200	8.9	270					
0954	9.5	290	0953	10.2	310	1048	8.4	255	17 M	1046	9.4	287				
1552	3.3	100	1550	3.1	94	1635	4.4	134	1141	8.8	269					
2132	9.4	288	2129	9.7	297	2202	8.3	252	1723	4.2	129					
3 F	0402	1.6	49	18 Sa	0406	0.2	6	3 M	0443	1.8	55					
1026	9.1	276	1042	9.6	293	1127	7.9	241	18 Tu	0541	0.9	26				
1621	3.9	119	1632	3.8	117	1711	4.8	146	1242	8.2	251					
2157	9.1	277	2206	9.3	282	2235	7.8	237	1824	4.5	138					
4 Sa	0432	2.0	60	19 Su	0452	0.7	22	4 Tu	0522	2.3	71					
1101	8.5	258	1138	8.9	271	1216	7.4	226	19 W	0641	1.7	52				
1650	4.5	138	1719	4.6	141	1757	5.2	157	1351	7.8	237					
2223	8.6	263	2247	8.6	261	2316	7.3	221	1941	4.6	139					
5 Su	0504	2.5	75	20 M	0545	1.5	46	5 W	0611	2.9	87					
1142	7.8	239	1249	8.1	248	1326	7.1	215	20 Th	0111	7.0	213				
1721	5.1	156	1818	5.3	162	1910	5.4	164	0751	2.5	75					
2251	8.1	246	2339	7.8	238	2109	4.3	130	1502	7.5	230					
6 M	0544	3.0	92	21 Tu	0652	2.3	71	6 Th	0018	6.7	204					
1240	7.3	221	1427	7.7	234	0718	3.3	101	21 F	0256	6.7	205				
1802	5.7	174	1956	5.6	172	1459	7.0	213	0909	3.0	92					
2325	7.4	227	●	2102	5.2	158	2223	3.6	110	1604	7.5	230				
7 Tu	0640	3.6	111	22 W	0112	7.1	216	7 F	0208	6.4	194					
1433	6.9	209	0823	2.9	88	0848	3.5	107	22 Sa	0427	6.9	211				
1932	6.1	187	1605	7.7	235	1611	7.3	222	0852	3.3	100					
●	2203	5.2	160	2224	4.5	138	1652	7.7	234	1532	7.3	223				
8 W	0032	6.8	208	23 Th	0327	7.0	214	8 Sa	0355	6.6	202					
0815	4.0	123	1000	3.0	91	1010	3.4	103	23 Su	0535	7.3	223				
1640	7.1	217	1708	8.0	245	1657	7.7	235	1731	7.8	239					
2234	5.9	179	2314	4.4	133	2312	3.6	110	1627	7.6	231					
9 Th	0313	6.6	202	24 F	0456	7.5	230	9 Su	0504	7.3	223					
1011	3.8	117	1110	2.8	85	1111	3.1	94	24 M	0000	2.2	66				
1734	7.6	232	1750	8.4	256	1733	8.2	250	0629	7.8	237					
2333	5.1	156	2358	3.4	105	2351	2.6	79	1213	3.4	105					
10 F	0448	7.1	217	25 Sa	0555	8.2	249	1805	8.0	245	1805	8.0	254			
1118	3.3	101	1202	2.6	79	1200	2.8	85	25 Tu	0037	1.6	48				
1806	8.2	249	1822	8.7	266	1807	8.7	264	0713	8.1	248					
11 Sa	0007	4.3	130	●	2129	2.6	79	1257	3.4	105	1257	3.4	105			
0543	7.8	239	26 Su	0034	2.6	79	1838	8.2	250	1838	2.0	61				
1203	2.8	84	0642	8.7	265	26 Th	0028	1.5	47	26 F	0129	-0.6	-18			
1832	8.7	266	1243	2.5	76	0644	8.9	270	0751	8.5	258					
●	1850	9.0	274	1245	2.6	79	1336	3.4	105	1336	3.4	105				
12 Su	0036	3.3	102	1841	9.1	277	1841	9.1	277	1910	8.4	255				
0626	8.6	263	27 M	0106	1.9	57	27 Th	0144	0.8	23	26 Th	0129	-0.6	-18		
1241	2.3	70	0722	9.1	278	0730	9.5	290	0826	8.7	264	0855	9.3	283		
1857	9.2	281	1321	2.5	77	1329	2.6	78	1413	3.4	105	1441	3.2	97		
13 M	0106	2.4	73	1916	9.2	280	1916	9.4	287	1943	8.4	257	●	2007	8.0	244
0705	9.4	286	28 Tu	0137	1.3	41	13 M	0145	-0.2	-6	28 F	0129	-0.6	-18		
1317	2.0	60	0759	9.4	285	0816	9.9	302	0900	8.7	266	0926	8.4	256		
1924	9.7	295	1355	2.7	82	1413	2.7	82	1447	3.5	107	1514	3.1	100		
●	1942	9.3	282	●	1954	9.5	291	●	2015	8.5	258	●	2025	9.1	276	
14 Tu	0137	1.5	45	29 W	0207	1.0	30	14 F	0227	-0.7	-20	14 M	0306	-1.2	-38	
0745	10.0	304	0833	9.4	287	0904	10.0	306	0932	8.7	265	0955	8.4	257		
1354	1.9	57	1428	2.9	89	1458	3.0	91	1521	3.6	110	1545	3.1	96		
1952	10.0	304	●	2008	9.3	282	2033	9.5	290	2048	8.4	257	2115	8.2	250	
15 W	0210	0.7	22	30 Th	0236	0.8	25	15 Sa	0311	-0.8	-23	15 M	0354	-1.0	-32	
0825	10.4	316	0907	9.4	285	0954	9.8	300	1005	8.5	260	1024	8.4	255		
1431	2.0	62	1500	3.2	99	1543	3.4	103	1554	3.7	114	1617	3.1	94		
●	2023	10.1	309	2035	9.1	278	2115	9.3	283	2121	8.3	252	2148	8.1	247	
16 F	0306	0.9	26	31 F	0940	9.1	278					31 W	0419	0.4	11	
				1532	3.6	110						1051	8.3	252		
				2103	8.9	272						1649	3.0	91		
												2222	7.9	242		

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Naha, Nansei Shoto, Japan, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0048	4.2	129	16 W 0011	4.8	145	1 F 0326	3.8	116	1 Sa 0357	4.3	130
0634	2.5	75	0601	2.1	65	0726	3.5	106	0834	3.6	111
1308	5.1	155	1230	5.5	167	1341	4.7	144	1427	5.0	156
2013	2.3	70	● 1924	1.5	47	2146	1.8	55	2204	1.0	29
2 W 0225	4.0	122	17 Th 0143	4.4	134	2 Sa 0511	4.2	127	17 Su 0525	4.7	144
0734	2.9	89	0706	2.8	85	0935	3.6	109	1035	3.4	104
1402	5.1	154	1332	5.4	164	1515	4.8	145	1606	5.2	160
2127	1.9	59	2048	1.2	38	2253	1.4	42	2314	0.5	14
3 Th 0406	4.1	126	18 F 0338	4.4	135	3 Su 0559	4.6	140	18 M 0611	5.2	159
0855	3.2	98	0840	3.2	99	1057	3.4	103	1138	2.9	89
1503	5.1	155	1447	5.4	165	1628	5.0	153	1714	5.7	174
2228	1.5	47	2208	0.8	23	2341	0.9	28	● 0533	4.6	139
4 F 0518	4.5	136	19 Sa 0511	4.8	147	4 M 0632	5.0	152	19 Tu 0005	0.0	1
1012	3.3	100	1018	3.3	101	1145	3.1	93	0646	5.6	171
1601	5.2	159	1603	5.6	171	1720	5.4	165	1223	2.4	73
2316	1.1	34	2315	0.2	7	1807	6.1	187	1807	6.1	187
5 Sa 0606	4.8	147	20 Su 0613	5.3	161	5 Tu 0019	0.5	14	20 W 0047	-0.2	-7
1111	3.2	97	1130	3.1	95	0701	5.3	163	0717	5.9	180
1650	5.4	165	1709	5.9	181	1223	2.7	82	1301	1.9	58
2356	0.7	22	● 1803	5.8	178	1803	6.4	196	1851	6.4	196
6 Su 0644	5.2	157	21 M 0010	-0.3	-8	6 W 0053	0.1	3	21 Th 0123	-0.3	-9
1156	3.1	93	0659	5.6	172	0728	5.6	172	0746	6.1	186
1734	5.7	173	1224	2.8	85	1257	2.3	71	1335	1.5	46
● 1805	6.3	192	1805	6.3	192	1842	6.2	189	● 1930	6.5	199
7 M 0033	0.4	11	22 Tu 0058	-0.6	-18	7 Th 0125	-0.2	-5	22 F 0155	-0.2	-5
0717	5.4	164	0739	5.9	181	0755	5.9	179	0812	6.2	189
1234	2.9	88	1309	2.5	75	1331	1.9	56	1407	1.2	37
1813	5.9	181	● 1854	6.6	200	● 1919	6.5	197	2007	6.5	197
8 Tu 0108	0.1	3	23 W 0140	-0.7	-22	8 F 0157	-0.3	-9	23 Sa 0225	0.1	4
0749	5.6	170	0814	6.1	185	0822	6.1	185	0836	6.2	189
1309	2.7	82	1350	2.2	66	1405	1.6	48	1439	1.0	31
● 1850	6.2	188	1938	6.7	203	1958	6.6	200	2041	6.2	190
9 W 0142	-0.1	-3	24 Th 0218	-0.6	-18	9 Sa 0229	-0.2	-7	24 M 0252	0.6	17
0819	5.7	174	0847	6.1	186	0850	6.2	189	0859	6.1	187
1344	2.5	77	1428	1.9	59	1441	1.2	38	1509	0.9	28
1927	6.3	192	2019	6.6	200	2037	6.5	198	2115	5.9	179
10 Th 0215	-0.2	-6	25 F 0253	-0.3	-9	10 Su 0301	0.1	2	25 M 0317	1.0	32
0850	5.8	176	0917	6.1	185	0919	6.2	190	0922	6.0	183
1419	2.4	72	1505	1.8	54	1519	1.0	30	1540	1.0	29
2004	6.4	194	2058	6.3	192	2118	6.3	191	2149	5.4	166
11 F 0248	-0.1	-4	26 Sa 0325	0.2	5	11 M 0333	0.5	15	26 Tu 0342	1.5	47
0921	5.8	178	0945	6.0	182	0948	6.2	189	0945	5.8	178
1457	2.2	66	1541	1.7	51	1600	0.9	26	Tu 1613	1.1	33
2043	6.3	191	2136	5.9	179	2203	5.8	178	2225	5.0	151
12 Sa 0322	0.0	1	27 Su 0354	0.7	21	12 Tu 0407	1.1	34	12 W 0406	2.0	62
0953	5.8	178	1011	5.8	177	1020	6.0	184	1010	5.6	170
1537	2.0	62	1618	1.7	52	1645	0.9	27	1650	1.3	41
2125	6.0	184	2214	5.3	163	2253	5.3	161	2308	4.5	136
13 Su 0357	0.4	12	28 M 0422	1.3	39	13 W 0442	1.8	55	28 Th 0433	2.6	78
1026	5.8	177	1038	5.6	172	1055	5.8	177	1038	5.3	161
1621	1.9	58	1657	1.8	54	1740	1.0	31	1737	1.6	50
2210	5.7	174	2255	4.8	147	2356	4.7	142	● 0501	4.0	122
14 M 0433	0.9	27	29 Tu 0449	1.9	57	14 Th 0522	2.6	78	29 F 0504	3.1	93
1102	5.7	175	1106	5.4	165	1138	5.5	167	1115	4.9	149
1712	1.8	54	1743	1.9	58	1851	1.2	37	● 1850	1.9	59
2304	5.2	160	2346	4.3	131	● 0501	4.0	122	● 0501	3.0	92
15 Tu 0514	1.5	45	30 W 0520	2.5	75	15 F 0135	4.2	128	15 Sa 0149	4.2	128
1142	5.6	171	1140	5.2	158	0623	3.2	99	0619	3.6	109
1811	1.7	51	1844	2.0	61	1243	5.1	156	1222	4.9	148
● 0514	1.5	45	● 0601	3.0	92	2028	1.2	38	2017	1.3	40
31 Th 0107	3.9	118	31 Th 0601	3.0	92	● 0501	3.0	92	● 0501	3.0	92
1227	4.9	150	1227	4.9	150	● 1850	1.9	59	● 1850	1.9	59
2011	2.0	62	2011	2.0	62	● 0501	3.0	92	● 0501	3.0	92

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Naha, Nansei Shoto, Japan, 2008

Times and Heights of High and Low Waters

April				May				June				
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm	
1 Tu	0438	4.6	141	16 W	0501	5.4	164	1 Th	0404	5.3	161	
1004	3.2	99	W 1106	2.1	65	1007	2.4	73	F 1112	1.6	49	
1525	4.6	140	1658	5.3	162	1555	5.1	156	1727	5.3	163	
2224	1.4	43	2313	1.3	40	2217	1.6	49	2310	2.4	72	
2 W	0511	5.1	154	17 Th	0532	5.7	173	2 F	0441	5.7	174	
1054	2.6	80	Th 1144	1.6	48	1053	1.6	50	17 Sa	0511	5.9	179
1632	5.1	156	1746	5.6	171	1656	5.6	171	1811	5.6	170	
2310	1.0	31	2351	1.3	40	2305	1.5	46	2349	2.5	75	
3 Th	0539	5.5	168	18 F	0559	5.9	180	3 Sa	0515	6.1	186	
1132	1.9	59	F 1217	1.1	33	1135	0.8	25	18 Su	0541	6.0	184
1723	5.6	172	1826	5.8	178	1749	6.1	185	1221	0.9	26	
2349	0.8	23				2348	1.5	47	1850	5.7	175	
4 F	0607	5.9	181	19 Sa	0024	1.4	43	4 Su	0549	6.5	197	
1207	1.2	37	Sa 0625	6.1	185	1216	0.1	3	M 0610	6.2	188	
1808	6.1	187	1247	0.7	21	1838	6.4	194	1253	0.6	189	
			1903	5.9	181				1926	5.8	178	
5 Sa	0025	0.6	19	20 Su	0054	1.6	48	5 M	0030	1.7	51	
0635	6.3	192	Su 0649	6.2	188	0625	6.7	205	20 Tu	0056	2.7	81
1243	0.5	15	1316	0.4	13	1258	-0.5	-14	1324	0.5	14	
1852	6.5	198	O 1937	6.0	182	● 1927	6.5	199	O 2001	5.8	178	
6 Su	0100	0.7	21	21 M	0122	1.8	54	6 Tu	0111	1.9	59	
0704	6.6	200	M 0713	6.2	189	0701	6.9	210	21 W	0127	2.8	85
1321	-0.1	-3	1345	0.3	8	1342	-0.7	-22	21 Sa	0709	6.3	191
● 1936	6.6	202				2016	6.4	196	2035	5.8	177	
7 M	0136	0.9	28	22 Tu	0150	2.0	61	7 W	0152	2.3	69	
0735	6.7	205	Tu 0738	6.2	189	0741	6.9	210	22 Th	0158	2.9	88
1359	-0.5	-15	1414	0.2	7	1428	-0.8	-23	22 Sa	0740	6.3	191
2020	6.5	199	2044	5.7	174	2106	6.2	189	2109	5.7	173	
8 Tu	0212	1.3	41	23 W	0217	2.3	69	8 Th	0235	2.6	79	
0807	6.7	205	0804	6.1	187	0822	6.7	205	23 F	0231	3.0	91
1441	-0.6	-19	1444	0.3	10	1516	-0.5	-15	23 Su	0813	6.2	189
2107	6.2	190	2117	5.5	167	2159	5.8	178	2146	5.5	169	
9 W	0248	1.8	56	24 Th	0245	2.5	77	9 F	0321	3.0	90	
0841	6.6	201	Th 0831	6.0	182	0908	6.4	195	24 Sa	0847	6.0	184
1525	-0.5	-14	1517	0.6	17	1609	0.0	0	24 M	1541	0.9	27
2156	5.7	175	2154	5.2	159	2256	5.5	167	2225	5.4	164	
10 Th	0326	2.4	73	25 F	0316	2.8	85	10 Sa	0414	3.2	97	
0919	6.3	191	F 0901	5.8	176	0822	6.7	205	25 M	0958	6.4	194
1614	0.0	21	1553	0.9	26	1516	-0.5	-15	25 Tu	1649	0.8	24
2253	5.2	159	2235	4.9	150	2159	5.8	178	2331	5.8	178	
11 F	0409	2.9	89	26 W	0350	3.1	93	9 Sa	0512	3.2	97	
1001	5.8	177	Sa 0935	5.5	167	0908	6.4	195	24 Tu	1004	6.1	187
1712	0.5	16	1635	1.2	37	1609	0.0	0	24 M	1641	1.5	46
			2328	4.7	142	2256	5.5	167	2321	6.0	183	
12 Sa	0007	4.7	144	27 Su	0435	3.3	102	10 Sa	0346	3.2	99	
0508	3.4	103	Su 1016	5.2	157	0959	6.0	182	10 M	0926	5.8	178
1057	5.3	161	1729	1.5	47	1706	0.6	17	10 Tu	1621	1.1	35
1826	1.0	32				1706	0.6	17	10 Tu	2311	5.2	160
13 Su	0148	4.5	138	11 Su	0001	5.2	159	10 Tu	0618	3.1	95	
0655	3.6	110	Sa 0523	3.4	104	0959	6.0	182	10 Tu	1201	5.4	165
1229	4.8	146	Su 1103	5.5	167	1706	0.6	17	10 Tu	1829	2.0	61
● 1958	1.4	43	1810	1.1	35	1706	1.1	35	11 Tu	0109	5.6	172
14 M	0324	4.7	144	13 Tu	0221	5.1	156	11 Tu	0730	3.0	90	
0903	3.3	102	Tu 0548	3.5	108	0824	3.1	94	11 W	1318	5.0	153
1429	4.7	143	1117	4.8	146	1402	4.9	148	11 O	1924	2.6	78
2123	1.4	44	1841	1.8	55	2031	2.0	60	12 Tu	0003	6.0	183
15 Tu	0422	5.1	154	28 W	0044	4.5	137	12 Tu	0537	3.4	103	
1019	2.8	84	0548	3.5	108	0824	3.1	94	12 Tu	0841	2.7	82
1557	5.0	151	1117	4.8	146	1402	4.9	148	12 Tu	1444	4.9	149
2226	1.4	42	1841	1.8	55	2134	2.2	66	12 Tu	2025	3.0	91
16 W	0319	4.9	149	14 Th	0317	5.3	161	13 Tu	0003	5.7	173	
0908	3.1	94	0937	2.6	80	0937	2.6	80	13 F	0944	2.3	71
1429	4.7	143	1255	4.6	139	1527	4.9	149	13 F	1604	5.0	151
2123	1.4	44	2007	1.9	57	2134	2.2	66	13 F	2128	3.2	99
15 Tu	0422	5.1	154	30 W	0319	4.9	149	14 Th	0159	5.4	165	
1019	2.8	84	0908	3.1	94	0917	2.2	68	14 Th	1036	1.9	59
1557	5.0	151	1438	4.7	143	1519	5.2	159	14 Th	1709	5.2	158
2226	1.4	42	2120	1.8	54	2227	2.3	69	14 Th	2226	3.4	103
17 Sa	0339	6.0	182	31 Sa	0339	6.0	182	15 Tu	0420	5.9	179	
1014	1.5	46	1014	1.5	46	0917	2.2	68	15 Tu	1759	5.5	167
1631	5.6	170	1631	5.6	170	1519	5.2	159	15 Tu	2316	3.4	105
2220	2.5	77	2220	2.5	77	2120	2.4	73	16 W	0342	6.4	196

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

Naha, Nansei Shoto, Japan, 2008

## Times and Heights of High and Low Waters

July						August						September									
Time		Height		Time		Height															
<b>1</b> Tu	0441	6.7	205	<b>16</b> W	0520	6.3	191	<b>1</b> F	0045	3.4	104	<b>16</b> Sa	0044	3.3	102	<b>1</b> M	0147	2.0	62		
	1143	0.5	15		1222	1.4	43		0630	7.4	227		0628	7.0	213		0749	7.5	229		
	1831	6.3	192		1908	6.1	186		1317	0.3	9		1309	1.1	33		1406	1.2	36		
	2353	3.6	109		●	1952	7.0	213	1952	7.0	213	1937	6.8	207	2015	7.3	221				
<b>2</b> W	0537	7.0	214	<b>17</b> Th	0025	3.8	115	<b>2</b> Sa	0129	3.1	93	<b>17</b> Su	0116	3.0	90	<b>2</b> O	0221	1.8	55		
	1236	0.1	2		0602	6.5	199		0718	7.6	233		0704	7.2	220		0827	7.3	221		
	1923	6.6	200		1258	1.1	35		1358	0.3	10		1339	1.0	30		1435	1.6	49		
	●	1939	6.3	192	1939	7.1	217		2026	7.1	217		2003	7.0	213		2040	7.2	219		
<b>3</b> Th	0047	3.4	105	<b>18</b> F	0101	3.6	109	<b>3</b> Su	0209	2.7	83	<b>18</b> M	0149	2.6	79	<b>3</b> W	0254	1.7	52		
	0631	7.3	222		0641	6.8	207		0803	7.6	232		0741	7.3	224		0904	6.9	210		
	1327	-0.1	-4		1331	1.0	29		1436	0.6	18		1409	1.0	31		1502	2.1	65		
	●	2010	6.7	205	○	2008	6.5	197	2058	7.1	217	2029	7.1	217	2104	7.1	215				
<b>4</b> F	0137	3.3	100	<b>19</b> Sa	0135	3.3	102	<b>4</b> M	0249	2.5	76	<b>19</b> Tu	0223	2.2	68	<b>4</b> Th	0327	1.7	53		
	0722	7.4	226		0717	7.0	212		0845	7.4	225		0819	7.3	223		0940	6.4	195		
	1414	-0.1	-4		1403	0.9	27		1510	1.0	32		1439	1.2	38		1528	2.7	81		
	2053	6.8	206		2037	6.6	200		2127	7.1	215		2056	7.2	219		2129	6.8	208		
<b>5</b> Sa	0224	3.1	95	<b>20</b> Su	0209	3.1	96	<b>5</b> Tu	0327	2.4	72	<b>20</b> W	0259	2.0	60	<b>5</b> F	0401	1.9	59		
	0811	7.4	225		0754	7.1	215		0926	7.0	213		0858	7.2	218		1019	5.9	180		
	1458	0.1	4		1435	0.9	27		1541	1.6	50		1510	1.6	50		1554	3.2	97		
	2133	6.7	205		2106	6.7	203		2155	6.9	211		2124	7.2	219		2154	6.6	200		
<b>6</b> Su	0310	3.0	91	<b>21</b> M	0244	3.0	90	<b>6</b> W	0406	2.4	72	<b>21</b> Th	0337	1.8	55	<b>6</b> Sa	0440	2.2	67		
	0859	7.2	218		0831	7.0	214		1007	6.5	197		0941	6.8	208		1105	5.4	165		
	1540	0.6	17		1506	1.0	32		1611	2.3	69		1542	2.1	65		1622	3.7	112		
	2210	6.6	202		2135	6.7	205		2222	6.7	205		2154	7.1	216		2223	6.2	189		
<b>7</b> M	0356	2.9	88	<b>22</b> Tu	0322	2.8	85	<b>7</b> Th	0446	2.5	75	<b>22</b> F	0420	1.8	54	<b>7</b> Su	0528	2.5	77		
	0946	6.8	207		0910	6.9	209		1050	5.9	180		1028	6.4	194		1212	5.0	152		
	1619	1.1	35		1539	1.3	40		1639	2.9	88		1616	2.8	84		1657	4.1	126		
	2246	6.5	197		2205	6.7	205		2250	6.5	198		2227	6.9	209		2301	5.8	178		
<b>8</b> Tu	0443	2.9	87	<b>23</b> W	0402	2.6	80	<b>8</b> F	0531	2.6	79	<b>23</b> Sa	0509	1.9	58	<b>8</b> M	0641	2.8	86		
	1034	6.3	191		0953	6.6	201		1142	5.4	164		1126	5.8	177		1424	4.8	147		
	1656	1.8	55		1612	1.7	53		1710	3.5	106		1655	3.4	104		1813	4.6	139		
	2321	6.3	193		2237	6.7	204		2323	6.2	190		2307	6.6	201		2344	5.9	179		
<b>9</b> W	0533	2.9	87	<b>24</b> Th	0447	2.5	76	<b>9</b> Sa	0628	2.8	85	<b>24</b> Su	0614	2.1	63	<b>9</b> O	0007	5.4	166		
	1126	5.7	175		1041	6.2	190		1258	5.0	151		1249	5.3	162		0829	2.9	88		
	1733	2.5	76		1649	2.3	69		1751	4.0	123		1748	4.1	124		1626	5.1	156		
	2357	6.2	188		2312	6.6	201		●				2100	4.6	141		2201	4.0	122		
<b>10</b> Th	0630	2.9	87	<b>25</b> F	0538	2.4	73	<b>10</b> Su	0006	5.9	181	<b>25</b> M	0004	6.3	191	<b>10</b> W	0214	5.3	163		
	1229	5.2	159		1139	5.8	177		0746	2.9	88		0741	2.2	66		0959	2.6	79		
	1813	3.1	95		1730	2.9	88		1503	4.9	148		1457	5.2	159		1712	5.5	169		
	●	2354	6.5	198	1908	4.5	136		1933	4.6	139		2228	4.2	129		2258	3.3	102		
<b>11</b> F	0037	6.0	183	<b>26</b> Sa	0642	2.3	71	<b>11</b> M	0116	5.7	174	<b>26</b> Tu	0137	6.0	184	<b>11</b> Th	0349	5.6	171		
	0736	2.8	86		1256	5.4	166		0920	2.8	84		0919	2.0	61		1054	2.2	66		
	1352	4.9	150		1824	3.5	107		1651	5.2	158		1642	5.6	171		1742	5.9	181		
	1905	3.6	111		●	2116	4.6	140	2147	4.5	136	2313	3.8	115	2340	2.7	81				
<b>12</b> Sa	0127	5.9	179	<b>27</b> Su	0047	6.3	193	<b>12</b> Tu	0252	5.7	173	<b>27</b> W	0322	6.2	188	<b>12</b> F	0447	6.0	184		
	0850	2.7	81		0759	2.2	66		1033	2.4	74		1037	1.6	48		1133	1.8	54		
	1533	2.4	73		1440	5.3	161		1742	5.6	170		1738	6.1	186		1808	6.3	192		
	2145	5.2	157		1943	4.1	124		2243	4.4	134		2303	4.0	122		2347	3.2	99		
<b>13</b> Su	0228	5.8	177	<b>28</b> M	0158	6.3	191	<b>13</b> W	0411	5.9	180	<b>28</b> Th	0440	6.6	201	<b>13</b> Sa	0531	6.5	198		
	0959	2.4	73		0923	1.8	56		1124	2.0	62		1134	1.1	34		1207	1.4	44		
	1657	5.2	157		1626	5.5	169		1816	6.0	182		1817	6.5	199		1832	6.6	202		
	2145	4.2	127		2127	4.3	131		2333	4.1	124		2353	3.4	105		1842	7.0	212		
<b>14</b> M	0333	5.8	178	<b>29</b> Tu	0319	6.4	195	<b>14</b> Th	0506	6.3	191	<b>29</b> F	0538	7.1	215	<b>14</b> Su	0019	2.7	82		
	1056	2.1	63		1038	1.4	42		1204	1.6	50		1219	0.8	25		0610	6.9	210		
	1753	5.5	168		1740	6.0	183		1845	6.3	192		1850	6.9	210		1238	1.2	37		
	2254	4.1	125		2253	4.2	127		1912	6.6	200		1921	7.1	217		1856	6.9	211		
<b>15</b> Tu	0431	6.0	184	<b>30</b> W	0434	6.7	205	<b>15</b> F	0011	3.7	113	<b>30</b> Sa	0035	2.9	88	<b>15</b> M	0050	2.1	65		
	1142	1.7	52		1140	0.9	26		0549	6.6	202		0626	7.4	226		0648	7.2	220		
	1834	5.8	178		1832	6.4	196		1238	1.3	40		1259	0.7	22		1308	1.2	36		
	2345	4.0	121		2355	3.8	116		1912	6.6	200		1921	7.1	217		1921	7.2	219		

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

# Naha, Nansei Shoto, Japan, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
1 W 0153 1.0 32	16 0134 0.2 5	1 Sa 0230 0.6 19	16 0249 -0.5 -15	1 M 0250 0.5 14	16 0333 -0.5 -14						
0810 6.9 209	Th 0756 7.0 214	0906 5.9 179	0931 6.1 186	0933 5.5 168	1013 5.9 179						
1401 2.1 65	1344 2.1 63	1431 3.0 92	1453 3.0 92	1453 3.0 92	1544 2.7 82						
1955 7.0 213	1939 7.3 223	2013 6.3 193	2040 6.7 204	2032 6.0 182	2131 6.3 192						
2 Th 0223 1.0 31	17 0214 0.0 -1	2 Su 0302 0.9 26	17 0340 -0.1 -3	2 Tu 0325 0.7 20	17 0420 0.1 3						
0845 6.6 200	F 0841 6.8 207	0943 5.6 171	1026 5.8 176	1010 5.4 164	1059 5.7 173						
1428 2.5 77	1420 2.5 76	1502 3.2 99	1545 3.3 100	1531 3.1 95	1640 2.7 81						
2019 6.9 209	2013 7.2 219	2044 6.1 186	2130 6.3 191	2109 5.7 174	2226 5.8 176						
3 F 0254 1.1 34	18 0257 0.1 2	3 M 0338 1.1 35	18 0435 0.4 13	3 W 0402 1.0 29	18 0507 0.8 23						
0920 6.2 188	Sa 0929 6.4 195	1025 5.3 162	1127 5.5 167	1050 5.2 159	1146 5.5 168						
1454 2.9 89	1458 3.0 90	1538 3.5 106	1650 3.4 104	1617 3.2 97	1743 2.6 80						
2044 6.6 202	2050 6.9 211	2118 5.8 176	2230 5.7 175	2150 5.4 165	2327 5.2 158						
4 Sa 0326 1.3 41	19 0345 0.4 12	4 Tu 0419 1.5 46	19 0536 1.0 31	4 Th 0442 1.2 38	19 0556 1.4 44						
0957 5.8 176	Su 1024 5.9 179	1117 5.0 153	1235 5.3 161	1137 5.2 157	1234 5.4 164						
1521 3.3 101	1541 3.4 105	1625 3.7 113	1813 3.4 104	1714 3.2 98	1854 2.5 76						
2111 6.4 194	2132 6.5 198	2159 5.4 164	2348 5.2 160	2241 5.1 154	O						
5 Su 0402 1.7 51	20 0441 0.9 27	5 M 0510 1.9 57	20 0643 1.5 47	5 F 0529 1.6 48	20 0042 4.7 143						
1040 5.3 163	M 1133 5.4 165	1227 4.9 149	1343 5.3 161	1229 5.1 156	0649 2.1 64						
1552 3.7 112	1638 3.8 117	1739 3.9 118	1947 3.1 96	1826 3.1 94	1325 5.3 161						
2141 6.0 183	2226 6.0 182	2257 5.0 152	O	2350 4.7 144	2011 2.3 69						
6 M 0445 2.1 63	21 0551 1.4 43	6 Th 0618 2.2 66	21 0125 4.9 150	6 Sa 0625 1.9 59	21 0214 4.4 133						
1140 5.0 152	Tu 1306 5.2 158	1350 4.9 150	0755 2.0 60	1326 5.2 158	0751 2.6 80						
1632 4.0 123	1814 4.1 125	1927 3.8 115	1443 5.4 164	1944 2.8 84	1419 5.2 160						
2219 5.6 170	O 2351 5.4 166	O	2107 2.7 81	O	2124 1.9 58						
7 Tu 0547 2.5 75	22 0718 1.8 55	7 F 0032 4.7 144	22 0258 4.9 149	7 Su 0119 4.6 139	22 0348 4.4 134						
1326 4.8 146	W 1442 5.3 161	0739 2.3 70	0903 2.2 68	0733 2.2 68	0902 3.0 91						
1753 4.3 132	2021 3.9 118	1456 5.2 158	1532 5.6 170	1420 5.4 164	1513 5.3 161						
O 2320 5.2 158	O	2055 3.3 102	2207 2.1 63	2054 2.2 67	2224 1.5 46						
8 W 0722 2.7 81	23 0148 5.2 160	8 Sa 0218 4.8 145	23 0413 5.1 155	8 M 0251 4.7 142	23 0503 4.6 141						
1522 5.0 152	0845 1.9 58	0853 2.3 69	1001 2.4 74	0844 2.4 74	1011 3.1 95						
2027 4.3 131	1546 5.5 169	1541 5.5 168	1613 5.7 175	1510 5.6 171	1603 5.4 164						
2145 3.2 99	2145 3.2 99	2152 2.7 82	2253 1.5 46	2153 1.5 46	2312 1.1 33						
9 Th 0126 5.0 151	24 0324 5.4 166	9 Su 0338 5.1 155	24 0511 5.3 162	9 Tu 0410 5.0 153	24 0556 5.0 151						
0900 2.6 78	F 0953 1.9 57	0952 2.1 65	M 1050 2.5 77	0950 2.5 77	1107 3.1 95						
1617 5.3 163	1629 5.9 179	1617 5.9 179	1649 5.9 181	1557 5.9 181	1649 5.5 168						
2153 3.8 117	2238 2.6 79	2235 1.9 59	2332 1.0 32	2244 0.8 23	2352 0.8 23						
10 F 0313 5.2 158	25 0431 5.8 176	10 M 0438 5.5 169	25 0559 5.5 169	10 W 0514 5.4 165	25 0638 5.2 159						
1004 2.2 68	Sa 1045 1.8 56	1040 2.0 62	1131 2.6 80	1048 2.6 79	1153 3.1 93						
1650 5.7 175	1703 6.2 188	1651 6.2 190	1722 6.1 185	1643 6.3 191	1730 5.7 174						
2239 3.2 99	2319 1.9 59	2315 1.1 35	O	2333 0.0 1	O						
11 Sa 0417 5.6 171	26 0523 6.1 186	11 Tu 0529 6.0 183	26 0007 0.7 21	11 Th 0610 5.8 177	26 0029 0.5 14						
1049 1.9 58	Su 1126 1.9 57	1123 2.0 61	0639 5.7 174	1140 2.6 80	0713 5.4 166						
1717 6.1 187	1733 6.4 196	1724 6.6 201	1209 2.7 82	1229 2.7 82	1231 3.0 90						
2315 2.6 79	2355 1.4 42	2354 0.4 13	1753 6.2 188	1729 6.6 200	1808 5.9 179						
12 Su 0506 6.1 186	27 0607 6.3 192	12 W 0617 6.4 194	27 0040 0.4 13	12 F 0021 -0.5 -16	27 0103 0.2 7						
1127 1.7 51	M 1202 2.0 60	1204 2.1 64	0716 5.8 178	0746 6.1 185	0746 5.6 170						
1744 6.5 199	1801 6.6 200	1758 6.9 209	1242 2.8 84	1229 2.7 81	1306 2.8 86						
2348 1.9 57	O	O	1823 6.2 190	1815 6.8 207	1844 6.0 183						
13 M 0549 6.6 200	28 0027 1.0 29	13 Th 0035 -0.2 -6	28 0112 0.3 8	13 F 0021 -0.5 -16	28 0136 0.1 3						
1201 1.5 47	Tu 0646 6.4 195	0704 6.6 200	0751 5.8 178	0746 6.2 185	0816 5.6 172						
1810 6.9 209	1234 2.1 65	1244 2.3 69	1315 2.8 86	1316 2.7 82	1338 2.7 83						
O	1827 6.7 203	O 1835 7.1 215	O 1854 6.3 191	O 1902 6.9 211	O 1918 6.1 186						
14 Tu 0022 1.2 36	29 0058 0.7 20	14 F 0117 -0.6 -17	29 0144 0.2 7	14 M 0157 -1.0 -30	29 0208 0.1 2						
0631 6.9 210	0723 6.4 195	0751 6.6 200	0825 5.8 177	0839 6.2 189	0846 5.6 172						
1235 1.5 47	1304 2.3 71	1325 2.5 76	1346 2.9 88	1404 2.7 82	1411 2.6 80						
1838 7.1 217	O 1852 6.7 203	1913 7.1 216	1926 6.2 190	1950 6.9 210	1952 6.1 187						
15 W 0057 0.6 18	30 0128 0.5 16	15 M 0202 -0.7 -20	30 0217 0.3 9	15 F 0245 -0.9 -26	30 0240 0.1 4						
0713 7.1 215	0758 6.3 192	0840 6.4 195	0858 5.7 173	0926 6.1 185	0916 5.6 172						
1310 1.7 53	1333 2.6 78	1407 2.8 84	1419 3.0 90	1453 2.7 82	1445 2.6 78						
O 1908 7.3 222	1918 6.6 202	1955 7.0 213	1958 6.1 187	2040 6.7 204	2026 6.1 185						
16 F 0158 0.5 15	31 0158 0.5 15	O	O	O	O						
0832 6.1 187	F 0832 6.1 187	O	O	O	O						
1402 2.8 85	1402 2.8 85	O	O	O	O						
1945 6.5 199	1945 6.5 199	O	O	O	O						

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Pusan, Korea, 2008

Times and Heights of High and Low Waters

January				February				March				
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm	
1 Tu 0145	2.5	76	16 W 0114	3.0	91	1 F 0233	2.2	67	1 Sa 0316	2.6	79	
0827	1.2	37	W 0711	0.8	24	F 1001	1.4	43	Sa 1016	1.3	40	
1356	2.6	79	1324	2.8	85	1502	2.0	61	1643	2.2	67	
2039	1.0	30	● 2004	0.7	21	2147	1.2	37	2251	1.1	34	
2 W 0252	2.4	73	17 Th 0217	2.8	85	2 Sa 0530	2.3	70	17 M 0353	2.1	64	
0940	1.2	37	0838	1.0	30	Sa 1134	1.3	40	Su 1110	1.3	40	
1500	2.3	70	1434	2.5	76	1737	2.1	64	1708	2.0	61	
2145	1.0	30	2130	0.8	24	2319	1.1	34	2254	1.3	40	
3 Th 0436	2.4	73	18 F 0348	2.7	82	3 Su 0639	2.6	79	3 M 0614	2.5	76	
1051	1.2	37	1017	1.1	34	Su 1237	1.0	30	M 1214	1.0	30	
1634	2.3	70	1635	2.4	73	1845	2.4	73	1826	2.4	73	
2247	1.0	30	2253	0.8	24	18	0009	0.8	24	18 Tu 0005	0.9	27
4 F 0559	2.6	79	19 Sa 0531	2.9	88	3 M 0642	3.2	98	0629	3.1	94	
1152	1.1	34	Sa 1143	0.9	27	M 1259	0.7	21	Tu 1247	0.7	21	
1757	2.4	73	1817	2.7	82	1919	3.0	91	1907	3.0	91	
2343	0.9	27	1927	2.8	85	4 Tu 0003	1.0	30	19 W 0053	0.6	18	
5 Sa 0649	2.8	85	20 Su 0004	0.6	18	4 M 0718	3.0	91	0709	3.4	104	
1244	0.9	27	Su 0642	3.3	101	1320	0.7	21	1321	0.4	12	
1853	2.6	79	Tu 1250	0.6	18	1927	3.4	104	1940	3.4	104	
6 Su 0030	0.7	21	21 M 0103	0.4	12	5 Tu 0106	0.6	18	20 Sa 0131	0.3	9	
0729	3.1	94	0734	3.7	113	W 0751	3.3	101	W 0726	3.3	101	
1327	0.7	21	1344	0.4	12	Tu 1354	0.4	12	Th 0744	3.7	113	
1936	2.8	85	2004	3.3	101	2002	3.1	94	1350	0.2	6	
7 M 0112	0.5	15	21 W 0103	0.4	12	21 O 0148	0.2	6	2010	3.7	113	
0804	3.3	101	0840	4.0	122	W 0805	3.9	119	21 F 0204	0.1	3	
1405	0.5	15	1429	0.1	3	1425	0.2	6	0815	3.9	119	
2014	3.0	91	● 2045	3.6	110	2035	3.4	104	1416	0.0	0	
8 Tu 0149	0.4	12	22 W 0238	0.0	0	6 Th 0226	0.0	0	2039	3.9	119	
0837	3.5	107	0858	4.2	128	W 0840	4.1	125	21 F 0204	0.1	3	
Tu 1439	0.3	9	1508	0.0	0	Th 1447	0.0	0	0828	4.0	122	
● 2050	3.2	98	2122	3.8	116	O 2103	3.9	119	Sa 1441	-0.1	-3	
9 W 0224	0.3	9	23 W 0858	4.2	128	7 Th 0216	0.2	6	O 2107	4.0	122	
0909	3.7	113	0923	4.0	122	22 F 0259	-0.1	-3	22 M 0233	0.0	0	
1511	0.2	6	1523	-0.1	-3	F 0912	4.2	128	0845	4.0	122	
2124	3.4	104	2139	3.8	116	1516	-0.1	-3	Sa 1441	-0.1	-3	
10 Th 0258	0.2	6	23 M 0238	0.0	0	2134	4.0	122	O 2135	4.0	122	
0941	3.8	116	0945	4.3	131	23 Sa 0330	-0.1	-3	22 F 0228	-0.2	-6	
1542	0.1	3	1544	0.0	0	Sa 0944	4.2	128	0915	4.0	122	
2158	3.5	107	2158	3.8	116	1542	-0.1	-3	Su 1505	-0.1	-3	
11 F 0332	0.1	3	24 Th 0318	0.0	0	2204	3.9	119	2135	4.0	122	
1013	3.8	116	0955	4.3	131	9 Sa 0320	-0.1	-3	23 M 0301	0.0	0	
1614	0.1	3	1553	0.0	0	Sa 0954	4.1	125	0915	4.0	122	
2232	3.5	107	2158	3.8	116	1607	-0.1	-3	Su 1505	-0.1	-3	
12 Sa 0406	0.1	3	24 M 0355	0.0	0	2233	3.8	116	2149	4.2	128	
1045	3.7	113	1010	4.2	128	9 Tu 0320	-0.1	-3	24 F 0328	0.0	0	
1647	0.1	3	1617	0.0	0	W 1025	4.0	122	0915	4.0	122	
2307	3.4	104	2232	3.7	113	Su 1025	-0.1	-3	Su 1505	-0.1	-3	
13 Su 0443	0.2	6	1044	4.0	122	1623	-0.1	-3	2203	3.9	119	
1119	3.6	110	Sa 1647	0.1	3	2245	3.8	116	2224	4.1	125	
1722	0.2	6	2305	3.6	110	W 1025	4.0	122	2231	3.7	113	
2344	3.3	101	1655	0.0	0	1631	0.1	3	2231	3.7	113	
14 M 0523	0.3	9	2305	3.6	110	2302	3.6	110	25 Th 0354	0.2	6	
1155	3.4	104	1655	0.0	0	2302	3.6	110	1013	3.7	113	
1803	0.4	12	1716	0.2	6	2302	3.7	113	1553	0.1	3	
2337	3.3	101	1729	0.2	6	2302	3.7	113	2231	3.7	113	
15 Tu 0025	3.2	98	1729	0.2	6	2358	3.4	104	25 F 0444	0.2	6	
0610	0.6	18	1729	0.2	6	12 F 0502	0.2	6	0444	0.2	6	
1235	0.2	6	1744	0.4	12	1729	0.2	6	1113	3.1	94	
2344	3.3	101	1814	0.7	21	1729	0.2	6	1642	0.5	15	
14 M 0523	0.3	9	● 1909	0.9	27	1729	0.5	15	2329	3.1	94	
1155	3.4	104	1909	0.9	27	1729	0.8	24	27 F 0447	0.6	18	
1803	0.4	12	1909	0.9	27	1729	0.8	24	1113	3.1	94	
2337	3.3	101	1909	0.9	27	1729	0.8	24	1642	0.5	15	
15 Tu 0025	3.2	98	31 Th 0125	2.5	76	1729	0.8	24	2329	3.1	94	
0610	0.6	18	0806	1.3	40	1729	0.8	24	27 F 0447	0.6	18	
1235	0.2	6	1340	2.3	70	1729	0.8	24	1113	3.1	94	
2344	3.3	101	1958	1.1	34	1729	0.8	24	1642	0.5	15	

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Pusan, Korea, 2008

Times and Heights of High and Low Waters

April				May				June							
	Time	Height		Time	Height		Time	Height		Time	Height				
<b>1</b> Tu	0510	2.4	73	<b>16</b> W	0558	3.0	91	<b>1</b> Th	0501	2.8	85	<b>16</b> F	0600	3.0	91
	1126	1.0	30	1213	0.7	21	1117	0.6	18	1202	0.8	24			
	1741	2.4	73	1842	3.0	91	1736	3.0	91	1842	3.2	98			
	2323	1.0	30				2326	0.7	21						
<b>2</b> W	0608	2.8	85	<b>17</b> Th	0027	0.7	21	<b>2</b> F	0559	3.2	98	<b>17</b> Sa	0032	0.8	24
	1209	0.6	18	0640	3.2	98	1200	0.3	9	0640	3.2	98			
	1827	2.9	88	1246	0.5	15	1824	3.4	104	1234	0.6	18			
				1914	3.3	101				1915	3.5	107			
<b>3</b> Th	0010	0.7	21	<b>18</b> F	0104	0.5	15	<b>3</b> Sa	0013	0.4	12	<b>18</b> Su	0107	0.7	21
	0648	3.2	98	0714	3.5	107	0645	3.5	107	0717	3.3	101			
	1245	0.3	9	1314	0.3	9	1240	0.1	3	1304	0.5	15			
	1905	3.3	101	1943	3.6	110	1907	3.8	116	1947	3.6	110			
<b>4</b> F	0050	0.3	9	<b>19</b> Sa	0136	0.3	9	<b>4</b> Su	0057	0.2	6	<b>19</b> M	0140	0.6	18
	0723	3.6	110	0746	3.6	110	0727	3.8	116	0751	3.5	107			
	1319	0.0	0	1340	0.2	6	1320	-0.1	-3	1333	0.4	12			
	1940	3.8	116	2012	3.8	116	1949	4.1	125	2018	3.8	116			
<b>5</b> Sa	0127	0.0	0	<b>20</b> Su	0205	0.2	6	<b>5</b> M	0139	0.0	0	<b>20</b> Tu	0211	0.6	18
	0758	3.9	119	0817	3.7	113	0808	3.9	119	0825	3.5	107			
	1353	-0.3	-9	1405	0.1	3	1359	-0.2	-6	1402	0.4	12			
	2016	4.1	125	2040	3.9	119	● 2030	4.4	134	2050	3.8	116			
<b>6</b> Su	0203	-0.2	-6	<b>21</b> M	0233	0.2	6	<b>6</b> Tu	0221	0.0	0	<b>21</b> W	0243	0.5	15
	0833	4.1	125	0847	3.7	113	0849	4.0	122	0859	3.5	107			
	1426	-0.4	-12	1430	0.1	3	1439	-0.2	-6	1432	0.4	12			
	● 2051	4.3	131	2109	3.9	119	2111	4.4	134	2121	3.8	116			
<b>7</b> M	0240	-0.3	-9	<b>22</b> Tu	0301	0.2	6	<b>7</b> W	0304	0.0	0	<b>22</b> Th	0315	0.6	18
	0908	4.1	125	0918	3.7	113	0931	3.9	119	0933	3.5	107			
	1500	-0.4	-12	1456	0.1	3	1520	0.0	0	1502	0.5	15			
	2128	4.3	131	2139	3.8	116	2153	4.3	131	2153	3.8	116			
<b>8</b> Tu	0317	-0.2	-6	<b>23</b> W	0329	0.3	9	<b>8</b> Th	0348	0.2	6	<b>23</b> Su	0347	0.7	21
	0944	4.0	122	0949	3.5	107	1013	3.7	113	1009	3.3	101			
	1535	-0.2	-6	1522	0.2	6	1602	0.2	6	1533	0.6	18			
	2206	4.2	128	2208	3.7	113	2236	4.1	125	2226	3.7	113			
<b>9</b> W	0354	0.0	0	<b>24</b> Th	0358	0.5	15	<b>9</b> F	0435	0.5	15	<b>24</b> Sa	0422	0.8	24
	1022	3.7	113	1021	3.3	101	1057	3.4	104	1045	3.2	98			
	1611	0.0	0	1549	0.3	9	1648	0.6	18	1607	0.7	21			
	2245	4.0	122	2239	3.5	107	2321	3.8	116	2301	3.5	107			
<b>10</b> Th	0434	0.3	9	<b>25</b> F	0428	0.6	18	<b>10</b> Sa	0529	0.8	24	<b>25</b> Tu	0500	0.9	27
	1101	3.4	104	1055	3.0	91	1145	3.1	94	1145	3.1	94			
	1649	0.4	12	1619	0.5	15	1745	0.9	27	1645	0.8	24			
	2327	3.6	110	2312	3.2	98				2339	3.3	101			
<b>11</b> F	0520	0.7	21	<b>26</b> Sa	0504	0.8	24	<b>11</b> Su	0548	1.0	30	<b>26</b> W	0136	3.2	98
	1143	3.0	91	1133	2.8	85	0641	1.0	30	1208	2.9	88			
	1734	0.8	24	1652	0.8	24	1241	2.8	85	1733	1.0	30			
				2350	3.0	91	1908	1.2	37	1959	1.4	43			
<b>12</b> Sa	0015	3.2	98	<b>27</b> Su	0553	1.1	34	<b>12</b> M	0107	3.1	94	<b>27</b> Tu	0222	3.2	98
	0623	1.1	34	1219	2.5	76	0813	1.2	37	0653	1.1	34			
	1236	2.5	76	1737	1.0	30	1355	2.5	76	1300	2.8	85			
	1852	1.2	37				● 2044	1.3	40	1840	1.2	37			
<b>13</b> Su	0116	2.8	85	<b>28</b> M	0038	2.7	82	<b>13</b> Tu	0219	2.9	88	<b>28</b> W	0115	3.0	91
	0827	1.3	40	0731	1.2	37	0935	1.2	37	0812	1.1	34			
	1402	2.2	67	1322	2.3	70	1546	2.5	76	1404	2.8	85			
	● 2108	1.3	40	● 1902	1.3	40	2202	1.3	40	● 2011	1.3	40			
<b>14</b> M	0252	2.6	79	<b>29</b> Tu	0148	2.6	79	<b>14</b> W	0350	2.8	85	<b>29</b> Th	0222	2.9	88
	1020	1.2	37	0919	1.1	34	1037	1.1	34	0923	1.0	30			
	1657	2.3	70	1452	2.3	70	1715	2.7	82	1520	2.9	88			
	2240	1.2	37	2111	1.3	40	2303	1.1	34	2134	1.2	37			
<b>15</b> Tu	0454	2.7	82	<b>30</b> W	0330	2.6	79	<b>15</b> Th	0507	2.9	88	<b>30</b> Sa	0344	3.0	91
	1128	1.0	30	1026	0.9	27	1125	0.9	27	1023	0.8	24			
	1804	2.7	82	1630	2.6	79	1805	3.0	91	1638	3.1	94			
	2342	1.0	30	2230	1.0	30	2351	1.0	30	2241	1.0	30			
<b>31</b> Sa	0504	3.2	98				<b>31</b> Su	0504	3.2	98	<b>31</b> W	1116	0.6	18	
								1743	3.5	107					
								2339	0.8	24					

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Heights are referred to the chart datum of soundings.

# Pusan, Korea, 2008

Times and Heights of High and Low Waters

July				August				September						
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height			
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm			
1 Tu	0017	1.1	34	16 W	0116	1.4	43	1 F	0200	0.9	27			
0648	3.6	110	W 0723	3.4	104	0821	4.4	134	Sa 0816	4.2	128			
1237	0.8	24	1300	1.3	40	1412	0.8	24	1356	1.0	30			
1914	4.3	131	1951	4.0	122	● 2035	5.0	152	2033	4.6	140			
2 W	0113	0.9	27	17 Th	0152	1.2	37	2 Sa	0242	0.7	21			
0742	3.9	119	0801	3.7	113	0900	4.6	140	17 Su	0232	0.8	24		
1329	0.6	18	1337	1.2	37	1454	0.7	21	1427	0.9	27			
2003	4.6	140	2024	4.2	128	2113	5.1	155	○ 2103	4.7	143			
3 Th	0205	0.7	21	18 F	0225	1.1	34	3 Su	0319	0.7	21			
0830	4.1	125	0835	3.9	119	0937	4.7	143	18 M	0300	0.7	21		
1419	0.6	18	1411	1.0	30	1533	0.7	21	1457	0.8	24			
● 2048	4.8	146	○ 2055	4.4	134	2150	5.0	152	2132	4.7	143			
4 F	0254	0.6	18	19 Sa	0256	0.9	27	4 M	0355	0.7	21			
0914	4.3	131	0909	4.1	125	1013	4.6	140	19 Tu	0328	0.7	21		
1506	0.6	18	1443	0.9	27	1610	0.8	24	4 Th	0412	0.9	27		
2131	4.9	149	2126	4.5	137	2225	4.9	149	1046	4.4	134			
5 Sa	0339	0.6	18	20 Su	0326	0.9	27	5 Tu	0427	0.8	24			
0956	4.3	131	0942	4.2	128	1048	4.5	137	20 W	0356	0.7	21		
1552	0.6	18	1515	0.9	27	1646	1.0	30	5 F	0437	1.1	34		
2212	4.8	146	2156	4.5	137	2300	4.6	140	20 Sa	0433	0.9	27		
6 Su	0423	0.7	21	21 M	0355	0.8	24	20 Tu	1022	4.6	140			
1037	4.2	128	1014	4.2	128	1122	4.2	128	6 Sa	1117	4.1	125		
1636	0.8	24	1547	0.9	27	1721	1.3	40	1707	1.5	46			
2252	4.6	140	2227	4.4	134	2333	4.2	128	2329	3.8	116			
7 M	0505	0.8	24	21 Th	0425	0.8	24	21 Th	0426	0.8	24			
1117	4.0	122	1048	4.2	128	1056	4.5	137	6 Sa	1150	1.4	43		
1721	1.0	30	1621	0.9	27	1634	1.0	30	21 Su	1159	1.2	37		
2331	4.3	131	2259	4.3	131	2306	4.3	131	21 W	1159	3.9	119		
8 Tu	0546	1.0	30	23 W	0458	0.9	27	7 Th	0528	1.2	37			
1157	3.8	116	1123	4.1	125	0600	1.5	46	22 F	0459	1.0	30		
1807	1.3	40	1658	1.0	30	1232	3.6	110	22 Sa	0532	3.4	104		
			2332	4.1	125	1843	1.9	58	1713	1.3	40			
9 W	0010	4.0	122	24 Th	0534	1.1	34	2342	4.0	122	● 1837	2.1	64	
0629	1.2	37	1201	4.0	122	0639	1.8	55	7 Su	0004	3.4	104		
1239	3.6	110	1740	1.2	37	1316	3.3	101	1228	3.4	104			
1900	1.5	46				● 2007	2.1	64	○ 1837	2.1	64			
10 Th	0051	3.6	110	25 F	0010	3.9	119	23 M	0025	3.6	110			
0717	1.4	43	0619	1.2	37	0600	2.0	61	9 Tu	0207	2.7	82		
1325	3.3	101	1246	3.8	116	1217	4.0	122	24 W	0408	2.8	85		
● 2003	1.8	55	1834	1.5	46	1801	1.6	49	23 Tu	0826	1.9	58		
11 F	0136	3.3	101	26 Sa	0054	3.6	110	23 Sa	0538	1.3	40			
0814	1.6	49	0720	1.4	43	0600	1.5	46	8 M	0615	1.9	58		
1424	3.1	94	1342	3.6	110	1232	3.6	110	1325	3.0	91			
2118	1.9	58	● 1953	1.7	52	1843	1.9	58	2128	2.2	67			
12 Sa	0234	3.0	91	27 Su	0155	3.3	101	10 Th	0334	3.0	91			
0922	1.7	52	0847	1.6	49	0749	2.0	61	11 F	0608	3.1	94		
1600	3.0	91	1501	3.5	107	1426	3.1	94	26 F	0635	3.6	110		
2232	1.9	58	2135	1.8	55	2158	2.2	67	1220	1.2	37			
13 Su	0403	2.9	88	28 M	0335	3.2	101	2317	1.8	55	1838	4.0	122	
1029	1.7	52	1016	1.6	49	0630	1.8	55	11 Th	1149	1.7	52		
1741	3.2	98	1646	3.6	110	1209	1.7	52	1833	3.6	110			
2338	1.8	55	2306	1.7	52	1902	3.7	113	11 F	0008	1.2	37		
14 M	0538	3.0	91	28 W	0022	1.8	55	2324	2.0	61	26 F	0635	3.6	110
1128	1.6	49	0537	3.3	101	0647	3.7	113	2317	1.8	55	1220	1.2	37
1836	3.4	104	1131	1.4	43	1231	1.3	40	1905	4.0	122	1838	4.0	122
15 Tu	0032	1.6	49	14 Th	0103	1.5	46	1935	4.3	131	1916	4.3	131	
0639	3.2	98	0647	3.7	113	0710	3.5	107	12 F	0033	1.3	40		
1218	1.5	46	1233	1.2	37	1250	1.5	46	0645	3.5	107			
1916	3.7	113	1906	4.4	134	1934	4.1	125	1228	1.4	43			
16 W	0017	1.4	43	15 F	0135	1.2	37	1938	4.7	143	1916	4.3	131	
0647	3.7	113	0744	3.9	119	0728	4.1	125	1205	4.5	137			
1233	1.2	37	1325	1.2	37	1317	1.0	30	2005	4.5	137			
1906	4.4	134	2004	4.3	131	1938	4.7	143	● 2022	4.6	140			
17 Th	0113	1.2	37	31 M	0219	0.7	21	31 Sa	0103	1.0	30			
0738	4.1	125	1325	0.9	27	0839	4.7	143	1718	3.9	119			
1953	4.7	143	1906	4.7	143	● 2049	5.0	152	1301	1.1	34			

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Pusan, Korea, 2008

Times and Heights of High and Low Waters

October				November				December								
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height					
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm					
<b>1</b> W	0242	0.5	15	<b>16</b> Th	0232	0.1	3	<b>1</b> Sa	0305	0.5	15	<b>16</b> Su	0336	0.2	6	
0915	4.6	140	0902	4.6	140	0954	3.9	119	1013	4.2	128	1016	3.6	110		
1508	0.6	18	1448	0.3	9	1545	0.7	21	1609	0.4	12	1614	0.6	18		
2125	4.4	134	2118	4.3	131	2208	3.5	107	2235	3.5	107	2234	3.1	94		
<b>2</b> Th	0308	0.5	15	<b>17</b> F	0306	0.2	6	<b>2</b> Su	0334	0.6	18	<b>17</b> M	0422	0.5	15	
0945	4.4	134	0940	4.6	140	1027	3.7	113	1059	3.9	119	1051	3.4	104		
1536	0.8	24	1526	0.4	12	1618	0.9	27	1702	0.7	21	1652	0.7	21		
2156	4.2	128	2156	4.1	125	2244	3.2	98	2323	3.2	98	2312	3.0	91		
<b>3</b> F	0333	0.7	21	<b>18</b> Sa	0342	0.4	12	<b>3</b> M	0405	0.8	24	<b>18</b> Tu	0517	0.8	24	
1016	4.2	128	1020	4.4	134	1102	3.4	104	1148	3.6	110	1127	3.2	98		
1604	1.0	30	1606	0.7	21	1656	1.1	34	1808	0.9	27	1735	0.8	24		
2227	3.9	119	2236	3.7	113	2324	2.9	88	2354	2.8	85	1850	0.7	21		
<b>4</b> Sa	0359	0.9	27	<b>19</b> Su	0420	0.7	21	<b>4</b> Tu	0440	1.0	30	<b>19</b> W	0017	2.9	88	
1046	3.9	119	1103	4.0	122	1142	3.1	94	0632	1.1	34	0518	0.8	24		
1634	1.2	37	1652	1.0	30	1750	1.3	40	1242	3.3	101	1206	3.0	91		
2300	3.5	107	2321	3.4	104	1934	1.1	34	1934	1.1	34	1830	0.8	24		
<b>5</b> Su	0425	1.1	34	<b>20</b> M	0506	1.1	34	<b>5</b> W	0011	2.7	82	<b>20</b> Th	0123	2.7	82	
1119	3.6	110	1152	3.7	113	0525	1.3	40	0806	1.2	37	0041	2.7	82		
1707	1.5	46	1754	1.3	40	1230	2.9	88	1347	3.0	91	0614	1.0	30		
2338	3.2	98				1930	1.4	43	2057	1.1	34	1252	2.9	88		
<b>6</b> M	0455	1.4	43	<b>21</b> Tu	0015	3.0	91	<b>6</b> Th	0112	2.5	76	<b>21</b> Sa	0251	2.6	79	
1158	3.2	98	0618	1.5	46	0649	1.5	46	0927	1.2	37	0136	2.6	79		
1758	1.8	55	1253	3.3	101	1335	2.7	82	1506	2.8	85	0732	1.1	34		
			<b>○</b>	1950	1.6	49	2105	1.3	40	2203	1.0	30	1348	2.7	82	
<b>7</b> Tu	0025	2.8	85	<b>22</b> W	0134	2.7	82	<b>7</b> F	0233	2.5	76	<b>22</b> Su	0430	2.7	82	
0536	1.7	52	0833	1.6	49	0854	1.4	43	1032	1.1	34	0242	2.6	79		
1252	2.9	88	1417	3.1	94	1503	2.7	82	1628	2.8	85	0857	1.0	30		
<b>○</b>	2042	1.9	58	2142	1.5	46	2207	1.1	34	2256	0.9	27	1500	2.7	82	
<b>8</b> W	0140	2.6	79	<b>23</b> Th	0352	2.7	82	<b>8</b> Sa	0402	2.7	82	<b>23</b> M	0535	2.9	88	
0743	1.9	58	1006	1.5	46	1010	1.2	37	1125	1.0	30	1009	0.9	27		
1431	2.8	85	1605	3.1	94	1630	2.9	88	1731	2.9	88	1623	2.7	82		
2217	1.7	52	2251	1.2	37	2255	0.8	24	2338	0.7	21	2247	0.5	15		
<b>9</b> Th	0350	2.6	79	<b>24</b> F	0524	3.0	91	<b>9</b> Su	0509	3.0	91	<b>9</b> M	0619	3.1	94	
1009	1.8	55	1109	1.2	37	1103	0.9	27	1210	0.8	24	1111	0.7	21		
1649	2.9	88	1721	3.3	101	1731	3.1	94	1818	3.1	94	1737	2.9	88		
2310	1.4	43	2339	1.0	30	2336	0.5	15				2339	0.3	9		
<b>10</b> F	0521	2.9	88	<b>25</b> Sa	0610	3.3	101	<b>10</b> M	0559	3.4	104	<b>25</b> W	0014	0.6	18	
1108	1.5	46	1157	1.0	30	1149	0.7	21	0657	3.3	101	0612	3.4	104		
1746	3.3	101	1810	3.5	107	1819	3.4	104	1249	0.7	21	1206	0.5	15		
2349	1.1	34				1858	3.2	98	1858	3.2	98	1837	3.2	98		
<b>11</b> Sa	0605	3.3	101	<b>26</b> Su	0016	0.8	24	<b>11</b> Tu	0015	0.3	9	<b>26</b> Th	0047	0.5	15	
1151	1.1	34	0647	3.6	110	0643	3.7	113	0731	3.5	107	0704	3.7	113		
1824	3.6	110	1237	0.8	24	1232	0.4	12	1325	0.6	18	1258	0.3	9		
			1848	3.7	113	1902	3.7	113	1935	3.3	101	1928	3.4	104		
<b>12</b> Su	0022	0.7	21	<b>27</b> M	0048	0.6	18	<b>12</b> W	0054	0.1	3	<b>27</b> Th	0118	0.4	12	
0642	3.7	113	0719	3.9	119	0724	4.1	125	0804	3.6	110	0752	4.0	122		
1227	0.8	24	1312	0.6	18	1314	0.2	6	1359	0.5	15	1348	0.1	3		
1859	3.9	119	1923	3.9	119	1943	3.8	116	2010	3.4	104	2016	3.6	110		
<b>13</b> M	0054	0.5	15	<b>28</b> Tu	0116	0.4	12	<b>13</b> F	0133	0.0	0	<b>28</b> Sa	0149	0.4	12	
0716	4.1	125	0750	4.0	122	0805	4.3	131	0837	3.7	113	0838	4.2	128		
1302	0.5	15	1343	0.5	15	1355	0.1	3	1432	0.5	15	1436	0.0	0		
1933	4.2	128	1956	3.9	119	2025	3.9	119	<b>○</b>	2046	3.4	104	2102	3.7	113	
<b>14</b> Tu	0126	0.3	9	<b>29</b> W	0144	0.4	12	<b>14</b> F	0213	0.0	0	<b>29</b> M	0220	0.3	9	
0751	4.4	134	0821	4.1	125	0847	4.4	134	1438	0.1	3	0910	3.7	113		
1337	0.3	9	1414	0.5	15	1438	0.1	3	1505	0.5	15	1525	0.1	3		
2007	4.3	131	<b>●</b>	2028	3.9	119	2107	3.9	119	2121	3.3	101	2147	3.7	113	
<b>15</b> W	0158	0.1	3	<b>30</b> Th	0211	0.3	9	<b>15</b> Sa	0253	0.0	0	<b>30</b> Su	0251	0.4	12	
0826	4.6	140	0852	4.1	125	0929	4.4	134	0943	3.7	113	1007	4.2	128		
1412	0.2	6	1444	0.5	15	1522	0.2	6	1539	0.5	15	1613	0.1	3		
<b>○</b>	2042	4.4	134	2100	3.9	119	2150	3.7	113	2157	3.2	98	2232	3.6	110	
			<b>31</b> F	0238	0.4	12							<b>31</b> W	0352	0.3	9
			0923	4.1	125								1035	3.6	110	
			1514	0.6	18								1637	0.3	9	
			2133	3.7	113								2255	3.2	98	

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

## Inch'on, Korea, 2008

Times and Heights of High and Low Waters

January				February				March								
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height					
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm					
1 Tu	0425	5.8	177	16	0400	2.5	76	1 Sa	0503	7.4	226					
Tu	1049	21.3	649	W	1023	23.9	728	F	1154	20.1	613					
1645	8.0	244	1630	5.3	162	1820	11.3	344	Sa	1234	21.8	664				
2255	21.3	649	●	2236	23.2	707	1906	10.2	311	1 Sa	0536	6.1	186			
2 W	0519	6.8	207	17	0458	3.9	119	17 Su	0058	18.8	573					
W	1151	20.6	628	Th	1132	22.9	698	Sa	0633	8.7	265					
1759	9.6	293	1747	7.7	235	1333	19.9	607	Su	0717	6.9	210				
2358	19.9	607	2348	21.2	646	2011	11.1	338	M	1429	22.6	689				
3 Th	0628	7.4	226	18	0613	5.1	155	F	2049	8.9	271					
Th	1308	20.6	628	F	1302	22.6	689	Su	0109	18.2	555					
1928	10.0	305	1924	8.5	259	0809	8.1	247	M	0242	19.8	604				
4 F	0115	19.3	588	4	0308	19.4	591	M	0847	5.5	168					
F	0744	7.1	216	Sa	0740	5.1	155	1549	24.8	756						
1425	21.6	658	1434	23.7	722	2128	9.3	283	2155	6.4	195					
2047	9.1	277	2053	7.5	229	0109	17.4	530								
5 Sa	0229	19.8	604	20	0246	20.9	637	M	0722	9.5	290					
Sa	0849	6.1	186	Su	0856	3.8	116	1427	20.4	622						
1528	23.1	704	1548	25.7	783	1602	23.2	707	2059	10.3	314					
2146	7.6	232	2159	5.7	174	2216	7.2	219	0109	17.4	530					
6 Su	0330	20.9	637	21	0354	22.3	680	4	0241	19.0	579					
Su	0941	4.7	143	M	0957	2.1	64	Tu	0847	7.5	229					
1618	24.5	747	1645	27.3	832	1602	26.7	814	1532	22.7	738					
2231	6.3	192	2251	4.0	122	2242	4.1	125	2139	6.6	201					
7 M	0419	21.9	668	6	0447	22.8	695	5	0340	21.3	649					
M	1025	3.5	107	21	0447	22.3	680	W	0941	4.9	149					
1659	25.5	777	Tu	1048	0.7	21	1040	1.5	46	1023	2.7	82				
2311	5.3	162	1732	28.3	863	1644	25.0	762	1652	27.2	829					
●	2347	4.6	140	O	2336	2.9	88	2254	5.4	165	2255	2.3	70			
8 Tu	0501	22.6	689	7	0525	24.0	732	6	0423	23.6	719					
Tu	1104	2.5	76	22	0449	23.7	722	Th	1023	2.6	79					
1737	26.1	796	W	1134	-0.1	-3	1121	0.4	12	1102	1.6	49				
●	2347	4.6	140	1814	28.6	872	1754	28.4	866	1722	27.7	844				
9 W	0541	23.1	704	●	1236	2.9	88	O	2356	1.4	43	2326	1.2	37		
W	1141	1.7	52	24	0016	2.2	67	21	0526	25.5	777					
1813	26.5	808	Th	0621	25.1	765	Th	1124	1.0	30	1122	27.7	844			
●	2347	4.6	140	1215	-0.3	-9	1752	27.3	832	2330	1.2	37				
10 Th	0021	4.0	122	8	0000	2.5	76	7	0501	25.6	780					
Th	0619	23.5	716	F	0602	25.0	762	F	1159	0.1	3	22	0540	27.5	838	
1217	1.0	30	768	1200	-0.1	-3	1825	28.2	860	Sa	1137	1.2	37			
1847	26.9	820	1825	28.0	853	1854	27.7	844	1750	27.6	841					
11 F	0055	3.3	101	9	0032	1.3	40	O	2356	0.7	21	●	2356	0.7	21	
F	0656	23.9	728	Sa	0638	26.0	792	23	0604	26.3	802					
1253	0.4	12	1813	-0.3	-9	1236	-0.8	-24	8	0028	0.9	27	23	0612	27.9	850
1920	27.3	832	1852	28.4	866	1857	28.5	869	Sa	1139	-0.5	-15				
12 Sa	0021	4.0	122	10	0104	0.3	9	1234	0.3	9	1754	28.8	878			
Sa	0733	24.4	744	25	0053	1.9	58	1854	27.7	844	●	0037	-0.2	-6		
1329	0.1	3	768	F	0701	25.2	768	24	0058	0.8	24	1217	-1.1	-34		
1953	27.5	838	1254	0.0	0	1254	-1.0	-30	Su	1308	1.0	30	1828	29.1	887	
13 Su	0128	2.5	76	25	0127	0.9	27	1921	27.1	826	1217	-1.1	-34			
Su	0739	25.1	765	Th	0714	26.8	817	1921	27.1	826	1847	26.5	808			
1329	0.1	3	768	Su	1313	-1.0	-30	1929	28.6	872	1245	2.1	64			
1953	27.5	838	1925	27.8	847	1929	28.6	872	M	0743	26.7	814				
14 F	0128	2.5	76	11	0137	-0.5	-15	1948	26.3	802	1255	-0.9	-27			
F	0733	24.4	744	Sa	0750	27.4	835	1948	26.3	802	1903	28.8	878			
1329	0.1	3	768	M	1351	-0.6	-18	1948	26.3	802	1916	25.7	783			
1953	27.5	838	1955	27.1	826	2003	28.2	860	10	0036	-1.2	-37				
15 Su	0201	1.8	55	26	0154	1.4	43	11	0111	-1.5	-46	25	0054	1.1	34	
Su	0809	24.8	756	M	1514	2.9	88	Tu	0729	29.5	899	Th	0712	27.7	844	
1407	0.3	9	2051	25.2	768	2116	25.4	774	1335	-0.1	-3	1317	3.1	94		
2026	27.4	835	2116	25.4	774	2037	27.2	829	1939	28.1	856	1945	24.9	759		
16 M	0237	1.5	46	27	0211	-0.6	-18	2043	24.1	735	2057	24.8	768			
M	0848	25.0	762	W	0827	27.5	838	2043	24.1	735	2057	24.8	768			
1448	1.2	37	1406	1.8	55	1431	0.7	21	2043	24.1	735	2057	24.8	768		
2102	26.7	814	2023	26.2	799	2037	27.2	829	2043	24.1	735	2057	24.8	768		
17 Su	0201	1.8	55	13	0248	0.0	0	2043	24.1	735	2057	24.8	768			
Su	0809	24.8	756	M	0907	26.8	817	2043	24.1	735	2057	24.8	768			
1407	0.3	9	1440	3.2	98	1514	2.9	88	2043	24.1	735	2057	24.8	768		
2026	27.4	835	1555	7.2	219	2116	25.4	774	2043	24.1	735	2057	24.8	768		
18 M	0315	1.6	49	30	0331	4.0	122	2116	25.4	774	2043	24.1	735			
M	0930	24.8	756	W	0955	22.9	698	2116	25.4	774	2043	24.1	735			
1534	2.9	88	1555	15.5	219	1057	23.3	710	2116	25.4	774	2043	24.1	735		
2144	25.3	771	2121	23.8	725	1719	8.8	268	2116	25.4	774	2043	24.1	735		
19 Th	0409	5.6	171	14	0330	1.5	46	2121	22.9	698	2043	24.1	735			
Th	1043	21.4	652	F	0954	25.3	771	2121	22.9	698	2043	24.1	735			
1648	9.5	290	2121	23.8	725	1515	5.8	177	2121	22.9	698	2043	24.1	735		
2248	19.9	607	2121	22.9	698	2121	22.9	698	2121	22.9	698	2043	24.1	735		
20 Th	0409	5.6	171	29	0321	5.1	155	2121	22.9	698	2043	24.1	735			
Th	1043	21.4	652	W	0948	22.6	689	2121	22.9	698	2043	24.1	735			
1648	9.5	290	2121	22.9	698	1557	9.3	283	2121	22.9	698	2043	24.1	735		
2248	19.9	607	2121	22.9	698	2121	22.9	698	2121	22.9	698	2043	24.1	735		

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Inch'on, Korea, 2008

Times and Heights of High and Low Waters

April				May				June							
	Time	Height			Time	Height			Time	Height					
	h m	ft cm		h m	ft cm			h m	ft cm		h m	ft cm			
<b>1</b> Tu	0026	17.9	546	<b>16</b> W	0208	20.6	628	<b>1</b> Th	0111	20.4	622	<b>16</b> Su	0232	22.9	698
	0628	9.7	296		0807	7.9	241		0711	8.2	250		0849	5.9	180
	1328	20.6	628		1449	23.4	713		1340	23.0	701		1441	23.2	707
	2006	10.4	317		2103	6.7	204		2006	7.2	219		2100	5.3	162
<b>2</b> W	0201	19.3	588	<b>17</b> Th	0315	23.0	701	<b>2</b> F	0220	22.8	695	<b>17</b> Sa	0324	24.9	759
	0803	8.2	250		0911	6.1	186		0823	6.4	195		0927	6.7	204
	1442	22.6	689		1537	24.8	756		1439	24.6	750		1527	24.0	732
	2104	7.7	235		2146	4.4	134		2058	4.6	140		2141	3.9	119
<b>3</b> Th	0304	21.9	668	<b>18</b> F	0400	25.3	771	<b>3</b> Sa	0314	25.6	780	<b>18</b> Su	0405	26.5	808
	0905	5.6	171		0958	4.5	137		0920	4.3	131		1011	5.6	171
	1530	24.9	759		1613	25.8	786		1527	26.2	799		1605	24.6	750
	2145	4.9	149		2221	2.7	82		2141	2.2	67		2218	3.0	91
<b>4</b> F	0351	24.7	753	<b>19</b> Sa	0437	27.0	823	<b>4</b> Su	0400	28.1	856	<b>19</b> M	0442	27.6	841
	0953	3.2	98		1037	3.4	104		1008	2.6	79		1051	5.1	155
	1609	26.8	817		1644	26.3	802		1610	27.3	832		1642	24.8	756
	2221	2.3	70		2252	1.7	52		2222	0.4	12		2252	2.7	82
<b>5</b> Sa	0431	27.1	826	<b>20</b> Su	0511	28.0	853	<b>5</b> M	0443	29.9	911	<b>20</b> Tu	0517	27.9	850
	1035	1.3	40		1114	3.0	91		1054	1.7	52		1129	5.0	152
	1645	28.1	856		1714	26.4	805		1653	27.7	844		1718	24.7	753
	2256	0.4	12		2323	1.4	43		2303	-0.6	-18		2327	2.8	85
<b>6</b> Su	0509	29.0	884	<b>21</b> M	0543	28.4	866	<b>6</b> Tu	0527	30.9	942	<b>21</b> W	0553	27.8	847
	1116	0.2	6		1149	3.2	98		1140	1.5	46		1205	5.3	162
	1722	28.7	875		1745	26.0	792		1736	27.4	835		1756	24.2	738
	2332	-0.9	-27		2354	1.6	49		2345	-0.9	-27		1904	25.2	768
<b>7</b> M	0548	30.2	920	<b>22</b> Tu	0614	28.2	860	<b>7</b> W	0612	31.1	948	<b>22</b> Th	0001	3.2	98
	1157	-0.1	-3		1223	3.8	116		1225	2.1	64		0628	27.3	832
	1800	28.6	872		1817	25.4	774		1821	26.8	817		1242	5.9	180
												1834	23.7	722	
<b>8</b> Tu	0009	-1.5	-46	<b>23</b> W	0024	2.1	64	<b>8</b> Th	0028	-0.6	-18	<b>23</b> F	0035	3.6	110
	0629	30.7	936		0646	27.8	847		0659	30.5	930		0704	26.8	817
	1239	0.3	9		1257	4.6	140		1311	3.1	94		1317	6.4	195
	1839	28.1	856		1850	24.7	753		1909	25.8	786		1912	23.2	707
<b>9</b> W	0047	-1.4	-43	<b>24</b> Th	0054	2.7	82	<b>9</b> F	0112	0.3	9	<b>24</b> Sa	0109	3.9	119
	0710	30.6	933		0718	27.1	826		0748	29.5	899		0739	26.3	802
	1321	1.4	43		1330	5.5	168		1358	4.4	134		1352	6.8	207
	1920	27.1	826		1924	23.9	728		1958	24.7	753		1950	22.8	695
<b>10</b> Th	0126	-0.7	-21	<b>25</b> F	0125	3.5	107	<b>10</b> Sa	0157	1.6	49	<b>25</b> Su	0145	4.2	128
	0754	29.7	905		0749	26.3	802		0837	28.2	860		0814	25.9	789
	1405	3.1	94		1403	6.5	198		1446	5.9	180		1427	7.1	216
	2003	25.7	783		1958	23.1	704		2049	23.5	716		2028	22.4	683
<b>11</b> F	0208	0.7	21	<b>26</b> Sa	0158	4.2	128	<b>11</b> Su	0244	3.4	104	<b>26</b> W	0412	7.0	213
	0839	28.2	860		0822	25.4	774		0927	26.5	808		0851	25.5	777
	1451	5.3	162		1437	7.6	232		1538	7.3	223		1505	7.3	223
	2049	23.9	728		2033	22.1	674		2144	22.3	680		2110	22.0	671
<b>12</b> Sa	0253	2.8	85	<b>27</b> Su	0233	5.2	158	<b>12</b> M	0336	5.4	165	<b>27</b> W	0303	5.3	162
	0930	26.1	796		0859	24.3	741		1021	24.7	753		0933	24.9	759
	1544	7.7	235		1516	8.7	265		1638	8.6	262		1549	7.6	232
	2143	21.9	668		2116	21.0	640		2247	21.1	643		2200	21.6	658
<b>13</b> Su	0346	5.3	162	<b>28</b> M	0315	6.5	198	<b>13</b> Tu	0439	7.5	229	<b>28</b> W	0354	6.4	195
	1032	23.9	728		0948	23.1	704		1123	23.2	707		1024	24.2	738
	1655	9.8	299		1609	9.8	299		1751	9.1	277		1646	7.8	238
	2256	20.0	610		2218	19.8	604						2304	21.4	652
<b>14</b> M	0458	7.7	235	<b>29</b> Tu	0414	7.9	241	<b>14</b> W	0002	20.6	628	<b>29</b> Th	0500	7.5	229
	1158	22.2	677		1058	22.0	671		0559	8.9	271		1128	23.6	719
	1831	10.4	317		1729	10.4	317		1234	22.3	680		1755	7.4	226
					2344	19.3	588		1907	8.5	259				
<b>15</b> Tu	0033	19.3	588	<b>30</b> W	0539	8.8	268	<b>15</b> Th	0122	21.2	646	<b>30</b> F	0019	22.0	671
	0636	8.8	268		1224	21.9	668		0723	9.0	274		0621	7.9	241
	1335	22.2	677		1858	9.4	287		1344	22.4	683		1240	23.5	716
	2003	9.0	274						2011	7.0	213		1906	6.3	192
<b>16</b> M	0333	19.3	588	<b>31</b> Sa	0133	23.6	719	<b>16</b> Su	0741	7.3	223	<b>31</b> W	0853	9.0	274
	0636	8.8	268						1348	24.0	732		1440	22.1	674
	1335	22.2	677						2009	4.6	140		2100	5.8	177
	2003	9.0	274												

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

## Inch'on, Korea, 2008

Times and Heights of High and Low Waters

July				August				September							
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height				
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm				
1 Tu	0315	27.4	835	16 W	0402	25.3	771	1 F	0505	29.7	905				
0932	6.5	198		1017	8.3	253		1112	4.3	131					
1523	24.2	738		1601	22.6	689		1711	25.9	789					
2135	2.6	79		2209	5.4	165	●	2310	1.1	34					
2 W	0414	29.0	884	17 Th	0446	26.4	805	2 Sa	0550	30.3	924				
1029	5.2	158		1059	7.1	216		1154	3.3	101					
1621	25.0	762		1647	23.5	716		1758	26.7	814					
2228	1.4	43		2251	4.3	131		2354	0.7	21					
3 Th	0508	30.0	914	18 F	0525	27.2	829	3 Su	0630	30.3	924				
1120	4.3	131		1136	6.2	189		1233	2.8	85					
1715	25.5	777		1729	24.1	735		1841	27.0	823					
● 2318	0.8	24	○	2329	3.5	107									
4 F	0559	30.3	924	19 Sa	0601	27.6	841	4 M	0035	1.0	30	19 Th	0110	1.5	46
1208	3.9	119		1211	5.5	168		0706	29.7	905		0711	28.7	875	
1807	25.7	783		1808	24.4	744		1310	2.6	78		1321	0.0	0	
5 Sa	0006	0.7	21	20 Su	0004	2.9	88	5 Tu	0114	1.8	55	19 20	0110	1.5	46
0648	30.2	920		0635	27.9	850		0739	28.9	881		0748	27.6	841	
1252	3.8	116		1243	4.9	149		1344	2.8	85		1359	0.8	24	
1857	25.7	783		1845	24.8	756		1959	26.8	817		2020	29.0	884	
6 Su	0051	1.0	30	21 M	0039	2.5	76	6 W	0151	3.0	91	21 22	0233	4.8	146
0732	29.6	902		0707	28.2	860		0809	27.9	850		0828	26.0	792	
1335	3.8	116		1314	4.2	128		1415	3.1	94		1440	2.3	70	
1944	25.6	780		1920	25.3	771		2034	26.4	805		2107	27.3	832	
7 M	0134	1.8	55	22 Tu	0114	2.2	67	7 Th	0227	4.5	137	22 23	0322	7.3	223
0811	28.8	878		0737	28.4	866		0837	26.7	814		0916	23.8	725	
1414	4.0	122		1346	3.4	104		1446	3.8	116		1529	4.6	140	
2027	25.4	774		1955	25.8	786		2107	25.8	786		2207	25.1	765	
8 Tu	0215	3.0	91	23 W	0150	2.2	67	8 F	0303	6.3	192	23 24	0428	10.0	305
0846	27.8	847		0808	28.4	866		0907	25.3	771		0942	21.4	652	
1452	4.4	134		1418	2.9	88		1517	4.9	149		1550	8.3	253	
2107	25.0	762		2029	26.2	799		2143	24.7	753		2235	21.9	668	
9 W	0256	4.6	140	24 Th	0227	2.8	85	9 Sa	0342	8.5	259	9 24	0409	11.5	351
0918	26.5	808		0840	28.1	856		0941	23.6	719		1207	19.9	607	
1528	5.0	152		1453	2.7	82		1553	6.5	198		1817	8.5	259	
2147	24.3	741		2107	26.3	802	○	2227	23.3	710					
10 Th	0338	6.5	198	25 F	0309	4.0	122	10 Su	0432	10.8	329	10 25	0130	23.3	710
0952	25.0	762		0917	27.1	826		1028	21.6	658		0757	10.3	314	
1607	5.9	180		1533	3.2	98		1643	8.3	253		1355	20.8	634	
● 2231	23.5	716		2153	25.9	789		2332	21.9	668		1957	7.6	232	
11 F	0426	8.6	262	26 Sa	0358	6.1	186	11 M	0554	12.7	387	11 26	0255	25.1	765
1033	23.3	710		1003	25.4	774		1142	19.8	604		0907	7.6	232	
1653	7.0	213		1622	4.4	134		1804	9.8	299		1510	23.2	707	
2325	22.6	689	○	2251	24.9	759					2107	5.4	165		
12 Sa	0529	10.5	320	27 Su	0504	8.4	256	12 Tu	0107	21.3	649	12 27	0347	27.1	826
1126	21.7	661		1104	23.3	710		0746	12.7	387		0954	4.9	149	
1753	8.1	247		1727	5.8	177		1322	19.3	588		1523	22.3	680	
								1944	9.7	296		2125	6.4	195	
13 Su	0035	22.1	674	28 M	0012	24.2	738	13 W	0243	22.5	686	13 28	0426	28.4	866
0653	11.6	354		0634	10.0	305		0910	11.0	335		1031	2.8	85	
1238	20.5	625		1229	21.8	664		1447	20.5	625		1642	27.6	841	
1908	8.5	259		1852	6.4	195		2059	8.0	244		2239	2.2	67	
14 M	0155	22.6	689	29 Tu	0146	24.6	750	14 Th	0346	24.4	744	14 29	0458	28.9	881
0820	11.1	338		0810	9.7	296		1002	8.8	268		1104	1.5	46	
1358	20.5	625		1402	21.8	664		1546	22.3	680		1718	28.7	875	
2021	7.9	241		2016	5.6	171		2151	6.0	183		● 2316	1.8	55	
15 Tu	0307	23.9	728	30 W	0310	26.4	805	15 F	0428	26.2	799	15 30	0528	28.7	875
0927	9.8	299		0927	7.9	241		1040	6.9	210		1135	1.0	30	
1507	21.4	652		1519	23.1	704		1631	24.0	732		1751	29.1	887	
2121	6.7	204		2125	3.9	119		2232	4.2	128		2352	2.2	67	
				31 Th	0414	28.3	863								
				1024	5.9	180									
				1619	24.7	753									
				2221	2.2	67									

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Inch'on, Korea, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 W 0557	28.1	856	16 Th 0532	28.8	878	1 Sa 0041	4.7	143	1 M 0045	2.5	76
1206 1.2 37			1144 -0.7 -21			0631 24.8 756			0658 22.9 698		
1823 28.9 881			1801 30.7 936			1239 2.6 79			1257 2.9 88		
						1901 27.1 826			1927 25.8 786		
2 Th 0026	3.0	91	17 F 0013	1.2	37	2 Su 0115	5.7	174	2 Tu 0138	5.9	180
0626 27.2 829			0610 28.3 863			0706 23.9 728			0736 22.4 683		
1235 1.7 52			1221 -0.9 -27			1311 3.4 104			1332 3.3 101		
1854 28.4 866			1841 30.7 936			1935 26.2 799			2002 25.3 771		
3 F 0100	4.1	125	18 Sa 0055	2.0	61	3 M 0149	6.7	204	3 W 0213	6.2	189
0655 26.3 802			0650 27.4 835			0742 23.0 700			0814 22.0 671		
1304 2.4 73			1300 -0.4 -12			1344 4.2 128			1408 3.7 113		
1924 27.7 844			1924 30.0 914			2010 25.2 768			2037 24.8 756		
4 Sa 0133	5.4	165	19 Su 0138	3.4	104	4 Tu 0224	7.8	238	4 Th 0248	6.5	198
0726 25.2 768			0733 26.2 799			0820 22.0 671			0852 21.5 655		
1333 3.4 104			1342 0.7 21			1420 5.2 158			1446 4.4 134		
1954 26.8 817			2010 28.7 875			2049 24.1 735			2114 24.2 738		
5 Su 0206	6.8	207	20 M 0224	5.3	162	5 W 0303	8.8	268	5 F 0327	6.8	207
0757 24.1 735			0820 24.6 750			0903 20.8 634			0937 21.0 640		
1404 4.5 137			1427 2.4 73			1501 6.4 195			1530 5.4 165		
2026 25.5 777			2102 27.0 823			2136 22.9 698			2158 23.4 713		
6 M 0239	8.4	256	21 Tu 0316	7.4	226	6 Th 0353	9.8	299	6 Sa 0415	7.0	213
0832 22.7 692			0914 22.7 692			1001 19.7 600			1033 20.5 625		
1437 6.0 183			1519 4.6 140			1554 7.8 238			1627 6.7 204		
2104 23.9 728			2204 24.9 759			2240 21.8 664			2254 22.5 686		
7 Tu 0319	10.2	311	22 W 0422	9.3	283	7 F 0505	10.4	317	7 Su 0517	7.1	216
0914 21.0 640			1025 20.9 637			1121 19.0 579			1143 20.6 628		
1519 7.7 235			1626 6.9 210			1712 8.9 271			1742 7.7 235		
2158 22.2 677			2323 23.2 707								
8 W 0418	12.0	366	23 Th 0551	10.3	314	8 Sa 0000	21.4	652	8 M 0004	21.9	668
1023 19.2 585			1157 19.9 607			0632 9.8 299			0629 6.6 201		
1622 9.6 293			1757 8.4 256			1247 19.7 600			1406 22.1 674		
2327 20.8 634						1844 8.8 268			2007 7.9 241		
9 Th 0608	12.7	387	24 F 0056	22.8	695	9 Su 0116	22.1	674	9 Tu 0117	22.1	674
1209 18.5 564			0725 9.3 283			0743 7.8 238			0738 5.2 158		
1808 10.4 317			1332 20.8 634			1358 21.7 661			1409 23.6 719		
			1932 8.0 244			2000 7.2 219			2021 6.4 195		
10 F 0110	21.1	643	25 Sa 0216	23.7	722	10 M 0216	23.6	719	10 W 0222	23.0	701
0750 11.2 341			0834 7.0 213			0836 5.4 165			0838 3.3 101		
1343 19.7 600			1446 23.0 701			1453 24.4 744			1508 25.9 789		
1945 9.1 277			2043 6.4 195			2058 5.2 158			2122 4.8 146		
11 Sa 0223	22.9	698	26 Su 0310	25.1	765	11 Tu 0305	25.2	768	11 Th 0318	24.1	735
0848 8.5 259			0921 4.6 140			0920 2.9 88			0930 1.4 43		
1447 22.1 674			1538 25.4 774			1538 26.9 820			1600 27.9 850		
2048 6.8 207			2135 4.7 143			2147 3.4 104			2215 3.4 104		
12 Su 0311	25.0	762	27 M 0350	26.1	796	12 W 0348	26.4	805	12 Th 0428	24.2	738
0928 5.8 177			0959 2.7 82			1000 0.9 27			1038 2.1 64		
1533 24.7 753			1618 27.2 829			1620 28.9 881			1704 27.4 835		
2134 4.4 134			2217 3.6 110			2232 2.1 64			2314 4.4 134		
13 M 0349	26.8	817	28 Tu 0424	26.7	814	13 Th 0428	27.1	826	13 F 0504	24.3	741
1002 3.3 101			1033 1.6 49			1040 -0.5 -15			1113 2.0 61		
1611 27.1 826			1653 28.3 863			1702 30.2 920			1739 27.4 835		
2215 2.6 79			2255 3.1 94			2316 1.6 49			2351 4.6 140		
14 Tu 0423	28.1	856	29 W 0455	26.7	814	14 F 0510	27.2	829	14 Sa 0541	24.0	732
1035 1.3 40			1105 1.2 37			1121 -1.1 -34			1148 2.2 67		
1647 28.9 881			1725 28.7 875			1745 30.6 933			1815 26.9 820		
2254 1.4 43			● 2331 3.3 101								
15 W 0457	28.8	878	30 Th 0526	26.3	802	15 Sa 0000	1.8	55	15 M 0028	5.0	152
1109 0.0 0			1136 1.3 40			0553 26.7 814			0619 23.5 716		
1723 30.2 920			1757 28.5 869			1203 -1.2 -37			1223 2.6 79		
○ 2333 0.9 27						1831 30.3 924			1851 26.4 805		
16 F 0558	25.6	780	31 F 0006	3.9	119						
1207 1.9 58											
1829 27.9 850											

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Namp'O-Hang, Korea, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0240 14.3 436	16 0147 15.6 475	1 F 0327 12.1 369	16 Sa 0317 11.9 363	1 Sa 0234 12.4 378	16 Su 0310 11.4 347						
0916 3.6 110	W 0819 2.3 70	1005 4.3 131	0958 4.1 125	0907 4.7 143	0943 5.1 155						
1533 13.7 418	1432 15.3 466	1642 14.2 433	1646 15.1 460	1534 14.5 442	1636 15.0 457						
2147 5.4 165	● 2057 4.5 137	2316 6.0 183	2335 5.9 180	2226 6.3 192	2328 6.1 186						
2 W 0335 13.2 402	17 0240 14.1 430	2 0447 11.3 344	17 Su 0510 11.0 335	2 Su 0343 11.5 351	17 M 0525 11.1 338						
1010 3.8 116	Th 0919 2.8 85	1112 4.5 137	1126 4.3 131	1023 5.1 155	1119 5.1 155						
1642 14.0 427	1541 15.2 463	1809 14.5 442	1836 15.7 479	1705 14.3 436	1826 15.5 472						
2257 5.6 171	2220 5.2 158			2346 6.2 189							
3 Th 0443 12.3 375	18 0347 12.7 387	3 Su 0028 5.7 174	18 M 0059 5.1 155	3 M 0531 11.2 341	18 Tu 0046 5.2 158						
1106 3.8 116	F 1029 3.2 98	0627 11.2 341	0711 11.6 354	1139 5.0 152	0709 12.3 375						
1754 14.5 442	1708 15.4 469	1216 4.2 128	1244 3.7 113	1837 14.9 454	1238 4.4 134						
	2346 5.1 155	1921 15.3 466	1952 16.9 515	1939 15.9 485	1937 16.5 503						
4 F 0004 5.4 165	19 0521 11.7 357	4 M 0129 5.0 152	19 Tu 0204 4.0 122	4 Tu 0053 5.4 165	19 Tu 0144 4.0 122						
0602 11.9 363	Sa 1143 3.2 98	0740 11.8 360	0819 12.9 393	0705 11.9 363	0807 13.9 424						
1201 3.7 113	1842 16.1 491	1313 3.7 113	1349 2.9 88	1243 4.3 131	1341 3.4 104						
1859 15.3 466		2014 16.3 497	2046 18.0 549	1939 15.9 485	2027 17.4 530						
5 Sa 0104 4.9 149	20 0105 4.5 137	5 Tu 0219 4.3 131	20 W 0254 2.9 88	5 W 0145 4.4 134	20 Th 0229 3.0 91						
0711 12.0 366	Su 0706 11.8 360	0830 12.5 381	0908 14.2 433	0801 13.0 396	0851 15.4 469						
1253 3.4 104	1252 2.8 85	1401 3.0 91	1443 2.0 61	1337 3.4 104	1431 2.6 79						
1952 16.0 488	1956 17.3 527	2055 17.1 521	2129 18.7 570	2025 16.9 515	2108 17.8 543						
6 Su 0156 4.4 134	21 0211 3.6 110	6 W 0300 3.5 107	21 Th 0336 2.1 64	6 Th 0228 3.4 104	21 F 0306 2.3 70						
0806 12.3 375	M 0820 12.5 381	0909 13.3 405	0949 15.3 466	0843 14.2 433	0929 16.5 503						
1339 3.0 91	1354 2.2 67	1443 2.4 73	1528 1.5 46	1422 2.6 79	1513 2.1 64						
2037 16.7 509	2053 18.4 561	2130 17.7 539	● 2207 18.9 576	2102 17.6 536	2144 17.9 546						
7 M 0242 3.8 116	22 0306 2.7 82	7 Th 0335 2.8 85	22 F 0411 1.6 49	7 F 0303 2.6 79	22 M 0338 1.8 55						
0850 12.6 375	Tu 0915 13.4 408	0942 14.0 427	1024 16.1 491	0918 15.3 466	1001 17.2 524						
1422 2.6 79	1448 1.6 49	1521 1.8 55	1608 1.3 40	1502 1.8 55	1551 1.8 55						
2115 17.3 527	● 2141 19.1 582	● 2200 18.2 555	2240 18.7 570	2134 18.0 549	● 2214 17.6 536						
8 Tu 0321 3.4 104	23 0353 2.0 61	8 F 0407 2.2 67	23 Sa 0443 1.4 43	8 Sa 0336 1.8 55	23 Tu 0407 1.7 52						
0926 12.9 393	W 1001 14.2 433	1012 14.7 448	1057 16.5 503	0950 16.3 497	1031 17.7 539						
1500 2.3 70	1537 1.2 37	1557 1.4 43	1645 1.4 43	1541 1.3 40	1625 1.9 58						
● 2148 17.7 539	2223 19.4 591	2229 18.4 561	2310 18.1 552	● 2205 18.2 555	2242 17.1 521						
9 W 0356 3.0 91	24 0435 1.7 52	9 Sa 0437 1.7 52	24 Su 0512 1.4 43	9 Su 0407 1.3 40	24 M 0435 1.7 52						
0957 13.3 405	Th 1041 14.8 451	1042 15.5 472	1127 16.8 512	1021 17.3 527	1058 17.9 546						
1535 2.0 61	1621 1.1 34	1632 1.2 37	1720 1.7 52	1618 1.1 34	1657 2.1 64						
2218 18.0 549	2301 19.2 585	2257 18.4 561	2338 17.4 530	2236 18.0 549	2308 16.5 503						
10 Th 0428 2.7 82	25 0512 1.5 46	10 M 0507 1.3 40	25 M 0540 1.6 49	10 M 0438 0.9 27	25 Tu 0501 1.8 55						
1027 13.6 415	F 1118 15.2 463	1113 16.2 494	1156 16.9 515	1054 18.0 549	1125 18.0 549						
1609 1.7 52	1702 1.3 40	1709 1.2 37	1755 2.3 70	1657 1.2 37	1729 2.5 76						
2246 18.2 555	2335 18.6 567	2328 18.1 552	2307 17.5 533	2307 17.5 533	2333 15.9 485						
11 F 0500 2.3 70	26 0546 1.6 49	11 M 0539 1.1 34	26 Tu 0005 16.6 506	11 Tu 0511 0.9 27	26 W 0529 2.1 64						
1056 14.1 430	Sa 1153 15.4 469	1148 16.7 509	0610 1.9 58	1130 18.4 561	1153 17.8 543						
1644 1.6 49	Sa 1742 1.8 55	M 1750 1.6 49	1227 16.8 512	1738 1.7 52	1803 3.1 94						
2315 18.3 558			1832 3.0 91	2341 16.7 509							
12 Sa 0532 2.0 61	27 0007 17.8 543	12 Tu 0001 17.5 533	27 W 0034 15.6 475	12 W 0546 1.2 37	27 M 0001 15.2 463						
1129 14.6 445	Su 0620 1.8 55	0614 1.2 37	0642 2.4 73	1209 18.3 558	0600 2.6 79						
1721 1.6 49	1228 15.4 469	1227 17.0 518	1300 16.5 503	1823 2.7 82	1225 17.4 530						
2347 18.1 552	1822 2.5 76	1835 2.4 73	1914 3.9 119	1842 3.9 119							
13 Su 0607 1.8 55	28 0039 16.8 512	13 W 0038 16.4 500	28 Th 0106 14.6 445	13 Th 0019 15.6 475	28 F 0033 14.5 442						
1206 15.0 457	M 0654 2.2 67	0654 1.6 49	0719 3.1 94	0626 1.8 55	0636 3.2 98						
1803 2.0 61	1304 15.3 466	1312 16.8 512	1340 15.9 485	1253 17.8 543	1302 16.8 512						
	1905 3.3 101	1928 3.5 107	2004 4.9 149	1916 3.9 119	1928 4.7 143						
14 M 0022 17.7 539	29 0112 15.7 479	14 Th 0120 15.0 457	29 F 0145 13.5 411	14 O 0101 14.2 433	29 O 0111 13.7 418						
0645 1.7 52	Tu 0731 2.6 79	0741 2.3 70	0806 3.9 119	0713 2.9 88	0720 4.0 122						
1248 15.3 466	1344 15.1 460	1405 16.3 497	1429 15.2 463	1346 16.8 512	1348 16.1 491						
1850 2.6 79	1954 4.3 131	● 2034 4.8 146	● 2108 5.8 177	● 2023 5.3 162	● 2141 6.1 186						
15 Tu 0102 16.8 512	30 0148 14.5 442	15 F 0210 13.4 408	15 G 0154 12.7 387	15 O 0159 12.8 390	30 O 0159 12.8 390						
0728 1.9 58	W 0813 3.2 98	0840 3.3 101	0815 4.1 125	0819 4.9 149	0819 4.9 149						
1336 15.4 469	1430 14.8 451	1512 15.5 472	1455 15.7 479	1447 15.3 466	1447 15.3 466						
1947 3.5 107	● 2051 5.2 158	2200 5.8 177	2152 6.2 189	● 2141 6.1 186	● 2141 6.1 186						
16 Th 0232 13.3 405	31 0904 3.8 116										
1527 14.4 439	Th 1527 14.4 439										
2200 5.8 177											

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

## Namp'ō-Hang, Korea, 2008

## Times and Heights of High and Low Waters

April						May						June							
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height	
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm
<b>1</b> Tu	0436	11.8	360	<b>16</b> W	0016	4.9	149	<b>1</b> Th	0516	13.5	411	<b>16</b> F	0024	4.1	125	<b>1</b> Su	0013	3.2	98
	1057	5.4	165		0647	13.4	408		1127	5.1	155		0707	15.7	479		0645	17.1	521
	1733	15.0	457		1223	5.0	152		1741	15.5	472		1254	5.0	152		1258	4.3	131
					1907	15.9	485						1918	15.1	460		1859	15.0	457
<b>2</b> W	0007	5.3	162	<b>17</b> Th	0109	4.0	122	<b>2</b> F	0010	4.0	122	<b>17</b> Sa	0109	3.6	110	<b>2</b> M	0104	2.7	82
	0614	12.5	381		0742	15.0	457		0629	14.8	451		0754	16.8	512		0744	18.4	561
	1207	4.8	146		1322	4.1	125		1230	4.3	131		1345	4.4	134		1357	3.7	113
	1847	15.6	475		1958	16.4	500		1846	15.8	482		2005	15.2	463		2000	15.0	457
<b>3</b> Th	0101	4.3	131	<b>18</b> F	0152	3.2	98	<b>3</b> Sa	0059	3.1	94	<b>18</b> Su	0148	3.3	101	<b>3</b> Tu	0153	2.3	70
	0719	13.8	421		0826	16.3	497		0726	16.3	497		0833	17.7	539		0837	19.6	597
	1305	3.8	116		1411	3.4	104		1326	3.5	107		1429	4.0	122		1451	3.1	94
	1941	16.4	500		2039	16.6	506		1941	16.1	491		2045	15.1	460		2054	15.0	457
<b>4</b> F	0145	3.3	101	<b>19</b> Sa	0229	2.6	79	<b>4</b> Su	0143	2.3	70	<b>19</b> M	0224	3.1	94	<b>4</b> W	0240	2.0	61
	0807	15.3	466		0903	17.3	527		0814	17.8	543		0909	18.2	555		0927	20.3	619
	1355	2.9	88		1453	2.9	88		1417	2.7	82		1508	3.8	116		1542	2.9	88
	2024	17.0	518		2115	16.5	503		2029	16.2	494		2120	14.9	454		2144	15.0	457
<b>5</b> Sa	0224	2.3	70	<b>20</b> Su	0301	2.3	70	<b>5</b> M	0224	1.7	52	<b>20</b> Tu	0257	3.0	91	<b>5</b> O	0327	1.9	58
	0847	16.6	506		0935	18.0	549		0858	19.0	579		0940	18.5	564		1014	20.7	631
	1440	2.1	64		1530	2.7	82		1505	2.2	67		1544	3.7	113		1632	2.9	88
	2103	17.3	527		2147	16.2	494		2113	16.1	491		2151	14.7	448		2232	14.9	454
<b>6</b> Su	0300	1.6	49	<b>21</b> M	0331	2.2	67	<b>6</b> Tu	0304	1.4	43	<b>21</b> W	0328	3.0	91	<b>6</b> F	0414	2.1	64
	0923	17.9	546		1004	18.3	558		0940	19.9	607		1010	18.7	570		1100	20.5	625
	1522	1.5	46		1603	2.7	82		1551	2.0	61		1617	3.7	113		1721	3.2	98
	2139	17.3	527		2215	15.8	482		2156	15.8	482		2219	14.5	442		2319	14.7	448
<b>7</b> M	0334	1.2	37	<b>22</b> Tu	0359	2.3	70	<b>7</b> W	0344	1.3	40	<b>22</b> Th	0359	3.1	94	<b>7</b> Sa	0502	2.6	79
	0959	18.8	573		1031	18.5	564		1022	20.3	619		1038	18.6	567		1147	20.0	610
	1604	1.4	43		1635	2.8	85		1637	2.2	67		1650	3.9	119		1811	3.6	110
	2214	17.0	518		2241	15.4	469		2238	15.3	466		2247	14.4	439		2335	14.9	454
<b>8</b> Tu	0409	1.0	30	<b>23</b> W	0427	2.4	73	<b>8</b> Th	0425	1.6	49	<b>23</b> F	0431	3.1	94	<b>8</b> Su	0007	14.5	442
	1036	19.4	591		1058	18.5	564		1105	20.2	616		1108	18.6	567		0552	3.3	101
	1646	1.6	49		1707	3.1	94		1725	2.8	85		1723	4.0	122		1233	19.2	585
	2250	16.4	500		2307	15.0	457		2321	14.8	451		2316	14.3	436		1902	4.0	122
<b>9</b> W	0445	1.1	34	<b>24</b> Th	0456	2.6	79	<b>9</b> F	0509	2.2	67	<b>24</b> Sa	0504	3.3	101	<b>9</b> M	0057	14.3	436
	1115	19.5	594		1126	18.3	558		1151	19.6	597		1139	18.5	564		0647	4.2	128
	1729	2.2	67		1740	3.5	107		1816	3.5	107		1800	4.2	128		1321	18.2	555
	2327	15.6	475		2335	14.7	448						2349	14.3	436		1955	4.4	134
<b>10</b> Th	0523	1.6	49	<b>25</b> F	0528	2.9	88	<b>10</b> Sa	0007	14.1	430	<b>25</b> Su	0541	3.6	110	<b>10</b> Tu	0152	14.2	433
	1156	19.2	585		1158	18.0	549		0557	3.0	91		1215	18.2	555		0748	5.1	155
	1817	3.2	98		1818	4.0	122		1240	18.7	570		1841	4.4	134		1412	17.0	518
									1912	4.4	134						2051	4.6	140
<b>11</b> F	0008	14.6	445	<b>26</b> Sa	0007	14.2	433	<b>11</b> M	0059	13.4	408	<b>26</b> M	0029	14.2	433	<b>11</b> O	0254	14.2	433
	0606	2.4	73		0604	3.4	104		0653	4.1	125		0624	4.0	122		0857	5.8	177
	1243	18.3	558		1235	17.6	536		1334	17.6	536		1255	17.9	546		1509	15.9	485
	1913	4.3	131		1902	4.6	140		2017	5.0	152		1928	4.5	137		2147	4.7	143
<b>12</b> Sa	0055	13.5	411	<b>27</b> Su	0047	13.8	421	<b>12</b> M	0202	12.9	393	<b>27</b> Tu	0115	14.1	430	<b>12</b> Th	0404	14.5	442
	0658	3.6	110		0648	4.1	125		0802	5.1	155		0716	4.6	140		1008	6.3	192
	1338	17.1	521		1319	17.0	518		1437	16.4	500		1341	17.4	530		1613	15.0	457
	2022	5.4	165		1956	5.2	158		2126	5.3	162		2022	4.6	140		2241	4.7	143
<b>13</b> Su	0155	12.4	378	<b>28</b> M	0135	13.3	405	<b>13</b> Tu	0321	12.8	390	<b>28</b> W	0210	14.1	430	<b>13</b> F	0516	15.1	460
	0807	4.8	146		0744	4.8	146		0923	5.8	177		0819	5.1	155		1117	6.3	192
	1448	15.9	485		1411	16.3	497		1551	15.6	475		1433	16.8	512		1722	14.3	436
	2146	5.9	180		2101	5.5	168		2233	5.1	155		2121	4.5	137		2334	4.5	137
<b>14</b> M	0322	11.7	357	<b>29</b> Tu	0236	12.9	393	<b>14</b> W	0451	13.3	405	<b>29</b> Th	0313	14.3	436	<b>14</b> Sa	0622	16.0	488
	0937	5.7	174		0855	5.4	165		1044	5.9	180		0931	5.5	168		1220	6.0	183
	1622	15.2	463		1514	15.8	482		1711	15.1	460		1532	16.1	491		1830	14.0	427
	2309	5.7	174		2210	5.4	165		2333	4.7	143		2221	4.2	128				
<b>15</b> Tu	0522	12.0	366	<b>30</b> W	0352	12.9	393	<b>15</b> Th	0609	14.4	439	<b>30</b> F	0424	14.9	454	<b>15</b> Su	0023	4.3	131
	1108	5.6	171		1014	5.5	168		1155	5.6	171		1046	5.4	165		0717	16.8	512
	1758	15.3	466		1626	15.5	472		1822	15.1	460		1639	15.5	472		1316	5.6	171
					2314	4.8	146						2319	3.8	116		1928	14.0	427
													<b>31</b> Sa	0537	15.9	485			
													1155	5.0	152		1750	15.1	460

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

# Namp'O-Hang, Korea, 2008

Times and Heights of High and Low Waters

July				August				September				
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm	
1 Tu 0033	3.5	107	16 W 0123	4.8	146	1 F 0219	3.3	101	16 M 0230	4.1	125	
0723	18.6	567	0823	18.0	549	0914	20.4	622	0916	19.0	579	
1342	4.8	146	1428	5.6	171	1526	3.8	116	1519	4.5	137	
1942	14.1	430	2038	13.9	424	2134	15.7	479	2129	15.7	479	
●												
2 W 0131	3.1	94	17 Th 0208	4.4	134	2 Sa 0312	2.8	85	17 Su 0307	3.6	110	
0826	19.7	600	0904	18.5	564	0959	20.9	637	0946	19.3	588	
1442	4.1	125	1509	5.2	158	1610	3.3	101	1549	4.0	122	
2046	14.5	442	2117	14.3	436	2218	16.5	503	2158	16.3	497	
●												
3 Th 0226	2.7	82	18 F 0248	4.1	125	3 Su 0359	2.5	76	18 M 0342	3.2	98	
0920	20.5	625	0939	19.0	579	1040	20.8	634	1013	19.5	594	
1536	3.6	110	1545	4.8	146	1650	3.0	91	1618	3.5	107	
●	2140	14.9	454	O 2150	14.7	448	2258	17.0	518	2226	17.0	518
●												
4 F 0317	2.5	76	19 Sa 0324	3.8	116	4 M 0443	2.7	82	19 Tu 0416	3.0	91	
1009	20.9	637	1009	19.2	585	1117	20.3	619	1040	19.5	594	
1625	3.3	101	1617	4.4	134	1727	3.0	91	1647	3.1	94	
2228	15.3	466	2219	15.1	460	2336	17.3	527	2255	17.7	539	
●												
5 Sa 0407	2.4	73	20 Su 0358	3.5	107	5 Tu 0526	3.1	94	20 W 0450	3.0	91	
1054	20.9	637	1037	19.4	591	1152	19.5	594	1108	19.3	588	
1711	3.3	101	1647	4.1	125	1802	3.2	98	1716	2.8	85	
2313	15.6	475	2247	15.6	475	2327	18.3	558	1825	3.9	119	
●												
6 Su 0455	2.7	82	21 M 0432	3.4	104	6 W 0013	17.4	530	21 Th 0528	3.2	98	
1136	20.4	622	1104	19.5	594	0608	3.8	116	1138	18.8	573	
1755	3.4	104	1717	3.7	113	1225	18.5	564	1749	2.8	85	
2357	15.8	482	2317	16.1	491	1837	3.6	110	1902	4.7	143	
●												
7 M 0542	3.2	98	22 Tu 0507	3.4	104	7 Th 0050	17.3	527	22 F 0003	18.6	567	
1217	19.6	597	1133	19.4	591	0651	4.7	143	0610	3.8	116	
1837	3.6	110	1749	3.4	104	1259	17.3	527	1213	18.0	549	
●			2350	16.7	509	1914	4.1	125	1826	3.0	91	
●												
8 Tu 0040	15.8	482	23 W 0546	3.5	107	8 F 0130	17.0	518	23 Sa 0044	18.6	567	
0631	4.0	122	1204	19.1	582	0739	5.7	174	0658	4.7	143	
1257	18.6	567	1824	3.3	101	1336	16.0	488	1253	16.8	512	
1920	3.9	119	1903	3.3	101	1955	4.8	146	1909	3.6	110	
●												
9 W 0125	15.8	482	24 Th 0028	17.1	521	9 Sa 0215	16.6	506	24 Su 0133	18.2	555	
0723	4.9	149	0629	4.0	122	0836	6.6	201	0758	5.9	180	
1338	17.4	530	1241	18.5	564	1418	14.8	451	1340	15.4	469	
2004	4.3	131	1903	3.3	101	● 2045	5.4	165	● 2003	4.5	137	
●												
10 Th 0214	15.7	479	25 F 0112	17.4	530	10 M 0310	16.2	494	25 M 0234	17.5	533	
0820	5.8	177	0720	4.7	143	0943	7.3	223	0917	6.9	210	
1422	16.1	491	1322	17.6	536	1513	13.7	418	1441	13.9	424	
● 2052	4.7	143	1948	3.6	110	2146	6.0	183	2116	5.4	165	
●												
11 F 0309	15.7	479	26 Sa 0202	17.4	530	11 M 0422	15.9	485	26 Tu 0354	16.9	515	
0924	6.6	201	0822	5.6	171	1058	7.6	232	1050	7.3	223	
1512	14.9	454	Sa 1410	16.3	497	1630	12.9	393	1611	12.8	390	
2145	5.0	152	● 2042	4.1	125	2254	6.2	189	2244	5.7	174	
●												
12 Sa 0413	15.7	479	27 Su 0302	17.2	524	12 Tu 0549	16.1	491	27 W 0541	17.0	518	
1032	7.0	213	0937	6.4	195	1210	7.3	223	1218	6.7	204	
1615	13.9	424	1508	14.9	454	1810	12.8	390	1818	12.9	393	
2241	5.3	162	2148	4.6	140	●						
●												
13 Su 0526	16.0	488	28 M 0417	17.1	521	13 W 0000	5.9	180	28 Th 0007	5.3	162	
1140	7.0	213	1102	6.7	204	0704	16.8	512	0711	18.0	549	
1732	13.3	405	1625	13.7	418	1312	6.7	204	1327	5.6	171	
2338	5.3	162	2301	4.8	146	1925	13.4	408	1942	14.1	430	
●												
14 M 0636	16.5	503	29 Tu 0549	17.5	533	14 F 0058	5.4	165	29 F 0117	4.4	134	
1244	6.7	204	1223	6.4	195	0758	17.7	539	0813	19.1	582	
1849	13.2	402	1809	13.2	402	1402	5.9	180	1422	4.5	137	
●						2016	14.2	433	2038	15.6	475	
●												
15 Tu 0032	5.1	155	30 W 0014	4.5	137	15 F 0147	4.7	143	30 Sa 0214	3.5	107	
0735	17.3	527	0715	18.4	561	0841	18.4	561	0901	19.9	607	
1340	6.2	189	1335	5.6	171	1444	5.2	158	1507	3.6	110	
1950	13.5	411	1940	13.8	421	2056	15.0	457	2122	16.8	512	
●												
16 W 0120	4.0	122	31 Th 0821	19.5	594	31 Th 0120	4.0	122	31 Su 0303	2.8	85	
●			1435	4.6	140	1435	4.6	140	0942	20.2	616	
2044	14.7	448	2044	14.7	448	● 2201	17.7	539	1545	3.0	91	
●												

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Namp'O-Hang, Korea, 2008

Times and Heights of High and Low Waters

October				November				December				
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	
1 W	0407 2.6 79	16 Th	0341 2.1 64	1 Sa	0455 3.2 98	16 Su	0458 2.3 70	1 M	0513 3.2 98	16 Tu	0543 2.2 67	
1024 17.8 543	0949 17.1 521	1543 1.5 46	1055 14.8 451	1053 14.5 442	1107 13.6 415	1107 13.6 415	1139 13.9 424	1139 13.9 424	1725 1.6 49	1139 13.9 424		
1615 2.4 73	1543 1.5 46	1640 2.7 82	1641 1.5 46	1641 1.5 46	1652 2.5 76	2323 19.6 597	2329 17.8 543	2329 17.8 543	1725 1.6 49	1725 1.6 49		
2242 19.1 582	2211 19.8 604	2314 18.4 561	2323 19.6 597	2323 19.6 597	2329 17.8 543							
2 Th	0442 2.9 88	17 F	0421 2.1 64	2 Su	0528 3.6 110	17 M	0546 2.9 88	2 Tu	0548 3.4 104	17 W	0006 18.8 573	
1052 17.1 521	1023 16.6 506	1618 1.5 46	1123 14.4 439	1123 14.4 439	1137 13.9 424	1727 2.2 67	1139 13.5 411	1728 2.8 85	1227 13.7 418	0631 2.5 76		
1643 2.6 79	1618 1.5 46	1712 3.0 91	1727 2.2 67	1727 2.2 67	1728 2.8 85	1817 2.5 76						
2310 19.0 579	2247 20.0 610	2346 18.0 549										
3 F	0515 3.4 104	18 Sa	0502 2.6 79	3 M	0605 4.1 125	18 Tu	0010 18.8 573	3 W	0002 17.5 533	18 Th	0052 17.7 539	
1120 16.3 497	1059 15.9 485	1654 1.9 58	1155 14.0 427	1749 3.5 107	0626 3.5 107	0639 3.6 110	1227 13.3 405	1215 13.5 411	0722 2.9 88	1319 13.6 415		
1712 3.0 91	1654 1.9 58	1820 3.2 98	1820 3.2 98	1809 3.2 98	1809 3.2 98	1809 3.2 98	1915 3.5 107	1915 3.5 107	1319 13.6 415	1915 3.5 107		
2339 18.7 570	2328 19.7 600											
4 Sa	0550 4.0 122	19 Su	0548 3.4 104	4 Tu	0022 17.5 533	19 W	0102 17.7 539	4 Th	0039 17.1 521	19 F	0140 16.4 500	
1148 15.6 475	1139 15.0 457	1735 2.6 79	0648 4.7 143	0740 4.3 131	0740 4.3 131	0740 4.3 131	1924 4.3 131	0709 3.7 113	0815 3.3 101	1418 13.4 408		
1743 3.6 110			1234 13.5 411	1326 12.7 387	1326 12.7 387	1326 12.7 387	1856 3.7 113	1856 3.7 113	2020 4.5 137			
5 Su	0012 18.2 555	20 M	0013 19.0 579	5 W	0105 16.8 512	20 Th	0200 16.5 503	5 F	0121 16.6 506	20 Sa	0233 15.1 460	
0629 4.8 146	0640 4.4 134	1224 14.0 427	0741 5.1 155	0848 4.7 143	0848 4.7 143	0848 4.7 143	1924 4.3 131	0759 3.7 113	0912 3.6 110	1525 13.5 411		
1220 14.8 451	1224 14.0 427	1824 3.6 110	1322 13.0 396	1439 12.4 378	1439 12.4 378	1439 12.4 378	1954 4.3 131	1954 4.3 131	2134 5.2 158	2134 5.2 158		
1819 4.2 128			1926 4.9 149	2043 5.2 158	2043 5.2 158	2043 5.2 158						
6 M	0049 17.5 533	21 Tu	0105 17.9 546	6 Th	0155 16.1 491	21 F	0310 15.3 466	6 Sa	0209 15.9 485	21 Su	0335 13.8 421	
0715 5.6 171	0744 5.4 165	1321 13.0 396	0843 5.4 165	1421 12.7 387	0843 5.4 165	1421 12.7 387	2208 5.5 168	0854 3.7 113	1010 3.7 113	1642 13.8 421		
1259 14.0 427	1927 4.8 146		2036 5.5 168	2036 5.5 168	2036 5.5 168	2036 5.5 168	2103 4.8 146	1447 13.5 411	2249 5.5 168	2249 5.5 168		
1904 5.0 152												
7 Tu	0135 16.7 509	22 W	0209 16.7 509	7 F	0255 15.5 472	22 Sa	0430 14.6 445	7 Th	0303 15.2 463	22 M	0448 12.9 393	
0815 6.4 195	0905 6.1 186	1439 12.2 372	0951 5.3 162	1535 12.7 387	1092 4.2 128	1735 13.7 418	2326 5.3 162	0952 3.6 110	1107 3.7 113	1757 14.6 445		
1348 13.2 402	2054 5.8 177		2154 5.7 174			2326 5.3 162		2217 4.9 149	2359 5.3 162			
2004 5.8 177												
8 W	0234 15.9 485	23 Th	0334 15.7 479	8 Sa	0404 15.1 460	23 Su	0548 14.3 436	8 M	0406 14.4 439	23 Tu	0606 12.5 381	
0929 6.8 207	1031 5.9 180	1631 12.2 372	1054 4.7 143	1657 13.4 408	1158 3.6 110	1842 15.0 457	1707 14.7 448	1707 14.7 448	1707 14.7 448	1900 15.5 472	1202 3.5 107	
1456 12.6 384	2230 6.0 183		2307 5.3 162			2307 5.3 162		2329 4.6 140				
2123 6.3 192												
9 Th	0350 15.4 469	24 F	0513 15.5 472	9 Su	0517 15.0 457	24 M	0032 4.7 143	9 Tu	0516 13.9 424	24 W	0101 4.8 146	
1045 6.6 201	1143 5.2 158	1810 13.5 411	1149 3.9 119	1808 14.5 442	0653 14.3 436	1246 3.1 94	1817 15.8 482	1146 2.7 82	0713 12.5 381	1253 3.2 98		
1629 12.5 381	2351 5.4 165		1808 14.5 442			1933 16.2 494		1817 15.8 482		1952 16.3 497		
2244 6.2 189												
10 F	0517 15.5 472	25 Sa	0631 15.9 485	10 M	0011 4.5 137	25 Tu	0127 4.1 125	10 W	0034 4.0 122	25 Th	0155 4.2 128	
1150 5.8 177	1239 4.2 128	1913 15.1 460	0622 15.2 463	1237 3.1 94	0745 14.3 436	1329 2.7 82	1239 2.2 82	0627 13.6 415	0806 12.6 384	1338 2.9 88		
1801 13.3 405			1904 15.9 485	1904 15.9 485	1904 15.9 485	2017 17.2 524	1919 17.0 518	2036 17.0 518	2036 17.0 518			
2353 5.5 168												
11 Sa	0628 16.0 488	26 Su	0056 4.5 137	11 Tu	0106 3.7 113	26 W	0214 3.5 107	11 Th	0133 3.2 98	26 F	0240 3.7 113	
1242 4.8 146	0729 16.4 500	1325 3.3 101	0717 15.4 469	1320 2.3 70	0829 14.3 436	1407 2.4 73	2055 17.8 543	1329 1.6 49	0850 12.9 393	1420 2.7 82		
1903 14.6 445	2001 16.6 506	2001 17.3 527	1952 17.3 527		1952 17.3 527	2055 17.8 543	2013 18.2 555	2013 18.2 555	2114 17.4 530	2114 17.4 530		
12 Su	0049 4.6 140	27 M	0148 3.6 110	12 W	0156 2.8 85	27 Th	0256 3.2 98	12 F	0227 2.5 76	27 Sa	0320 3.4 104	
0721 16.7 509	0815 16.6 506	1405 2.6 79	0805 15.5 472	1401 1.6 49	1401 1.6 49	1443 2.3 70	2129 18.2 555	0829 13.8 421	1416 1.2 37	1458 2.4 73	0928 13.1 399	
1325 3.8 116			2041 17.7 539	2035 18.5 564	2035 18.5 564	2035 18.5 564	2103 19.1 582	2103 19.1 582	2148 17.7 539			
1949 15.9 485												
13 M	0138 3.7 113	28 Tu	0233 3.1 94	13 F	0242 2.2 67	28 F	0333 3.0 91	13 Sa	0319 2.1 64	28 Su	0355 3.1 94	
0803 17.2 524	0854 16.5 503	1440 2.3 70	0848 15.5 472	1440 1.2 37	1516 2.2 67	1503 0.9 27	1503 0.9 27	0920 13.9 424	1533 2.2 67	2150 19.7 600	1000 13.2 402	
1403 2.9 88	2116 18.5 564	2116 19.4 591	2116 19.4 591	2200 18.2 555	2200 18.2 555	2200 18.2 555	2219 17.8 543	2219 17.8 543	2219 17.8 543	2219 17.8 543	2219 17.8 543	
2027 17.2 524												
14 Tu	0221 2.9 88	29 W	0313 2.8 85	14 F	0327 1.9 58	29 M	0407 3.0 91	14 W	0407 1.9 58	29 Tu	0427 3.0 91	
0841 17.4 530	0929 16.2 494	1512 2.1 64	0930 15.3 466	1519 1.0 30	1519 1.0 30	1548 2.3 70	2230 18.2 555	1007 14.0 427	1028 13.4 408	1028 13.4 408	1028 13.4 408	
1437 2.2 67			2157 19.9 607	2157 19.9 607	2157 19.9 607	2157 19.9 607	2230 18.2 555	1550 0.8 24	1606 2.1 64	1606 2.1 64	1606 2.1 64	
2102 18.3 558	● 2148 18.8 573							2236 19.8 604	2236 19.8 604	2247 17.9 546	2247 17.9 546	2247 17.9 546
15 W	0301 2.3 70	30 Th	0349 2.7 82	15 F	0412 1.9 58	30 M	0440 3.1 94	15 W	0455 1.9 58	30 Tu	0458 2.8 85	
0915 17.4 530	0959 15.8 484	1542 2.2 67	1011 14.9 454	1559 1.1 34	1559 1.1 34	1619 2.4 73	2239 20.0 610	1053 14.0 427	1056 13.6 415	1056 13.6 415	1056 13.6 415	
1510 1.7 52	2217 18.9 576		2239 20.0 610	2239 20.0 610	2239 20.0 610	2239 20.0 610	2259 18.0 549	1636 1.1 34	1636 1.1 34	2314 17.9 546	2314 17.9 546	
○ 2136 19.2 585								2321 19.5 594	2321 19.5 594			
31 F	0422 2.9 88	31 F	1028 15.3 466									
1611 2.4 73	1611 2.4 73		1611 2.4 73									
2246 18.7 570	2246 18.7 570		2246 18.7 570									

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

## Dalian, China, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0320 7.3 222	16 0244 8.1 247	1 F 0409 5.9 180	16 Sa 0420 6.2 190	1 Sa 0310 6.0 182	16 Su 0418 6.0 182						
0955 1.3 39	W 0913 0.5 16	F 1031 1.8 55	Sa 1043 1.2 37	0928 2.0 61	1030 1.9 59						
1622 6.9 209	1532 7.9 242	1729 7.2 219	Sa 1741 8.4 256	1620 7.5 228	1735 8.5 259						
2225 2.8 86	● 2146 2.0 61			2318 3.8 115							
2 W 0416 6.6 202	17 0339 7.3 224	2 Sa 0017 3.4 105	17 Su 0037 3.0 91	2 Su 0432 5.4 164	17 M 0046 3.1 93						
1048 1.5 45	Th 1007 0.7 20	Sa 0537 5.4 164	Su 0601 5.8 177	1044 2.5 77	0613 5.9 179						
1730 7.0 214	1641 8.1 248	1148 2.1 63	1213 1.4 44	1212 2.2 66	1212 2.2 66						
2346 3.1 93	2304 2.4 74	1853 7.4 227	1912 8.7 264	1905 8.6 263							
3 Th 0525 6.1 186	18 0447 6.7 203	3 Su 0153 3.2 97	18 M 0211 2.5 77	3 M 0116 3.6 109	18 Tu 0204 2.5 75						
1147 1.6 49	F 1111 0.8 257	Su 0712 5.4 164	M 0736 6.1 185	0637 5.4 164	0740 6.5 198						
1838 7.3 224	1757 8.4 257	1308 2.0 60	1337 1.2 37	1231 2.6 79	1334 1.9 57						
4 F 0107 3.0 90	19 0034 2.6 78	4 M 0252 2.7 81	19 Tu 0308 1.9 59	4 Tu 0222 3.0 90	19 W 0251 1.9 58						
0638 5.9 179	Sa 0609 6.2 190	M 0820 5.8 178	Tu 0840 6.7 203	0755 6.0 183	0835 7.3 223						
1247 1.6 50	1224 0.8 25	1409 1.6 48	1440 0.8 24	1344 2.2 66	1435 1.4 44						
1937 7.8 238	1914 8.9 270	2052 8.5 258	2116 9.5 291	2021 8.4 255	2058 9.2 279						
5 Sa 0216 2.7 81	20 0201 2.3 70	5 Tu 0332 2.2 66	20 W 0350 1.4 44	5 W 0302 2.3 71	20 Th 0326 1.5 45						
0745 5.9 179	Su 0730 6.2 190	M 0906 6.4 195	W 0927 7.3 224	0843 6.8 206	0915 8.1 247						
1343 1.5 45	1338 0.6 19	Tu 1457 1.1 34	1530 0.4 12	1435 1.6 49	1521 1.1 34						
2027 8.3 253	2021 9.4 286	2131 9.0 273	2156 9.7 296	2102 8.9 272	2134 9.2 279						
6 Su 0309 2.3 70	21 0307 1.9 57	6 W 0404 1.7 53	21 Th 0424 1.1 34	6 Th 0332 1.7 53	21 F 0354 1.1 35						
0839 6.1 185	M 0837 6.5 199	O 0942 6.9 211	Th 1005 7.9 241	0919 7.4 227	0949 8.7 265						
1431 1.2 37	1440 0.3 8	1537 0.7 21	1613 0.2 6	1516 1.1 33	1600 1.0 29						
2110 8.8 267	2118 9.8 300	2204 9.4 285	○ 2230 9.6 294	2135 9.4 285	2204 9.1 277						
7 M 0351 2.0 60	22 0359 1.5 45	7 Th 0433 1.4 42	22 F 0453 0.9 26	7 F 0400 1.3 39	22 M 0421 0.9 28						
0922 6.3 193	Tu 0930 6.9 211	H 1014 7.3 224	1040 8.4 255	0950 8.1 246	1020 9.1 278						
1513 0.9 27	1533 -0.1 -3	1613 0.4 11	1651 0.2 6	1553 0.7 20	1635 0.9 28						
2147 9.1 278	○ 2206 10.1 308	● 2234 9.6 293	2301 9.5 289	2206 9.6 293	○ 2233 9.0 273						
8 Tu 0425 1.8 54	23 0442 1.2 36	8 F 0501 1.1 33	23 Sa 0522 0.7 20	8 Sa 0427 0.9 28	23 M 0447 0.8 24						
0958 6.6 202	W 1014 7.3 221	1046 7.7 234	1114 8.7 264	1021 8.7 264	1051 9.4 286						
1552 0.6 17	1620 -0.3 -9	1648 0.1 4	1727 0.3 10	1628 0.4 11	1708 1.0 30						
● 2221 9.4 286	2248 10.1 309	2304 9.7 297	2332 9.3 282	● 2237 9.7 295	2304 8.8 269						
9 W 0456 1.6 48	24 0520 1.0 30	9 Sa 0530 0.8 24	24 Su 0551 0.5 15	9 Su 0456 0.6 17	24 M 0514 0.7 21						
1032 6.9 209	M 1055 7.5 230	Sa 1118 8.0 244	Su 1149 8.8 268	1053 9.2 281	1122 9.5 291						
1628 0.3 10	1703 -0.3 -9	1723 0.0 1	1802 0.6 17	1706 0.2 7	1742 1.1 34						
2253 9.5 291	2325 9.9 303	2336 9.7 297	2332 9.3 282	2310 9.6 293	2335 8.6 262						
10 Th 0526 1.4 42	25 0555 0.8 25	10 M 0600 0.5 16	25 M 0004 9.0 273	10 M 0526 0.2 7	25 Tu 0543 0.7 20						
1104 7.0 214	F 1135 7.7 236	Su 1153 8.4 255	M 0620 0.4 13	1129 9.7 296	1154 9.6 292						
1703 0.2 6	1744 -0.1 -3	1802 0.1 2	1224 8.8 268	1746 0.3 9	1816 1.4 42						
2325 9.6 294			1837 0.9 285	2346 9.4 285							
11 F 0558 1.2 37	26 0001 9.6 292	11 M 0011 9.6 292	26 Tu 0037 8.6 262	0601 0.0 -1	0008 8.3 252						
1138 7.1 217	Sa 0628 0.7 21	M 0633 0.3 8	0651 0.5 14	1208 10.1 307	0613 0.7 22						
1738 0.2 5	Sa 1215 7.9 240	M 1231 8.7 265	Tu 1300 8.7 265	1830 0.6 17	1227 9.5 291						
2359 9.6 294	1824 0.3 8	1844 0.3 9	1914 1.4 42	1852 1.7 53	1852 1.7 53						
12 Sa 0631 1.0 31	27 0036 9.2 279	12 Tu 0048 9.2 281	27 W 0111 8.1 247	0225 9.0 273	0041 7.8 239						
1215 7.2 220	Su 0701 0.6 18	0710 0.1 2	0724 0.6 19	0639 -0.1 -4	0645 0.9 26						
1817 0.3 8	1255 7.8 239	1314 8.9 272	1337 8.5 259	1252 10.2 310	1302 9.4 286						
	1903 0.8 23	1930 0.8 23	1954 1.9 59	1918 1.0 32	1929 2.2 67						
13 Su 0035 9.5 290	28 0111 8.7 264	13 W 0129 8.7 264	28 Th 0146 7.5 228	0108 8.4 255	0115 7.3 223						
0706 0.8 25	M 0735 0.6 17	0750 0.0 1	0759 1.0 29	0722 0.0 1	0719 1.1 35						
1255 7.4 225	1338 7.7 236	1403 9.0 273	1420 8.2 250	1341 9.9 303	1342 9.1 276						
1859 0.5 15	1945 1.3 41	2023 1.4 43	2039 2.6 80	2012 1.8 54	2012 1.8 54						
14 M 0114 9.2 281	29 0148 8.1 246	14 Th 0215 7.9 242	29 F 0224 6.7 205	0155 7.6 232	0152 6.8 206						
0745 0.6 19	Tu 0811 0.7 21	0836 0.3 8	0838 1.4 43	0810 0.5 16	0758 1.6 50						
1340 7.5 230	1423 7.5 230	1500 8.8 269	F 1511 7.8 239	1441 9.4 288	1429 8.5 260						
1947 0.9 27	2029 2.0 60	● 2125 2.2 66	● 2140 3.3 102	● 2119 2.6 78	2106 3.3 102						
15 Tu 0157 8.7 266	30 0227 7.4 226	15 F 0308 7.1 216									
0826 0.5 16	W 0850 1.0 29	0931 0.7 22									
1432 7.7 236	1514 7.3 224	1611 8.5 260									
2042 1.4 43	● 2122 2.7 81	2249 2.9 87									
16 Th 0311 6.7 203	31 0311 6.7 203										
0934 1.4 42	Th 0934 1.4 42										
1614 7.2 219	1614 7.2 219										
2236 3.2 98	2236 3.2 98										

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Dalian, China, 2008

## Times and Heights of High and Low Waters

April				May				June			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0012 3.6 111	16 W 0130 2.4 73	1 Th 0018 3.0 91	16 F 0120 2.2 67	1 Su 0056 2.0 61	16 M 0157 2.5 76						
0553 5.7 174	0724 7.2 220	0624 7.0 212	0741 8.6 262	0723 9.6 293	0834 9.7 295						
1142 3.1 94	1321 2.5 75	1217 3.1 93	1355 2.8 86	1347 2.7 81	1514 3.1 95						
1833 7.8 239	1940 8.5 259	1839 8.4 255	1945 7.9 242	1937 8.3 253	2047 7.5 228						
2 W 0131 3.1 94	17 Th 0214 2.0 60	2 F 0113 2.5 76	17 Sa 0201 2.0 62	2 M 0146 1.6 49	17 Tu 0240 2.4 73						
0718 6.4 194	0815 8.1 246	0721 7.8 238	0823 9.1 278	0813 10.5 319	0915 10.1 307						
1307 2.7 83	1420 2.1 65	1323 2.6 79	1444 2.6 79	1445 2.4 72	1558 2.9 89						
1935 8.3 254	2026 8.5 260	1931 8.6 262	2029 7.9 241	2029 8.3 254	2130 7.5 230						
3 Th 0216 2.4 74	18 F 0248 1.6 50	3 Sa 0154 2.0 60	18 Su 0237 1.9 58	3 Tu 0235 1.2 37	18 W 0320 2.3 69						
0808 7.2 219	0853 8.8 267	0805 8.8 268	0900 9.5 291	0902 11.1 339	0952 10.3 315						
1403 2.2 66	1506 1.9 57	1415 2.1 64	1527 2.4 74	1540 2.2 66	1637 2.9 87						
2020 8.8 269	2103 8.5 260	2016 8.8 268	2109 7.9 241	2120 8.3 254	2208 7.6 233						
4 F 0249 1.8 56	19 Sa 0317 1.4 43	4 Su 0231 1.5 45	19 M 0311 1.8 55	4 W 0324 0.9 27	19 Th 0357 2.1 63						
0846 8.1 246	0926 9.3 283	0844 9.8 298	0934 9.9 301	0950 11.6 353	1027 10.5 321						
1447 1.6 48	1544 1.7 52	1503 2.3 63	1606 2.3 71	1633 2.1 63	1711 2.8 86						
2057 9.2 280	2135 8.5 259	2057 8.8 269	2146 7.9 240	2209 8.3 254	2243 7.7 236						
5 Sa 0318 1.3 41	20 Su 0345 1.3 39	5 M 0308 1.0 31	20 Tu 0343 1.7 53	5 Th 0413 0.7 21	20 F 0433 1.9 58						
0919 8.9 271	0957 9.6 293	0923 10.6 323	1007 10.1 309	1040 11.8 360	1101 10.6 324						
1528 1.1 34	1619 1.6 50	1550 1.4 44	1644 2.3 71	1725 2.0 62	1743 2.8 85						
2132 9.4 285	2207 8.4 256	2139 8.8 268	2221 7.8 237	2259 8.2 251	2316 7.9 240						
6 Su 0348 0.9 28	21 M 0413 1.2 36	6 Tu 0347 0.6 19	21 W 0415 1.6 50	6 F 0503 0.6 19	21 Sa 0509 1.8 55						
0952 9.7 296	1027 9.8 300	1004 11.2 341	1039 10.3 314	1131 11.8 359	1134 10.6 324						
1608 0.8 25	1653 1.7 51	1637 1.4 42	1719 2.4 73	1817 2.1 63	1813 2.8 84						
● 2206 9.3 284	2239 8.3 252	2222 8.7 264	2255 7.7 234	2348 8.1 247	2350 7.9 242						
7 M 0419 0.5 16	22 Tu 0442 1.1 35	7 W 0428 0.4 11	22 Th 0448 1.6 48	7 Sa 0553 0.8 24	22 Su 0544 1.8 55						
1027 10.4 317	1058 10.0 305	1049 11.5 352	1111 10.4 317	1223 11.5 351	1208 10.6 323						
1650 0.7 22	1727 1.8 54	1727 1.5 45	1754 2.5 76	1909 2.1 65	1845 2.7 81						
2244 9.2 280	2312 8.0 245	2308 8.4 257	2329 7.6 231								
8 Tu 0454 0.2 6	23 W 0511 1.1 34	8 Th 0513 0.3 9	23 F 0521 1.5 47	8 Su 0040 8.0 243	23 M 0025 8.0 243						
1106 10.9 331	1129 10.1 308	1136 11.6 353	1145 10.4 317	0645 1.1 35	0622 1.9 58						
1734 0.8 25	1802 2.0 60	1819 1.7 51	1827 2.6 79	1315 11.0 336	1244 10.5 319						
2324 8.9 271	2345 7.8 237	2356 8.1 247		2000 2.2 67	1920 2.5 77						
9 W 0533 0.0 0	24 Th 0543 1.1 34	9 F 0601 0.4 13	24 Sa 0003 7.5 228	9 M 0135 7.9 240	24 Tu 0104 8.0 244						
1149 11.1 338	1202 10.1 308	1228 11.3 345	0557 1.6 48	0738 1.7 52	0702 2.1 65						
1822 1.1 34	1837 2.2 68	1915 2.0 60	1221 10.3 313	1407 10.3 315	1322 10.3 313						
			1902 2.7 82	2050 2.3 69	1958 2.4 74						
10 Th 0007 8.5 258	25 F 0019 7.5 229	10 Sa 0047 7.7 234	25 Su 0040 7.4 226	10 Tu 0237 7.8 239	25 W 0148 8.1 247						
0616 0.1 2	0616 1.2 37	0653 0.8 25	0634 1.8 54	0835 2.4 73	0748 2.4 74						
1236 11.0 334	1237 9.9 303	1324 10.8 330	1300 10.0 305	1500 9.5 291	1405 9.9 303						
1914 1.6 48	1914 2.5 77	2015 2.3 70	1941 2.8 71	2140 2.3 71	2040 2.4 72						
11 F 0054 7.9 241	26 Sa 0054 7.2 220	11 Su 0145 7.3 221	26 M 0121 7.3 222	11 W 0342 7.9 241	26 Th 0239 8.3 252						
0703 0.4 12	0652 1.5 45	0748 1.4 44	0716 2.1 64	0942 3.1 93	0841 2.8 85						
1329 10.5 320	1316 9.6 293	1426 10.1 309	1343 9.7 295	1556 8.8 267	1452 9.4 288						
2013 2.2 66	1955 2.9 87	2119 2.5 77	2026 2.8 86	2231 2.4 73	2125 2.3 70						
12 Sa 0147 7.3 221	27 Su 0134 6.9 210	12 M 0255 7.0 212	27 Tu 0210 7.2 218	12 W 0450 8.1 248	27 F 0337 8.6 262						
0756 1.0 31	0732 1.9 58	0852 2.2 67	0805 2.5 76	0942 3.5 106	0942 3.2 97						
1432 9.8 300	1402 9.1 278	1535 9.4 286	1433 9.3 284	1546 8.1 248	1546 8.9 272						
2125 2.7 82	2046 3.1 96	● 2225 2.6 80	2118 2.9 87	2323 2.5 75	2215 2.3 69						
13 Su 0254 6.6 200	28 M 0224 6.5 199	13 Tu 0415 7.0 212	28 W 0310 7.1 217	13 F 0558 8.5 258	28 Th 0440 9.0 275						
0859 1.8 55	0822 2.5 75	1012 2.8 86	0903 2.9 89	1212 3.6 111	1054 3.5 106						
1551 9.1 278	1459 8.6 263	1646 8.7 266	1530 8.9 272	1759 7.7 234	1648 8.4 255						
● 2251 3.0 91	● 2153 3.3 102	2331 2.6 79	● 2214 2.8 85		2311 2.2 67						
14 M 0427 6.2 189	29 Tu 0335 6.3 191	14 W 0539 7.3 223	29 Th 0419 7.3 223	14 Sa 0017 2.5 77	29 W 0546 9.6 292						
1026 2.5 76	0927 3.0 91	1139 3.1 94	1013 3.2 98	0657 8.9 270	1212 3.5 108						
1720 8.7 264	1610 8.2 251	1754 8.2 251	1634 8.6 262	1321 3.6 109	1758 8.0 244						
2308 3.3 101	2308 3.3 101		2310 2.6 80	1900 7.5 228							
15 Tu 0024 2.8 86	30 W 0505 6.4 194	15 Th 0031 2.4 74	30 F 0527 7.9 240	15 Su 0110 2.6 78	30 M 0011 2.1 65						
0610 6.5 197	1052 3.3 100	0648 7.9 242	1130 3.2 98	0749 9.3 283	0652 10.2 311						
1204 2.7 82	1732 8.2 249	1253 3.1 93	1740 8.4 256	1422 3.3 102	1330 3.4 103						
1839 8.5 259		1854 8.0 244		1957 7.4 226	1909 7.9 240						
				31 Sa 0004 2.4 72							
				0629 8.7 265							
				1243 3.0 91							
				1842 8.3 253							

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

## Dalian, China, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu	0115	1.9	59	16 W	0216	2.9	89	1 F	0312	1.6	50
	0755	10.8	330		0900	10.2	310		0946	11.8	359
	1440	3.1	94		1548	3.4	104		1626	2.6	79
	2014	7.9	242		2117	7.6	231	●	2158	8.8	267
2 W	0217	1.6	50	17 Th	0303	2.6	80	2 Sa	0402	1.3	41
	0853	11.4	346		0941	10.5	320		1030	11.8	361
	1540	2.8	85		1624	3.1	96		1704	2.3	71
	2112	8.1	248		2154	7.9	242		2240	9.2	280
3 Th	0314	1.3	40	18 F	0344	2.3	71	3 Su	0448	1.3	39
	0948	11.7	358		1016	10.7	327		1109	11.7	356
	1632	2.5	77		1654	3.0	91		1740	2.1	65
●	2204	8.3	254	○	2228	8.3	252		2321	9.5	290
4 F	0407	1.0	32	19 Sa	0421	2.1	64	4 M	0531	1.4	42
	1038	11.9	364		1048	10.9	332		1146	11.4	346
	1720	2.3	71		1722	2.8	86		1814	2.0	61
	2251	8.5	260		2300	8.5	259				
5 Sa	0457	1.0	29	20 Su	0456	1.9	59	5 Tu	0001	9.7	297
	1125	11.9	362		1118	11.0	334		0613	1.7	52
	1805	2.2	67		1750	2.7	81		1222	10.9	331
	2338	8.7	264		2331	8.7	265		1848	1.9	57
6 Su	0545	1.1	33	21 M	0530	1.9	58	6 W	0043	9.8	299
	1210	11.6	353		1149	11.0	334		0655	2.2	66
	1847	2.1	65		1819	2.5	75		1258	10.3	315
7 M	0024	8.8	267	22 Tu	0005	8.9	270	7 Th	0126	9.8	298
	0632	1.4	43		0606	1.9	59		0739	2.7	83
	1252	11.1	338		1222	10.9	331		1336	9.7	296
	1928	2.1	63		1850	2.3	69		1958	2.0	60
8 Tu	0113	8.9	270	23 W	0041	9.1	276	8 F	0212	9.6	293
	0719	1.9	59		0645	2.1	63		0825	3.3	102
	1335	10.4	318		1257	10.6	324		1416	9.0	274
	2008	2.0	62		1925	2.1	63		2037	2.3	69
9 W	0204	8.9	271	24 Th	0121	9.3	284	9 Sa	0303	9.4	287
	0809	2.6	78		0730	2.4	72		0920	4.0	123
	1417	9.7	296		1336	10.2	312		1500	8.2	250
	2048	2.1	64		2002	1.9	59	○	2119	2.7	82
10 Th	0259	8.9	270	25 F	0207	9.6	292	10 Su	0401	9.2	280
	0903	3.2	99		0820	2.8	86		1033	4.6	141
	1502	9.0	273		1419	9.6	294		1556	7.4	225
●	2132	2.3	70		2044	1.9	59		2213	3.2	97
11 F	0357	8.9	270	26 Sa	0301	9.8	298	11 M	0514	9.1	276
	1007	3.8	117		0918	3.3	102		1209	4.9	148
	1554	8.2	250		1508	9.0	273		1721	6.8	207
	2220	2.6	78	○	2133	2.0	62		2328	3.6	109
12 Sa	0500	8.9	270	27 Su	0404	9.9	303	12 Tu	0637	9.2	280
	1123	4.2	129		1030	3.9	118		1346	4.6	140
	1657	7.5	230		1609	8.2	250		1901	6.7	205
	2316	2.9	88		2232	2.3	70				
13 Su	0608	9.0	274	28 M	0517	10.1	307	13 W	0050	3.6	110
	1246	4.3	131		1158	4.2	127		0748	9.6	292
	1813	7.1	217		1729	7.6	232		1447	4.1	125
					2345	2.5	75		2012	7.2	219
14 M	0019	3.1	95	29 Tu	0638	10.4	317	14 Th	0156	3.3	100
	0714	9.3	284		1333	4.0	122		0842	10.1	307
	1404	4.1	125		1858	7.5	228		1528	3.6	109
	1928	7.0	214						2059	7.8	238
15 Tu	0122	3.1	95	30 W	0103	2.4	73	15 F	0247	2.9	87
	0812	9.7	297		0753	10.9	332		0922	10.5	320
	1503	3.7	114		1447	3.5	107		1559	3.2	97
	2030	7.3	221		2014	7.8	237		2136	8.4	255
16	0214	2.1	63	31 Th	0214	2.1	63	16	0354	1.6	49
	0855	11.4	348		0855	11.4	348		1012	11.3	343
	1541	3.0	92		1541	3.0	92	●	2224	9.8	300
	2111	8.2	251								

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Dalian, China, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 W	0455	1.8	56	16 Th	0432	1.5	46	1 Sa	0554	2.1	65
W	1047	9.6	293	Th	1023	9.4	285	Sa	1131	7.7	236
W	1659	1.4	44	Th	1633	0.9	27	Su	1729	1.1	31
W	2308	10.6	322	Th	2245	11.2	342	Sa	2351	10.2	311
2 Th	0532	2.0	62	17 F	0515	1.6	48	1 M	0555	1.5	45
Th	1120	9.3	283	F	1102	9.1	276	Su	1130	7.7	236
Th	1729	1.4	44	F	1710	0.7	20	Sa	1736	0.0	1
Th	2341	10.6	322	F	2326	11.5	349	Su	1743	0.8	24
3 F	0609	2.3	70	18 Sa	0601	1.8	54	1 M	0615	1.9	59
F	1155	8.9	270	Sa	1144	8.7	265	Th	1148	6.9	209
F	1800	1.5	46	Sa	1752	0.6	19	M	1743	0.8	24
F	1833	1.7	51	Sa	1838	0.9	26	Su	1819	1.0	30
4 Sa	0016	10.5	319	19 Su	0012	11.4	348	2 Tu	0007	9.6	292
Sa	0647	2.7	81	Su	0653	2.1	64	W	0649	2.0	60
Sa	1230	8.4	256	Tu	1230	8.2	249	M	1220	7.3	224
Sa	1833	1.7	51	Tu	1838	0.9	26	W	1826	0.3	10
5 Su	0053	10.2	312	19 W	0104	11.0	336	3 W	0056	10.7	325
Su	0728	3.1	95	W	0751	2.6	78	W	0746	1.8	56
Su	1305	7.8	239	W	1321	7.6	231	Tu	1315	7.0	212
Su	1908	2.0	60	W	1930	1.3	40	Tu	1921	0.9	26
6 M	0134	9.8	300	20 M	0104	11.0	336	3 M	0043	9.3	284
M	0814	3.6	110	M	0751	2.6	78	W	0724	2.0	61
M	1344	7.3	222	M	1321	7.6	231	W	1303	6.6	201
M	1948	2.4	73	M	1930	1.3	40	Tu	1858	1.3	40
7 Tu	0222	9.3	284	21 O	0205	10.4	318	4 Th	0123	9.0	273
Tu	0912	4.1	124	O	0900	3.0	90	W	0804	2.0	61
Tu	1433	6.7	205	O	1426	6.9	211	M	1421	6.7	203
Tu	2036	3.0	91	O	2032	2.0	61	W	2021	1.5	47
8 W	0324	8.8	267	21 O	0242	8.6	261	4 Th	0123	9.0	273
W	1032	4.3	132	O	0939	3.2	98	W	0804	2.0	61
W	1552	6.3	191	O	1519	6.2	188	M	1441	6.4	196
W	2146	3.6	109	O	2108	3.0	91	W	2035	2.2	67
9 Th	0451	8.4	255	22 F	0348	8.1	247	5 F	0207	8.6	261
Th	1203	4.2	127	F	1022	3.1	96	F	0850	2.0	61
Th	1742	6.3	193	F	1554	6.6	200	W	1454	6.3	193
Th	2330	3.8	116	F	2152	2.6	80	W	2217	2.4	72
10 F	0618	8.5	258	22 F	0519	7.9	242	5 M	0318	8.0	244
F	1317	3.6	111	F	0320	9.7	297	M	0955	1.1	34
F	1905	7.0	212	F	1048	3.1	96	W	1614	7.2	218
F	2032	8.4	255	F	1644	6.2	190	W	2217	2.4	72
11 Sa	0053	3.5	106	23 F	0348	8.1	247	6 M	0418	7.3	221
Sa	0720	8.8	269	F	1155	3.1	96	M	1049	1.2	36
Sa	1401	3.0	92	F	1805	6.7	205	W	1725	7.4	225
Sa	1956	7.8	237	F	2357	3.2	97	W	2338	2.7	81
12 Su	0149	2.9	89	23 F	0505	7.9	241	6 Sa	0257	8.1	247
Su	0806	9.2	281	F	1155	2.9	87	Sa	0942	2.0	60
Su	1434	2.5	75	F	1805	6.7	205	Sa	1546	6.4	196
Su	2033	8.6	261	F	2357	3.2	97	O	2139	2.6	78
13 M	0234	2.4	73	24 F	0502	7.9	242	7 Su	0356	7.7	234
M	0842	9.5	289	F	0607	9.0	274	Su	1038	1.9	57
M	1502	2.0	61	F	1258	2.6	78	W	1656	6.9	209
M	2105	9.4	285	F	1855	7.5	228	W	2255	2.7	83
14 Tu	0313	1.9	59	24 F	0615	7.9	242	7 M	0523	6.7	203
Tu	0915	9.6	292	F	1250	2.4	73	M	1147	1.3	39
Tu	1530	1.6	49	F	1904	7.5	229	W	1832	7.7	235
Tu	2136	10.1	307	F	2357	3.2	97	W	2338	2.7	81
15 W	0352	1.6	50	25 F	0129	2.4	73	8 M	0054	2.7	81
W	0948	9.5	290	F	0718	7.4	225	M	0630	6.3	193
W	1600	1.2	37	F	1335	1.3	41	W	1245	1.3	40
W	2209	10.7	327	F	2044	9.2	257	W	1931	8.1	247
16 F	0517	2.0	60	25 F	0224	2.2	66	8 W	0013	2.6	79
F	1057	8.0	245	F	0806	7.3	223	W	0203	2.4	74
F	1657	1.1	34	F	1416	1.2	36	W	0734	6.2	190
F	2317	10.3	314	F	2044	9.2	257	W	1339	1.2	38
17 F	0517	2.0	60	26 F	0310	1.9	59	W	2022	8.5	259
F	1057	8.0	245	F	0849	7.3	223	W	0829	6.3	192
F	1657	1.1	34	F	1453	1.0	32	W	1426	1.1	34
F	2317	10.3	314	F	2120	9.4	288	W	2105	8.9	270
18 M	0154	2.3	71	26 F	0310	1.9	59	W	0258	2.1	65
M	0801	8.8	269	F	0755	8.3	252	W	0829	6.3	192
M	1423	1.7	53	F	1410	1.4	43	W	1508	0.9	28
M	2032	9.1	277	F	2026	9.4	285	W	2143	9.2	279
19 F	0244	2.0	62	27 F	0352	1.8	55	W	0344	1.9	58
F	0841	8.8	267	F	0837	8.3	254	W	0915	6.4	196
F	1455	1.4	44	F	1447	0.9	28	F	1508	0.9	28
F	2108	9.6	294	F	2104	10.2	310	W	2143	9.2	279
20 M	0244	1.9	57	27 F	0352	1.8	55	W	0422	1.7	53
M	0916	8.6	263	F	0929	7.3	221	W	0953	6.6	201
M	1526	1.3	39	F	1528	1.0	29	W	1546	0.7	21
M	2140	10.0	304	F	2154	9.6	294	W	2218	9.4	285
21 O	0326	1.9	57	28 F	0431	1.8	54	W	0456	1.6	50
O	0916	8.6	263	F	0917	8.3	253	W	1027	6.8	206
O	1526	1.3	39	F	1525	0.5	15	W	1622	0.5	16
O	2140	10.0	304	O	2144	10.8	329	O	2217	10.9	331
22 Tu	0404	1.8	55	28 F	0417	1.4	42	W	0526	1.6	48
Tu	0949	8.5	259	F	0959	8.2	250	W	1100	6.9	209
Tu	1556	1.2	36	F	1606	0.2	5	W	1656	0.4	13
Tu	2212	10.2	310	F	2227	11.2	341	W	2320	9.4	287
23 W	0441	1.8	56	29 F	0507	1.8	55	W	0548	1.1	33
W	1023	8.3	253	F	1044	8.0	244	W	1132	7.0	212
W	1626	1.1	35	F	1649	0.0	0	W	1729	0.4	13
W	2244	10.3	313	F	2313	11.3	344	W	2351	9.4	285
24 F	0517	2.0	60	30 F	0517	2.0	60	W	0623	1.3	41
F	1057	8.0	245	F	1057	8.0	245	W	1205	7.0	213
F	1657	1.1	34	F	1657	1.1	34	W	1803	0.5	16
F	2317	10.3	314	F	2317	10.3	314	W	2351	9.4	285

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

**Qinhuangdao, China, 2008**

## Times and Heights of High and Low Waters

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

# Qinhuangdao, China, 2008

Times and Heights of High and Low Waters

April					May					June													
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height									
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm									
<b>1</b> Tu	0236 1422	4.4 1.2	134 37	<b>16</b> W	0343 1433	4.0 1.6	123 48	<b>1</b> Th	0252 1319	4.1 2.0	125 60	<b>16</b> F	0217 1051 1337 1902	2.9 3.3 3.0 3.9	87 100 90 120	<b>1</b> Su	0235 1113 1320 1818	2.6 3.9 3.7 4.4	78 119 112 135	<b>16</b> M	0343 1809	1.8 4.9	54 149
<b>2</b> W	0326 1507	4.2 1.3	128 41	<b>17</b> Th	0143 0521 1521 2318	3.2 3.5 2.1 3.4	99 107 63 105	<b>2</b> F	0034 0407 1410 2242	3.5 3.7 2.3 3.6	107 113 71 110	<b>17</b> Sa	0316 1140 1406 1917	2.4 3.6 3.3 4.2	73 109 101 127	<b>2</b> M	0342 1821	2.0 4.8	60 147	<b>17</b> Tu	0429 1812	1.4 5.1	43 155
<b>3</b> Th	0419 1542 2354	3.9 1.5 3.5	120 47 107	<b>18</b> F	0307 1156 1557 2349	2.8 3.4 2.5 3.5	85 103 77 106	<b>3</b> Sa	0233 0557 1451 1938	3.1 3.4 2.8 3.6	93 103 84 111	<b>18</b> Su	0402 1218 1432 1937	2.0 3.8 3.6 4.3	62 116 109 131	<b>3</b> Tu	0442 1835	1.4 5.2	43 159	<b>18</b> W	0514 1847	1.1 5.2	34 160
<b>4</b> F	0214 0530 1614	3.3 3.6 1.8	102 111 56	<b>19</b> Sa	0410 1240 1617 2024	2.4 3.6 2.9 3.7	72 110 89 112	<b>4</b> Su	0341 1216 1522 1948	2.5 3.9 3.2 3.9	76 118 98 120	<b>19</b> M	0444 1250 1501 1951	1.7 4.0 3.7 4.4	52 121 114 135	<b>4</b> W	0536 1915	1.0 5.5	29 168	<b>19</b> Th	0559 1935	0.9 5.3	28 163
<b>5</b> Sa	0017 0338 0714 1642	3.5 3.0 3.3 2.2	108 91 102 68	<b>20</b> Su	0500 1317 1614 2044	2.0 3.7 3.2 3.8	62 114 97 117	<b>5</b> M	0444 1259 1546 2002	1.9 4.2 3.6 4.3	59 129 111 130	<b>20</b> Tu	0527 1318 1532 1941	1.4 4.1 3.9 4.6	42 126 118 140	<b>5</b> Th	0626 2007	0.6 5.7	18 175	<b>20</b> F	0642 2028	0.9 5.4	26 164
<b>6</b> Su	0050 0440 1319 ● 1703 2106	3.5 2.5 3.7 2.7 3.3	107 77 113 82 102	<b>21</b> M	0542 1349 1627 2100	1.7 3.8 3.3 3.9	53 116 102 120	<b>6</b> Tu	0542 1342 1607 2008	1.4 4.4 4.0 4.7	42 135 121 142	<b>21</b> W	0610 1346 1603 1957	1.1 4.2 3.9 4.8	33 128 120 146	<b>6</b> F	0713 2112	0.4 5.8	12 177	<b>21</b> Sa	0724 2115	0.9 5.3	27 163
<b>7</b> M	0542 1401 1717 2118	2.0 4.0 3.1 3.7	61 122 95 112	<b>22</b> Tu	0623 1416 1650 2108	1.4 3.9 3.4 4.1	44 118 104 125	<b>7</b> W	0634 1426 1630 2033	0.9 4.4 4.1 5.1	28 135 125 154	<b>22</b> Th	0654 1418 1633 2040	0.9 4.2 3.9 5.0	26 128 120 151	<b>7</b> Sa	0758 2210	0.4 5.7	11 174	<b>22</b> Su	0801 2155	1.0 5.2	31 160
<b>8</b> Tu	0639 1443 1727 2133	1.5 4.1 3.4 4.1	45 125 104 124	<b>23</b> W	0704 1442 1715 2119	1.1 3.9 3.5 4.3	35 119 106 132	<b>8</b> Th	0723 2122	0.6 5.3	18 162	<b>23</b> F	0738 1456 1701 2128	0.7 4.1 3.9 5.1	22 125 118 155	<b>8</b> Su	0842 2303	0.5 5.4	16 166	<b>23</b> M	0835 2235	1.2 5.1	38 156
<b>9</b> W	0730 1525 1743 2159	1.0 4.0 3.6 4.5	32 122 109 137	<b>24</b> Th	0747 1512 1740 2156	0.9 3.8 3.4 4.6	27 117 105 139	<b>9</b> F	0811 2215	0.4 5.5	11 167	<b>24</b> Sa	0821 2214	0.7 5.1	22 155	<b>9</b> M	0922 2357	0.9 5.0	27 151	<b>24</b> Tu	0903 1700 1908 2318	1.5 4.4 4.2 4.9	46 135 129 149
<b>10</b> Th	0819 2240	0.7 4.8	22 147	<b>25</b> F	0832 1549 1802 2240	0.8 3.7 3.4 4.7	23 112 104 144	<b>10</b> Sa	0858 2307	0.3 5.4	10 165	<b>25</b> Su	0901 2255	0.9 5.0	26 153	<b>10</b> Tu	0959 1801 2020	1.4 4.0 3.9	43 122 118	<b>25</b> W	0926 1735 2032	1.8 4.4 4.0	56 134 123
<b>11</b> F	0910 2328	0.6 5.0	17 153	<b>26</b> Sa	0919 2326	0.8 4.8	23 146	<b>11</b> Su	0946	0.5	14	<b>26</b> M	0937 2335	1.1 4.9	33 149	<b>11</b> W	0054 1029 1820 2220	4.4 2.0 4.0 3.6	133 62 123 109	<b>26</b> Th	0011 0946 1807 2155	4.5 2.3 4.3 3.7	138 70 132 113
<b>12</b> Sa	1003	0.5	15	<b>27</b> Su	1006	0.9	28	<b>12</b> M	0001 1034	5.2 0.8	158 25	<b>27</b> Tu	1009	1.4	42	<b>12</b> Th	0154 1052 1825	3.7 2.6 4.2	114 79 127	<b>27</b> F	0125 1006 1829 2318	4.1 2.8 4.3 3.3	124 85 130 100
<b>13</b> Su	0020 1102	5.1 0.6	154 19	<b>28</b> M	0011 1053	4.8 1.1	145 35	<b>13</b> Tu	0101 1123	4.7 1.3	144 40	<b>28</b> W	0017 1040 1853 2056	4.7 1.7 3.9 3.8	142 52 119 117	<b>13</b> F	0100 0303 0613 1757	3.1 3.2 2.9 4.4	95 97 89 133	<b>28</b> Sa	0246 0550 1604	3.5 3.2 4.6	108 97 139
<b>14</b> M	0119 1210	4.9 0.9	149 26	<b>29</b> Tu	0057 1139	4.6 1.4	141 42	<b>14</b> W	0215 1211 2037	4.1 1.9 3.6	126 58 109	<b>29</b> Th	0111 1116 1925 2308	4.3 2.1 3.9 3.6	131 64 119 110	<b>14</b> Sa	0207 1753	2.6 4.6	79 140	<b>29</b> Su	0100 1615	2.7 5.0	83 152
<b>15</b> Tu	0226 1328	4.5 1.2	138 36	<b>30</b> W	0149 1228	4.4 1.7	134 51	<b>15</b> Th	0012 0336 1258 1927	3.4 3.5 2.5 3.7	104 108 75 112	<b>30</b> F	0241 1157 1936	3.9 2.6 3.9	118 80 119	<b>15</b> Su	0257 1808	2.2 4.8	66 145	<b>30</b> M	0235 1642	2.1 5.4	65 165
												<b>31</b> Sa	0048 0422 0724 1806	3.1 3.4 3.1 4.1	96 104 94 125								

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

**Qinhuangdao, China, 2008**

## Times and Heights of High and Low Waters

July						August						September											
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height					
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm				
1 Tu	0341 1720	1.6 5.7	48 175	16 W	0417 1735	1.3 5.6	39 172	1 F	0513 1942	1.0 6.1	29 185	16 Sa	0523 1938	1.5 5.4	47 165	1 M	0608 1355 1709 2135	2.3 4.6 3.8 4.7	71 140 115 143	16 Tu	0539 1337 1712 2119 2340	2.7 4.5 3.4 4.3 3.9	82 136 105 130 118
2 W	0437 1806	1.1 5.9	34 181	17 Th	0503 1829	1.1 5.7	34 173	2 Sa	0556 2045	1.0 5.9	32 179	17 Su	0558 1345 1615 2032	1.7 4.8 4.5 5.2	53 146 138 160	2 Tu	0639 1427 1808 2218	2.8 4.5 3.4 4.3	86 137 104 131	17 W	0154 0556 1411 1809	4.4 3.1 4.3 3.0	134 94 131 91
3 Th	0527 1902	0.8 6.0	24 184	18 F	0545 1935	1.1 5.6	33 171	3 Su	0637 1434 1649 2138	1.3 4.8 4.5 5.5	41 147 138 169	18 M	0629 1414 1707 2118	2.0 4.9 4.3 5.0	61 148 132 153	3 W	0034 0248 0655 1902	3.9 4.5 3.2 3.1	119 138 99 93	18 Th	0234 0605 1019 1905	4.6 3.5 4.3 2.5	139 106 132 77
●				○																			
4 F	0613 2026	0.6 6.0	19 184	19 Sa	0625 2033	1.2 5.5	36 168	4 M	0714 1505 1747 2224	1.8 4.7 4.2 5.1	55 144 128 156	19 Tu	0656 1446 1759 2205	2.3 4.8 4.1 4.8	71 147 124 146	4 Th	0324 0642 1114 1952	4.3 3.5 4.5 2.8	132 107 137 84	19 F	0315 0612 1035 1957	4.6 3.8 4.7 2.1	139 115 144 64
5 Sa	0658 2128	0.6 5.9	19 180	20 Su	0701 1443 1655 2114	1.4 4.7 4.5 5.3	42 144 138 163	5 Tu	0745 1535 1852 2308	2.3 4.6 3.9 4.7	71 141 118 142	20 W	0715 1520 1858 2255	2.7 4.7 3.7 4.5	83 143 113 137	5 F	0354 0644 1139 2040	4.1 3.6 4.8 2.5	126 109 145 75	20 Sa	0358 0623 1101 2050	4.4 3.9 5.2 1.8	134 119 158 54
6 Su	0740 2221	0.9 5.6	26 171	21 M	0733 1518 1745 2155	1.6 4.8 4.5 5.2	48 146 136 158	6 W	0805 1604 1958 2349	2.8 4.6 3.5 4.2	85 140 108 128	21 Th	0724 1553 1956 2347	3.1 4.5 3.3 4.1	95 138 100 126	6 Sa	0422 0657 1205 2134	3.9 3.6 5.0 2.2	120 109 153 67	21 Su	1139 2147	5.6 1.5	170 47
7 M	0818 1617 1822 2310	1.2 4.5 4.3 5.2	38 137 131 157	22 Tu	0801 1553 1841 2241	1.9 4.8 4.3 5.0	57 146 132 152	7 Th	0802 1629 2058	3.1 4.6 3.2	95 139 99	22 F	0158 0411 0726 1211 2053	3.8 4.3 3.5 4.6 2.9	115 130 106 141 87	7 Su	0459 0706 1236 2240	3.8 3.6 5.3 2.0	115 110 162 62	22 M	1225 2253	5.8 1.4	178 44
8 Tu	0850 1645 1938 2357	1.8 4.4 4.0 4.6	54 135 122 141	23 W	0822 1627 1946 2333	2.2 4.7 4.0 4.7	68 144 123 142	8 F	0034 0750 1324 2201	3.8 3.3 4.8 2.9	116 101 145 89	23 Sa	0500 0731 1235 2155	4.1 3.7 5.2 2.5	125 113 157 76	8 M	1316	5.5	169	23 Tu	1319	5.9	180
9 W	0913 1709 2102	2.3 4.4 3.7	70 135 112	24 Th	0834 1700 2052	2.6 4.6 3.7	80 140 112	9 Sa	0540 0747 1349 2318	3.5 3.4 5.1 2.6	108 105 155 80	24 Su	1311 2308	5.6 2.2	171 67	9 Tu	0010 1403	1.9 5.7	57 173	24 W	0013 1421	1.4 5.8	43 177
10 Th	0043 0920 1728 ● 2230	4.1 2.8 4.5 3.3	124 85 137 101	25 F	0032 0840 1727 2159	4.2 3.1 4.5 3.2	129 94 137 98	10 Su	1414	5.4	164	25 M	1358	6.0	183	10 W	0144 1453	1.7 5.6	52 172	25 Th	0143 1529	1.4 5.5	42 167
11 F	0132 0858 1528	3.5 3.1 4.6	108 95 141	26 Sa	0135 0842 1416 2316	3.7 3.5 5.0 2.8	114 106 151 85	11 M	0050 1448	2.3 5.6	69 172	26 Tu	0045 1450	1.9 6.2	59 189	11 Th	0252 1545	1.6 5.5	49 168	26 F	0247 1700	1.4 5.1	44 154
12 Sa	0016 1547	2.9 4.9	89 150	27 Su	1445	5.4	166	12 Tu	0210 1529	1.9 5.8	57 177	27 W	0217 1545	1.6 6.2	49 189	12 F	0338 1641	1.6 5.2	50 160	27 Sa	0337 1151 1416 1842	1.7 4.2 4.0 4.6	52 127 122 141
13 Su	0131 1600	2.5 5.2	75 157	28 M	0101 1523	2.4 5.9	72 179	13 W	0314 1617	1.5 5.8	47 178	28 Th	0318 1648	1.3 6.0	41 184	13 Sa	0415 1800	1.8 5.0	55 151	28 Su	0419 1212 1529 1951	2.1 4.1 3.5 4.2	65 126 106 129
14 M	0233 1617	2.0 5.4	61 164	29 Tu	0231 1608	1.8 6.1	56 187	14 Th	0404 1711	1.4 5.8	42 176	29 F	0408 1836	1.3 5.8	39 176	14 Su	0447 1244 1526 1923	2.0 4.5 4.2 4.7	62 137 129 144	29 M	0455 1242 1629	2.6 4.1 3.0	80 125 92
15 Tu	0328 1650	1.6 5.5	49 169	30 W	0334 1658	1.4 6.2	42 190	15 F	0446 1819	1.4 5.6	42 171	30 Sa	0452 1300 1506 1952	1.4 4.8 4.6 5.5	44 145 140 167	15 M	0515 1306 1620 2025	2.3 4.5 3.9 4.5	71 137 118 137	30 Tu	0113 0522 0907 1724	4.4 3.1 4.0 2.6	133 94 123 80
				31 Th	0426 1757	1.1 6.2	33 189					31 Sa	0532 1325 1610 2048	1.8 4.7 4.2 5.1	55 142 127 155								

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

# Qinhuangdao, China, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 W 0153	4.4	133	16 Th 0138	4.3	130	1 Sa 0230	3.7	114	16 Su 0852	5.0	151
0524	3.4	105	0437	3.5	106	0448	3.4	103	1951	-0.2	-6
0930	4.3	130	0856	4.3	130	0905	4.5	136	M 0906	4.2	127
1812	2.3	69	1814	1.6	49	1931	0.6	17	2006	-0.1	-3
2 Th 0227	4.3	130	17 F 0219	4.4	133	2 Su 0300	3.6	110	17 M 0944	5.1	154
0520	3.6	110	0453	3.7	114	0514	3.3	101	2037	-0.3	-8
0952	4.4	135	0911	4.7	142	0939	4.6	140	Tu 0950	4.1	124
1856	2.0	60	1906	1.1	35	2016	0.4	13	2045	0.1	2
3 F 0257	4.2	127	18 Sa 0301	4.3	131	3 M 0337	3.4	105	18 Tu 1036	4.9	150
0535	3.6	111	0513	3.9	118	0537	3.2	99	2123	-0.1	-4
1012	4.6	140	0936	5.0	153	1021	4.7	143	W 1028	3.9	120
1940	1.6	50	1956	0.8	25	2102	0.5	14	Th 2119	0.3	8
4 Sa 0324	4.1	124	19 Su 1015	5.3	162	4 Tu 1103	4.7	142	18 W 1128	4.6	141
0556	3.6	110	2045	0.6	19	2148	0.6	19	2207	0.2	6
1033	4.8	147									
2026	1.4	43									
5 Su 0355	3.9	119	20 M 1102	5.5	167	5 W 1143	4.5	137	20 Th 1222	4.1	125
0615	3.6	109	2137	0.6	17	2232	0.9	27	2249	0.7	21
1104	5.0	153									
2116	1.3	39									
6 M 1144	5.2	158	21 Tu 1151	5.4	166	6 Th 1221	4.2	129	21 F 1328	3.4	104
2213	1.3	39	2232	0.7	20	2312	1.2	36	2329	1.2	38
7 Tu 1228	5.2	159	22 W 1247	5.2	158	7 F 1257	3.9	119	22 Sa 0719	3.0	90
2323	1.4	42	2333	0.9	27	2351	1.5	45	1143	2.7	81
8 W 1317	5.1	156	23 Th 1355	4.7	144	8 Sa 1343	3.5	107	1459	2.8	84
9 Th 0051	1.5	47	24 F 0041	1.2	38	9 Su 0031	1.8	55	0649	3.0	91
1409	4.9	149	1521	4.2	127	0827	3.2	99	1053	2.5	77
						1234	3.1	93	1303	2.6	80
						1530	3.1	94	2256	1.6	48
10 F 0158	1.7	51	25 Sa 0148	1.7	52	10 M 0114	2.1	65	2004	1.8	55
1503	4.6	140	1027	3.4	105	0757	3.3	100	0651	3.1	94
			1322	3.3	100	1442	2.5	76	1402	2.0	62
			1659	3.6	109	1732	2.7	83	1629	2.2	66
11 Sa 0242	1.9	57	26 Su 0239	2.2	66	2025	2.4	74	1912	2.0	60
1603	4.2	129	1043	3.4	105	11 Tu 0708	3.4	105	24 M 0624	3.4	103
			1447	2.7	81	1532	1.9	59	1458	1.5	45
			2332	3.4	104	2359	3.3	100	9 Tu 0537	3.1	96
12 Su 0315	2.1	64	27 M 0314	2.6	80	12 W 0229	2.9	88	24 W 0535	3.5	108
1132	3.9	118	0735	3.6	110	0720	3.7	113	1533	0.5	15
1433	3.6	111	1546	2.1	65	1628	1.3	41			
1742	3.9	119									
13 M 0341	2.4	73	28 Tu 0018	3.6	110	13 Th 0040	3.6	110	27 F 0610	4.2	127
1147	3.9	118	0332	3.0	92	0258	3.2	98	1723	0.5	-1
1531	3.2	97	0757	3.9	118	0733	4.0	123	0721	3.9	120
1910	3.6	111	1637	1.7	53	O 1723	0.8	25	1756	0.2	5
2157	3.3	100									
14 Tu 0017	3.6	111	29 W 0057	3.7	114	14 F 0121	3.8	115	0649	4.4	135
0403	2.7	83	0341	3.2	99	0327	3.4	105	1812	-0.4	-11
0834	3.7	114	0820	4.0	123	0737	4.4	134			
1623	2.7	81	● 1722	1.4	43	1815	0.4	11			
15 W 0057	4.0	122	30 Th 0132	3.8	115	15 Sa 0807	4.7	144	0740	4.1	124
0422	3.1	95	0358	3.4	103	1904	0.0	1	1840	0.0	-1
0843	4.0	121	0840	4.2	127				0735	4.6	140
O 1719	2.1	65	1805	1.1	33				1858	-0.6	-18
31 F 0201	3.8	115									
0421	3.4	104									
0851	4.3	131									
1847	0.8	25									

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Tanggu (Xingang), China, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0301	3.7	114	16 W 0236	3.0	90	1 F 0337	5.8	176	1 Sa 0354	5.8	178
0905	10.4	316	W 0822	10.8	329	F 0923	10.0	304	Sa 0908	10.4	318
1549	4.1	124	1512	3.2	97	1637	3.2	99	1644	2.4	73
2144	9.1	276	● 2049	9.9	301	2325	9.1	276	2320	9.9	303
2 W 0351	4.7	142	17 Th 0325	3.8	117	2 Sa 0439	6.6	200	17 Su 0515	6.8	206
0952	10.0	306	0906	10.7	325	1018	9.6	294	1014	9.9	303
1647	3.8	115	1606	2.8	85	1754	3.2	99	1811	2.5	77
2307	9.0	275	2206	9.7	297						
3 Th 0453	5.5	168	18 F 0424	4.9	149	3 Su 0045	9.3	284	18 M 0053	10.1	308
1043	9.8	298	0956	10.4	318	0605	7.0	213	0652	7.0	213
1751	3.4	103	1709	2.5	76	1125	9.4	287	1143	9.7	295
			2333	9.8	300	1912	3.0	91	1939	2.3	71
4 F 0026	9.3	283	19 Sa 0537	5.8	177	4 M 0150	9.8	299	19 Tu 0211	10.5	319
0604	6.1	187	1052	10.1	309	0731	6.9	209	0817	6.5	199
1138	9.6	295	1823	2.2	68	1242	9.4	287	1318	9.9	301
1855	3.0	90				2016	2.6	79	2051	2.0	61
5 Sa 0131	9.6	294	20 Su 0054	10.1	309	5 Tu 0240	10.4	317	20 W 0303	10.8	329
0714	6.4	195	0659	6.4	194	0835	6.3	193	0917	5.7	175
1236	9.7	295	1156	9.9	302	1348	9.6	293	1430	10.3	314
1953	2.5	76	1941	1.9	58	2108	2.2	67	2148	1.8	55
6 Su 0223	10.0	305	21 M 0205	10.5	320	6 W 0320	10.8	330	21 Th 0342	11.0	336
0812	6.4	195	0819	6.4	196	0925	5.7	175	1005	5.0	151
1328	9.8	298	1307	9.9	302	1438	9.9	302	1524	10.7	325
2044	2.1	65	2052	1.5	47	2154	1.9	59	● 2233	1.9	57
7 M 0304	10.3	315	22 Tu 0305	10.8	328	7 Th 0357	11.1	337	22 F 0414	11.2	340
0859	6.2	189	0922	6.2	188	1008	5.2	159	1047	4.3	132
1411	9.9	301	1411	10.1	308	1519	10.2	311	1606	10.8	330
2131	1.9	57	● 2154	1.3	39	● 2234	1.8	54	2310	2.1	65
8 Tu 0339	10.6	324	23 W 0352	10.9	332	8 F 0431	11.1	338	23 Sa 0445	11.2	341
0941	5.9	181	1015	5.7	175	1048	4.8	145	1125	3.9	118
1446	9.9	303	1509	10.3	314	1557	10.4	318	1643	10.9	331
● 2213	1.7	53	2247	1.2	38	2310	1.7	53	2342	2.5	76
9 W 0414	10.9	331	24 Th 0433	11.0	334	9 Sa 0502	11.0	335	24 M 0514	11.2	341
1022	5.7	173	1101	5.2	160	1127	4.4	133	1159	3.5	107
1519	10.0	304	1601	10.5	319	1635	10.6	323	1720	10.8	330
2251	1.7	52	2331	1.4	43	2345	1.8	55			
10 Th 0448	11.0	334	25 F 0510	11.0	335	10 M 0531	10.9	333	25 W 0010	2.9	87
1102	5.4	165	1144	4.8	145	1205	4.0	121	0542	11.2	341
1553	10.1	307	1648	10.5	319	1715	10.7	326	1230	3.2	99
2327	1.7	52				1756	10.8	329	1756	2.8	84
11 F 0522	10.9	333	26 Sa 0008	1.7	52	11 M 0020	1.9	59	10 Tu 0456	11.2	340
1142	5.2	158	0545	11.0	336	0601	11.0	334	1140	3.1	95
1631	10.1	309	Sa 1224	4.3	132	1242	3.5	108	1705	11.4	347
			1732	10.4	317	1757	10.8	328	2359	2.8	84
12 Sa 0000	1.7	52	27 Su 0040	2.1	64	12 Tu 0056	2.2	68	12 W 0106	3.8	116
0556	10.8	330	0620	11.0	336	0631	11.1	338	0637	11.1	338
1222	4.9	149	1301	4.0	121	1320	3.0	92	1331	2.8	84
1714	10.2	312	1816	10.2	312	1842	10.8	329	1915	10.5	320
13 Su 0035	1.8	54	28 M 0110	2.6	78	13 W 0133	2.8	85	27 F 0037	3.2	99
0630	10.8	328	0654	11.0	335	0704	11.2	341	0553	11.3	344
1302	4.6	139	1337	3.7	112	1400	2.6	78	1255	2.2	67
1801	10.2	312	1901	10.0	306	1932	10.7	327	1831	11.6	353
14 M 0112	1.9	59	29 Tu 0141	3.1	96	14 Th 0213	3.6	110	14 W 0136	4.4	135
0705	10.8	328	0727	10.8	330	0739	11.1	339	0705	11.0	335
1342	4.1	126	1412	3.4	104	1444	2.3	69	1407	2.7	83
1851	10.2	311	1950	9.8	298	● 2031	10.5	320	2002	10.2	310
15 Tu 0152	2.3	70	30 W 0214	3.9	119	15 F 0258	4.7	142	15 Sa 0240	5.8	177
0741	10.8	329	0802	10.6	323	0819	10.9	331	0743	10.9	332
1425	3.6	111	1451	3.2	99	1537	2.2	68	1520	2.2	67
1946	10.1	307	● 2048	9.4	288	2145	10.1	309	2137	10.6	322
16 Th 0253	4.8	147	31 Th 0839	10.3	314				31 F 0311	7.0	212
			1537	3.2	98	1539	9.1	278	M 0815	10.1	308
			2159	9.1	278				1559	3.8	115
									2304	10.2	312

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Tanggu (Xingang), China, 2008

Times and Heights of High and Low Waters

April					May					June													
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height									
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm									
<b>1</b> Tu	0437 0941 1723	7.3 9.5 4.1	223 289 124	<b>16</b> W	0024 0640 1208 1907	10.9 6.2 10.0 3.8	333 189 306 116	<b>1</b> Th	0545 1105 1758	6.5 9.8 4.5	197 300 138	<b>16</b> F	0030 0710 1308 1928	11.5 4.6 11.0 5.1	350 139 335 156	<b>1</b> Su	0006 0700 1304 1926	11.6 4.0 11.5 5.7	355 123 352 174	<b>16</b> M	0108 0809 1437 2040	11.4 3.3 12.1 7.1	348 100 370 215
<b>2</b> W	0026 0627 1131 1854	10.5 6.9 9.4 4.0	320 211 286 121	<b>17</b> Th	0122 0746 1328 2008	11.2 5.2 10.6 3.8	342 157 323 117	<b>2</b> F	0027 0655 1232 1910	11.0 5.5 10.4 4.5	336 169 317 137	<b>17</b> Sa	0116 0801 1407 2023	11.5 3.8 11.5 5.3	350 115 352 163	<b>2</b> M	0052 0754 1401 2029	11.7 3.2 12.2 6.0	357 99 372 184	<b>17</b> Tu	0152 0857 1518 2125	11.4 2.9 12.4 7.2	348 89 377 218
<b>3</b> Th	0128 0741 1302 2000	10.9 6.0 9.9 3.6	331 183 303 110	<b>18</b> F	0205 0837 1425 2058	11.4 4.2 11.2 4.0	348 127 340 121	<b>3</b> Sa	0113 0749 1335 2009	11.3 4.6 11.1 4.5	343 139 339 136	<b>18</b> Su	0156 0845 1454 2110	11.5 3.2 12.0 5.6	349 98 365 172	<b>3</b> Tu	0134 0846 1453 2126	11.7 2.6 12.8 6.3	357 78 389 193	<b>18</b> W	0231 0942 1552 2204	11.5 2.7 12.5 7.2	350 83 382 219
<b>4</b> F	0212 0832 1404 2051	11.2 5.0 10.7 3.3	340 152 325 102	<b>19</b> Sa	0240 0919 1509 2140	11.5 3.5 11.6 4.2	350 106 353 129	<b>4</b> Su	0151 0835 1425 2101	11.4 3.6 11.7 4.6	348 111 358 139	<b>19</b> M	0231 0925 1532 2151	11.4 2.9 12.1 5.9	347 87 370 181	<b>4</b> W	0215 0939 1543 2219	11.7 2.1 13.1 6.6	356 63 399 201	<b>19</b> Th	0303 1024 1623 2239	11.5 2.7 12.6 7.1	350 81 385 217
<b>5</b> Sa	0247 0915 1451 2135	11.3 4.1 11.3 3.2	345 126 343 99	<b>20</b> Su	0310 0956 1546 2217	11.4 3.1 11.8 4.6	348 93 359 139	<b>5</b> M	0224 0918 1510 2149	11.5 3.0 12.2 4.8	351 90 373 147	<b>20</b> Tu	0302 1003 1605 2225	11.3 2.7 12.2 6.2	345 82 371 190	<b>5</b> Th	0256 1033 1632 2310	11.6 1.8 13.3 6.8	355 54 404 206	<b>20</b> F	0331 1101 1655 2315	11.5 2.7 12.8 7.0	350 83 390 214
<b>6</b> Su	0317 0954 1531 2217	11.4 3.4 11.6 3.4	346 105 355 103	<b>21</b> M	0337 1030 1618 2249	11.3 2.9 11.8 5.0	344 87 360 151	<b>6</b> Tu	0256 1001 1554 2236	11.5 2.4 12.6 5.2	350 73 384 159	<b>21</b> W	0329 1039 1635 2257	11.3 2.7 12.2 6.5	343 81 371 197	<b>6</b> F	0341 1128 1721 2359	11.6 1.6 13.2 6.8	355 50 403 207	<b>21</b> Sa	0400 1136 1729 2352	11.5 2.8 12.9 6.9	350 86 393 209
<b>7</b> M	0344 1033 1610 2258	11.4 2.9 11.9 3.7	346 89 363 113	<b>22</b> Tu	0402 1101 1648 2318	11.2 2.7 11.8 5.3	341 83 359 162	<b>7</b> W	0328 1046 1640 2323	11.4 2.0 12.8 5.7	348 60 390 173	<b>22</b> Th	0352 1114 1706 2327	11.3 2.7 12.2 6.6	343 82 373 200	<b>7</b> Sa	0431 1221 1810	11.6 1.7 13.1	355 51 398	<b>22</b> Su	0434 1207 1804	11.5 2.9 12.9	351 88 393
<b>8</b> Tu	0412 1111 1651 2339	11.3 2.4 12.1 4.1	345 74 370 126	<b>23</b> W	0425 1131 1719 2345	11.2 2.7 11.8 5.6	340 81 359 171	<b>8</b> Th	0403 1134 1727	11.4 1.7 12.9	346 52 392	<b>23</b> F	0417 1146 1741 2359	11.3 2.8 12.3 6.6	343 84 376 202	<b>8</b> Su	0047 0527 1309 1900	6.7 11.6 355 2.0 60	203 355 192 392	<b>23</b> M	0030 0513 1238 1840	6.7 11.5 3.0 12.8	204 352 91 391
<b>9</b> W	0442 1152 1735	11.3 2.0 12.3	344 61 374	<b>24</b> Th	0447 1201 1753	11.2 2.6 11.8	342 80 360	<b>9</b> F	0008 0443 1225 1817	6.1 11.3 1.6 12.8	185 345 49 389	<b>24</b> Sa	0445 1216 1818	11.3 2.8 12.4	344 86 379	<b>9</b> M	0135 0628 1355 1952	6.4 11.5 2.5 12.7	196 351 75 386	<b>24</b> Tu	0109 0557 1312 1917	6.5 11.5 3.2 12.7	198 352 97 387
<b>10</b> Th	0020 0514 1235 1823	4.7 11.3 5.2 12.3	144 344 52 374	<b>25</b> F	0013 0513 1232 1831	5.8 11.3 2.6 11.8	178 343 80 360	<b>10</b> Sa	0054 0529 1316 1911	6.4 11.3 1.7 12.5	195 344 53 380	<b>25</b> Su	0036 0520 1246 1859	6.7 11.3 2.9 12.4	203 343 88 378	<b>10</b> Tu	0226 0732 1442 2045	6.1 11.3 3.2 12.4	187 344 98 379	<b>25</b> W	0150 0647 1352 1956	6.2 11.5 3.5 12.6	189 350 106 383
<b>11</b> F	0102 0551 1322 1915	5.3 11.3 1.6 12.0	163 343 50 367	<b>26</b> Sa	0045 0542 1303 1914	6.1 11.3 2.7 11.7	185 343 83 358	<b>11</b> Su	0142 0625 1408 2012	6.6 11.2 2.2 12.1	202 340 67 368	<b>26</b> W	0122 0841 1531 2137	5.8 11.0 4.1 12.2	176 334 125 372	<b>26</b> Th	0234 0742 1437 2038	5.8 11.4 4.0 12.5	177 346 122 380				
<b>12</b> Sa	0145 0633 1413 2017	6.0 11.1 1.9 11.6	183 339 58 353	<b>27</b> Su	0211 0618 1338 2004	6.3 11.1 3.0 11.5	193 339 90 351	<b>12</b> M	0237 0731 1503 2121	6.7 10.9 2.9 11.7	205 331 87 358	<b>27</b> Tu	0201 0651 1404 2032	6.7 10.9 3.4 11.9	204 333 104 363	<b>12</b> W	0421 0958 1628 2230	5.4 10.8 5.0 11.9	164 328 153 363	<b>27</b> F	0322 0846 1528 2124	5.3 11.2 4.7 12.4	163 341 144 377
<b>13</b> Su	0236 0726 1513 2136	6.7 10.8 2.5 11.1	203 329 76 338	<b>28</b> M	0205 0701 1423 2104	6.7 10.8 3.3 11.2	204 328 102 342	<b>13</b> Tu	0344 0852 1606 2231	6.6 10.5 3.6 11.5	201 320 111 351	<b>28</b> W	0253 0752 1458 2126	6.6 10.6 3.9 11.6	201 324 119 355	<b>13</b> F	0522 1124 1733 2325	4.9 10.9 5.8 11.6	149 331 178 355	<b>28</b> Sa	0415 1001 1628 2214	4.8 11.2 5.6 12.3	146 340 170 374
<b>14</b> M	0345 0841 1626 2307	7.1 10.3 3.2 10.8	216 313 97 330	<b>29</b> Tu	0301 0758 1521 2216	7.0 10.2 3.8 11.0	212 312 117 334	<b>14</b> W	0457 1020 1715 2335	6.2 10.3 4.3 11.5	188 313 132 349	<b>29</b> Th	0353 0908 1601 2222	6.3 10.4 4.5 11.5	191 317 136 351	<b>14</b> Sa	0622 1241 1841	4.3 11.3 6.5	132 344 197	<b>29</b> Su	0513 1123 1736 2306	4.2 11.4 6.4 12.1	128 348 194 370
<b>15</b> Tu	0515 1020 1750	7.0 9.9 3.6	212 302 111	<b>30</b> W	0419 0924 1637 2327	7.0 9.8 4.3 10.9	213 298 132 332	<b>15</b> Th	0608 1153 1824	5.4 10.5 4.8	165 319 147 332	<b>30</b> F	0458 1035 1710 2316	5.7 10.5 5.0 11.5	174 319 152 352	<b>15</b> Sa	0019 0717 1345 1819	11.5 3.8 11.8 5.4	350 364 359 164	<b>30</b> M	0617 1239 1849 2359	3.6 11.9 7.0 12.0	109 364 214 366
								<b>31</b> Sa	0601 1157 1819	4.9 10.9 5.4	150 332 164												

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Tanggu (Xingang), China, 2008

Times and Heights of High and Low Waters

July				August				September									
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height						
h m	ft	cm															
1 Tu 0724 1346 2004	3.0 12.5 7.4	91 382 225	16 W 0113 0833 1500 2101	11.5 3.2 12.5 7.9	349 98 381 242	1 F 0149 0930 1534 2158	12.2 2.2 13.3 7.1	372 67 406 216	16 Sa 0233 0946 1545 2204	11.8 3.1 13.2 6.6	360 95 402 200	1 M 0346 1051 1624 2309	13.0 2.9 13.2 4.5	397 87 403 137	16 Tu 0336 1030 1605 2247	12.5 3.6 12.6 4.3	381 110 385 131
2 W 0056 0828 1445 2110	11.9 2.5 13.0 7.4	363 75 397 227	17 Th 0204 0923 1535 2145	11.6 2.9 12.8 7.5	354 89 391 230	2 Sa 0251 1025 1616 2246	12.6 2.0 13.5 6.4	383 61 410 195	17 Su 0313 1025 1616 2241	12.2 3.0 13.2 6.0	371 92 403 183	2 Tu 0427 1128 1654 2346	13.1 3.3 13.2 4.1	398 101 401 125	17 W 0411 1104 1630 2322	12.7 3.8 12.6 3.8	386 116 385 116
3 Th 0151 0931 1539 2208	11.9 2.0 13.3 7.3	364 62 406 223	18 F 0246 1008 1608 2224	11.7 2.8 13.1 7.2	358 85 399 218	3 Su 0346 1112 1653 2331	12.8 2.1 13.5 5.7	390 64 411 175	18 M 0350 1059 1644 2317	12.4 3.1 13.1 5.5	378 93 400 169	3 W 0506 1201 1723	13.0 3.9 13.1	395 118 398	18 Th 0446 1139 1655 2357	12.8 4.1 12.7 3.3	389 125 387 101
4 F 0245 1030 1627 2300	12.1 1.8 13.4 7.1	368 55 409 215	19 Sa 0321 1047 1640 2302	11.8 2.8 13.2 6.8	361 84 403 207	4 M 0435 1152 1729	12.9 2.4 13.5	393 74 410	19 Tu 0425 1131 1711 2352	12.6 3.2 13.1 5.1	383 98 398 156	4 Th 0020 0545 1232 1752	3.8 12.8 4.5 12.9	116 391 394	19 F 0525 1215 1723	12.9 4.6 12.8	392 139 389
5 Sa 0339 1124 1712 2348	12.2 1.7 13.4 6.6	372 53 409 202	20 Su 0356 1121 1712 2340	11.9 2.9 13.2 6.5	364 87 403 197	5 Tu 0012 0520 1228 1803	5.2 12.8 3.0 13.4	159 391 409 409	20 W 0501 1204 1738	12.6 3.4 13.1	385 105 398	5 F 0053 0624 1303 1820	3.6 12.6 5.2 12.8	109 384 389	20 Sa 0034 0608 1253 1755	2.9 12.9 5.2 12.8	87 393 157 390
6 Su 0434 1211 1755	12.3 1.9 13.4	375 58 407	21 M 0432 1153 1743	12.0 3.0 13.1	367 90 400	6 W 0051 0605 1303 1837	4.8 12.7 3.6	145 386 406	21 Th 0027 0540 1238 1806	4.6 12.7 3.8	141 141 402	6 Sa 0126 0706 1332 1848	3.4 12.3 6.0 12.6	105 375 384	21 Su 0114 0656 1332 1830	2.5 12.8 5.9 12.7	76 390 180 387
7 M 0033 0529 1253 1837	6.2 12.3 2.3 13.3	188 374 70 405	22 Tu 0016 0510 1225 1813	6.1 12.1 3.1 13.1	187 369 98 398	7 Th 0129 0651 1337 1911	4.4 12.4 4.4 13.1	135 378 400	22 F 0102 0622 1313 1836	4.1 12.7 4.3 13.3	125 387 405	7 Su 0202 0753 1404 1918	3.4 11.9 6.8 12.3	105 362 208 376	22 M 0200 0752 1416 1912	2.4 12.5 6.8 12.4	73 380 206 378
8 Tu 0118 0622 1332 1918	5.7 12.1 2.9 13.2	174 370 88 402	23 W 0052 0552 1258 1844	5.8 12.2 3.3 13.1	176 371 102 398	8 F 0205 0740 1411 1946	4.2 12.1 5.3 12.8	128 369 391 391	23 Sa 0140 0709 1351 1910	3.6 12.7 5.1 13.3	110 386 405	8 M 0243 0854 1439 1952	3.7 11.4 7.6 11.9	112 347 233 364	23 Tu 0253 0903 1510 2006	2.7 11.9 7.6 11.9	81 363 232 362
9 W 0201 0716 1410 2000	5.3 11.9 3.7 13.0	162 362 112 396	24 Th 0129 0636 1334 1917	5.3 12.2 3.7 13.1	162 371 114 400	9 Sa 0244 0837 1449 2022	4.1 11.7 6.4 12.4	124 357 395 379	24 Su 0222 0804 1433 1949	3.2 12.5 6.1 13.1	98 380 385 398	9 Tu 0333 1015 1528 2040	4.1 11.0 8.4 11.3	126 336 257 345	24 W 0401 1041 1634 2131	3.2 11.5 8.1 11.2	97 352 248 342
10 Th 0246 0814 1451 2043	5.0 11.6 4.6 12.7	151 353 141 386	25 F 0208 0725 1414 1953	4.8 12.1 4.4 13.1	146 369 400	10 Su 0329 0949 1532 2104	4.1 11.3 7.5 12.0	125 345 229 366	25 M 0312 0912 1524 2035	3.1 12.1 7.2 12.6	95 369 220 384	10 W 0441 1147 1701 2210	4.6 11.1 8.9 10.7	139 338 271 326	25 Th 0528 1215 1815 2320	3.6 11.6 7.8 11.0	110 354 239 336
11 F 0332 0922 1539 2127	4.7 11.3 5.7 12.3	144 344 175 374	26 M 0250 0822 1458 2033	4.3 11.9 5.3 13.0	130 364 397	11 M 0426 1116 1633 2159	4.3 11.2 8.5 11.5	130 340 258 352	26 Tu 0413 1044 1637 2140	3.3 11.8 8.2 12.0	100 361 250 367	11 Th 0614 1302 1900 2353	4.7 11.5 8.5 10.6	143 352 258 322	26 F 0657 1325 1938 2320	3.6 11.9 6.8 11.0	110 364 207 336
12 Sa 0425 1042 1636 2215	4.5 11.2 6.8 11.8	137 340 209 361	27 W 0339 0931 1551 2120	3.9 11.8 6.4 12.7	118 359 395 388	12 Tu 0541 1238 1803 2309	4.3 11.4 9.0 11.2	132 347 365 342	27 F 0534 1221 1815 2309	3.4 12.0 8.5 11.6	105 365 220 355	12 W 0732 1357 2010 2036	4.4 12.1 7.5 5.5	134 368 228 169	27 M 0058 0807 1413 2036	11.5 3.4 12.3 169	349 104 375
13 Su 0525 1205 1745 2310	4.3 11.3 7.7 11.5	131 345 235 351	28 M 0438 1057 1700 2216	3.6 11.8 7.4 12.3	110 360 227 376	13 W 0701 1345 1935 2038	4.1 11.9 8.7 8.0	126 362 273 245	28 Th 0705 1341 1948 2053	3.3 12.4 8.0 7.0	101 377 244 214	13 Sa 0119 0830 1437 2056	11.0 4.0 12.5 6.4	336 121 381 196	28 Tu 0206 0902 1450 2123	12.1 3.3 12.5 4.5	368 101 382 136
14 M 0631 1317 1900	4.0 11.7 4.6 8.2	122 356 249	29 Tu 0548 1225 1823 2322	3.4 12.1 8.1 12.0	103 369 366	14 Th 0032 0807 1434 2038	11.2 3.7 12.5 8.0	341 314 380 245	29 F 0045 0821 1437 2053	11.8 2.9 12.8 7.0	360 88 390 214	14 Su 0216 0915 1510 2135	11.6 3.6 12.7 5.5	355 111 386 169	29 M 0257 0947 1521 2205	12.5 3.5 12.6 3.7	381 107 383 114
15 Tu 0013 0735 1416 2007	11.4 3.6 12.1 8.2	348 110 369 249	30 W 0709 1341 1952 2102	3.1 12.6 8.2 7.8	93 384 250 237	15 F 0142 0901 1512 2124	11.5 3.4 12.9 7.3	349 303 394 222	30 Sa 0201 0921 1519 2144	12.3 2.6 13.1 6.0	375 79 182 182	15 Tu 0259 0921 1519 2212	12.2 2.6 13.1 4.8	371 79 147 147	30 M 0339 1026 1549 2242	12.7 3.9 12.5 3.3	387 118 380 101
31 Th 0038 0824 1444 2102	12.0 2.6 13.0 7.8	365 79 397 237				31 Th 0101 1553 2228	12.0 2.6 5.2	365 79 157	31 Su 0259 1010 1553 2228	12.8 2.6 5.2	389 79 157						

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Tanggu (Xingang), China, 2008

Times and Heights of High and Low Waters

October				November				December					
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height		
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm		
1 W	0415	12.7	388	16 Th	0351	12.4	377	1 Sa	0505	11.8	360		
1101	4.4	133		1035	4.6	139	1133	6.0	182	1139	5.9	179	
1615	12.3	376		1542	11.9	364	1623	11.2	342	1609	11.1	338	
2316	3.1	94		2249	2.5	77	2351	2.4	72	2359	1.2	36	
2 Th	0450	12.6	385	17 F	0429	12.5	382	2 Su	0539	11.7	357		
1134	4.9	149		1115	4.9	150	1200	6.2	188	1225	6.1	185	
1641	12.2	372		1610	11.9	364	1649	11.3	343	1654	11.0	336	
2348	3.0	90		2328	2.1	64				0001	2.2	67	
3 F	0524	12.5	381	18 Sa	0511	12.7	386	3 M	0021	2.5	75		
1203	5.4	165		1155	5.4	164	0616	11.6	354	0050	1.3	39	
1705	12.1	369		1641	11.9	364	1230	6.3	192	0642	11.7	357	
						1719	11.2	341	1313	6.2	188		
4 Sa	0019	2.9	87	19 Su	0011	1.8	55	4 Tu	0050	2.6	80		
0559	12.3	375		0557	12.7	386	0657	11.5	350	0142	1.6	49	
1230	5.9	180		1237	5.9	179	1305	6.4	196	0739	11.3	345	
1730	12.1	369		1717	11.9	363	1755	11.0	335	1405	6.1	187	
5 Su	0050	2.8	86	20 M	0057	1.7	52	1854	10.5	320	1826	9.9	303
0637	12.1	368		0648	12.4	379	5 W	0122	2.9	88			
1257	6.4	194		1320	6.4	194	0743	11.2	342	0235	2.2	67	
1758	12.0	367		1759	11.7	358	1346	6.6	202	0844	11.0	335	
6 M	0124	3.0	91	21 Tu	0148	1.9	58	1837	10.6	322	0134	2.8	84
0721	11.8	359		0746	12.0	365	6 Th	0200	3.3	100	0801	10.7	327
1328	6.8	207		1408	6.8	208	0839	10.9	332	0922	10.5	319	
1829	11.8	361		1852	11.4	347	1437	6.8	206	0952	10.8	328	
7 Tu	0201	3.3	101	22 W	0244	2.4	73	1932	10.0	304	1618	5.5	168
0813	11.4	347		0859	11.4	348	2056	9.4	286	2145	9.8	298	
1405	7.3	222		1511	7.2	218				0222	3.2	98	
1905	11.4	347		2003	10.8	330				0850	10.5	319	
8 W	0244	3.8	116	23 Th	0352	3.1	95				1515	5.3	162
0922	11.0	335		1029	11.1	339	8 Sa	0400	4.4	134	2032	9.2	281
1455	7.8	237		1636	7.1	215	1055	10.4	318				
1954	10.7	326		2145	10.4	316	1713	6.3	191				
9 Th	0341	4.4	134	24 F	0512	3.7	112	2244	9.3	283			
1047	10.8	330		1147	11.1	339	9 Su	0522	4.8	146			
1617	8.0	245		1802	6.3	193	1155	10.5	321	0038	10.2	311	
2122	10.0	304		2330	10.4	316	1828	5.4	164	0658	4.8	145	
10 F	0502	4.8	147	25 Sa	0632	4.0	121	1243	10.6	324	1243	10.6	324
1207	11.0	335		1247	11.4	346	1915	5.2	158	1934	3.1	96	
1814	7.5	230		1915	4.1	124							
2320	9.8	300											
11 Sa	0636	4.8	147	26 Su	0056	10.9	332	10 Th	0117	10.4	318		
1306	11.3	345		0739	4.1	124	0742	4.8	147	0234	11.1	338	
1929	6.5	198		1333	11.5	352	1321	11.0	334	0849	5.3	162	
				2010	4.1	124	2012	3.4	103	1404	10.6	323	
12 Su	0051	10.4	317	27 M	0159	11.5	349	2106	2.1	64	1217	10.5	319
0744	4.6	139		0833	4.2	128	1243	10.7	327	2022	2.5	76	
1349	11.6	353		1410	11.6	354	1925	4.3	132	2123	2.7	81	
2017	5.4	164		2056	3.2	98							
13 M	0151	11.1	339	27 W	0206	11.0	336						
0834	4.3	131		0834	4.9	148	1355	11.1	339	0143	10.7	327	
1422	11.8	359		1438	10.5	321	2055	2.6	79	0758	5.1	154	
2057	4.4	134		2146	1.9	57				1326	10.6	324	
14 Tu	0236	11.7	357	27 Th	0315	11.3	343				2022	2.7	81
0916	4.2	128		0932	5.6	170							
1450	11.9	363		1426	11.2	341	1507	10.5	320	0036	9.8	300	
2135	3.6	110		2137	2.0	61	1531	10.5	320	0644	5.2	159	
15 W	0314	12.1	369	2225	1.8	56	2301	1.9	59	1217	10.5	319	
0956	4.3	131					2106	2.1	64	1212	10.5	318	
1516	11.9	364								0135	10.5	319	
2212	3.0	92								0752	5.4	166	
15 Th	0403	12.0	367	13 F	0429	11.5	351	1531	11.1	339	0407	11.5	351
1035	5.2	160		0919	4.5	136	1556	10.5	320	1038	5.9	179	
1537	11.3	345		1422	11.6	353	2308	1.3	39	1510	10.6	322	
2247	2.3	70		2136	2.7	81				2302	0.9	28	
15 F	0434	11.9	363	2213	2.4	73				0455	11.5	351	
1106	5.7	173								1128	5.8	177	
1601	11.2	342								1129	5.4	165	
2320	2.3	70								1619	10.1	307	
16 F	0434	11.9	363							2349	2.0	61	
1106	5.7	173								0544	11.0	334	
1601	11.2	342								1204	5.2	158	
2320	2.3	70								1655	10.0	306	

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

## Yantai, China, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0321 5.9 181	16 W 0250 6.6 202	1 F 0429 5.2 157	16 Sa 0441 5.8 177	1 Sa 0340 5.5 168	16 Su 0443 5.9 181						
0936 1.5 47	W 0859 1.0 31	F 1020 2.6 80	Sa 1037 2.5 75	0920 3.0 91	1035 3.1 96						
1611 6.3 193	1528 7.1 216	1651 6.0 184	Sa 1706 6.8 206	1542 6.3 192	1652 6.7 203						
2232 2.2 68	● 2143 1.6 49			2310 2.5 77							
2 W 0421 5.4 165	17 Th 0350 6.2 189	2 Sa 0009 2.3 69	17 Su 0021 1.9 59	2 Su 0509 5.2 157	17 M 0019 2.1 63						
1030 1.9 59	0953 1.4 44	0605 5.0 151	0626 5.6 172	1048 3.5 106	0633 5.9 180						
1707 6.2 190	1627 7.1 215	1150 3.0 92	1218 2.8 85	1700 6.0 182	1230 3.2 99						
2347 2.2 67	2300 1.7 51	1806 5.9 181	1842 6.7 203		1839 6.6 201						
3 Th 0535 5.1 156	18 F 0501 5.8 178	3 Su 0135 2.0 62	18 M 0151 1.6 49	3 M 0047 2.4 74	18 Tu 0141 1.7 52						
1136 2.3 70	1100 1.9 57	0746 5.2 159	0759 6.0 183	0706 5.3 161	0755 6.4 194						
1808 6.2 190	F 1734 7.0 213	1313 3.1 93	1350 2.6 79	1238 3.5 106	1351 2.9 87						
4 F 0101 2.0 61	19 Sa 0027 1.6 49	4 M 0237 1.6 50	19 Tu 0251 1.2 36	4 Tu 0203 2.1 63	19 W 0235 1.4 42						
0703 5.2 158	0626 5.7 175	0848 5.7 174	0903 6.5 198	0815 5.8 177	0849 6.9 209						
1242 2.5 77	1221 2.1 65	1421 2.8 84	1450 2.2 67	1353 3.1 93	1441 2.3 71						
1912 6.3 193	1850 7.0 214	2033 6.6 200	2105 7.4 226	2006 6.5 198	2052 7.4 225						
5 Sa 0206 1.7 52	20 Su 0147 1.4 42	5 Tu 0321 1.3 39	20 W 0335 0.9 26	5 W 0250 1.6 50	20 Th 0313 1.2 36						
0813 5.5 167	0751 6.0 182	0930 6.2 188	0949 6.9 211	0859 6.4 194	0928 7.3 221						
1345 2.6 78	1340 2.1 65	1507 2.3 71	1534 1.8 54	1441 2.5 76	1519 1.9 57						
2007 6.5 199	2004 7.2 220	2120 7.0 214	2151 7.8 237	2056 7.1 215	2135 7.7 234						
6 Su 0258 1.4 42	21 M 0252 1.0 32	6 W 0356 1.0 32	21 Th 0411 0.7 22	6 Th 0323 1.3 40	21 F 0345 1.2 36						
0906 5.9 179	0859 6.3 193	1003 6.5 199	1025 7.2 219	0933 6.9 209	0959 7.6 231						
1439 2.5 75	1446 1.9 59	1542 1.9 58	1610 1.4 43	1517 2.0 60	1552 1.5 45						
2053 6.8 208	2106 7.5 229	2200 7.4 226	○ 2231 7.9 242	2135 7.5 229	2211 7.8 238						
7 M 0340 1.1 34	22 Tu 0344 0.8 23	7 Th 0425 0.9 27	22 F 0442 0.7 21	7 F 0350 1.1 33	22 M 0413 1.2 37						
0947 6.2 189	0954 6.7 204	1033 6.8 208	1057 7.4 225	1004 7.3 222	1027 7.8 238						
1521 2.3 69	1539 1.7 51	1614 1.6 48	1644 1.1 35	1550 1.6 48	1624 1.2 38						
2134 7.1 217	○ 2158 7.8 238	● 2235 7.7 234	2306 8.0 243	2210 7.8 238	○ 2244 7.8 238						
8 Tu 0416 1.0 30	23 W 0427 0.5 16	8 F 0451 0.8 23	23 Sa 0512 0.7 22	8 Sa 0417 0.9 27	23 M 0440 1.3 39						
1022 6.4 196	1040 6.9 211	1103 7.1 215	1126 7.5 230	1033 7.7 234	1056 8.0 244						
1557 2.0 61	1622 1.4 44	1646 1.3 40	1719 1.0 30	1625 1.2 38	1658 1.1 35						
● 2212 7.3 224	2243 8.0 244	2308 7.8 238	2340 7.8 239	● 2243 8.0 244	2315 7.7 236						
9 W 0448 0.9 27	24 Th 0505 0.4 13	9 Sa 0520 0.6 19	24 Su 0542 0.8 24	9 Su 0447 0.8 23	24 M 0508 1.3 40						
1053 6.6 201	1120 7.0 214	1133 7.3 221	1157 7.6 233	1104 8.0 244	1126 8.1 247						
1630 1.8 54	1702 1.3 39	1721 1.1 34	1754 1.0 29	1701 1.0 30	1732 1.2 36						
2249 7.5 230	2324 8.0 244	2341 7.9 240	2340 7.8 239	2317 8.1 247	2347 7.6 233						
10 Th 0517 0.9 26	25 F 0541 0.4 13	10 M 0550 0.5 15	25 M 0013 7.6 233	10 M 0519 0.7 21	25 Tu 0538 1.4 43						
1124 6.7 203	1156 7.1 215	1206 7.4 227	0612 0.9 26	1136 8.3 254	1156 8.1 246						
1703 1.6 49	1206 7.1 216	1759 1.0 30	1229 7.7 234	1741 0.8 24	1227 8.0 243						
2324 7.6 233	1740 1.2 36	1841 0.9 28	1831 1.0 32	2354 8.1 246	1843 1.4 42						
11 F 0546 0.8 23	26 Sa 0002 7.9 240	11 M 0016 7.8 239	26 Tu 0046 7.4 225	11 Tu 0554 0.7 22	26 W 0020 7.5 228						
1156 6.7 205	0616 0.5 15	0624 0.4 13	0643 1.0 31	1213 8.5 260	0608 1.6 48						
1738 1.5 45	1230 7.1 216	1241 7.7 234	1302 7.6 232	1823 0.8 23	1227 8.0 243						
2359 7.6 233	1819 1.1 35	1841 0.9 28	1909 1.3 39		1843 1.4 42						
12 Sa 0619 0.6 19	27 Su 0039 7.6 232	12 Tu 0054 7.7 234	27 W 0121 7.0 214	12 W 0034 7.9 241	27 Th 0055 7.3 221						
1231 6.8 206	0650 0.6 18	0700 0.5 15	0715 1.3 39	0632 0.9 27	0640 1.9 57						
1817 1.4 44	1305 7.1 216	1320 7.8 238	1336 7.4 226	1253 8.6 261	1259 7.8 238						
	1859 1.2 38	1926 1.0 29	1949 1.5 47	1909 0.9 27	1919 1.6 48						
13 Su 0035 7.5 230	28 M 0116 7.2 219	13 W 0137 7.3 224	28 Th 0159 6.6 201	13 Th 0120 7.6 231	28 F 0132 6.9 210						
0654 0.6 17	0724 0.8 23	0741 0.8 23	0749 1.7 53	0715 1.2 38	0713 2.3 69						
1309 6.9 209	1342 7.0 214	1403 7.8 238	1412 7.1 216	1337 8.3 254	1333 7.5 229						
1859 1.4 43	1943 1.4 43	2017 1.1 35	2034 1.9 58	2000 1.2 36	1959 1.8 56						
14 M 0115 7.3 224	29 Tu 0154 6.7 205	14 Th 0227 6.9 210	29 F 0243 6.1 185	14 O 0211 7.1 215	29 M 0215 6.5 197						
0731 0.6 17	0759 1.0 32	0826 1.2 37	0828 2.3 71	0804 1.8 56	0752 2.8 84						
1351 7.0 212	1421 6.9 209	1452 7.6 231	1451 6.7 205	1427 7.8 239	1411 7.2 218						
1947 1.4 44	2031 1.7 52	● 2117 1.5 45	● 2134 2.3 69	● 2103 1.6 50	2049 2.2 67						
15 Tu 0159 7.1 215	30 W 0235 6.2 188	15 F 0325 6.3 193	15 O 0314 6.4 196	15 O 0314 6.4 196	30 M 0308 6.0 182						
0813 0.7 21	0836 1.4 44	0922 1.8 56	0907 2.6 78	0907 2.6 78	0842 3.3 100						
1436 7.1 215	1504 6.6 202	1551 7.2 219	1528 7.2 220	1528 7.2 220	1500 6.7 204						
2040 1.5 46	● 2128 2.0 61	2237 1.8 56			● 2204 2.6 78						
	31 Th 0324 5.6 171										
	0920 2.0 61										
	1552 6.3 192										
	2244 2.3 69										

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Yantai, China, 2008

## Times and Heights of High and Low Waters

April				May				June									
	Time	Height															
	h m	ft cm															
<b>1</b> Tu	0610	5.6 171	<b>16</b> W	0110	1.9 58	<b>1</b> Th	0626	6.5 199	<b>16</b> F	0109	2.4 73	<b>1</b> Su	0048	2.5 77	<b>16</b> M	0159	3.3 102
	1151	3.7 112		0726	6.8 206		1221	3.2 99		0730	7.4 227		0821	7.9 241			
	1759	6.2 188		1332	2.9 89		1830	6.7 204		1350	2.5 76		1501	2.3 70			
<b>2</b> W	0106	2.4 73	<b>17</b> Th	0201	1.8 55	<b>2</b> F	0056	2.3 69	<b>17</b> Sa	0154	2.5 75	<b>2</b> M	0141	2.5 76	<b>17</b> Tu	0250	3.4 105
	0726	6.0 184		0816	7.2 218		0721	7.1 215		0814	7.7 236		0807	8.6 263		0903	8.1 246
	1312	3.2 99		1419	2.4 73		1322	2.7 83		1434	2.2 66		1434	1.8 56		1544	2.1 64
	1924	6.6 200		2028	7.2 219		1932	7.1 216		2045	7.1 216		2043	7.7 235		2156	7.4 227
<b>3</b> Th	0159	2.0 61	<b>18</b> F	0239	1.8 54	<b>3</b> Sa	0142	2.0 62	<b>18</b> Su	0235	2.6 78	<b>3</b> Tu	0232	2.5 75	<b>18</b> W	0333	3.4 105
	0815	6.6 202		0854	7.5 230		0805	7.7 234		0853	8.0 243		0856	9.0 274		0941	8.2 251
	1405	2.7 82		1457	2.0 60		1410	2.2 66		1515	2.0 60		1526	1.6 48		1624	2.0 61
	2018	7.1 216		2111	7.4 226		2022	7.5 228		2127	7.3 221		2136	8.0 243		2234	7.7 234
<b>4</b> F	0236	1.7 51	<b>19</b> Sa	0311	1.8 55	<b>4</b> Su	0222	1.9 57	<b>19</b> M	0311	2.6 80	<b>4</b> W	0323	2.5 75	<b>19</b> Th	0409	3.4 104
	0853	7.3 221		0926	7.8 239		0845	8.3 252		0929	8.1 247		0944	9.3 282		1018	8.4 256
	1445	2.1 65		1532	1.7 51		1455	1.7 51		1553	1.9 43		1617	1.4 43		1659	1.9 58
	2100	7.5 229		2148	7.5 229		2106	7.8 238		2205	7.4 226		2228	8.1 247		2309	7.8 237
<b>5</b> Sa	0308	1.4 43	<b>20</b> Su	0341	1.9 57	<b>5</b> M	0301	1.8 54	<b>20</b> Tu	0346	2.7 82	<b>5</b> Th	0414	2.5 76	<b>20</b> F	0441	3.3 102
	0926	7.8 238		0957	8.1 246		0923	8.8 268		1002	8.2 250		1034	9.4 285		1053	8.5 260
	1523	1.6 50		1606	1.5 47		1540	1.3 41		1631	1.8 55		1708	1.3 40		1731	1.9 58
	2138	7.8 239		2221	7.5 230		2150	8.0 244		2241	7.5 229		2321	8.2 249		2341	7.8 238
<b>6</b> Su	0339	1.2 38	<b>21</b> M	0410	1.9 59	<b>6</b> Tu	0342	1.7 53	<b>21</b> W	0420	2.8 85	<b>6</b> F	0504	2.6 79	<b>21</b> Sa	0513	3.2 98
	0958	8.3 253		1028	8.2 250		1003	9.1 278		1034	8.3 252		1124	9.3 284		1129	8.6 262
	1601	1.2 38		1641	1.5 46		1625	1.1 35		1706	1.8 54		1758	1.2 38		1801	1.9 57
	2214	8.1 246		2254	7.6 231		2235	8.1 247		2316	7.6 231						
<b>7</b> M	0412	1.1 35	<b>22</b> Tu	0440	2.0 62	<b>7</b> W	0425	1.8 55	<b>22</b> Th	0452	2.9 88	<b>7</b> Sa	0015	8.1 247	<b>22</b> Su	0014	7.8 238
	1032	8.7 266		1058	8.2 250		1046	9.3 283		1107	8.3 253		0555	2.8 84		0546	3.1 96
	1641	1.0 30		1716	1.5 46		1712	1.1 33		1740	1.8 54		1213	9.2 279		1205	8.6 262
	2253	8.1 248		2327	7.6 231		2323	8.1 247		2351	7.5 230		1848	1.2 38		1831	1.8 56
<b>8</b> Tu	0449	1.1 35	<b>23</b> W	0510	2.2 66	<b>8</b> Th	0512	2.0 60	<b>23</b> F	0524	3.0 90	<b>8</b> Su	0108	8.0 243	<b>23</b> M	0048	7.8 237
	1108	9.0 274		1128	8.2 251		1132	9.2 281		1140	8.3 253		0647	3.0 90		0623	3.1 94
	1724	0.9 26		1750	1.5 47		1802	1.1 34		1814	1.7 53		1302	8.9 270		1241	8.5 260
	2334	8.1 248									1938	1.3 40	1905	1.8 55			
<b>9</b> W	0528	1.3 39	<b>24</b> Th	0001	7.5 228	<b>9</b> F	0014	7.9 242	<b>24</b> Sa	0026	7.5 228	<b>9</b> M	0202	7.8 238	<b>24</b> Tu	0125	7.8 237
	1148	9.1 277		0541	2.3 71		0600	2.3 69		0558	3.0 91		0742	3.1 95		0703	3.1 94
	1809	0.9 27		1159	8.2 249		1220	9.0 274		1215	8.3 252		1352	8.4 257		1320	8.4 255
				1824	1.6 48		1855	1.2 37		1848	1.8 54		2026	1.5 46		1942	1.8 56
<b>10</b> Th	0020	8.0 243	<b>25</b> F	0037	7.3 224	<b>10</b> Sa	0110	7.7 234	<b>25</b> Su	0103	7.3 224	<b>10</b> W	0256	7.7 234	<b>25</b> M	0205	7.8 237
	0612	1.5 47		0614	2.5 77		0653	2.7 81		0635	3.1 93		0841	3.2 99		0749	3.1 94
	1232	8.9 272		1231	8.0 245		1311	8.6 262		1253	8.1 247		1445	7.9 240		1403	8.1 247
	1858	1.0 32		1900	1.7 51		1951	1.4 42		1925	1.8 56		2116	1.8 56		2023	1.9 59
<b>11</b> F	0110	7.6 232	<b>26</b> Sa	0115	7.1 216	<b>11</b> Su	0212	7.3 224	<b>26</b> M	0143	7.2 219	<b>11</b> W	0350	7.6 232	<b>26</b> Th	0251	7.8 239
	0659	2.0 61		0650	2.8 84		0754	3.1 93		0718	3.1 96		0946	3.3 100		0842	3.1 95
	1320	8.5 259		1307	7.8 239		1405	8.1 246		1334	7.8 239		1544	7.3 223		1452	7.8 238
	1954	1.3 41		1939	1.8 56		2051	1.6 48		2007	1.9 59		2208	2.2 68		2108	2.1 65
<b>12</b> Sa	0208	7.2 218	<b>27</b> Su	0157	6.8 207	<b>12</b> M	0321	7.1 216	<b>27</b> Tu	0230	7.0 214	<b>12</b> W	0444	7.6 231	<b>27</b> F	0341	7.9 242
	0755	2.6 79		0730	3.1 93		0903	3.4 103		0808	3.3 100		1058	3.2 98		0942	3.1 93
	1413	7.9 241		1348	7.5 228		1506	7.5 229		1422	7.5 230		1651	6.9 209		1550	7.5 228
	2100	1.7 52		2026	2.1 64		2156	1.8 56		2055	2.1 64		2306	2.6 80		2158	2.5 75
<b>13</b> Su	0320	6.6 202	<b>28</b> M	0248	6.4 196	<b>13</b> Tu	0429	6.9 211	<b>28</b> W	0326	6.9 211	<b>13</b> F	0540	7.6 231	<b>28</b> Sa	0436	8.1 247
	0907	3.2 97		0822	3.4 103		1022	3.5 107		0908	3.4 103		1210	3.1 93		1052	3.0 90
	1517	7.3 221		1437	7.1 216		1620	7.0 214		1518	7.2 220		1806	6.6 201		1658	7.3 221
	2222	2.0 61		2125	2.4 72		2308	2.1 64		2148	2.3 69					2257	2.8 86
<b>14</b> M	0449	6.3 193	<b>29</b> Tu	0357	6.2 188	<b>14</b> W	0535	7.0 212	<b>29</b> Th	0428	7.0 213	<b>14</b> F	0005	3.0 90	<b>29</b> Sa	0535	8.3 253
	1039	3.5 108		0933	3.6 110		1149	3.3 101		1017	3.3 102		0638	7.6 233		1208	2.8 84

## Yantai, China, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0113 3.2 98	16 W 0235 4.1 126	1 F 0320 3.4 104	16 Sa 0337 3.6 111	1 M 0428 2.6 79	16 Tu 0410 2.6 79						
0740 8.8 267	0841 8.1 246	0934 9.4 286	0947 8.9 270	1047 9.5 291	1026 9.1 277						
1425 2.2 66	1532 2.3 71	1609 1.7 52	1616 2.2 66	1655 1.8 56	1629 2.0 61						
2035 7.7 235	2146 7.6 233	● 2225 8.6 262	2227 8.4 256	2312 9.2 279	2247 9.1 278						
2 W 0219 3.2 97	17 Th 0322 3.9 120	2 Sa 0406 3.1 96	17 Su 0406 3.3 100	2 Tu 0504 2.4 73	17 W 0444 2.3 71						
0841 9.0 275	0925 8.4 255	1022 9.6 294	1023 9.1 278	1122 9.4 287	1058 9.2 279						
1524 1.9 57	1610 2.1 65	1649 1.5 47	1642 2.1 64	1726 2.0 60	1659 2.0 60						
2135 8.0 245	2222 7.9 242	2306 8.8 268	2255 8.6 263	2343 9.3 282	2318 9.4 286						
3 Th 0319 3.1 94	18 F 0358 3.7 112	3 Su 0447 2.9 89	18 M 0436 3.0 92	3 W 0541 2.4 72	18 Th 0522 2.1 64						
0937 9.3 283	1005 8.7 264	1105 9.7 297	1055 9.3 282	1157 9.2 280	1134 9.1 278						
1616 1.6 50	1643 2.0 62	1725 1.5 47	1706 2.0 62	1758 2.1 64	1733 2.0 62						
● 2230 8.3 253	○ 2253 8.1 247	2343 8.9 271	2323 8.8 268	1831 2.3 70	2351 9.6 292						
4 F 0411 3.0 91	19 Sa 0428 3.4 105	4 M 0526 2.8 84	19 Tu 0508 2.8 86	4 Th 0016 9.2 281	19 F 0603 2.0 61						
1029 9.5 289	1042 8.9 271	1145 9.6 294	1127 9.3 284	0620 2.4 74	1213 9.0 274						
1703 1.4 44	1712 2.0 61	1800 1.6 49	1734 2.0 60	1233 8.9 270	1811 2.2 66						
2320 8.4 257	2323 8.2 251		2353 9.0 274	1831 2.3 70							
5 Sa 0459 2.9 89	20 Su 0458 3.2 98	5 Tu 0019 9.0 273	20 W 0544 2.7 81	5 F 0050 9.1 278	20 Sa 0030 9.6 293						
1117 9.5 291	1116 9.0 275	0606 2.7 81	1159 9.3 283	0701 2.6 79	0647 2.0 62						
1747 1.3 41	1738 2.0 60	1224 9.4 286	1805 1.9 59	1310 8.5 259	1257 8.7 266						
2353 8.3 253	1835 1.8 54			1906 2.6 80	1853 2.5 75						
6 Su 0006 8.5 258	21 M 0530 3.1 94	6 W 0055 9.0 274	21 Th 0025 9.2 280	6 Sa 0125 8.9 270	21 Su 0112 9.4 288						
0545 2.9 88	1150 9.1 276	0648 2.7 81	0623 2.5 77	0744 2.9 87	0737 2.2 68						
1203 9.5 289	1806 1.9 58	1302 9.0 274	1236 9.2 279	1350 8.0 245	1348 8.3 252						
1830 1.3 41		1911 2.0 60	1840 2.0 61	1942 3.1 95	1941 3.0 91						
7 M 0050 8.5 258	22 Tu 0024 8.4 256	7 Th 0132 8.9 272	22 F 0100 9.4 285	7 Su 0202 8.5 259	22 M 0201 9.0 275						
0630 2.9 88	0605 3.0 90	0733 2.8 85	0706 2.5 75	0833 3.1 96	0837 2.6 78						
1247 9.2 281	1224 9.0 275	1342 8.5 260	1317 8.9 272	1436 7.5 228	1449 7.7 234						
1910 1.4 44	1837 1.8 56	1947 2.3 70	1918 2.2 68	● 2022 3.7 114	2041 3.6 110						
8 Tu 0133 8.4 257	23 W 0058 8.5 259	8 F 0210 8.8 267	23 M 0140 9.4 286	8 M 0242 8.1 246	23 Tu 0300 8.5 258						
0718 2.9 89	0644 2.9 88	0822 3.0 92	0754 2.5 77	0938 3.4 105	0957 2.9 88						
1331 8.8 268	1259 8.9 271	1424 8.0 243	1404 8.5 259	1537 6.9 210	1614 7.2 218						
1950 1.7 51	1912 1.8 56	2026 2.8 85	2002 2.6 80	2116 4.4 133	2204 4.1 126						
9 W 0216 8.4 255	24 Th 0134 8.6 263	9 Sa 0251 8.5 258	24 Su 0226 9.2 281	9 Tu 0331 7.6 232	24 W 0417 7.9 241						
0808 3.0 91	0728 2.8 86	0920 3.3 101	0850 2.8 85	1102 3.6 110	1142 2.9 89						
1415 8.3 252	1340 8.7 264	1514 7.4 225	1500 8.0 243	1711 6.5 199	1758 7.1 215						
2031 2.0 61	1950 2.0 60	● 2110 3.4 104	2055 3.2 99	2248 4.8 147	2354 4.3 130						
10 Th 0301 8.3 252	25 F 0214 8.8 267	10 Su 0338 8.1 247	25 M 0321 8.9 270	10 W 0448 7.3 221	25 Th 0600 7.7 236						
0904 3.1 95	0816 2.8 86	1030 3.5 108	1003 3.1 94	1232 3.5 107	1308 2.6 79						
1504 7.6 233	1426 8.3 253	1618 6.8 208	1612 7.4 226	1857 6.7 203	1923 7.4 226						
● 2115 2.5 75	2032 2.3 70	2209 4.1 125	2204 3.9 118								
11 F 0349 8.1 248	26 Sa 0300 8.8 269	11 M 0434 7.7 236	26 Tu 0430 8.4 257	11 W 0028 4.8 147	26 F 0120 3.9 118						
1008 3.2 99	0913 2.9 88	1151 3.6 109	1143 3.2 98	0635 7.3 222	0724 8.0 245						
1559 7.1 216	1521 7.9 240	1756 6.6 200	1751 7.2 218	1347 3.1 96	1407 2.2 67						
2204 3.0 91	● 2121 2.8 84	2333 4.6 141	2339 4.3 131	2005 7.1 217	2021 7.9 241						
12 Sa 0441 7.9 242	27 Tu 0353 8.8 267	12 M 0547 7.5 229	27 W 0601 8.2 250	12 F 0143 4.4 134	27 Sa 0216 3.3 101						
1120 3.3 101	1021 3.0 91	1319 3.3 102	1319 2.9 88	0751 7.7 236	0823 8.5 258						
1708 6.7 203	1628 7.4 227	1936 6.8 207	1930 7.4 227	1436 2.7 83	1449 2.0 60						
2306 3.5 108	2222 3.3 101			2048 7.6 233	2103 8.3 254						
13 Su 0539 7.7 236	28 M 0456 8.6 262	13 W 0101 4.8 145	28 Th 0118 4.2 128	13 F 0231 3.8 117	28 Su 0257 2.8 85						
1236 3.2 99	1147 3.0 92	0714 7.6 232	0731 8.5 258	0841 8.2 251	0910 8.8 267						
1839 6.6 200	1751 7.2 220	1424 3.0 90	1426 2.4 73	1510 2.4 74	1523 1.9 58						
	2340 3.8 115	2042 7.3 222	2038 7.9 242	2122 8.1 247	2137 8.7 264						
14 M 0016 4.0 121	29 Tu 0610 8.5 260	14 Th 0215 4.5 137	29 F 0226 3.8 115	14 W 0306 3.3 101	29 M 0332 2.4 72						
0645 7.7 234	1314 2.8 86	0819 8.0 244	0836 8.9 271	0920 8.7 264	0949 8.9 270						
1349 3.0 91	1924 7.4 225	1510 2.6 78	1513 2.0 61	1537 2.2 68	1553 2.0 60						
2000 6.8 208		2125 7.7 236	2128 8.4 257	2151 8.5 259	● 2208 8.9 271						
2101 7.3 221											
15 Tu 0129 4.2 127	30 W 0107 3.9 119	15 F 0302 4.1 124	30 Sa 0313 3.3 101	15 M 0338 2.9 89	30 Tu 0407 2.1 65						
0748 7.8 238	0730 8.7 264	0907 8.5 258	0926 9.3 284	0954 8.9 272	1024 8.8 269						
1446 2.6 80	1428 2.4 74	1547 2.3 70	1551 1.8 55	1602 2.1 64	1622 2.1 63						
2101 7.3 221	2039 7.8 238	2158 8.1 248	2207 8.8 267	2219 8.8 269	2239 9.0 275						
	31 Th 0222 3.7 114		31 Su 0352 2.9 89								
	0839 9.0 275		1009 9.5 290								
	1524 2.0 62		1624 1.8 54								
	2137 8.2 251		● 2240 9.0 274								

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Yantai, China, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
1 W 0442 2.0 61	16 0422 1.6 50	1 Sa 0538 1.7 52	16 Su 0537 1.0 29	1 M 0601 1.3 39	16 Tu 0619 0.4 13						
1058 8.7 266	Th 1031 8.6 261	1146 7.6 232	1146 7.7 234	1207 6.8 208	1234 7.1 215						
1652 2.2 66	1627 1.9 58	1729 2.5 77	1734 2.0 61	1744 2.3 69	1816 1.8 54						
2309 9.1 277	2245 9.4 287	2344 8.3 252	2353 8.8 268								
2 Th 0518 2.0 62	17 0502 1.5 46	2 Su 0615 1.8 54	17 M 0628 1.0 30	2 Tu 0000 7.6 233	17 W 0036 8.1 248						
1131 8.6 261	F 1111 8.6 261	1222 7.4 226	1240 7.4 226	0633 1.3 39	0706 0.5 14						
1724 2.3 70	1705 2.0 60	1802 2.7 83	1826 2.3 70	1242 6.7 203	1326 6.9 211						
2341 9.0 274	2323 9.5 289			1818 2.3 70	1908 1.9 58						
3 F 0556 2.1 65	18 0547 1.5 45	3 M 0017 8.1 246	18 Tu 0043 8.4 257	3 W 0037 7.4 227	18 Th 0125 7.7 235						
1206 8.4 255	Sa 1155 8.4 256	0651 1.8 56	0723 1.1 33	0707 1.3 41	0754 0.6 18						
1756 2.5 77	1748 2.2 67	1301 7.1 217	1340 7.1 216	1320 6.5 198	1419 6.8 207						
		1837 3.0 90	1922 2.7 81	1858 2.4 73	2004 2.1 63						
4 Sa 0014 8.8 269	19 0006 9.4 285	4 Tu 0053 7.8 238	19 W 0137 7.9 242	4 Th 0115 7.2 218	19 M 0216 7.2 218						
0634 2.3 69	Su 0635 1.6 48	0730 2.0 61	0820 1.2 38	0746 1.4 44	0842 0.9 26						
1243 8.1 246	1245 8.1 247	1342 6.8 207	1446 6.8 208	1402 6.3 193	1513 6.7 204						
1830 2.9 87	1835 2.6 78	1917 3.2 97	2029 2.9 89	1944 2.5 77	2107 2.1 65						
5 Su 0047 8.6 261	20 0053 9.0 274	5 W 0133 7.4 227	20 Th 0237 7.4 225	5 F 0158 6.8 208	20 M 0312 6.5 199						
0713 2.4 74	M 0729 1.8 54	0815 2.2 67	0922 1.4 44	0829 1.5 47	0933 1.2 37						
1322 7.7 235	1341 7.7 234	1431 6.5 197	1555 6.7 203	1452 6.2 189	1608 6.7 203						
1904 3.2 99	1930 3.0 92	2007 3.4 105	2145 3.1 93	2039 2.7 81	2219 2.1 65						
6 M 0121 8.2 251	21 0146 8.5 258	6 Th 0220 7.0 214	21 F 0346 6.8 208	6 Sa 0249 6.4 196	21 M 0415 6.0 182						
0756 2.7 81	Tu 0832 2.0 62	0909 2.4 74	1031 1.7 51	0917 1.7 52	1030 1.6 49						
1407 7.2 220	1451 7.2 219	1536 6.2 189	1701 6.7 204	1551 6.2 189	1705 6.6 202						
1943 3.7 112	O 2038 3.5 108	2116 3.6 110	2313 2.9 87	2145 2.7 82	2338 2.0 62						
7 Tu 0200 7.8 239	22 0248 7.8 239	7 F 0322 6.6 200	22 Sa 0505 6.5 197	7 Su 0351 6.1 186	22 M 0529 5.6 170						
0849 2.9 89	W 0949 2.3 69	1016 2.6 79	1139 1.8 56	1013 1.9 57	1134 1.9 59						
1502 6.7 205	1617 6.9 209	1653 6.2 188	1804 6.9 209	1653 6.4 195	1807 6.6 202						
O 2035 4.1 126	2206 3.8 116	2241 3.6 110		2302 2.5 77							
8 W 0248 7.3 224	23 0408 7.3 223	8 Sa 0443 6.3 192	23 Su 0027 2.5 75	8 M 0502 5.9 181	23 M 0049 1.8 56						
1003 3.2 98	Th 1120 2.3 70	1132 2.6 78	0624 6.3 193	1115 2.0 60	0650 5.5 168						
1624 6.4 194	1741 6.9 210	1801 6.4 196	1237 1.9 59	1752 6.7 205	1237 2.2 66						
2159 4.5 136	2349 3.7 112		1901 7.1 217		1909 6.7 204						
9 Th 0359 6.9 211	24 0543 7.1 217	9 Su 0004 3.2 99	24 M 0125 2.0 61	9 Tu 0016 2.2 66	24 W 0152 1.6 49						
1132 3.2 99	F 1235 2.2 66	0605 6.4 195	0730 6.4 196	0614 6.0 184	0758 5.7 174						
1757 6.4 194	1853 7.2 219	1232 2.4 73	1327 2.0 62	1218 2.0 60	1338 2.3 69						
2343 4.4 133		1858 6.9 210	1949 7.4 225	1847 7.2 218	2004 6.8 208						
10 F 0542 6.8 207	25 0102 3.2 97	10 M 0104 2.7 83	25 Tu 0213 1.7 51	10 W 0117 1.7 52	25 M 0244 1.3 41						
1247 3.0 92	Sa 0702 7.3 222	0710 6.7 204	0823 6.6 200	0719 6.3 192	0854 6.0 183						
1909 6.8 206	1330 2.0 62	1319 2.2 66	1411 2.1 63	1314 1.9 58	1434 2.3 69						
	1946 7.6 231	1942 7.5 228	2032 7.6 231	1939 7.6 232	2050 7.0 212						
11 Sa 0059 3.9 120	26 0154 2.6 79	11 Tu 0153 2.2 66	26 W 0257 1.4 44	11 Th 0212 1.3 39	26 F 0329 1.1 35						
0707 7.1 217	Su 0801 7.5 230	0801 7.1 216	0907 6.7 205	0816 6.6 202	0940 6.3 192						
1341 2.7 82	1413 2.0 60	1359 2.0 60	1452 2.1 64	1407 1.8 54	1519 2.2 67						
1959 7.3 222	2028 8.0 243	2022 8.0 244	2111 7.7 235	2030 8.0 244	2131 7.1 217						
12 Su 0151 3.3 102	27 0235 2.1 65	12 W 0237 1.7 51	27 Th 0337 1.3 40	12 F 0304 1.0 30	27 M 0409 1.0 30						
0802 7.6 231	0848 7.7 235	0845 7.4 226	0947 6.9 209	0909 6.9 211	1018 6.5 198						
1418 2.4 72	1448 2.0 61	1439 1.8 55	1530 2.1 65	1458 1.6 50	1557 2.1 64						
2036 7.8 239	2104 8.3 252	2100 8.5 259	2146 7.7 236	2119 8.3 253	2208 7.3 222						
13 M 0231 2.8 85	28 0313 1.8 55	13 Th 0320 1.3 40	28 F 0416 1.3 39	13 F 0354 0.8 23	28 Su 0444 0.9 28						
0843 8.0 243	Tu 0927 7.8 238	0927 7.6 233	1024 7.0 212	0959 7.1 217	1051 6.6 201						
1449 2.1 65	1520 2.0 62	1519 1.7 53	1606 2.2 66	1549 1.5 47	1629 1.9 59						
2108 8.3 254	2137 8.4 257	O 2139 8.9 270	● 2220 7.8 237	O 2208 8.5 258	2243 7.4 226						
14 Tu 0307 2.3 71	29 0349 1.7 51	14 F 0404 1.1 33	29 Sa 0453 1.2 38	14 M 0443 0.6 18	29 M 0516 0.9 28						
0919 8.3 252	W 1003 7.8 238	1010 7.8 238	1059 7.0 213	1051 7.2 219	1121 6.6 202						
1519 2.0 60	1552 2.1 65	1602 1.7 52	1639 2.2 68	1638 1.5 47	1659 1.8 55						
2138 8.8 268	● 2209 8.5 259	2220 9.0 275	2253 7.7 236	2258 8.5 259	2317 7.5 228						
15 W 0343 1.9 59	30 0425 1.6 50	15 Sa 0449 1.0 29	30 Su 0528 1.2 38	15 M 0531 0.5 15	30 Tu 0544 0.9 28						
0954 8.5 258	Th 1037 7.8 238	1056 7.8 238	1133 6.9 211	1142 7.2 218	1151 6.6 202						
1551 1.9 58	1624 2.2 68	1647 1.8 55	1711 2.3 69	1727 1.6 49	1729 1.7 52						
O 2210 9.2 279	2241 8.5 258	2305 9.0 274	2326 7.7 235	2347 8.4 256	2350 7.4 227						
	31 0502 1.7 51	F 1111 7.7 235									
	1657 2.4 72	1657 2.4 72									
	2312 8.4 256	2312 8.4 256									

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

**Qingdao (Da Gang), China, 2008**

## Times and Heights of High and Low Waters

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

# Qingdao (Da Gang), China, 2008

Times and Heights of High and Low Waters

April				May				June			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0001	9.4	288	16 W 0128	10.7	327	1 Th 0033	10.6	324	16 Su 0201	11.1	339
0656	3.9	120	0824	2.4	72	0719	3.3	102	0839	3.6	110
1346	10.9	331	1426	11.9	364	1334	11.8	360	1423	12.0	367
1958	6.0	184	2103	3.9	120	2005	4.5	138	2114	3.1	95
2 W 0119	10.1	309	17 Th 0227	11.4	346	2 0137	11.6	353	17 Sa 0252	11.6	355
0816	3.3	101	0917	2.3	69	0822	2.9	89	0927	3.8	117
1431	11.6	353	1503	12.3	375	1417	12.5	380	1500	12.2	371
2054	5.0	152	2148	3.1	95	2056	3.3	102	2155	2.6	80
3 Th 0215	11.2	340	18 F 0312	11.9	363	3 Sa 0229	12.6	384	18 Su 0335	12.1	370
0911	2.6	78	1001	2.4	72	0915	2.6	79	1010	4.0	121
1506	12.3	376	1534	12.6	384	1454	13.2	401	1534	12.3	375
2138	3.8	117	2226	2.5	77	2141	2.2	67	2231	2.3	69
4 F 0302	12.3	374	19 Sa 0350	12.3	376	4 Su 0315	13.5	412	19 M 0412	12.6	383
0956	1.9	57	1039	2.6	78	1002	2.4	72	1048	4.1	125
1538	13.0	397	1604	12.8	390	1530	13.7	418	1605	12.4	378
2218	2.7	82	2300	2.1	64	2225	1.1	35	2306	2.0	61
5 Sa 0342	13.3	404	20 Su 0425	12.7	387	5 M 0359	14.2	434	20 Tu 0447	12.8	391
1036	1.4	43	1113	2.7	83	1046	2.3	70	1123	4.2	127
1608	13.6	415	1633	12.9	393	1606	14.1	429	1635	12.4	379
2256	1.6	50	2331	1.8	56	2308	0.4	11	2340	1.8	56
6 Su 0421	14.0	428	21 M 0459	12.9	394	6 Tu 0441	14.7	448	21 W 0521	12.9	394
1115	1.2	36	1145	2.9	89	1130	2.4	73	1157	4.3	130
1639	14.1	430	1702	12.9	393	1643	14.2	432	1705	12.4	379
● 2334	0.8	23				2351	-0.1	-4			
7 M 0459	14.5	442	22 Tu 0002	1.7	51	7 W 0524	14.8	451	22 Th 0014	1.8	55
1153	1.2	37	0533	13.0	396	1214	2.7	82	0556	12.9	394
1711	14.4	438	1217	3.1	96	1722	14.0	427	1231	4.4	134
			1730	12.8	389				1736	12.4	377
8 Tu 0013	0.2	5	23 W 0034	1.6	49	8 Th 0035	-0.3	-9	23 F 0048	1.8	56
0538	14.7	447	0607	12.9	393	0610	14.5	442	0632	12.8	390
1232	1.5	47	1249	3.5	106	1300	3.2	97	1306	4.6	141
1745	14.3	436	1759	12.5	382	1804	13.5	413	1809	12.2	372
9 W 0052	-0.1	-3	24 Th 0106	1.7	52	9 F 0122	-0.1	-4	24 Sa 0122	2.0	60
0620	14.4	440	0643	12.6	385	0700	13.9	423	0710	12.6	384
1312	2.2	66	1322	4.0	121	1348	3.8	116	1342	4.9	149
1821	13.9	423	1828	12.2	371	1851	12.9	393	1845	11.9	364
10 Th 0134	0.0	0	25 F 0138	1.9	59	10 Sa 0213	0.3	10	25 Su 0158	2.2	66
0706	13.8	422	0723	12.2	372	0758	13.1	398	0753	12.3	375
1356	3.1	93	1357	4.6	139	1442	4.5	137	1422	5.2	158
1902	13.1	399	1901	11.7	357	1945	12.1	368	1927	11.6	355
11 F 0220	0.5	14	26 Sa 0213	2.3	70	11 Su 0310	1.0	31	26 M 0238	2.4	73
0800	12.9	394	0810	11.7	356	0905	12.3	374	0843	12.0	367
1445	4.1	126	1436	5.2	160	1545	5.1	155	1509	5.5	167
1950	12.1	368	1940	11.1	339	2051	11.3	343	2017	11.3	344
12 Sa 0314	1.2	38	27 Su 0253	2.8	84	12 M 0415	1.8	54	12 Tu 0352	1.7	53
0907	11.9	362	0907	11.2	341	1022	11.7	357	0942	12.4	378
1547	5.2	159	1524	5.9	179	1659	5.3	161	1629	4.7	143
2052	11.0	335	2029	10.5	321	● 2214	10.7	325	● 2144	11.3	343
13 Su 0423	2.0	62	28 M 0343	3.2	98	13 Tu 0526	2.4	74	28 F 0421	3.0	92
1042	11.2	340	1018	10.9	331	1141	11.5	352	1037	11.7	358
1710	5.8	178	1630	6.3	191	1818	5.1	154	1708	5.4	164
● 2224	10.2	312	● 2140	10.1	307	2341	10.5	320	● 2232	11.0	334
14 M 0548	2.5	77	29 Tu 0449	3.5	108	14 W 0638	3.0	90	29 Th 0522	3.3	101
1228	11.2	340	1135	10.9	332	1247	11.6	355	1136	11.9	363
1848	5.7	173	1749	6.2	188	1929	4.4	135	1813	4.8	147
			2311	10.0	306				2348	11.3	343
15 Tu 0010	10.2	312	30 W 0604	3.6	109	15 Th 0057	10.7	326	30 F 0626	3.5	108
0715	2.5	77	1242	11.3	343	0743	3.3	101	1915	3.9	120
1338	11.5	351	1904	5.5	169	1340	11.8	361			
2006	4.9	148				2027	3.7	113	31 Sa 0059	11.9	362
									0732	3.7	113
									1323	12.7	388
									2013	2.9	89

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Qingdao (Da Gang), China, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0242 13.4 408	16 W 0401 12.8 389	1 F 0422 14.6 444	16 Sa 0434 13.7 419	1 M 0512 14.8 451	16 Tu 0452 14.6 444						
0913 5.2 157	W 1010 6.3 193	F 1101 4.8 146	Sa 1105 5.2 160	M 1205 3.2 97	Tu 1142 2.9 89						
1430 13.3 405	1526 12.2 373	1610 14.4 438	1616 13.6 416	1717 14.9 453	1700 15.1 461						
2142 1.3 40	2230 2.7 83	● 2325 0.4 13	2324 2.2 68	2359 2.0 60							
2 W 0337 14.1 430	17 Th 0432 13.2 401	2 Sa 0502 14.8 451	17 Su 0501 14.1 429	2 Tu 0023 1.6 49	17 W 0520 14.8 452						
1013 4.9 150	1051 5.9 180	1146 4.2 129	1138 4.6 140	0544 14.7 449	1216 2.3 71						
1525 13.6 416	1601 12.6 385	1654 14.8 450	1649 14.2 434	1240 3.0 91	1736 15.3 466						
2239 0.7 20	2310 2.4 73	○ 2358 1.9 59	1754 14.6 446	1754 14.6 446							
3 Th 0427 14.6 444	18 F 0501 13.4 409	3 Su 0009 0.3 10	18 M 0528 14.3 437	3 W 0057 2.2 66	18 Th 0034 2.2 66						
1107 4.6 140	1127 5.5 167	0539 14.8 452	1211 4.0 122	0615 14.5 442	0550 14.9 455						
1615 14.0 426	1635 13.0 397	1228 3.8 116	1723 14.7 447	1314 3.0 90	1252 1.9 59						
● 2332 0.2 5	○ 2346 2.2 66	1736 14.9 453	1832 14.2 433	1832 14.2 433	1813 15.2 463						
4 F 0513 14.7 449	19 Sa 0529 13.6 416	4 M 0050 0.6 19	19 Tu 0030 1.8 55	4 Th 0130 2.9 88	19 F 0110 2.6 80						
1157 4.3 131	1202 5.1 154	0615 14.7 449	0556 14.5 443	0648 14.0 428	0622 14.8 450						
1703 14.2 434	1708 13.4 408	1307 3.5 108	1245 3.5 108	1349 3.1 96	1330 1.8 55						
		1816 14.6 445	1758 14.9 453	1911 13.6 414	1854 14.8 450						
5 Sa 0021 -0.1 -2	20 Su 0021 2.0 60	5 Tu 0127 1.2 36	20 W 0102 1.8 56	5 F 0204 3.7 114	20 Th 0149 3.4 103						
0558 14.6 446	0558 13.8 421	0651 14.5 441	0625 14.6 446	0721 13.4 409	0659 14.3 435						
1244 4.1 124	1236 4.7 143	1346 3.5 107	1320 3.2 98	1425 3.5 107	1412 2.0 61						
1749 14.3 435	1742 13.7 417	1857 14.0 428	1835 14.8 450	1955 12.8 389	1941 14.0 426						
6 Su 0108 0.0 1	21 M 0054 1.8 56	6 W 0203 2.0 61	21 Th 0136 2.2 66	6 Sa 0240 4.8 147	21 Su 0233 4.4 135						
0641 14.4 438	0628 13.9 423	0728 14.1 429	0657 14.6 445	0756 12.6 384	0740 13.5 410						
1329 4.0 121	1310 4.4 134	1425 3.6 111	1357 3.0 92	1505 4.0 122	1500 2.5 75						
1835 14.0 428	1818 13.9 423	1940 13.3 405	1915 14.4 440	2048 11.9 362	2040 13.0 396						
7 M 0153 0.5 14	22 Tu 0128 1.8 54	7 Th 0239 3.0 91	22 F 0212 2.8 86	7 Su 0322 6.0 184	22 M 0326 5.6 172						
0724 14.0 426	0700 13.9 424	0807 13.5 411	0732 14.4 438	0837 11.8 359	0833 12.4 378						
1414 4.0 121	1346 4.2 128	1506 4.0 121	1437 3.0 92	1554 4.6 139	1600 3.1 93						
1921 13.5 411	1857 13.8 422	2028 12.4 379	2000 13.8 421	2207 11.1 338	2203 12.1 369						
8 Tu 0235 1.2 37	23 W 0202 1.9 59	8 F 0318 4.2 127	23 Sa 0253 3.8 116	8 M 0417 7.2 218	23 Tu 0439 6.7 203						
0808 13.5 413	0735 13.9 423	0849 12.8 389	0813 13.8 422	0935 11.0 335	0950 11.5 349						
1500 4.1 124	1425 4.1 124	1552 4.4 133	1524 3.2 98	1659 5.0 153	1722 3.4 105						
2011 12.7 387	1938 13.6 414	2127 11.5 352	2056 13.0 397	1824 5.1 156	1859 3.2 99						
9 W 0318 2.2 68	24 Th 0239 2.4 72	9 Sa 0404 5.5 167	24 M 0342 5.1 154	9 Tu 0013 11.0 335	24 W 0008 11.9 364						
0855 13.1 399	0813 13.8 420	0940 12.0 366	0902 13.1 399	0539 7.9 242	0619 6.9 211						
1549 4.3 130	1507 4.0 121	1647 4.8 145	1621 3.5 107	1116 10.6 322	1143 11.3 343						
2106 11.8 361	2026 13.1 400	● 2254 10.9 333	● 2210 12.2 373	1824 5.1 156	1859 3.2 99						
10 Th 0402 3.4 104	25 F 0320 3.1 96	10 Su 0503 6.7 204	25 M 0446 6.3 191	10 W 0131 11.5 349	25 Th 0133 12.5 381						
0945 12.6 383	0855 13.5 413	1046 11.4 347	1008 12.3 375	0722 7.9 241	0753 6.2 190						
1643 4.5 136	1556 3.9 119	1756 4.9 150	1733 3.7 112	1246 10.8 328	1312 11.9 362						
● 2213 11.1 338	2122 12.6 383	1917 4.8 145	2357 12.0 365	1951 4.7 143	2018 2.6 78						
11 F 0453 4.7 142	26 Sa 0408 4.2 127	11 M 0052 11.0 335	26 Tu 0615 7.0 214	11 W 0223 12.1 368	26 Th 0227 13.1 400						
1042 12.0 367	0945 13.2 403	0624 7.5 229	1140 11.9 362	0834 7.2 220	0856 5.2 158						
1744 4.6 139	1652 3.8 116	1210 11.1 339	1903 3.4 105	1348 11.4 346	1415 12.7 388						
2339 10.7 327	● 2232 12.1 369	1917 4.8 145	2051 4.0 123	2051 4.0 123	2117 2.0 60						
12 Sa 0554 5.7 175	27 Su 0508 5.3 161	12 Tu 0211 11.6 353	27 W 0140 12.6 383	12 F 0301 12.7 387	27 M 0306 13.6 415						
1146 11.6 355	1045 12.8 391	0754 7.6 233	0754 6.8 208	0921 6.4 194	0945 4.2 127						
1851 4.4 135	1757 3.6 109	1324 11.3 344	1314 12.2 373	1435 12.2 372	1503 13.5 411						
	2359 12.0 367	2029 4.2 129	2028 2.7 81	2138 3.3 102	2204 1.8 54						
13 Su 0114 11.0 334	28 M 0623 6.1 187	13 W 0303 12.3 374	28 Th 0243 13.4 407	13 F 0331 13.3 404	28 Tu 0340 14.0 426						
0709 6.5 197	1157 12.6 383	0902 7.3 221	0907 6.0 184	0959 5.4 165	1027 3.4 103						
1254 11.5 351	1912 3.2 97	1421 11.7 358	1423 13.0 397	1515 13.1 400	1544 14.0 426						
1958 4.1 124		2124 3.6 111	2133 1.8 54	2217 2.8 84	2245 1.9 57						
14 M 0230 11.5 352	29 Tu 0132 12.5 382	14 Th 0339 12.9 392	29 F 0329 14.0 427	14 W 0358 13.8 420	29 M 0411 14.2 432						
0821 6.7 205	0751 6.4 196	0951 6.6 202	1002 5.1 156	1034 4.5 138	1104 2.8 86						
1355 11.6 354	1313 12.7 386	1505 12.3 376	1516 13.9 423	1551 14.0 426	1622 14.2 434						
2056 3.6 109	2030 2.5 76	2209 3.1 94	2225 1.2 36	2253 2.3 71	● 2321 2.2 67						
15 Tu 0322 12.2 372	30 W 0244 13.4 407	15 F 0408 13.4 407	30 Sa 0406 14.4 440	15 M 0425 14.2 433	30 Tu 0441 14.2 434						
0922 6.6 202	0908 6.1 185	1030 5.9 181	1047 4.3 131	1108 3.7 112	1138 2.5 76						
1445 11.9 362	1423 13.1 399	1542 13.0 396	1600 14.5 442	1626 14.7 447	1657 14.3 435						
2146 3.1 95	2138 1.6 50	2249 2.6 80	2309 1.0 30	2327 2.0 62	2354 2.6 80						
31 Th 0337 14.1 429	31 Th 1009 5.5 167		31 Su 0440 14.7 448								
	1521 13.7 419		1128 3.6 111								
	2235 0.9 27		1639 14.8 452								
			● 2348 1.1 35								

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

## **Qingdao (Da Gang), China, 2008**

## Times and Heights of High and Low Waters

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

# Lianyun Gang, China, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu	0642	4.5	137	16	0606	3.2	99	1 F	0031	12.6	385
1227	12.0	365	W	1136	13.8	421		0748	4.5	138	
1848	4.9	148	Sa	1812	3.7	113		1412	12.0	365	
			O	2357	14.5	442		2001	6.5	199	
2 W	0052	13.0	395	17	0709	3.1	94	2 Sa	0144	12.2	371
0745	4.3	132	Th	1253	13.5	411		0900	4.4	134	
1348	11.8	359		1919	4.7	143		1529	12.5	381	
1952	5.6	171						2122	6.7	203	
3 Th	0153	12.7	388	18	0101	14.1	431	3 Su	0259	12.1	370
0851	4.0	122	F	0819	2.8	86		1008	3.9	120	
1500	12.1	368		1416	13.5	413		1632	13.3	405	
2100	5.9	180		2041	5.3	162		2233	6.2	190	
4 F	0251	12.7	386	19	0212	13.9	424	4 M	0404	12.6	383
0952	3.6	109	Sa	0935	2.4	73		1108	3.3	100	
1602	12.7	387		1538	14.1	429		1720	14.1	431	
2205	5.8	178		2204	5.3	161		2331	5.5	167	
5 Sa	0345	12.8	389	20	0324	14.0	426	5 Tu	0456	13.3	405
1046	3.1	94	Su	1047	1.9	57		1159	2.6	79	
1655	13.5	411		1647	14.8	452		1800	14.8	452	
2303	5.5	168		2317	4.8	146					
6 Su	0432	13.0	396	21	0432	14.4	438	6 W	0020	4.6	139
1134	2.6	80	M	1154	1.2	37		0539	14.1	431	
1740	14.2	434		1744	15.6	476		1243	1.9	59	
2353	5.1	156						1833	15.4	470	
7 M	0513	13.4	409	22	0020	4.1	126	7 Th	0106	3.2	98
1218	2.2	66	Tu	0530	14.9	455		0616	14.9	453	
1820	14.9	453		1253	0.6	19		1320	1.4	42	
			O	1831	16.1	492		1902	15.8	483	
8 Tu	0037	4.7	143	23	0113	3.5	108	8 F	0139	3.0	92
0551	13.9	424	W	0617	15.4	470		0649	15.4	470	
1258	1.8	54		1342	0.2	7		1354	1.0	30	
● 1855	15.3	465		1912	16.3	498		1929	16.2	493	
9 W	0116	4.3	130	24	0158	3.2	98	9 Sa	0213	2.5	77
0627	14.4	440	Th	0659	15.7	479		0720	16.0	488	
1334	1.5	45		1422	0.2	5		1429	1.3	40	
1926	15.5	472		1948	16.3	496		1946	16.1	491	
10 Th	0153	3.9	119	25	0235	3.1	94	10 M	0247	2.3	70
0702	14.9	453	F	0738	15.8	481		0754	16.1	490	
1407	1.2	38		1455	0.5	14		1458	0.9	27	
1956	15.6	474		2021	16.0	487		2025	16.5	503	
11 F	0228	3.6	111	26	0308	3.0	92	11 Tu	0322	2.2	66
0736	15.1	460	Sa	0816	15.5	473		0832	16.1	491	
1439	1.1	34		1524	1.0	32		1533	1.3	40	
2026	15.6	475		2053	15.6	475		2058	16.4	501	
12 Sa	0302	3.5	106	27	0340	3.0	92	12 W	0400	2.2	66
0811	15.2	462	Su	0855	15.0	457		0917	15.8	483	
1513	1.1	34		1554	1.8	56		1611	2.1	63	
2057	15.6	475		2127	15.2	462		2137	16.1	492	
13 Su	0340	3.4	104	28	0415	3.1	95	13 Th	0444	2.3	70
0850	15.0	458	M	0938	14.2	434		1010	15.3	465	
1550	1.3	41		1627	2.8	85		1654	3.1	96	
2133	15.5	471		2203	14.6	446		2223	15.6	474	
14 M	0422	3.4	103	29	0458	3.4	104	14 F	0536	2.6	79
0936	14.7	449	Tu	1027	13.4	407		1114	14.5	442	
1631	1.9	57		1704	3.8	117		1747	4.4	134	
2214	15.3	465		2244	14.0	427		2318	14.7	449	
15 Tu	0510	3.3	102	30	0547	3.8	117	15 F	0639	3.0	91
1031	14.3	435	W	1126	12.5	382		1235	13.8	421	
1718	2.7	81		1749	4.9	149		1855	5.6	170	
2301	14.9	454		2332	13.3	406					
				31	0644	4.3	130				
				Th	1242	12.0	365				
				1847	5.9	179					

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Lianyun Gang, China, 2008

Times and Heights of High and Low Waters

April				May				June			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu	0134	12.2	371	16 W	0312	13.6	415	1 Th	0210	13.0	396
	0824	4.9	149		1003	3.2	97		0848	4.4	133
	1514	13.5	410		1606	15.2	462		1509	14.4	439
	2123	6.5	198		2242	4.4	133		2140	4.9	150
2 W	0258	12.7	386	17 Th	0413	14.3	437	2 F	0314	13.8	422
	0939	4.3	132		1101	3.0	92		0951	3.8	117
	1607	14.2	434		1648	15.4	468		1554	15.2	462
	2227	5.3	162		2329	3.4	104		2234	3.7	113
3 Th	0400	13.6	415	18 F	0459	14.9	455	3 Sa	0406	14.9	454
	1040	3.5	107		1148	3.1	93		1046	3.4	103
	1648	15.1	460		1721	15.5	471		1631	15.9	484
	2318	4.0	123						2321	2.6	78
4 F	0445	14.6	446	19 Sa	0008	2.7	81	4 Su	0452	15.9	486
	1132	2.7	82		0537	15.3	467		1137	3.1	94
	1721	15.9	485		1226	3.3	100		1704	16.5	503
					1749	15.6	474				
5 Sa	0002	2.9	88	20 Su	0041	2.2	67	5 M	0005	1.6	50
	0524	15.6	477		0611	15.6	474		0535	16.9	514
	1216	2.1	64		1258	3.5	107		1225	3.1	93
	1750	16.6	505		1814	15.6	476		1738	17.0	517
6 Su	0042	1.9	59	21 M	0113	2.0	62	6 Tu	0048	1.0	30
	0559	16.5	503		0642	15.7	480		0620	17.5	533
	1257	1.9	57		1327	3.7	113		1310	3.2	98
	1817	17.1	520		1839	15.6	477		1815	17.2	525
7 M	0119	1.3	39	22 Tu	0143	2.1	65	7 W	0132	0.7	21
	0636	17.2	524		0715	15.9	484		0707	17.7	541
	1336	2.0	60		1358	3.9	120		1356	3.6	109
	1846	17.4	529		1906	15.5	473		1856	17.1	522
8 Tu	0157	0.9	27	23 W	0213	2.4	73	8 Th	0216	0.7	22
	0717	17.6	535		0752	15.9	486		0758	17.7	538
	1414	2.4	73		1430	4.3	130		1442	4.1	125
	1919	17.4	530		1936	15.3	466		1943	16.7	509
9 W	0235	0.8	25	24 Th	0243	2.7	83	9 F	0304	1.0	31
	0803	17.5	534		0833	15.8	482		0853	17.3	526
	1455	3.1	94		1503	4.8	146		1531	4.7	144
	1959	17.1	520		2009	14.9	455		2035	15.9	486
10 Th	0317	1.1	33	25 F	0312	3.1	93	10 Sa	0356	1.5	47
	0854	17.1	520		0917	15.5	472		0953	16.6	507
	1539	4.0	121		1539	5.4	166		1626	5.4	166
	2045	16.3	497		2046	14.5	442		2133	15.0	457
11 F	0404	1.7	52	26 Sa	0344	3.3	102	11 M	0454	2.1	65
	0954	16.3	497		1005	15.0	456		1102	15.9	485
	1630	5.0	151		1618	6.1	186		1732	6.0	183
	2140	15.2	464		2129	14.0	426		2243	14.1	429
12 Sa	0501	2.5	75	27 Su	0423	3.7	114	12 M	0559	2.8	84
	1106	15.5	471		1057	14.3	436		1218	15.4	468
	1733	5.9	180		1704	6.7	203		1848	6.2	189
	2248	14.0	427		2222	13.4	407		●		
13 Su	0611	3.2	97	28 M	0513	4.2	128	13 Tu	0005	13.5	410
	1235	14.9	453		1157	13.8	420		0710	3.3	101
	1858	6.5	198		1803	6.9	211		1328	15.0	458
	●				2331	12.8	390		2002	5.8	177
14 M	0018	13.2	401	29 Tu	0618	4.6	139	14 W	0129	13.4	407
	0735	3.5	108		1307	13.5	413		0818	3.7	114
	1358	14.7	448		1920	6.8	206		1429	14.8	452
	2030	6.2	190						2106	5.0	153
15 Tu	0151	13.1	399	30 W	0054	12.6	384	15 Th	0244	13.7	417
	0855	3.4	105		0734	4.7	142		0920	4.1	125
	1509	14.9	454		1415	13.8	420		1522	14.8	452
	2144	5.4	164		2038	6.0	184		2200	4.1	125

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Lianyun Gang, China, 2008

Times and Heights of High and Low Waters

July				August				September							
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height				
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm				
1 Tu	0416	16.3	497	16 W	0532	15.8	482	1 F	0012	1.8	55				
Tu	1043	5.8	177	W	1136	7.0	213	F	0608	18.0	549				
1558	16.1	492	1657	14.5	441	Sa	1243	5.5	167	Sa	0017	3.3	100		
2314	2.0	60	2359	3.4	105	●	1749	17.1	520	M	0621	16.9	516		
2 W	0517	17.1	520	17 Th	0613	16.4	499	2 Sa	1241	6.0	182	1 M	0132	1.7	51
W	1147	5.6	170	Th	1222	6.6	202	Sa	1755	16.1	492	Tu	0700	18.0	549
1656	16.5	502	1737	14.9	455	●	1749	17.1	520	M	1348	4.1	124		
3 Th	0014	1.5	45	18 F	0040	3.1	95	17 Su	1856	17.8	544	Sa	1856	17.8	544
Th	0612	17.7	540	F	0648	16.7	508	●	1749	17.1	520	M	0132	1.7	51
1245	5.2	160	1302	6.3	191	Su	1332	5.0	153	Tu	0728	17.8	542		
●	1751	16.8	512	O	1813	15.5	471	1834	17.5	533	1418	3.9	118		
4 F	0110	1.1	34	19 Sa	0117	2.9	87	●	1828	16.7	509	Su	1931	17.7	540
F	0702	18.1	551	M	0718	16.8	512	1834	17.5	533	Th	0204	2.2	67	
1339	5.1	154	1339	5.9	179	Sa	1414	4.7	144	17 W	0648	17.2	524		
1841	17.0	518	1847	15.9	484	Su	1915	17.7	538	Tu	0621	16.9	516		
5 Sa	0203	0.9	26	20 Su	0150	2.7	82	●	1749	17.1	520	M	1241	6.0	182
Sa	0748	18.1	552	Tu	0746	16.8	513	Su	1755	16.1	492	Sa	1755	17.5	536
1428	5.0	151	1412	5.6	170	M	1524	4.5	137	M	0021	2.5	76		
1929	17.0	519	1920	16.2	494	Sa	2036	17.0	518	Tu	0736	17.5	534		
6 Su	0249	0.9	27	21 M	0221	2.6	80	●	1749	17.1	520	4 F	0231	1.3	39
Su	0832	17.9	545	W	0812	16.8	513	Su	1524	4.5	137	Th	0804	18.0	549
1514	5.0	153	1445	5.3	162	M	1450	4.6	139	Sa	1955	17.5	532		
2015	16.8	511	1953	16.4	499	Sa	2055	17.5	532	M	0201	2.5	76		
7 M	0332	1.2	38	22 Tu	0253	2.7	82	●	1749	17.1	520	4 Th	0303	3.7	114
M	0915	17.4	529	Tu	0840	16.8	513	Su	1530	4.2	127	19 W	0231	1.3	39
1558	5.1	155	1519	5.2	158	M	1601	4.5	138	Tu	0801	17.6	537		
2103	16.2	495	2028	16.4	500	Sa	2048	17.5	533	4 W	0232	2.6	80		
8 Tu	0412	2.0	62	23 W	0327	2.9	88	●	1749	17.1	520	5 F	0336	4.6	141
Tu	0957	16.7	510	W	0910	16.8	513	Su	1530	4.2	127	Th	0859	16.4	501
1642	5.1	156	1557	5.1	154	M	1644	4.8	145	Sa	1600	4.6	140		
2155	15.5	473	2111	16.3	496	Sa	2113	15.4	470	M	1522	4.1	125		
9 W	0454	3.1	95	24 Th	0405	3.3	102	●	1749	17.1	520	2050	16.7	509	
W	1042	16.1	490	Th	0947	16.8	513	Su	2140	17.1	520	20 F	0325	4.4	134
1730	5.1	155	1641	4.9	150	M	1611	4.1	126	Sa	0834	17.4	531		
2255	14.7	448	2201	16.0	488	Sa	2140	17.1	520	M	1545	3.2	99		
10 Th	0539	4.4	133	25 O	0449	4.1	124	●	2352	14.6	444	2128	17.4	530	
Th	1130	15.5	471	F	1030	16.6	506	Su	0458	6.8	207	21 C	0410	5.5	167
1823	5.1	154	1732	4.7	144	W	1030	15.8	482	W	0922	16.6	507		
●	O	2303	15.7	478	F	1733	5.2	157	Su	1636	3.7	113			
11 F	0005	14.0	428	26 M	0539	5.1	154	●	2352	14.6	444	2235	16.5	503	
F	0630	5.6	170	W	1120	16.3	498	Su	0458	6.8	207				
1225	14.9	455	Sa	1831	4.5	137	M	1611	4.1	126					
1921	5.0	152	●	2043	5.6	170	Sa	2140	17.1	520					
12 Sa	0123	13.7	419	27 Tu	0015	15.4	470	●	2352	14.6	444	21 C	0506	6.7	203
Sa	0730	6.6	200	W	0641	6.1	185	Su	0458	6.8	207				
1324	14.5	442	Su	1219	16.0	488	M	1611	4.1	126					
2024	4.8	147	●	1936	4.2	127	Sa	2140	17.1	520					
13 Su	0237	13.9	424	28 W	0135	15.4	469	●	2352	14.6	444	21 C	0506	6.7	203
Su	0837	7.2	218	M	0757	6.9	209	Su	0458	6.8	207				
1423	14.2	433	●	1327	15.7	479	M	1611	4.1	126					
2126	4.6	139	2048	3.7	114	Sa	2140	17.1	520						
14 M	0344	14.4	439	29 Tu	0259	15.7	480	●	2352	14.6	444	21 C	0506	6.7	203
M	0943	7.3	224	Tu	0921	7.1	216	Su	0458	6.8	207				
1520	14.1	429	1440	15.6	476	M	1611	4.1	126						
2222	4.2	128	2201	3.2	97	Sa	2140	17.1	520						
15 Tu	0442	15.1	461	30 W	0416	16.5	503	●	2352	14.6	444	21 C	0506	6.7	203
Tu	1043	7.3	221	W	1038	6.8	206	Su	0458	6.8	207				
1612	14.2	432	1552	15.9	484	M	1611	4.1	126						
2313	3.8	117	2309	2.5	76	Sa	2140	17.1	520						
16 Th	0517	17.4	529	31 Th	0517	17.4	529	●	2352	14.6	444	21 C	0506	6.7	203
Th	1145	6.1	187	W	1656	16.4	501	Su	0458	6.8	207				
1656	16.4	501	●	1820	17.7	540	M	1611	4.1	126					

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Lianyungang, China, 2008

Times and Heights of High and Low Waters

October				November				December				
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm	
1 W	0135	3.2	98	16 Th	0109	2.8	86	1 Sa	0211	4.7	142	
0651	17.0	519	0620	17.5	534	0717	15.4	469	16 M	0218	4.0	121
1347	3.1	94	1327	1.9	59	1421	3.0	91	0716	16.6	506	
1910	17.3	528	1852	18.3	557	2016	16.2	494	1435	0.8	24	
2 Th	0204	3.8	115	17 F	0148	3.2	99	17 Su	0218	4.0	121	
0717	16.8	512	0652	17.6	537	0750	15.0	458	0735	14.6	444	
1417	3.3	100	1404	1.7	53	1450	3.2	98	1434	2.3	69	
1946	17.1	521	1936	18.3	557	2100	15.7	480	2026	17.3	526	
3 F	0234	4.4	133	18 Sa	0228	3.9	119	18 M	0245	5.2	159	
0746	16.4	500	0729	17.4	529	0805	16.0	487	0306	4.6	139	
1448	3.7	112	1444	1.9	57	1525	1.1	35	0811	14.4	439	
2027	16.7	509	2027	17.8	544	2123	16.6	506	1505	2.4	73	
4 Sa	0307	5.1	154	19 Su	0312	4.8	145	2121	14.8	452		
0818	15.8	482	0813	16.7	510	0358	6.6	200	0301	5.2	159	
1520	4.1	126	1529	2.3	69	0907	14.0	428	0352	4.1	125	
2115	16.1	491	2125	17.1	520	1601	3.8	116	0854	15.2	463	
5 Su	0344	5.9	181	20 M	0402	5.7	174	1622	1.7	51		
0855	15.1	461	0906	15.7	479	0442	7.1	216	1632	1.6	506	
1555	4.6	140	1624	2.9	88	0958	13.4	408	0336	5.4	166	
2211	15.4	469	2235	16.2	493	1650	4.3	130	0851	14.1	429	
6 M	0426	7.0	212	21 Tu	0503	6.7	203	2227	15.8	483		
0937	14.3	437	1012	14.6	444	0537	7.4	225	0344	4.4	133	
1637	5.1	154	1734	3.5	106	1105	12.8	389	0500	5.8	177	
2317	14.6	446	●	●	●	1752	4.7	143	0500	5.6	171	
7 Tu	0515	7.9	241	22 W	0003	15.5	473	0731	5.7	175		
1031	13.5	413	0627	7.3	221	1229	12.5	380	1253	13.0	397	
1732	5.5	167	1138	13.7	417	1908	4.9	150	1947	3.4	103	
●	●	●	1900	3.8	115	●	●	●	●	●	●	
8 W	0037	14.1	429	23 Th	0129	15.4	468	0048	13.5	410		
0619	8.6	261	0802	7.0	214	0653	7.3	221	0200	14.5	442	
1146	12.9	394	1315	13.5	412	1229	12.5	380	0839	5.0	151	
1845	5.7	174	2023	3.6	109	1908	4.9	150	1413	13.3	405	
9 Th	0156	14.0	426	24 F	0241	15.5	473	2054	3.8	115		
0748	8.5	260	0916	6.1	185	0250	14.1	429	0226	14.1	429	
1317	12.8	391	1437	14.1	429	0919	5.4	164	0343	14.5	441	
2010	5.5	169	2132	3.2	98	1453	13.5	413	0925	3.1	93	
10 F	0300	14.3	436	25 Sa	0339	15.8	481	1219	4.2	128		
0909	7.7	235	1015	4.9	149	0347	12.8	390	1027	3.1	93	
1437	13.4	408	1542	14.9	453	2025	4.7	143	1615	14.3	435	
2122	4.9	150	2232	3.0	91	2129	4.2	128	2246	4.2	129	
11 Sa	0350	14.9	455	26 M	0424	15.9	486	0410	15.4	469		
1008	6.5	197	1103	3.8	117	1058	3.0	90	0423	14.5	443	
1537	14.3	436	1632	15.6	474	1632	15.6	477	1112	2.4	73	
2219	4.2	127	2322	3.0	92	2224	3.7	113	1700	14.7	448	
12 Su	0430	15.6	477	27 W	0500	16.0	487	1114	1.4	42		
1055	5.2	158	1143	3.1	93	0443	16.0	488	1739	15.1	459	
1623	15.3	466	1714	16.0	488	1141	1.9	59	0458	14.6	444	
2307	3.4	104	●	●	●	1224	1.2	37	1154	2.1	64	
13 M	0502	16.3	497	28 Tu	0003	3.3	100	1306	2.1	64		
1136	4.0	123	0529	16.0	487	0516	16.5	503	1853	15.6	476	
1701	16.3	496	1219	2.6	78	1800	17.3	528	●	●	●	
2351	2.9	88	1749	16.2	495	●	●	●	●	●	●	
14 Tu	0529	16.8	513	29 F	0038	3.6	110	1844	17.0	517		
1214	3.1	94	0555	15.9	485	0047	3.3	100	1853	15.6	476	
1737	17.2	523	1252	2.4	73	0552	16.8	513	●	●	●	
●	●	●	1823	16.4	500	1306	0.8	23	1853	15.6	476	
15 W	0031	2.7	82	30 Th	0109	3.9	120	1845	17.7	538		
0554	17.3	526	0620	15.8	485	0132	3.5	108	0047	4.4	133	
1251	2.4	73	1323	2.5	76	0632	16.9	514	0559	14.6	445	
●	●	●	1857	16.5	502	1349	0.7	20	1306	2.1	64	
16 O	1813	17.8	544	1935	16.4	501	1934	17.6	537	●	●	●
17 F	31	0140	4.3	130	●	●	●	●	●	●	●	
1457	0647	15.6	477	●	●	●	●	●	●	●	●	
1457	1353	2.7	83	●	●	●	●	●	●	●	●	
1457	1935	16.4	501	●	●	●	●	●	●	●	●	

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Wusong (Shanghai), China, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0115	2.4	72	16 W 0048	1.8	54	1 F 0105	2.9	89	1 Sa 0128	3.0	90
0632	7.7	236	W 0549	9.2	280	F 0725	7.4	226	Sa 0751	8.4	255
1306	3.7	112	1249	3.1	93	1457	4.0	121	1354	4.1	125
1830	7.9	241	● 1757	8.9	270	1947	5.8	176	1838	5.6	170
2 W 0155	2.6	78	17 Th 0133	2.1	63	2 Sa 0221	3.3	101	2 Su 0034	3.8	116
0738	7.6	232	0655	8.9	272	0910	7.6	232	0948	8.7	264
1427	3.9	120	1402	3.6	110	1649	3.5	107	1740	3.0	91
1939	7.1	217	1907	7.8	238	2142	5.8	177	2238	6.6	202
3 Th 0250	2.8	85	18 F 0232	2.4	72	3 Su 0409	3.2	98	18 M 0518	2.8	85
0853	7.9	240	0817	8.9	270	1027	8.4	256	1106	9.6	293
1601	3.7	114	1547	3.6	111	1756	2.9	89	1850	2.2	66
2100	6.8	206	2041	7.1	217	2252	6.6	201	2341	7.7	236
4 F 0355	2.8	86	19 Sa 0348	2.5	77	4 M 0533	2.7	81	19 Tu 0638	1.9	59
1000	8.5	258	0947	9.3	283	1119	9.4	285	1159	10.5	321
1721	3.2	98	1731	3.1	94	1847	2.5	75	1947	1.6	49
2213	6.9	211	2216	7.2	220	2335	7.6	231	1048	9.1	278
5 Sa 0500	2.6	80	20 Su 0517	2.3	71	5 Tu 0635	2.0	62	20 W 0638	1.9	59
1053	9.3	283	1102	10.1	307	1200	10.2	310	0741	1.2	38
1823	2.7	83	1847	2.4	73	1936	2.1	65	1238	11.2	340
2307	7.4	227	2328	7.8	238	2039	1.2	37	2039	9.0	274
6 Su 0557	2.3	70	21 M 0636	1.8	55	6 W 0013	8.6	261	20 O 0104	9.6	293
1136	10.1	307	1200	10.9	331	0732	1.5	46	0835	0.8	24
1911	2.4	73	1951	1.9	57	1235	10.9	331	1319	11.5	352
2350	8.1	246	2020	2.1	63	2117	1.5	47	2117	1.5	47
7 M 0650	1.9	58	22 Tu 0023	8.6	261	7 Th 0049	9.3	284	21 O 0104	9.6	293
1216	10.8	328	0740	1.3	40	0818	1.3	41	0835	0.8	24
1952	2.2	68	1248	11.5	349	1314	11.4	348	1352	11.4	348
○ 2037	2.1	63	○ 2046	1.5	45	● 2052	1.9	57	2143	1.2	38
8 Tu 0026	8.7	266	23 W 0112	9.2	279	8 F 0124	9.9	303	22 Sa 0212	10.3	315
0741	1.5	47	0838	0.9	28	0855	1.0	32	0942	1.0	30
1252	11.2	342	1328	11.9	363	1342	11.7	356	1421	11.3	345
● 2037	2.1	63	2139	1.2	38	2140	1.4	43	2208	1.5	46
9 W 0103	9.2	281	24 Th 0155	9.5	291	9 Sa 0201	10.3	315	24 M 0238	10.3	314
0832	1.2	38	0930	0.7	21	0939	0.8	25	1004	1.5	45
1326	11.6	353	1415	11.9	363	1419	11.9	364	1447	10.9	331
2115	2.2	68	2214	1.7	51	2219	1.6	49	2236	1.2	37
10 Th 0139	9.5	290	25 F 0232	9.7	295	10 Su 0232	10.6	323	25 M 0308	10.2	311
0900	1.3	41	0956	1.0	30	1014	1.2	36	1033	1.6	49
1404	11.7	356	1448	11.6	353	1450	11.7	358	1512	10.4	318
2147	2.0	60	2243	1.3	41	2245	1.1	34	2246	1.4	43
11 F 0215	9.7	295	26 Sa 0309	9.7	295	11 M 0311	10.8	328	26 Tu 0330	10.0	305
0940	1.2	37	1034	1.1	33	1044	1.2	37	1044	2.1	63
1431	11.7	356	1521	11.3	343	1522	11.5	350	1534	9.8	298
2235	1.7	51	2309	1.6	49	2324	1.4	42	2258	1.7	52
12 Sa 0252	9.7	295	27 Su 0341	9.4	288	12 Tu 0345	10.7	325	27 W 0358	9.6	294
1012	1.5	46	1050	1.6	50	1119	1.8	54	1108	2.5	76
1512	11.6	353	1549	10.6	322	1558	10.7	326	1601	8.9	271
2259	1.7	53	2337	1.4	43	2342	1.2	38	2311	2.1	63
13 Su 0328	9.7	295	28 M 0414	9.2	279	13 W 0425	10.4	317	28 Th 0426	9.2	280
1045	1.6	48	1116	2.1	65	1145	2.2	68	1138	3.0	90
1543	11.3	343	1617	9.8	300	1635	9.6	294	1633	7.7	236
2341	1.5	45	2351	1.6	50	2321	2.5	77	2322	2.0	62
14 M 0411	9.6	293	29 Tu 0446	8.7	266	14 Th 0004	1.7	52	29 F 0505	8.5	259
1125	2.0	62	1138	2.6	78	0513	9.8	298	1222	3.6	111
1622	10.7	327	1646	8.9	271	1229	3.1	94	1716	6.5	199
● 1705	9.9	302	● 1722	7.8	237	● 1721	8.3	253	● 2341	3.1	94
15 Tu 0012	1.7	51	30 Th 0034	2.4	73	15 F 0039	2.2	68	15 M 0442	10.4	316
0456	9.4	287	0612	7.7	236	0614	9.0	274	1217	3.3	102
1156	2.4	74	1305	3.8	115	1337	3.8	115	1701	7.7	235
1705	9.9	302	1815	6.6	202	1831	6.9	209	● 2343	2.9	88
16 Tu 0650	1.7	51	31 Th 0612	7.7	236	1645	6.9	209	15 M 0442	10.4	316
0456	9.4	287	1305	3.8	115	1337	3.8	115	1217	3.3	102
1156	2.4	74	1815	6.6	202	1831	6.9	209	1701	7.7	235
1705	9.9	302	31 Th 0612	7.7	236	1645	6.9	209	● 2343	2.9	88

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Wusong (Shanghai), China, 2008

Times and Heights of High and Low Waters

April				May				June			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0218 4.6 141	16 W 0455 3.4 103	1 Th 0329 4.5 136	16 F 0519 3.4 104	1 Su 0524 3.6 111	16 M 0635 3.2 99						
0850 8.3 254	1017 9.8 299	0900 9.6 292	1017 9.7 296	1007 10.4 316	1113 9.3 282						
1632 3.4 105	1753 2.3 71	1635 3.2 98	1741 2.7 82	1735 3.0 90	1810 3.5 106						
2152 7.1 217	2258 9.3 284	2146 9.3 283	2252 10.5 320	2238 12.2 373	2334 11.7 358						
2 W 0418 4.0 121	17 Th 0600 2.6 80	2 F 0446 3.7 112	17 Sa 0614 3.0 92	2 M 0634 2.9 89	17 Tu 0725 3.1 93						
1000 9.3 283	1103 10.3 315	0959 10.3 315	1101 9.9 303	1101 10.8 328	1155 9.7 295						
1733 2.8 86	1840 1.9 59	1734 2.8 84	1829 2.7 82	1834 2.6 79	1853 3.3 100						
2237 8.4 257	2331 10.2 312	2231 10.6 323	2328 11.2 340	2326 13.2 401							
3 Th 0533 3.1 94	18 F 0651 2.1 65	3 Sa 0553 3.0 92	18 Su 0658 2.8 84	3 Tu 0737 2.4 72	18 W 0012 12.3 375						
1048 10.3 314	1139 10.6 324	1046 11.0 336	1139 10.2 310	1151 11.0 335	0759 2.9 88						
1828 2.4 74	1923 2.0 60	1831 2.3 70	1858 2.6 80	1930 2.3 70	1229 10.1 308						
2315 9.8 298		2316 11.8 360			1939 3.1 94						
4 F 0634 2.4 72	19 Sa 0007 10.9 332	4 Su 0652 2.5 76	19 M 0004 11.7 356	4 W 0017 13.7 419	19 Th 0044 12.7 387						
1126 11.2 341	0738 1.9 58	1127 11.6 353	0742 2.6 78	0837 2.0 61	0841 2.8 84						
1912 2.1 64	1214 10.8 330	1918 2.2 68	1214 10.4 317	1237 11.1 338	1305 10.4 317						
2351 10.9 333	1948 1.8 56	2356 12.7 387	1937 2.6 78	2010 2.5 76	2014 3.2 97						
5 Sa 0733 1.7 53	20 Su 0032 11.3 345	5 M 0747 2.1 63	20 Tu 0032 12.1 369	5 Th 0105 14.0 426	20 F 0120 13.0 395						
1207 11.8 359	0811 2.2 67	1212 11.8 360	0829 2.7 82	0930 2.0 61	0915 3.1 94						
1951 1.7 53	1242 10.8 330	1954 2.0 60	1248 10.5 319	1325 11.1 339	1337 10.6 322						
● 2024 2.0 62		● 2024 2.7 83	2053 2.4 74	2046 3.1 93							
6 Su 0025 12.0 365	21 M 0107 11.6 355	6 Tu 0027 13.6 414	21 W 0108 12.4 378	6 F 0143 14.0 426	21 Th 0151 13.0 395						
0830 1.3 40	0842 2.1 65	0843 1.6 48	0851 2.6 80	1000 2.2 68	0945 3.0 91						
1235 12.0 367	1313 10.8 330	1253 11.7 357	1319 10.5 320	1416 10.9 331	1411 10.7 325						
● 2039 1.2 36	2042 2.0 60	2039 1.6 49	2037 2.7 81	2140 2.5 77	2125 3.2 99						
7 M 0108 12.6 384	22 Tu 0129 11.9 363	7 W 0117 13.8 422	22 Th 0133 12.5 382	7 Sa 0228 13.9 423	22 M 0223 12.9 394						
0855 1.7 51	0912 2.5 76	0938 1.5 46	0934 2.6 79	1048 2.2 66	1022 3.2 98						
1317 12.2 372	1339 10.6 324	1332 11.4 347	1353 10.3 315	1507 10.5 320	1444 10.6 322						
2119 1.6 48	2103 2.3 70	2119 2.0 62	2058 2.9 89	2219 3.1 93	2146 3.3 100						
8 Tu 0129 13.2 402	23 W 0159 11.9 364	8 Th 0200 13.7 417	23 F 0207 12.5 381	8 Su 0321 13.3 405	23 M 0254 12.7 387						
0943 1.2 38	0942 2.3 71	1007 2.3 69	0955 2.9 88	1138 2.4 73	1047 3.1 93						
1356 11.7 358	1409 10.3 315	1419 10.9 332	1423 10.1 308	1559 10.1 307	1519 10.5 319						
2143 1.2 38	2132 2.2 68	2146 2.2 66	2132 3.0 90	2254 3.4 103	2223 3.6 109						
9 W 0218 13.2 401	24 Th 0224 11.9 363	9 F 0235 13.4 407	24 Sa 0234 12.3 374	9 M 0411 12.5 380	24 Tu 0327 12.4 379						
1032 1.5 47	1006 2.7 81	1049 2.2 68	1034 2.9 89	1216 3.0 90	1129 3.2 97						
1430 11.2 341	1437 9.8 298	1508 10.0 306	1458 9.7 296	1654 9.7 295	1600 10.3 315						
2209 1.7 53	2142 2.6 78	2218 2.8 85	2146 3.2 99	2342 3.8 116	2251 3.7 114						
10 Th 0256 12.7 388	25 F 0251 11.6 353	10 Sa 0326 12.7 387	25 Su 0308 11.9 363	10 Tu 0502 11.5 350	25 W 0406 12.0 365						
1050 2.2 66	1039 2.8 84	1139 2.6 80	1057 3.2 97	1257 3.1 96	1155 3.2 97						
1514 10.1 309	1509 9.2 279	1603 9.1 278	1534 9.3 283	1753 9.4 286	1644 10.3 314						
2237 2.0 62	2153 2.9 89	2245 3.3 100	2217 3.6 110	● 2024 3.6 110	2338 4.1 124						
11 F 0334 12.0 367	26 Sa 0320 11.1 339	11 M 0420 11.7 356	26 M 0342 11.4 348	11 W 0038 4.3 131	26 Th 0450 11.4 346						
1136 2.7 82	1105 3.1 96	1231 3.1 95	1138 3.3 100	0559 10.5 320	1240 3.3 101						
1601 8.9 271	1545 8.4 256	1708 8.3 254	1618 8.9 272	1345 3.4 103	1736 10.3 315						
2249 2.8 85	2213 3.3 101	2336 4.0 121	2246 3.9 120	1859 9.3 282	● 2024 9.3 282						
12 Sa 0425 11.0 335	27 Su 0355 10.5 319	12 M 0525 10.6 324	27 Tu 0426 10.9 332	12 Th 0146 4.7 142	27 F 0035 4.5 138						
1222 3.4 103	1146 3.5 106	1333 3.4 105	1222 3.5 108	0704 9.6 292	0544 10.6 323						
1702 7.5 230	1630 7.6 233	1830 7.9 242	1714 8.7 264	1438 3.5 107	1328 3.6 110						
2322 3.7 112	2240 3.8 117	● 2024 4.4 133	2341 4.4 133	2008 9.4 286	1840 10.5 319						
13 Su 0534 9.7 297	28 W 0444 9.7 296	13 Tu 0056 4.6 139	28 F 0523 10.3 315	13 M 0308 4.7 142	28 Th 0148 4.8 147						
1348 3.7 114	1243 3.8 117	0649 9.8 298	0814 9.0 274	0559 10.5 320	0653 9.9 301						
1845 6.6 202	1739 7.1 217	1445 3.4 105	1822 8.8 267	1535 3.6 110	1425 3.8 116						
● O 2335 4.5 136	O 2335 4.5 136	2006 8.2 249	O 2335 4.5 136	2113 9.8 299	1953 10.8 330						
14 M 0050 4.5 137	29 Tu 0600 9.1 277	14 W 0243 4.5 136	29 Th 0057 4.7 143	14 Sa 0430 4.3 130	29 Th 0322 4.8 146						
0725 9.0 274	1401 3.9 120	0814 9.4 288	0636 9.9 302	0923 8.8 268	0812 9.4 286						
1537 3.4 105	1917 7.2 219	1554 3.2 98	1422 3.7 114	1632 3.6 110	1533 3.8 115						
2103 7.0 213		2118 8.9 271	1938 9.3 282	2208 10.4 317	2108 11.5 349						
15 Tu 0326 4.3 131	30 W 0131 4.8 147	15 Th 0410 3.9 120	30 F 0236 4.6 141	15 Sa 0536 3.7 114	30 M 0450 4.2 129						
0911 9.2 281	0738 9.0 275	0924 9.5 290	0755 9.8 300	1023 8.9 272	0932 9.4 285						
1656 2.9 87	1526 3.7 112	1651 2.9 89	1531 3.5 108	1727 3.6 110	1642 3.6 111						
2214 8.2 249	2048 8.0 244	2211 9.7 297	2048 10.1 309	2254 11.1 338	2215 12.2 373						
31 Sa 0402 4.2 128											
0906 10.0 306											
1635 3.3 100											
2148 11.2 342											

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Wusong (Shanghai), China, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0609 3.6 111	16 W 0658 3.3 101	1 F 0003 13.6 416	16 Sa 0003 13.1 398	1 M 0107 14.0 428	16 Tu 0024 14.1 429						
1044 9.7 295	1139 9.2 279	0816 2.7 81	0750 3.1 93	0913 2.5 76	0840 2.0 62						
1751 3.4 103	1832 3.7 112	1228 11.0 335	1220 11.2 340	1324 12.9 392	1252 13.4 407						
2315 13.0 397	2351 12.4 378	● 1950 2.8 85	1940 3.0 90	2107 2.7 81	2041 2.1 65						
2 W 0726 3.1 94	17 Th 0743 3.0 92	2 Sa 0040 14.1 430	17 Su 0028 13.7 417	2 Tu 0127 13.9 424	17 W 0106 14.0 426						
1143 10.2 311	1214 10.0 304	0855 2.3 69	0836 2.7 83	0941 2.0 60	0900 2.7 81						
1855 3.1 94	1915 3.5 106	1314 11.7 356	1252 11.8 360	1401 12.8 390	1321 14.1 429						
● 1953 2.8 86	○ 1954 3.2 97	2042 2.5 75	2027 3.0 90	2136 2.6 79	2134 1.9 58						
3 Th 0008 13.6 416	18 F 0026 13.0 396	3 Su 0122 14.5 442	18 M 0107 13.9 423	3 W 0208 13.3 406	18 Th 0126 13.9 425						
0830 2.4 72	0830 3.2 97	0944 1.8 56	0857 3.0 92	0953 2.5 76	0939 1.9 57						
1233 10.7 325	1247 10.6 323	1355 12.0 366	1322 12.4 379	1425 12.9 392	1358 14.0 428						
● 1953 2.8 86	○ 1954 3.2 97	2132 2.3 70	2052 2.9 87	2153 3.2 98	2145 2.6 78						
4 F 0054 14.0 428	19 Sa 0102 13.3 405	4 M 0208 14.2 432	19 Tu 0126 14.1 431	4 Th 0229 12.7 388	19 F 0210 13.3 404						
0911 2.5 75	0850 3.1 94	1022 2.6 80	0940 2.4 74	1022 2.8 86	0954 2.4 74						
1322 11.1 339	1318 11.1 339	1427 12.3 374	1355 12.7 388	1457 12.5 381	1424 14.2 434						
2047 2.6 80	2038 2.9 89	2156 2.9 87	2135 2.6 79	2227 3.6 110	2234 2.7 81						
5 Sa 0130 14.2 432	20 Su 0128 13.5 413	5 Tu 0232 13.7 417	20 W 0207 13.9 424	5 F 0259 11.8 361	20 Sa 0241 12.3 375						
0954 2.2 66	0935 2.9 88	1043 2.3 69	0959 2.9 88	1035 2.9 88	1031 2.4 73						
1411 11.3 345	1351 11.4 347	1508 12.1 369	1423 13.1 400	1523 12.2 372	1511 13.6 415						
2136 2.6 78	2109 3.1 95	2232 3.0 92	2200 3.1 95	2244 3.9 120	2251 3.5 108						
6 Su 0222 14.2 433	21 M 0205 13.5 412	6 W 0313 13.1 398	21 Th 0228 13.6 416	6 Sa 0326 10.7 327	21 Su 0321 11.1 338						
1044 2.0 61	0955 3.1 94	1102 2.7 83	1037 2.4 72	1038 3.4 104	1040 3.1 94						
1457 11.3 345	1422 11.6 354	1537 11.8 361	1501 13.1 399	1553 11.6 353	1550 12.8 389						
2213 3.0 90	2141 3.1 93	2248 3.7 112	2235 3.1 96	2315 4.6 140	2337 4.3 131						
7 M 0309 13.7 417	22 Tu 0228 13.5 412	7 Th 0340 12.1 370	22 F 0308 12.9 392	7 Su 0358 9.4 285	22 M 0408 9.5 290						
1123 2.7 82	1037 2.7 83	1132 2.8 86	1052 2.8 84	1042 4.0 121	1049 4.0 121						
1537 11.2 341	1457 11.7 357	1614 11.5 350	1530 13.0 395	1627 10.8 328	1645 11.5 351						
2249 3.1 96	2214 3.4 103	2320 4.3 131	2304 3.8 117	2359 5.2 158	○ 1821 10.3 315						
8 Tu 0345 13.0 395	23 W 0306 13.2 402	8 F 0411 11.0 336	23 Sa 0342 11.8 360	8 M 0440 7.9 241	23 Tu 0043 5.1 154						
1146 2.6 79	1057 3.0 90	1140 3.3 102	1120 3.1 96	1051 4.6 140	0518 7.9 240						
1621 11.0 335	1528 11.8 361	1650 10.9 332	1619 12.5 381	1723 9.8 299	1131 4.9 150						
2329 3.7 114	2245 3.5 107	2347 4.9 148	2342 4.5 137	1930 9.3 283	1821 10.3 315						
9 W 0425 12.0 367	24 Th 0335 12.7 387	9 Sa 0448 9.6 294	24 Su 0425 10.4 317	9 Tu 0149 5.6 172	24 W 0259 5.0 153						
1218 3.1 93	1136 2.8 85	1151 4.0 121	1142 3.6 316	0600 6.7 204	0801 7.1 217						
1706 10.6 323	1611 11.8 360	1734 10.3 313	1712 11.7 356	1117 5.4 165	1406 5.7 173						
2356 4.3 130	2324 4.0 122	○ 2347 4.9 148	○ 2342 4.5 137	1930 9.3 283	2043 10.4 317						
10 Th 0505 10.9 333	25 F 0415 11.9 364	10 Su 0050 5.5 167	25 M 0043 5.3 161	10 W 0406 5.1 155	25 Th 0447 4.0 122						
1243 3.3 100	1157 3.1 96	0538 8.2 249	0525 8.8 268	0923 6.7 204	1007 8.3 254						
○ 1754 10.2 310	1656 11.6 355	1215 4.6 140	1213 4.5 136	1443 5.9 179	1631 4.7 142						
○ 1752 11.3 345	1845 9.7 295	1833 10.8 329	2127 9.9 303	2127 9.9 303	2204 11.4 347						
11 F 0045 4.8 147	26 Sa 0003 4.5 137	11 M 0250 5.6 170	26 Tu 0245 5.5 168	11 Th 0511 4.3 131	26 F 0554 3.1 94						
0552 9.7 296	0500 10.8 330	0714 7.0 214	0717 7.5 230	1027 7.9 242	1053 9.9 301						
1315 3.8 116	1236 3.4 105	1317 5.2 159	1346 5.2 158	1635 5.0 152	1744 3.5 107						
1851 9.8 299	○ 1752 11.3 345	2036 9.7 295	2039 10.7 327	2221 11.0 336	2254 12.3 376						
12 Sa 0156 5.2 160	27 Su 0109 5.1 156	12 Tu 0444 4.9 148	27 W 0450 4.6 139	12 Th 0556 3.7 112	27 F 0647 2.4 72						
0656 8.6 261	0600 9.5 291	0938 7.0 213	0949 7.9 240	1057 9.3 284	1125 11.3 343						
1357 4.2 129	1318 4.0 122	1534 5.3 161	1614 4.9 149	1737 4.1 124	1844 2.7 82						
2005 9.7 297	1907 11.1 337	2200 10.5 319	2210 11.7 356	2259 12.1 368	2328 13.0 397						
13 Su 0339 5.1 155	28 M 0249 5.3 161	13 W 0548 4.1 124	28 Th 0608 3.5 108	13 Th 0641 3.1 95	28 Su 0738 1.8 54						
0823 7.8 238	0730 8.5 259	1047 7.9 242	1100 9.2 281	1122 10.7 325	1201 12.1 370						
1505 4.5 138	1433 4.4 134	1700 4.7 142	1743 3.9 118	1834 3.3 100	1936 2.1 63						
2122 10.1 309	2041 11.2 341	2250 11.5 349	2308 12.8 389	2328 13.0 396							
14 M 0505 4.4 135	29 Tu 0441 4.7 143	14 Th 0637 3.5 107	29 F 0710 2.8 86	14 Th 0732 2.7 81	29 W 0009 13.2 402						
0955 7.8 238	0921 8.3 254	1121 9.1 278	1142 10.5 321	1152 11.7 358	0803 2.2 68						
1627 4.5 137	1609 4.4 134	1759 4.0 122	1850 3.1 93	1923 3.0 90	M 1225 12.9 393						
2224 10.9 331	2206 11.9 364	2328 12.4 377	2350 13.5 413	○ 2027 2.4 74	● 2027 2.4 74						
15 Tu 0609 3.8 115	30 W 0605 3.8 116	15 F 0719 3.3 101	30 Sa 0754 2.3 71	15 M 0004 13.5 412	30 Tu 0029 13.2 403						
1058 8.4 255	1047 9.0 275	1152 10.2 311	1219 11.7 356	0751 2.7 82	0838 1.7 53						
1734 4.1 125	1739 3.8 117	1850 3.4 104	1945 2.5 76	1221 12.8 389	1303 13.0 396						
2312 11.7 356	2310 12.9 392	○ 2035 2.1 63	○ 2059 2.7 81	2041 2.3 69							
31 Th 0719 3.1 94	31 Th 1145 10.0 305	31 F 0023 14.1 431	31 Su 0843 1.7 53								
	1848 3.3 100		31 Su 1256 12.3 375								
			● 2035 2.1 63								

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Wusong (Shanghai), China, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
1 W	0109 12.9 392	16 Th	0028 13.4 408	1 Sa	0143 10.8 328	16 Su	0151 11.0 335	1 M	0208 9.6 292	16 Tu	0249 9.8 299
0851 2.2 68	0839 1.4 42	0856 2.5 77	0931 1.5 47	1401 12.7 387	1415 13.8 421	0916 2.3 69	1424 11.9 362	1006 1.6 50	1511 12.6 385		
1324 13.3 404	1304 14.4 438	2148 2.6 80	2237 1.8 55	2107 2.4 72	2148 2.6 80	2215 2.7 81	2331 1.6 48	1006 1.6 50	1511 12.6 385		
2112 2.9 88											
2 Th	0130 12.5 381	17 F	0114 13.0 396	2 Su	0213 10.2 312	17 M	0237 10.2 311	2 Tu	0242 9.2 281	17 W	0339 9.4 288
0925 2.6 78	0907 2.1 63	0921 2.8 84	0949 2.2 67	1426 12.4 379	1500 13.1 398	0939 2.4 72	1456 11.5 349	1047 1.9 58	1558 11.9 363		
1355 13.1 398	1324 14.9 453	2219 3.1 93	2308 2.5 77	2146 1.7 53		2245 2.6 80	2358 1.9 59				
2139 2.7 82											
3 F	0202 11.9 362	18 Sa	0152 12.2 373	3 M	0245 9.5 289	18 Tu	0330 9.4 285	3 W	0317 8.8 269	18 Th	0431 9.1 276
0936 2.5 75	0938 1.8 55	1416 14.4 438	1001 2.7 84	1456 11.8 360	1551 12.1 369	1529 11.0 335	2321 2.8 85	1133 2.4 72	1646 11.0 334		
1421 13.0 395		2235 2.3 69	2357 2.8 86	2246 3.2 99							
2157 3.2 97											
4 Sa	0227 11.1 339	19 Su	0231 11.3 343	4 Tu	0320 8.7 266	19 W	0433 8.5 258	4 Th	0400 8.4 255	19 F	0044 2.0 61
0942 2.9 89	0954 2.5 76	1455 13.5 413	1030 3.4 103	1530 11.1 338	1604 10.4 317	1653 11.0 335	2358 2.9 87	1035 3.1 93	1215 3.0 91	1739 9.9 302	
1444 12.5 382		2253 3.1 95	2325 3.7 112								
2234 3.4 103											
5 Su	0258 10.1 308	20 M	0318 10.0 306	5 W	0405 7.9 242	20 Th	0058 3.1 95	5 F	0451 8.0 245	20 Sa	0132 2.2 67
0949 3.3 101	1021 3.2 99	1541 12.5 381	1013 3.9 120	1615 10.2 311	1116 3.5 108	1116 3.5 108	298	0630 8.4 256	1316 3.5 106	1838 8.8 269	
1513 11.9 364		2344 3.7 113									
2253 3.9 119											
6 M	0329 9.0 273	21 Tu	0415 8.6 263	6 Th	0015 4.0 122	21 F	0210 3.1 96	6 Sa	0048 3.0 90	21 Su	0214 2.4 73
0959 3.8 115	1039 4.0 123	1643 11.2 340	0508 7.3 223	1057 4.6 141	0725 8.0 244	1400 4.3 132	1219 4.2 128	0553 7.9 242	0740 8.2 251	1435 3.7 113	
1545 11.1 338		2340 9.4 138	1723 9.4 287		1937 9.4 286		1801 9.2 281	1219 4.0 122	1435 3.7 113	1946 7.9 242	
2334 4.5 138											
7 Tu	0412 7.8 237	22 W	0056 4.3 130	7 F	0132 4.1 125	22 Sa	0324 2.9 89	7 Su	0147 3.0 91	22 M	0309 2.5 76
1009 4.4 133	0546 7.5 228	1145 5.1 154	0645 7.2 220	1242 5.2 157	0848 8.6 263	1539 3.8 117	1348 4.2 127	0707 8.2 251	0854 8.4 256	1559 3.5 108	
1632 10.0 306		1824 10.1 307	1902 9.1 277		2053 9.2 281		1917 8.9 270	2100 7.5 228			
2334 4.5 138											
8 W	0047 5.1 154	23 Th	0247 4.1 125	8 Sa	0253 3.8 117	23 Su	0429 2.6 79	8 M	0252 2.9 89	23 Tu	0409 2.5 75
0523 6.8 208	0811 7.5 229	1431 5.2 159	0823 8.0 243	1452 4.9 148	0948 9.4 288	1651 3.2 99	1527 3.9 120	0821 9.0 273	0958 8.9 271	1716 3.1 95	
1041 5.2 160		2023 10.0 305	2030 9.4 288		2152 9.3 283	2034 8.9 270		1647 3.3 101	2207 7.4 227		
1809 9.2 280											
9 Th	0248 4.9 150	24 F	0417 3.4 105	9 Su	0401 3.4 103	24 M	0519 2.3 70	9 Tu	0358 2.7 81	24 W	0508 2.3 71
0808 6.7 205	0940 8.8 267	1617 4.2 129	0925 9.3 282	1619 4.1 124	1033 10.3 313	1751 2.8 84	1647 3.3 101	0926 10.0 304	1051 9.5 290	1819 2.7 81	
1334 5.9 180		2139 10.6 322	2132 10.1 309		2240 9.4 288	2141 9.2 279		2141 9.2 279	2303 7.7 236		
2024 9.4 285											
10 F	0410 4.3 131	25 Sa	0525 2.8 85	10 M	0459 2.9 88	25 Tu	0601 2.0 62	10 W	0502 2.3 71	25 Th	0600 2.2 66
0942 7.9 242	1026 10.1 308	1732 3.2 97	1011 10.7 325	1731 3.1 96	1114 10.9 333	1843 2.4 73	1757 2.8 84	1022 11.0 336	1908 2.3 71	1908 2.3 71	
1552 5.1 156		2228 11.2 340	2220 10.9 331		2320 9.6 294	2238 9.5 291		2238 9.5 291	2347 8.2 249		
2135 10.3 314											
11 Sa	0505 3.6 111	26 Su	0612 2.3 71	11 Tu	0551 2.4 73	26 W	0643 1.9 57	11 Th	0602 2.0 60	26 F	0649 1.9 58
1018 9.4 288	1105 11.2 341	1832 2.4 74	1050 11.9 363	1835 2.4 72	1147 11.4 348	1934 2.1 64	2358 9.8 298	1114 11.9 364	1213 10.7 327	1949 2.1 65	
1700 4.1 126		2309 11.5 350		2303 11.4 348		2358 9.8 298		1902 2.3 71	2328 9.9 303		
2220 11.3 345											
12 Su	0552 3.1 94	27 M	0648 2.0 60	12 W	0642 1.9 58	27 Th	0725 2.0 61	12 F	0658 1.6 49	27 Sa	0023 8.7 264
1050 10.9 331	1131 11.9 364	1919 2.4 73	1125 13.1 399	1937 1.7 51	1222 11.8 361	2005 2.3 70	1959 2.0 60	1201 12.6 384	1247 11.1 339	2034 2.0 62	
1759 3.3 101		2341 11.6 353		2340 11.7 356							
2257 12.2 372											
13 M	0640 2.5 76	28 Tu	0734 1.6 50	13 Th	0735 1.3 40	28 F	0030 9.8 300	13 Sa	0018 10.2 311	28 Su	0059 9.0 275
1120 12.2 373	1210 12.4 379	1946 2.2 66	0831 1.8 56	2031 1.5 46	1212 13.7 418	0749 1.9 58	1253 12.0 367	0751 1.3 40	1322 13.0 396	0817 1.6 49	
1852 2.7 82		2049 2.0 62			2042 2.1 65	● 2042 2.1 65		2052 1.6 48	2101 2.3 69	1322 11.4 348	
2325 13.0 395											
14 Tu	0734 1.9 57	29 W	0015 11.6 355	14 F	0021 11.8 361	29 Sa	0105 9.9 302	14 Su	0109 10.2 312	29 M	0130 9.3 282
1152 13.2 401	0750 2.0 60	● 2034 2.0 62	0815 1.6 50	1230 14.3 435	1324 12.2 372	0831 1.8 55	1324 12.2 372	0841 1.1 35	1326 13.4 408	0848 1.4 43	
1942 2.0 60				2054 1.7 53	2116 2.5 75	1324 12.2 372	2148 1.3 39	1326 13.4 408	2148 1.3 39	1353 11.4 348	
● 2040 1.3 39											
15 W	0006 13.2 402	30 Th	0044 11.4 348	15 Sa	0106 11.5 352	30 Su	0136 9.8 298	15 M	0159 10.1 308	30 Tu	0204 9.4 286
0755 2.2 67	0831 1.8 56	1308 12.9 392	0845 1.5 46	1322 14.3 437	2146 1.3 41	0846 2.0 62	2146 1.3 41	0932 1.1 35	1424 11.5 349	0930 1.4 42	
1221 14.2 433		2049 2.4 74							2206 2.3 70		
● 2040 1.3 39											
16 F	0114 11.2 342	31 F	0841 2.2 67								
1328 13.0 395	1328 13.0 395	1328 2.4 72									
2133 2.4 72											

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Zhongjun, Changjiang Approach, China, 2008

Times and Heights of High and Low Waters

January				February				March							
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height				
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm				
1 Tu	0453	9.1	277	16	0407	10.7	325	1 Sa	0548	9.0	274				
1116	4.9	148	W	1052	4.0	123	F	1300	5.3	163					
1650	9.4	287	1613	10.5	320	1754	7.4	225	Sa	1344	5.1	155			
2359	3.6	109	●	2332	2.8	86		1839	7.5	228	16	0612	9.9	302	
2 W	0603	9.0	275	17	0516	10.4	316	17 Su	0123	4.3	131				
1238	5.2	159	Th	1206	4.8	145	Sa	0737	9.2	281					
1757	8.6	263	1720	9.4	286	1456	4.8	147	1542	4.1	124				
						1952	7.3	222	2051	7.9	241				
3 Th	0056	3.8	117	18	0032	3.2	99	3 Su	0218	4.3	131				
0720	9.4	285	F	0644	10.3	314	0858	10.1	307	18 M	0321	3.6	111		
1413	5.0	153	1352	4.9	149	1605	4.0	123	M	0933	11.2	342			
1917	8.3	252	1855	8.6	263	2110	8.0	245	1655	2.9	89				
4 F	0203	3.8	117	19	0152	3.4	104	18	0129	5.1	154				
0829	10.0	306	Sa	0818	10.8	329	0822	9.7	295	18 Tu	0324	3.8	115		
1532	4.4	133	1536	4.2	128	0951	11.0	335	1536	4.1	126				
2031	8.4	256	2034	8.6	263	1657	3.3	101	2053	7.8	238				
5 Sa	0309	3.5	108	20	0323	3.1	95	2159	9.1	276	18 W	0436	2.6	78	
0923	10.9	332	Su	0932	11.6	355	Tu	1026	12.2	373	1004	10.7	326		
1631	3.7	112	1654	3.3	100	1026	12.2	373	1630	3.3	102				
2127	8.9	272	2150	9.2	281	1753	2.1	63	2138	9.1	276				
6 Su	0407	3.1	93	21	0439	2.4	74	2246	10.2	311	2227	10.9	332		
1008	11.7	357	M	1030	12.5	381	2159	10.0	304						
1720	3.2	98	1758	2.5	76	2312	10.8	330							
2211	9.6	292	2246	10.0	304										
7 M	0458	2.5	76	21	0439	2.4	74	21	0640	1.0	32	21 F	0621	1.5	45
1049	12.3	376	Tu	1120	13.2	402	W	1109	12.5	382	1116	12.7	388		
1802	2.9	88	1854	2.0	60	1833	2.3	71	1758	2.1	65				
2250	10.2	311	○	2333	10.6	323	2312	11.5	350	2252	11.3	345			
8 Tu	0546	2.0	60	22	0544	1.8	54	21	0640	1.0	32	22 Sa	0652	1.4	42
1125	12.8	391	W	1204	13.5	412	Th	1144	13.0	396	1148	12.6	385		
1844	2.7	81	1944	1.6	50	1909	2.2	66	1219	13.1	399				
● 2326	10.7	327				● 2349	11.5	350	1953	1.4	43				
9 W	0635	1.5	47	24	0014	11.1	337	22	0000	11.6	354	22 O	0652	1.4	42
1202	13.1	399	Th	0734	0.9	28	F	0726	1.1	33	1148	12.6	385		
1930	2.5	75	1242	13.5	411	1909	2.2	66	1844	1.6	48				
			2030	1.6	48	1953	1.4	43	2327	12.2	371				
10 Th	0001	11.1	338	25	0053	11.3	343	23	0033	11.8	360	23 O	0006	12.4	377
0710	1.5	46	F	0806	1.2	36	8	0705	1.2	36	0730	1.5	45		
1234	13.3	404	1316	13.3	404	F	1217	13.4	407	Sa	1149	13.4	408		
1958	2.5	75	2050	1.7	53	1946	1.7	52	1932	1.1	35				
11 F	0037	11.3	343	26	0126	11.2	342	23	0750	1.1	35	1213	12.4	378	
0745	1.4	43	Sa	0839	1.4	44	Sa	1248	12.8	390	1939	1.3	41		
1307	13.3	406	1346	12.7	388	2032	1.4	42							
2039	2.2	66	2117	2.0	60										
12 Sa	0111	11.4	346	27	0159	11.0	336	11 M	0102	11.9	362	24 M	0033	12.4	378
0825	1.7	53	Su	0858	2.1	63	W	0827	1.3	40	0746	1.9	57		
1338	13.2	402	1411	12.2	371	Su	1317	13.4	408	1238	12.1	369			
2108	2.2	67	2138	1.9	59	2051	1.4	42	1953	1.1	35				
13 Tu	0149	11.3	344	28	0228	10.7	325	25	0127	11.7	358	25 Tu	0059	12.5	380
0851	2.0	61	Th	0928	2.8	84	W	0839	1.9	59	0811	2.3	69		
1410	12.9	393	1436	11.4	348	1347	13.0	396	M	1252	13.3	404			
2142	2.0	61	2152	2.2	68	2137	12.0	365	2033	0.9	26				
14 M	0227	11.2	341	29	0302	10.3	313	25	0127	11.7	358	2039	1.9	59	
0931	2.5	75	Tu	0946	3.4	103	W	0924	2.2	68	0837	2.5	75		
1444	12.4	377	1503	10.5	321	1416	12.3	376	Tu	0840	1.5	46			
2213	2.2	68	2210	2.7	83	2143	1.6	48	1321	12.7	387				
15 Tu	0313	11.0	334	14	0330	11.4	346	21	0153	11.5	352	2106	2.3	70	
1002	3.2	99	W	1018	4.2	128	F	1029	4.6	141	0111	13.5	410		
1523	11.5	352	1537	9.5	289	1533	10.0	304	W	0837	2.5	75			
2247	2.4	74	●	2234	3.2	99	●	2236	2.9	88	1324	11.1	339		
16 Sa	0428	9.4	285	28	0248	10.8	329	28	0248	10.8	329	2027	2.3	70	
1112	5.0	151	Th	1112	5.0	151	W	0946	3.7	114	0121	12.4	378		
1626	8.3	253	1626	8.3	253	1449	9.4	287	Th	0939	3.0	91			
2308	3.9	120	2308	3.9	120	2131	3.1	96	1421	10.7	326				
17 M	0428	9.4	285	31	0428	9.4	285	2131	2.4	73	2045	3.3	102		
1112	5.0	151	Th	1112	5.0	151	F	1029	4.6	141	0215	11.7	356		
1626	8.3	253	1626	8.3	253	1530	8.2	249	Th	0929	3.7	112			
2308	3.9	120	2308	3.9	120	●	2149	3.9	120	1421	9.3	283			
18 W	0526	9.4	288							2045	3.3	102			
1322	5.0	151								2154	5.1	154			
1837	7.1	217								31	0526	9.4	288		

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Heights are referred to the chart datum of soundings.

# Zhongjun, Changjiang Approach, China, 2008

Times and Heights of High and Low Waters

April				May				June			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0034	5.5	167	16 W 0301	3.9	118	1 Th 0139	4.9	149	1 Su 0326	3.8	115
0726	9.7	297	0842	11.2	340	0733	10.7	327	0835	11.2	340
1446	4.2	128	1558	2.5	77	1444	3.5	107	1539	2.8	86
2015	8.1	248	2120	10.4	318	2016	10.1	309	2116	13.0	397
2 W 0233	4.6	141	17 Th 0408	2.9	89	2 F 0256	4.0	121	2 M 0434	3.0	91
0835	10.7	325	0928	11.7	356	0832	11.4	347	0925	11.0	336
1543	3.3	102	1647	2.0	61	1541	2.9	87	1633	2.5	75
2105	9.5	289	2159	11.4	348	2105	11.5	349	2159	12.2	372
3 Th 0341	3.5	107	18 F 0500	2.3	70	3 Sa 0401	3.1	96	18 Su 0505	2.8	84
0923	11.6	354	1007	12.0	365	0920	12.0	365	1005	11.2	341
1636	2.6	79	1733	1.7	51	1635	2.3	70	1706	2.5	76
2145	10.8	329	2233	12.1	368	2149	12.6	385	2235	12.7	387
4 F 0440	2.6	78	19 Sa 0544	2.0	60	4 Su 0500	2.5	76	19 M 0547	2.5	76
1003	12.4	378	1042	12.1	368	1004	12.4	377	1042	11.3	344
1726	2.1	65	1758	1.7	53	1725	2.1	63	1742	2.4	73
2222	12.0	365	2306	12.5	382	2231	13.5	413	2309	13.1	399
5 Sa 0537	1.8	56	20 Su 0625	2.1	64	5 M 0554	2.1	64	20 Tu 0631	2.3	71
1041	12.9	394	1112	12.0	367	1046	12.5	382	1116	11.4	346
1805	1.7	52	1834	1.7	51	1804	1.8	54	1814	2.5	76
2301	13.0	395	2337	12.8	389	2315	14.3	435	2342	13.4	408
6 Su 0632	1.4	42	21 M 0651	2.1	64	6 Tu 0645	1.8	54	21 W 0700	2.5	76
1116	13.2	401	1142	11.9	363	1127	12.5	380	1150	11.3	345
1845	1.2	38	1852	1.9	57	1844	1.5	47	1844	2.4	74
● 2339	13.6	416	2357	14.6	446	2357	14.6	446	2357	14.6	446
7 M 0710	1.6	48	22 Tu 0006	13.0	396	7 W 0737	1.6	50	22 Th 0014	13.5	413
1152	13.1	400	0726	2.3	71	1206	12.2	371	0737	2.5	76
1931	1.0	29	1209	11.7	357	1929	1.8	55	1220	11.2	340
1917	2.1	64	1917	2.1	64	1910	2.6	80	1910	2.6	80
8 Tu 0015	14.1	431	23 W 0033	13.1	398	8 Th 0037	14.7	447	23 F 0045	13.5	412
0747	1.5	45	0749	2.4	73	0819	2.1	65	0805	2.8	85
1226	12.8	389	1238	11.4	346	1250	11.6	355	1253	10.9	333
1949	1.2	38	1938	2.2	67	1949	2.0	61	1937	2.8	84
9 W 0052	14.2	433	24 Th 0100	13.1	398	9 F 0119	14.4	440	24 M 0115	13.3	406
0833	1.7	51	0819	2.8	84	0854	2.3	71	0839	2.9	89
1300	12.2	371	1305	10.9	331	1334	10.9	331	1326	10.6	322
2017	1.7	51	1950	2.6	80	2027	2.6	79	1959	3.1	96
10 Th 0127	14.0	426	25 F 0127	12.8	391	10 Sa 0204	13.8	420	25 Su 0146	13.0	396
0856	2.4	73	0846	3.0	92	0942	2.7	83	0910	3.2	98
1338	11.2	342	1336	10.2	311	1424	10.0	306	1403	10.1	309
2038	2.1	64	2007	3.1	94	2055	3.2	99	2031	3.5	108
11 F 0209	13.3	406	26 Sa 0157	12.4	377	11 Su 0255	12.9	392	26 M 0221	12.6	383
0938	3.0	92	0918	3.5	108	1035	3.2	99	0947	3.4	104
1420	10.0	306	1411	9.4	288	1528	9.3	282	1448	9.7	296
2057	3.0	91	2031	3.6	110	2146	4.1	125	2102	4.1	125
12 Sa 0257	12.3	376	27 Su 0232	11.7	357	12 M 0358	11.8	361	27 Tu 0304	12.0	366
1028	3.9	118	0957	4.0	123	1138	3.6	110	1034	3.6	111
1518	8.8	267	1457	8.7	265	1652	8.8	269	1543	9.5	289
2136	4.0	121	2057	4.3	132	● 2305	4.8	147	2154	4.6	141
13 Su 0405	11.2	340	28 Tu 0322	11.0	334	13 M 0516	11.0	336	28 W 0359	11.5	349
1148	4.4	133	1056	4.5	136	1251	3.6	110	1130	3.8	116
1655	7.8	237	1605	8.1	247	1825	9.1	276	1652	9.5	291
● 2256	5.0	152	● 2152	5.1	154	● 2309	5.0	153	● 1941	10.8	328
14 M 0551	10.4	316	29 Th 0438	10.3	315	14 W 0050	4.9	149	29 Th 0507	11.0	336
1338	4.1	125	1218	4.5	138	0639	10.6	324	1233	3.8	115
1912	8.0	243	1743	8.1	247	1400	3.3	102	1809	10.0	306
2344	5.4	166	2344	5.4	166	1942	9.8	300	2037	11.4	348
15 Tu 0130	4.9	150	30 W 0615	10.3	313	15 Th 0220	4.4	133	30 F 0043	5.0	151
0735	10.6	322	1340	4.1	125	0747	10.7	325	0623	10.9	331
1459	3.3	100	1915	8.9	272	1458	3.0	91	1338	3.6	109
2033	9.2	280	2037	10.8	328	2037	10.8	328	1919	11.0	334
16 Sa 0209	4.5	136	31 Sa 0733	10.9	333	31 F 0209	4.5	136	31 F 0234	4.6	141
1440	3.2	98	1440	3.2	98	0843	9.9	301	0742	9.8	299
2021	12.0	367	2021	12.0	367	1437	3.6	109	1437	3.6	109

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Zhongjun, Changjiang Approach, China, 2008

Times and Heights of High and Low Waters

July				August				September							
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height				
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm				
1 Tu	0410	3.6	109	16 W	0457	3.2	99	1 F	0618	2.0	60	16 M	0554	2.5	75
Tu	0907	10.4	318	W	0959	10.0	304	F	1057	11.7	356	Sa	1047	11.9	364
	1556	3.1	95		1633	3.4	105		1754	2.1	69		1743	2.3	69
	2150	13.9	425		2224	13.4	409	●	2320	15.2	463		2308	14.5	443
2 W	0522	2.8	85	17 Th	0542	2.8	84	2 Sa	0703	1.6	48	17 Su	0638	2.0	61
	1008	10.9	332		1036	10.7	326		1141	12.3	376		1116	12.7	386
	1700	2.7	82		1720	3.0	91		1847	1.7	53		1831	1.8	56
	2243	14.6	445		2301	13.9	425		2359	15.3	466	○	2337	14.8	450
3 Th	0628	2.2	67	18 F	0628	2.6	80	3 Su	0746	1.2	36	18 M	0710	2.1	65
	1102	11.4	346		1109	11.4	346		1217	12.7	388		1150	13.3	405
	1758	2.3	70		1759	2.6	78		1935	1.6	48		1900	1.9	58
●	2332	15.1	459	○	2335	14.2	434					●	0034	14.1	429
4 F	0720	1.9	57	19 Sa	0656	2.5	75	4 M	0035	15.0	458	19 Tu	0007	14.9	453
	1152	11.7	357		1144	11.8	361		0831	1.3	39		0742	1.7	51
	1851	2.0	61		1841	2.2	68		1256	12.9	393		1220	13.7	417
									2003	2.1	64		1938	1.8	56
5 Sa	0018	15.2	464	20 Su	0007	14.4	440	5 Tu	0108	14.5	443	20 W	0035	14.7	449
	0800	1.7	51		0737	2.2	67		0845	1.6	49		0811	2.0	60
	1238	11.9	363		1215	12.2	371		1328	12.8	390		1254	13.9	425
	1941	1.9	58		1917	2.3	71		2035	2.5	77		2008	2.4	72
6 Su	0100	15.0	458	21 M	0037	14.5	441	6 W	0137	13.8	422	21 Th	0103	14.4	439
	0845	1.5	46		0805	2.3	71		0905	2.1	64		0838	1.7	51
	1318	11.9	364		1249	12.4	378		1403	12.6	383		1324	14.0	427
	2024	2.3	70		1947	2.3	71		2054	3.3	100		2038	2.7	82
7 M	0139	14.6	444	22 Tu	0106	14.4	439	7 Th	0204	13.0	397	22 F	0134	13.8	420
	0929	2.0	61		0839	2.0	62		0927	2.5	77		0855	2.1	65
	1402	11.8	361		1320	12.5	382		1435	12.1	370		1403	13.8	421
	2054	2.7	82		2022	2.7	82		2125	4.1	124		2107	3.5	107
8 Tu	0216	13.9	423	23 W	0135	14.2	432	8 F	0232	12.0	365	23 Sa	0205	12.8	390
	0948	2.1	65		0903	2.2	68		0940	3.0	92		0921	2.7	82
	1444	11.5	352		1357	12.6	384		1513	11.7	357		1447	13.3	406
	2132	3.4	103		2050	3.0	92		2154	4.9	149		2146	4.4	133
9 W	0251	13.0	395	24 Th	0205	13.7	418	9 Sa	0305	10.7	326	24 M	0246	11.5	349
	1018	2.6	79		0937	2.2	67		0956	3.8	117		0945	3.4	104
	1527	11.3	343		1435	12.5	382		1600	11.2	340		1543	12.5	382
	2203	4.2	128		2130	3.6	109	○	2250	5.7	175	○	2246	5.4	165
10 Th	0327	11.9	362	25 F	0240	13.0	395	10 Su	0354	9.3	283	25 M	0345	9.9	301
	1045	3.0	92		1001	2.7	81		1026	4.7	144		1028	4.5	137
	1618	10.9	332		1522	12.4	379		1712	10.7	325		1710	11.8	359
●	2250	5.0	153		2210	4.4	135					10 W	0209	5.7	174
11 F	0411	10.7	327	26 M	0323	11.9	362	11 M	0041	6.2	188	26 Tu	0043	5.8	178
	1118	3.6	111		1038	3.1	96		0521	8.1	246		0534	8.5	260
	1717	10.6	324		1622	12.1	370		1132	5.5	168		1208	5.4	164
	2359	5.6	170	○	2313	5.2	158		1903	10.7	327		1913	11.8	360
12 Sa	0511	9.6	293	27 Su	0421	10.6	324	12 Tu	0239	5.4	165	27 W	0249	4.8	147
	1205	4.3	130		1128	3.9	118		0740	7.9	241		0806	8.8	267
	1831	10.6	324		1741	11.9	363		1344	5.5	169		1427	4.9	149
									2030	11.5	352		2043	12.8	391
13 Su	0137	5.5	169	28 M	0050	5.5	169	13 W	0346	4.3	132	28 Th	0407	3.4	103
	0635	8.8	269		0549	9.5	290		0901	8.8	268		0921	10.1	307
	1314	4.6	141		1242	4.3	132		1509	4.7	144		1549	3.6	110
	1951	11.1	339		1917	12.2	371		2122	12.6	383		2139	13.9	424
14 M	0303	4.8	147	29 Tu	0240	4.9	149	14 Th	0436	3.4	105	29 F	0510	2.3	71
	0804	8.8	267		0739	9.2	281		0943	9.9	302		1006	11.4	348
	1433	4.5	138		1421	4.3	130		1607	3.8	115		1655	2.6	78
	2054	11.9	363		2041	13.0	395		2201	13.4	409		2223	14.7	449
15 Tu	0407	3.9	120	30 W	0405	3.7	113	15 F	0518	2.9	88	30 Sa	0600	1.7	51
	0911	9.3	282		0908	9.8	299		1014	11.0	335		1046	12.5	381
	1537	4.0	123		1544	3.5	108		1656	2.9	89		1751	1.9	57
	2143	12.7	388		2144	13.9	425		2235	14.1	429		2300	15.1	459
31 Th	0516	2.7	81	31 W	1008	10.8	328					31 Sa	0645	1.1	35
					1652	2.8	85						1120	13.2	403
					2235	14.7	449					1840	1.4	44	
●												●	2335	15.0	456

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

Zhongjun, Changjiang Approach, China, 2008

## Times and Heights of High and Low Waters

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

## **Ch'ang Chiang Approach (Side Saddle), China, 2008**

## Times and Heights of High and Low Waters

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

# Ch'ang Chiang Approach (Side Saddle), China, 2008

Times and Heights of High and Low Waters

April				May				June													
	Time	Height		Time	Height		Time	Height		Time	Height										
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm										
<b>1</b> Tu	0616 1305 1844	12.2 7.7 10.6	372 235 323	<b>16</b> W	0111 0730 1404 2001	6.4 13.6 5.7 12.6	195 415 174 384	<b>1</b> Th	0623 1256 1901	13.1 6.4 12.4	399 402 378	<b>16</b> Su	0137 0723 1357 2007	6.4 13.2 5.2 13.8	195 405 158 421	<b>16</b> M	0246 0805 1431 2054	7.0 12.4 5.2 14.7	213 378 158 448		
<b>2</b> W	0044 0721 1357 1943	6.9 13.1 6.6 11.9	210 399 201 363	<b>17</b> Th	0209 0813 1442 2041	5.7 14.0 4.8 13.6	174 427 416 415	<b>2</b> F	0108 0717 1346 1952	6.4 13.7 5.3 13.7	195 418 416 418	<b>2</b> M	0238 0813 1438 2100	5.7 13.4 3.9 16.0	174 408 119 488	<b>17</b> Tu	0329 0847 1510 2132	6.6 12.5 5.0 15.2	201 381 152 463		
<b>3</b> Th	0151 0807 1436 2027	5.8 14.0 5.4 13.2	177 427 165 402	<b>18</b> F	0254 0848 1515 2115	5.1 14.3 4.1 14.5	155 436 125 442	<b>3</b> Sa	0207 0803 1428 2036	5.5 14.1 4.3 14.9	168 430 131 454	<b>18</b> Tu	0308 0841 1507 2119	5.9 13.4 4.3 15.0	198 408 131 457	<b>18</b> W	0407 0927 1547 2208	6.3 12.7 4.8 15.6	192 387 146 475		
<b>4</b> F	0240 0846 1511 2106	4.8 14.7 4.3 14.4	146 427 131 439	<b>19</b> Sa	0333 0919 1545 2147	4.7 14.4 3.7 15.1	143 439 113 460	<b>4</b> Su	0258 0846 1509 2119	4.7 14.4 3.4 15.9	143 439 104 485	<b>4</b> M	0423 0915 1539 2152	4.9 13.3 4.2 15.4	149 405 415 469	<b>19</b> Th	0443 1004 1622 2235	6.1 12.8 4.7 17.0	186 390 143 482		
<b>5</b> Sa	0324 0922 1545 2144	3.9 15.2 3.3 15.4	119 463 101 469	<b>20</b> Su	0408 0949 1613 2217	4.5 14.3 3.5 15.4	137 436 107 469	<b>5</b> M	0346 0926 1549 2201	4.1 14.5 2.8 16.6	125 442 506 506	<b>20</b> Th	0422 0948 1609 2224	5.5 13.2 4.2 15.6	168 402 475 518	<b>20</b> F	0517 1040 1657 2316	6.0 12.9 4.7 15.9	183 393 143 485		
<b>6</b> Su	0405 0958 1620 ●	3.3 15.4 2.7 16.2	101 469 82 494	<b>21</b> M	0441 1018 1640 2246	4.5 14.1 3.5 15.6	137 437 107 475	<b>6</b> Tu	0432 1006 1630 2243	3.9 14.4 2.6 16.9	119 439 79 515	<b>21</b> W	0455 1020 1639 2255	5.5 13.1 4.3 15.6	168 405 475 515	<b>21</b> Sa	0550 1114 1730 2349	5.9 13.0 4.8 15.8	180 396 146 482		
<b>7</b> M	0446 1032 1655 2259	3.0 15.2 2.3 16.5	91 463 70 503	<b>22</b> Tu	0512 1045 1705 2314	4.7 13.8 3.7 15.5	143 421 113 472	<b>7</b> W	0517 1046 1711 2327	4.1 14.0 2.7 16.8	125 425 82 512	<b>22</b> Th	0528 1052 1709 2327	5.7 12.9 4.5 15.5	174 393 131 472	<b>22</b> Su	0623 1148 1805	5.9 13.0 4.9	180 396 149		
<b>8</b> Tu	0527 1107 1730 2338	3.2 14.8 2.4 16.5	98 451 73 503	<b>23</b> W	0541 1112 1730 2342	5.1 13.4 4.0 15.3	155 408 122 466	<b>8</b> Th	0603 1127 1753	4.5 13.5 3.1 94	137 411 94 466	<b>23</b> F	0600 1122 1739 2359	5.9 12.7 4.8 15.3	180 387 146 475	<b>23</b> M	0022 0657 1224 1841	15.7 6.0 13.0 5.2	479 183 396 158		
<b>9</b> W	0608 1142 1807	3.8 14.1 2.8	116 430 85	<b>24</b> Th	0610 1138 1755	5.5 12.9 4.5	168 393 137	<b>9</b> F	0012 0650 1210 1837	16.4 5.2 12.9 3.8	500 158 393 116	<b>24</b> Sa	0634 1154 1812	6.2 12.5 5.1	491 381 155	<b>24</b> Tu	0056 0733 1305 1921	15.4 6.0 12.9 5.6	469 183 393 171		
<b>10</b> Th	0019 0652 1218 1846	16.0 4.7 13.2 3.5	488 143 402 107	<b>25</b> F	0011 0641 1205 1822	14.9 6.1 12.4 5.0	454 186 378 152	<b>10</b> Sa	0100 0742 1257 1926	15.6 6.0 12.1 4.8	475 183 146 446	<b>25</b> W	0232 0710 1229 1848	14.5 6.6 12.2 5.6	442 201 171 404	<b>25</b> Tu	0134 0813 1353 2007	14.9 6.1 12.8 6.2	454 186 390 189		
<b>11</b> F	0104 0741 1258 1930	15.2 5.9 12.2 4.5	463 180 372 137	<b>26</b> Sa	0043 0715 1234 1854	14.4 6.7 11.9 5.6	439 204 363 171	<b>11</b> Su	0155 0840 1358 2023	14.7 6.7 11.4 5.8	448 204 347 177	<b>26</b> M	0327 1010 1312 1931	13.6 6.5 11.9 6.1	415 198 363 186	<b>26</b> Th	0217 0858 1453 2104	14.3 6.1 12.6 6.9	436 186 384 210		
<b>12</b> Sa	0158 0841 1349 2026	14.1 7.0 11.2 5.7	430 213 341 174	<b>27</b> Su	0122 0758 1312 1937	13.7 7.3 11.3 6.3	418 223 344 192	<b>12</b> M	0302 0949 1525 2136	13.8 7.1 11.0 6.8	421 216 335 207	<b>27</b> Tu	0428 0841 1409 2026	13.0 7.0 11.6 6.6	396 213 375 241	<b>27</b> W	0311 0952 1609 2217	13.6 6.1 12.7 7.4	415 186 387 226		
<b>13</b> Su	0314 1007 1518 2150	13.1 7.7 10.3 6.7	399 235 314 204	<b>28</b> M	0214 0858 1412 2038	13.1 7.8 10.7 7.0	399 238 326 213	<b>13</b> Tu	0421 1108 1710 2305	13.2 7.0 11.2 7.3	402 213 341 223	<b>28</b> F	0255 0939 1529 2135	13.6 7.0 11.5 7.1	415 213 351 216	<b>28</b> Sa	0529 1209 1837 2346	12.5 6.3 12.8 7.7	381 192 390 235		
<b>14</b> M	0502 1157 1742 2343	12.7 7.5 10.4 6.9	387 229 317 210	<b>29</b> Tu	0333 1022 1606 2209	12.6 7.9 10.5 7.4	384 241 320 226	<b>14</b> W	0536 1219 1829	13.1 6.5 12.0 7.4	399 198 366 226	<b>29</b> Th	0405 1046 1700 2259	13.2 6.8 11.9 7.3	402 207 354 223	<b>29</b> Su	0532 1206 1848	12.4 5.7 14.0	378 392 427		
<b>15</b> Tu	0632 1315 1909	13.0 6.7 11.4	396 204 347	<b>30</b> W	0509 1151 1755 2350	12.6 7.4 11.2 7.2	384 226 341 219	<b>15</b> Th	0031 0636 1314 1924	7.1 13.1 5.8 12.9	216 399 177 393	<b>30</b> Sa	0519 1153 1816	13.1 6.2 12.8	229 189 390	<b>30</b> M	0116 0645 1315 2014	7.4 12.4 5.2 14.2	226 378 158 433		
										<b>31</b> Sa	0024 0624 1253 1917		7.0 13.1 5.4 14.0	<b>31</b> Su	0024 0624 1253 1917		213 399 165 427				

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Ch'ang Chiang Approach (Side Saddle), China, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0229 12.5 381	16 W 0315 12.1 369	1 F 0411 13.6 415	16 Sa 0403 13.8 421	1 M 0501 15.6 475	16 Tu 0429 4.1 125						
1418 4.5 137	W 0830 12.6 384	1559 3.8 116	1551 4.8 146	1706 3.9 119	Tu 1021 16.1 491						
2050 15.8 482	2117 15.1 460	● 2221 17.1 521	2206 16.5 503	2304 16.8 512	1640 3.9 119						
2 W 0328 12.9 393	17 Th 0354 12.6 384	2 0452 14.2 433	17 Su 1012 14.5 442	2 Tu 0531 15.8 482	17 W 0500 3.7 113						
1514 3.9 119	1531 5.3 162	1644 3.5 107	1626 4.3 131	1740 4.4 134	W 1055 16.5 503						
2142 16.6 506	2154 15.7 479	2259 17.3 527	○ 2237 16.8 512	2332 16.2 494	1716 4.0 122						
3 Th 0420 13.2 402	18 F 0428 13.1 399	3 Su 1107 14.7 448	18 M 1045 15.1 460	3 W 1153 15.6 475	18 Th 0531 3.5 107						
1605 3.5 107	1609 4.9 149	1725 3.6 110	1701 4.1 125	1812 5.0 152	Th 1129 16.6 506						
● 2230 17.0 518	○ 2229 16.1 491	2334 17.1 521	2306 16.9 515	2358 15.5 472	1754 4.4 134						
4 F 0506 13.6 415	19 Sa 0500 13.5 411	4 M 1145 14.8 451	19 Tu 1117 15.4 469	4 Th 1224 15.3 466	19 F 0603 3.7 113						
1653 3.3 101	1644 4.6 140	1803 4.1 125	1735 4.1 125	1842 5.9 180	F 1206 16.4 500						
2315 17.2 524	2301 16.4 500	2335 16.6 506	2335 16.6 506	1916 5.2 158	1833 5.2 158						
5 Sa 0550 13.8 421	20 Su 0531 13.9 424	5 Tu 0007 14.6 506	20 W 1151 15.6 475	5 F 0024 14.6 445	20 Sa 0008 14.8 451						
1117 17.3 507	1103 13.9 424	0637 4.5 137	1810 4.5 137	0650 5.1 155	0637 4.2 128						
1738 3.5 107	1719 4.4 134	1222 14.8 451	1912 6.8 207	1255 14.7 448	F 1246 15.8 482						
2357 17.0 518	2332 16.5 503	1839 4.8 146	1916 6.3 192	1912 6.8 207	1916 6.3 192						
6 Su 0631 13.8 421	21 M 0602 14.1 430	6 W 0037 15.8 482	21 Th 0004 16.1 491	6 Sa 0048 13.7 418	21 Su 0043 13.8 421						
1202 14.0 422	1137 14.1 430	0708 4.8 146	0633 4.3 131	0714 5.7 174	0715 5.0 152						
1821 4.0 122	1753 4.5 137	1259 14.5 442	1226 15.5 472	1329 14.1 430	1334 14.9 454						
7 M 0036 13.7 418	22 Tu 0002 14.2 433	7 Th 0106 14.9 454	22 F 0035 15.4 469	7 Su 0114 12.8 390	22 M 0123 12.6 384						
0710 5.0 152	0633 5.1 155	0738 5.3 162	0706 4.6 140	0741 6.5 198	0803 6.0 183						
1247 13.7 418	1211 14.2 433	1337 14.0 427	1305 15.1 460	1411 13.3 405	M 1441 13.9 424						
1903 4.7 143	1827 4.7 143	1948 6.7 204	1928 6.0 183	● 2026 8.7 265	O 2126 8.6 262						
8 Tu 0114 13.4 408	23 W 0032 14.2 433	8 F 0136 13.9 424	23 Sa 0108 14.4 439	8 M 0144 11.8 360	23 Tu 0223 11.4 347						
0749 5.3 162	0705 5.1 155	0808 5.9 180	0742 5.1 155	0818 7.3 223	0916 7.0 213						
1332 13.4 408	1247 14.2 433	1419 13.4 408	1352 14.5 442	1519 12.6 384	1635 13.3 405						
1944 5.7 174	1905 5.2 158	2026 7.8 238	2017 7.2 219	2139 9.6 293	2334 8.9 271						
9 W 0151 13.0 396	24 Th 0105 14.0 427	9 Sa 0208 12.9 393	24 Su 0148 13.2 402	9 Tu 0238 10.9 332	24 W 0443 10.7 326						
0828 5.7 174	0739 5.2 158	0841 6.5 198	0827 5.8 177	0924 8.1 247	1112 7.4 226						
1421 14.0 424	1329 14.0 427	1513 12.8 390	1457 13.8 421	1721 12.4 378	1830 13.8 421						
2028 6.7 204	1947 6.0 183	● 2117 8.7 265	● 2126 8.4 256	1947 14.1 399	1936 14.7 448						
10 Th 0230 13.9 424	25 F 0141 14.6 445	10 Su 0250 11.9 363	25 M 0242 12.0 366	10 W 0030 9.6 293	25 Th 0117 8.0 244						
0908 6.1 186	0818 5.5 168	0926 7.2 219	0932 6.6 201	0526 10.5 320	0652 11.5 351						
1518 12.7 387	1420 13.7 418	1633 12.5 381	1638 13.3 405	1130 8.3 253	1256 6.8 207						
● 2119 7.7 235	2037 6.9 210	2243 9.4 287	2323 9.0 274	1855 13.1 399	1936 14.7 448						
11 F 0315 12.9 393	26 Sa 0225 13.6 415	11 M 0406 11.1 338	26 Tu 0426 11.1 338	11 Th 0152 8.7 265	26 F 0211 6.7 204						
0954 6.5 198	0905 5.8 177	1037 7.7 235	1114 7.0 213	0706 11.3 344	0755 12.7 387						
1627 12.5 381	1527 13.4 408	1809 12.7 387	1834 13.8 421	1311 7.6 232	1401 5.9 180						
2225 8.5 259	● 2144 7.9 241	1949 9.4 287	1951 9.0 274	1949 14.1 430	2022 15.5 472						
12 Sa 0412 12.1 369	27 Su 0323 12.5 381	12 Tu 0104 9.3 283	27 W 0125 8.4 256	12 F 0229 7.6 232	27 M 0251 5.6 171						
1050 6.8 207	1007 6.2 189	0559 10.9 332	0638 11.3 344	0759 12.4 378	0840 13.9 424						
1741 12.6 384	1657 13.3 405	1221 7.6 232	1259 6.6 201	1407 6.6 201	1450 5.1 155						
2356 8.8 268	2323 8.4 256	1924 13.4 408	1951 14.8 451	2029 15.1 460	2059 16.0 488						
13 Su 0523 11.6 354	28 M 0449 11.7 357	13 W 0217 8.5 259	28 Th 0230 7.2 219	13 F 0259 6.6 201	28 W 0326 4.7 143						
1157 6.9 210	1130 6.3 192	0722 11.4 347	0757 12.2 372	0839 13.5 411	0917 14.9 454						
1850 13.1 399	1833 13.8 421	1340 7.1 216	1411 5.6 171	1449 5.6 171	1532 4.5 137						
14 M 0127 8.5 259	29 Tu 0114 8.2 250	14 W 0259 7.6 232	29 F 0315 6.1 186	2043 15.8 482	2132 16.2 494						
0636 11.5 351	0628 11.6 354	0818 12.2 372	0850 13.4 408	1404 4.7 143	2202 16.2 494						
1305 6.6 201	1300 5.9 180	1432 6.3 192	1504 4.7 143	2124 16.5 503	2305 16.7 485						
1947 13.7 418	1950 14.8 451	2058 15.1 460	2124 16.5 503	2201 17.0 518	2230 15.9 485						
15 Tu 0230 8.0 244	30 W 0232 7.3 223	15 F 0332 6.8 207	30 Sa 0353 5.2 158	15 M 0359 4.7 143	30 Tu 0428 3.7 113						
0738 11.7 357	0748 12.1 369	0901 13.0 396	0934 14.4 439	0948 15.4 469	1024 16.1 491						
1403 6.2 189	1412 5.2 158	1514 5.5 168	1549 4.1 125	1604 4.2 128	1644 4.4 134						
2035 14.4 439	2049 15.8 482	2134 15.9 485	2201 17.0 518	2205 16.7 509	2230 15.9 485						
31 Th 0326 6.3 192	31 Th 0849 12.8 390	31 0428 4.5 137	31 Su 1012 15.1 460	31 O 2233 17.0 518	31 O 2230 15.9 485						
1510 4.4 134	1510 4.4 134	1629 3.8 116	1629 3.8 116	2233 17.0 518	2230 15.9 485						
2138 16.6 506		● 2233 17.0 518									

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Ch'ang Chiang Approach (Side Saddle), China, 2008

Times and Heights of High and Low Waters

October				November				December				
Time	Height											
1 W	0456 3.7 113	16 Th	0429 3.1 94	1 Sa	0517 4.3 131	16 Su	0528 2.9 88	1 M	0530 4.4 134	16 Tu	0609 2.9 88	
1055 16.2 494	1034 17.1 521	1701 4.1 125	1130 15.6 475	1147 16.6 506	1149 15.1 460	1230 16.1 491						
1717 4.8 146	1759 6.0 183	1824 5.2 158	1821 6.0 183	1821 6.0 183	1905 4.8 146							
2257 15.4 469	2323 13.3 405	2343 13.3 405	2342 12.4 378									
2 Th	0522 3.9 119	17 F	0504 3.0 91	2 Su	0543 4.8 146	17 M	0612 3.5 107	2 Tu	0600 4.8 146	17 W	0031 12.8 390	
1124 16.1 491	1112 17.1 521	1200 15.2 463	1234 16.0 488	1221 14.8 451	1855 6.3 192	0655 3.6 110						
1747 5.3 162	1742 4.6 140	1830 6.6 201	1913 5.8 177	1315 15.3 466	1952 5.2 158	1315 15.3 466						
2323 14.7 448	2314 14.8 451	2350 12.7 387										
3 F	0547 4.4 134	18 Sa	0540 3.3 101	3 M	0610 5.3 162	18 Tu	0029 12.6 384	3 W	0015 12.1 369	18 Th	0122 12.3 375	
1153 15.7 479	1152 16.7 509	1232 14.6 445	0700 4.3 131	1326 15.1 460	0634 5.2 158	0743 4.6 140	1256 14.4 439	1256 14.4 439	2040 5.6 171	1402 14.4 439	2040 5.6 171	
1816 6.0 183	1825 5.3 162	1903 7.2 219	1326 15.1 460	1932 6.6 201								
2348 14.0 427	2350 14.0 427		2009 6.5 198									
4 Sa	0610 4.9 149	19 Su	0619 3.9 119	4 Tu	0020 12.2 372	19 W	0123 11.8 360	4 Th	0053 11.8 360	19 F	0221 11.9 363	
1222 15.1 460	1236 16.0 488	0641 5.9 180	0754 5.4 165	0712 5.7 174	0836 5.7 174	1453 13.4 408	1336 13.9 424	2114 6.8 207	2134 5.9 180	2134 5.9 180	2134 5.9 180	
1845 6.8 207	1913 6.3 192	1309 14.0 427	1428 14.2 433									
		1945 7.8 238	2114 7.0 213									
5 Su	0012 13.3 405	20 M	0029 13.1 399	5 W	0055 11.6 354	20 Th	0239 11.2 341	5 F	0141 11.5 351	20 Sa	0334 11.6 354	
0633 5.6 171	0702 4.8 146	0720 6.6 201	0901 6.4 195	0759 6.2 189	0938 6.7 204	1552 12.5 381	1552 12.5 381	2107 6.8 207	2234 6.0 183	2234 6.0 183	2234 6.0 183	
1253 14.5 442	1328 15.0 457	1358 13.4 408	1543 13.5 411	1424 13.3 405								
1916 7.6 232	2011 7.4 226	2041 8.2 250	2229 7.0 213	2107 6.8 207								
6 M	0037 12.5 381	21 Tu	0116 12.0 366	6 Th	0149 11.0 335	21 F	0424 11.1 338	6 Sa	0249 11.3 344	21 Su	0457 11.6 354	
0700 6.3 192	0756 5.9 180	0817 7.3 223	1025 7.0 213	0900 6.8 207	1058 7.3 223	1658 11.9 363	1658 11.9 363	2341 5.9 180	2341 5.9 180	2341 5.9 180	2341 5.9 180	
1330 13.7 418	1438 14.0 427	1511 12.8 390	1702 13.1 399	1527 12.8 390								
1957 8.5 259	2130 8.1 247	2159 8.3 253	2346 6.6 201	2209 6.7 204								
7 Tu	0107 11.7 357	22 W	0232 11.0 335	7 F	0336 10.7 326	22 Sa	0557 11.7 357	7 Su	0418 11.4 347	22 M	0613 12.0 366	
0737 7.1 216	0912 6.9 210	0941 7.7 235	1156 7.1 216	1018 7.1 216	1227 7.4 226	1805 11.5 351	1805 11.5 351	2317 6.3 192	2317 6.3 192	2317 6.3 192	2317 6.3 192	
1427 12.9 393	1621 13.4 408	1645 12.7 387	1809 13.0 396	1641 12.5 381	1641 12.5 381	2317 6.3 192	2317 6.3 192					
2104 9.2 280	2315 8.1 247	2326 7.8 238										
8 W	0156 10.9 332	23 Th	0455 10.8 329	8 Sa	0532 11.2 341	23 Su	0047 5.9 180	8 M	0543 12.0 366	23 Tu	0044 5.6 171	
0839 7.9 241	1059 7.3 223	1120 7.6 232	0702 12.6 384	0702 12.6 384	0716 12.6 384	1342 7.1 216	1753 12.4 378	1753 12.4 378	1904 11.5 351	1904 11.5 351	1904 11.5 351	
1615 12.5 381	1758 13.6 415	1800 13.1 399	1310 6.8 207	1310 6.8 207	1342 7.1 216	1902 13.1 399	1854 12.6 384	1854 12.6 384	1956 11.6 354	1956 11.6 354	1956 11.6 354	
2309 9.3 283												
9 Th	0438 10.4 317	24 F	0042 7.3 223	9 Su	0033 6.9 210	24 M	0136 5.2 158	9 Tu	0022 5.6 171	24 W	0138 5.2 158	
1032 8.3 253	0637 11.7 357	0641 12.3 375	0641 12.3 375	0750 13.6 415	0650 13.0 396	1406 6.3 192	1406 6.3 192	1307 6.5 198	1307 6.5 198	1437 6.6 201	1437 6.6 201	
1803 12.9 393	1235 7.0 213	1242 7.0 213	1855 13.6 415	1946 13.2 402	1946 13.2 402	1946 13.2 402	1854 12.6 384	1854 12.6 384	1956 11.6 354	1956 11.6 354	1956 11.6 354	
	1902 14.1 430											
10 F	0053 8.5 259	25 Sa	0136 6.2 189	10 M	0122 5.8 177	25 Tu	0216 4.6 140	10 W	0121 4.7 143	25 Th	0225 4.8 146	
0632 11.3 344	0735 12.9 393	0731 13.5 411	0731 13.5 411	0830 14.3 436	0830 14.3 436	1452 5.9 180	1452 5.9 180	1412 5.8 177	1412 5.8 177	1522 6.1 186	1522 6.1 186	
1224 7.8 238	1341 6.2 189	1342 6.1 186	1940 14.0 427	2025 13.2 402	2025 13.2 402	1949 12.8 390	1949 12.8 390	2041 11.9 363	2041 11.9 363	2041 11.9 363	2041 11.9 363	
1904 13.7 418	1948 14.5 442	1940 14.0 427										
11 Sa	0140 7.4 226	26 Su	0217 5.2 158	11 Tu	0205 4.8 146	26 W	0253 4.2 128	11 Th	0214 3.9 119	26 F	0306 4.4 134	
0727 12.5 381	0819 14.1 430	0815 14.7 448	0815 14.7 448	0906 14.9 454	0906 14.9 454	1533 5.6 171	1533 5.6 171	1509 5.2 158	1509 5.2 158	1601 5.7 174	1601 5.7 174	
1330 6.8 207	1430 5.6 171	1434 5.3 162	1434 5.3 162	2022 14.4 439	2022 14.4 439	2101 13.2 402	2101 13.2 402	2039 13.0 396	2039 13.0 396	2121 12.1 369	2121 12.1 369	
1947 14.5 442	2025 14.8 451	2022 14.4 439										
12 Su	0215 6.2 189	27 M	0253 4.4 134	12 W	0245 3.9 119	27 Th	0327 3.9 119	12 F	0304 3.2 98	27 Sa	0343 4.2 128	
0808 13.7 418	0855 15.0 457	1512 5.1 155	0855 15.0 457	0940 15.3 466	0940 15.3 466	1610 5.4 165	1610 5.4 165	1600 4.7 143	1600 4.7 143	1636 5.4 165	1636 5.4 165	
1418 5.8 177	1512 5.1 155	1521 4.7 143	1521 4.7 143	2135 13.2 402	2135 13.2 402	2126 13.2 402	2126 13.2 402			2158 12.4 378	2158 12.4 378	
2024 15.2 463	2058 14.9 454	2102 14.5 442	2102 14.5 442									
13 M	0249 5.1 155	28 Tu	0325 3.9 119	13 Th	0325 3.2 98	28 F	0359 3.9 119	13 Sa	0351 2.7 82	28 Su	0418 4.0 122	
0845 14.9 454	0929 15.6 475	1549 4.9 149	1549 4.9 149	1606 4.3 131	1606 4.3 131	1644 5.4 165	1644 5.4 165	1648 4.4 134	1648 4.4 134	1708 5.2 158	1708 5.2 158	
1500 4.9 149	2129 14.8 451	2129 14.8 451	2129 14.8 451	2208 13.0 396	2208 13.0 396	2233 13.2 405	2233 13.2 405					
2059 15.7 479												
14 Tu	0322 4.2 128	29 W	0355 3.7 113	14 F	0405 2.7 82	29 Sa	0430 4.0 122	14 Su	0438 2.4 73	29 M	0450 3.9 119	
0921 15.9 485	1000 15.9 485	1624 4.9 149	1624 4.9 149	1651 4.3 131	1651 4.3 131	1717 5.5 168	1717 5.5 168	1734 4.4 134	1734 4.4 134	1739 5.1 155	1739 5.1 155	
1541 4.3 131	2159 14.6 445	2159 14.6 445	2221 14.2 433	2240 12.9 393	2240 12.9 393	2258 13.3 405	2258 13.3 405	2306 12.7 387	2306 12.7 387			
2132 15.9 485												
15 W	0355 3.5 107	30 Th	0424 3.7 113	15 Sa	0446 2.7 82	30 Su	0500 4.1 125	15 M	0524 2.5 76	30 Tu	0522 3.9 119	
0957 16.6 506	1031 16.0 488	1657 5.1 155	1102 17.0 518	1102 17.0 518	1117 15.4 469	1749 5.7 174	1145 16.6 506	1145 16.6 506	1180 4.5 137	1180 4.5 137	1208 4.5 155	1208 4.5 155
1620 4.0 122	2228 14.2 433	2228 14.2 433	2301 13.8 421	2311 12.7 387	2311 12.7 387	2344 13.1 399	2344 13.1 399	2337 12.7 387	2337 12.7 387			
2206 15.8 482												
31 F	0451 3.9 119	31 F	1100 15.9 485									
	1728 5.5 168		1728 5.5 168									
	2256 13.7 418		2256 13.7 418									

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Kanmen, China, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0242 14.1 429	16 W 0201 15.6 476	1 F 0415 13.4 408	16 Sa 0427 15.0 457	1 Sa 0309 13.5 413	16 Su 0422 15.2 463						
0837 6.6 200	W 0752 5.1 156	F 1000 8.7 266	Sa 1017 8.2 249	Sa 0840 9.1 276	Su 1025 8.4 257						
1502 15.1 459	1423 16.2 495	1555 13.4 408	1622 14.4 439	1445 13.2 401	1627 14.0 427						
2127 6.1 185	● 2039 4.3 131	2255 6.2 188	2313 4.5 138	2151 6.8 207	2311 5.0 153						
2 W 0357 13.8 420	17 Th 0313 15.2 464	2 Sa 0545 13.9 423	17 Su 0559 15.6 477	2 Su 0459 13.6 415	17 M 0550 15.8 483						
0950 7.5 229	0900 6.5 197	1133 8.7 266	1200 7.7 235	1053 9.2 279	1202 7.4 226						
1602 14.5 443	1525 15.6 477	1721 13.4 409	1758 14.9 453	1632 12.9 394	1802 14.9 453						
2240 5.9 179	2157 4.3 130			2337 6.2 190							
3 Th 0516 14.0 428	18 F 0440 15.3 467	3 Su 0015 5.4 165	18 M 0037 3.5 106	3 M 0616 14.6 446	18 Tu 0029 4.0 121						
1105 7.9 240	1030 7.3 221	0651 14.9 454	0709 16.8 513	1219 8.1 247	0656 16.9 515						
1706 14.3 437	1639 15.4 469	1246 8.0 243	1313 6.5 197	1802 13.7 419	1303 5.9 180						
2347 5.3 162	2320 3.7 114	1832 14.1 430	1910 15.9 485	1908 16.1 490							
4 F 0623 14.8 451	19 Sa 0603 16.0 489	4 M 0113 4.3 130	19 Tu 0139 2.2 67	4 Tu 0044 5.0 151	19 W 0124 2.9 88						
1212 7.8 237	1155 7.2 219	0740 16.0 489	0804 17.9 545	0709 15.9 486	0744 17.7 541						
1807 14.5 442	1755 15.6 476	1337 6.9 209	1404 5.2 157	1312 6.6 202	1346 4.5 137						
		1924 15.1 460	2005 17.0 517	1901 15.0 458	1957 17.1 521						
5 Sa 0042 4.5 138	20 Su 0035 2.8 85	5 Tu 0158 3.1 94	20 W 0226 1.2 36	5 W 0131 3.5 107	20 Th 0206 2.2 66						
0717 15.7 479	0712 17.1 522	0821 17.1 521	0847 18.6 566	0751 17.2 524	0822 18.2 556						
1307 7.3 224	1308 6.5 198	1417 5.7 173	1445 4.0 122	1352 5.1 155	1422 3.3 102						
1859 15.0 456	1904 16.2 495	2007 16.0 489	2049 17.7 538	1945 16.3 497	2036 17.7 541						
6 Su 0130 3.6 111	21 M 0139 1.7 51	6 W 0236 2.0 61	21 Th 0305 0.7 20	6 Th 0210 2.2 67	21 F 0241 1.8 56						
0802 16.6 505	0810 18.1 552	0857 17.9 547	0923 18.8 574	0827 18.1 553	0854 18.4 561						
1352 6.8 206	1407 5.6 171	1452 4.6 140	1519 3.1 96	1427 3.7 114	1453 2.5 77						
1942 15.5 473	2002 17.0 517	2044 16.9 514	○ 2126 18.0 548	2023 17.4 530	2109 18.1 551						
7 M 0212 2.8 86	22 Tu 0233 0.7 22	7 Th 0310 1.1 34	22 F 0339 0.6 19	7 F 0244 1.2 37	22 M 0312 1.9 57						
0841 17.3 528	0859 18.8 573	0931 18.5 564	0954 18.8 572	0900 18.8 572	0922 18.3 558						
1430 6.1 186	1455 4.8 146	1525 3.7 113	1550 2.6 78	1500 2.6 78	1523 2.0 60						
2020 16.1 490	○ 2052 17.5 534	● 2119 17.5 533	2159 18.0 549	2059 18.2 556	○ 2139 18.2 554						
8 Tu 0250 2.1 64	23 W 0318 0.1 3	8 F 0342 0.6 18	23 Sa 0409 1.0 29	8 Sa 0317 0.7 21	23 M 0341 2.2 66						
0917 17.8 544	0943 19.1 582	1003 18.8 572	1023 18.5 564	0931 19.1 581	0948 18.1 551						
1506 5.5 167	1536 4.1 126	1558 3.0 91	1621 2.2 68	1533 1.6 50	1551 1.7 52						
● 2055 16.6 505	2135 17.8 542	2153 17.9 545	2231 17.8 544	● 2135 18.8 574	2209 18.1 553						
9 W 0325 1.5 47	24 Th 0358 0.0 0	9 Sa 0414 0.4 13	24 Su 0438 1.6 48	9 Su 0349 0.7 20	24 M 0408 2.7 81						
0951 18.2 554	1021 19.0 579	1034 18.8 573	1050 18.1 552	1001 19.1 582	1014 17.7 541						
1540 4.9 150	1613 3.7 112	1631 2.5 75	1650 2.2 66	1606 1.0 29	1620 1.7 52						
2130 16.9 515	2215 17.7 541	2229 18.0 550	2304 17.5 533	2212 19.1 582	2239 17.9 547						
10 Th 0359 1.2 37	25 F 0434 0.4 11	10 Su 0446 0.7 21	25 M 0506 2.4 74	10 M 0422 1.1 33	25 Tu 0436 3.3 102						
1025 18.3 558	1056 18.7 569	1104 18.6 568	1118 17.6 537	1031 18.9 577	1039 17.3 528						
1615 4.5 137	1648 3.4 105	1705 2.1 64	1721 2.4 73	1640 0.6 18	1649 2.0 61						
2205 17.1 520	2253 17.4 531	2307 18.0 548	2338 17.0 518	2252 19.0 580	2312 17.6 535						
11 F 0432 1.1 34	26 Sa 0508 1.1 33	11 M 0519 1.3 41	26 Tu 0535 3.5 106	11 Tu 0455 1.9 58	26 W 0504 4.2 128						
1059 18.3 557	1128 18.2 554	1136 18.3 558	1146 16.9 516	1103 18.6 566	1106 16.8 512						
1650 4.2 129	1722 3.4 103	1740 2.0 61	1752 3.0 91	1716 0.7 21	1719 2.6 79						
2242 17.1 520	2330 16.9 515	2350 17.7 538		2336 18.6 567	2348 17.0 517						
12 Sa 0506 1.3 39	27 M 0540 2.1 65	12 Tu 0554 2.4 74	27 W 0016 16.3 496	12 W 0532 3.1 95	27 Th 0535 5.2 160						
1133 18.1 555	1200 17.6 535	1210 17.8 543	0605 4.8 145	1139 17.9 546	1135 16.1 492						
1726 4.0 123	1756 3.6 109	1820 2.3 69	1216 16.1 491	1756 1.3 41	1751 3.5 106						
2321 16.9 515			1826 3.9 118								
13 Su 0541 1.8 54	28 M 0612 3.4 103	13 W 0634 3.8 117	28 Th 0639 6.2 190	13 Th 0025 17.8 542	28 F 0028 16.1 491						
1209 17.7 541	1233 16.8 513	1250 17.1 520	1250 15.1 461	1221 16.9 516	0609 6.5 197						
1805 4.0 121	1833 4.0 123	1906 2.9 88	1906 5.0 152	1843 2.5 77	1209 15.3 467						
					1829 4.6 140						
14 M 0006 16.6 505	29 Tu 0053 15.4 469	14 Th 0137 16.2 493	29 F 0153 14.4 438	14 O 0124 16.7 508	29 M 0118 15.1 461						
0619 2.6 79	0646 4.8 146	0721 5.5 169	0722 7.7 236	0703 6.5 197	0651 7.7 236						
1247 17.4 529	1309 15.9 486	1340 16.0 489	1335 14.1 429	1314 15.6 477	1251 14.4 438						
1848 4.0 122	1914 4.7 144	○ 2004 3.8 117	○ 2003 6.1 187	○ 1946 4.0 123	1919 5.8 178						
15 Tu 0058 16.1 491	30 W 0144 14.5 443	15 F 0249 15.3 467	15 W 0828 7.3 222	15 O 0240 15.6 474	30 M 0224 14.3 435						
0702 3.7 114	0726 6.3 192	0828 8.1 246	1448 15.0 457	0823 8.1 246	0800 8.9 271						
1331 16.8 513	1351 15.0 456	2129 4.7 142	2121 5.2 157	1432 14.4 439	1357 13.4 408						
1938 4.1 126	○ 2005 5.5 169			2120 5.2 157	○ 2050 6.8 206						
13 31 Th 0246 13.7 419											
14 31 Th 0821 7.8 237											
15 31 Th 1443 14.0 427											
16 31 Th 2121 6.2 189											

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Kanmen, China, 2008

Times and Heights of High and Low Waters

April				May				June							
	Time	Height			Time	Height			Time	Height					
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm				
<b>1</b> Tu	0527	14.8	451	<b>16</b> W	0001	4.6	140	<b>1</b> Th	0529	16.0	488	<b>16</b> Su	0012	5.3	163
	1137	7.9	240		0625	16.7	510		1143	5.9	179		0610	17.1	521
	1723	13.8	420		1233	5.3	163		1742	15.4	468		1237	4.2	127
	2358	5.4	165		1849	16.1	490						1907	16.4	500
<b>2</b> W	0626	16.0	487	<b>17</b> Th	0053	4.0	122	<b>2</b> F	0000	4.7	142	<b>17</b> Sa	0059	5.2	158
	1234	6.3	192		0711	17.3	527		0618	16.9	515		0708	16.5	504
	1825	15.1	461		1315	4.1	125		1232	4.2	129		1318	3.4	103
					1936	16.9	516		1836	16.7	510		1949	17.0	519
<b>3</b> Th	0050	4.0	123	<b>18</b> F	0135	3.6	109	<b>3</b> Sa	0050	3.8	117	<b>18</b> Su	0139	5.1	154
	0710	17.2	523		0748	17.6	538		0700	17.7	538		0744	16.6	505
	1316	4.6	141		1351	3.1	95		1314	2.7	81		1354	2.8	86
	1913	16.6	505		2014	17.5	534		1925	18.0	549		2026	17.5	533
<b>4</b> F	0133	2.8	86	<b>19</b> Sa	0211	3.4	104	<b>4</b> Su	0134	3.3	100	<b>19</b> M	0216	5.0	153
	0748	18.1	551		0820	17.6	537		0738	18.2	555		0817	16.5	504
	1353	3.1	94		1423	2.4	74		1355	1.2	38		1429	2.4	74
	1955	17.8	543		2048	17.9	545		2011	19.1	581		2100	17.8	542
<b>5</b> Sa	0210	2.0	61	<b>20</b> Su	0243	3.5	106	<b>5</b> M	0216	3.1	93	<b>20</b> Tu	0249	5.1	155
	0821	18.7	569		0848	17.5	534		0815	18.5	564		0847	16.5	502
	1429	1.7	53		1454	2.0	61		1435	0.2	6		1503	2.2	67
	2035	18.8	574		2118	18.1	551		2056	19.8	602		2134	17.9	547
<b>6</b> Su	0246	1.6	50	<b>21</b> M	0313	3.7	112	<b>6</b> Tu	0257	3.1	96	<b>21</b> W	0321	5.2	160
	0853	19.0	578		0915	17.3	528		0854	18.6	567		0915	16.4	501
	1504	0.7	20		1524	1.8	55		1517	-0.4	-11		1536	2.2	66
	2115	19.5	595		2149	18.1	553		2142	20.0	610		2207	17.9	546
<b>7</b> M	0322	1.7	52	<b>22</b> Tu	0342	4.0	123	<b>7</b> W	0339	3.5	108	<b>22</b> Th	0353	5.4	165
	0925	19.0	580		0941	17.1	520		0934	18.4	561		0944	16.4	500
	1539	0.0	-1		1554	1.8	56		1600	-0.4	-11		1609	2.3	70
	2156	19.8	604		2220	18.0	550		2230	19.8	605		2241	17.8	542
<b>8</b> Tu	0358	2.2	67	<b>23</b> W	0411	4.5	138	<b>8</b> Th	0422	4.2	127	<b>23</b> F	0426	5.6	172
	0959	18.8	574		1007	16.8	512		1018	18.0	548		1015	16.3	500
	1617	-0.2	-7		1624	2.1	64		1646	0.2	6		1642	2.6	79
	2239	19.7	600		2253	17.7	541		2321	19.3	588		2316	17.5	533
<b>9</b> W	0435	3.1	93	<b>24</b> Th	0441	5.1	156	<b>9</b> F	0509	5.0	153	<b>24</b> Sa	0502	5.9	181
	1036	18.4	561		1035	16.5	502		1105	17.3	526		1049	16.1	490
	1657	0.2	5		1655	2.6	80		1736	1.2	36		1718	3.1	94
	2326	19.1	583		2329	17.3	526						2354	17.1	520
<b>10</b> Th	0516	4.2	129	<b>25</b> F	0514	5.8	177	<b>10</b> Sa	0016	18.4	562	<b>25</b> Su	0541	6.3	192
	1117	17.6	537		1106	16.0	489		0601	6.0	182		1129	15.7	479
	1741	1.2	36		1729	3.3	102		1200	16.3	498		1758	3.7	112
									1831	2.5	76				
<b>11</b> F	0018	18.2	555	<b>26</b> Sa	0008	16.6	506	<b>11</b> Su	0116	17.5	533	<b>26</b> M	0036	16.6	506
	0602	5.6	172		0551	6.6	202		0705	6.8	208		0627	6.7	203
	1204	16.5	504		1143	15.5	471		1307	15.4	469		1215	15.3	465
	1834	2.6	80		1808	4.3	130		1935	3.8	116		1845	4.4	133
<b>12</b> Sa	0120	17.0	519	<b>27</b> Su	0055	15.9	484	<b>12</b> M	0223	16.7	508	<b>27</b> Tu	0126	16.2	493
	0701	7.1	217		0637	7.5	228		0825	7.2	219		0722	7.0	212
	1306	15.3	466		1229	14.7	448		1429	14.7	447		1313	14.8	450
	1942	4.2	127		1859	5.2	160		2049	4.9	148		1941	5.0	153
<b>13</b> Su	0238	16.0	489	<b>28</b> M	0154	15.2	463	<b>13</b> Tu	0332	16.2	493	<b>28</b> W	0224	15.9	484
	0837	8.1	246		0743	8.2	249		0945	6.9	210		0831	6.9	211
	1436	14.3	435		1332	13.9	424		1556	14.5	443		1426	14.5	443
	2114	5.2	158		2012	6.0	184		2208	5.4	165		2048	5.5	167
<b>14</b> M	0407	15.7	479	<b>29</b> Tu	0309	14.9	454	<b>14</b> W	0439	16.1	490	<b>29</b> Th	0326	15.8	483
	1018	7.8	239		0923	8.2	249		1055	6.1	186		0943	6.3	193
	1623	14.2	433		1502	13.6	414		1713	15.0	456		1543	14.8	452
	2250	5.2	158		2142	6.2	188		2316	5.5	167		2201	5.6	171
<b>15</b> Tu	0524	16.1	491	<b>30</b> W	0428	15.3	465	<b>15</b> Th	0537	16.2	494	<b>30</b> F	0426	16.1	492
	1138	6.7	205		1042	7.3	222		1152	5.1	155		1047	5.2	159
	1747	15.0	458		1633	14.1	431		1816	15.7	478		1657	15.6	477
					2300	5.5	169					2309	5.4	165	
<b>31</b> Sa	0520	16.6	506	<b>31</b> Sa	1145	3.9	118	<b>31</b> Sa	0520	16.6	506	<b>31</b> M	1209	2.8	85
					1801	16.8	511					1843	17.7	540	

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Kanmen, China, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0040 6.2 188	16 W 0138 7.2 220	1 F 0229 5.1 156	16 Sa 0235 5.3 162	1 M 0329 2.9 89	16 Tu 0311 2.7 81						
0633 16.9 516	0732 15.6 474	0827 18.3 557	0830 17.6 535	0939 19.5 595	0914 19.8 602						
1309 1.8 54	1357 3.5 107	1452 0.5 16	1452 2.2 66	1548 1.5 47	1527 2.0 61						
1944 18.7 571	2029 17.7 538	● 2119 20.2 616	2113 19.3 588	2202 19.9 608	2137 19.9 607						
2 W 0139 5.7 173	17 Th 0219 6.5 199	2 Sa 0313 4.3 130	17 Su 0308 4.4 134	2 Tu 0401 2.6 79	17 W 0343 2.0 61						
0732 17.4 531	0811 16.1 492	0914 18.8 572	0903 18.2 555	1014 19.4 590	0950 20.1 612						
1406 0.9 26	1437 2.8 85	1535 0.2 7	1524 1.7 51	1619 2.3 70	1558 2.4 73						
2039 19.5 595	2105 18.2 555	● 2159 20.3 618	○ 2143 19.5 595	2231 19.5 593	2206 19.8 602						
3 Th 0233 5.2 157	18 F 0255 5.8 177	3 Su 0353 3.7 112	18 M 0340 3.7 113	3 W 0433 2.6 78	18 Th 0415 1.6 49						
0827 17.8 544	0846 16.7 509	0956 18.9 575	0935 18.6 568	1049 19.0 578	1028 20.1 613						
1458 0.2 6	1513 2.2 68	1613 0.5 16	1554 1.5 47	1650 3.3 100	1631 3.1 95						
● 2129 19.9 608	○ 2138 18.6 566	2235 20.0 609	2212 19.5 595	2259 18.8 574	2236 19.5 593						
4 F 0323 4.7 143	19 Sa 0329 5.2 158	4 M 0430 3.3 101	19 Tu 0411 3.2 97	4 Th 0505 2.9 88	19 F 0450 1.6 49						
0918 18.1 553	0919 17.2 523	1037 18.7 570	1009 18.9 576	1125 18.4 561	1110 19.8 603						
1547 -0.1 -2	1546 1.9 57	1649 1.2 38	1625 1.8 55	1720 4.5 137	1707 4.2 128						
2217 20.0 609	2210 18.7 571	2309 19.5 593	2240 19.4 591	2329 18.1 551	2311 18.9 577						
5 Sa 0409 4.4 134	20 Su 0402 4.7 143	5 Tu 0505 3.2 99	20 W 0443 2.8 86	5 F 0537 3.5 108	20 Sa 0529 2.1 64						
1006 18.1 553	0952 17.4 531	1116 18.2 556	1045 18.9 577	1204 17.7 538	1158 19.1 582						
1632 0.1 4	1618 1.7 53	1724 2.4 72	1657 2.4 73	1752 5.9 179	1746 5.6 171						
2302 19.7 601	2241 18.7 571	2341 18.8 573	2309 19.1 583	2351 18.1 551	2351 18.1 551						
6 Su 0453 4.3 130	21 M 0435 4.4 133	6 W 0541 3.4 105	21 Th 0517 2.7 82	6 Sa 0001 17.2 523	21 Su 0614 3.1 96						
1054 17.9 545	1026 17.6 535	1157 17.6 536	1125 18.8 572	0613 4.5 138	1255 18.1 552						
1715 0.8 25	1650 1.9 57	1758 3.7 114	1731 3.4 103	1249 16.7 509	1835 7.3 221						
2344 19.2 584	2312 18.6 567	2342 18.7 571	1827 7.4 226	1827 7.4 226	1827 7.4 226						
7 M 0535 4.3 131	22 Tu 0509 4.1 126	7 Th 0015 18.0 549	22 F 0554 2.9 87	7 Su 0036 16.1 492	22 M 0042 16.9 516						
1141 17.4 530	1103 17.6 535	0618 4.0 121	1211 18.3 558	0654 5.7 175	0713 4.5 138						
1756 1.9 59	1723 2.3 71	1241 16.8 513	1808 4.7 142	1344 15.7 478	1406 17.1 520						
2344 18.4 560	2344 18.4 560	1834 5.3 161	● 1912 9.0 273	● 1945 8.9 270	● 1945 8.9 270						
8 Tu 0024 18.5 563	23 W 0545 4.0 123	8 F 0050 17.1 520	23 Sa 0019 18.1 553	8 M 0121 15.1 459	23 Tu 0154 15.7 479						
0618 4.5 136	1144 17.4 531	0700 4.8 145	0637 3.4 104	0755 7.0 212	0840 5.7 174						
1230 16.7 510	1758 3.1 93	1330 15.9 486	1306 17.6 537	1459 14.9 453	1542 16.5 504						
1837 3.3 101		1915 6.9 211	1853 6.2 190	2053 10.2 311	2148 9.4 286						
9 W 0104 17.7 538	24 Th 0018 18.1 551	9 Sa 0131 16.0 488	24 Su 0105 17.3 526	9 Tu 0230 14.1 430	24 W 0341 15.1 461						
0703 4.8 146	0624 4.0 122	0750 5.7 175	0731 4.3 131	0943 7.6 231	1029 5.7 175						
1322 16.0 487	1230 17.2 523	1429 15.1 460	1413 16.8 512	1644 14.9 454	1713 17.1 521						
1922 4.9 148	1837 4.1 125	● 2014 8.5 258	● 1954 7.9 241	2247 10.1 307	2325 8.4 256						
10 Th 0146 16.8 512	25 F 0056 17.7 538	10 Sa 0221 15.0 457	25 M 0206 16.2 494	10 W 0417 13.8 422	25 Th 0521 15.8 483						
0755 5.2 159	0709 4.2 127	0903 6.6 200	0848 5.2 159	1120 7.0 214	1152 4.8 145						
1419 15.3 465	1326 16.7 510	1554 14.6 445	1542 16.3 496	1800 15.8 483	1822 18.1 553						
● 2015 6.3 193	1923 5.4 164	2150 9.4 288	2139 9.0 274								
11 F 0233 15.9 485	26 Sa 0142 17.1 521	11 M 0330 14.2 433	26 Tu 0334 15.5 471	11 Th 0005 9.0 274	26 F 0030 6.8 208						
0856 5.6 171	0803 4.4 135	1034 6.7 205	1029 5.3 161	0548 14.7 447	0633 17.1 522						
1527 14.7 449	1432 16.3 497	1727 15.0 456	1721 16.8 511	1225 5.8 178	1251 3.6 111						
2123 7.5 229	● 2023 6.8 206	2318 9.4 288	2322 8.6 263	1853 17.1 520	1914 19.1 582						
12 Sa 0328 15.1 461	27 Su 0239 16.5 502	12 Tu 0502 14.1 429	27 W 0516 15.7 479	12 F 0055 7.5 230	27 F 0117 5.3 161						
1006 5.8 177	0914 4.7 142	1154 6.1 187	1158 4.4 133	0646 15.9 485	0726 18.3 558						
1648 14.7 449	1551 16.1 492	1836 15.9 484	1836 17.9 547	1311 4.5 138	1337 2.9 87						
2237 8.2 249	2148 7.7 236			1934 18.2 554	1955 19.7 599						
13 Su 0434 14.6 446	28 M 0350 16.0 487	13 W 0619 14.7 449	28 Th 0039 7.4 225	13 F 0133 6.1 185	28 F 0156 4.0 122						
1116 5.6 170	1037 4.4 135	1253 5.1 156	0635 16.8 512	0729 17.2 524	0809 19.1 583						
1801 15.3 465	1723 16.6 507	1926 17.0 518	1304 3.0 92	1349 3.4 103	1415 2.5 77						
2348 8.2 251	2318 7.8 239			2008 19.1 581	2029 19.8 604						
14 M 0543 14.6 445	29 Tu 0512 16.0 487	14 Th 0121 7.6 231	29 F 0134 5.9 180	14 W 0208 4.7 144	29 W 0230 3.1 94						
1218 5.1 154	1157 3.6 110	0713 15.7 479	0735 18.0 548	0806 18.3 557	0846 19.6 596						
1901 16.1 490	1839 17.7 539	1340 4.0 121	1355 1.9 58	1423 2.5 76	1449 2.6 79						
1949 16.9 516	1941 18.8 574	2006 18.0 549	2020 20.0 609	2040 19.6 598	● 2100 19.7 600						
15 Tu 0049 7.8 239	30 W 0035 7.2 219	15 F 0201 6.4 195	30 Sa 0217 4.6 141	15 W 0240 3.6 109	30 Tu 0302 2.5 76						
0644 15.0 456	0629 16.6 506	0754 16.7 509	0822 18.9 576	0840 19.2 584	0920 19.7 599						
1312 4.3 131	1305 2.5 75	1418 3.0 90	1438 1.2 38	1455 2.0 62	1520 3.0 92						
1949 16.9 516	1941 18.8 574	2041 18.8 572	2058 20.3 619	2109 19.9 606	2128 19.4 590						
16 Th 0138 6.2 188	31 Th 0733 17.5 533										
1403 1.3 41	1403 1.3 41										
2033 19.8 602											

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Kanmen, China, 2008

Times and Heights of High and Low Waters

October				November				December												
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height									
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm									
1 W	0332	2.2	68	16 Th	0315	1.0	29	1 Sa	0409	2.6	78	1 M	0429	2.6	78	16 Tu	0506	0.3	9	
W	0952	19.6	596	Th	0933	20.7	630	Sa	1042	18.6	568	M	1105	17.8	544	Tu	1141	19.3	588	
1550	3.6	111		1533	3.4	103		1625	6.0	183		1646	6.2	188		1728	5.0	151		
2155	18.9	576		2134	19.6	597		2221	17.2	525		2240	18.1	551		2329	17.3	528		
2 Th	0402	2.3	70	17 F	0351	0.7	20	2 Su	0440	3.1	94	17 M	0509	1.1	34	2 Tu	0503	3.0	91	
1025	19.3	588		F	1015	20.6	629	Su	1118	18.0	550	M	1150	19.3	589	17 W	0553	1.3	39	
1619	4.4	135		1610	4.1	125		1658	6.7	203		1733	6.2	189		1230	18.6	566		
2222	18.4	560		2209	19.2	586		2253	16.7	510		2332	17.3	526		1818	5.2	160		
3 F	0433	2.7	81	18 Sa	0430	0.9	27	3 M	0514	3.8	116	18 Tu	0602	2.3	69	3 W	0539	3.6	109	
1059	18.8	573		Sa	1101	20.2	615	M	1158	17.4	516	Tu	1248	18.4	562	W	0641	2.6	79	
1648	5.4	164		1650	5.1	155		1734	7.4	226		1831	7.0	212		1319	17.7	540		
2250	17.7	541		2250	18.6	566		2330	16.1	491		2357	15.6	474		1912	5.5	168		
4 Sa	0504	3.3	102	19 Su	0513	1.7	51	4 Tu	0552	4.7	144	19 W	0035	16.3	496	4 Th	0620	4.3	132	
1137	18.1	551		Su	1152	19.4	590	Tu	1244	16.6	505	W	0701	3.6	109	19 F	0128	15.7	479	
1719	6.5	197		1735	6.3	193		1818	8.2	249		1350	17.6	535		0733	4.1	125		
2321	17.0	519		2336	17.6	537		1944	7.4	227		1944	7.4	227		1410	16.9	514		
5 Su	0536	4.3	130	20 M	0604	3.0	90	5 W	0014	15.3	467	20 Th	0152	15.5	471	5 F	0049	15.0	456	
1219	17.2	524		M	1252	18.3	558	W	0639	5.7	174	Th	0810	4.8	146	W	0834	5.5	169	
1754	7.7	234		1830	7.7	235		1339	15.8	483		1456	16.9	516		1504	16.1	491		
2355	16.2	493						1918	8.9	270		2107	7.3	222		2123	5.7	173		
6 M	0615	5.4	166	21 Tu	0034	16.4	501	6 Th	0114	14.5	442	21 F	0315	15.1	460	6 Sa	0156	14.5	442	
1309	16.2	493		Tu	0708	4.4	134	Th	0745	6.6	202	F	0929	5.6	171	Sa	0807	5.9	179	
1837	8.9	272		1405	17.3	527		1448	15.5	471		1602	16.7	508		1454	15.7	479		
	○	1954	8.8	267				○	2055	9.0	273		2224	6.6	200		2102	6.9	210	
7 Tu	0038	15.2	463	22 W	0157	15.4	469	7 F	0240	14.0	428	22 Sa	0436	15.4	468	7 Su	0312	14.5	442	
0706	6.7	203		W	0833	5.5	168	F	0913	7.0	213	Sa	1044	5.9	181	M	0505	14.8	452	
1415	15.3	467		1529	16.9	514		1602	15.6	476		1704	16.7	508		1058	7.2	218		
○ 1948	10.0	305		2142	8.7	264		2220	8.2	249		2326	5.5	169		1705	15.3	466		
8 W	0144	14.2	434	23 Th	0340	15.1	461	8 Sa	0410	14.4	440	23 Su	0545	16.0	488	8 M	0429	15.1	459	
0838	7.6	231		Th	1011	5.7	174	Sa	1035	6.6	202	Su	1147	5.9	180	M	1204	7.2	220	
1546	15.1	459		1647	17.1	521		1705	16.2	494		1757	16.8	513		1805	15.3	466		
2202	9.9	303		2306	7.5	230		2322	6.8	208		1844	17.0	517		2339	4.8	147		
9 Th	0328	13.8	422	24 F	0508	15.8	483	9 Su	0522	15.5	472	24 M	0017	4.5	137	9 Tu	0539	16.1	490	
1025	7.4	226		F	1127	5.2	159	Su	1138	5.9	180	M	0643	16.8	512	W	0709	4.2	128	
1709	15.7	479		1751	17.7	540		1755	17.0	518		1239	5.8	177		1300	7.0	213		
2322	8.8	269								1844	17.0	517		2317	4.8	146		1857	15.5	472
10 F	0505	14.6	444	25 Sa	0005	6.1	186	10 M	0011	5.2	160	25 Tu	0100	3.6	111	10 W	0013	3.4	103	
1139	6.4	196		Sa	0615	16.9	516	M	0618	16.8	513	Tu	0730	17.5	532	W	0639	17.3	528	
1807	16.8	511		1224	4.6	141		1228	5.2	157		1323	5.7	173		1236	5.8	176		
		1841	18.3	557				1837	17.7	541		1925	17.1	520		1835	17.2	525		
11 Sa	0016	7.3	222	26 Su	0050	4.7	144	11 Tu	0053	3.7	112	26 W	0140	3.0	92	11 Th	0104	2.0	61	
0608	15.9	484		Su	0708	17.9	546	Su	0706	18.2	554	W	0810	18.0	548	W	0836	17.4	529	
1231	5.2	159		1310	4.2	129		1312	4.6	139		1401	5.6	172		1425	6.2	190		
1850	17.8	544		1922	18.6	566		1915	18.3	559		2001	17.0	519		2019	16.1	490		
12 Su	0057	5.7	173	27 M	0129	3.6	110	12 W	0133	2.2	67	27 Th	0216	2.6	79	12 F	0244	2.4	73	
0656	17.3	526		M	0751	18.6	567	W	0751	19.3	588	Th	0847	18.3	557	W	0911	17.7	540	
1312	4.1	125		1349	4.1	126		1353	4.2	128		1436	5.7	173		1500	5.9	179		
1927	18.7	570		1957	18.6	568		1952	18.8	572		2033	17.0	518		2052	16.4	499		
13 M	0133	4.2	127	28 Tu	0203	2.9	87	13 Th	0213	1.0	31	28 F	0251	2.3	71	13 Sa	0242	0.1	2	
0736	18.5	565		Tu	0827	19.0	580	Sa	0836	20.1	613	F	0922	18.4	562	Sa	0914	19.9	608	
1349	3.3	102		1423	4.2	129		1434	4.1	126		1509	5.8	176		1506	4.7	144		
1959	19.3	587		2028	18.5	564		2030	19.0	579		● 2104	17.0	517		○ 2100	18.3	558		
14 Tu	0207	2.8	86	29 W	0236	2.4	73	14 F	0253	0.3	9	29 Sa	0325	2.2	68	14 M	0331	-0.3	-10	
0815	19.6	597		W	0901	19.2	586	F	0921	20.5	625	Sa	0956	18.4	560	W	1017	18.0	548	
1424	3.0	91		1455	4.5	137		1515	4.3	132		1540	5.9	179		1604	5.2	158		
2030	19.6	597		● 2057	18.2	556		2111	19.0	578		2134	16.9	514		2155	16.7	509		
15 W	0240	1.7	52	30 Th	0307	2.2	67	15 Sa	0336	0.1	2	30 Su	0357	2.3	71	15 M	0419	-0.3	-8	
0853	20.3	619		Th	0934	19.2	585	Sa	1008	20.5	625	Su	1030	18.2	554	W	1049	17.9	545	
1458	3.0	92		1525	4.9	150		1558	4.8	145		1612	6.0	183		1637	5.0	151		
○ 2101	19.7	600		2125	17.9	546		2153	18.7	569		2204	16.8	511		2228	16.6	507		
31 F	0338	2.3	69												31 W	0453	2.0	60		
	1007	19.0	579												W	1121	17.7	538		
	1555	5.4	165												1710	4.9	148			
	2153	17.6	536												2303	16.5	502			

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Xiamen, China, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0000	6.1	186	16 W 0523	16.4	500	1 F 0053	5.5	169	1 Sa 0605	14.3	435
0602	15.2	464	1133	5.2	158	0726	14.1	431	1215	8.7	265
1205	6.7	203	1743	17.5	534	1313	8.5	259	1809	14.3	435
1823	16.4	500	●			1911	14.6	446			
2 W 0059	6.0	183	17 Th 0013	4.2	129	2 Sa 0205	5.6	171	2 Su 0102	5.9	181
0712	14.8	451	0634	15.9	486	0851	14.3	437	0754	14.0	428
1307	7.6	231	1237	6.3	193	1441	8.8	267	1348	9.1	278
1918	15.9	486	1841	17.0	518	2027	14.5	441	1935	14.0	426
3 Th 0203	5.7	174	18 F 0121	4.0	121	3 Su 0318	5.2	157	3 M 0230	5.8	176
0828	14.9	453	0755	15.8	483	1004	15.2	462	0920	14.7	448
1418	8.1	246	1351	7.1	217	1556	8.3	253	1632	7.1	215
2017	15.7	478	1948	16.7	509	2138	14.9	455	2214	16.6	506
4 F 0305	5.2	158	19 Sa 0237	3.4	104	4 M 0418	4.3	131	4 Tu 0343	4.9	149
0938	15.5	471	0919	16.3	498	1100	16.2	495	1025	15.9	484
1531	8.1	246	1514	7.3	224	1653	7.5	230	1732	6.1	187
2116	15.7	478	2101	16.8	511	2236	15.8	481	2316	17.5	533
5 Sa 0400	4.5	136	20 Su 0350	2.6	80	5 Tu 0508	3.3	101	5 W 0545	1.8	56
1036	16.3	496	1035	17.3	527	1146	17.3	526	1221	18.5	564
1631	7.8	237	1632	7.0	213	1741	6.7	204	1817	5.4	166
2209	15.9	486	2211	17.2	524	2324	16.7	508			
6 Su 0449	3.7	113	21 M 0454	1.8	54	6 W 0552	2.5	75	6 Th 0525	2.8	85
1124	17.1	520	1139	18.2	556	1226	18.0	550	1155	18.2	554
1719	7.4	226	1735	6.4	195	1821	6.0	183	1753	5.2	160
2256	16.4	500	2313	17.8	542	● O 1855	4.8	146	2347	17.9	545
7 M 0533	3.0	92	22 Tu 0550	1.1	35	7 Th 0005	17.5	533	7 F 0604	2.1	63
1206	17.7	541	1232	18.9	576	0633	1.8	56	1232	18.8	574
1801	7.0	212	1830	5.9	179	1301	18.7	569	1832	4.3	130
2340	16.9	515	● O			1856	5.3	162	● O 1901	3.4	105
8 Tu 0611	2.5	76	23 W 0007	18.2	556	8 F 0045	18.1	551	8 Sa 0029	18.5	565
1245	18.2	556	0641	0.9	27	0707	1.5	47	0643	1.8	54
1841	6.5	199	1317	19.2	584	1336	19.0	579	1304	19.1	583
●			1912	5.5	169	1935	4.7	144	2001	3.8	115
9 W 0018	17.3	528	24 Th 0055	18.5	565	9 Sa 0123	18.3	558	9 Su 0107	19.1	581
0650	2.1	64	0724	1.0	32	0744	1.5	45	0719	2.0	60
1321	18.5	564	1357	19.2	584	1407	19.1	581	1336	19.2	586
1916	6.3	191	1953	5.1	156	2005	4.2	128	2034	3.3	102
10 Th 0055	17.7	540	25 F 0139	18.5	565	10 M 0200	18.5	563	25 M 0239	18.3	557
0726	2.0	61	0802	1.4	44	0816	1.8	56	0845	3.3	101
1355	18.7	570	1433	18.9	577	1439	19.1	581	1454	18.3	559
1951	5.9	181	2034	4.8	147	2041	3.6	110	2104	3.2	97
11 F 0134	17.9	546	26 Sa 0219	18.2	555	11 M 0241	18.5	563	26 Tu 0313	17.8	542
0800	1.9	59	0841	2.1	63	0853	2.4	72	0915	4.2	129
1430	18.7	569	1503	18.6	568	1508	18.9	576	1522	17.8	544
2030	5.7	175	2105	4.6	141	2117	3.2	97	2140	3.3	100
12 Sa 0209	17.8	544	27 Su 0259	17.8	543	12 Tu 0323	18.1	553	12 W 0352	17.1	521
0838	2.1	65	0915	3.0	91	0934	3.2	97	0950	5.2	159
1502	18.7	570	1535	18.3	558	1543	18.7	569	1552	17.2	525
2103	5.4	165	2145	4.4	134	2157	2.8	85	2216	3.8	116
13 Su 0249	17.7	541	28 M 0342	17.2	525	13 W 0410	17.7	539	28 Th 0434	16.2	493
0913	2.6	79	0951	3.9	120	1014	4.4	133	1030	6.4	195
1538	18.6	567	1605	17.8	544	1621	18.1	551	1627	16.2	494
2144	5.0	153	2223	4.5	137	2245	2.9	87	2257	4.5	138
14 M 0335	17.5	532	29 Tu 0425	16.4	499	14 Th 0505	16.9	515	29 F 0522	15.1	461
0953	3.2	97	1031	5.1	155	1104	5.7	173	1112	7.6	233
1613	18.3	559	1640	17.2	524	1708	17.3	528	1708	15.2	462
2228	4.8	146	2304	4.7	143	● O 2344	3.2	99	● O 2349	5.4	164
15 Tu 0424	16.9	516	30 W 0513	15.5	472	16013	16.0	487	15 M 0605	16.2	493
1040	4.1	125	1109	6.4	194	1209	7.0	213	1203	7.6	233
1655	18.0	549	1719	16.3	496	1809	16.4	500	1755	15.8	483
2315	4.5	136	● O 2353	5.2	157				● O		
16 Th 0612	14.6	446	31 Th 1201	7.6	231				31 M 0013	5.9	179
1807	15.4	468	1807	15.4	468				0702	14.5	443

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Xiamen, China, 2008

## Times and Heights of High and Low Waters

April				May				June								
	Time	Height			Time	Height			Time	Height						
<b>1</b> Tu	0140	5.9	181	<b>16</b> W	0316	4.6	141	<b>1</b> Th	0207	5.2	160	<b>16</b> F	0340	5.4	164	
	0827	15.0	456		0952	16.9	516		0841	16.2	495		0954	16.8	511	
	1434	8.4	256		1602	6.0	184		1455	6.5	198		1613	4.5	136	
	2021	14.6	445		2201	16.5	504		2055	15.7	480		2230	16.8	511	
<b>2</b> W	0257	5.2	160	<b>17</b> Th	0416	4.4	133	<b>2</b> F	0311	4.8	145	<b>17</b> Sa	0433	5.4	165	
	0938	16.0	487		1042	17.4	531		0937	17.0	518		1038	16.9	514	
	1543	7.2	220		1651	5.0	152		1551	5.0	153		1655	3.6	111	
	2136	15.7	479		2255	17.4	530		2159	16.9	515		2316	17.3	527	
<b>3</b> Th	0358	4.3	130	<b>18</b> F	0504	4.2	127	<b>3</b> Sa	0408	4.3	130	<b>18</b> Su	0516	5.5	169	
	1031	17.1	522		1121	17.7	538		1024	17.6	536		1114	16.8	513	
	1636	5.8	178		1732	4.1	126		1640	3.5	107		1735	3.0	92	
	2234	17.0	518		2340	18.0	548		2255	18.1	551		2358	17.7	540	
<b>4</b> F	0449	3.4	103	<b>19</b> Sa	0546	4.1	126	<b>4</b> Su	0459	4.0	122	<b>19</b> M	0556	5.6	170	
	1113	18.0	549		1154	17.8	542		1105	18.1	551		1149	16.8	513	
	1718	4.5	138		1802	3.4	104		1722	2.2	67		1807	2.6	79	
	2322	18.0	550						2346	19.1	582					
<b>5</b> Sa	0535	2.9	87	<b>20</b> Su	0017	18.3	557	<b>5</b> M	0549	4.0	123	<b>20</b> Tu	0038	17.9	547	
	1151	18.6	568		0621	4.4	134		1147	18.4	561		0636	5.7	175	
	1755	3.2	98		1223	17.7	538		1803	1.0	31		1222	16.7	508	
					○	1836	2.9	87	●				○	1843	2.3	70
<b>6</b> Su	0006	19.0	579	<b>21</b> M	0052	18.5	563	<b>6</b> Tu	0036	19.8	602	<b>21</b> W	0112	18.0	548	
	0615	2.8	86		0653	4.7	142		0638	4.3	130		0708	6.0	183	
	1226	18.8	574		1250	17.6	537		1229	18.5	563		1252	16.7	508	
	●	1834	2.1	64		1904	2.5	76		1848	0.2	7		1914	2.3	69
<b>7</b> M	0050	19.7	599	<b>22</b> Tu	0127	18.4	562	<b>7</b> W	0124	20.0	610	<b>22</b> Th	0148	17.9	546	
	0655	3.0	92		0729	5.1	156		0726	4.8	146		0743	6.2	189	
	1259	19.0	579		1317	17.4	531		1309	18.6	567		1325	16.5	504	
	1908	1.2	37		1937	2.3	69		1935	-0.1	-2		1949	2.3	71	
<b>8</b> Tu	0135	20.0	609	<b>23</b> W	0159	18.3	559	<b>8</b> Th	0213	20.0	609	<b>23</b> F	0221	17.7	538	
	0738	3.5	108		0757	5.4	166		0811	5.2	158		0815	6.5	197	
	1335	19.0	580		1346	17.3	527		1355	18.5	563		1356	16.6	505	
	1949	0.6	18		2005	2.4	72		2024	0.2	7		2024	2.6	80	
<b>9</b> W	0219	19.9	607	<b>24</b> Th	0234	18.0	550	<b>9</b> F	0304	19.6	596	<b>24</b> Sa	0256	17.4	531	
	0820	4.3	131		0832	5.9	180		0902	5.6	171		0850	6.6	200	
	1411	18.8	574		1413	17.0	517		1446	18.0	550		1433	16.5	503	
	2033	0.6	17		2040	2.7	81		2116	0.9	28		2059	2.9	88	
<b>10</b> Th	0306	19.5	595	<b>25</b> F	0306	17.6	536	<b>10</b> Sa	0357	18.8	574	<b>25</b> Su	0333	17.1	522	
	0903	5.1	155		0901	6.5	197		0957	6.1	186		0928	6.8	207	
	1453	18.4	562		1445	16.7	508		1540	17.4	529		1509	16.3	496	
	2121	1.0	32		2113	3.2	98		2211	2.0	60		2140	3.3	102	
<b>11</b> F	0357	18.7	571	<b>26</b> Sa	0344	17.0	518	<b>11</b> Su	0454	18.0	548	<b>26</b> M	0412	16.8	513	
	0955	6.0	183		0939	7.0	214		1056	6.6	201		1008	6.9	211	
	1543	17.7	538		Sa	1521	16.1	492		1642	16.5	503		1554	16.0	487
	2215	2.0	61		2153	3.9	118		2312	3.1	95		2226	3.9	118	
<b>12</b> Sa	0455	17.6	537	<b>27</b> Su	0426	16.3	497	<b>12</b> M	0555	17.2	524	<b>27</b> Tu	0458	16.6	506	
	1055	7.0	212		1020	7.6	232		1202	6.9	210		1058	7.0	212	
	1641	16.6	505		1604	15.6	475		1751	15.7	480		1648	15.6	475	
	2319	3.3	100		2242	4.6	141	●					2316	4.4	133	
<b>13</b> Su	0604	16.6	506	<b>28</b> M	0517	15.7	480	<b>13</b> Tu	0019	4.2	128	<b>28</b> W	0550	16.4	501	
	1207	7.7	234		1115	8.1	246		0700	16.7	508		1157	6.8	207	
	1755	15.6	476		1702	15.0	457		1315	6.8	206		1751	15.3	466	
				○	2342	5.2	160		1909	15.4	469	○				
<b>14</b> M	0036	4.3	132	<b>29</b> Tu	0622	15.5	471	<b>14</b> W	0132	4.9	150	<b>29</b> Th	0015	4.8	145	
	0725	16.1	490		1228	8.2	250		0805	16.5	503		0647	16.4	499	
	1337	7.8	237		1817	14.7	447		1425	6.2	190		1301	6.3	191	
	1925	15.2	464						2027	15.6	474		1903	15.3	467	
<b>15</b> Tu	0200	4.8	145	<b>30</b> W	0055	5.5	167	<b>15</b> Th	0240	5.3	161	<b>30</b> F	0121	5.1	154	
	0847	16.3	498		0735	15.6	477		0903	16.6	505		0746	16.5	504	
	1459	7.1	216		1347	7.6	233		1525	5.4	164		1405	5.3	161	
	2052	15.7	478		1941	14.9	455		2135	16.1	492		2017	15.8	482	
												<b>31</b> Sa	0228	5.2	157	
												0842	16.8	512		
												1505	4.0	122		
												2128	16.7	509		

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Xiamen, China, 2008

Times and Heights of High and Low Waters

July				August				September				
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm	
1 Tu 0408 17.0 518	6.1	186	16 W 0509 1054	7.1	217	1 F 0013 0606	19.2	584	1 M 0014 0607	18.2	555	
1635 1.3 39	17.5	532	W 1721	15.5	473	F 1156	18.3	558	Sa 1158	17.6	537	
2320 18.3 557	0.5	15	● 1819	0.6	17	● 1817	2.3	69	M 1313	19.7	599	
2 W 0514 1101	5.9	180	17 Th 0002 0555	17.2	523	2 Sa 0103	19.7	600	2 Tu 0147 0746	19.6	596	
1734 0.5 15	17.5	532	Th 1141	16.1	491	Sa 0655 1248	5.0	152	W 0644 1239	3.5	108	
● 1829 0.1 3	2.5	76	1802	2.5	76	1506	18.8	573	Tu 1352 2000	19.6	598	
3 Th 0020 0614	19.1	581	18 F 0043 0636	17.7	539	3 Su 0147	19.8	602	17 W 0113 0715	19.7	600	
1159 17.9 546	5.6	172	F 1221	16.6	506	Su 0741 1336	4.5	138	W 0715 1431	3.1	108	
● 1829 0.1 3	1843	2.1	O 1843	0.9	63	1950	19.0	579	Th 1407 2035	20.2	617	
4 F 0114 0708	19.5	595	19 Sa 0118 0709	18.0	549	4 M 0225 0819	19.5	594	18 Th 0144 0750	19.7	600	
1254 18.2 556	5.3	163	Sa 1258	17.1	522	M 1417 1918	4.2	129	F 0750 1431	2.4	74	
1920 0.0 -1	1.9	57	1918	1.9	57	2032	1.5	47	W 1431 2002	1.9	59	
5 Sa 0204 0758	19.7	599	20 Su 0153 0745	18.2	556	5 Tu 0258 0857	19.2	585	3 W 0214 0818	19.2	586	
1347 18.4 560	5.1	154	Su 1337	17.5	533	Tu 1459 2107	3.8	116	W 0818 1431	3.3	100	
2008 0.2 6	1.8	54	1954	1.8	54	2107	2.5	77	Th 1431 2039	1.9	59	
6 Su 0251 0847	19.5	594	21 M 0226 0819	18.3	558	6 W 0331 0937	18.7	571	4 Th 0244 0852	19.0	578	
1438 18.2 556	4.8	145	M 1411	17.6	535	W 1543 2147	3.6	109	F 0829 1507	2.1	65	
2055 0.9 26	2.0	60	2030	2.0	60	2147	3.5	107	W 1507 2108	20.1	612	
7 M 0333 0933	19.1	581	22 Tu 0257 0853	18.4	560	7 Th 0402 1012	18.2	555	19 Th 0214 0829	19.5	595	
1526 17.8 542	4.6	140	Tu 1449	17.6	537	F 1012 1626	3.6	110	F 0829 1450	2.1	65	
2142 1.7 53	2.3	71	2103	2.3	71	W 1626 2225	17.3	527	W 1450 2053	20.1	613	
8 Tu 0411 1015	18.5	565	23 W 0330 0931	18.3	558	8 F 0437 1054	17.5	534	18 W 0250 0908	19.4	590	
1612 17.3 526	4.5	138	W 1531	17.5	534	F 1054 1712	3.9	118	W 0908 1538	2.0	61	
2226 3.0 90	2.8	86	2142	2.8	86	W 1712 2307	16.4	501	O 1538 2139	19.6	596	
9 W 0450 1059	17.9	547	24 Th 0402 1006	18.2	554	9 Sa 0514 1142	16.6	505	19 W 0250 0931	19.4	590	
1703 16.6 506	4.4	135	Th 1613	4.0	123	Sa 1142 1807	4.4	134	W 0931 1547	3.2	99	
2308 4.2 127	3.7	112	2222	3.7	112	O 1807 2358	15.6	221	O 1547 2146	18.2	554	
10 Th 0531 1147	17.2	525	25 F 0440 1051	17.9	546	10 Su 0601 1238	15.6	475	10 W 0141 0725	9.5	290	
1758 15.9 484	4.4	135	F 1705	17.0	517	Su 1238 1915	5.0	152	W 0725 1413	14.6	445	
● 2356 5.4 164	4.6	141	2308	4.6	141	O 1915 2034	14.9	455	W 1413 2103	6.3	475	
11 F 0613 1240	16.5	502	26 F 0523 1144	17.4	530	11 M 0106 0701	8.2	251	10 W 0141 0725	9.5	290	
1859 15.3 465	3.5	106	Sa 1807	16.5	504	M 0701 1347	14.8	451	W 0725 1413	14.6	445	
● O						M 1347 2034	5.3	163	W 1413 2103	6.3	475	
12 Sa 0053 0703	6.5	198	27 Su 0007 0615	5.7	174	12 Tu 0229 0815	8.6	263	10 W 0141 0725	9.5	290	
1339 4.7 480	15.7	480	W 0615	16.9	514	Tu 0815 1459	14.5	442	W 0725 1413	14.6	445	
2008 15.0 457	4.7	142	1246	3.3	102	W 1459 2149	5.2	157	W 1413 2103	15.6	475	
● 1921 16.2 494	16.2	494	1921	16.2	494	2149	15.5	471	W 2103 2207	16.6	507	
13 Su 0158 0801	7.3	222	28 M 0119 0720	6.7	203	12 W 0229 0929	8.3	253	11 W 0305 0849	9.0	275	
1441 4.5 138	15.2	463	M 1358	3.1	96	W 0929 1602	14.9	453	W 0849 1525	15.2	462	
2118 15.2 463	2045	16.4	500	2248	16.4	500	O 1602 2305	18.7	569	W 1525 2207	5.5	169
14 M 0310 0903	7.6	231	29 Tu 0242 0835	7.0	214	13 Th 0443 1030	7.6	232	11 W 0305 0849	9.0	275	
1541 4.1 126	15.0	456	Tu 1514	2.6	79	F 1030 1654	15.7	479	W 0849 1525	15.2	462	
2222 15.7 480	2205	17.2	524	2335	17.4	530	W 1654 2357	3.6	111	W 1525 2207	5.5	169
15 Tu 0416 1002	7.5	228	30 W 0400 0949	6.8	208	14 F 0443 1116	6.8	208	11 W 0305 0849	9.0	275	
1635 3.6 110	15.1	460	W 0949	16.9	514	F 1116 1739	16.7	509	W 0849 1525	15.2	462	
2316 16.5 503	1625	1.8	55	2315	18.2	556	O 1739 2357	2.8	86	W 1525 2207	19.3	595
● 31 Th 0508 1056	6.3	191	31 Th 1056 1727	17.6	536	15 M 0530 0637	5.4	164	11 W 0305 0849	9.0	275	
						W 1147 1848	19.1	581	W 0849 1525	15.2	462	
						O 1848 2182	1.7	52	W 1525 2207	19.3	595	

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Xiamen, China, 2008

Times and Heights of High and Low Waters

October				November				December				
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm	
1 W 0103	19.4	592	16 Th 0031	19.9	606	1 Sa 0122	18.6	566	1 M 0118	19.7	599	
0712	3.1	95	0645	1.9	57	0749	2.8	86	0753	0.7	21	
1327	20.0	609	1307	21.0	639	1413	19.3	588	1430	20.6	628	
1934	4.4	135	1912	4.5	138	2012	6.8	206	2034	6.2	189	
2 Th 0132	19.3	587	17 F 0102	19.9	607	2 Su 0151	18.3	558	17 M 0205	19.3	589	
0745	2.8	86	0723	1.4	42	0823	3.3	100	0844	1.3	39	
1401	19.8	603	1351	21.0	641	1448	18.8	573	1519	20.0	609	
2003	5.1	156	1954	5.1	155	2046	7.2	220	2124	6.8	207	
3 F 0157	19.0	579	18 Sa 0141	19.9	606	3 M 0224	17.8	544	18 Tu 0257	18.7	570	
0815	2.9	88	0804	1.2	38	0857	3.8	117	0939	2.3	70	
1438	19.4	591	1437	20.7	631	1524	18.1	553	1613	19.2	585	
2038	5.8	178	2041	5.7	175	2123	7.8	239	2219	7.2	220	
4 Sa 0228	18.5	564	19 Su 0221	19.5	593	4 Tu 0258	17.4	529	19 W 0356	17.8	543	
0850	3.2	98	0852	1.6	49	0938	4.6	141	1037	3.5	108	
1512	18.7	571	1526	19.9	608	1604	17.5	533	1711	18.4	561	
2110	6.7	205	2131	6.6	202	2202	8.4	256	2325	7.5	230	
5 Su 0257	17.9	547	20 M 0308	18.8	574	5 W 0342	16.7	510	20 Th 0504	16.9	516	
0927	3.9	120	0945	2.5	75	1021	5.5	169	1141	4.7	144	
1552	17.9	546	1621	19.0	579	1653	16.9	514	1814	17.8	543	
2147	7.6	232	2226	7.6	232	2254	8.9	271	●	2323	7.6	232
6 M 0333	17.2	524	21 Tu 0404	17.9	546	6 Th 0437	16.0	488	21 F 0036	7.4	227	
1004	4.8	147	1046	3.6	111	1117	6.3	191	0623	16.4	499	
1636	16.9	516	1726	18.0	549	1753	16.5	502	1250	5.7	173	
2232	8.6	261	●	2335	8.3	252	●	1919	17.5	534	●	
7 Tu 0413	16.3	496	22 W 0515	17.0	517	7 F 0001	9.1	277	22 Sa 0147	6.9	211	
1053	5.8	178	1158	4.8	146	0547	15.5	473	0745	16.4	500	
1731	16.1	490	1844	17.5	532	1227	6.8	206	1400	6.2	190	
● 2328	9.4	288	●	●	●	1901	16.5	503	2020	17.6	535	
8 W 0512	15.5	471	23 Th 0057	8.5	258	8 Sa 0119	8.6	263	23 Su 0251	6.0	184	
1158	6.7	203	0643	16.5	503	0709	15.6	474	0858	16.9	515	
1845	15.6	477	1320	5.4	165	1340	6.7	203	1505	6.5	197	
●	●	●	2003	17.6	535	2007	17.0	517	2114	17.7	541	
9 Th 0048	9.7	297	24 F 0222	7.9	240	9 Su 0231	7.5	230	24 M 0346	5.0	153	
0634	15.1	459	0810	16.8	511	0829	16.2	495	0959	17.6	537	
1320	6.9	211	1440	5.4	165	1446	6.2	190	1602	6.5	197	
2005	15.9	486	2111	18.0	550	2103	17.7	538	2201	17.9	547	
10 F 0216	9.2	281	25 Sa 0330	6.7	204	10 M 0329	6.1	186	25 Tu 0434	4.1	125	
0801	15.5	472	0925	17.6	537	0934	17.4	530	1051	18.3	557	
1438	6.4	194	1545	5.1	156	1544	5.7	175	1652	6.4	195	
2112	16.9	514	2204	18.6	567	2151	18.3	558	2243	18.1	552	
11 Sa 0324	8.1	246	26 Su 0422	5.6	170	11 Tu 0414	4.5	138	26 W 0512	3.4	104	
0914	16.5	503	1024	18.5	565	1029	18.6	567	1136	18.8	572	
1539	5.5	167	1638	4.9	150	1637	5.3	163	1738	6.4	194	
2204	17.9	547	2248	19.0	578	2234	18.9	576	2320	18.1	551	
12 Su 0414	6.7	203	27 M 0503	4.5	137	12 W 0457	3.0	92	11 W 0434	4.1	125	
1011	17.8	542	1111	19.3	587	1118	19.7	601	1051	18.3	557	
1630	4.6	141	1722	5.0	152	1725	5.3	161	1652	6.4	196	
2247	18.8	574	2323	19.1	581	2312	19.3	587	2243	18.1	552	
13 M 0456	5.2	158	28 Tu 0541	3.7	112	13 Th 0540	1.8	55	13 F 0625	2.7	83	
1059	19.0	578	1153	19.7	601	1205	20.5	626	1251	19.1	583	
1711	4.1	126	1759	5.1	156	1808	5.2	160	1850	6.6	200	
2324	19.4	590	2354	19.1	582	●	●	●	●	●	●	
14 Tu 0535	3.9	118	29 W 0613	3.1	96	14 F 0621	1.0	32	14 Sa 0028	18.0	548	
1143	19.9	607	1231	19.9	606	1253	21.0	639	0657	2.6	79	
1753	3.9	119	1837	5.4	164	1855	5.4	165	1326	19.0	579	
2357	19.7	601	●	●	●	1926	6.8	208	1926	5.7	175	
15 W 0608	2.8	85	30 Th 0024	18.9	577	15 Sa 0035	19.8	604	30 Su 0058	18.0	548	
1225	20.5	626	0647	2.7	83	0705	0.6	19	0733	2.7	83	
1834	4.0	123	1305	19.8	605	1341	21.0	640	1359	18.8	573	
○	●	●	1907	5.8	177	1944	5.7	175	1956	7.0	212	
31 F 0052	18.8	574	31 F 0716	2.7	83	●	●	●	●	●	●	
1341	19.7	599	1341	19.7	599	1341	21.0	640	1359	18.8	573	
1941	6.2	190	1941	6.2	190	1944	5.7	175	1956	7.0	212	

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Shantou, China, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0101 3.5 106	16 0715 5.5 167	1 F 0203 2.4 72	16 Sa 0155 1.4 44	1 Sa 0103 2.2 66	16 Su 0140 1.3 40						
0744 5.2 157	W 1158 3.0 91	0931 5.2 157	1002 5.7 174	0829 5.3 163	0958 5.9 180						
1228 3.4 105	1906 6.3 192	1310 4.6 140	1344 4.7 142	1225 4.7 142	1402 4.8 147						
1949 6.2 190	●	1902 5.7 174	1852 6.0 182	1805 5.6 171	1829 5.6 172						
2 W 0205 3.1 93	17 0059 2.5 75	2 Sa 0304 2.2 67	17 Su 0312 1.2 38	2 Su 0207 2.1 65	17 0300 1.4 43						
0905 5.1 156	Th 0834 5.5 169	1116 5.4 164	1141 5.9 179	1017 5.3 161	1128 5.9 181						
1316 4.0 123	1253 3.6 111	1430 5.0 152	1520 5.0 151	1338 5.0 151	1547 4.7 143						
2015 6.0 184	1932 6.2 189	1921 5.6 171	1939 5.8 177	1826 5.4 166	1933 5.3 162						
3 Th 0301 2.7 82	18 0209 2.0 60	3 Su 0406 2.0 62	18 M 0430 1.1 34	3 M 0317 2.0 62	18 0420 1.5 46						
1034 5.3 163	F 1002 5.7 175	1238 5.7 174	1300 6.2 188	1159 5.4 166	1242 6.0 183						
1417 4.6 139	1356 4.3 131	1618 5.2 158	1658 4.9 148	1545 5.0 153	1706 4.3 130						
2031 5.9 181	1935 6.2 188	2002 5.5 169	2041 5.6 172	1916 5.3 161	2047 5.1 155						
4 F 0353 2.4 73	19 0321 1.5 47	4 M 0504 1.8 54	19 Tu 0538 1.0 30	4 Tu 0428 1.8 56	19 0528 1.6 49						
1152 5.7 175	Sa 1132 6.1 185	1333 6.0 184	1359 6.4 195	1301 5.7 173	1337 6.0 183						
1528 5.0 152	1512 4.9 148	1737 5.1 156	1802 4.6 139	1712 4.8 146	1757 3.8 116						
2034 5.9 180	2003 6.2 190	2057 5.5 168	2144 5.5 168	2027 5.2 157	2151 5.0 151						
5 Sa 0441 2.2 66	20 0430 1.1 35	5 Tu 0555 1.5 46	20 W 0633 1.0 31	5 W 0525 1.6 49	20 0618 1.8 54						
1251 6.2 189	Su 1252 6.5 198	1416 6.3 192	1445 6.4 196	1345 5.9 179	1414 5.9 180						
1640 5.2 160	1634 5.2 157	1819 5.0 151	1848 4.2 127	1756 4.5 136	1835 3.4 104						
2055 5.9 181	2049 6.3 191	2146 5.5 168	2235 5.4 165	2124 5.1 155							
6 Su 0524 1.9 59	21 0533 0.8 25	6 W 0639 1.3 40	21 Th 0715 1.2 36	6 Th 0610 1.5 45	21 0156 5.2 159						
1339 6.6 202	M 1355 6.9 210	1453 6.4 196	1518 6.3 193	1417 6.0 182	0658 2.0 62						
1736 5.4 164	1743 5.2 157	1852 4.7 144	1923 3.8 116	1826 4.1 125	1445 5.8 177						
2124 6.0 182	2142 6.2 190	2225 5.5 168	● O		1905 3.1 93						
7 M 0606 1.7 53	22 0629 0.7 22	7 Th 0715 1.2 37	22 F 0239 5.3 163	7 F 0119 5.0 151	22 0242 5.6 170						
1418 6.9 211	Tu 1447 7.1 216	1521 6.4 196	0754 1.4 44	0648 1.5 47	0731 2.4 74						
1818 5.4 164	1836 5.0 152	1919 4.5 136	1548 6.2 189	1447 5.9 181	1505 5.7 174						
2202 6.0 184	O 2234 6.1 187	● 2305 5.4 166	1956 3.4 104	1854 3.7 113	1936 2.7 83						
8 Tu 0647 1.6 48	23 0717 0.8 23	8 F 0750 1.2 38	23 Sa 0326 5.5 168	8 Sa 0213 5.2 160	23 0316 5.9 179						
1457 7.1 215	W 1528 7.1 216	1548 6.4 194	0827 1.8 56	0721 1.8 54	0757 2.8 86						
1852 5.3 163	1923 4.7 143	1946 4.1 126	1610 6.1 185	1507 5.9 179	1525 5.6 172						
● 2240 6.0 184	2322 6.0 183	2032 3.1 93	2032 3.1 93	● 1922 3.3 101	2005 2.4 74						
9 W 0724 1.4 44	24 0801 0.9 28	9 Sa 0252 5.3 163	24 Su 0403 5.7 175	9 Su 0257 5.6 172	24 0351 6.2 188						
1529 7.1 215	Th 1605 7.0 213	0820 1.4 44	0856 2.2 67	0754 2.1 64	0825 3.2 99						
1921 5.2 159	2004 4.3 132	1608 6.3 191	1635 6.0 184	1531 5.8 178	1544 5.7 175						
2315 6.0 183		2017 3.7 114	2107 2.7 83	1954 2.8 86	2041 2.2 67						
10 Th 0800 1.4 42	25 0011 5.8 176	10 Su 0343 5.5 168	25 M 0444 5.9 179	10 M 0343 6.0 184	25 0424 6.4 194						
1600 7.0 213	F 0843 1.2 37	0853 1.7 51	0928 2.7 81	0827 2.6 78	0852 3.6 110						
1952 5.0 152	1640 6.8 206	1634 6.2 190	1654 6.0 184	1552 5.9 179	1600 5.8 177						
2354 5.9 180	2047 3.9 120	2053 3.2 99	2149 2.5 75	2036 2.3 71	2114 2.0 62						
11 F 0836 1.4 43	26 0355 5.6 172	11 M 0433 5.7 174	26 Tu 0522 5.9 181	11 Tu 0430 6.4 194	26 0458 6.5 199						
1629 6.9 209	Sa 0919 1.6 49	0927 2.1 63	0956 3.1 93	0902 3.0 90	0923 4.0 121						
2027 4.7 142	Sa 1708 6.6 201	1659 6.2 189	1714 6.0 183	1619 5.9 180	1621 5.8 177						
	Sa 2133 3.6 109	2140 2.8 84	2231 2.3 70	2120 1.9 57	2153 1.9 59						
12 Sa 0028 5.7 174	27 0449 5.6 172	12 Tu 0520 5.8 178	27 W 0600 5.9 181	12 W 0517 6.5 199	27 0534 6.5 199						
0908 1.5 46	Su 0956 2.0 61	1004 2.4 74	1031 3.5 106	0947 3.4 104	0953 4.2 129						
1657 6.8 207	1738 6.4 196	1731 6.2 189	1735 6.0 182	1646 6.0 184	1640 5.9 179						
2107 4.3 131	2218 3.2 98	2230 2.3 71	2312 2.2 67	2214 1.5 46	2234 1.9 59						
13 Su 0407 5.5 169	28 0538 5.6 170	13 W 0613 5.9 180	28 Th 0641 5.8 177	13 Th 1033 3.9 118	28 0609 6.4 195						
0946 1.7 51	M 1033 2.5 76	1050 3.0 90	1100 3.9 119	1701 6.0 184	1029 4.5 137						
1728 6.7 203	1801 6.3 192	1755 6.2 188	1745 5.9 180	2315 1.3 39	1652 5.8 178						
2155 3.8 117	2310 2.9 89	2329 2.0 60			2317 2.0 60						
14 M 0506 5.5 168	29 0624 5.4 166	14 Th 0712 5.9 179	29 F 0005 2.2 66	14 F 0711 6.4 195	29 0652 6.1 186						
1023 2.0 61	Tu 1104 3.0 91	1138 3.5 107	0726 5.6 171	1123 4.3 131	1108 4.7 142						
1759 6.6 201	1826 6.1 187	1815 6.1 186	1141 4.3 132	1717 6.1 185	1707 5.7 175						
2251 3.4 104	● O 1842 6.0 183	● O 1755 5.8 176	● O 1755 5.8 176	● O 1726 5.5 169							
15 Tu 0608 5.5 167	30 0005 2.7 82	15 F 0038 1.7 51									
1108 2.4 73	W 0713 5.3 162	0825 5.7 175									
1837 6.5 197	1142 3.5 108	1236 4.1 126									
2352 2.9 89	● O 1842 6.0 183	1827 6.1 185									
	31 0104 2.5 77										
	Th 0812 5.2 158										
	1221 4.1 125										
	1853 5.8 178										

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Shantou, China, 2008

Times and Heights of High and Low Waters

April				May				June				
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm	
1 Tu 0222	2.0	62	16 W 0355	2.1	64	1 Th 0238	2.1	65	16 Su 0415	3.0	92	
1044	5.5	167	W 1157	5.8	178	1034	5.6	172	F 1142	5.4	166	
1508	4.7	144	1646	3.6	110	1533	3.8	115	1658	2.5	75	
1846	5.1	154	2345	4.8	145	2211	4.6	141				
2 W 0334	2.0	61	17 Th 0458	2.3	71	2 F 0339	2.4	73	17 Sa 0044	5.3	162	
1151	5.6	170	1247	5.7	174	1123	5.6	170	507	3.4	104	
1624	4.4	133	1732	3.1	96	1621	3.2	99	1213	5.3	161	
2002	4.9	148				2348	5.1	155	1739	2.1	65	
3 Th 0436	2.0	60	18 F 0059	5.2	157	3 Sa 0434	2.7	83	18 Su 0133	5.8	176	
1240	5.6	172	0548	2.7	81	1201	5.5	169	0551	3.8	117	
1710	3.9	119	1324	5.5	169	1702	2.7	82	1240	5.2	160	
2356	4.8	146	1806	2.8	84				1812	1.9	58	
4 F 0524	2.1	63	19 Sa 0150	5.6	170	4 Su 0051	5.7	174	19 M 0212	6.2	189	
1314	5.7	173	0624	3.1	93	0521	3.2	97	0630	4.2	129	
1745	3.4	105	1349	5.5	167	1239	5.5	169	1024	5.2	160	
			1840	2.4	74	1744	2.1	65	1847	1.7	53	
5 Sa 0109	5.2	160	20 Su 0229	5.9	181	5 M 0145	6.3	193	20 Tu 0250	6.6	200	
0604	2.3	70	0656	3.4	105	0606	3.7	112	0706	4.6	139	
1346	5.7	173	1406	5.4	166	1259	5.5	168	1050	5.4	164	
1815	3.0	91	O 1908	2.2	67	● 1828	1.6	50	1920	1.6	50	
6 Su 0200	5.8	177	21 M 0300	6.3	193	6 Tu 0236	6.9	210	21 W 0322	6.8	208	
0644	2.7	82	0726	3.9	118	0652	4.2	128	0742	4.8	147	
1408	5.6	171	1429	5.4	166	1100	5.7	174	1114	5.5	168	
● 1851	2.5	75	1941	2.0	61	1914	1.1	35	1954	1.5	47	
7 M 0247	6.3	193	22 Tu 0334	6.6	202	7 W 0326	7.3	221	22 Th 0357	7.0	212	
0718	3.2	97	0754	4.2	129	0737	4.6	141	0814	5.0	151	
1436	5.7	173	1443	5.6	170	1142	6.0	183	1148	5.6	170	
1932	2.0	60	2011	1.9	57	2006	0.8	24	2032	1.5	46	
8 Tu 0334	6.8	206	23 W 0404	6.9	209	8 Th 0419	7.5	228	23 F 0431	7.0	212	
0758	3.7	112	0825	4.5	138	0827	4.9	150	0849	5.0	153	
1456	5.7	175	1456	5.6	172	1233	6.2	188	1222	5.6	171	
2015	1.5	46	2048	1.8	54	2102	0.6	18	2108	1.5	45	
9 W 0421	7.1	215	24 Th 0439	7.0	212	9 F 0514	7.5	228	24 M 0506	6.9	209	
0842	4.1	125	0855	4.7	144	0923	5.0	153	0921	4.9	150	
1528	5.8	178	1526	5.7	173	1331	6.2	188	1308	5.6	170	
2107	1.1	35	2124	1.7	53	2158	0.6	18	2150	1.4	43	
10 Th 0513	7.2	219	25 F 0512	6.9	210	10 Sa 0609	7.3	223	25 Su 0544	6.6	202	
0930	4.5	136	0930	4.8	147	1021	5.0	151	1000	4.8	146	
1420	6.0	183	1540	5.7	175	1436	6.0	182	1358	5.4	166	
2204	1.0	29	2203	1.7	52	2258	0.8	24	2232	1.4	43	
11 F 0609	7.1	217	26 Sa 0551	6.7	205	11 Su 0706	7.0	213	26 M 0621	6.4	195	
1021	4.7	144	1006	4.9	148	1133	4.8	145	1048	4.6	139	
1525	6.1	186	1555	5.7	173	1548	5.6	171	1454	5.2	159	
2305	1.0	29	2250	1.7	53	2359	1.1	35	2314	1.5	45	
12 Sa 0711	6.8	208	27 Su 0633	6.4	195	12 M 0805	6.6	201	27 Tu 0704	6.2	188	
1125	4.9	148	1055	4.8	147	1252	4.4	133	1142	4.3	131	
1623	5.9	181	1624	5.5	169	1706	5.2	158	1605	4.9	150	
			2340	1.8	54	●			2147	4.7	144	
13 Su 0012	1.1	35	28 M 0723	6.1	185	13 Tu 0101	1.6	49	28 W 0003	1.6	49	
0820	6.5	197	1154	4.7	144	0905	6.2	189	0751	5.9	181	
1245	4.8	147	1645	5.3	163	1406	3.9	119	1246	3.9	120	
● 1717	5.6	172	O			1829	4.8	145	● 1832	4.7	142	
14 M 0123	1.4	44	29 Tu 0036	1.8	56	14 W 0207	2.1	65	29 Th 0054	1.9	58	
0940	6.2	188	0826	5.8	178	1004	5.9	179	0841	5.8	176	
1418	4.6	139	1311	4.6	139	1515	3.4	104	1351	3.5	107	
1820	5.2	159	1727	5.0	153	2158	4.6	141	2034	4.6	140	
15 Tu 0240	1.8	55	30 W 0135	2.0	60	15 Th 0313	2.6	79	30 F 0151	2.3	70	
1054	6.0	183	0935	5.7	174	1057	5.6	171	0930	5.6	171	
1543	4.1	126	1429	4.2	129	1611	2.9	88	1449	3.0	91	
1938	4.9	148	1831	4.7	144	2339	4.9	149	2206	4.8	147	
13	28	0723	6.1	185	14	2027	2.1	65	31	0252	2.8	85
Su	M	1154	4.7	144	W	1004	5.9	179	Sa	1010	5.5	167
1245	4.8	147	1645	5.3	163	1515	3.4	104	1543	2.4	74	
● 1717	5.6	172	O			2158	4.6	141	2329	5.3	163	
14	29	0036	1.8	56	14	0207	2.1	65	13	0229	3.0	90
M	Tu	0826	5.8	178	W	1004	5.9	179	F	0944	5.4	165
1418	4.6	139	1311	4.6	139	1515	3.4	104	1531	2.3	69	
1820	5.2	159	1727	5.0	153	2158	4.6	141	2308	5.0	151	
15	30	0135	2.0	60	15	0313	2.6	79	30	0017	5.3	163
Tu	W	0935	5.7	174	Th	1057	5.6	171	M	0430	4.0	121
1543	4.1	126	1429	4.2	129	1611	2.9	88	1617	1.2	36	
1938	4.9	148	1831	4.7	144	2339	4.9	149				
16	31	0252	2.8	85	16	0115	5.8	177	28	0116	2.6	80
Su	M	1010	5.5	167	W	0528	4.3	132	Sa	0828	5.5	167
1245	4.8	147	1543	2.4	74	1620	4.6	140	1410	2.2	67	
● 1717	5.6	172	O			1309	2.7	82	2151	5.1	156	
14	29	0036	1.8	56	14	0329	3.5	106	29	0216	3.3	100
M	Tu	0826	5.8	178	W	1012	5.2	158	Su	0843	5.4	164
1418	4.6	139	1311	4.6	139	1622	1.9	59	1512	1.7	52	
1820	5.2	159	1727	5.0	153	2034	4.6	140	2314	5.5	169	
15	30	0135	2.0	60	15	0313	2.6	79	M	0617	1.2	36
Tu	W	0935	5.7	174	Th	1057	5.6	171	1617	1.2	36	
1543	4.1	126	1429	4.2	129	1611	2.9	88				
1938	4.9	148	1831	4.7	144	2339	4.9	149	1708	1.7	51	

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Shantou, China, 2008

Times and Heights of High and Low Waters

July				August				September								
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height					
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm					
1 Tu	0035	6.0	184	16 W	0155	6.1	186	1 F	0245	6.8	207					
0436	4.4	135	W 0615	4.7	143	F 0650	4.6	139	Sa 0704	4.4	134					
0839	5.6	172	0925	5.2	158	1018	5.7	173	16 M	0252	6.4	196				
1720	0.7	21	1817	1.2	38	● 1914	0.3	9	Sa 0744	3.4	103					
2 W	0145	6.6	200	17 Th	0240	6.4	194	1028	5.2	160	M 1507	5.9	179			
0544	4.8	145	0702	4.7	142	1915	1.2	37	1915	2.0	60	Sa 2009	2.0	60		
0926	5.8	177	1009	5.2	159	● 1914	0.3	9	1 M	0328	6.4	196				
1820	0.3	10	1901	1.1	33	2001	0.5	14	Tu 0744	3.4	103					
3 Th	0246	6.9	211	18 F	0318	6.5	199	1915	1.2	37	1442	6.3	192			
0648	4.9	149	0737	4.6	124	0408	6.8	206	2009	2.0	60	1933	2.7	83		
1020	5.9	180	1051	5.3	161	0815	3.9	118	16 W	0242	6.4	195				
● 1916	0.1	3	○ 1942	1.0	30	1203	5.4	166	0704	3.5	107					
4 F	0339	7.1	217	19 Sa	0354	6.6	200	2046	0.8	23	1442	6.3	192			
0742	4.8	146	0806	4.5	137	18 M	0347	6.3	192	2002	3.2	97				
1115	5.9	179	1125	5.2	160	0444	6.5	199	1714	3.0	90					
2009	0.1	2	2017	1.0	29	0856	3.4	105	18 Th	0318	6.3	193				
5 Sa	0425	7.2	218	20 Su	0423	6.4	196	19 M	0405	6.2	188					
0831	4.5	138	0835	4.3	132	0511	6.3	192	20 Tu	0437	6.3	191				
1209	5.7	175	1202	5.2	158	0940	3.1	93	19 F	0431	6.4	196				
2059	0.2	6	2052	1.0	31	1657	5.5	169	0853	2.4	74					
6 Su	0508	7.0	213	21 M	0450	6.3	192	2202	1.7	51	1647	7.3	221			
0920	4.1	126	0901	4.1	124	0541	6.2	188	2121	2.3	71	2115	4.1	126		
1304	5.5	168	1233	5.0	153	1020	2.7	82	2225	4.0	121					
2148	0.5	16	2123	1.2	36	1746	5.6	172	2200	4.5	138					
7 M	0550	6.7	205	21 W	0450	6.3	192	2241	2.2	68	2255	4.9	150			
1007	3.7	113	22 Tu	0512	6.1	187	21 M	0446	6.0	184	2104	6.6	202			
1401	5.2	157	0932	3.7	114	0541	6.2	188	0916	2.2	67	1836	7.1	216		
2235	1.0	29	1636	5.0	153	1020	2.7	82	1833	6.4	196	2255	4.9	150		
8 Tu	0625	6.4	195	23 W	0537	6.0	183	1746	5.6	172	2113	6.7	203			
1100	3.2	99	1006	3.3	101	1013	2.4	72	2240	3.2	97	2113	6.7	203		
1800	5.1	154	1721	5.1	155	1108	2.4	72	2344	4.8	145					
2315	1.5	45	2232	1.7	53	1834	5.6	172	2359	5.2	159					
9 W	0659	6.1	186	24 Th	0601	5.9	180	2316	2.8	86	0445	6.7	203			
1153	2.8	86	1050	2.9	88	0604	6.0	183	1153	2.2	68	1148	1.6	50		
1859	5.0	153	1810	5.2	159	1108	2.4	72	1919	6.2	190	1946	6.8	208		
2359	2.0	62	2308	2.1	65	1834	5.6	172	2344	4.8	145	2359	5.2	159		
10 Th	0734	5.8	177	25 F	0631	5.8	177	2358	3.4	104	0531	6.2	189			
1250	2.5	75	1139	2.5	75	0643	5.7	175	2002	1.7	51	0445	6.7	203		
1959	5.0	151	1908	5.3	163	1209	2.0	60	1351	2.4	72	1146	1.6	50		
●			2355	2.7	81	1853	6.2	190	2200	5.9	179	1416	1.8	54		
11 F	0047	2.7	82	26 Sa	0655	5.7	173	2002	4.3	130	0041	5.1	155			
0756	5.5	169	1236	2.0	62	0650	5.6	170	0602	6.0	184	0556	5.9	179		
1347	2.2	66	2014	5.4	165	1349	2.0	60	1321	1.5	45	1351	2.4	72		
2106	5.0	151	●			2128	5.4	164	2129	6.0	184	2200	5.9	179		
12 Sa	0136	3.3	102	27 Su	0047	3.3	100	1439	1.3	39	0206	5.3	161			
0814	5.3	162	0712	5.6	170	0137	4.5	137	0620	5.7	173	0705	5.9	179		
1444	1.9	58	1343	1.6	50	0654	5.4	166	1459	2.3	71	1537	1.9	58		
2225	5.1	154	2138	5.5	168	1450	1.9	59	2329	6.0	182	2354	6.7	205		
13 Su	0237	3.9	120	28 M	0150	3.9	120	2305	5.5	167	0714	5.5	167			
0807	5.2	159	0708	5.6	171	0137	4.5	137	0628	6.0	182	0816	5.6	171		
1542	1.7	53	1456	1.2	38	0654	5.4	166	1439	1.3	39	1644	2.0	62		
2349	5.3	163	2312	5.8	176	1450	1.9	59	2306	6.2	188	2423	4.7	144		
14 M	0349	4.4	134	29 Tu	0305	4.5	137	1657	1.7	51	0117	6.3	193			
0811	5.2	157	0732	5.7	173	0027	5.7	175	1558	1.1	35	0542	4.6	139		
1637	1.6	48	1608	0.9	27	0445	4.9	150	0711	5.8	178	0919	5.3	162		
15 Tu	0059	5.7	174	30 W	0039	6.1	187	0800	5.2	160	1751	2.0	60	1325	5.9	181
0510	4.6	141	0435	4.8	146	0213	6.3	192	1558	1.0	31	1817	2.6	78		
0844	5.2	157	0821	5.7	174	0553	4.8	146	0130	6.6	202	0201	6.6	200		
1730	1.4	44	1719	0.6	17	0858	5.2	159	0544	4.6	139	0632	3.3	102		
●			1752	1.4	44	1752	1.4	44	0918	5.6	171	1406	6.4	195		
15 Tu	0059	5.7	174	31 Th	0149	6.6	200	1806	1.0	31	1828	2.1	63	1853	3.0	91
0510	4.6	141	0551	4.8	146	0213	6.3	192	0153	6.5	197	0228	6.5	197		
0844	5.2	157	0920	5.7	174	0632	4.6	141	0611	4.2	129	0702	3.0	92		
1730	1.4	44	1820	0.3	10	0950	5.2	160	1314	5.5	167	1446	6.8	208		
●			1838	1.2	38	1015	5.5	169	1828	2.1	63	1922	3.5	107		
31 Th	0149	6.6	200	30 W	0039	6.1	187	1855	1.2	37	1900	2.3	71			
0551	4.8	146	0435	4.8	146	0213	6.3	192	0258	6.6	202					
0920	5.7	174	0821	5.7	174	0632	4.6	141	0708	3.8	115					
1820	0.3	10	1719	0.6	17	0950	5.2	160	1424	5.5	168					
●			1936	1.5	47	1015	5.5	169	1936	1.5	47					

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Shantou, China, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
1 W 0245 6.5 198	16 0150 6.7 205	1 Sa 0217 6.9 209	16 Su 0032 7.3 224	1 M 0149 6.6 202	16 Tu 0056 6.9 209						
0738 2.7 83	Th 0654 2.5 75	0810 2.3 70	0808 1.2 38	0832 2.1 64	0900 1.0 30						
1521 7.1 217	1455 7.8 238	1601 8.0 245	1620 8.4 257	1620 7.7 236	1705 7.8 239						
1951 3.9 120	1912 4.5 138	2003 5.6 171	2006 5.8 178	2016 5.6 171	2105 5.2 158						
2 Th 0301 6.6 200	17 0207 6.8 208	2 Su 0241 7.0 212	17 M 0131 7.3 223	2 Tu 0237 6.6 200	17 W 0200 6.5 197						
0810 2.5 76	F 0739 2.1 63	0852 2.3 71	0905 1.2 38	0909 2.1 65	0951 1.3 41						
1556 7.4 225	1542 8.1 247	1636 7.9 242	1711 8.2 251	1654 7.5 230	1752 7.5 230						
2021 4.4 134	1952 5.0 151	2037 5.7 173	2104 5.8 177	2058 5.4 166	2209 4.8 146						
3 F 0322 6.6 202	18 0233 7.0 214	3 M 0305 6.9 210	18 Tu 0235 7.1 216	3 W 0315 6.4 195	18 Th 0415 6.0 182						
0850 2.4 75	Sa 0823 1.8 55	0933 2.4 73	1002 1.4 44	0950 2.2 66	1044 1.8 56						
1632 7.5 228	1630 8.1 248	1711 7.7 236	1806 7.9 240	1730 7.3 222	1837 7.2 219						
2052 4.8 145	2036 5.3 163	2120 5.7 174	2219 5.6 172	2147 5.2 160	2326 4.3 132						
4 Sa 0342 6.7 205	19 0238 7.2 218	4 Tu 0339 6.8 207	19 W 0342 6.7 204	4 Th 0353 6.1 187	19 F 0550 5.7 174						
0929 2.4 72	Su 0919 1.6 49	1014 2.5 75	1100 1.8 56	1029 2.3 70	1134 2.4 73						
1707 7.5 228	1720 8.0 244	1752 7.4 226	1902 7.5 229	1807 7.1 216	1919 6.8 208						
2129 5.1 154	2124 5.6 170	2209 5.6 172	2345 5.3 162	2248 5.0 153	O						
5 Su 0359 6.7 205	20 0316 7.2 219	5 W 0408 6.6 200	20 Th 0453 6.2 189	5 F 0445 5.8 178	20 O 0039 3.8 117						
1009 2.4 72	M 1018 1.6 48	1104 2.6 78	1201 2.3 71	1112 2.5 76	0719 5.4 166						
1745 7.3 223	1819 7.7 236	1840 7.1 215	2002 7.2 218	1850 6.9 210	1226 3.1 93						
2204 5.3 161	2229 5.7 174	2312 5.5 169	O	2358 4.7 143	2000 6.6 200						
6 M 0427 6.6 202	21 0404 7.0 213	6 Th 0444 6.2 190	21 M 0113 4.8 146	6 Sa 0552 5.5 168	21 Su 0149 3.3 100						
1058 2.5 75	Tu 1123 1.8 54	1155 2.7 82	0626 5.7 173	1200 2.8 85	0850 5.4 164						
1828 7.0 213	1926 7.4 225	1939 6.8 207	1305 2.9 88	1938 6.7 205	1323 3.7 112						
2253 5.4 166	O 2351 5.7 173	O	2101 6.9 210	O	2042 6.3 193						
7 Tu 0447 6.5 198	22 0457 6.6 201	7 F 0039 5.3 162	22 M 0229 4.2 127	7 Su 0110 4.2 129	22 W 0252 2.8 86						
1149 2.6 79	W 1233 2.0 62	0531 5.8 178	0855 5.5 167	0736 5.3 163	1020 5.5 169						
1923 6.7 203	2044 7.1 217	1251 2.9 88	1411 3.4 104	1253 3.2 97	1423 4.3 130						
O 2352 5.5 169	O	2043 6.7 203	2156 6.7 204	2027 6.6 202	2113 6.2 188						
8 W 0512 6.2 190	23 0130 5.4 164	8 Sa 0207 5.0 151	23 M 0327 3.6 109	8 M 0210 3.7 113	23 Tu 0348 2.4 74						
1249 2.7 82	0558 6.1 186	0646 5.5 167	1047 5.7 175	0917 5.5 167	1139 5.9 180						
2042 6.4 194	Th 1345 2.4 74	1352 3.1 95	1515 3.9 119	1352 3.7 112	1527 4.8 145						
O	2157 7.0 212	2143 6.7 203	2244 6.6 200	2111 6.6 200	2118 6.1 185						
9 Th 0116 5.5 168	24 0258 4.9 149	9 Su 0307 4.4 135	24 M 0415 3.1 93	9 Tu 0305 3.1 95	24 W 0437 2.1 65						
0545 5.9 180	F 0717 5.7 173	0946 5.5 167	1158 6.2 189	1044 6.0 183	1240 6.4 194						
1354 2.8 84	1458 2.8 85	1454 3.4 103	1609 4.3 132	1454 4.2 127	1630 5.1 155						
2205 6.3 193	2300 6.8 208	2235 6.7 204	2325 6.4 196	2151 6.5 199	2114 6.1 186						
10 F 0300 5.3 161	25 0400 4.3 130	10 M 0351 3.8 117	25 Tu 0458 2.7 81	10 W 0357 2.5 76	25 Th 0520 1.9 59						
0644 5.6 171	Sa 1052 5.6 172	1115 6.0 182	1252 6.7 205	1154 6.7 203	1328 6.8 206						
1502 2.8 85	1603 3.1 95	1550 3.7 112	1654 4.7 144	1553 4.7 142	1725 5.3 161						
2308 6.4 196	2351 6.8 206	2316 6.7 204	2348 6.4 196	2155 6.5 199	2136 6.1 186						
11 Sa 0404 4.9 148	26 0446 3.7 113	11 Tu 0429 3.3 100	26 W 0537 2.4 72	11 Th 0447 1.9 58	26 F 0600 1.8 56						
0809 5.4 165	Su 1214 6.1 185	1216 6.7 203	1334 7.2 218	1254 7.3 222	1409 7.1 216						
1602 2.8 85	1654 3.4 105	1637 4.1 124	1734 5.1 155	1646 5.1 154	1809 5.4 165						
2357 6.6 200	O	2351 6.8 206	O	2138 6.8 206	2208 6.1 187						
12 Su 0445 4.4 133	27 0033 6.7 203	12 W 0505 2.7 82	27 Th 0009 6.4 196	12 F 0538 1.4 43	27 W 0639 1.7 53						
1147 5.7 173	0524 3.2 99	1307 7.4 225	0609 2.2 66	1350 7.8 238	1447 7.3 221						
1650 2.9 88	1306 6.6 201	1717 4.5 138	1409 7.5 230	1734 5.4 164	1845 5.4 165						
O	1735 3.8 117	O	1808 5.4 164	2216 7.0 213	2243 6.1 187						
13 M 0037 6.6 202	28 0057 6.6 202	13 Th 0027 6.8 206	28 F 0035 6.5 199	13 F 0626 1.0 32	28 W 0714 1.7 53						
0515 3.9 118	0558 2.9 88	0548 2.2 66	0645 2.1 63	1442 8.1 246	1518 7.3 222						
1247 6.2 189	1349 7.1 216	1355 8.0 243	1444 7.8 238	1821 5.6 170	1915 5.3 163						
1730 3.1 96	1804 4.3 131	O 1755 5.0 152	O 1840 5.6 170	O 2305 7.1 217	2317 6.1 187						
14 Tu 0103 6.7 203	29 0122 6.6 201	14 F 0039 6.9 211	29 Sa 0037 6.6 201	13 0626 1.0 32	28 O 0825 1.7 53						
0546 3.4 103	0632 2.6 80	0631 1.7 53	0717 2.1 63	1442 8.1 246	1550 7.3 221						
1335 6.8 207	1423 7.4 227	1444 8.4 255	1515 7.9 241	1821 5.6 170	1943 5.2 159						
1804 3.5 108	O 1838 4.7 144	1835 5.4 164	1911 5.7 174	2359 7.1 216	2357 6.0 184						
15 W 0132 6.7 204	30 0141 6.7 205	15 T 0716 1.4 43	30 Su 0131 6.7 203	15 0808 0.8 24	30 Tu 0825 1.7 53						
0617 3.0 90	0701 2.4 74	1531 8.5 258	0755 2.1 63	1618 8.1 246	1617 7.1 216						
1412 7.3 224	1455 7.8 237	1918 5.7 173	1549 7.9 241	2003 5.4 166	2015 5.0 152						
O 1840 4.0 122	1902 5.1 156	O	1941 5.7 174	O	O						
31 F 0154 6.8 208	31 F 0738 2.3 71	O	O	O	O						
1529 8.0 243	1529 8.0 243	O	O	O	O						
1935 5.4 164	1935 5.4 164	O	O	O	O						

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# PengHu (Ma-Kung Kang), Pescadores Islands, 2008

Times and Heights of High and Low Waters

January				February				March									
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height						
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm						
1 Tu 0524 1129 1749	2.0 -2.4 2.6	62 -73 80	16 W 0438 1025 1700 2311	3.0 -2.6 3.5 -3.2	90 -78 107 -98	1 F 0032 0700 1234 1823	-3.0 1.6 -1.0 2.2	-90 48 32 67	16 Sa 0008 0707 1233 1836	-3.5 2.3 -0.7 2.9	-106 69 22 89	1 Sa 0607 1135 1714	1.6 -0.8 2.2	50 -23 67	16 Su 0004 0659 1236 1828	-3.4 2.3 -0.6 2.7	-104 71 83
2 W 0029 0637 1230 1842	-2.7 1.8 -1.9 2.5	-83 55 -57 76	17 Th 0552 1129 1756	2.6 -1.9 3.3	79 -58 102	2 Sa 0134 0816 1344 1928	-3.1 1.7 -0.8 2.2	-94 52 25 68	17 Su 0131 0832 1359 1957	-3.6 2.5 -0.7 3.0	-110 75 20 91	2 Su 0037 0726 1255 1829	-2.9 1.7 -0.6 2.1	-87 51 18 64	17 M 0126 0820 1400 1954	-3.4 2.6 -0.8 2.9	-104 78 87
3 Th 0130 0750 1332 1935	-3.0 1.8 -1.5 2.4	-91 55 -46 74	18 F 0023 0717 1243 1900	-3.5 2.5 -1.3 3.2	-106 75 41 99	3 Su 0232 0921 1445 2032	-3.3 2.0 -0.9 2.4	-100 62 26 74	18 M 0247 0942 1511 2109	-3.8 2.8 -0.9 3.3	-117 86 26 100	3 M 0144 0838 1406 1954	-3.0 2.0 -0.7 2.3	-91 61 21 71	18 Tu 0240 0924 1510 2106	-3.5 3.0 -1.3 3.2	-107 90 99
4 F 0226 0856 1430 2026	-3.3 2.0 -1.3 2.5	-100 61 -39 76	19 Sa 0137 0838 1401 2008	-3.8 2.6 -1.0 3.3	-116 79 31 100	4 M 0325 1011 1537 2128	-3.5 2.5 -1.0 2.8	-108 76 31 86	19 Tu 0352 1036 1609 2209	-4.0 3.2 -1.2 3.6	-123 97 36 111	4 Tu 0244 0933 1504 2101	-3.2 2.5 -1.0 2.8	-99 77 31 86	19 W 0343 1013 1607 2203	-3.6 3.3 -1.8 3.6	-110 101 111
5 Sa 0317 0952 1523 2113	-3.6 2.3 -1.2 2.7	-109 71 -37 82	20 Su 0249 0948 1510 2113	-4.1 2.9 -0.9 3.4	-126 88 105	5 Tu 0412 1051 1622 2215	-3.8 2.9 -1.2 3.3	-117 89 38 100	20 W 0447 1120 1658 2259	-4.1 3.5 -1.6 3.9	-126 106 48 120	5 W 0335 1015 1550 2154	-3.6 3.1 -1.4 3.4	-109 93 105 105	20 Th 0435 1053 1654 2251	-3.6 3.5 -2.2 3.9	-109 108 120
6 Su 0402 1038 1609 2155	-3.8 2.6 -1.2 2.9	-117 80 -37 89	21 M 0354 1047 1610 2211	-4.4 3.2 -1.0 3.7	-135 97 113	6 W 0453 1127 1700 2258	-4.1 3.3 -1.5 3.7	-124 101 45 114	21 Th 0533 1157 1741 2344	-4.1 3.6 -2.0 4.1	-125 110 60 125	6 Th 0419 1052 1629 2240	-3.8 3.5 -1.8 4.0	-117 108 123 123	21 F 0518 1128 1733 2334	-3.4 3.7 -2.7 4.0	-104 112 123
7 M 0443 1118 1649 2235	-4.1 2.9 -1.3 3.2	-124 89 -39 98	22 Tu 0451 1137 1701 2303	-4.6 3.4 -1.1 3.9	-141 104 120	7 Th 0529 1200 1732 2338	-4.2 3.6 -1.8 4.1	-129 110 54 125	22 F 0610 1231 1819 2338	-3.9 3.7 -2.4 4.1	-119 112 72 136	7 O 0457 1126 1704 2322	-3.9 3.9 -2.3 4.5	-120 120 71 136	22 O 0551 1158 1806 2334	-3.2 3.7 -3.0 4.0	-97 113 91
8 Tu 0520 1154 1725 ●	-4.2 3.2 -1.3 3.5	-129 97 -41 106	23 W 0541 1220 1747 2351	-4.7 3.5 -1.4 4.0	-142 108 123	8 F 0600 1232 1803	-4.3 3.9 -2.1 64	-130 118 64	23 Sa 0026 0641 1302 1855	4.1 -3.7 3.7 -2.7	124 112 112 83	8 Sa 0530 1158 1736 1810	-3.9 4.2 -2.8 -3.2	-118 128 85	23 Su 0012 0618 1227 1837	4.0 -2.9 -3.7 -3.3	-122 88 101
9 W 0554 1228 1757 2350	-4.3 3.4 -1.5 3.7	-132 103 -45 113	24 Th 0625 1259 1830	-4.6 3.6 -1.8 1.8	-139 109 -54	9 Sa 0018 0629 1304 1835	4.3 -4.2 4.0 -2.5	132 132 123 -75	24 Su 0106 0710 1332 1931	3.9 -3.3 3.6 -3.0	119 102 92	9 O 0003 0601 1320 1810	4.7 -3.6 4.4 -3.2	142 110 99	24 M 0049 0643 1253 1906	3.8 -2.6 3.6 -3.5	-117 -80 108
10 Th 0623 1301 1827	-4.4 3.5 -1.6	-133 107 -50	25 F 0037 0703 1335 1913	4.0 -4.3 3.6 -2.1	122 122 -65	10 Su 0058 0659 1336 1911	4.4 -3.9 4.1 -2.9	134 120 -87	25 M 0145 0740 1401 2008	3.6 -3.0 3.5 -3.2	110 98 -98	10 M 0045 0633 1302 1848	4.6 -3.2 4.4 -3.6	141 110 -110	25 Tu 0125 0710 1318 1936	3.6 2.4 3.5 -3.7	-110 -73 112
11 F 0029 0652 1334	3.9 -4.4 3.6	118 -133 110	26 Sa 0121 0739 1411 1958	3.8 -4.0 3.5 -2.5	117 -123 75	11 M 0140 0734 1410 1953	4.2 -3.6 4.1 -3.2	129 -109 -97	26 Tu 0225 0813 1430 2049	3.2 -2.7 3.3 -3.3	98 -81 101 -100	11 Tu 0128 0708 1335 1930	4.4 -2.8 4.3 -3.9	133 -84 -118 -118	26 W 0201 0739 1343 2009	3.3 -2.1 3.4 -3.7	-101 -64 -112
12 Sa 0109 0723 1409	3.9 -4.3 3.7	119 -130 113	27 Su 0206 0816 1446 2045	3.5 -3.6 3.4 -2.7	107 -111 82	12 Tu 0227 0813 1448 2041	3.9 -3.1 4.0 -3.4	119 -93 103	27 W 0308 0850 1500 2134	2.8 -2.2 3.1 -3.2	85 -67 94 -98	12 M 0215 0748 1413 2020	3.9 -2.2 4.1 -3.9	120 -67 126 -119	27 Th 0240 0814 1412 2048	3.0 -1.8 3.2 -3.5	-90 -55 -98
13 Su 0153 0800 1445	3.8 -4.0 3.7	117 -123 114	28 M 0252 0855 1522 2136	3.1 -3.1 3.2 -2.8	93 -96 97 -86	13 W 0319 0859 1530 2138	3.4 -2.4 3.8 -3.5	105 -74 -106	28 Th 0356 0933 1535 2227	2.3 -1.7 2.8 -3.1	71 -51 85 -94	13 O 0310 0836 1457 2121	3.4 -1.6 3.8 -3.8	103 -49 115 -115	28 F 0323 0854 1447 2134	2.6 -1.4 2.9 -3.3	-79 -43 -101
14 M 0241 0842 1525	3.6 -3.7 3.7	111 -112 114	29 Tu 0342 0938 1600 2231	2.6 -2.6 2.9 -2.9	79 -79 89 -88	14 Th 0422 0954 1620 2247	2.9 -1.8 -1.0 -3.5	88 -54 -106	29 F 0454 1026 1618 2329	1.9 -1.1 2.5 -2.9	58 -35 75 -89	14 O 0416 0936 1552 2238	2.8 -1.0 3.3 -3.5	86 -32 102 -108	29 Sa 0415 0944 1531 2231	2.2 -1.0 2.6 -3.1	-67 -31 -93
15 Tu 0335 0930 1610	3.3 -3.2 3.6	102 -97 111	30 W 0438 1027 1640 2330	2.1 -2.0 2.7 -2.9	64 -61 81 -88	15 F 0539 1104 1721	2.5 -1.1 3.1	75 -34 96	30 Sa 0534 1100 1702	2.4 -0.7 2.9	74 -20 89	15 O 0521 1048 1628 2339	2.0 -0.7 2.3 -2.9	-60 -21 69	30 M 0635 1207 1745	1.9 -0.6 2.1	-59 -18 65
31 Th 0545 1126 1727	1.7 -1.4 2.4	53 -44 72															

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# PengHu (Ma-Kung Kang), Pescadores Islands, 2008

Times and Heights of High and Low Waters

April				May				June			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm		h m	ft	cm		h m	ft	cm	
1 Tu 0051	-2.9	-88		16 W 0219	-3.2	-98		1 Th 0103	-3.1	-93	
0746	2.2	67		0851	3.1	94		0244	-2.6	-79	
1322	-0.8	-25		1459	-2.0	-60		0749	3.0	90	
1916	2.3	71		2055	3.1	95		1337	-1.8	-55	
2 W 0156	-3.1	-94		17 Th 0320	-3.1	-95		16 F 0244	-2.4	-72	
0844	2.7	82		0940	3.3	102		0857	3.1	96	
1424	-1.3	-39		1554	-2.5	-77		1527	-3.1	-95	
2031	2.9	88		2151	3.5	106		2133	3.1	93	
3 Th 0251	-3.3	-101		18 F 0411	-3.0	-91		17 Sa 0336	-2.4	-72	
0930	3.2	99		1019	3.5	107		0940	3.2	99	
1513	-1.8	-56		1640	-3.0	-91		1614	-3.5	-108	
2129	3.5	108		2238	3.7	113		2222	3.2	99	
4 F 0338	-3.5	-106		19 Sa 0452	-2.7	-83		18 Su 0419	-2.1	-64	
1010	3.7	114		1053	3.6	109		1016	3.3	101	
1555	-2.5	-75		1717	-3.3	-102		1653	-3.8	-117	
2218	4.1	126		2320	3.8	115		2305	3.3	102	
5 Sa 0420	-3.4	-105		20 Su 0526	-2.5	-75		19 M 0426	-2.4	-74	
1047	4.1	126		1123	3.6	109		1045	4.4	133	
1633	-3.1	-93		1749	-3.6	-110		1647	-4.3	-132	
2304	4.5	138		2358	3.7	114		2336	4.3	132	
6 Su 0458	-3.2	-98		21 M 0554	-2.2	-68		20 Tu 0507	-2.0	-61	
1121	4.4	134		1151	3.6	109		1123	4.4	135	
1710	-3.6	-110		1817	-3.8	-116		1731	-4.7	-143	
● 2348	4.7	142									
7 M 0533	-2.8	-86		22 Tu 0033	3.6	111		21 W 0024	4.2	128	
1155	4.5	137		0620	-2.0	-62		0549	-1.6	-48	
1748	-4.0	-123		1216	3.5	108		1201	4.4	134	
				1844	-4.0	-121		1818	-4.8	-147	
8 Tu 0033	4.5	138		23 W 0108	3.5	106		22 Th 0053	3.3	100	
0608	-2.4	-72		0646	-1.9	-57		0626	-1.5	-47	
1229	4.5	137		1240	3.5	107		1211	3.4	104	
1829	-4.3	-132		1910	-4.0	-122		1850	-4.2	-129	
9 W 0119	4.2	128		24 Th 0143	3.3	100		21 F 0128	3.2	98	
0646	-1.9	-57		0715	-1.7	-52		0655	-1.5	-46	
1305	4.4	133		1306	3.4	104		1241	3.4	103	
1915	-4.4	-134		1939	-4.0	-121		1917	-4.2	-128	
10 Th 0210	3.7	114		25 F 0220	3.0	92		24 Sa 0203	3.1	94	
0730	-1.4	-44		0748	-1.5	-46		0723	-1.1	-33	
1346	4.1	124		1337	3.2	99		1329	4.0	121	
2010	-4.3	-130		2014	-3.8	-117		2009	-4.5	-138	
11 F 0307	3.2	99		26 Sa 0300	2.8	85		25 Su 0402	3.0	92	
0825	-1.0	-32		0827	-1.3	-39		0823	-1.0	-30	
1435	3.7	112		1415	3.0	92		1424	3.6	109	
2117	-4.0	-121		2056	-3.6	-110		2115	-4.2	-128	
12 Sa 0413	2.8	86		27 Su 0348	2.5	77		25 Tu 0241	3.0	91	
0936	-0.8	-23		0914	-1.1	-33		0804	-1.4	-43	
1537	3.2	97		1502	2.7	83		1357	3.1	96	
2236	-3.7	-112		2148	-3.3	-102		2028	-3.9	-119	
13 Su 0525	2.6	79		27 M 0502	2.9	87		26 W 0322	2.9	89	
1105	-0.7	-21		0955	-1.2	-36		0848	-1.4	-42	
1655	2.8	84		1645	2.7	83		1445	3.0	90	
● 2354	-3.4	-104		● 2330	-3.4	-105		2115	-3.7	-113	
14 M 0639	2.6	78		28 Tu 0444	2.4	73		26 Th 0512	3.0	92	
1232	-0.9	-28		1012	-1.0	-29		1142	-2.2	-68	
1822	2.6	79		1601	2.4	74		1736	2.4	73	
				● 2250	-3.1	-96		2355	-2.9	-87	
15 Tu 0109	-3.3	-100		29 W 0546	2.4	73		2254	-3.3	-102	
0751	2.8	84		1122	-1.0	-29		2254	-3.3	-102	
1351	-1.4	-42		1714	2.3	70		2014	-3.8	-117	
1945	2.8	85		2357	-3.1	-93		1923	2.8	84	
16 F 0210	3.7	114									
0730	-1.4	-44									
1346	4.1	124									
2010	-4.3	-130									
11 F 0307	3.2	99									
0825	-1.0	-32									
1435	3.7	112									
2117	-4.0	-121									
12 Sa 0413	2.8	86									
0936	-0.8	-23									
1537	3.2	97									
2236	-3.7	-112									
13 Su 0525	2.6	79									
1105	-0.7	-21									
1655	2.8	84									
● 2354	-3.4	-104									
14 M 0639	2.6	78									
1232	-0.9	-28									
1822	2.6	79									
15 Tu 0109	-3.3	-100									
0751	2.8	84									
1351	-1.4	-42									
1945	2.8	85									

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# PengHu (Ma-Kung Kang), Pescadores Islands, 2008

Times and Heights of High and Low Waters

July				August				September					
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height		
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm		
1 Tu 0245	-1.3	-39	16 W 0355	-1.1	-35	1 F 0436	-1.1	-34	1 M 0047	-1.6	-48		
0858	3.6	110	0945	2.8	85	1041	4.0	121	0007	3.8	117		
1526	-4.5	-137	1631	-4.0	-122	1716	-4.6	-140	0600	-2.6	-78		
2227	3.3	100	2308	2.8	86	2356	3.6	110	1208	4.3	131		
●			●			2344	3.5	107	1823	-3.6	-110		
2 W 0347	-1.1	-33	17 Th 0437	-1.3	-39	2 Sa 0525	-1.5	-45	2 Tu 0040	3.9	118		
0953	3.8	117	1026	3.1	94	1131	4.2	128	0638	-3.0	-90		
1625	-4.8	-146	1710	-4.1	-126	1802	-4.5	-138	1250	4.2	127		
2322	3.5	107	2343	3.1	94	○			1854	-3.3	-100		
●			○			●							
3 Th 0441	-1.0	-31	18 F 0514	-1.4	-43	3 Su 0035	3.7	114	3 W 0112	3.8	117		
1045	4.0	123	1104	3.4	103	0609	-1.9	-57	0716	-3.3	-100		
1721	-5.0	-151	1743	-4.2	-129	1218	4.3	130	1331	3.9	118		
●			○			1843	-4.3	-132	1925	-2.9	-89		
4 F 0011	3.6	110	19 Sa 0015	3.3	100	4 M 0112	3.8	115	4 Th 0142	3.7	113		
0531	-1.1	-34	0546	-1.6	-48	0653	-2.3	-70	0755	-3.5	-107		
1136	4.2	127	1141	3.6	110	1304	4.1	126	1413	3.5	106		
1812	-5.0	-151	1813	-4.2	-129	1920	-4.0	-123	1959	-2.6	-78		
●			●			2037	-3.7	-114	●				
5 Sa 0056	3.6	111	20 Su 0046	3.4	105	5 Tu 0148	3.8	115	5 F 0213	3.5	107		
0619	-1.3	-41	0615	-1.8	-54	0739	-2.7	-82	0836	-3.6	-109		
1225	4.2	127	1217	3.8	116	1349	3.8	117	1457	3.0	92		
1859	-4.8	-147	1839	-4.2	-128	1957	-3.6	-110	2037	-2.1	-65		
●			●			●			●				
6 Su 0139	3.6	110	21 M 0116	3.6	109	6 W 0223	3.7	112	6 Sa 0245	3.2	99		
0708	-1.7	-51	0643	-2.0	-61	0826	-3.0	-91	0921	-3.5	-106		
1314	4.0	123	1254	3.9	119	1436	3.4	104	1545	2.5	77		
1945	-4.5	-138	1905	-4.1	-126	2037	-3.1	-96	2121	-1.7	-51		
●			●			●			●				
7 M 0221	3.6	109	22 Tu 0146	3.7	113	7 Th 0300	3.5	106	7 F 0320	2.9	88		
0800	-2.0	-61	0715	-2.3	-70	0917	-3.1	-96	0810	-3.5	-107		
1405	3.7	114	1333	3.9	119	1526	2.9	88	1450	3.6	110		
2030	-4.1	-126	1937	-4.0	-121	2120	-2.6	-80	2028	-2.5	-75		
●			●			●			●				
8 Tu 0303	3.5	107	23 W 0219	3.8	115	8 F 0338	3.2	97	8 M 0402	2.5	77		
0857	-2.3	-71	0753	-2.6	-79	1012	-3.2	-97	0901	-3.6	-109		
1459	3.3	100	1416	3.7	114	1621	2.4	72	1546	3.1	95		
2117	-3.6	-111	2014	-3.7	-112	2209	-2.0	-62	2118	-1.8	-56		
●			●			●			●				
9 W 0346	3.3	102	24 Th 0255	3.8	116	9 Sa 0420	2.9	87	9 M 0457	2.2	66		
0957	-2.6	-79	0837	-2.9	-87	1110	-3.1	-96	1003	-3.5	-108		
1556	2.8	85	1505	3.5	106	1726	1.9	59	1657	2.6	79		
2208	-3.1	-93	2057	-3.2	-98	●	2307	-1.5	-45	●	2220	-1.2	-36
●			●			●			●				
10 Th 0432	3.1	96	25 F 0335	3.7	114	10 Su 0507	2.5	76	10 W 0441	3.2	99		
1100	-2.8	-85	0929	-3.1	-94	1211	-3.1	-94	1120	-3.4	-105		
1700	2.3	71	1601	3.1	94	1839	1.7	51	1823	2.3	70		
●	2304	-2.5	-75	2147	-2.6	-80	●	1957	1.7	52	2343	-0.7	-21
●			●			●			●				
11 F 0521	2.9	87	26 Sa 0421	3.6	109	11 M 0015	-1.0	-31	12 W 0553	3.0	90		
1203	-3.0	-90	1029	-3.3	-100	0604	2.2	68	1246	-3.5	-106		
1811	2.0	60	Sa 1709	2.7	82	1314	-3.1	-94	1952	2.4	72		
●	2246	-1.9	-59	●	1957	1.7	52	●	2115	2.4	72		
●			●			●			●				
12 Sa 0005	-1.9	-58	27 Su 0515	3.4	103	12 Tu 0125	-0.8	-25	12 W 0118	-0.6	-17		
0614	2.6	80	1137	-3.4	-105	0712	2.1	65	0718	2.9	89		
1305	-3.1	-96	1832	2.4	73	1415	-3.2	-98	1408	-3.7	-112		
1926	1.9	57	2357	-1.3	-40	2107	2.0	60	2108	2.7	83		
●			●			●			●				
13 Su 0109	-1.5	-45	28 M 0618	3.2	97	13 W 0229	-0.8	-25	13 Th 0237	-0.8	-23		
0710	2.5	75	1254	-3.6	-111	0820	2.3	70	0837	3.2	97		
1405	-3.3	-102	1959	2.4	74	1511	-3.4	-104	1518	-3.9	-119		
2038	2.0	61	●			2159	2.4	72	2206	3.1	96		
●			●			●			●				
14 M 0211	-1.2	-37	29 Tu 0119	-0.9	-28	14 Th 0323	-1.0	-30	14 F 0340	-1.1	-35		
0807	2.4	74	0729	3.1	96	0918	2.7	81	0942	3.6	111		
1459	-3.6	-109	1411	-3.9	-120	1559	-3.6	-111	1617	-4.0	-123		
2139	2.3	69	2117	2.7	83	2239	2.8	85	2253	3.5	106		
●			●			●			●				
15 Tu 0306	-1.1	-34	30 W 0237	-0.8	-24	15 F 0409	-1.3	-39	15 Sa 0433	-1.6	-49		
0859	2.6	78	0841	3.3	102	1006	3.1	95	1036	4.0	123		
1548	-3.8	-116	1521	-4.3	-130	1640	-3.8	-117	1707	-4.0	-123		
2228	2.6	78	2220	3.1	94	2313	3.1	96	2332	3.7	113		
●			●			●			●				
16 Th 0341	-0.9	-27	31 Th 0945	-0.9	-27	16 Sa 0519	-2.1	-63	16 Su 1124	4.3	130		
0945	3.6	111	1623	-4.5	-137	1748	-3.9	-118	●	2312	3.4	103	
●			●			●			●				

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# PengHu (Ma-Kung Kang), Pescadores Islands, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 W 0007	3.8	116	16 Th 0528	-4.1	-124	1 Sa 0028	3.5	107	1 M 0021	4.3	131
0623	-3.6	-109	1213	4.4	135	0702	-4.2	-128	0645	-4.8	-147
1235	4.0	122	1747	-2.2	-68	1335	3.3	101	1344	3.6	111
1830	-2.5	-77				1905	-1.7	-51	1859	-1.1	-33
2 Th 0035	3.8	115	17 F 0005	4.5	136	2 Su 0056	3.4	104	17 M 0106	4.1	124
0654	-3.8	-116	0606	-4.4	-133	0732	-4.2	-127	0740	-4.7	-142
1314	3.7	114	1258	4.2	128	1412	3.1	94	1437	3.4	104
1858	-2.3	-69	1824	-1.8	-55	1938	-1.5	-47	1955	-1.0	-31
3 F 0103	3.7	112	18 Sa 0041	4.4	133	3 M 0127	3.2	99	18 Tu 0159	3.8	115
0726	-3.9	-119	0649	-4.5	-136	0805	-4.0	-122	0841	-4.4	-135
1352	3.4	105	1346	3.8	117	1452	2.9	87	1532	3.2	97
1929	-2.0	-62	1906	-1.4	-43	2016	-1.4	-43	2102	-1.1	-33
4 Sa 0130	3.5	107	19 M 0121	4.1	126	4 Tu 0203	3.0	92	19 W 0300	3.3	102
0800	-3.9	-119	0739	-4.4	-133	0845	-3.8	-115	0947	-4.0	-122
1432	3.1	94	1440	3.4	103	1536	2.6	80	1629	3.1	93
2004	-1.8	-54	1956	-1.1	-33	2101	-1.2	-38	2218	-1.3	-40
5 Su 0159	3.3	100	20 M 0207	3.8	116	5 W 0247	2.7	83	20 Th 0411	3.0	90
0838	-3.8	-115	0840	-4.1	-125	0932	-3.5	-106	0942	-3.5	-106
1516	2.7	82	1542	3.0	92	1625	2.5	75	1631	2.9	89
2044	-1.4	-44	2059	-0.8	-25	2154	-1.1	-34	2335	-1.7	-51
6 M 0234	3.0	90	21 Tu 0305	3.3	102	6 Th 0342	2.4	74	21 F 0527	2.7	82
0923	-3.5	-107	0955	-3.8	-115	1027	-3.2	-97	1200	-3.2	-98
1606	2.3	71	1649	2.8	84	1720	2.4	73	1828	3.1	93
2132	-1.1	-34	● 2222	-0.7	-22	● 2257	-1.1	-35	● 2313	-2.1	-63
7 Tu 0316	2.6	79	22 W 0418	2.9	89	7 F 0449	2.2	67	7 Sa 0050	-2.2	-66
1017	-3.2	-97	1113	-3.5	-107	1129	-3.0	-90	0646	2.6	79
1705	2.1	63	1759	2.7	82	1818	2.5	76	1306	-2.9	-87
● 2233	-0.8	-25	2351	-0.9	-28	1928	3.1	95	1928	3.1	95
8 W 0411	2.2	68	23 Th 0542	2.7	82	8 Sa 0006	-1.4	-42	23 M 0158	-2.7	-83
1121	-2.9	-89	1228	-3.3	-101	0608	2.2	67	0801	2.8	84
1812	2.0	60	1908	2.8	86	1232	-2.9	-87	1409	-2.6	-78
2347	-0.7	-22				1916	2.8	84	2023	3.2	98
9 Th 0524	2.0	61	24 F 0112	-1.4	-42	9 Su 0111	-1.8	-56	24 M 0258	-3.2	-99
1229	-2.8	-85	0706	2.8	84	0728	2.5	76	0906	3.0	91
1920	2.1	65	1339	-3.2	-97	1333	-2.8	-85	1506	-2.3	-69
			2012	3.1	93	2009	3.1	96	2112	3.3	100
10 F 0101	-0.9	-27	25 Sa 0223	-2.0	-61	10 M 0208	-2.5	-75	25 Tu 0349	-3.7	-112
0654	2.1	64	0822	3.1	93	0836	3.0	91	1001	3.2	97
1334	-2.9	-87	1443	-3.1	-93	1428	-2.7	-82	1556	-2.0	-62
2019	2.5	76	2105	3.3	102	2057	3.5	108	2154	3.3	101
11 Sa 0205	-1.3	-40	26 Su 0323	-2.6	-80	11 Tu 0257	-3.1	-95	26 W 0434	-4.0	-122
0811	2.5	77	0924	3.4	104	0933	3.5	107	1049	3.3	101
1430	-3.0	-92	1539	-2.9	-88	1518	-2.5	-77	1638	-1.8	-55
2106	3.0	91	2150	3.5	108	2140	3.9	119	2230	3.3	102
12 Su 0256	-1.9	-57	27 M 0413	-3.1	-96	12 W 0343	-3.8	-115	27 Th 0512	-4.2	-128
0910	3.1	96	1016	3.7	112	1025	3.9	119	1131	3.4	103
1518	-3.1	-95	1626	-2.7	-81	1604	-2.2	-68	1714	-1.7	-51
2147	3.5	107	2229	3.6	111	2220	4.2	127	2303	3.3	102
13 M 0338	-2.5	-75	28 Tu 0457	-3.5	-108	13 Th 0426	-4.3	-131	28 F 0545	-4.3	-131
1000	3.7	114	1102	3.8	116	1115	4.1	125	1209	3.3	102
1600	-3.1	-95	1706	-2.4	-73	1647	-1.9	-57	1746	-1.6	-48
2223	3.9	120	2303	3.6	111	● 2259	4.3	132	● 2334	3.3	102
14 Tu 0416	-3.1	-94	29 W 0534	-3.8	-117	14 F 0510	-4.7	-142	29 Sa 0615	-4.3	-132
1045	4.2	128	1143	3.8	116	1204	4.1	125	1244	3.3	100
1638	-3.0	-90	1738	-2.1	-65	1728	-1.5	-46	1815	-1.5	-47
2258	4.2	129	● 2333	3.6	110	2339	4.4	133			
15 W 0452	-3.6	-110	30 Th 0605	-4.0	-123	15 Sa 0555	-4.8	-147	30 Su 0003	3.4	103
1129	4.4	135	1222	3.7	112	1253	3.9	119	0643	-4.3	-132
1713	-2.6	-80	1807	-1.9	-59	1811	-1.2	-38	1319	3.2	98
○ 2331	4.4	134							1845	-1.5	-47
			31 F 0002	3.6	109						
			0634	-4.2	-127						
			1259	3.5	107						
			1835	-1.8	-54						

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Keelung (Chi-lung Chiang), Taiwan, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0516 0.3 10	16 0408 0.6 19	1 Sa 0730 0.9 28	16 0653 1.3 41	1 Sa 0638 1.0 32	16 0635 1.5 46						
1025 -0.2 -7	W 0918 -0.5 -14	F 1332 0.3 9	Sa 1223 0.4 11	Sa 1307 0.3 9	Su 1224 0.3 9						
1644 0.7 21	1526 0.9 26	1632 0.4 13	1612 0.7 20	1546 0.4 12	1618 0.6 18						
2335 -1.1 -33	O 2219 -1.5 -46	2351 -2.0 -62	2318 -1.4 -43	2338 -1.7 -53							
2 W 0647 0.6 17	17 0540 0.8 25	2 Sa 0008 -1.5 -45	17 0756 1.5 46	2 Su 0726 1.2 38	17 0733 1.5 46						
1203 0.0 1	Th 1045 -0.1 -3	Sa 0820 1.1 35	Su 1322 0.4 12	Su 1340 0.3 10	M 1312 0.2 6						
1717 0.6 17	1602 0.7 22	1433 0.4 11	1712 0.7 20	1651 0.5 15	M 1742 0.7 20						
2313 -1.8 -56	1719 0.5 15										
3 Th 0016 -1.3 -39	18 0659 1.1 34	3 Su 0049 -1.6 -48	18 0046 -2.1 -65	3 M 0007 -1.4 -44	18 0036 -1.7 -51						
0757 0.8 25	F 1210 0.2 5	Su 0900 1.3 40	M 0850 1.5 47	M 0806 1.4 42	Tu 1347 0.1 2						
1340 0.2 6	1637 0.7 20	1514 0.4 13	1402 0.4 11	1400 0.3 10	1853 0.7 21						
1743 0.5 14		1807 0.6 17	1808 0.7 22	1753 0.6 19							
4 F 0052 -1.4 -44	19 0005 -2.1 -65	4 M 0127 -1.7 -51	19 Tu 0132 -2.1 -65	4 Tu 0051 -1.5 -46	19 0123 -1.5 -47						
0851 1.0 31	Sa 0806 1.4 42	M 0934 1.4 44	Tu 0935 1.5 45	Tu 0841 1.5 45	W 0904 1.2 38						
1504 0.3 9	1319 0.4 11	1532 0.5 14	1431 0.3 9	1416 0.3 10	1415 -0.1 -2						
1804 0.4 13	1713 0.7 20	1852 0.6 19	1900 0.8 24	1847 0.8 23	1955 0.8 23						
5 Sa 0125 -1.6 -49	20 0054 -2.4 -72	5 Tu 0201 -1.8 -54	20 W 0213 -2.1 -63	5 W 0130 -1.5 -47	20 0203 -1.3 -41						
0934 1.2 36	Su 0904 1.5 47	Tu 1004 1.5 46	W 1014 1.3 40	W 0913 1.5 46	Th 0938 1.0 31						
1613 0.4 11	1410 0.5 14	1535 0.5 15	1457 0.2 5	1432 0.3 8	1437 -0.3 -9						
1831 0.4 13	1753 0.7 22	1935 0.7 22	1952 0.8 25	1935 0.9 27	2051 0.8 23						
6 Su 0157 -1.7 -53	21 0140 -2.5 -77	6 W 0234 -1.8 -56	21 Th 0250 -1.9 -57	6 Th 0205 -1.6 -48	21 0237 -1.1 -34						
1010 1.3 40	M 0954 1.6 48	1032 1.5 47	1047 1.1 34	0941 1.5 45	F 1005 0.8 23						
1706 0.4 13	1447 0.5 15	1542 0.5 14	1523 -0.1 -2	1447 0.1 3	1459 -0.6 -17						
1902 0.5 14	1840 0.8 25	2016 0.8 25	O 2049 0.8 24	2021 1.0 30	2145 0.8 23						
7 M 0227 -1.8 -56	22 0223 -2.6 -78	7 Th 0306 -1.9 -57	22 F 0325 -1.6 -50	7 F 0238 -1.5 -46	22 0308 -0.9 -26						
1042 1.4 43	Tu 1039 1.5 47	1058 1.5 46	1115 1.0 29	1005 1.4 43	Sa 1023 0.6 17						
1745 0.5 14	1519 0.5 14	1553 0.3 10	1555 -0.3 -10	1504 -0.1 -4	1526 -0.9 -26						
1936 0.5 16	O 1932 0.9 27	2100 0.9 27	2153 0.7 22	2108 1.1 33	O 2237 0.8 23						
8 Tu 0258 -1.9 -59	23 0305 -2.5 -76	8 F 0338 -1.8 -56	23 Sa 0400 -1.3 -41	8 Sa 0311 -1.4 -43	23 0341 -0.6 -19						
1112 1.4 44	W 1119 1.4 43	1123 1.4 44	1139 0.8 24	1026 1.3 39	Tu 1031 0.4 13						
1737 0.5 16	1552 0.3 10	1612 0.1 3	1636 -0.6 -18	1528 -0.5 -15	Su 1559 -1.1 -33						
● 2013 0.6 17	2029 0.9 27	2149 0.9 28	2303 0.6 19	● 2201 1.2 36	2327 0.8 23						
9 W 0330 -2.0 -61	24 0345 -2.3 -70	9 Sa 0413 -1.7 -53	24 Su 0438 -1.0 -31	9 Su 0346 -1.2 -36	24 0421 -0.4 -11						
1140 1.5 45	Th 1156 1.3 39	1147 1.3 41	1200 0.7 20	1044 1.1 35	M 1038 0.4 11						
1712 0.5 15	1632 0.1 4	1643 -0.2 -7	1726 -0.8 -25	1601 -0.9 -27	1639 -1.3 -39						
2053 0.6 19	2131 0.8 24	2246 0.9 28	2258 1.2 37								
10 Th 0403 -2.0 -62	25 0427 -2.0 -61	10 Su 0452 -1.5 -46	25 M 0013 0.6 17	10 M 0426 -0.9 -26	25 0019 0.8 23						
1209 1.4 44	F 1230 1.1 35	1212 1.2 38	524 0.7 -20	1103 1.0 32	Tu 0521 -0.2 -5						
1719 0.4 12	1725 -0.1 -3	1724 -0.6 -17	1221 0.6 17	1643 -1.3 -39	1058 0.3 9						
2142 0.7 20	2240 0.6 19	2351 0.9 27	1826 -1.0 -30		1726 -1.4 -42						
11 F 0440 -2.0 -62	26 0509 -1.6 -49	11 M 0537 -1.2 -36	26 Tu 0125 0.5 15	11 Tu 0002 1.2 37	26 0116 0.8 23						
1238 1.4 43	Sa 1304 1.0 31	1238 1.1 34	0631 -0.3 -9	0513 -0.5 -14	W 0714 0.0 1						
1745 0.2 6	Sa 1834 -0.4 -11	M 1817 -0.9 -28	1247 0.5 14	1126 1.0 30	1126 0.3 8						
2239 0.7 20			1931 -1.1 -34	1734 -1.6 -48	1821 -1.4 -44						
12 Sa 0522 -1.9 -58	27 0001 0.5 14	12 Tu 0107 0.9 26	27 W 0243 0.5 16	12 W 0114 1.2 37	27 0219 0.8 25						
1309 1.3 41	Su 0557 -1.1 -35	0631 -0.8 -23	0818 0.0 2	0615 -0.1 -2	0844 0.2 5						
1828 -0.1 -2	1338 0.9 26	1308 1.0 30	1319 0.4 12	1156 0.9 28	1200 0.2 7						
2345 0.6 19	1945 -0.6 -18	1921 -1.2 -38	2031 -1.2 -37	1837 -1.7 -52	1921 -1.4 -43						
13 Su 0608 -1.7 -51	28 0133 0.3 10	13 W 0233 0.9 26	28 Th 0411 0.7 20	13 Th 0236 1.2 37	28 0329 0.9 27						
1341 1.2 38	M 0655 -0.7 -22	0742 -0.3 -9	1001 0.2 5	0749 0.3 8	F 1029 0.2 6						
1924 -0.4 -11	1411 0.7 22	1344 0.9 27	1357 0.4 11	1237 0.8 25	1248 0.2 7						
2047 -0.8 -25	2047 -0.8 -25	2032 -1.5 -46	2127 -1.3 -39	1953 -1.8 -54	2023 -1.4 -43						
14 M 0103 0.6 17	29 0309 0.3 9	14 Th 0407 1.0 29	29 F 0535 0.9 26	14 O 0403 1.3 39	29 0435 1.0 31						
0701 -1.3 -40	Tu 0818 -0.3 -9	0917 0.1 2	1201 0.3 8	0938 0.4 12	Sa 1153 0.2 7						
1415 1.1 35	1443 0.6 18	1425 0.8 23	1446 0.4 11	1336 0.7 21	1356 0.3 8						
2024 -0.8 -23	2143 -1.0 -32	O 2142 -1.7 -53	O 2223 -1.3 -41	O 2113 -1.8 -54	2125 -1.3 -41						
15 Tu 0232 0.5 16	30 0449 0.4 13	15 F 0536 1.1 35									
0804 -0.9 -27	W 1000 0.0 0	1059 0.3 9									
1450 1.0 31	1516 0.5 15	1515 0.7 21									
2123 -1.1 -34	O 2234 -1.2 -37	2249 -1.9 -58									
16 Th 0622 0.7 20	31 0622 0.7 20										
1153 0.2 6	Th 1153 0.2 6										
1551 0.4 13	1551 0.4 13										
2322 -1.3 -41	2322 -1.3 -41										

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Keelung (Chi-lung Chiang), Taiwan, 2008

Times and Heights of High and Low Waters

April					May					June						
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height		
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm	
1 Tu	0703	1.4	42	16 W	0024	-1.1	-35	1 Th	0638	1.3	39	16 F	0119	-0.4	-11	
	1301	0.1	3	0745	1.2	37	1239	-0.5	-16	0737	0.7	22	0625	0.8	24	
	1742	0.6	19	1330	-0.4	-11	1839	0.8	23	1340	-1.0	-32	1301	-1.8	-55	
2 W	0013	-1.3	-40	17 Th	0117	-0.9	-27	2 F	0022	-1.0	-30	17 Sa	0226	-0.1	-4	
	0740	1.4	43	0824	1.0	30	0710	1.1	35	0804	0.5	14	0639	0.8	23	
	1324	0.0	-1	1358	-0.6	-17	1305	-0.8	-25	1406	-1.2	-38	1337	-2.2	-67	
	1843	0.8	24	2032	0.8	24	1941	1.0	30	2138	1.0	29	2136	1.5	47	
3 Th	0056	-1.3	-39	18 F	0202	-0.7	-20	3 Sa	0108	-0.8	-23	18 Su	0347	0.0	1	
	0813	1.4	42	0855	0.7	31	0735	1.0	31	0813	0.3	1	0651	0.8	24	
	1345	-0.2	-6	1422	-0.8	-24	1329	-1.2	-36	1429	-1.4	-44	1416	-2.5	-77	
	1938	1.0	29	2125	0.8	25	2037	1.2	37	2222	1.0	31	2229	1.7	51	
4 F	0135	-1.2	-36	19 Sa	0242	-0.4	-12	4 Su	0150	-0.5	-14	19 M	0527	0.1	4	
	0841	1.3	39	0914	0.5	14	0751	0.9	27	0756	0.2	6	0756	0.2	6	
	1404	-0.5	-14	1443	-1.0	-32	1357	-1.6	-49	1454	-1.6	-50	1500	-2.7	-83	
	2030	1.1	34	2212	0.9	26	2131	1.4	43	2302	1.1	33	2320	1.7	53	
5 Sa	0211	-1.0	-31	20 Su	0321	-0.2	-6	5 M	0231	-0.2	-5	20 Tu	0643	0.2	5	
	0902	1.1	35	0915	0.3	9	0801	0.8	25	0759	0.2	6	0803	1.0	30	
	1426	-0.8	-25	1506	-1.3	-40	1431	-2.0	-61	1522	-1.8	-54	1549	-2.8	-84	
	2122	1.3	39	2255	0.9	27	2225	1.6	48	2339	1.1	34	2359	1.3	39	
6 Su	0247	-0.8	-24	21 M	0409	0.0	-1	6 Tu	0313	0.1	4	21 W	1554	-1.9	-57	
	0917	1.0	31	0907	0.2	7	0813	0.9	27	1511	-2.3	-71	0012	1.7	52	
	1455	-1.3	-39	1535	-1.5	-46	2319	1.7	51	0458	0.6	19	0653	0.4	11	
	2215	1.4	43	2337	0.9	28				0902	1.0	31	0933	0.4	12	
7 M	0324	-0.5	-15	22 Tu	0535	0.1	3	7 W	0403	0.4	12	21 Th	1554	-1.9	-57	
	0930	1.0	29	0920	0.2	6	0838	1.0	29	1631	-1.9	-59	0012	1.7	52	
	1531	-1.7	-51	1611	-1.6	-50	1558	-2.5	-77				0458	0.6	19	
	2311	1.5	45							1002	1.0	31	0902	1.0	31	
8 Tu	0407	-0.1	-4	23 W	0020	1.0	29	8 Th	0016	1.7	52	21 F	0012	1.7	52	
	0947	0.9	28	0701	0.1	4	0506	0.6	17	1713	-1.9	-58	0458	0.6	19	
	1615	-2.0	-61	0942	0.2	6	0919	1.0	29				0902	1.0	31	
				1651	-1.7	-52	1653	-2.5	-76				1641	-2.6	-80	
9 W	0012	1.5	47	24 Th	0106	1.0	30	9 F	0118	1.7	51	23 F	0053	1.2	36	
	0502	0.2	6	0816	0.2	6	0633	0.6	19	1713	-1.9	-58	0158	1.5	47	
	1012	0.9	28	1004	0.2	6	1016	0.9	27	1840	-1.9	-58	0732	0.3	10	
	1707	-2.1	-65	1738	-1.7	-52	1755	-2.3	-70	1759	-1.8	-56	1132	0.7	21	
10 Th	0119	1.5	46	25 F	0157	1.0	32	9 Sa	0232	1.6	49	23 M	0132	1.2	37	
	0624	0.4	13	1832	-1.6	-50	0805	0.5	16	0848	0.2	7	0250	1.4	44	
	1051	0.9	27				1133	0.8	23	1019	0.2	7	0853	0.0	1	
	1811	-2.1	-63				1906	-2.0	-60	1759	-1.8	-56	1311	0.5	14	
11 F	0234	1.5	46	26 Sa	0250	1.1	34	25 Su	0212	1.2	38	9 M	0250	1.4	44	
	0811	0.5	16	1039	0.2	6	0858	0.2	5	0848	0.2	7	0206	1.3	39	
	1148	0.8	24	1151	0.2	6	1140	0.2	7	1019	0.2	7	0811	-0.1	-4	
	1928	-1.9	-59	1931	-1.6	-48	1852	-1.7	-53	1759	-1.4	-43	1246	0.4	11	
12 Sa	0351	1.5	46	27 Su	0341	1.2	36	10 M	0427	1.5	45	25 Tu	0342	1.3	40	
	0948	0.5	14	1046	0.1	4	1042	0.0	1	1006	-0.1	-4	1003	-0.3	-9	
	1313	0.7	20	1324	0.2	6	1507	0.4	13	1426	0.3	8	1513	0.3	10	
	2050	-1.7	-53	2034	-1.4	-44	2142	-1.2	-38	2050	-1.4	-42	2107	-1.0	-29	
13 Su	0502	1.5	47	28 M	0430	1.2	38	12 F	0523	1.4	42	27 W	0336	1.3	39	
	1109	0.3	8	1112	0.1	2	1141	-0.3	-9	1045	-0.4	-12	0356	-1.0	-29	
	1455	0.6	17	1449	0.3	8	1703	0.5	14	1553	0.3	10	1031	-1.1	-34	
	2209	-1.5	-47	2137	-1.3	-41	2259	-0.9	-28	2152	-1.1	-35	1115	-1.5	-45	
14 M	0604	1.5	46	29 Tu	0516	1.3	40	14 W	0614	1.2	36	28 F	0417	1.2	38	
	1208	0.1	2	1142	-0.1	-3	1229	-0.6	-18	1833	0.6	18	0605	0.7	22	
	1647	0.6	17	1613	0.4	12				2253	-0.9	-27	1238	-1.2	-36	
	2322	-1.3	-41	2237	-1.2	-38							1950	0.8	24	
15 Tu	0659	1.4	43	30 W	0559	1.3	40	15 Th	0012	-0.6	-19	30 F	0534	1.1	33	
	1253	-0.2	-5	1212	-0.3	-8	0700	1.0	29	1308	-0.8	-25	1157	-1.0	-31	
	1819	0.6	19	1731	0.6	17				1945	0.7	22	1834	0.8	23	
				2333	-1.1	-35							2353	-0.6	-18	
16 M													31 Sa	0604	0.9	28
													1229	-1.4	-43	
													1941	1.0	32	

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Keelung (Chi-lung Chiang), Taiwan, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0142 0.4 11	16 W 0439 0.4 11	1 F 0249 0.5 14	16 Sa 0328 0.3 10	1 M 0330 -0.5 -15	16 Tu 0311 -0.6 -18						
0544 0.7 22	0656 0.5 14	0714 1.0 30	0814 0.8 24	0950 0.9 26	0954 1.1 35						
1324 -2.5 -76	1419 -1.8 -55	1441 -2.5 -75	1453 -1.7 -51	1541 -1.2 -38	1529 -1.0 -29						
2135 1.6 49	2234 1.4 42	2249 1.5 45	2239 1.4 43	2308 0.8 23	2218 1.0 32						
2 W 0228 0.5 16	17 Th 0508 0.4 13	2 Sa 0321 0.3 9	17 Su 0338 0.2 6	2 Tu 0410 -0.8 -24	17 W 0340 -1.0 -30						
0615 0.9 26	0732 0.5 16	0812 1.0 31	0857 0.9 26	1100 0.8 24	1046 1.2 37						
1407 -2.7 -82	1449 -1.9 -57	1522 -2.3 -70	1524 -1.6 -50	1621 -0.9 -27	1606 -0.7 -21						
2225 1.7 51	2301 1.4 43	2325 1.3 40	2301 1.3 41	2329 0.6 19	2235 1.0 29						
3 Th 0307 0.6 18	18 F 0503 0.5 14	3 Su 0359 0.0 1	18 M 0354 0.0 -1	3 W 0457 -1.0 -31	18 Th 0417 -1.3 -41						
0703 1.0 30	0811 0.6 17	0915 1.0 29	0944 0.9 28	1208 0.7 21	1143 1.2 38						
1452 -2.8 -85	1519 -1.9 -58	1603 -2.0 -60	1556 -1.5 -47	1709 -0.5 -16	1649 -0.4 -12						
● 2312 1.7 51	2326 1.4 42	2359 1.1 35	2322 1.2 38	2350 0.5 16	2255 0.9 28						
4 F 0345 0.6 17	19 Sa 0452 0.4 13	4 M 0446 -0.2 -7	19 Tu 0421 -0.3 -10	4 Th 0555 -1.2 -36	19 F 0503 -1.6 -50						
0801 1.0 32	0853 0.6 19	1027 0.8 24	1036 0.9 28	1317 0.7 20	1246 1.3 39						
1538 -2.7 -83	1551 -1.9 -59	1646 -1.6 -48	1632 -1.3 -41	1829 -0.2 -6	1745 0.0 -1						
2356 1.6 48	2351 1.4 42		2344 1.1 35		2321 0.9 26						
5 Sa 0430 0.4 13	20 Su 0458 0.3 9	5 Tu 0032 1.0 31	20 W 0457 -0.7 -20	5 F 0017 0.4 13	20 Th 0558 -1.8 -54						
0905 1.0 31	0938 0.7 20	0547 -0.5 -15	1134 0.9 28	0701 -1.2 -38	1400 1.3 39						
1625 -2.5 -75	1624 -1.9 -58	1151 0.6 19	1713 -1.1 -33	1432 0.7 20	1907 0.3 8						
		1734 -1.1 -33		2021 0.0 1	2357 0.8 24						
6 Su 0038 1.5 45	21 M 0016 1.3 40	6 W 0105 0.9 27	21 Th 0008 1.0 32	6 Sa 0052 0.4 11	21 Su 0707 -1.8 -56						
0528 0.2 7	0519 0.1 3	0701 -0.7 -22	0542 -1.0 -31	0806 -1.3 -40	1521 1.3 40						
1015 0.9 26	1031 0.7 20	1320 0.5 15	1241 0.9 28	1556 0.8 23	2054 0.4 13						
1714 -2.1 -63	1702 -1.8 -55	1834 -0.6 -19	1802 -0.7 -21	2207 0.2 6							
7 M 0121 1.3 41	22 Tu 0042 1.3 39	7 Th 0140 0.7 22	22 F 0035 1.0 29	7 Su 0135 0.3 10	22 M 0050 0.7 22						
0643 0.0 -1	0555 -0.2 -5	0812 -1.0 -29	0638 -1.3 -39	0906 -1.3 -40	0825 -1.8 -55						
1135 0.6 19	1130 0.6 19	1451 0.4 13	1358 0.9 28	1718 0.9 28	1643 1.4 42						
1808 -1.6 -49	1744 -1.6 -48	2009 -0.2 -7	1906 -0.3 -9	● 2230 0.4 13							
8 Tu 0203 1.2 37	23 W 0111 1.2 36	8 F 0215 0.6 18	23 Sa 0107 0.9 26	8 M 0001 0.2 7	23 Tu 0207 0.6 19						
0803 -0.3 -10	0644 -0.5 -14	0914 -1.1 -34	0745 -1.5 -46	0228 0.3 9	0944 -1.7 -53						
1316 0.4 13	1239 0.6 18	1630 0.5 16	1525 1.0 29	1005 -1.3 -40	1754 1.5 45						
1911 -1.1 -33	1832 -1.3 -39	2156 0.1 2	2035 0.1 2	1821 1.1 33	2345 0.3 10						
9 W 0247 1.0 32	24 Th 0142 1.1 33	9 Sa 0253 0.5 15	24 Su 0146 0.8 23	9 Tu 0057 0.3 8	24 W 0336 0.6 18						
0913 -0.6 -19	0741 -0.8 -24	1011 -1.2 -38	0857 -1.7 -52	0332 0.4 11	1058 -1.7 -52						
1506 0.3 10	1359 0.6 17	1805 0.8 23	1654 1.1 34	1101 -1.3 -41	1855 1.5 45						
2030 -0.6 -18	1930 -0.9 -27	● 2358 0.2 6	● 2218 0.3 9	1910 1.2 37							
10 Th 0331 0.9 26	25 F 0216 1.0 30	10 Su 0334 0.4 13	25 M 0235 0.7 21	10 W 0129 0.3 8	25 Th 0036 0.2 5						
1015 -0.9 -28	0841 -1.1 -34	1104 -1.4 -42	1008 -1.8 -56	0441 0.5 14	0506 0.7 20						
1651 0.4 12	1529 0.6 19	1914 1.0 30	1814 1.3 40	1152 -1.3 -41	1202 -1.6 -50						
● 2206 -0.2 -6	2041 -0.5 -14		2346 0.4 11	1949 1.3 40	1946 1.4 43						
11 F 0415 0.7 21	26 Sa 0251 0.9 26	11 M 0126 0.3 8	26 Tu 0335 0.7 20	11 Th 0148 0.3 8	26 F 0116 0.0 0						
1109 -1.2 -36	0940 -1.5 -45	0420 0.4 12	1114 -2.0 -60	0546 0.6 18	0628 0.7 22						
1828 0.6 19	1701 0.8 24	1153 -1.4 -44	1920 1.5 45	1237 -1.3 -41	1255 -1.5 -46						
2354 0.1 2	● 2207 -0.1 -2	2006 1.2 36		2023 1.4 42	2030 1.2 38						
12 Sa 0456 0.5 16	27 Su 0328 0.8 23	12 Tu 0220 0.3 9	27 W 0048 0.4 11	12 F 0203 0.2 7	27 Sa 0147 -0.2 -6						
1157 -1.3 -41	1038 -1.8 -54	0511 0.5 14	0441 0.7 22	0643 0.7 22	0737 0.8 24						
1943 0.9 27	1824 1.1 33	1237 -1.5 -46	1214 -2.0 -62	1317 -1.3 -41	1340 -1.3 -39						
	2336 0.2 6	2047 1.3 40	2016 1.5 47	2052 1.4 43	2106 1.0 31						
13 Su 0137 0.2 5	28 M 0405 0.7 21	13 W 0257 0.4 11	28 Th 0131 0.3 10	13 Th 0219 0.1 4	28 Su 0214 -0.4 -13						
0531 0.4 13	1133 -2.0 -62	0601 0.5 16	0544 0.8 23	0733 0.9 26	0840 0.8 25						
1238 -1.5 -46	1934 1.3 41	1316 -1.6 -48	1304 -2.1 -63	1352 -1.3 -41	1419 -1.0 -31						
2040 1.1 33		2121 1.4 42	2103 1.5 45	2119 1.4 42	2134 0.8 23						
14 M 0254 0.3 8	29 Tu 0049 0.4 11	14 Th 0315 0.4 12	29 F 0203 0.3 8	14 W 0234 0.0 -1	29 W 0240 -0.7 -22						
0558 0.4 12	0445 0.7 21	0648 0.6 19	0643 0.9 26	0820 1.0 29	0937 0.9 26						
1315 -1.6 -49	1226 -2.3 -69	1351 -1.6 -49	1348 -2.0 -61	1424 -1.3 -39	1454 -0.8 -23						
2125 1.2 38	2034 1.5 46	2150 1.4 44	2142 1.3 41	2142 1.3 39	● 2154 0.6 17						
15 Tu 0354 0.3 10	30 W 0141 0.5 14	15 F 0321 0.4 12	30 Sa 0230 0.1 2	15 M 0250 -0.3 -8	30 Tu 0308 -1.0 -31						
0624 0.4 12	0529 0.8 24	0732 0.7 22	0740 0.9 27	0906 1.0 32	1031 0.9 27						
1348 -1.7 -52	1314 -2.4 -74	1423 -1.6 -50	1428 -1.8 -56	1456 -1.1 -35	1530 -0.5 -15						
2202 1.3 40	2125 1.6 49	2216 1.4 44	2216 1.1 35	2201 1.2 36	2201 0.4 12						
	31 Th 0219 0.5 15		31 Su 0258 -0.2 -6								
	0619 0.9 27		0841 0.9 27								
	1359 -2.5 -77		1504 -1.6 -48								
	2210 1.6 48		● 2244 1.0 29								

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Keelung (Chi-lung Chiang), Taiwan, 2008

Times and Heights of High and Low Waters

October				November				December							
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height				
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm				
1 W	0341	-1.3	-39	16 Th	0311	-1.7	-52	1 Sa	0440	-1.8	-56	1 M	0425	-2.6	-78
1123	0.9	27		1056	1.5	45	1300	1.0	32	1249	1.7	52			
1616	-0.2	-7		1549	0.0	-1	2021	0.2	5	1746	0.6	19			
2207	0.3	10		2118	0.9	26	2150	0.2	6	2144	1.0	29			
2 Th	0422	-1.5	-45	17 F	0350	-2.0	-61	2 Su	0526	-1.8	-55	17 M	0522	-2.4	-73
1214	0.9	27		1150	1.5	47	1348	1.1	33	1348	1.6	50			
1734	0.0	-1		1639	0.2	7	2119	0.2	5	1912	0.6	17			
2228	0.3	9		2140	0.9	27	2238	0.2	5	2256	0.9	26			
3 F	0508	-1.5	-47	18 Sa	0438	-2.2	-66	3 M	0617	-1.7	-53	18 Tu	0627	-2.1	-65
1309	0.9	27		1251	1.6	48	1436	1.1	34	1448	1.6	48			
1921	0.1	3		1747	0.5	14	2156	0.2	5	2038	0.4	11			
2258	0.3	8		2215	0.9	27	2347	0.2	5						
4 Sa	0602	-1.6	-48	19 Su	0536	-2.2	-66	4 Tu	0713	-1.6	-49	4 Th	0027	0.7	20
1410	0.9	28		1359	1.5	47	1523	1.1	35	0739	-1.7	-53			
2049	0.2	5		1924	0.6	17	2222	0.1	3	1546	1.5	46			
2336	0.2	7		2307	0.8	25				2154	0.0	1			
5 Su	0702	-1.5	-46	20 M	0644	-2.0	-62	5 W	0107	0.2	5	5 Th	0043	0.2	7
1516	1.0	30		1511	1.5	47	0811	-1.5	-45	0857	-1.3	-41			
2234	0.2	5		2100	0.5	15	1607	1.2	36	1641	1.4	42			
							2250	0.0	0	2259	-0.3	-9			
6 M	0029	0.2	6	21 Tu	0026	0.7	21	6 Th	0228	0.2	7	6 Sa	0217	0.5	15
0804	-1.4	-44		0802	-1.8	-55	0912	-1.3	-40	0857	-1.3	-41			
1619	1.0	32		1620	1.5	46	1649	1.2	37	1641	1.4	42			
2336	0.2	5		2222	0.3	10	2320	-0.2	-5	2259	-0.3	-9			
7 Tu	0140	0.2	7	22 W	0206	0.6	18	6 F	0420	0.5	14	6 Sa	0328	0.3	9
0905	-1.3	-41		0923	-1.6	-48	1017	-1.0	-30	0957	-1.1	-33			
1713	1.1	35		1723	1.5	45	1624	1.1	34	1642	1.0	30			
				2327	0.1	2	2353	-0.7	-20	2321	-1.0	-31			
8 W	0004	0.2	5	23 Th	0359	0.5	16	8 Sa	0514	0.5	14	8 M	0603	0.6	18
0257	0.3	8		1040	-1.3	-41	1108	-1.0	-30	0822	-1.3	-41			
1005	-1.3	-39		1818	1.4	42	1806	1.2	36	1546	1.1	35			
1759	1.2	38					1905	0.7	22	2217	-0.5	-14			
9 Th	0024	0.1	3	24 F	0018	-0.2	-6	9 Su	0021	-0.6	-18	9 Tu	0454	0.4	13
0417	0.4	12		0544	0.6	18	0626	0.7	21	1024	-0.8	-24			
1103	-1.2	-37		1149	-1.1	-34	1201	-0.8	-25	1136	-0.6	-19			
1839	1.3	39		1907	1.2	37	1839	1.1	33	1822	1.0	30			
10 F	0046	0.0	0	25 Sa	0059	-0.5	-14	10 Tu	0049	-0.9	-27	10 W	0613	0.7	20
0533	0.6	17		0705	0.7	22	0729	0.9	28	0924	1.0	31			
1154	-1.1	-35		1249	-0.9	-27	1250	-0.6	-18	1410	-0.1	-4			
1915	1.3	40		1950	1.0	30	1907	1.0	30	1938	0.5	15			
11 Sa	0109	-0.1	-4	26 Su	0134	-0.7	-22	10 M	0115	-1.2	-37	11 Th	0217	-1.6	-49
0637	0.7	22		0812	0.8	25	0826	1.1	35	1012	1.1	33			
1239	-1.1	-33		1343	-0.6	-18	1335	-0.3	-10	1719	0.1	4			
1947	1.3	39		2024	0.7	22	1926	0.9	26	1940	0.2	6			
12 Su	0131	-0.3	-10	27 M	0202	-1.0	-30	11 W	0142	-1.6	-48	11 F	0217	-1.2	-37
0733	0.9	27		0910	0.9	28	1054	1.4	42	0918	1.5	46			
1320	-1.0	-29		1432	-0.3	-10	1417	0.0	-1	1413	0.4	11			
2014	1.2	36		2047	0.5	14	1939	0.8	24	1830	0.8	24			
13 M	0152	-0.6	-18	28 Tu	0228	-1.2	-38	10 M	0214	-2.0	-60	13 Th	0119	-2.1	-64
0825	1.0	32		1001	1.0	29	1009	1.6	48	0918	1.5	46			
1357	-0.8	-24		1523	-0.1	-3	1459	0.2	7	1413	0.4	11			
2036	1.0	32		2051	0.3	8	1948	0.8	25	1830	0.8	24			
14 Tu	0213	-0.9	-28	29 W	0253	-1.5	-45	11 F	0251	-2.3	-70	12 W	0158	-2.4	-74
0915	1.2	37		1047	1.0	30	1209	1.7	51	1009	1.7	51			
1432	-0.6	-18		1628	0.1	2	2004	0.2	7	1457	0.6	17			
2052	1.0	29		2038	0.2	6	2008	0.9	28	1852	0.9	27			
15 W	0238	-1.3	-40							2000	0.4	11			
1005	1.4	42		30 Th	0323	-1.7	-51	12 W	0313	-1.9	-57	27 Sa	0300	-1.9	-59
1509	-0.3	-10		1131	1.0	31	1009	1.7	53	1120	1.3	39			
○ 2105	0.9	27		1804	0.1	4	1459	0.2	7	1824	0.3	10			
				2048	0.2	6	○ 1948	0.8	25	● 2000	0.4	11			
16 F	0359	-1.8	-55												
1215	1.0	31													
1925	0.2	5													
2113	0.2	6													
17 F	0359	-1.8	-55												
1215	1.0	31													
1925	0.2	5													
2113	0.2	6													

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

## Huangpu, China, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0118 4.2 129	16 W 0039 3.0 90	1 F 0351 2.0 60	16 Sa 0347 1.3 41	1 Sa 0242 1.7 52	16 Su 0335 1.2 36						
0557 5.8 176	W 0545 6.1 185	F 1950 7.3 221	Sa 1013 4.4 134	Sa 1824 7.3 222	Su 1126 5.2 157						
1331 1.9 59	1241 1.8 54		1316 4.1 124		1342 5.0 153						
2014 7.1 215	● 1858 7.2 218		1958 7.8 239		1953 7.8 237						
2 W 0323 3.6 110	17 Th 0227 2.6 79	2 Sa 0509 1.4 42	17 Su 0514 1.0 29	2 Su 0412 1.5 47	17 M 0459 1.1 33						
0752 4.8 145	0725 5.1 156	2100 7.7 234	1209 5.0 153	2013 7.4 226	1148 5.8 177						
1407 2.7 81	1326 2.4 73		1533 4.4 134		1555 4.5 137						
2046 7.3 223	1939 7.5 230		2128 8.3 252		2132 8.1 247						
3 Th 0451 2.6 79	18 F 0401 1.9 57	3 Su 0610 1.0 30	18 M 0633 0.7 21	3 M 0527 1.3 40	18 Tu 0607 1.0 32						
1039 4.5 137	0936 4.7 142	1314 5.2 159	1249 5.6 170	M 1600 4.9 148	1209 6.3 192						
1457 3.4 104	1422 3.1 94	1612 4.7 142	1656 4.0 121	2135 7.9 242	1706 3.5 108						
2117 7.7 234	2033 8.0 245	2200 8.2 251	2238 8.8 267		2239 8.5 260						
4 F 0552 1.6 50	19 Sa 0525 1.2 36	4 M 0700 0.8 24	19 Tu 0732 0.6 19	4 Tu 0623 1.1 33	19 W 0657 1.1 33						
1215 4.9 150	1128 4.8 147	1321 5.5 168	1316 5.9 181	Tu 1243 6.0 183	1234 6.6 202						
1553 4.0 121	1534 3.6 109	1712 4.2 127	1757 3.2 125	1702 4.1 125	1759 2.7 81						
2151 8.1 248	2134 8.5 260	2249 8.8 267	2334 9.1 278	2230 8.5 258	2332 8.7 265						
5 Sa 0642 1.0 31	20 Su 0639 0.6 19	5 Tu 0744 0.7 21	20 W 0813 0.8 24	5 W 0704 0.9 27	20 Th 0737 1.2 36						
1305 5.3 163	1245 5.2 160	1338 5.8 176	1345 6.2 188	W 1259 6.4 195	1255 7.0 212						
1645 4.2 127	1645 3.8 115	1757 3.5 108	1847 2.5 75	1751 3.2 99	1847 2.0 61						
2226 8.6 262	2231 9.0 275	2330 9.1 278		2315 8.8 269							
6 Su 0724 0.8 23	21 M 0740 0.4 12	6 W 0818 0.8 23	21 Th 0023 9.2 281	6 Th 0746 0.7 22	21 F 0018 8.6 261						
1333 5.6 171	1334 5.6 171	1401 6.1 185	0851 0.9 27	1321 6.7 205	0757 1.3 41						
1731 4.0 123	1746 3.6 110	1842 3.0 90	1409 6.4 195	1841 2.5 75	1317 7.3 221						
2303 9.1 276	2325 9.4 287		○ 1936 1.9 58		1935 1.6 50						
7 M 0800 0.7 22	22 Tu 0833 0.4 13	7 Th 0011 9.3 283	22 F 0107 9.0 274	7 F 0001 8.9 272	22 M 0058 8.2 251						
1358 5.8 176	1413 5.8 177	0853 0.7 20	0917 1.1 35	8 F 0822 1.5 45	0822 1.5 45						
1806 3.8 116	1840 3.2 98	1429 6.3 191	1438 6.7 204	8 Sa 1339 7.5 230	1339 7.5 230						
2340 9.4 285	○ 1930 2.6 79	● 1930 2.6 79	2016 1.8 55	9 O 2012 1.6 49	2012 1.6 49						
8 Tu 0840 0.9 26	23 W 0016 9.6 292	8 F 0051 9.3 282	23 Sa 0145 8.6 262	8 Sa 0046 8.8 269	23 Tu 0138 7.8 239						
1421 5.9 179	0913 0.7 20	0928 0.8 24	0942 1.0 31	846 0.9 26	0842 1.4 44						
1843 3.4 105	1450 5.9 181	1459 6.5 198	1503 7.0 213	1410 7.3 221	1357 7.8 237						
● 1931 2.8 84	2005 2.2 67	2053 1.7 51	2053 1.7 51	● 2010 1.5 46	2057 1.3 41						
9 W 0016 9.5 289	24 Th 0105 9.5 291	9 Sa 0131 9.0 275	24 Su 0223 8.1 246	9 Su 0134 8.5 260	24 M 0216 7.4 225						
0908 1.0 30	0954 0.8 24	0954 0.7 20	0955 1.0 32	0905 1.0 31	0857 1.6 48						
1451 6.0 182	1523 6.1 186	1530 6.7 203	1528 7.2 219	1434 7.5 228	1413 8.0 244						
1922 3.3 100	2014 2.5 77	2049 1.8 56	2141 1.7 51	2058 1.1 33	2145 1.1 34						
10 Th 0054 9.5 289	25 F 0149 9.3 282	10 Su 0215 8.6 263	25 M 0259 7.4 227	10 M 0222 8.1 246	25 Tu 0258 7.0 212						
0946 1.0 29	1029 1.0 31	1021 0.9 28	1010 1.2 36	0934 1.0 32	0923 2.1 63						
1524 6.0 184	1557 6.4 194	1557 6.9 209	1544 7.3 224	1452 7.8 237	1426 8.2 251						
1955 3.1 95	2053 2.4 72	2140 1.6 49	2230 1.7 52	2152 1.0 29	2231 0.9 26						
11 F 0128 9.4 285	26 Sa 0227 8.8 269	11 M 0300 8.1 246	26 Tu 0340 6.7 205	11 Tu 0309 7.5 229	26 W 0342 6.5 197						
1016 1.0 29	1051 0.9 27	1041 0.9 26	1033 1.5 46	0952 1.2 38	0939 2.5 75						
1601 6.2 188	1633 6.6 201	1621 7.0 214	1554 7.4 227	1508 8.0 245	1443 8.4 256						
2039 3.0 90	2141 2.4 73	2231 1.7 51	2324 1.7 52	2249 0.8 25	2307 0.8 24						
12 Sa 0207 9.1 277	27 Su 0304 8.2 249	12 Tu 0349 7.3 224	27 W 0429 5.9 179	12 W 0359 6.8 207	27 M 0426 5.9 180						
1051 0.8 25	1111 1.0 30	1057 1.2 36	1043 2.2 67	1015 1.8 54	0948 3.2 97						
1640 6.3 192	1702 6.8 207	1639 7.2 220	1608 7.5 230	1526 8.3 254	1504 8.4 257						
2126 3.0 91	2227 2.7 83	2334 1.8 54		2350 0.8 24	2349 1.0 29						
13 Su 0249 8.6 263	28 M 0339 7.3 223	13 W 0443 6.4 196	28 Th 0019 1.6 50	13 Th 0455 5.9 181	28 F 0519 5.3 161						
1122 1.0 29	1132 1.0 32	1123 1.6 48	0527 5.0 152	1038 2.4 74	0955 3.8 117						
1717 6.5 197	1728 6.8 208	1657 7.4 227	1046 3.0 92	1558 8.4 257	1533 8.3 252						
2215 3.0 90	2315 3.0 90		1630 7.5 230								
14 M 0335 8.0 243	29 Tu 0424 6.3 192	14 Th 0052 1.7 53	29 F 0118 1.7 51	14 F 0051 0.9 28	29 M 0040 1.3 41						
1147 1.0 32	1144 1.5 47	0551 5.4 165	0708 4.2 129	0612 5.1 156	0652 4.8 145						
1753 6.6 202	1747 6.9 209	1146 2.2 68	1028 3.8 116	1056 3.3 102	0945 4.5 136						
2316 3.0 91	○ 1729 7.6 233	○ 1729 7.6 233	○ 1710 7.4 227	○ 1643 8.2 251	1615 7.9 241						
15 Tu 0432 7.1 216	30 W 0040 3.0 91	15 F 0213 1.6 50	15 Th 0735 4.6 139	15 Sa 0204 1.1 35	30 M 0148 1.7 52						
1211 1.4 42	0527 5.2 157	0735 4.6 139	1218 3.2 97	0819 4.7 143	1730 7.5 228						
1827 6.8 208	1158 2.3 70	1828 7.7 235	1828 7.7 235	1119 4.3 132	○						
● 1809 6.9 211				1756 7.9 240							
31 Th 0217 2.6 79											
0720 4.1 126											
1208 3.2 98											
1849 7.0 214											

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Huangpu, China, 2008

Times and Heights of High and Low Waters

April				May				June			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
1 Tu 0429 1.6 49		16 W 0525 1.5 46		1 Th 0422 1.7 52		16 F 0455 1.9 58		1 Su 0442 2.3 70		16 M 0007 5.6 171	
1137 6.2 188		W 1119 7.0 213		Th 1043 7.1 215		F 1046 7.7 236		Su 1016 8.3 254		0505 3.6 109	
1545 4.9 149		1657 3.2 98		1619 3.6 111		1748 2.6 78		1813 1.5 46		1039 8.4 256	
2100 7.6 232		2225 7.9 240		2132 7.4 225		2301 6.6 200		2328 6.5 198		1911 1.3 40	
2 W 0530 1.3 41		17 Th 0600 1.5 47		2 F 0504 1.7 52		17 Sa 0533 2.1 65		2 M 0531 2.5 77		17 Tu 0057 5.8 177	
1148 6.7 203		1142 7.4 225		1102 7.5 229		1106 8.0 245		1049 8.9 271		0546 3.8 116	
1646 3.9 120		1752 2.5 77		1723 2.7 82		1844 2.0 60		1913 1.0 29		1111 8.8 267	
2204 8.0 245		2318 7.8 237		2239 7.5 228		2359 6.5 197				1952 1.2 36	
3 Th 0612 1.3 39		18 F 0635 1.6 48		3 Sa 0545 1.7 52		18 Su 0601 2.5 77		3 Tu 0030 6.4 195		18 W 0129 5.9 181	
1205 7.1 216		1202 7.7 235		1122 8.0 243		1126 8.3 254		0606 2.9 87		0625 3.8 117	
1740 3.0 90		1845 2.0 62		1827 1.9 58		1933 1.5 45		1125 9.4 286		1146 9.0 275	
2257 8.3 252				2339 7.4 227				2008 0.7 20		2031 1.3 40	
4 F 0649 1.2 36		19 Sa 0005 7.5 230		4 Su 0624 1.9 58		19 M 0050 6.4 195		4 W 0129 6.3 191		19 Th 0158 6.0 183	
1227 7.4 227		0657 1.7 53		1145 8.5 258		0636 2.9 88		0645 3.1 95		0655 3.7 112	
1835 2.1 64		1221 8.0 243		1926 1.3 40		1149 8.6 262		1206 9.7 296		1222 9.3 282	
2350 8.3 254		1936 1.7 51				2006 1.2 37		● 2102 0.5 16		○ 2102 1.5 45	
5 Sa 0720 1.3 41		20 Su 0049 7.3 222		5 M 0034 7.3 223		20 Tu 0132 6.4 195		5 Th 0227 6.1 186		20 F 0225 6.0 184	
1248 7.8 238		0725 2.0 62		0654 2.0 60		0658 3.2 99		0732 3.4 103		0736 3.4 105	
1926 1.6 48		1240 8.2 251		1210 8.9 272		1213 8.9 270		1250 9.9 302		1300 9.3 284	
○		2018 1.4 44		● 2018 0.8 25		○ 2045 1.0 31		2156 0.6 17		2142 1.5 47	
6 Su 0042 8.2 249		21 M 0132 7.1 215		6 Tu 0128 7.1 215		21 W 0208 6.4 194		6 F 0325 5.9 181		21 Sa 0300 6.1 185	
0748 1.3 40		0747 2.2 67		0736 2.2 67		0733 3.4 103		0806 3.7 112		0809 3.4 105	
1308 8.1 248		1258 8.5 259		1238 9.3 284		1241 9.1 276		1336 9.9 302		1337 9.3 283	
● 2015 1.1 33		2057 1.0 32		2108 0.5 14		2117 1.1 33		2249 0.7 22		2215 1.6 48	
7 M 0132 7.9 240		22 Tu 0213 6.9 209		7 W 0222 6.7 204		22 Th 0243 6.3 191		7 Sa 0422 5.8 178		22 Su 0342 6.1 185	
0815 1.5 47		0810 2.7 81		0758 2.7 83		0753 3.5 108		0851 3.8 115		0846 3.4 104	
1330 8.5 260		1316 8.7 266		1310 9.6 294		1311 9.2 280		1426 9.7 297		1413 9.2 280	
2109 0.7 22		2138 0.8 23		2200 0.3 9		2153 1.1 35		2341 0.9 28		2254 1.4 42	
8 Tu 0222 7.4 227		23 W 0254 6.6 202		8 Th 0319 6.3 193		23 F 0316 6.2 188		8 Su 0518 5.9 179		23 M 0427 6.1 187	
0845 1.7 51		0837 2.9 89		0836 3.1 96		0829 3.7 113		0947 3.9 119		0932 3.5 107	
1351 8.9 271		1337 8.9 272		1346 9.8 298		1344 9.2 280		1521 9.4 285		1453 8.9 272	
2203 0.5 14		2209 0.7 22		2253 0.4 11		2232 1.3 40				2335 1.3 39	
9 W 0313 6.9 210		24 Th 0333 6.3 193		9 F 0421 5.9 181		24 Sa 0359 6.0 182		9 M 0028 1.1 34		24 Tu 0514 6.2 190	
0909 2.2 67		0851 3.4 104		0900 3.7 114		0850 3.9 118		0614 6.0 184		1018 3.6 259	
1415 9.2 280		1402 9.0 275		1426 9.6 294		1417 9.1 276		1051 4.0 121		1537 8.5 259	
2256 0.3 8		2247 0.8 24		2346 0.6 19		2306 1.4 43		1619 8.8 267			
10 Th 0408 6.3 192		25 F 0413 6.0 182		10 Sa 0531 5.7 173		25 Su 0450 5.8 177		10 Tu 0109 1.3 39		25 W 0007 1.3 41	
0937 2.8 85		0911 3.9 118		0940 4.2 129		0929 4.2 129		0708 6.3 193		0559 6.4 195	
1446 9.3 282		1429 8.9 271		1518 9.3 283		1458 8.8 267		1201 4.1 124		1117 3.6 110	
2349 0.4 12		2326 1.1 35				2352 1.4 44		○ 1720 8.0 243		1629 7.9 242	
11 F 0514 5.7 173		26 Sa 0507 5.6 170		11 M 0043 0.9 28		26 M 0554 5.7 175		11 W 0150 1.4 43		26 Th 0045 1.5 45	
0956 3.6 111		0932 4.3 131		0654 5.6 172		1010 4.6 139		0757 6.7 204		0640 6.7 203	
1525 9.1 276		1506 8.6 263		1041 4.7 144		1545 8.4 255		1323 4.0 123		1232 3.4 105	
○				1625 8.7 265				1827 7.1 215		1735 7.2 219	
12 Sa 0047 0.8 23		27 Su 0009 1.4 44		12 M 0144 1.2 38		27 Tu 0041 1.5 45		12 W 0230 1.7 51		27 F 0121 1.8 56	
0647 5.2 160		0626 5.3 162		0813 5.9 181		0706 5.9 180		0839 7.1 215		0717 7.0 214	
1027 4.5 136		0946 4.9 148		1219 4.9 150		1124 4.8 146		1455 3.7 113		1357 3.1 94	
1622 8.6 261		1553 8.2 249		○ 1750 8.1 246		1647 7.8 239		1947 6.2 189		1855 6.5 197	
13 Su 0157 1.1 34		28 M 0109 1.7 52		13 Tu 0244 1.4 44		28 W 0132 1.6 48		13 F 0304 2.1 63		28 Sa 0158 2.2 68	
0902 5.4 164		1704 7.6 233		0912 6.4 195		0808 6.2 190		0912 7.4 226		0754 7.5 228	
1142 5.2 158		1403 4.5 138		1403 4.5 138		1256 4.6 141		1628 3.1 94		1529 2.5 76	
○ 1754 8.0 243		1918 7.5 229		○ 1804 7.3 223		2122 5.6 171		2122 5.6 171		2027 5.9 181	
14 M 0317 1.3 41		29 Tu 0218 1.8 54		14 W 0337 1.6 48		29 Th 0222 1.8 54		14 Sa 0345 2.5 77		29 Su 0247 2.6 80	
1019 6.0 182		1000 6.0 183		0953 6.9 211		0852 6.7 204		0940 7.7 236		0834 8.0 245	
1425 5.1 154		1337 5.4 165		1530 3.9 118		1428 4.0 121		1737 2.3 70		1648 1.8 55	
1950 7.7 236		1843 7.3 223		2041 7.1 217		1930 6.9 210		2257 5.5 167		2202 5.7 174	
15 Tu 0431 1.4 42		30 W 0326 1.7 52		15 Th 0419 1.7 53		30 F 0309 1.9 59		15 Su 0430 3.1 94		30 M 0341 3.0 92	
1054 6.5 199		1021 6.5 199		1023 7.3 224		0924 7.2 219		1009 8.1 246		0921 8.6 263	
1553 4.1 126		1510 4.7 142		1642 3.2 97		1550 3.1 95		1831 1.7 51		1759 1.2 38	
2118 7.8 239		2016 7.3 222		2155 6.8 207		2058 6.6 202				2326 5.7 174	
31 Sa 0355 2.1 65						31 Sa 0949 7.7 236					
1705 2.3 69						1705 2.3 69					
2217 6.5 199						2217 6.5 199					

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

## Huangpu, China, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0438 0.9	3.3	102	16 W 0058 279	5.6	172	1 F 0122 1.4	6.2	189	1 M 0110 2049	6.8	206
1010 9.2	279		W 0512 26	4.4	133	0630 1.0	3.5	108	Sa 0638 1.0	3.3	100
1903 0.9			1048 26	8.9	272	1155 1.4	10.1	307	1156 1.6	9.7	297
			1938 42			2049 1.0		31	2026 1.6		49
●											
2 W 0036 0.7	5.8	177	17 Th 0117 22	5.9	179	2 Sa 0159 1.5	6.4	195	17 Su 0137 47	7.1	215
0535 3.5	108		W 0558 22	4.0	121	0720 1.2	3.1	93	Su 1235 1.2	2.9	88
1102 9.6	292		1130 22	9.3	283	1246 1.3	10.1	308	O 2054 1.5	9.7	296
2002 0.7			2013 22	1.5	47	2133 1.2		37			
●											
3 Th 0134 0.8	5.9	180	18 F 0139 23	6.1	185	3 Su 0235 1.6	6.6	202	18 M 0204 48	7.3	223
0628 3.7	112		F 0643 23	3.5	106	0807 1.3	2.6	190	0759 1.3	2.5	75
1154 9.9	301		1211 23	9.5	290	1332 1.3	9.9	302	1316 1.6	9.5	291
●			O 2051 23	1.6	48	2203 1.3		40	2128 1.6		50
4 F 0224 0.9	5.9	181	19 Sa 0205 27	6.3	191	4 M 0309 1.6	6.9	211	19 Tu 0232 50	7.5	230
0714 3.6	109		Sa 0729 27	3.2	98	0853 1.3	2.3	71	Tu 0847 1.6	2.0	62
1246 10.0	305		1251 27	9.6	292	1416 1.3	9.5	290	1359 1.6	9.2	281
2151 0.9			2127 27	1.6	50	2238 1.3		41	2149 1.5		47
●											
5 Sa 0311 1.0	6.0	182	20 Su 0239 32	6.4	196	5 Tu 0344 1.4	7.2	220	20 W 0257 44	7.8	238
0802 3.3	101		Su 0803 32	3.0	91	0944 1.4	2.3	70	W 0936 1.8	1.8	55
1337 9.9	303		1327 32	9.5	290	1456 1.4	8.9	271	1442 1.8	8.8	268
2239 1.0			2157 32	1.4	44	2255 1.4		42	2212 1.8		54
●											
6 Su 0356 1.1	6.1	186	21 M 0314 35	6.6	201	6 W 0413 40	7.5	228	21 Th 0320 50	8.1	246
0855 3.1	95		M 0847 35	2.7	83	1032 1.3	2.5	77	Th 1025 1.6	1.8	56
1426 9.7	297		1407 35	9.3	284	1534 1.3	8.1	247	1527 1.6	8.2	250
2315 1.1			2235 1.3		40	2317 1.6		50	2239 1.9		57
●											
7 M 0439 1.1	6.4	194	22 Tu 0351 35	6.8	207	7 Th 0438 40	7.6	233	22 F 0342 40	8.3	254
0948 3.0	90		Tu 0935 35	2.6	79	1126 1.3	2.7	83	F 1120 1.6	1.8	54
1513 9.3	283		1447 35	9.0	273	1619 1.3	7.2	219	1616 1.6	7.4	227
2352 1.1			2258 1.3		40	2336 1.2		63	2301 2.4		72
●											
8 Tu 0520 8.6	6.6	202	23 W 0423 261	7.0	212	8 F 0500 43	7.7	236	23 Sa 0409 233	8.6	262
1043 3.1	93		W 1021 261	2.6	78	1236 1.2	2.7	83	Sa 1228 1.6	1.8	56
1559 8.6			1530 261	8.5	258	1716 1.2	6.1	187	1715 1.6	6.6	201
			2333 1.4		43	2351 1.2		87	2334 3.0		91
●											
9 W 0022 7.6	1.3	41	24 Th 0451 232	7.2	219	9 Sa 0526 1.7	7.8	237	24 Su 0447 2359	8.7	265
0558 6.9	210		Th 1114 232	2.5	77	1343 1.7	2.6	79	Su 1333 1.8	1.8	56
1138 3.3	101		1620 232	7.8	237	1841 1.7	5.2	158	1839 1.7	5.7	175
1645 7.6			2352 1.7		51	● 2359 1.7		118	● 2359 3.9		118
●											
10 Th 0044 6.5	1.5	46	25 F 0517 199	7.4	227	10 Su 0002 211	3.8	116	25 M 0544 199	8.7	264
0631 7.1	215		F 1231 199	2.5	75	0607 1.6	7.8	237	M 1455 211	1.8	55
1248 3.5	106		1719 211	6.9	211	1501 1.6	2.3	71	2049 1.6	5.4	165
●											
11 F 0109 5.5	2.0	61	26 Sa 0023 168	2.2	66	11 M 0008 184	4.7	142	26 Tu 0057 184	4.7	143
0704 7.3	221		Sa 0550 168	7.7	236	0709 1.6	7.8	238	Tu 0707 1.6	8.7	264
1425 3.3	100		Sa 1347 168	2.3	70	1622 1.6	2.0	62	1625 1.6	1.6	50
1901 5.5			● 1834 168	6.0	184	2132 1.6			2253 5.8		176
●											
12 Sa 0141 4.9	2.7	83	27 Su 0058 148	2.8	84	12 Tu 0829 2018	8.1	246	27 W 0253 166	5.0	153
0741 7.4	226		Su 0634 148	8.1	246	Tu 1734 5.4		55	W 0845 1734	9.0	273
1551 2.7	82		1508 2018	2.0	61	1746 1.2			1746 1.4		42
2108 4.9											
●											
13 Su 0218 5.0	3.6	110	28 M 0737 152	3.4	105	13 W 0030 2210	5.7	175	28 Th 0432 1831	4.5	138
0825 7.7	234		M 1633 152	1.6	49	0354 1.6	5.2	157	Th 1002 1.2	9.5	38
1702 2.0	62		2210 152	5.3	163	0939 1.6	8.6	261	1851 1.2		
2317 5.0											
●											
14 M 0315 1.5	4.3	130	29 Tu 0254 47	4.0	122	14 Th 0037 2340	6.1	186	29 F 0022 1712	6.8	207
0914 8.0	245		Tu 0848 47	8.9	127	0458 1.2	4.6	140	F 0538 1.2	3.7	112
1802 1.5			1751 1.2		37	1031 1.6	9.1	278	1102 1.6	9.9	303
			2340 5.6		171	1912 1.6		49	1943 1.3		39
●											
15 Tu 0024 1.3	5.3	163	30 W 0415 41	4.2	128	15 F 0051 1853	6.4	196	30 Sa 0053 1957	7.2	218
0420 4.5	138		W 0957 41	9.4	285	0549 1.0	3.9	120	Sa 0636 1.5	2.9	87
1002 8.5	258		1858 1.0		30	1115 1.5	9.5	291	1154 1.6	10.1	307
1853 1.3											
●											
16 W 0141 1.3	5.9	181	31 Th 0040 28	5.9	181	15 W 0056 28	8.1	248	31 Su 0120 1957	7.4	226
0528 4.0	122		Th 0528 28	4.0	122	0538 1.0			Su 0724 1.6	2.5	75
1058 9.8	298		1058 0.9		28	1031 1.0			1240 1.6	9.9	301
●											

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Huangpu, China, 2008

Times and Heights of High and Low Waters

October				November				December				
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm	
1 W 0122	9.0	274	16 Th 0048	9.7	296	1 Sa 0113	9.7	296	1 M 0121	9.5	291	
0849	1.8	56	0850	1.0	31	0953	1.3	41	1010	1.6	50	
1357	8.2	249	1359	8.1	247	1522	6.9	210	1555	6.6	200	
2038	2.5	75	2002	2.6	80	2023	4.3	130	2025	4.0	123	
2 Th 0141	9.2	280	17 F 0111	10.0	306	2 Su 0137	9.7	296	2 Tu 0154	9.4	285	
0937	1.6	50	0942	0.8	24	1030	1.5	47	1048	1.7	51	
1440	7.7	235	1448	7.7	234	1604	6.6	200	1640	6.1	187	
2054	3.0	91	2039	2.9	87	2038	4.6	140	2048	4.5	137	
3 F 0159	9.4	285	18 Sa 0136	10.3	313	3 M 0205	9.5	291	2227	9.0	275	
1013	1.6	49	1024	0.9	26	1101	1.8	55	1124	1.7	53	
1523	7.3	221	1540	7.2	218	1654	6.2	189	1737	6.0	184	
2108	3.6	110	2053	3.6	109	2051	5.1	154	2130	4.9	149	
4 Sa 0217	9.4	287	19 Su 0207	10.4	316	4 Tu 0237	9.2	281	4 Th 0306	8.5	260	
1052	1.4	44	1111	0.9	28	1146	2.1	64	1201	1.7	53	
1609	6.7	205	1641	6.6	201	1811	5.9	181	1844	6.1	187	
2129	4.3	131	2123	4.4	133	2106	5.5	169	2232	5.2	160	
5 Su 0240	9.4	285	20 M 0247	10.1	308	5 W 0317	8.7	265	5 F 0356	7.9	240	
1133	1.7	53	1208	1.2	38	1238	2.3	71	1244	1.9	57	
1706	6.1	187	1803	6.2	188	Th 2049	7.0	214	1948	6.4	196	
2132	4.9	148	2147	5.2	157	●			2027	7.3	222	
6 M 0309	9.1	277	21 Tu 0341	9.6	292	6 Th 0417	8.0	245	6 Sa 0009	5.3	162	
1215	2.2	66	1317	1.6	50	1342	2.4	74	0507	7.1	215	
1844	5.7	174	2009	6.2	190	2202	6.7	205	1330	2.1	65	
2112	5.5	167	●	2258	5.9	181	●		2036	6.9	210	
7 Tu 0350	8.6	263	22 W 0505	8.9	270	7 F 0113	6.4	194	7 Su 0202	4.7	144	
1320	2.5	77	1436	1.9	57	0554	7.4	227	0645	6.3	192	
●			2144	6.8	208	1444	2.4	74	1414	2.4	73	
8 W 0500	8.1	246	23 Th 0146	5.8	178	2212	7.3	222	2108	7.4	225	
1443	2.6	80	0703	8.4	256	8 Sa 0300	5.5	169	●			
2334	6.7	205	1547	1.9	58	0746	7.1	217	●			
			2222	7.5	229	1538	2.4	73	●			
9 Th 0159	6.5	199	24 F 0323	4.9	149	2227	7.8	237	●			
0702	7.8	237	0843	8.3	254	9 Su 0406	4.5	136	●			
1556	2.5	76	1643	1.9	59	0917	7.1	217	●			
2313	7.2	220	2253	8.1	246	1622	2.5	75	●			
10 F 0338	5.7	175	25 Sa 0434	3.8	117	2243	8.3	252	●			
0842	8.0	243	1000	8.4	255	10 M 0509	3.4	104	●			
1652	2.3	69	1729	2.0	62	1034	7.3	222	●			
2320	7.7	235	2317	8.5	259	1658	2.5	76	●			
11 Sa 0434	4.8	145	26 Su 0536	3.0	92	2257	8.8	267	●			
0947	8.3	253	1102	8.3	252	104	2.1	63	●			
1738	2.1	65	1755	2.0	62	1212	6.6	201	●			
2336	8.2	249	2339	8.8	269	1739	2.7	83	●			
12 Su 0525	3.8	116	27 M 0634	2.5	75	1740	2.5	75	●			
1041	8.6	261	1156	8.1	247	2315	9.3	283	●			
1807	2.2	66	1833	2.2	66	●			●			
2351	8.6	261	2357	9.1	277	2337	9.8	298	●			
13 M 0615	2.9	89	28 Tu 0730	2.1	63	12 W 0705	1.6	49	●			
1134	8.7	264	1244	7.8	239	1230	7.5	228	●			
1841	2.1	64	1853	2.5	76	1813	2.7	82	●			
●			●			2337	9.4	287	●			
14 Tu 0008	9.0	273	29 W 0015	9.3	283	13 F 0757	1.0	29	●			
0705	2.2	66	0805	1.8	54	1319	7.4	226	●			
1223	8.6	263	1327	7.6	232	1848	2.7	83	●			
1904	2.2	68	●	1920	3.0	91	●		●			
15 W 0028	9.3	284	30 Th 0033	9.4	288	14 F 0004	10.2	311	●			
0757	1.5	46	0848	1.4	44	0849	0.6	17	●			
1311	8.4	257	1407	7.4	225	1408	7.2	220	●			
●	1941	2.2	67	1943	3.3	102	1925	3.2	98	●		
16 F 0053	9.6	293	31 F 0923	1.4	44	●			●			
1448	7.2	219	1448	7.2	219	●			●			
1958	3.8	117	1958	3.8	117	●			●			

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Hong Kong, China, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m 0125 Tu 0910 1655 2326	ft 5.2 3.3 5.9 4.4	cm 160 101 179 134	h m <b>16</b> W 0823 1607 2202	ft 5.3 2.9 5.9 3.3	cm 161 88 179 102	h m <b>1</b> F 0106 1632	ft 3.1 6.1	cm 95 185	h m <b>16</b> Sa 1659 201	ft 6.6	cm 201
0125 0910 1655 2326	5.2 3.3 5.9 4.4	160 101 179 134	<b>16</b> W 0823 1607 2202	5.3 2.9 5.9 3.3	161 88 179 102	<b>1</b> F 0106 1632	3.1 6.1	95 185	<b>16</b> Sa 1659 201	6.6	201
0427 0944 1721	4.6 3.6 6.1	139 111 187	<b>17</b> Th 0357 0856 1646 2349	4.4 3.3 6.3 2.7	134 100 192 81	<b>2</b> Sa 0151 1720	2.5 6.3	75 193	<b>17</b> Su 0118 1817	1.4 6.9	43 210
0108 0645 1019 1744	3.6 4.3 3.9 6.4	111 130 119 196	<b>18</b> F 0625 0934 1731	3.9 3.6 6.8	120 110 207	<b>3</b> Su 0225 1811	1.9 6.6	58 202	<b>18</b> M 0211 1928	1.0 7.2	30 220
0154 0836 1056 1810	2.9 4.3 4.1 6.8	89 130 126 206	<b>19</b> Sa 0111 1823	1.8 7.3	56 222	<b>4</b> M 0256 1902	1.5 7.0	47 212	<b>19</b> Tu 0252 0952 1301 2027	0.8 4.2 3.6 7.4	24 129 111 227
0232 1841	2.3 7.1	70 216	<b>20</b> Su 0213 0937 1142 1920	1.1 4.1 3.9 7.7	35 124 120 236	<b>5</b> Tu 0323 1009 1257 1951	1.3 4.3 3.9 7.3	39 130 119 222	<b>20</b> W 0327 1010 1402 2116	0.8 4.5 3.3 7.5	25 136 100 230
0306 1015 1217 1917	1.8 4.4 4.3 7.4	55 135 131 226	<b>21</b> M 0303 1012 1246 2017	0.7 4.2 3.8 8.1	21 128 117 246	<b>6</b> W 0349 1023 1353 2037	1.1 4.5 3.7 7.5	35 136 112 230	<b>21</b> Th 0358 1030 1454 2157	1.0 4.7 3.0 7.4	42 144 146 227
0339 1037 1259 1957	1.5 4.5 4.2 7.7	45 136 129 235	<b>22</b> Tu 0347 1042 1345 2109	0.5 4.3 3.7 8.3	15 132 113 252	<b>7</b> Th 0414 1045 1446 2120	1.1 4.7 3.4 7.7	35 130 104 234	<b>22</b> F 0427 1050 1541 2231	1.3 5.1 2.7 7.1	40 154 154 217
0410 1057 1343 ● 2037	1.3 4.5 4.2 7.9	40 138 127 242	<b>23</b> W 0427 1110 1441 2156	0.6 4.5 3.5 8.2	17 136 108 250	<b>8</b> F 0440 1112 1537 2202	1.2 4.9 3.2 7.6	36 149 97 232	<b>23</b> Sa 0454 1111 1624 2259	1.6 5.3 2.7 6.7	50 163 81 203
0441 1121 1430 2118	1.3 4.6 4.1 8.1	39 141 124 246	<b>24</b> W 0503 1138 1534 2235	0.9 4.7 3.4 7.9	26 142 105 242	<b>9</b> Th 0507 1142 1626 2242	1.3 5.1 3.0 7.3	39 156 156 224	<b>24</b> Sa 0518 1131 1707 2324	2.0 5.6 2.7 6.1	61 170 81 186
0511 1150 1520 2157	1.3 4.7 4.0 8.0	40 144 122 245	<b>25</b> Th 0536 1208 1625 2307	1.2 4.9 3.4 7.5	37 148 105 228	<b>10</b> F 0535 1215 1716 2324	1.5 5.3 2.8 6.9	46 162 162 209	<b>25</b> M 0540 1153 1749 2351	2.4 5.7 2.8 5.5	72 175 84 168
0542 1227 F 1613 2235	1.4 4.8 4.0 7.9	43 147 121 240	<b>26</b> F 0606 1239 1713 2332	1.6 5.1 3.5 6.9	50 154 107 210	<b>11</b> M 0602 1249 1808	1.8 5.5 2.7	55 168 82	<b>26</b> W 0600 1218 1834	2.7 5.8 2.9	83 178 88
0614 1310 1709 2313	1.6 4.9 4.0 7.5	48 150 121 229	<b>27</b> Sa 0635 1312 1802 2354	2.1 5.2 3.6 6.2	63 160 111 189	<b>12</b> Tu 0008 0629 1324 1905	6.2 2.2 5.7 2.7	188 67 174 81	<b>27</b> W 0026 0615 1248 1927	4.8 3.1 5.9 3.0	147 93 180 91
0647 1357 1807 2354	1.8 5.1 3.9 7.0	55 154 120 212	<b>28</b> Su 0700 1348 1853	2.5 5.4 3.8	76 164 115	<b>13</b> W 0101 0655 1400 2016	5.3 2.7 5.9 2.6	161 81 180 80	<b>28</b> Th 0026 0623 1325 2044	4.2 3.3 5.9 3.0	127 102 180 92
0719 1444 M 1910	2.1 5.2 3.9	64 160 118	<b>29</b> Tu 0020 0723 1426 1954	5.4 2.9 5.5 3.8	166 87 169 117	<b>14</b> Th 0222 0717 1444 2157	4.3 3.1 6.1 2.5	132 93 187 75	<b>29</b> F 0329 0603 1414 2349	3.6 3.5 5.9 2.8	110 107 180 84
0041 0751 1527 2024	6.2 2.5 5.5 3.7	189 75 168 113	<b>30</b> W 0056 0741 1506 2141	4.7 3.2 5.7 3.7	143 98 173 114	<b>15</b> F 0443 0727 1544 2355	3.6 3.4 6.4 2.0	111 104 194 60	<b>30</b> Sa 1456 2347	6.5 1.6	198 50
0257 0751 1537 M 1537	3.9 5.8 113	31 Th 0257 0751 1547	3.9 3.5 5.8	120 107 178					<b>31</b> M 1537	6.0	184

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Hong Kong, China, 2008

Times and Heights of High and Low Waters

April				May				June				
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm	
1 Tu 0050 050 1701 6.1	2.1	63	16 W 0059 1.9 0809 5.0	153	1 Th 0002 2.3 0722 5.1	70	16 F 0034 2.8 0725 5.8	85	1 Su 0002 2.9 0656 6.4	89	16 M 0022 3.7 0655 6.6	112
1229 3.9	119	1918 6.0	184	1145 3.9	120	1322 3.1	95	1334 1.8	56	1451 1.8	55	
				1740 5.8	176	1959 5.0	153	2010 4.7	142	2201 4.2	127	
2 W 0123 1.9 0827 4.7	143	17 17 0132 2.1 0823 5.3	163	2 F 0040 2.3 0738 5.5	71	17 Sa 0103 3.0 0740 6.2	92	2 M 0041 3.1 0723 7.0	96	17 Tu 0048 3.8 0720 6.9	117	
1200 4.1	124	1325 3.3	100	1251 3.2	98	1407 2.6	78	1430 1.0	32	1531 1.5	45	
1814 6.2	190	2014 5.9	181	1856 5.7	173	2057 4.9	148	2123 4.6	140	2242 4.2	128	
3 Th 0149 1.9 0835 5.0	152	18 18 0200 2.4 0838 5.7	174	3 Sa 0111 2.5 0757 6.0	75	18 Su 0128 3.2 0752 6.5	99	3 Tu 0117 3.3 0757 7.6	101	18 W 0115 3.9 0752 7.1	119	
1304 3.5	107	1410 2.8	84	1345 2.4	73	1449 2.1	64	1524 0.5	15	1609 1.3	40	
1918 6.4	194	2103 5.8	176	2008 5.6	170	2148 4.7	144	2224 4.5	138	2314 4.2	128	
4 F 0214 1.9 0853 5.4	164	19 19 0226 2.6 0851 6.1	186	4 Su 0141 2.6 0819 6.5	80	19 M 0151 3.5 0805 6.8	106	4 W 0154 3.5 0839 8.0	106	19 Th 0144 3.9 0829 7.3	120	
1357 2.8	86	1452 2.3	71	1436 1.6	49	1529 1.8	54	1618 0.2	5	1646 1.2	38	
2017 6.4	196	2146 5.5	169	2114 5.4	166	2233 4.6	141	2319 4.4	135	2341 4.2	128	
5 Sa 0239 2.0 0914 5.8	178	20 20 0249 2.9 0902 6.5	197	5 M 0210 2.8 0843 7.1	86	20 Tu 0211 3.7 0825 7.1	112	5 Th 0230 3.6 0927 8.3	110	20 F 0216 3.9 0908 7.4	120	
1445 2.2	66	1532 2.0	61	1526 1.0	29	1608 1.5	47	1712 0.1	4	1722 1.3	40	
2112 6.4	194	2226 5.3	162	2214 5.2	160	2311 4.5	138					
6 Su 0305 2.1 0938 6.4	194	21 21 0309 3.1 0915 6.8	206	6 Tu 0240 3.1 0912 7.6	94	21 W 0230 3.8 0851 7.3	117	6 F 0012 4.4 0309 3.7	133	21 Sa 0010 4.2 0255 3.9	129	
1532 1.5	47	1610 1.8	55	1617 0.5	16	1648 1.5	45	1020 8.3	252	0949 7.4	227	
● 2207 6.1	187	2303 5.1	154	2311 5.0	152	2347 4.4	134	1806 0.4	11	1757 1.4	43	
7 M 0331 2.4 1002 6.8	208	22 22 0328 3.4 0933 7.0	213	7 W 0310 3.3 0945 8.0	102	22 Th 0249 3.9 0921 7.4	120	7 Sa 0108 4.3 0352 3.9	131	22 Su 0047 4.3 0341 4.0	130	
1620 1.1	34	1649 1.7	53	1711 0.4	11	1729 1.5	46	1113 8.0	243	1029 7.3	224	
2300 5.8	176	2339 4.8	145					1857 0.8	23	1832 1.6	48	
8 Tu 0358 2.7 1027 7.2	220	23 23 0344 3.6 0955 7.1	217	8 Th 0008 4.7 0338 3.6	143	23 F 0023 4.3 0308 4.0	131	8 Su 0212 4.3 0443 4.1	132	23 M 0133 4.3 0438 4.0	132	
1710 0.9	27	1730 1.7	53	1024 8.1	247	0955 7.4	226	1207 7.5	228	1110 7.1	217	
2355 5.2	160			1808 0.5	15	1811 1.6	49	1947 1.3	39	1906 1.7	52	
9 W 0424 3.1 1055 7.4	227	24 24 0018 4.5 0357 3.8	115	9 F 0110 4.4 0405 3.8	133	24 M 0107 4.2 0327 4.0	128	9 M 0321 4.5 0552 4.3	137	24 Tu 0228 4.5 0545 4.1	136	
1805 0.9	27	1021 7.2	218	1109 8.0	243	1032 7.3	223	1303 6.8	208	1303 6.8	206	
		1814 1.9	57	1910 0.8	24	1855 1.8	54	2034 1.8	54	2034 1.8	58	
10 Th 0055 4.7 0447 3.4	143	25 25 0104 4.2 0406 3.9	129	10 Sa 1200 7.6 2015 1.2	231	25 Su 1114 7.1 1940 1.9	217	10 Tu 0416 4.8 0715 4.4	145	25 W 0318 4.7 0655 4.0	142	
1126 7.5	228	1051 7.1	216	21 21 0205 1.2	37	1940 5.9	59	1408 6.1	133	1242 6.3	191	
1908 1.1	33	1904 2.0	62					2120 2.2	68	2017 2.1	64	
11 F 0209 4.2 0503 3.7	127	26 26 1127 6.9 2003 2.2	211	11 Su 1303 7.1 2121 1.6	215	26 M 1200 6.8 2027 2.1	208	11 W 0458 5.1 0851 4.3	155	26 Th 0359 4.9 0809 3.9	150	
1206 7.3	223			2121 1.6	49	2027 6.8	63	1532 5.4	165	1343 5.6	172	
2023 1.3	41					2204 2.6	80	2204 2.6	80	2053 2.4	72	
12 Sa 1303 7.0 2151 1.6	213	27 27 1214 6.7 2111 2.3	203	12 M 1431 6.5 2224 2.0	197	27 Tu 1257 6.5 2114 2.2	197	12 Th 0531 5.4 1049 4.0	164	27 F 0432 5.2 0933 3.5	159	
				197 60		2114 2.2	67	1702 4.8	147	1508 5.0	151	
								2244 3.0	90	2131 2.7	81	
13 Su 1437 6.6 2314 1.7	200	28 28 1320 6.4 2223 2.3	194	13 Tu 0632 4.8 0855 4.7	147	28 W 0532 4.7 0811 4.5	143	13 M 0558 5.7 1221 3.5	174	28 F 0500 5.6 1104 3.0	172	
				181 70		1408 6.0	183	1827 4.4	135	1701 4.4	133	
						2201 2.3	71	2321 3.2	98	2211 3.0	91	
14 M 1635 6.3 1635 1.6	191	29 29 1447 6.1 2322 2.3	186	14 W 0647 5.1 1109 4.3	156	29 Th 0551 5.0 0953 4.2	152	14 Sa 0619 6.0 1321 2.9	183	29 F 0529 6.1 1224 2.2	187	
				1742 5.5	169	1535 5.5	169	1952 4.2	128	1853 4.0	123	
				2359 2.6	78	2246 2.5	76	2353 3.4	105	2256 3.2	99	
15 Tu 0016 1.8 0805 4.8	55	30 30 0718 4.8 1012 4.5	146	15 Th 0707 5.5 1228 3.7	167	30 F 0612 5.3 1123 3.5	163	15 Su 0636 6.3 1409 2.3	191	30 M 0601 6.7 1331 1.3	205	
1106 4.5	136	1617 5.9	180	1855 5.2	160	1710 5.2	157	2105 4.2	127	2031 4.0	121	
1808 6.1	187					2327 2.7	82			2341 3.4	105	
						31 Sa 0634 5.8 1234 2.7	177					
						1844 4.9	148					

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Hong Kong, China, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0643	7.3	222	16 W 0652	6.8	208	1 F 0121	3.6	110	1 M 0326	2.9	89
1431	0.7	21	1527	1.3	40	0839	7.9	242	0140	3.8	117
2141	4.0	123	2238	4.1	125	1601	0.4	13	0814	7.3	221
			● 2250	4.4	135	1555	1.5	45	1628	2.0	60
						2228	4.8	146	2254	5.9	180
									16 Tu 0322	2.9	87
									0941	7.0	213
									1553	2.4	74
									2225	6.4	196
2 W 0032	3.6	109	17 Th 0039	4.0	121	2 Sa 0224	3.4	104	2 Tu 0413	2.8	85
0734	7.7	236	0735	7.1	215	0935	7.9	242	0900	7.3	224
1526	0.3	8	1600	1.2	36	1639	0.7	20	1619	1.6	48
2232	4.1	126	2254	4.2	127	2319	4.7	143	● 2252	5.1	154
									2317	6.2	190
3 Th 0122	3.6	110	18 F 0129	3.9	119	3 Su 0322	3.2	99	3 W 0459	2.8	85
0832	8.1	246	0821	7.3	222	1024	7.7	236	0943	7.3	222
1617	0.1	3	1630	1.2	36	1713	1.0	32	1643	1.7	52
● 2316	4.2	128	○ 2312	4.3	131	2350	5.0	152	2319	5.3	163
									2341	6.4	196
4 F 0214	3.6	110	19 Sa 0220	3.8	116	4 M 0417	3.1	96	4 Th 0544	2.9	88
0930	8.2	250	0905	7.4	225	1107	7.3	222	1025	7.1	215
1704	0.2	6	1659	1.2	38	1744	1.5	46	1708	1.9	58
2356	4.3	131	2336	4.4	135				2350	5.6	171
5 Sa 0309	3.6	109	20 Su 0314	3.7	113	5 Tu 0022	5.3	161	5 W 0502	2.9	88
1025	8.1	246	0947	7.4	225	0508	3.1	96	1109	6.6	202
1747	0.5	16	1727	1.4	42	1144	6.7	203	1734	2.1	65
						1812	2.0	60			
									5 F 0006	6.5	199
									0632	3.0	92
									1244	4.9	150
									1752	3.5	106
6 Su 0038	4.4	135	21 M 0007	4.6	140	6 W 0056	5.5	168	21 Th 0021	5.8	178
0408	3.6	110	0408	3.6	110	0559	3.2	99	0552	2.7	83
1115	7.7	235	1027	7.3	221	1216	5.9	181	1156	6.0	184
1827	1.0	30	1755	1.5	47	1838	2.4	74	1800	2.5	75
7 M 0121	4.6	141	22 Tu 0044	4.8	146	7 Th 0131	5.7	174	22 F 0052	6.1	185
0508	3.7	112	0502	3.5	108	0652	3.4	103	0646	2.6	80
1201	7.2	218	1107	7.0	212	1250	5.2	158	1252	5.3	162
1904	1.5	46	1823	1.7	52	1901	2.8	86	1825	2.9	87
8 Tu 0207	4.9	148	23 W 0124	5.0	151	8 F 0206	5.9	179	23 Sa 0124	6.3	192
0608	3.8	115	0556	3.4	105	0754	3.5	106	0751	2.6	78
1243	6.4	195	1149	6.5	197	1343	4.5	136	1408	4.6	139
1938	2.0	61	1852	2.0	60	1919	3.2	97	1848	3.2	98
9 W 0253	5.1	156	24 Th 0204	5.2	158	9 Sa 0242	6.0	182	24 Su 0201	6.5	198
0711	3.8	117	0654	3.3	102	0934	3.4	104	0917	2.4	74
1325	5.6	171	1237	5.8	177	1549	3.9	118	1601	3.9	120
2010	2.5	75	1921	2.3	69	● 1928	3.5	107	● 1904	3.6	109
10 Th 0334	5.4	164	25 F 0241	5.4	165	10 Su 0320	6.1	185	25 M 0253	6.7	204
0824	3.9	118	0759	3.1	96	1211	3.0	90	1103	2.1	63
1424	4.9	148	1339	5.1	154						
● 2040	2.9	87	1950	2.6	80						
11 F 0410	5.6	171	26 Sa 0316	5.7	175	11 M 0402	6.2	189	26 Tu 0403	6.9	210
1015	3.7	112	0920	2.9	88	1315	2.4	73	1231	1.6	49
1614	4.2	128	1517	4.3	130						
2108	3.2	97	● 2019	3.0	91						
12 Sa 0440	5.8	178	27 Su 0353	6.1	186	12 Tu 0449	6.4	194	27 W 0522	7.1	217
1220	3.1	96	1058	2.4	73	1357	1.9	59	1333	1.2	37
1812	3.8	116	1727	3.7	114						
2135	3.5	106	2049	3.3	101						
13 Su 0508	6.0	184	28 M 0436	6.5	199	13 W 0541	6.6	200	28 Th 0639	7.3	234
1326	2.5	77	1227	1.7	53	1433	1.6	50	1419	4.5	137
14 M 0537	6.3	192	29 Tu 0529	7.0	212	14 Th 0634	6.8	208	14 F 0031	4.0	122
1412	2.0	61	1337	1.1	33	1504	1.5	45	0747	7.6	231
						2201	4.4	133	1457	1.1	33
									2146	4.8	146
15 Tu 0611	6.6	200	30 W 0631	7.3	224	15 F 0041	4.1	124	15 Th 0138	3.6	109
1451	1.6	48	1433	0.6	19	0725	7.1	215	0845	7.7	234
			2152	4.0	122	1531	1.4	43	1530	1.3	39
						2211	4.5	138	2208	5.1	156
16 Th 0737	7.7	235	31 Th 0012	3.8	115				31 Su 0235	3.2	98
			1520	0.4	12				0935	7.5	230
			2221	4.2	128				1600	1.6	48
									● 2230	5.5	168

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Hong Kong, China, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
1 W	0405 2.6 78	16 Th	0400 1.8 55	1 Sa	0520 2.3 71	16 Su	0541 1.0 29	1 M	0555 2.1 65	16 Tu	0625 1.0 30
1053 6.2 188	1040 6.2 189	1216 5.2 158	1243 5.2 159	1251 4.9 150	1329 5.0 152	1329 5.0 152	1328 4.5 137	1515 4.8 145	1630 4.5 137	1217 4.8 145	1328 8.3 254
1559 3.4 103	1527 3.6 109	1536 4.6 141	1543 4.6 140	1543 4.6 140	2228 8.9 270	2213 8.1 247	2213 8.1 247	2213 8.1 247	2328 8.3 254	1217 4.8 145	1328 8.3 254
2207 7.3 221	2148 8.0 244	2158 8.1 246	2228 8.9 270	2228 8.9 270	2228 8.9 270	2228 8.9 270	2228 8.9 270	2228 8.9 270	2328 8.3 254	1217 4.8 145	1328 8.3 254
2 Th	0447 2.5 77	17 F	0448 1.5 46	2 Su	0603 2.5 76	17 M	0638 1.2 38	2 Tu	0635 2.3 71	17 W	0712 1.5 46
1130 5.7 174	1134 5.8 178	1302 5.0 152	1353 5.1 154	1613 4.8 147	2250 7.9 240	1430 5.1 156	1734 4.7 142	1734 4.7 142	1734 4.7 142	1430 5.1 156	1734 4.7 142
1618 3.7 113	1553 3.9 118	1543 4.8 145	2228 7.9 242	2316 8.5 260	2316 8.5 260	2316 8.5 260	2316 8.5 260	2316 8.5 260	2316 8.5 260	1430 5.1 156	1734 4.7 142
2226 7.4 225	2213 8.3 252	2228 7.9 242	2228 7.9 242	2228 7.9 242	2228 7.9 242	2228 7.9 242	2228 7.9 242	2228 7.9 242	2228 7.9 242	1430 5.1 156	1734 4.7 142
3 F	0529 2.6 79	18 Sa	0541 1.4 44	3 M	0651 2.7 82	18 Tu	0738 1.6 50	3 W	0715 2.5 77	18 Th	0017 7.6 232
1209 5.3 162	1233 5.4 165	1619 4.2 128	2303 7.7 236	0745 2.9 88	0839 2.1 64	0839 2.1 64	0839 2.1 64	0839 2.1 64	0839 2.1 64	0756 2.1 63	1530 5.3 163
1634 4.0 122	1619 4.2 128	2244 8.3 254	2244 8.3 254	2346 7.4 226	2346 7.4 226	2346 7.4 226	2346 7.4 226	2346 7.4 226	2346 7.4 226	1848 4.8 146	1848 4.8 146
2249 7.4 226	2244 8.3 254	2244 8.3 254	2244 8.3 254	2244 8.3 254	2244 8.3 254	2244 8.3 254	2244 8.3 254	2244 8.3 254	2244 8.3 254	1848 4.8 146	1848 4.8 146
4 Sa	0615 2.8 84	19 Su	0640 1.6 49	4 Tu	0745 2.9 88	19 W	0011 7.9 242	4 Th	0755 2.8 84	19 F	0109 6.8 206
1255 4.9 150	1343 5.0 153	1640 4.5 137	2346 7.4 226	0839 2.1 64	0839 2.1 64	0839 2.1 64	0839 2.1 64	0839 2.1 64	0839 2.1 64	0839 2.1 64	1621 5.7 173
1644 4.3 130	1640 4.5 137	2323 8.2 250	2323 8.2 250	2323 8.2 250	2323 8.2 250	2323 8.2 250	2323 8.2 250	2323 8.2 250	2323 8.2 250	2015 4.8 147	1621 5.7 173
2316 7.3 224	2323 8.2 250	2323 8.2 250	2323 8.2 250	2323 8.2 250	2323 8.2 250	2323 8.2 250	2323 8.2 250	2323 8.2 250	2323 8.2 250	2015 4.8 147	1621 5.7 173
5 Su	0707 2.9 89	20 M	0749 1.9 57	5 W	0846 3.1 93	20 Th	0128 7.3 221	5 F	0015 7.0 214	20 Sa	0236 5.9 179
1406 4.6 139	1406 4.6 139	1748 5.6 172	1748 5.6 172	1748 5.6 172	1748 5.6 172	1748 5.6 172	1748 5.6 172	1748 5.6 172	1748 5.6 172	0921 3.1 95	1702 6.0 184
1638 4.4 135	1638 4.4 135	1944 5.4 166	1944 5.4 166	1944 5.4 166	1944 5.4 166	1944 5.4 166	1944 5.4 166	1944 5.4 166	1944 5.4 166	1702 6.0 184	2221 4.6 140
2351 7.2 220	2351 7.2 220	2243 5.1 154	2243 5.1 154	2243 5.1 154	2243 5.1 154	2243 5.1 154	2243 5.1 154	2243 5.1 154	2243 5.1 154	2221 4.6 140	2221 4.6 140
6 M	0816 3.1 94	21 Tu	0015 7.9 240	6 Th	0046 7.1 215	21 F	0333 6.6 201	6 Sa	0115 6.4 196	21 Su	0441 5.1 156
0908 2.1 65	0908 2.1 65	0950 3.1 96	0950 3.1 96	1036 3.0 91	1036 3.0 91	1036 3.0 91	1036 3.0 91	0918 3.1 95	1003 3.5 106	1003 3.5 106	1737 6.4 194
0956 3.1 95	0956 3.1 95	1813 6.0 182	1813 6.0 182	1813 6.0 182	1813 6.0 182	1813 6.0 182	1813 6.0 182	1727 5.7 173	1727 5.7 173	1727 5.7 173	1737 6.4 194
●	●	2243 5.1 154	2243 5.1 154	2243 5.1 154	2243 5.1 154	2243 5.1 154	2243 5.1 154	2130 4.9 150	2130 4.9 150	2130 4.9 150	1737 6.4 194
7 Tu	0038 7.0 214	22 W	0141 7.4 226	7 F	0214 6.7 203	22 Sa	0517 6.1 186	7 Su	0245 5.8 178	22 M	0026 4.0 121
0956 3.1 95	1028 2.3 71	1028 2.3 71	1028 2.3 71	1048 3.2 98	1048 3.2 98	1123 3.3 101	1123 3.3 101	1001 3.3 101	1001 3.3 101	0621 4.7 143	1044 3.8 116
●	●	1852 5.7 173	1852 5.7 173	2204 5.3 163	2204 5.3 163	1838 6.4 194	1838 6.4 194	1748 6.0 184	1748 6.0 184	1807 6.7 203	1832 6.9 211
8 W	0150 6.8 207	23 Th	0351 7.0 214	8 Sa	0353 6.3 193	23 Su	0016 4.4 134	8 M	0443 5.3 163	23 Tu	0130 3.2 99
1129 3.0 91	1134 2.5 76	1925 5.6 170	1925 5.6 170	1856 6.0 182	1856 6.0 182	1201 3.6 109	1201 3.6 109	1044 3.5 107	1044 3.5 107	0755 4.5 137	1124 4.0 123
2233 5.3 161	2233 5.3 161	2339 4.8 145	2339 4.8 145	1901 6.7 205	1901 6.7 205	1901 6.7 205	1901 6.7 205	1810 6.5 198	1810 6.5 198	1832 6.9 211	1832 6.9 211
9 Th	0318 6.7 203	24 F	0533 6.8 208	9 Su	0522 6.1 187	24 M	0115 3.7 112	9 Tu	0024 3.5 106	24 W	0214 2.6 80
1222 2.9 87	1223 2.7 82	1935 5.9 179	1935 5.9 179	1207 3.3 102	1207 3.3 102	1910 6.3 193	1910 6.3 193	0628 5.1 154	0628 5.1 154	0909 4.5 138	1201 4.2 128
297 2.9 87	297 2.9 87	1952 6.3 191	1952 6.3 191	1928 6.8 208	1928 6.8 208	1928 6.8 208	1928 6.8 208	1900 7.6 232	1900 7.6 232	1855 7.2 219	1855 7.2 219
10 F	0441 6.6 202	25 Sa	0006 4.7 142	10 M	0041 4.0 121	25 Tu	0201 3.1 93	10 W	0122 2.6 78	25 Th	0252 2.1 65
1257 2.8 85	1257 2.8 85	0650 6.7 203	0650 6.7 203	0640 6.0 183	0640 6.0 183	1238 3.5 106	1238 3.5 106	0852 5.3 163	0852 5.3 163	1000 4.6 140	1235 4.3 131
2002 5.5 167	2002 5.5 167	1300 2.9 89	1300 2.9 89	1238 3.5 106	1238 3.5 106	1928 6.8 208	1928 6.8 208	1302 4.0 123	1302 4.0 123	1207 3.9 118	1207 3.9 118
2352 4.8 146	2352 4.8 146	1952 6.3 191	1952 6.3 191	1928 6.8 208	1928 6.8 208	1928 6.8 208	1928 6.8 208	1900 7.6 232	1900 7.6 232	1920 7.4 227	1920 7.4 227
11 Sa	0553 6.7 203	26 Su	0106 4.0 121	11 Tu	0132 3.1 96	26 W	0242 2.6 78	11 Th	0215 1.7 52	26 F	0328 1.8 54
1323 2.8 85	1323 2.8 85	0753 6.5 198	0753 6.5 198	0752 5.9 180	0752 5.9 180	1308 3.6 110	1308 3.6 110	0945 5.2 160	0945 5.2 160	1036 4.7 142	1307 4.4 133
2009 5.8 176	2009 5.8 176	1330 3.2 97	1330 3.2 97	1308 3.6 110	1308 3.6 110	1948 7.4 225	1948 7.4 225	1327 4.2 129	1327 4.2 129	1307 4.4 133	1950 7.7 234
2009 6.7 203	2009 6.7 203	2009 6.7 203	2009 6.7 203	1948 7.4 225	1948 7.4 225	1951 7.7 236	1951 7.7 236	1247 4.0 122	1247 4.0 122	1307 4.4 133	1950 7.7 234
12 Su	0053 4.2 128	27 M	0155 3.3 102	12 W	0220 2.3 71	27 Th	0322 2.2 66	12 F	0306 1.0 31	27 Sa	0402 1.6 48
0657 6.7 204	0847 6.3 192	1357 3.4 105	1357 3.4 105	1056 5.8 178	1056 5.8 178	1338 3.8 115	1338 3.8 115	1029 5.2 158	1029 5.2 158	1103 4.7 143	1340 4.4 133
1346 2.9 87	1346 2.9 87	2025 7.1 216	2025 7.1 216	2010 7.9 242	2010 7.9 242	2010 7.9 242	2010 7.9 242	1351 4.4 134	1351 4.4 134	2024 7.9 240	2024 7.9 240
2024 6.2 188	2024 6.2 188	2025 7.1 216	2025 7.1 216	2010 7.9 242	2010 7.9 242	2010 7.9 242	2010 7.9 242	1351 4.4 134	1351 4.4 134	2024 7.9 240	2024 7.9 240
13 M	0143 3.5 108	28 Tu	0238 2.9 87	13 Th	0307 1.6 50	28 F	0400 2.0 60	13 Sa	0357 0.6 18	28 Su	0436 1.5 47
0756 6.7 204	0936 6.1 186	1421 3.7 113	1421 3.7 113	1409 4.0 121	1409 4.0 121	2036 8.5 258	2036 8.5 258	1107 5.1 156	1107 5.1 156	1126 4.7 143	1414 4.3 132
1409 3.0 91	1409 3.0 91	2038 7.4 227	2038 7.4 227	2036 8.5 258	2036 8.5 258	2035 8.2 249	2035 8.2 249	1413 4.6 139	1413 4.6 139	2101 8.0 244	2101 8.0 244
2043 6.7 203	2043 6.7 203	● 2052 7.8 237	● 2052 7.8 237	2108 8.8 269	2108 8.8 269	2105 8.2 251	2105 8.2 251	1413 4.6 139	1413 4.6 139	2101 8.0 244	2101 8.0 244
14 Tu	0229 2.9 88	29 W	0320 2.5 76	14 F	0356 1.1 35	29 Sa	0438 1.9 58	14 Su	0447 0.5 14	29 M	0508 1.6 49
0852 6.6 202	1019 5.8 178	1444 4.0 121	1444 4.0 121	1441 4.2 127	1441 4.2 127	2108 8.8 269	2108 8.8 269	1141 5.1 154	1141 5.1 154	1149 4.7 144	1453 4.3 131
1434 3.1 95	1434 3.1 95	2104 7.2 218	2104 7.2 218	2108 8.8 269	2108 8.8 269	2105 8.2 251	2105 8.2 251	1434 4.6 139	1434 4.6 139	2138 8.0 245	2138 8.0 245
2104 7.2 218	● 2104 7.2 218	● 2052 7.8 237	● 2052 7.8 237	2108 8.8 269	2108 8.8 269	2105 8.2 251	2105 8.2 251	1434 4.6 139	1434 4.6 139	2138 8.0 245	2138 8.0 245
15 W	0314 2.3 69	30 Th	0400 2.3 70	15 Sa	0447 0.9 28	30 Su	0517 2.0 60	15 M	0537 0.6 19	30 Tu	0539 1.8 54
0946 6.5 197	1100 5.6 171	1504 4.2 129	1504 4.2 129	1145 5.4 166	1145 5.4 166	1512 4.4 133	1512 4.4 133	1454 4.7 143	1454 4.7 143	1217 4.8 145	1536 4.3 131
1500 3.3 101	1500 3.3 101	2109 8.0 243	2109 8.0 243	2145 9.0 274	2145 9.						

**Haikou, China, 2008**

## Times and Heights of High and Low Waters

January					February					March													
Time		Height		Time		Height		Time		Height		Time		Height									
<b>1</b> Tu	h m 0309	ft 5.3	cm 162	<b>16</b> W	0150 0801	5.2 4.1	159 126	<b>1</b> F	0108 1140	ft 7.1 2.9	cm 217 88	<b>16</b> Sa	0053 1229	ft 7.9 1.7	cm 240 53	<b>1</b> Sa	0031 0903	ft 7.3 2.7	cm 224 82	<b>16</b> Su	0026 1342	ft 8.1 1.5	cm 248 47
	0800	4.8	145		1414	6.1	187																
	1303	5.9	180	O	2015	4.4	133																
	2104	4.7	142																				
<b>2</b> W	0221	5.8	176	<b>17</b> Th	0131 1002	5.9 3.3	180 102	<b>2</b> Sa	0146 1345	7.3 2.5	222 75	<b>17</b> Su	0141 1455	8.0 1.1	245 34	<b>2</b> Su	0101 1422	7.2 2.5	220 77	<b>17</b> M	0142 1453	7.7 1.3	236 41
	1007	4.2	128		1614	5.3	162																
	1516	5.1	155		1935	5.0	153																
	1752	5.0	151																				
<b>3</b> Th	0212	6.4	196	<b>18</b> F	0140 1150	6.8 2.4	208 73	<b>3</b> Su	0233 1529	7.2 1.9	220 58	<b>18</b> M	0346 1603	7.9 0.7	240 20	<b>3</b> M	0041 1519	7.1 2.0	216 62	<b>18</b> Tu	0408 1528	7.4 1.4	226 44
	1204	3.4	104																				
<b>4</b> F	0234	7.0	213	<b>19</b> Sa	0210 1338	7.6 1.5	233 46	<b>4</b> M	0428 1626	7.1 1.4	217 44	<b>19</b> Tu	0536 1643	7.8 0.6	237 19	<b>4</b> Tu	0041 1546	7.1 1.7	215 52	<b>19</b> W	0536 1540	7.3 1.7	221 51
	1326	2.7	81																				
<b>5</b> Sa	0315	7.3	223	<b>20</b> Su	0301 1531	8.1 0.8	246 23	<b>5</b> Tu	0600 1701	7.2 1.1	219 35	<b>20</b> W	0654 1702	7.7 0.8	235 25	<b>5</b> W	0520 1551	7.0 1.5	214 46	<b>20</b> Th	0656 1542 2229	7.2 1.9 5.5	220 58 167
	1442	2.0	62																				
<b>6</b> Su	0418	7.4	226	<b>21</b> M	0455 1651	8.1 0.2	248 7	<b>6</b> W	0702 1714	7.3 1.0	222 32	<b>21</b> Th	0757 1702	7.6 1.1	233 33	<b>6</b> Th	0615 1559	7.2 1.3	219 41	<b>21</b> F	0133 0810 1556 2202	5.1 7.3 2.2 5.4	154 223 67 164
	1600	1.6	49																				
<b>7</b> M	0558	7.4	226	<b>22</b> Tu	0644 1744	8.2 0.1	249 2	<b>7</b> Th	0745 1715	7.4 1.0	226 30	<b>22</b> F	0848 1711 2350	7.6 1.4 5.2	232 43 159	<b>7</b> F	0710 1619 2335	7.4 1.3 5.5	225 41 168	<b>22</b> Sa	0225 0910 1617 2152	4.1 7.4 2.8 5.5	126 225 85 168
	1707	1.3	39																				
<b>8</b> Tu	0720	7.5	228	<b>23</b> W	0800 1817	8.1 0.3	247 9	<b>8</b> F	0817 1731	7.5 1.0	230 31	<b>23</b> Sa	0315 0933 1729 2332	4.6 7.5 1.9 5.2	140 229 59 157	<b>8</b> Sa	0230 0816 1644 2301	5.1 7.6 1.6 5.2	156 232 50 160	<b>23</b> Su	0316 1001 1633 2142	3.2 7.3 3.5 5.8	98 223 108 177
	1756	1.1	34																				
<b>9</b> W	0818	7.6	231	<b>24</b> Th	0857 1829	8.0 0.7	243 21	<b>9</b> Sa	0857 1755	7.7 1.3	234 39	<b>24</b> Su	0405 1021 1747 2318	3.8 7.3 2.7 5.3	115 224 83 163	<b>9</b> Su	0322 0927 1706 2244	4.2 7.8 2.2 5.2	128 238 68 158	<b>24</b> M	0408 1050 1641 2135	2.5 7.1 4.2 6.3	75 216 129 193
	1823	1.1	34																				
<b>10</b> Th	0857	7.6	232	<b>25</b> F	0936 1833	7.8 1.1	237 35	<b>10</b> Su	0100 0410 0954 1819	5.2 4.8 7.7 1.8	159 145 235 54	<b>25</b> M	0455 1114 1755 2305	3.1 7.0 3.5 5.8	95 213 107 178	<b>10</b> M	0413 1038 1722 2229	3.2 7.8 3.1 5.5	98 238 95 168	<b>25</b> Tu	0459 1139 1643 2145	2.0 6.7 4.6 6.9	60 203 141 211
	1827	1.2	36																				
<b>11</b> F	0913	7.6	232	<b>26</b> Sa	1004 1849	7.5 1.7	230 53	<b>11</b> M	0031 0501 1103 1836	5.0 4.1 7.5 2.6	153 124 230 78	<b>26</b> Tu	0548 1208 1752 2305	2.7 6.5 4.0 6.5	81 197 123 197	<b>11</b> Tu	0505 1147 1733 2225	2.3 7.5 4.1 6.2	70 228 124 190	<b>26</b> W	0547 1234 1648 2211	1.8 6.1 4.8 7.3	54 187 146 224
	1843	1.3	40																				
<b>12</b> Sa	0929	7.7	234	<b>27</b> Su	0136 0450 1041 1907	5.1 4.6 7.3 2.6	154 139 221 78	<b>12</b> Tu	0013 0554 1216 1847 2357	5.1 3.4 7.2 3.4 5.6	156 104 218 105 171	<b>27</b> W	0643 1304 1748 2324 2354	2.5 5.8 4.2 7.0 7.3	76 177 129 214 223	<b>12</b> Tu	0558 1258 1739 2238	1.6 6.8 4.9 7.2	48 207 149 218	<b>27</b> Th	0627 1342 1659 2247	1.8 5.5 5.0 7.5	56 169 151 229
	1910	1.5	47																				
<b>13</b> Su	1011	7.6	233	<b>28</b> M	0108 0544 1135 1916	5.1 4.0 6.8 3.4	155 122 207 105	<b>13</b> W	0653 1332 1850 2359	2.8 6.4 4.3 6.5	85 196 130 197	<b>28</b> Th	0737 1406 1749 2354	2.5 5.1 4.3 7.3	76 154 132 223	<b>13</b> Th	0653 1431 1730 2305	1.2 5.8 5.3 7.9	37 177 163 240	<b>28</b> F	0654 2324	2.0 7.5	60 228
	1940	2.0	61																				
<b>14</b> M	1113	7.4	225	<b>29</b> Tu	0042 0645 1239 1907	5.4 3.6 6.1 4.1	166 111 187 124	<b>14</b> Th	0804 1459 1833 1840	2.3 5.4 4.8	71 165 147 131	<b>29</b> F	0826 2342 1833 1840	2.6 5.1 4.8 1.0	79 123 147 131	<b>14</b> F	0752 2342 1833 1840	1.2 8.2 8.2 1.0	38 251 251 131	<b>29</b> Sa	0718 2342 1833 1840	2.1 7.3 2.1 1.0	65 223 223 131
	2004	2.7	81																				
<b>15</b> Tu	0229	5.1	154	<b>30</b> W	0029 0802 1350 1840	6.1 3.4 5.3 4.3	185 104 163 131	<b>15</b> F	0019 0935	7.3 2.0	223 61					<b>15</b> Sa	0906	1.6	50	<b>30</b> Su	0758 2300	2.3 7.3	71 221
	0636	4.7	143																				
	1234	6.9	209																				
	2016	3.5	107																				
				<b>31</b> Th	0040 0941 1514 1812	6.7 3.2 4.5 4.3	204 97 138 130									<b>31</b> M	0901 1115 1335 2307	2.7 2.9 2.7 7.3	82 87 82 221				

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

# Haikou, China, 2008

Times and Heights of High and Low Waters

April					May					June													
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height									
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm									
<b>1</b> Tu	1406 2353	2.4 7.1	74 216	<b>16</b> W	0327 1409	6.8 2.5	207 75	<b>1</b> Th	0057 1309 2114 2344	6.8 2.6 6.1 5.9	207 80 186 181	<b>16</b> F	0740 1312 1841	6.0 4.0 5.6	184 123 172	<b>1</b> Su	0044 0721 1242 1709	3.3 6.0 4.9 5.9	102 183 148 181	<b>16</b> M	0155 1655	1.6 7.1	50 217
<b>2</b> W	1420	2.2	67	<b>17</b> Th	0544 1421 2047	6.6 2.8 5.6	202 85 170	<b>2</b> F	0341 1343 2033	6.5 2.9 5.7	197 88 173	<b>17</b> Sa	0041 0854 1332 1821	3.6 6.2 4.8 6.0	110 190 146 183	<b>2</b> M	0143 0932 1255 1719	1.9 6.2 5.7 6.8	59 190 175 208	<b>17</b> Tu	0301 1759	1.1 7.3	35
<b>3</b> Th	0343 1440 2236	6.9 2.0 6.1	209 62 186	<b>18</b> F	0037 0754 1442 2026	4.9 6.8 3.2 5.6	149 206 99 171	<b>3</b> Sa	0047 0630 1411 1944	4.9 6.6 3.4 5.5	148 201 104 167	<b>18</b> Su	0144 0948 1341 1810	2.6 6.3 5.4 6.5	78 191 165 199	<b>3</b> Tu	0242 1754	0.7 7.6	22 233	<b>18</b> W	0408 1915	0.9 7.3	28
<b>4</b> F	0046 0546 1506 2155	5.9 7.0 2.1 5.6	181 213 64 172	<b>19</b> Sa	0135 0904 1503 2014	3.8 7.0 3.9 5.8	117 212 119 178	<b>4</b> Su	0142 0820 1432 1913	3.5 7.0 4.3 5.7	108 212 130 175	<b>19</b> M	0241 1040 1340 1829	1.7 6.2 5.7 7.1	52 188 175 215	<b>4</b> W	0346 1855	-0.1 8.2	-2 249	<b>19</b> Th	0515 2022	0.8 7.4	25
<b>5</b> Sa	0140 0731 1532 2125	5.0 7.3 2.5 5.4	152 222 76 165	<b>20</b> Su	0230 0952 1518 2003	2.8 7.0 4.6 6.2	86 213 140 190	<b>5</b> M	0235 0943 1447 1905	2.2 7.2 5.2 6.5	66 219 159 198	<b>20</b> Tu	0337 1138 1349 1910	1.2 6.1 5.9 7.3	37 185 179 224	<b>5</b> Th	0500 2016	-0.4 8.4	-13 257	<b>20</b> F	0610 2117	0.9 7.4	26
<b>6</b> Su	0232 0856 1553 ●	3.8 7.6 3.2 5.5	117 232 98 167	<b>21</b> M	0323 1037 1524 2004	2.0 6.8 5.2 6.8	61 208 157 207	<b>6</b> Tu	0329 1109 1459 1923	1.0 7.2 6.1 7.4	29 218 185 225	<b>21</b> W	0429 2007	1.0 7.5	31 228	<b>6</b> F	0628 2129	-0.5 8.4	-14 257	<b>21</b> Sa	0641 2157	0.9 7.3	28
<b>7</b> M	0324 1008 1609 2050	2.6 7.7 4.2 6.0	79 236 127 184	<b>22</b> Tu	0415 1128 1528 2026	1.5 6.5 5.4 7.3	46 199 165 221	<b>7</b> W	0424 1259 1509 2002	0.1 7.0 6.7 8.1	4 212 203 248	<b>22</b> Th	0517 2108	1.1 7.5	33 228	<b>7</b> Sa	0743 2226	-0.2 8.2	-5 250	<b>22</b> Su	0658 2219	1.0 7.2	32
<b>8</b> Tu	0416 1120 1620 2055	1.5 7.5 5.1 6.9	45 230 156 210	<b>23</b> W	0503 1231 1541 2104	1.3 6.2 5.5 7.5	40 188 168 229	<b>8</b> Th	0522 2059	-0.2 8.5	-6 260	<b>23</b> F	0552 2201	1.2 7.4	37 227	<b>8</b> Su	0835 2306	0.4 7.8	11 238	<b>23</b> M	0727 2228	1.2 7.2	37
<b>9</b> W	0508 1242 1629 2119	0.7 7.0 5.9 7.8	21 212 179 237	<b>24</b> Th	0541 1356 1558 2151	1.4 5.9 5.7 7.6	42 179 173 231	<b>9</b> F	0628 2204	0.0 8.6	0 261	<b>24</b> Sa	0617 2240	1.4 7.3	42 223	<b>9</b> M	0908 2328	1.0 7.3	31 223	<b>24</b> Tu	0804 2257	1.5 7.1	45
<b>10</b> Th	0602 2156	0.4 8.4	11 255	<b>25</b> F	0606 2237	1.5 7.5	47 229	<b>10</b> Sa	0811 2302	0.5 8.3	16 252	<b>25</b> Su	0654 2247	1.6 7.2	49 219	<b>10</b> Tu	0935 2359	1.7 6.8	53 208	<b>25</b> W	0843 2353	1.9 6.8	57 206
<b>11</b> F	0656 2242	0.6 8.5	17 259	<b>26</b> Sa	0627 2306	1.7 7.3	52 224	<b>11</b> Su	1003 2339	1.1 7.8	33 238	<b>26</b> M	0758 2228	1.9 7.2	57 219	<b>11</b> W	1008 1725 1938	2.5 5.0 4.9	77 153 150	<b>26</b> Th	0918 1654 1943	2.4 5.0 4.8	73 152 147
<b>12</b> Sa	0757 2329	1.1 8.3	35 252	<b>27</b> Su	0702 2146	2.0 7.3	60 223	<b>12</b> M	1110 2349	1.6 7.3	50 223	<b>27</b> Tu	0917 2305	2.1 7.1	65 216	<b>12</b> Th	0101 1040 1649 2139	6.2 3.4 5.1 4.3	188 104 155 131	<b>27</b> F	0114 0944 1533 2143	6.3 3.1 5.0 4.2	192 94 152 127
<b>13</b> Su	1155 2359	1.6 7.8	49 238	<b>28</b> M	0800 2210	2.4 7.3	72 223	<b>13</b> Tu	1150	2.2	68	<b>28</b> W	1022	2.4	73	<b>13</b> F	0311 1103 1610 2323	5.4 4.3 5.5 3.4	166 131 167 104	<b>28</b> Sa	0309 0956 1511 2319	5.7 3.9 5.4 3.1	174 120 165 94
<b>14</b> M	1314	1.8	55	<b>29</b> Tu	1132 2309	2.7 7.2	81	<b>14</b> W	0033 1217	6.8 2.8	206 84	<b>29</b> Th	0012 1114	6.8 2.7	206 82	<b>14</b> Sa	0813 1102 1555	5.3 5.0 6.1	161 153 186	<b>29</b> Su	0522 0956 1515	5.2 4.8 6.2	160 145 188
<b>15</b> Tu	0001 1353	7.3 2.1	222 64	<b>30</b> W	1230	2.6	79	<b>15</b> Th	0211 1244 1905 2324	6.2 3.3 5.5 4.7	188 102 167 144	<b>30</b> F	0200 1154 1854 2335	6.2 3.2 5.4 4.7	190 188 164 142	<b>31</b> Sa	0444 1224 1737	5.9 3.9 5.4	180 120 164	<b>30</b> M	0037 1543	1.9 7.0	58 214

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

## Haikou, China, 2008

Times and Heights of High and Low Waters

July					August					September													
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height									
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm								
<b>1</b> Tu	0152 1637	0.9 7.7	26 234	<b>16</b> W	0347 1813	1.1 7.2	34 220	<b>1</b> F	0509 1941	-0.2 8.1	-6 248	<b>16</b> Sa	0443 1952	1.0 7.4	32 225	<b>1</b> M	0444 1059	1.5 5.2	45 159	<b>16</b> Tu	0420 1017	2.3 5.7	69 173
●																							
<b>2</b> W	0318 1801	0.1 8.1	3 246	<b>17</b> Th	0453 1923	0.8 7.3	25 222	<b>2</b> Sa	0537 2039	-0.1 8.0	-2 245	<b>17</b> Su	0451 2029	1.0 7.4	32 227	<b>2</b> Tu	0506 1049	2.2 5.3	66 162	<b>17</b> W	0439 1005	2.9 5.7	89 175
○																							
<b>3</b> Th	0449 1930	-0.4 8.3	-12 252	<b>18</b> F	0536 2018	0.7 7.3	21 224	<b>3</b> Su	0550 2127	0.2 7.9	7 241	<b>18</b> M	0510 1214	1.1 5.2	35 159	<b>3</b> W	0523 1038	3.1 5.6	94 172	<b>18</b> Th	0453 0956	3.7 6.1	114 187
●																							
<b>4</b> F	0600 2041	-0.6 8.3	-18 252	<b>19</b> Sa	0556 2100	0.7 7.3	22 224	<b>4</b> M	0605 1318	0.7 4.8	21 146	<b>19</b> Tu	0533 1148	1.4 5.1	44 155	<b>4</b> Th	0531 1031	4.0 6.3	121 191	<b>19</b> F	0504 0958	4.6 6.9	140 209
○																							
<b>5</b> Sa	0647 2137	-0.4 8.1	-13 247	<b>20</b> Su	0604 2129	0.8 7.3	24 223	<b>5</b> Tu	0627 1236	1.4 4.7	43 143	<b>20</b> W	0555 1139	2.0 5.1	61 156	<b>5</b> F	0015 0529	6.5 4.5	199 138	<b>20</b> Sa	0052 0512	6.9 5.4	209 164
○																							
<b>6</b> Su	0714 2220	0.0 7.8	0 238	<b>21</b> M	0623 2154	0.9 7.3	28 222	<b>6</b> W	0647 1219	2.3 4.9	71 149	<b>21</b> Th	0611 1131	2.7 5.3	83 162	<b>6</b> Sa	0114 0523	5.7 4.7	175 144	<b>21</b> Su	0256 0502	6.0 5.9	184 179
○																							
<b>7</b> M	0733 2253	0.6 7.4	17 227	<b>22</b> Tu	0649 1415	1.2 4.9	36 150	<b>7</b> Th	0657 1204	3.3 5.4	101 165	<b>22</b> F	0011 0622	7.1 3.5	216 108	<b>7</b> Su	0237 0517	5.0 4.8	152 145	<b>22</b> M	1114 2042	8.6 1.6	263 50
○																							
<b>8</b> Tu	0755 1520	1.3 4.7	39 143	<b>23</b> W	0716 1338	1.6 4.8	50 146	<b>8</b> F	0056 0651	6.1 4.0	185 122	<b>23</b> Sa	0123 0630	6.4 4.3	196 132	<b>8</b> M	1217 2115	7.7 2.6	235 78	<b>23</b> Tu	1144	8.6	261
○																							
<b>9</b> W	0820 1432	2.2 4.6	67 141	<b>24</b> Th	0736 1325	2.3 4.8	69 147	<b>9</b> Sa	0202 0632	5.2 4.3	159 130	<b>24</b> Su	0252 0623	5.5 4.9	168 150	<b>9</b> Tu	1259	7.5	228	<b>24</b> W	0107 1203	1.6 8.2	49 251
○																							
<b>10</b> Th	0027 0838	6.4 3.2	195 97	<b>25</b> F	0044 0749	6.6 3.0	201 92	<b>10</b> Su	0331 0604	4.4 4.2	133 128	<b>25</b> M	1237 2300	7.9 1.6	240 49	<b>10</b> W	0154 1230	2.4 7.2	74 220	<b>25</b> Th	0216 1238	1.5 7.8	45 237
○																							
<b>11</b> F	0146 0833	5.6 4.1	171 124	<b>26</b> Sa	0207 0755	6.0 3.8	182 116	<b>11</b> M	1346 1314	7.3 5.8	222 176	<b>26</b> Tu	1327 1222	8.0 6.8	244 225	<b>11</b> Th	0249 1618	2.1 7.1	64 216	<b>26</b> F	0251 1708	1.6 7.5	48 230
○																							
<b>12</b> Sa	0323 0745	4.8 4.5	147 136	<b>27</b> Su	0346 0748	5.2 4.5	158 137	<b>12</b> Tu	0116 1509	2.1 7.2	63 218	<b>27</b> W	0217 1534	1.1 7.9	35 241	<b>12</b> F	0315 1730	1.9 7.1	58 217	<b>27</b> Sa	0305 1840	1.8 7.5	56 230
○																							
<b>13</b> Su	1428	6.9	209	<b>28</b> M	1408	7.3	222	<b>13</b> W	0306 1651	1.7 7.1	51 217	<b>28</b> Th	0327 1716	0.7 7.9	22 241	<b>13</b> Sa	0323 1829	1.8 7.2	55 220	<b>28</b> Su	0315 0951	2.2 5.9	66 180
○																							
<b>14</b> M	0051 1523	1.9	58	<b>29</b> Tu	0050 1515	1.2	38	<b>14</b> Th	0402 1806	1.3	40	<b>29</b> F	0405 1833	0.7	20	<b>14</b> Su	0336 1059	1.8 6.1	54 185	<b>29</b> M	0332 0930	2.6 5.9	80 179
○																							
<b>15</b> Tu	0219 1646	1.5	45	<b>30</b> W	0257 1701	0.6	17	<b>15</b> F	0433 1905	1.1	34	<b>30</b> Sa	0421 1938	0.8	24	<b>15</b> M	0357 1033	1.9 5.8	58 176	<b>30</b> Tu	0352 0922	3.3 6.1	102 185
○																							
<b>31</b> Th	0419 1831	0.0	0																				
●																							
<b>31</b> Th	0419 1831	0.0	0																				

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Haikou, China, 2008

Times and Heights of High and Low Waters

October				November				December										
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height							
h m 0406 W 0912 1559 2252	ft 4.2 6.5 2.4 7.3	cm 129 197 73 222	h m 0337 Th 0824 1607 2317	ft 5.0 6.8 1.9 7.6	cm 151 207 58 231	h m 0849 Sa 1746	ft 8.3 1.8	cm 254 55	h m 0831 Su 1828	ft 9.1 0.6	cm 276 18	h m 0948 M 1857	ft 8.0 2.1	cm 243 63	h m 0951 Tu 2018	ft 8.6 0.8	cm 263 24	
<b>1</b> W	0412 0908 1652 2348	5.0 7.1 1.9 6.8	152 217 57 206	<b>16</b> F 0347 0831 1657	5.8 7.6 1.1	177 232 34	<b>1</b> Sa 0937 1815	8.4 2.1	255 63	<b>16</b> M 0931 2028	9.1 0.9	278 28	<b>1</b> M 1016 1909	7.8 2.3	239 70	<b>16</b> W 1018 2049	8.3 1.4	253 43
<b>2</b> Th	0411 0921 1743	5.4 7.7 1.7	164 236 53	<b>18</b> Sa 0052 0356 0855 1748	7.1 6.5 8.4 0.8	217 198 257 24	<b>2</b> Su 1020 1833	8.2 2.3	251 71	<b>18</b> Tu 1013 2154	8.9 1.3	272 41	<b>2</b> Tu 1016 1909	7.8 2.3	239 70	<b>17</b> W 1049 2049	8.3 1.4	253 43
<b>3</b> F	0054 0413 0950 1828	6.2 5.5 8.2 1.9	188 168 249 57	<b>19</b> Su 0930 1842	9.0 0.9	274 28	<b>3</b> M 1034 1908	8.0 2.6	245 80	<b>19</b> W 1006 2254	8.6 1.9	261 58	<b>3</b> W 0957 1959	7.7 2.5	236 77	<b>18</b> Th 1033 2115	7.9 2.2	241 67
<b>4</b> Sa	1028 1859	8.3 2.2	252 66	<b>19</b> M 1007 1956	9.2 1.4	279 44	<b>4</b> Tu 1034 1908	8.0 2.6	245 80	<b>4</b> Th 1058 2100	7.8 2.8	237 86	<b>19</b> F 1111 2144	7.4 3.1	226 95			
<b>5</b> Su	1105 1923	8.2 2.5	249 75	<b>20</b> M 1007 1956	9.2 1.4	279 44	<b>5</b> W 0939 2026	8.0 3.0	244 92	<b>20</b> Th 1030 2335	8.2 2.5	249 77	<b>5</b> F 1035 2156	7.6 3.1	233 96	<b>20</b> Sa 1214 2209	6.7 4.1	203 125
<b>6</b> M	1115 2002	7.9 2.8	242 85	<b>20</b> Tu 1026 2335	9.0 1.7	273 52	<b>6</b> Th 1004 2342	8.0 3.1	244 96	<b>21</b> F 1121 2335	7.6 2.5	231 77	<b>6</b> Sa 1126 2244	7.3 3.6	221 109	<b>21</b> Su 0427 0859 1405 2212	5.4 4.9 5.7 5.1	164 148 175 154
<b>7</b> Tu	1035 1104	7.8 7.7	238 236	<b>21</b> O Tu 1026 2335	9.0 1.7	273 52	<b>7</b> F 1048 1243	7.8 6.8	237 207	<b>21</b> F 1121 2335	7.6 2.5	231 77	<b>7</b> Su 1252 2320	6.6 4.1	200 126	<b>22</b> M 0305 1110	5.8 4.0	178 122
<b>8</b> W	0115 1044	2.8 7.7	86 236	<b>22</b> W 1031 2335	8.6 1.7	263 52	<b>8</b> Sa 0019 1143	3.2 7.3	98 223	<b>22</b> Sa 0005 1243	3.2 6.8	98 207	<b>8</b> M 0732 1135 1106 1945	5.9 5.3 5.5 4.8	179 163 167 147	<b>23</b> Tu 0246 1247	6.6 3.0	201 92
<b>9</b> Th	0115 1044	2.8 7.7	86 236	<b>23</b> Th 0045 1102	1.9 8.2	59 249	<b>9</b> Su 0054 0858 1157 1423	3.4 6.8 6.5 6.6	103 207 199 202	<b>24</b> M 0054 0642 1236 2058	4.8 6.1 4.3 6.6	146 185 130 200	<b>9</b> Tu 0455 1245 1209 2356	5.8 4.1 6.0 5.6	176 125 184 171	<b>24</b> W 0311 1402	7.3 2.2	221 68
<b>10</b> F	0144 1109	2.7 7.5	83 229	<b>24</b> F 0146 1725	2.7 6.9	83 211	<b>10</b> M 0124 0835 1253 1904	3.7 6.4 5.4 6.6	114 195 166 200	<b>25</b> Tu 0104 0558 1341 2201	5.6 6.5 3.1 6.6	172 197 95 201	<b>10</b> W 0420 1341	6.4 2.8	195 85	<b>25</b> Th 0403 1518	7.6 1.7	231 52
<b>11</b> Sa	0201 1024	2.6 7.1	80 215	<b>25</b> Sa 0202 0836 1226 1956	3.2 6.2 5.5 7.1	98 190 169 217	<b>11</b> Tu 0148 0746 1343 2039	4.3 6.1 4.2 7.0	132 187 128 213	<b>26</b> W 0059 0533 1441	6.2 7.1 2.2	190 217 68	<b>11</b> Th 0432 1438	7.2 1.6	220 50	<b>26</b> F 0525 1635	7.6 1.4	233 44
<b>12</b> Su	0222 0948 1253 1759	2.7 6.7 6.2 7.0	81 203 190 212	<b>26</b> M 0221 0814 1327 2103	3.9 6.2 4.4 7.3	118 190 133 222	<b>12</b> W 0202 0652 1432 2153	5.1 6.4 2.9 7.3	156 194 87 221	<b>27</b> Th 0558 1540	7.7 1.7	234 53	<b>12</b> F 0507 1543	8.0 0.8	243 24	<b>27</b> Sa 0659 1740	7.6 1.3	233 40
<b>13</b> M	0246 0926 1340 1948	2.9 6.3 5.3 7.3	88 193 161 222	<b>27</b> F 0238 0759 1423 2155	4.7 6.5 3.2 7.3	142 198 98 222	<b>13</b> Th 0212 0637 1522 2321	6.0 7.1 1.7 7.3	182 216 52 224	<b>28</b> F 0649 1640 1640 ●	8.0 1.6 48	146 185 130 ●	<b>13</b> Sa 0609 1703	8.5 0.3	258 10	<b>28</b> Su 0810 1826	7.6 1.4	233 42
<b>14</b> Tu	0308 0903 1428 2059	3.3 6.1 4.1 7.6	102 187 126 231	<b>28</b> W 0248 0743 1517 ●	5.4 7.0 2.3 7.1	166 212 70 215	<b>14</b> F 0225 0655 1615	6.7 7.9 0.9	205 242 26	<b>29</b> Sa 0755 1741	8.1 1.6	246 50	<b>14</b> Su 0744 1828	8.7 0.2	266 5	<b>29</b> M 0902 1850	7.6 1.5	233 47
<b>15</b> W	0325 0837 1517 ●	4.1 6.2 3.0 7.7	125 190 90 236	<b>30</b> Th 0249 0742 1611 2345	6.0 7.6 1.8 6.7	182 231 55 205	<b>15</b> Sa 0734 1713	8.7 0.5	264 15	<b>30</b> Su 0858 1837	8.1 1.8	246 56	<b>15</b> M 0859 1933	8.8 0.3	268 10	<b>30</b> Tu 0936 1846	7.5 1.7	230 52
<b>16</b> O	0205	4.1 6.2 3.0 7.7	125 190 90 236	<b>31</b> F 0250 0807 1702	6.2 8.1 1.6	188 246 50							<b>31</b> W 0944 1902	7.5 1.9	228 57			

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
 Heights are referred to the chart datum of soundings.

## Beihai, China, 2008

Times and Heights of High and Low Waters

January					February					March					
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height	
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm	
<b>1</b> Tu	0100	8.8 269	<b>16</b> W	0506	6.5 197	<b>1</b> F	0052	12.6 385	<b>16</b> Sa	0015	14.7 448	<b>1</b> Sa	1038	3.7 112	
	0516	7.5 230		1129	10.2 311		1127	4.8 146		1126	2.6 80		<b>16</b> Su	1128 58	
	1138	10.2 310		1755	6.5 198										
	1856	6.0 182	●												
<b>2</b> W	0129	10.5 320	<b>17</b> Th	0013	10.8 330	<b>2</b> Sa	0135	13.4 408	<b>17</b> Su	0120	15.3 467	<b>2</b> Su	0029	13.6 414	
	0813	7.3 224		0732	5.8 178		1241	3.6 110		1256	1.8 56		1156	3.0 90	
	1251	8.1 247		1301	7.7 235								<b>17</b> M	0101 458	
	1829	6.3 193		1712	6.7 204								1231	2.0 61	
<b>3</b> Th	0205	12.0 366	<b>18</b> F	0056	13.0 396	<b>3</b> Su	0217	14.0 426	<b>18</b> M	0227	15.6 474	<b>3</b> M	0121	13.8 422	
	1131	6.0 183		1025	4.4 135		1330	2.7 83		1357	1.6 48		13252	2.4 74	
	1534	6.4 196											<b>18</b> Tu	0215 448	
	1747	6.3 192											1318	2.4 73	
<b>4</b> F	0242	13.2 402	<b>19</b> Sa	0147	14.8 451	<b>4</b> M	0300	14.4 440	<b>19</b> Tu	0333	15.5 473	<b>4</b> Tu	0217	14.1 430	
	1255	4.5 137		1229	2.7 83		1415	2.1 65		1446	1.7 53		1338	2.2 68	
													<b>19</b> W	0330 439	
<b>5</b> Sa	0315	14.1 430	<b>20</b> Su	0242	15.9 486	<b>5</b> Tu	0347	14.8 451	<b>20</b> W	0437	15.4 470	<b>5</b> W	0316	14.3 436	
	1344	3.3 102		1350	1.6 48		1458	1.9 58		1523	2.2 67		1418	2.3 70	
													<b>20</b> Th	0441 429	
<b>6</b> Su	0348	14.7 449	<b>21</b> M	0340	16.5 503	<b>6</b> W	0436	15.1 459	<b>21</b> Th	0539	15.2 464	<b>6</b> Th	0416	14.5 441	
	1427	2.6 78		1454	1.1 34		1535	1.9 59		1551	3.0 90		1450	2.7 82	
													<b>21</b> F	0548 413	
													1422	5.1 154	
													1902	6.8 207	
													2327	5.5 167	
<b>7</b> M	0423	15.2 463	<b>22</b> Tu	0437	16.6 506	<b>7</b> Th	0526	15.2 463	<b>22</b> F	0638	14.8 451	<b>7</b> F	0517	14.5 442	
	1511	2.1 64		1548	1.2 37		1608	2.2 68		1603	4.0 121		1512	3.4 103	
													<b>22</b> Sa	0651 388	
													1414	6.2 189	
													1851	8.2 251	
													O		
<b>8</b> Tu	0501	15.5 472	<b>23</b> W	0534	16.4 501	<b>8</b> F	0618	15.2 464	<b>23</b> Sa	0735	14.1 429	<b>8</b> Sa	0618	14.3 436	
	1553	1.9 59		1631	1.7 51		1630	2.7 83		1555	5.1 156		1517	4.4 135	
										2014	6.5 199		1950	6.0 182	
													2341	5.1 155	
<b>9</b> W	0542	15.6 475	<b>24</b> Th	0629	16.1 492	<b>9</b> Sa	0710	15.0 458	<b>24</b> Su	0052	5.2 157	<b>9</b> Su	0720	13.7 417	
	1632	2.0 61		1705	2.3 71		1645	3.5 107		0829	12.9 394		1503	5.7 174	
										1544	6.0 184		1919	7.4 226	
										2019	8.1 248				
<b>10</b> Th	0624	15.6 475	<b>25</b> F	0723	15.6 477	<b>10</b> Su	0803	14.5 442	<b>25</b> M	0222	5.0 151	<b>10</b> M	0124	4.3 131	
	1708	2.2 67		1721	3.2 98		1640	4.5 138		0919	11.5 349		0822	12.5 381	
							2125	6.1 186		1545	6.6 202		1457	6.8 207	
										2047	9.7 297		1928	9.5 289	
<b>11</b> F	0707	15.5 472	<b>26</b> Sa	0816	14.9 454	<b>11</b> M	0117	5.3 410	<b>26</b> Tu	0344	4.8 298	<b>11</b> Tu	0247	3.4 104	
	1734	2.5 77		1721	4.2 127		0858	13.5 410		1010	9.8 215		0927	10.8 328	
				2223	5.7 175		1631	5.6 171		1535	7.1 215		1452	7.7 236	
							2111	7.7 234		2125	11.1 339		1958	11.7 356	
<b>12</b> Sa	0751	15.3 466	<b>27</b> Su	0028	5.5 169	<b>12</b> Tu	0302	5.0 152	<b>27</b> W	0508	4.7 142	<b>12</b> W	0411	2.8 85	
	1755	3.0 92		0907	13.7 418		0956	11.8 359		1107	8.1 248		1051	8.6 263	
				1716	5.1 154		1630	6.6 202		1531	7.1 215		1438	8.0 243	
				2218	7.2 218		2133	9.7 295		2210	12.1 370		2044	13.5 413	
<b>13</b> Su	0838	14.9 453	<b>28</b> M	0233	6.0 182	<b>13</b> W	0444	4.6 141	<b>28</b> Th	0643	4.6 140	<b>13</b> Th	0550	2.5 75	
	1805	3.7 112		0957	12.1 369		1059	9.5 291		2255	12.8 390		2140	14.8 451	
				1717	5.7 175		1611	7.2 219							
				2244	8.8 267		2217	11.7 358							
<b>14</b> M	0927	13.9 425	<b>29</b> Tu	0419	6.2 190	<b>14</b> Th	0633	4.3 130	<b>29</b> F	0826	4.3 131	<b>14</b> F	0738	2.3 71	
	1806	4.6 140		1046	10.2 312		1223	7.2 219		2340	13.3 404		2242	15.3 467	
	2340	7.0 213		1718	6.3 192		1507	6.9 209					O		
				2324	10.3 314		2313	13.5 411							
<b>15</b> Tu	0249	6.4 195	<b>30</b> W	0607	6.2 190	<b>15</b> F	0852	3.7 112							
	1023	12.4 377		1139	8.3 253										
	1806	5.6 171		1701	6.4 196										
	2345	8.7 265													
			●												
				<b>31</b> Th	0008	11.6 354									
				0831	5.9 179										
				1305	6.5 199										
				1611	6.2 190										

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

## Beihai, China, 2008

Times and Heights of High and Low Waters

April						May						June											
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height		Time	Height						
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm				
<b>1</b> Tu	0026 1155	13.8 2.7	420 81	<b>16</b> W	0201 1204	13.7 3.7	417 114	<b>1</b> Th	0043 1103	13.2 4.0	402 121	<b>16</b> F	0320 1021 1617 2249	10.8 6.5 10.0 6.2	328 198 304 190	<b>1</b> Su	0354 0838 1526 2347	9.2 7.5 12.3 4.2	281 230 374 129	<b>16</b> M	0116 1618	3.8 14.6	117 445
<b>2</b> W	0131 1234	13.7 2.9	417 88	<b>17</b> Th	0325 1223 1754 2112	12.9 4.8 7.3 6.7	393 147 223 205	<b>2</b> F	0209 1121 1703 2011	12.5 5.0 7.6 7.1	381 152 231 215	<b>17</b> Sa	0456 1004 1636	9.4 7.3 11.6	288 224 354	<b>2</b> M	1557	14.5	443	<b>17</b> Tu	0217 1651	3.0	91
<b>3</b> Th	0242 1307	13.6 3.4	414 104	<b>18</b> F	0445 1229 1740 2315	12.1 6.0 8.6 5.8	368 183 261 176	<b>3</b> Sa	0346 1125 1643 2242	11.7 6.3 9.0 5.7	356 193 274 173	<b>18</b> Su	0025 0628 0941 1700	4.8 8.4 7.7 13.1	147 255 235 399	<b>3</b> Tu	0114 1639	2.3 16.4	71 500	<b>18</b> W	0310 1723	2.5 15.5	76 471
<b>4</b> F	0357 1327 1853 2105	13.5 4.3 6.4 6.2	410 131 196 189	<b>19</b> Sa	0600 1222 1745	11.1 7.1 10.1	337 216 309	<b>4</b> Su	0519 1111 1646	10.7 7.6 11.1	325 231 337	<b>19</b> M	0139 1727	3.7 14.2	112 432	<b>4</b> W	0235 1728	1.1 17.5	33 534	<b>19</b> Th	0359 1759	2.3 15.6	71 474
<b>5</b> Sa	0512 1329 1809 2325	13.1 5.5 7.5 5.2	399 169 228 157	<b>20</b> Su	0044 0710 1207 1801	4.6 9.9 7.8 11.7	141 303 238 358	<b>5</b> M	0018 0657 1057 1707	3.7 9.4 8.4 13.5	114 287 255 410	<b>20</b> Tu	0241 1756	2.9 14.9	89 454	<b>5</b> Th	0356 1821	0.5 17.9	16 545	<b>20</b> F	0445 1837	2.3 15.5	71 473
<b>6</b> Su	0625 1315 1758	12.3 6.9 9.3	375 209 284	<b>21</b> M	0154 0817 1142 1826	3.7 8.8 8.1 13.1	113 268 246 399	<b>6</b> Tu	0146 1744	2.1 15.6	63 474	<b>21</b> W	0338 1827	2.6 15.3	78 465	<b>6</b> F	0513 1916	0.5 17.7	16 539	<b>21</b> Sa	0526 1916	2.5 15.4	75 469
●																							
<b>7</b> M	0055 0740 1312 1813	3.6 11.1 7.9 11.6	110 337 240 355	<b>22</b> Tu	0300 1857	3.1 14.0	96	<b>7</b> W	0308 1830	1.0 16.9	29	<b>22</b> Th	0429 1859	2.4 15.4	74 469	<b>7</b> Sa	0620 2011	0.9 17.1	28 522	<b>22</b> Su	0604 1956	2.7 15.2	83 462
<b>8</b> Tu	0216 0908 1300 1847	2.3 9.4 8.6 13.9	70 287 262 424	<b>23</b> W	0401 1929	2.8 14.6	86	<b>8</b> Th	0431 1923	0.5 17.5	16	<b>23</b> F	0523 1934	2.4 15.3	73 467	<b>8</b> Su	0714 2106	1.6 16.3	48 498	<b>23</b> M	0631 2037	3.1 14.9	93 454
<b>9</b> W	0341 1933	1.5 15.5	45 473	<b>24</b> Th	0502 2003	2.7 14.8	81	<b>9</b> F	0600 2017	0.6 17.3	18	<b>24</b> Sa	0617 2010	2.5 15.1	75 461	<b>9</b> M	0752 2202	2.4 15.3	74 467	<b>24</b> Tu	0653 2119	3.4 14.4	104 440
<b>10</b> Th	0512 2026	1.1 16.4	34 499	<b>25</b> F	0605 2038	2.6 14.8	80	<b>10</b> Sa	0722 2112	1.0 16.7	29	<b>25</b> Su	0706 2048	2.6 14.9	79 454	<b>10</b> Tu	0813 2301	3.4 13.9	105 425	<b>25</b> W	0706 2207	3.9 13.6	120 416
●																							
<b>11</b> F	0646 2123	1.2 16.4	36 501	<b>26</b> Sa	0711 2115	2.6 14.6	80	<b>11</b> Su	0829 2209	1.5 15.8	46	<b>26</b> M	0748 2127	2.8 14.6	86	<b>11</b> W	0824	4.5	138	<b>26</b> Th	0715 2304	4.7 12.3	143 376
<b>12</b> Sa	0829 2223	1.4 15.9	42 486	<b>27</b> Su	0819 2155	2.6 14.4	80	<b>12</b> M	0917 2311	2.2 14.8	68	<b>27</b> Tu	0820 2210	3.1 14.1	95	<b>12</b> Th	0007 0832 1418 1847	12.2 5.7 8.9 7.5	371 173 270 228	<b>27</b> F	0721 1308 1740	5.7 8.8 7.3	173 268 223
●																							
<b>13</b> Su	0954 2329	1.7 15.2	51 464	<b>28</b> M	0918 2241	2.7 14.1	82	<b>13</b> Tu	0949	3.1	96	<b>28</b> W	0844 2304	3.6 13.4	109	<b>13</b> F	0132 0818 1441 2151	10.2 6.6 10.7 6.7	311 202 325 203	<b>28</b> Sa	0019 0705 1325 2038	10.5 6.7 10.8 6.4	320 204 328 195
●																							
<b>14</b> M	1052	2.2	67	<b>29</b> Tu	1003 2335	2.9 13.7	88	<b>14</b> W	0021 1010	13.6 4.2	414	<b>29</b> Th	0903	4.3	130	<b>14</b> Sa	0323 0751 1512 2358	8.4 7.2 12.3 5.2	255 218 376 158	<b>29</b> Su	0208 0627 1357 2300	8.4 7.2 13.0 4.6	256 219 395 140
<b>15</b> Tu	0042 1132	14.4 2.9	440 88	<b>30</b> W	1037	3.3	100	<b>15</b> Th	0144 1024 1612 2019	12.2 5.3 8.4 7.3	372 163 256 224	<b>30</b> F	0015 0914 1510 1844	12.3 5.3 8.3 7.5	375 161 253 230	<b>31</b> Sa	0154 0911 1509 2144	10.8 6.5 10.0 6.3	329 199 306 193	<b>30</b> M	1440	15.0	458

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
 Heights are referred to the chart datum of soundings.

## Beihai, China, 2008

## Times and Heights of High and Low Waters

July					August					September													
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height									
	h m	ft	cm																				
<b>1</b> Tu	0042 1529	2.7 16.6	83 505	<b>16</b> W	0226 1614	2.6 15.3	79 467	<b>1</b> F	0320 1720	1.3 17.2	40 523	<b>16</b> Sa	0317 1724	2.8 15.3	84 466	<b>1</b> M	0319 0753	4.6 6.5	141 198	<b>16</b> Tu	0226 0710	5.6 7.8	172 239
<b>2</b> W	0204 1623	1.4 17.5	43 532	<b>17</b> Th	0312 1655	2.3 15.5	71 472	<b>2</b> Sa	0406 1820	1.7 16.9	53 515	<b>17</b> Su	0343 1815	3.2 15.2	99 462	<b>2</b> Tu	0318 0741	5.9 8.0	180 244	<b>17</b> W	0218 0702	6.6 9.4	202 285
<b>3</b> Th	0316 1720	0.8 17.7	25 540	<b>18</b> F	0354 1739	2.3 15.6	71 474	<b>3</b> Su	0439 1919	2.5 16.4	77 499	<b>18</b> M	0400 1906	3.9 14.8	119 452	<b>3</b> W	0316 0757	7.0 9.8	214 300	<b>18</b> Th	0218 0717	7.6 11.3	231 343
●				○									1442 2119	4.9 11.5	150 351					1447 2109	4.0 10.6	122 322	
<b>4</b> F	0421 1818	0.8 17.6	24 536	<b>19</b> Sa	0429 1823	2.5 15.5	77 472	<b>4</b> M	0501 2016	3.6 15.5	110 471	<b>19</b> Tu	0406 0859	4.7 6.6	143 201	<b>4</b> Th	0316 0828	7.7 11.6	236 353	<b>19</b> F	0214 0748	8.3 13.2	252 403
<b>5</b> Sa	0517 1915	1.2 17.2	37 524	<b>20</b> Su	0500 1909	2.9 15.3	88 467	<b>5</b> Tu	0505 0931	4.9 6.5	148 198	<b>20</b> W	0403 0842	5.6 7.7	170 235	<b>5</b> F	0301 0911	8.0 12.9	245 394	<b>20</b> Sa	0117 0830	8.4 14.9	255 453
<b>6</b> Su	0600 2011	1.9 16.6	58 505	<b>21</b> M	0520 1954	3.3 15.0	102 458	<b>6</b> W	0501 0936	6.0 8.2	183 250	<b>21</b> Th	0400 0850	6.5 9.3	198 284	<b>6</b> Sa	0212 0957	7.7 13.8	234 424	<b>21</b> Su	0923 1923	15.9 2.6	486 79
<b>7</b> M	0627 2107	2.9 15.6	87 476	<b>22</b> Tu	0531 2040	3.9 14.5	120 442	<b>7</b> Th	0500 1008	6.9 10.0	211 306	<b>22</b> F	0355 0916	7.4 11.2	225 341	<b>7</b> Su	1045 2045	14.3 4.2	435 129	<b>22</b> M	1022 2118	16.4 2.4	500 74
<b>8</b> Tu	0640 2202	4.0 14.2	122 434	<b>23</b> W	0537 1100	4.6 6.7	141 205	<b>8</b> F	0443 1052	7.4 11.7	226 356	<b>23</b> Sa	0332 0958	7.8 13.1	239 398	<b>8</b> M	1133 2225	14.5 3.7	441 114	<b>23</b> Tu	1127 2246	16.4 2.3	499 70
<b>9</b> W	0645 1152	5.2 7.4	157 225	<b>24</b> Th	0538 1050	5.5 7.9	167 242	<b>9</b> Sa	0013 0423	8.2 7.3	250 224	<b>24</b> Su	1050 2029	14.6 3.7	445 112	<b>9</b> Tu	1224 2334	14.6 3.3	444 100	<b>24</b> W	1236 2347	16.1 2.5	490 75
<b>10</b> Th	0642 1210	6.2 9.2	188 280	<b>25</b> F	0536 1105	6.4 9.6	196 294	<b>10</b> Su	1231 2258	13.8 4.5	421 136	<b>25</b> M	1150 2245	15.6 2.9	477 87	<b>10</b> W	1317 2146	14.6 445	445 Th	<b>25</b>	1349 2246	15.7 2.3	479 70
●																							
<b>11</b> F	0003 0633	10.2 6.9	312 209	<b>26</b> Sa	0520 1138	7.2 11.6	218 354	<b>11</b> M	1319	14.4	438	<b>26</b> Tu	1255	16.2	495	<b>11</b> Th	0026 1413	3.0 14.6	92 446	<b>26</b> F	0030 1504	2.9 15.3	88 467
	1249	11.0	336		1927	5.6	172																
	2010	6.6	201	○																			
<b>12</b> Sa	0130 0554	8.1 7.0	247 214	<b>27</b> Su	0055 0438	7.9 7.2	242 218	<b>12</b> Tu	0020 1406	3.5 14.7	108 449	<b>27</b> W	0014 1403	2.1 16.5	65	<b>12</b> F	0110 1511	3.0 14.6	92 446	<b>27</b> Sa	0105 1617	3.6 14.8	110 452
	1332	12.6	384		1224	13.6	415																
	2249	5.5	167		2150	4.4	135																
<b>13</b> Su	1415	13.7	419	<b>28</b> M	1317 2356	15.3 3.0	465 90	<b>13</b> W	0115 1454	2.9 15.0	89 457	<b>28</b> Th	0116 1511	1.9 16.5	57 503	<b>13</b> Sa	0146 1611	3.3 14.6	101 444	<b>28</b> Su	0125 0631	4.6 7.1	139 215
<b>14</b> M	0032 1455	4.2 14.5	128 443	<b>29</b> Tu	1415	16.4	500	<b>14</b> Th	0202 1543	2.6 15.2	78 463	<b>29</b> F	0206 1618	2.0 16.4	62 500	<b>14</b> Su	0211 1710	3.9 14.4	118 439	<b>29</b> M	0133 0616	5.8 8.3	176 253
<b>15</b> Tu	0136 1535	3.2 15.0	98 458	<b>30</b> W	0120 1516	1.8 17.0	55 519	<b>15</b> F	0243 1633	2.5 15.3	77 466	<b>30</b> Sa	0244 1723	2.6 16.1	79 492	<b>15</b> M	0224 0733	4.7 6.9	142 209	<b>30</b> Tu	0128 0620	6.9 10.0	211 304
				<b>31</b> Th	0225 1618	1.3 17.2	39 525								<b>31</b> Su	0310 1825	3.4 15.6	105 476					
														●									

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Beihai, China, 2008

## Times and Heights of High and Low Waters

October				November				December							
	Time	Height			Time	Height			Time	Height					
1 W	0133 0642 1412 2038	7.8 11.8 4.2 10.2	237 359 127 311	16 Th	0033 0601 1410 2041 2354	8.3 13.1 3.0 9.2 8.7	252 400 92 279 266	1 Sa	0717 1656 15.6 3.0 476 92	16 Su	0657 1726 17.9 1.0 547 32	1 M	0719 1744 15.5 2.9 472 87	16 Tu	0735 1828 17.4 1.7 531 53
2 Th	0126 0712 1530 2151	8.3 13.3 3.8 8.8	254 405 115 267	17 F	0632 1529 15.1 2.1	460 64	474 94	2 Su	0752 1753 15.6 3.1 474 94	17 M	0748 1843 17.8 1.4 543 43	2 Tu	0754 1823 15.2 3.0 464 92	17 W	0828 1901 16.7 2.6 508 79
3 F	0042 0750 1636	8.4 14.3 3.6	255 436 110	18 Sa	0716 1655 16.5 1.7	504 51	468 97	3 M	0827 1853 15.4 3.2 468 97	18 Tu	0840 1945 17.3 1.9 526 59	3 W	0829 1857 14.9 3.2 453 98	18 Th	0923 1916 15.6 3.6 476 109
4 Sa	0829 1755	14.8 3.6	452 110	19 Su	0807 1822 17.2 1.6	525 50	459 99	4 Tu	0904 1948 15.1 3.2 459 99	19 W	0934 2026 16.4 2.7 500 82	4 Th	0905 1924 14.4 3.5 439 107	19 F	1019 1922 14.1 4.6 430 140
5 Su	0910 1907	15.0 3.6	457 110	20 M	0901 1956 17.3 1.9	526 57	446 103	5 W	0942 2036 14.6 3.4 446 103	20 Th	1032 2053 15.3 3.5 467 108	5 F	0942 1946 13.8 3.9 421 119	20 Sa	0109 0339 7.4 7.1 226 215
6 M	0952 2026	14.9 3.5	454 108	21 Tu	0958 2112 16.8 2.2	512 66	431 111	6 Th	1023 2114 14.1 3.6 431 111	21 F	1137 2111 13.9 4.6 425 139	6 Sa	1025 2002 13.0 4.5 395 138	21 Su	0123 0623 9.3 7.4 282 226
7 Tu	1036 2137	14.7 3.4	448 104	22 W	1100 2205 16.0 2.7	489 83	413 125	7 F	1110 2143 13.5 4.1 413 125	22 Sa	1257 2122 12.2 5.6 373 172	7 Su	1123 2012 11.7 5.4 357 165	22 M	0158 0923 11.2 6.7 342 203
8 W	1124 2232	14.4 3.4	440 103	23 Th	1208 2242 15.2 3.4	464 105	390 145	8 Sa	1210 2204 12.8 4.8 390 145	23 Su	0316 0801 9.3 7.6 284 233	8 M	0241 0640 9.2 8.3 281 252	23 Tu	0237 1154 12.9 5.1 394 156
9 Th	1219 2316	14.1 3.5	430 107	24 F	1326 2309 14.3 4.4	435 133	362 172	9 Su	1334 2218 11.9 5.6 362 172	24 M	0337 1034 11.1 6.4 338 195	9 Tu	0247 0953 10.8 6.9 328 211	24 W	0318 1312 14.2 3.7 432 114
10 F	1320 2351	13.8 3.9	420 120	25 Sa	1451 2327 13.3 5.4	404 166	276 245	10 M	0425 0836 9.1 8.0 276 245	25 Tu	0404 1214 12.8 4.8 391 147	10 W	0305 1146 12.7 4.8 387 147	25 Th	0357 1410 14.9 2.9 455 88
11 Sa	1429	13.5	410	26 Su	0455 0913 8.5 7.2	260 218	318 196	11 Tu	0422 1050 10.4 6.4 318 196	26 W	0435 1328 14.2 3.6 434 110	11 Th	0335 1306 14.7 2.9 447 87	26 F	0434 1458 15.3 2.5 465 76
12 Su	0016 1543	4.6 13.1	139 398	27 M	0500 1111 10.1 5.9	307 181	374 136	12 W	0431 1218 12.3 4.5 374 136	27 Th	0508 1430 15.2 2.9 463 88	12 F	0413 1419 16.4 1.5 499 45	27 Sa	0508 1540 15.4 2.4 469 73
13 M	0033 0600 0941 1656	5.4 8.1 7.2 12.6	165 248 220 383	28 Tu	0514 1232 11.8 4.7	359 142	437 92	13 Th	0451 1335 14.3 2.7 437 83	28 F	0541 1524 15.6 2.6 477 80	13 Sa	0500 1529 17.5 0.9 532 26	28 Su	0544 1619 15.4 2.5 468 75
14 Tu	0035 0545 1132 1807	6.5 9.3 6.0 11.8	197 284 182 359	29 W	0539 1344 13.4 3.7	409 113	493 80	14 F	0523 1452 16.2 1.5 493 47	29 Sa	0613 1615 15.8 2.6 481 80	14 Su	0550 1639 17.9 0.8 546 24	29 M	0621 1654 15.3 2.6 466 80
15 W	0029 0545 1254 O	7.5 11.1 4.4 19.19	229 337 134 10.6	30 Th	0609 1452 14.6 3.2	446 97	531 31	15 Sa	0607 1609 17.4 1.0 531 31	30 Su	0645 1702 15.7 2.7 479 83	15 M	0642 1741 17.8 1.1 544 34	30 Tu	0659 1722 15.1 2.9 460 87
				31 F	0643 1556 15.4 3.0	468 91							31 W	0738 1746 14.8 3.1 452 96	

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Do Son, Hon Dau, Vietnam, 2008

Times and Heights of High and Low Waters

January				February				March				
	Time	Height			Time	Height			Time	Height		
	h m	ft	cm		h m	ft	cm		h m	ft	cm	
<b>1</b> Tu	0744 1849	7.3 5.6	222 170		<b>16</b> W	0538 1241 2224	6.3 5.2 7.2	191 160 220	<b>1</b> F	0140 1304	8.3 2.7	252 83
●												
<b>2</b> W	0451 1446	7.1 4.9	216 149		<b>17</b> Th	1215 2353	3.7 8.8	113 267	<b>2</b> Sa	0158 1334	9.1 2.0	277 60
<b>3</b> Th	0303 1429	7.7 3.9	235 119		<b>18</b> F	1246	2.2	66	<b>3</b> Su	0221 1410	9.8 1.4	299 42
<b>4</b> F	0250 1439	8.6 3.0	263 90		<b>19</b> Sa	0059 1331	10.2 0.9	311 28	<b>4</b> M	0247 1450	10.4 1.0	317 30
<b>5</b> Sa	0302 1504	9.4 2.1	288 64		<b>20</b> Su	0157 1423	11.4 0.0	346 0	<b>5</b> Tu	0315 1536	10.9 0.8	331 23
<b>6</b> Su	0322 1535	10.2 1.4	311 44		<b>21</b> M	0251 1520	12.1 -0.4	370 -13	<b>6</b> W	0347 1629	11.2 0.7	340 22
<b>7</b> M	0345 1610	10.9 0.9	331 28		<b>22</b> Tu	0343 1619	12.5 -0.5	382 -15	<b>7</b> Th	0421 1728	11.2 1.0	340 29
●												
<b>8</b> Tu	0413 1649	11.4 0.6	347 17		<b>23</b> W	0433 1721	12.5 -0.2	380 -5	<b>8</b> F	0458 1835	10.9 1.4	331 44
<b>9</b> W	0444 1731	11.7 0.5	357 14		<b>24</b> Th	0520 1823	12.0 0.5	365 14	<b>9</b> Sa	0536 1947	10.2 2.2	311 66
<b>10</b> Th	0518 1817	11.8 0.6	361 18		<b>25</b> F	0603 1922	11.2 1.4	340 42	<b>10</b> Su	0613 2105	9.2 3.1	281 95
<b>11</b> F	0555 1907	11.6 1.0	355 32		<b>26</b> Sa	0640 2014	10.1 2.5	307 76	<b>11</b> M	0643 2236	7.9 4.2	241 129
<b>12</b> Sa	0632 2002	11.1 1.8	338 54		<b>27</b> Su	0707 2054	8.9 3.7	270 112	<b>12</b> Tu	0640 1133 1734	6.4 6.0 6.6	196 182 200
<b>13</b> Su	0708 2100	10.2 2.8	310 86		<b>28</b> M	0712 2110	7.6 4.9	233 148	<b>13</b> W	0102 0330 1011 2015	5.4 5.5 4.6 7.7	164 167 140 234
<b>14</b> M	0737 2206	8.9 4.1	272 125		<b>29</b> Tu	0619 1314	6.7 5.4	203 166	<b>14</b> Th	1033 2200	3.1 8.9	93 272
<b>15</b> Tu	0741 2348	7.5 5.5	228 169		<b>30</b> W	0326 1243	6.7 4.5	203 138	<b>15</b> F	1116 2328	1.7 10.1	52 307
●												
<b>31</b> Th	0145 1243	7.4 3.6	225 109									

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Do Son, Hon Dau, Vietnam, 2008

Times and Heights of High and Low Waters

April						May						June											
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height		Time	Height						
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm						
<b>1</b> Tu	0006 1220	10.1 1.8	307 54	<b>16</b> W	0043 1312	10.0 2.6	304 79	<b>1</b> Th	1243 F	3.6 6.0	109 183	<b>16</b> F	1244 2224	5.7 6.0	174 183	<b>1</b> Su	0238 1323	4.7 8.2	142 250	<b>16</b> M	0322 1531	2.8 9.4	86 285
<b>2</b> W	0054 1322	10.0 2.2	304 67	<b>17</b> Th	0141 1437	9.0 3.7	273 113	<b>2</b> F	0028 1516	8.2 4.6	251 141	<b>17</b> Sa	0502 1447	5.5 6.9	167 211	<b>2</b> M	0246 1419	3.1 9.6	96 294	<b>17</b> Tu	0355 1601	2.0 10.1	61 307
<b>3</b> Th	0142 1447	9.6 2.9	293 87	<b>18</b> F	0231 1751	7.8 4.7	238 143	<b>3</b> Sa	0110 0807 1200 1901	7.0 6.2 6.2 5.2	214 188 190 158	<b>18</b> Su	0417 1514	4.4 8.0	135 244	<b>3</b> Tu	0324 1515	1.7 10.9	53 333	<b>18</b> W	0431 1631	1.4 10.7	42 325
<b>4</b> F	0232 1707	8.9 3.5	272 108	<b>19</b> Sa	0307 0717 1102 2043	6.6 6.3 6.5 5.3	201 191 198 161	<b>4</b> Su	0057 0348 1343	5.6 5.6 7.6	171 170 232	<b>19</b> M	0431 1555	3.4 8.9	103 272	<b>4</b> W	0411 1611	0.6 11.9	18 363	<b>19</b> Th	0508 1702	1.0 11.1	29 337
<b>5</b> Sa	0325 1920	7.9 4.1	242 125	<b>20</b> Su	0229 0610 1434	5.5 5.3 7.3	167 163 222	<b>5</b> M	0334 1452	4.1 9.0	125 274	<b>20</b> Tu	0502 1636	2.5 9.6	77 294	<b>5</b> Th	0503 1706	-0.2 12.5	-5 382	<b>20</b> F	0545 1734	0.7 11.3	22 345
			○				●							○									
<b>6</b> Su	0432 0827 1254	6.7 6.5 6.8	205 197 207	<b>21</b> M	0549 1600	4.3 8.1	132 247	<b>6</b> Tu	0420 1555	2.7 10.2	81 312	<b>21</b> W	0537 1716	1.8 10.2	56 312	<b>6</b> F	0557 1800	-0.5 12.7	-16 387	<b>21</b> Sa	0624 1808	0.7 11.4	21 347
● 2120	4.5	137																					
<b>7</b> M	1511	7.9	242	<b>22</b> Tu	0617 1706	3.4 8.8	104 268	<b>7</b> W	0511 1657	1.4 11.2	43 342	<b>22</b> Th	0612 1755	1.4 10.7	42 325	<b>7</b> Sa	0652 1853	-0.5 12.4	-14 379	<b>22</b> Su	0704 1842	0.9 11.3	26 343
<b>8</b> Tu	0512 1633	3.8 9.1	117 277	<b>23</b> W	0650 1803	2.7 9.4	81 286	<b>8</b> Th	0604 1758	0.5 11.9	14 363	<b>23</b> F	0646 1833	1.0 11.0	32 334	<b>8</b> Su	0746 1944	0.0 11.8	1 359	<b>23</b> M	0747 1918	1.2 10.8	38 329
<b>9</b> W	0620 1746	2.5 10.1	76 308	<b>24</b> Th	0725 1855	2.1 9.8	63 299	<b>9</b> F	0659 1859	-0.1 12.2	-2 372	<b>24</b> Sa	0721 1912	1.0 11.1	29 338	<b>9</b> M	0839 2032	0.9 10.8	27 328	<b>24</b> Tu	0833 1952	1.9 10.0	58 306
<b>10</b> Th	0717 1858	1.4 10.9	42 331	<b>25</b> F	0759 1944	1.7 10.2	51 310	<b>10</b> Sa	0753 1959	-0.2 12.1	-5 368	<b>25</b> Su	0758 1951	1.0 11.0	31 335	<b>10</b> Tu	0928 2112	2.0 9.5	62 290	<b>25</b> W	0922 2021	2.8 9.0	86 274
														●									
<b>11</b> F	0813 2010	0.6 11.3	18 345	<b>26</b> Sa	0835 2032	1.4 10.4	44 316	<b>11</b> Su	0848 2058	0.1 11.6	4 354	<b>26</b> M	0838 2030	1.3 10.7	41 325	<b>11</b> W	1010 2135	3.3 8.2	101 249	<b>26</b> Th	1016 2032	4.0 7.7	123 235
														○									
<b>12</b> Sa	0909 2121	0.2 11.5	6 350	<b>27</b> Su	0912 2118	1.4 10.4	42 318	<b>12</b> M	0943 2155	0.9 10.8	26 329	<b>27</b> Tu	0921 2109	1.9 10.1	58 307	<b>12</b> Th	1033 2113	4.7 6.9	142 211	<b>27</b> F	1124 1906	5.4 6.5	165 197
<b>13</b> Su	1006 2231	0.3 11.3	8 344	<b>28</b> M	0953 2205	1.5 10.3	47 314	<b>13</b> Tu	1036 2248	1.9 9.7	57 296	<b>28</b> W	1007 2145	2.8 9.2	84 279	<b>13</b> F	0749 1721	5.7 6.6	175 200	<b>28</b> Sa	0233 1135	5.5 7.0	167 212
														○									
<b>14</b> M	1104 2338	0.8 10.8	23 329	<b>29</b> Tu	1039 2252	2.0 9.9	60 302	<b>14</b> W	1128 2333	3.1 8.5	94 258	<b>29</b> Th	1058 2211	3.8 8.0	117 243	<b>14</b> Sa	0318 1500	4.9 7.5	149 228	<b>29</b> Su	0115 1238	4.1 8.5	125 259
<b>15</b> Tu	1205	1.5	47	<b>30</b> W	1133 2339	2.6 9.2	80 281	<b>15</b> Th	1216 2353	4.4 7.2	134 218	<b>30</b> F	1212 2154	5.2 6.6	158 202	<b>15</b> Su	0301 1507	3.8 8.5	116 259	<b>30</b> M	0136 1334	2.6 9.9	79 303
														<b>31</b> Sa	0512 1225	5.8 6.7	176 203						

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Do Son, Hon Dau, Vietnam, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m 0218 Tu 1428	ft 1.3 11.2	cm 39 341	h m 0317 W 1539	ft 1.4 10.7	cm 44 325	h m 0358 F 1607	ft 0.0 12.3	cm 0 374	h m 0426 Sa 1605	ft 1.7 10.8	cm 52 330
●				●				●			
2 W 0308 1521	0.3 12.1	8 369	16 Th 0359 1608	1.1 11.1	33 337	2 Sa 0508 1656	0.4 11.8	11 359	17 Su 0532 1639	2.0 10.5	60 319
○				○				○			
3 Th 0402 1614	-0.3 12.6	-10 385	18 F 0443 1637	0.9 11.3	27 343	3 Su 0619 1742	1.0 10.9	31 333	18 M 0643 1714	2.4 9.8	73 299
●				○				●			
4 F 0500 1705	-0.5 12.7	-16 387	19 Sa 0530 1708	0.9 11.3	28 343	4 M 0728 1824	1.9 9.8	59 298	19 Tu 0757 1750	3.0 8.9	92 270
5 Sa 0559 1754	-0.3 12.3	-9 375	20 Su 0619 1741	1.1 11.0	34 336	5 Tu 0831 1855	3.0 8.5	92 259	20 W 0915 1818	3.8 7.7	117 234
6 Su 0658 1841	0.3 11.5	8 352	21 M 0712 1815	1.5 10.5	47 320	6 W 0926 1900	4.2 7.2	129 220	21 Th 1047 1807 2137	4.8 6.3 6.1	145 193 187
7 M 0755 1924	1.2 10.5	36 319	22 Tu 0808 1848	2.2 9.6	68 294	7 Th 1008 1655 2326	5.4 6.2 5.6	166 190 170	22 F 0510 1333 1412 2110	7.3 5.6 5.6 4.7	224 172 172 144
8 Tu 0845 1957	2.3 9.2	71 279	23 W 0910 1915	3.2 8.5	97 259	8 F 0745 0931 1321 2317	6.6 6.6 6.7 4.5	202 202 204 138	23 Sa 0734 2144	8.4 3.3	255 102
9 W 0926 2009	3.6 7.8	110 239	24 Th 1021 1917	4.3 7.2	132 218	9 Sa 1223 2342	7.7 3.6	236 109	24 Su 0916 2230	9.4 2.2	288 66
10 Th 0944 1916	4.9 6.7	150 204	25 F 1223 1700 2335	5.6 6.1 5.2	171 186 160	10 Su 1255	8.7	265	25 M 1046 2323	10.5 1.3	319 39
11 F 0214 1549	5.7 6.8	173 206	26 Sa 0929 2333	7.4 3.8	225 115	11 M 0019 1329	2.8 9.4	86 288	26 Tu 1202	11.3	344
12 Sa 0126 1413	4.7 7.7	142 234	27 Su 1110	8.8	267	12 Tu 0100 1402	2.3 10.0	69 306	27 W 0023 1307	0.8 11.8	24 360
13 Su 0131 1421	3.6 8.7	110 264	28 M 0008 1224	2.4 10.1	72 308	13 W 0144 1432	1.9 10.5	57 320	28 Th 0127 1407	0.7 11.9	22 364
14 M 0200 1444	2.7 9.5	82 289	29 Tu 0057 1326	1.2 11.2	37 342	14 Th 0232 1502	1.6 10.8	50 329	29 F 0239 1502	1.0 11.6	31 355
15 Tu 0237 1512	2.0 10.1	60 309	30 W 0152 1422	0.4 12.0	12 366	15 F 0326 1533	1.6 10.9	49 332	30 Sa 0404 1553	1.6 11.0	48 335
31 Th 0253 1516	0.0 12.4	0 377							31 Su 0540 1641	2.3 10.0	70 305

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Do Son, Hon Dau, Vietnam, 2008

Times and Heights of High and Low Waters

October						November						December							
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height		Time	Height		
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm
<b>1</b> W	0215 1838	7.9 5.3	240 161	<b>16</b> Th	0309 1715	9.1 4.0	278 123	<b>1</b> Sa	0546 1901	10.7 2.1	325 64	<b>16</b> Su	0532 1832	12.8 0.2	389 6	<b>1</b> M	0619 1906	11.6 1.2	354 37
<b>2</b> Th	0359 1903	8.5 4.3	260 130	<b>17</b> F	0415 1759	10.2 2.8	312 84	<b>2</b> Su	0638 1935	11.0 1.8	334 56	<b>17</b> M	0630 1922	13.0 0.1	397 4	<b>2</b> Tu	0655 1939	11.6 1.4	353 44
<b>3</b> F	0524 1939	9.1 3.4	278 105	<b>18</b> Sa	0521 1847	11.2 1.7	341 51	<b>3</b> M	0726 2009	11.1 1.8	339 55	<b>18</b> Tu	0727 2014	12.9 0.5	392 16	<b>3</b> W	0730 2012	11.4 1.9	346 57
<b>4</b> Sa	0643 2016	9.6 2.9	292 87	<b>19</b> Su	0628 1937	11.9 1.0	362 30	<b>4</b> Tu	0812 2042	11.1 2.0	339 60	<b>19</b> W	0824 2105	12.3 1.3	374 40	<b>4</b> Th	0805 2045	10.9 2.5	332 77
<b>5</b> Su	0758 2053	9.9 2.5	303 76	<b>20</b> M	0736 2029	12.3 0.7	374 21	<b>5</b> W	0855 2116	11.0 2.3	336 70	<b>20</b> Th	0918 2155	11.4 2.5	346 75	<b>5</b> F	0837 2115	10.2 3.4	311 103
<b>6</b> M	0906 2129	10.2 2.3	312 71	<b>21</b> Tu	0844 2123	12.3 0.9	376 27	<b>6</b> Th	0937 2151	10.7 2.9	326 87	<b>21</b> F	1007 2241	10.1 3.8	309 116	<b>6</b> Sa	0904 2120	9.3 4.4	283 135
<b>7</b> Tu	1004 2207	10.4 2.3	318 71	<b>22</b> W	0951 2218	12.0 1.5	367 45	<b>7</b> F	1017 2227	10.2 3.6	311 110	<b>22</b> Sa	1045 2311	8.8 5.2	268 159	<b>7</b> Su	0914 2005	8.2 5.5	249 168
<b>8</b> W	1054 2247	10.5 2.6	321 78	<b>23</b> Th	1056 2316	11.4 2.4	348 74	<b>8</b> Sa	1055 2256	9.5 4.6	289 140	<b>23</b> Su	1047 1836	7.4 6.4	225 194	<b>8</b> M	0759 1639	7.1 5.7	215 175
<b>9</b> Th	1139 2332	10.5 2.9	319 89	<b>24</b> F	1158	10.5	320	<b>9</b> Su	1127 2201	8.5 5.7	259 175	<b>24</b> M	0318 1613	6.9 5.5	210 168	<b>9</b> Tu	0120 1441	7.3 4.7	223 144
<b>10</b> F	1222	10.2	312	<b>25</b> Sa	0023 1254	3.7 9.4	112	<b>10</b> M	1137 1840	7.3 6.3	223	<b>25</b> Tu	0239 1547	8.1 4.3	246	<b>10</b> W	0132 1439	8.8 3.3	268
<b>11</b> Sa	0032 1304	3.5 9.7	108 297	<b>26</b> Su	0152 1340	5.0 8.0	152	<b>11</b> Tu	0111 0740	7.2 6.2	219	<b>26</b> W	0304 1609	9.2 3.2	280	<b>11</b> Th	0213 1511	10.2 1.9	312
<b>12</b> Su	0205 1346	4.3 9.0	131 275	<b>27</b> M	0634 1349	5.9 6.7	179 205	<b>12</b> W	0155 1546	8.6 4.3	262	<b>27</b> Th	0343 1644	10.1 2.4	307	<b>12</b> F	0301 1554	11.5 0.8	350
<b>13</b> M	0518 1426	5.0 8.0	151 244	<b>28</b> Tu	0122 1706	7.7 5.3	234 163	<b>13</b> Th	0246 1614	9.9 2.9	303	<b>28</b> F	0423 1721	10.8 1.7	328	<b>13</b> Sa	0351 1642	12.4 0.0	379
<b>14</b> Tu	0729 1455	5.3 6.8	162 208	<b>29</b> W	0247 1714	8.7 4.2	265 128	<b>14</b> F	0340 1655	11.2 1.7	340	<b>29</b> Sa	0503 1757	11.2 1.3	342	<b>14</b> Su	0443 1733	13.0 -0.3	397
<b>15</b> W	0157 0947	7.9 5.5	241 168	<b>30</b> Th	0352 1748	9.5 3.2	291 99	<b>15</b> Sa	0436 1742	12.1 0.7	370	<b>30</b> Su	0542 1832	11.5 1.2	351	<b>15</b> M	0535 1826	13.2 -0.3	402
<b>16</b> O	0157 1203	5.6 5.6	241 170	<b>31</b> F	0451 1825	10.2 2.6	311 78					<b>30</b> Tu	0555 1851	11.5 1.1	350	<b>31</b> W	0625 1930	11.2 1.6	341
	0947 1650	5.4 5.4	168 165																

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Mui Vung Tau, Vietnam, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu	0202	7.3	224	16	0112	6.1	187	1 F	0246	5.1	155
	0759	9.3	283	W	0717	10.1	308		1047	9.3	284
	1317	7.0	213		1252	6.7	204		1334	9.0	274
	2020	11.4	348	●	1921	11.7	356		1946	10.9	333
2 W	0310	6.5	198	17	0219	5.1	156	2 Sa	0352	4.6	139
	0946	9.4	285	Th	0909	10.0	305		1218	9.8	300
	1408	8.0	243		1346	8.0	243		1447	9.6	294
	2053	11.5	349		2002	11.7	358		2039	10.8	330
3 Th	0409	5.6	170	18	0330	4.0	122	3 Su	0456	3.9	120
	1110	9.7	296	F	1052	10.4	316		1316	10.4	317
	1509	8.8	267		1452	9.1	277		1712	9.9	303
	2127	11.5	351		2050	11.9	362		2142	10.8	330
4 F	0459	4.7	143	19	0439	2.9	87	4 M	0551	3.2	98
	1216	10.2	312	Sa	1216	11.0	334		1352	10.9	333
	1623	9.3	283		1621	9.9	301		1834	9.7	297
	2202	11.6	354		2145	12.0	367		2242	11.0	335
5 Sa	0542	3.8	116	20	0543	1.8	55	5 Tu	0637	2.6	78
	1310	10.8	328	Su	1324	11.6	353		1420	11.4	346
	1736	9.6	292		1756	10.1	308		1918	9.4	286
	2238	11.7	358		2241	12.2	373		2336	11.3	344
6 Su	0621	3.0	91	21	0638	1.0	30	6 W	0718	2.0	61
	1354	11.2	342	M	1418	12.0	366		1446	11.6	355
	1835	9.7	295		1902	9.9	303		1952	8.9	271
	2314	11.9	362		2336	12.4	378	●	2025	7.3	221
7 M	0658	2.3	70	22	0728	0.5	15	7 Th	0026	11.7	356
	1434	11.6	354	Tu	1501	12.2	373		0756	1.7	51
	1921	9.7	295		1951	9.5	290		1509	11.8	361
	2350	12.0	367	○	2023	8.3	253	●	2057	6.4	194
8 Tu	0734	1.7	53	23	0031	12.5	381	8 F	0115	12.0	367
	1509	11.9	363	W	0812	0.5	14		0832	1.6	50
	2000	9.6	292		1537	12.3	374		1532	11.9	363
●	2033	9.0	273		2033	9.0	273		2055	7.6	232
9 W	0029	12.2	372	24	0123	12.4	379	9 Sa	0203	12.3	374
	0810	1.4	42	Th	0854	0.9	26		0909	1.9	59
	1543	12.1	369		1609	12.2	371		1555	11.9	363
	2036	9.4	288		2112	8.3	254		2129	6.8	208
10 Th	0107	12.3	376	25	0214	12.2	373	10 M	0252	12.3	376
	0845	1.3	39	F	0932	1.6	49		0945	2.6	79
	1615	12.1	370		1638	12.0	365		1618	11.9	362
	2111	9.2	281		2151	7.7	235		2206	6.0	184
11 F	0149	12.4	377	26	0305	11.8	361	11 M	0345	12.1	369
	0922	1.5	46	Sa	1008	2.6	80		1021	3.6	110
	1645	12.1	369		1704	11.7	358		1642	11.8	361
	2148	8.9	271		2230	7.2	218		2248	5.3	161
12 Sa	0234	12.2	372	27	0357	11.3	344	12 Tu	0443	11.6	354
	0959	2.1	63	Su	1043	3.8	117		1058	4.8	147
	1715	12.0	365		1728	11.6	353		1706	11.8	359
	2229	8.4	257		2312	6.7	203		2335	4.6	141
13 Su	0325	11.9	362	28	0452	10.6	324	13 W	0550	11.0	334
	1039	2.9	89	M	1116	5.1	154		1136	6.2	189
	1744	11.8	360		1751	11.4	348		1733	11.7	358
	2315	7.8	238		2358	6.2	190				
14 M	0425	11.4	346	29	0555	9.9	303	14 Th	0031	4.0	123
	1120	4.0	123	Tu	1147	6.2	189		0716	10.3	313
	1814	11.7	357		1814	11.3	344		1216	7.5	230
15 Tu	0010	7.0	214	●	1804	11.7	356		1804	11.7	356
	0540	10.7	325	30	0049	5.9	179		1730	10.9	332
	1204	5.3	163	W	0715	9.4	286				
	1845	11.6	355		1219	7.3	222		1840	11.5	352
16 ●	1839	11.2	341	31	0144	5.5	168				
	0859	9.1	278	Th	0859	9.1	278				
	1252	8.2	250		1252	8.2	250				
	1907	11.1	337		1907	11.1	337				

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Mui Vung Tau, Vietnam, 2008

Times and Heights of High and Low Waters

April				May				June								
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height					
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm					
1 Tu	0257	4.3	132	16 W	0447	4.1	125	1 Th	0329	4.8	146					
1156	10.5	319	1201	11.0	334	1106	10.7	326	16 F	0508	5.9	179				
1857	9.2	279	1817	7.3	222	1723	7.1	216	1119	10.7	327					
2002	9.2	279	2316	9.7	296	2230	9.3	283	1807	4.5	138					
2 W	0425	4.3	131	17 Th	0553	4.4	135	2 F	0445	5.1	154					
1219	10.8	328	1226	11.0	336	1130	10.9	333	17 Sa	0022	9.9	302				
1818	8.3	253	1843	6.0	182	1754	5.6	172	0602	6.4	194					
2231	9.6	292				2339	10.2	310	1142	10.9	331					
3 Th	0535	4.1	125	18 F	0023	10.4	318	1838	3.4	103	0113	10.4	318			
1238	11.0	336	0643	4.8	145	Sa	0546	5.3	162	0645	6.8	207				
1836	7.2	220	1248	11.1	338	1828	4.1	124	1204	11.0	336					
2342	10.4	317	1911	4.7	144				1908	2.4	73					
4 F	0627	3.9	120	19 Sa	0115	11.0	336	4 Su	0038	11.1	339	0134	11.2	341		
1258	11.3	343	0722	5.2	158	0636	5.6	171	0721	7.1	217	0237	10.3	315		
1903	5.9	180	1307	11.2	341	1219	11.6	353	1227	11.2	341	0728	8.1	248		
			1938	3.6	111	1904	2.5	76	1937	1.6	49	1205	10.8	330		
5 Sa	0038	11.3	345	20 Su	0200	11.4	348	5 M	0130	11.8	360	2055	-1.1	-35		
0711	4.0	121	0755	5.6	172	0720	6.0	184	0237	11.0	336	0324	11.7	358		
1318	11.5	351	1325	11.4	346	1245	11.9	364	0754	7.4	227	0822	8.2	251		
1933	4.5	137	O 2006	2.7	83	1941	1.1	33	Tu	1249	11.3	345	1310	12.2	373	
6 Su	0129	12.1	368	21 M	0240	11.6	354	20 O	0237	11.0	336	2048	-1.4	-44		
0750	4.2	129	0824	6.2	188	0800	6.6	201	0822	8.2	251	0354	10.7	327		
1340	11.8	360	1343	11.5	350	1313	12.3	374	1310	12.2	373	0843	8.2	251		
● 2005	3.1	96	2033	2.1	63	2020	0.0	1	2050	0.2	6	1308	10.8	330		
7 M	0218	12.6	383	22 Tu	0318	11.6	353	6 Tu	0222	12.2	373	2132	-1.1	-35		
0826	4.8	146	0852	6.7	204	0800	6.6	201	0316	11.1	339	0431	10.8	328		
1403	12.1	368	1402	11.6	353	1343	12.5	380	0825	7.7	236	0919	8.2	251		
2041	2.0	60	2102	1.7	52	2101	-0.6	-17	1336	11.3	345	1348	12.0	367		
8 Tu	0308	12.7	387	23 W	0356	11.4	348	7 W	0314	12.4	377	2132	-1.1	-35		
0902	5.6	170	0919	7.3	221	0839	7.2	220	0356	11.1	338	0507	10.7	327		
1428	12.3	374	1421	11.6	353	1343	12.5	380	0856	8.1	246	0957	8.2	250		
2119	1.1	34	2131	1.6	48	2101	-0.6	-18	2107	0.7	21	1417	10.5	320		
9 W	0400	12.5	381	24 Th	0437	11.2	340	8 Th	0409	12.2	372	2159	0.8	24		
0937	6.5	199	0946	7.8	238	0917	7.9	241	0437	11.0	335	0543	10.6	324		
1454	12.4	377	1440	11.5	349	1413	12.4	379	0929	8.4	256	1039	8.0	245		
2159	0.7	21	2202	1.7	52	2143	-0.6	-18	1400	11.2	341	1459	10.2	310		
10 Th	0458	12.0	365	25 F	0522	10.8	329	2139	0.9	26	2304	0.7	22	2237	1.4	44
1012	7.5	230	1015	8.4	255	1043	9.1	276	0522	10.8	330	0617	10.5	319		
1520	12.3	374	1459	11.3	343	1517	11.6	354	1004	8.7	265	1127	7.7	235		
2244	0.8	23	2235	2.0	61	2317	0.7	22	1426	11.0	334	1550	9.7	295		
11 F	0605	11.3	345	26 Sa	0618	10.4	318	25 Su	0613	11.4	346	2319	2.3	70		
1050	8.5	260	1047	8.9	272	1043	9.1	276	0612	10.7	325	0650	10.3	315		
1547	12.0	365	1518	11.0	334	1517	11.6	354	1046	8.9	272	1221	7.1	217		
2334	1.2	37	2313	2.5	76	2317	0.7	22	1454	10.6	323	1658	9.1	277		
12 Sa	0730	10.8	329	27 Su	0734	10.2	311	26 M	0726	11.0	335	0048	3.5	108		
1134	9.3	284	1131	9.4	285	1087	10.8	329	0706	10.5	320	0004	3.3	101		
1614	11.5	349	1537	10.6	322	1312	9.2	281	1139	9.0	274	0722	10.3	313		
			2358	3.1	94	1634	9.7	296	1528	10.1	307	1321	6.3	191		
13 Su	0034	2.0	62	28 O	0900	10.2	311	2336	2.6	78	1943	8.2	251	1834	8.5	260
0912	10.6	323	1244	9.6	292	0937	10.7	326	0706	10.5	320	0048	3.5	108		
1243	9.9	301	1557	10.0	306	1541	8.4	257	0827	10.4	318	0004	3.3	101		
● 1638	10.7	326	O			1912	8.7	264	1426	6.9	209	0722	10.3	313		
14 M	0147	2.9	89	29 Tu	0056	3.7	114	1756	8.7	264	1943	8.2	251	1321	6.3	191
1036	10.7	327	Tu	1002	10.3	315	1020	10.7	325	2036	2.6	78	1834	8.5	260	
			1512	9.3	283	1052	10.7	326	1525	7.0	212	0048	3.5	108		
			1610	9.3	283	1052	8.7	265	2038	8.5	258	0048	3.5	108		
15 Tu	0317	3.7	112	30 W	0207	4.4	133	1734	5.8	177	029	10.4	318	0048	3.5	108
1127	10.9	332	1039	10.5	321	0357	5.2	160	1621	5.5	169	0356	6.9	209		
1755	8.5	260	1658	8.3	254	1052	10.7	326	1621	4.6	141	0501	7.4	227		
2137	9.2	280	2034	8.7	264	1734	9.3	283	2220	9.0	275	0501	7.4	227		
13 Su	0347	5.9	180	31 Sa	0347	5.9	180	1734	9.3	283	0013	9.2	280	0250	6.7	203
1709	4.0	121	1020	10.8	329	1020	10.8	329	1709	4.0	121	0952	10.9	333		
			1709	4.0	121	1020	10.8	329	2333	9.8	299	0952	10.9	333		
14 M	0401	7.5	230	30 M	0401	7.5	230	1709	4.0	121	1725	1.1	33	1725	1.1	33

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Mui Vung Tau, Vietnam, 2008

Times and Heights of High and Low Waters

July					August					September					
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height	
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm
1 Tu	0043	10.0	305	16 W	0155	9.5	290	1 F	0236	10.7	325	16 Sa	0228	10.3	314
	0519	8.1	248		0624	8.4	256		0730	8.1	247		0744	7.4	226
	1036	11.2	342		1053	10.1	307		1208	11.0	334		1218	10.1	307
	1818	-0.1	-3		1846	1.1	34	●	1949	-0.7	-22		1941	1.1	35
2 W	0145	10.6	322	17 Th	0233	9.9	303	2 Sa	0312	10.8	330	17 Su	0250	10.5	320
	0629	8.4	257		0716	8.2	251		0815	7.4	225		0813	6.8	207
	1122	11.5	350		1136	10.2	310		1306	11.0	336		1306	10.5	319
	1909	-1.0	-30		1924	0.6	19		2033	-0.5	-14	○	2017	1.1	34
3 Th	0240	11.0	334	18 F	0305	10.2	312	3 Su	0344	10.8	329	18 M	0310	10.6	323
	0727	8.4	257		0757	8.0	244		0855	6.6	201		0843	6.1	185
	1208	11.6	354		1218	10.3	313		1402	11.0	334		1353	10.8	329
	● 1956	-1.4	-44	○	2000	0.3	10		2114	0.2	6		2051	1.4	42
4 F	0329	11.2	340	19 Sa	0334	10.5	319	4 M	0413	10.7	326	19 Tu	0330	10.7	325
	0816	8.3	252		0832	7.7	235		0934	5.8	178		0914	5.3	161
	1256	11.6	353		1300	10.4	317		1456	10.7	326		1440	11.0	334
	2041	-1.4	-43		2035	0.3	8		2152	1.2	36		2125	2.0	60
5 Sa	0414	11.2	341	20 Su	0401	10.6	322	5 Tu	0439	10.5	321	20 W	0351	10.7	326
	0903	7.9	242		0906	7.4	225		1014	5.2	158		0948	4.5	137
	1345	11.4	346		1343	10.4	318		1551	10.2	312		1530	10.9	332
	2124	-0.9	-28		2110	0.5	14		2227	2.4	73		2200	2.8	86
6 Su	0454	11.0	336	21 M	0427	10.6	322	6 W	0503	10.4	316	21 Th	0412	10.7	326
	0949	7.5	229		0941	7.0	212		1055	4.7	142		1026	3.8	115
	1437	10.9	332		1428	10.4	317		1647	9.6	294		1623	10.6	322
	2207	0.0	0		2145	0.9	28		2301	3.7	112		2234	3.9	120
7 M	0531	10.8	329	22 Tu	0452	10.5	320	7 Th	0526	10.2	312	22 F	0435	10.8	328
	1036	7.0	214		1017	6.4	196		1138	4.2	129		1109	3.1	95
	1533	10.2	312		1518	10.2	311		1749	9.0	274		1724	10.0	306
	2249	1.2	38		2221	1.7	51		2333	4.9	150		2310	5.2	158
8 Tu	0606	10.5	321	23 W	0516	10.4	317	8 F	0548	10.1	308	23 Sa	0500	10.8	329
	1127	6.5	198		1058	5.8	177		1225	3.9	120		1159	2.6	79
	1636	9.4	288		1613	9.8	300		1903	8.4	256		1841	9.4	288
	2330	2.6	80		2258	2.7	81		2347	6.4	196		2347	9.3	282
9 W	0639	10.3	314	24 Th	0541	10.3	314	9 Sa	0004	6.0	184	24 Su	0528	10.8	328
	1223	5.9	180		1144	5.1	155		0610	10.0	305		1257	2.2	68
	1754	8.7	264		1719	9.4	285		1318	3.7	113	○	2027	9.0	275
	2338	3.8	117		2338	3.8	117		2037	8.0	245		2348	7.9	242
10 Th	0012	4.1	124	25 F	0607	10.3	314	10 Su	0035	7.0	213	25 M	0030	7.6	233
	0710	10.1	308		1237	4.3	131		0636	9.8	300		0602	10.7	325
	1323	5.3	161		1840	8.8	269		1416	3.5	106		1405	2.0	60
	● 1930	8.1	247		2225	8.1	247		2225	8.1	247		2219	9.2	280
11 F	0054	5.3	163	26 M	0021	5.1	156	11 M	0111	7.8	238	26 W	0127	8.6	263
	0741	10.0	305		0637	10.3	315		0710	9.7	295		0649	10.4	318
	1426	4.6	139		1336	3.4	105		1522	3.2	98		1525	1.7	51
	2112	7.9	242	○	2021	8.5	260		2354	9.7	296		2354	3.4	105
12 Sa	0137	6.4	196	27 Su	0106	6.4	195	12 Tu	0002	8.6	261	27 F	0053	10.1	309
	0813	10.0	304		0714	10.4	317		0215	8.4	257		0634	8.3	252
	1528	3.8	117		1442	2.5	77		0803	9.5	289		1023	9.2	280
	2246	8.1	248		2208	8.7	264		1631	2.8	86		1751	3.1	95
13 Su	0227	7.3	224	28 M	0201	7.5	229	13 W	0105	9.1	277	28 Th	0055	10.2	312
	0848	9.9	303		0800	10.5	319		0455	8.7	266		0544	9.0	273
	1627	3.1	94		1553	1.6	49		0917	9.4	285	○	2022	9.0	275
	2341	9.2	280		2341	9.2	280		1732	2.3	71		1757	1.0	29
14 M	0004	8.6	261	29 Tu	0317	8.4	256	14 Th	0139	9.6	292	29 F	0133	10.6	323
	0336	8.0	244		0858	10.6	322		0629	8.4	257		0647	8.1	247
	0927	10.0	304		1703	0.7	21		1027	9.4	287		1121	10.4	316
	1719	2.4	72		1821	1.8	56		1821	1.8	56		1853	0.8	24
15 Tu	0108	9.1	276	30 W	0058	9.8	300	15 F	0205	10.0	304	30 M	0204	10.8	328
	0508	8.4	255		0505	8.8	269		0712	8.0	243		0728	7.1	217
	1009	10.0	305		1003	10.7	325		1126	9.7	295		1228	10.7	327
	1805	1.7	52		1806	-0.1	-2		1903	1.4	43		1940	1.0	29
31 Th	0153	10.3	315	31 Th	0633	8.6	263	31 Su	0231	10.8	330	31 O	0804	6.0	184
	1107	10.8	330		1107	10.8	330		1326	11.1	337		1326	11.1	338
	1901	-0.6	-18		1901	-0.6	-18	●	2020	1.4	43		1953	2.8	85

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Mui Vung Tau, Vietnam, 2008

Times and Heights of High and Low Waters

October				November				December				
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	
h m	ft	cm		h m	ft	cm		h m	ft	cm		
1 W	0215	11.5	349	16 Th	0133	12.3	376	1 Sa	0159	12.3	375	
	0844	3.0	90		0818	2.0	61		0917	1.8	56	
	1509	11.7	357		1446	12.7	386		1629	11.6	355	
	2102	5.5	167		2034	6.2	189		2128	8.7	264	
2 Th	0233	11.5	351	17 F	0158	12.6	384	2 Su	0219	12.2	371	
	0914	2.5	75		0855	1.1	35		0948	2.1	63	
	1551	11.5	349		1536	12.6	384		1716	11.4	346	
	2129	6.3	192		2109	7.1	215		2158	9.2	279	
3 F	0251	11.5	352	18 Sa	0224	12.8	389	3 M	0240	11.9	364	
	0945	2.3	70		0935	0.7	21		1022	2.5	77	
	1634	11.1	337		1632	12.2	373		1812	11.1	337	
	2155	7.1	216		2144	8.0	243		2234	9.6	294	
4 Sa	0309	11.5	350	19 Su	0251	12.8	389	4 Tu	0300	11.5	352	
	1018	2.4	73		1018	0.7	22		1059	3.1	96	
	1722	10.6	322		1736	11.7	358		1924	10.9	333	
	2221	7.8	239		2222	8.9	271		2322	10.0	305	
5 Su	0326	11.3	345	20 M	0319	12.5	381	5 W	0319	11.1	338	
	1053	2.7	82		1107	1.2	36		1142	3.9	118	
	1821	10.1	307		1856	11.3	344		2041	11.0	334	
	2249	8.5	260		2308	9.6	294		0	2059	11.8	359
6 M	0343	11.1	337	21 Tu	0349	12.0	366	6 Th	0045	10.2	310	
	1132	3.1	96		1204	2.0	60		0337	10.5	320	
	1947	9.8	299		2031	11.1	338		1236	4.6	140	
	2323	9.2	279		0	2138	11.1	339		2146	11.8	359
7 Tu	0359	10.7	326	22 W	0018	10.2	310	7 F	0342	5.3	161	
	1218	3.7	113		0421	11.2	342		2215	11.3	344	
	2137	9.9	302		1312	3.0	90		1500	6.1	186	
8 W	0023	9.7	295		2154	11.2	342		2222	11.8	360	
	0408	10.2	312	23 Th	0237	10.1	307	8 Sa	0448	8.8	268	
	1318	4.2	129		0503	10.2	310		0824	9.1	278	
	2251	10.3	313		1435	3.8	117		1458	5.8	178	
9 Th	1434	4.6	141		2248	11.4	348		2241	11.5	350	
	2327	10.6	324	24 F	0509	9.0	273	9 Su	0507	7.6	233	
					0903	9.6	292		1017	9.7	297	
					1604	4.5	136		1611	6.2	189	
					2325	11.5	352		2304	11.7	357	
10 F	0637	8.9	270	25 Sa	0545	7.6	232	10 M	0535	6.3	192	
	0817	8.9	271		1050	10.1	308		1124	10.6	324	
	1558	4.8	145		1717	5.0	151		1714	6.5	199	
	2351	10.9	333		2353	11.6	355		2327	12.0	366	
11 Sa	0604	8.0	245	26 Su	0617	6.2	190	11 Tu	0607	4.8	147	
	1026	9.4	286		1200	10.9	331		1219	11.5	351	
	1708	4.7	143		1812	5.4	165		1805	6.9	209	
									2351	12.4	378	
12 Su	0011	11.2	340	27 M	0018	11.7	358	12 W	0642	3.3	101	
	0621	7.0	213		0647	4.9	150		1309	12.2	373	
	1131	10.2	311		1255	11.5	350		1850	7.3	221	
	1801	4.7	142		1856	5.9	181		0	1935	8.8	268
13 M	0030	11.4	348	28 Tu	0039	11.9	362	13 Th	0017	12.8	391	
	0645	5.8	176		0718	3.8	115		0719	1.9	59	
	1224	11.1	338		1343	11.9	363		1359	12.8	389	
	1845	4.8	145		1932	6.5	198		0	1931	7.7	236
14 Tu	0050	11.7	356	29 W	0059	12.0	367	14 F	0046	13.2	403	
	0713	4.5	136		0748	2.9	87		0757	0.8	25	
	1311	11.9	362		1427	12.1	369		1449	13.0	396	
	1923	5.0	153		0	2004	7.1	215		2010	8.3	253
15 W	0111	12.0	366	30 Th	0119	12.2	372	15 Sa	0116	13.5	411	
	0744	3.1	96		0817	2.2	67		0837	0.2	5	
	1358	12.4	379		1507	12.1	369		1542	13.0	395	
	0	2000	5.5		2032	7.6	232		2048	8.9	270	
16 F	0139	12.3	375	31 F	0139	12.3	375					
	0847	1.9	57									
	1547	11.9	364									
	2100	8.1	248									

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Bangkok Bar, Thailand, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0305 0305 6.3 192	16 0252 6.2 190	1 F 0838 11.2 342	16 Sa 0830 11.5 352	1 Sa 0250 9.7 296	16 Su 0628 11.2 342						
1020 11.5 349	W 0930 12.0 365	1724 5.2 158	1800 4.1 124	0751 11.1 339	1733 4.0 123						
1801 6.6 202	1647 5.5 168			1624 4.7 144							
2339 7.8 238	● 2255 9.1 276										
2 W 0240 7.6 231	17 0317 7.8 238	2 Sa 0805 11.2 341	17 Su 0638 11.7 356	2 Su 0726 11.1 338	17 M 0430 11.6 355						
1016 11.1 339	Th 0943 11.7 357	1838 5.1 155	1943 4.1 124	1735 5.1 154	1915 4.5 136						
1847 6.0 182	1739 4.8 145										
3 Th 1003 10.9 331	18 0948 11.4 348	3 Su 0703 11.3 345	18 M 0602 12.3 374	3 M 0539 11.3 344	18 Tu 0452 12.0 365						
1936 5.3 163	F 1847 4.2 127	2022 4.8 146	2116 3.7 113	1919 5.1 156	2046 4.5 138						
4 F 0900 10.7 326	19 0903 11.3 343	4 M 0616 11.8 360	19 Tu 0619 12.6 384	4 Tu 0534 11.8 360	19 W 0509 12.1 368						
2027 4.7 144	Sa 2008 3.6 110	2146 4.2 128	2224 3.3 100	2100 4.8 146	1133 8.6 263						
5 Sa 0622 11.1 339	20 0624 12.0 367	5 Tu 0633 12.2 373	20 W 0636 12.7 386	0550 12.1 370	1451 9.3 284						
2117 4.1 126	Su 2125 3.0 92	2243 3.6 110	1238 9.4 288	2207 4.4 133	2153 4.5 137						
6 Su 0615 11.7 358	21 M 0646 12.7 387	6 W 0659 12.5 380	1535 10.0 305								
2207 3.6 109	2232 2.4 74	2325 3.2 97	2313 3.0 92								
7 M 0639 12.2 372	22 0717 13.0 396	7 Tu 0720 12.5 382	20 0704 12.4 379	0605 12.3 374	0534 12.0 365						
2254 3.1 95	Tu 2327 2.0 61	1305 9.7 295	F 1257 8.1 246	1205 9.0 275	1147 6.8 206						
○	O 2359 3.0 92	1606 10.3 313	1731 10.8 328	1630 10.4 318	1704 10.7 326						
8 Tu 0712 12.4 379	23 0745 13.1 398	8 F 0737 12.5 380	23 Sa 0025 3.6 110	0605 12.3 374	2324 5.0 152						
2335 2.8 84	W 1343 10.1 308	1313 9.3 282	0716 12.2 372	1241 8.9 270							
●	1600 10.4 316	1659 10.6 323	1316 7.3 221	1640 10.5 320							
9 W 0746 12.5 382	24 0012 1.9 57	9 Sa 0028 3.1 94	24 Su 0054 4.4 133	0625 12.0 366	0554 11.7 356						
1345 10.0 306	Th 0810 12.9 394	0747 12.4 377	0724 12.0 366	1243 6.1 186	1229 5.0 151						
1539 10.2 311	1356 9.7 296	1329 8.5 258	1337 6.4 195	1814 11.6 353	1834 11.5 349						
10 Th 0012 2.5 77	24 0012 1.9 57	1750 10.8 329	1902 10.8 329	1249 4.3 130							
0817 12.6 383	F 0830 12.7 387	1703 10.5 320	1914 11.6 353	1914 11.6 353							
1358 10.0 306	1416 9.2 279										
1630 10.4 316	1757 10.4 318	1843 10.9 322									
11 F 0043 2.5 75	25 0048 2.1 64	10 Su 0056 3.5 106	25 M 0119 5.3 161	0038 5.1 156	0100 7.0 214						
0843 12.5 382	F 0830 12.7 387	0752 12.3 374	0727 11.8 361	0634 12.0 366	0616 11.4 347						
1414 9.8 298	1416 9.2 279	1352 7.4 227	1359 5.6 172	1309 4.9 148	1312 3.7 114						
1719 10.4 318	1757 10.4 318	1843 10.9 322	1946 10.7 326	1906 11.9 362	1951 11.6 355						
12 Sa 0110 2.6 79	27 0145 3.6 111	11 M 0123 4.2 128	26 Tu 0143 6.3 191	0112 6.0 183	0129 7.7 234						
0901 12.5 380	Su 0849 12.1 370	0757 12.2 373	0734 11.7 358	0647 12.0 366	0631 11.3 344						
1437 9.3 282	1456 7.6 232	1419 6.3 193	1421 5.0 153	1339 3.8 116	1335 3.4 103						
1811 10.3 315	1936 9.8 299	1937 10.9 331	2030 10.5 321	2002 11.9 364	2031 11.6 353						
13 Su 0136 3.1 93	28 0208 4.8 145	11 F 0123 4.2 128	26 Tu 0143 6.3 191	0112 6.0 183	0129 7.7 234						
0911 12.3 376	M 0851 11.9 364	0815 12.1 370	0734 11.7 358	0647 12.0 366	0631 11.3 344						
1504 8.4 257	1519 6.8 207	1519 4.5 137	1444 4.6 140	1411 3.1 95							
1905 10.1 307	2028 9.4 287	2143 10.4 317	2118 10.4 316	2101 11.8 359							
14 M 0200 3.8 116	29 0224 6.0 182	14 F 0243 7.8 237	29 F 0242 9.0 273	0245 9.3 284	0257 9.4 288						
0913 12.2 373	Tu 0853 11.7 358	0829 12.0 365	0752 11.3 343	0739 11.7 356	0712 10.8 328						
1534 7.5 228	1545 6.1 187	1558 4.0 123	1540 4.5 136	1527 3.0 90	1506 3.7 113						
2005 9.7 297	2124 9.1 276	● 2315 10.1 307	● 2358 9.9 303	2340 11.0 336	2329 10.9 333						
15 Tu 0226 4.9 149	30 0231 7.2 218	15 F 0302 9.1 278	15 F 0839 11.8 359	0313 10.3 314	0335 10.1 307						
0918 12.1 370	W 0853 11.5 352	1647 3.9 120		0748 11.4 348	0707 10.6 324						
1608 6.5 197	1610 5.6 172			1619 3.4 104							
2117 9.4 285	● 2241 8.8 268										
13 Su 0230 8.2 250	31 0230 8.2 250										
Th 0846 11.4 347	Th 1640 5.3 163										

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Bangkok Bar, Thailand, 2008

Times and Heights of High and Low Waters

April					May					June														
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height										
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm									
<b>1</b> Tu	0340 1818	11.2 5.2	341 159	<b>16</b> W	0308 1023 1331 1959	11.5 7.9 8.3 5.6	350 241 254 170	<b>1</b> Th	0150 1836	11.1 6.0	339 182	<b>16</b> F	0147 0930 1608 2030	10.7 5.3 8.9 7.7	326 161 271 235	<b>1</b> Su	0100 0856 1630 2115	10.2 3.9 9.9 8.6	311 119 303 263	<b>16</b> M	0943 1758	3.1 10.9	95 331	
<b>2</b> W	0412 1953	11.5 5.4	350 165	<b>17</b> Th	0332 1026 1527 2113	11.4 6.9 9.1 6.1	347 209 276 186	<b>2</b> F	0223 0939 1444 2012	11.0 6.8 8.5 6.7	336 208 260 203	<b>17</b> Sa	0215 0956 1703 2158	10.4 4.3 10.0 8.2	316 130 305 251	<b>2</b> M	0136 0937 1730 2249	10.0 2.6 11.2 9.0	305 80 340 275	<b>17</b> Tu	1021 1829	2.6 11.4	80 347	
<b>3</b> Th	0425 1111 1432 2112	11.6 8.3 8.8 5.4	354 254 267 166	<b>18</b> F	0351 1042 1637 2214	11.3 5.7 10.0 6.6	344 175 305 200	<b>3</b> Sa	0248 0956 1602 2135	10.9 5.5 9.8 7.2	332 167 298 218	<b>18</b> Su	0242 1023 1744 2303	10.1 3.4 10.9 8.4	308 104 333 257	<b>3</b> Tu	0215 1022 1824	9.9 1.6 12.0	301 48 367	<b>18</b> W	1101 1903	2.2 11.6	68 355	
<b>4</b> F	0432 1058 1548 2211	11.6 7.4 9.7 5.5	354 226 295 169	<b>19</b> Sa	0408 1102 1727 2303	11.2 4.7 10.9 7.0	340 142 331 213	<b>4</b> Su	0310 1021 1702 2240	10.8 4.0 11.0 7.6	329 122 336 232	<b>19</b> M	0310 1049 1819 2353	9.9 2.8 11.5 8.5	302 84 352 259	<b>4</b> W	0001 0257 1111 1919	9.3 9.8 0.8 12.6	282 300 25 383	<b>19</b> Th	1142 1941	2.0 11.7	61 358	
<b>5</b> Sa	0440 1111 1645 2300	11.6 6.2 10.7 5.8	353 188 327 178	<b>20</b> Su	0424 1126 1809 ○	11.0 3.8 11.5 7.4	336 116 351 226	<b>5</b> M	0333 1052 1756 2336	10.8 2.7 12.0 8.1	328 81 366 246	<b>20</b> Tu	0339 1117 1855	9.7 2.3 11.9	297 71 362	<b>5</b> Th	0107 0340 1202 2015	9.4 9.8 0.4 12.8	288 300 13 389	<b>20</b> F	0147 0415 1221 2018	8.7 9.0 1.8 11.8	264 273 55 360	
<b>6</b> Su	0452 1133 1738 ●	11.5 4.8 11.6 6.3	352 146 355 193	<b>21</b> M	0441 1148 1846	10.9 3.1 11.9	331 96 362	<b>6</b> Tu	0400 1128 1851	10.8 1.6 12.6	328 48 385	<b>21</b> W	0033 0409 1147	8.6 9.6 2.1	262 294 64	<b>6</b> F	0213 0427 1254	9.5 9.8 0.3	290 299 9 390	<b>21</b> Sa	0217 0455 1258 2055	8.7 9.1 1.7 11.8	265 276 53 360	
<b>7</b> M	0508 1200 1830	11.5 3.4 12.3	352 105 376	<b>22</b> Tu	0022 0500 1212 1921	7.8 10.7 2.7 12.1	239 326 83 368	<b>7</b> W	0029 0430 1209 1948	8.6 10.7 0.9 12.9	263 327 28 393	<b>22</b> Th	0109 0437 1219 2008	8.7 9.6 2.0 12.0	266 293 61 365	<b>7</b> Sa	0313 0520 1343 2158	9.4 9.7 0.5 12.7	287 296 16 386	<b>22</b> Su	0247 0534 1330 2127	8.7 9.1 1.8 11.8	264 277 56 360	
<b>8</b> Tu	0026 0526 1233 1926	7.0 11.5 2.4 12.7	214 351 73 387	<b>23</b> W	0055 0521 1236 1957	8.2 10.6 2.5 12.1	251 322 76 368	<b>8</b> Th	0122 0500 1252 2050	9.2 10.7 0.7 12.9	280 325 20 392	<b>23</b> F	0144 0506 1253 2049	8.9 9.6 2.0 11.9	270 293 60 363	<b>8</b> Su	0405 0619 1426 2234	9.1 9.4 1.0 12.4	278 288 32 377	<b>23</b> M	0317 0614 1358 2153	8.5 9.0 2.1 11.7	258 274 64 357	
<b>9</b> W	0108 0547 1308 2025	7.9 11.5 1.8 12.7	240 350 54 387	<b>24</b> Th	0128 0541 1304 2037	8.6 10.5 2.4 12.0	261 319 73 366	<b>9</b> F	0220 0533 1338 2153	9.7 10.5 0.8 12.7	295 321 24 386	<b>24</b> Sa	0222 0535 1329 2132	9.0 9.6 2.1 11.9	273 293 63 362	<b>9</b> M	0451 0722 1503 2300	8.6 9.0 1.9 11.9	262 275 59 364	<b>24</b> Tu	0345 0658 1423 2211	8.1 8.8 2.6 11.5	248 268 80 351	
<b>10</b> Th	0150 0612 1346 2128	8.8 11.4 1.6 12.4	268 347 48 379	<b>25</b> F	0200 0602 1336 2123	8.9 10.4 2.5 11.9	270 316 75 362	<b>10</b> Sa	0332 0609 1424 2252	9.9 10.3 1.2 12.4	302 315 38 378	<b>25</b> Su	0305 0604 1403 2215	9.1 9.5 2.3 11.8	276 290 69 359	<b>10</b> Tu	0533 0828 1539 2317	7.9 8.4 3.1 11.5	240 257 95 351	<b>25</b> W	0414 0748 1445 2218	7.6 8.5 3.4 11.3	231 259 104 343	
<b>11</b> F	0231 0637 1427 2238	9.6 11.2 1.8 12.1	293 342 54 368	<b>26</b> Sa	0238 0624 1411 2216	9.2 10.2 2.7 11.7	280 312 83 356	<b>11</b> Su	1151 2340	1.9 12.1	59 369	<b>26</b> M	0356 0630 1435 2253	9.1 9.3 2.7 11.6	276 283 81 355	<b>11</b> W	0616 0946 1612 2333	7.0 7.8 4.6 11.1	214 237 140 337	<b>26</b> Th	0445 0852 1510 2222	6.8 8.1 4.5 11.0	207 248 136 334	
<b>12</b> Sa	0319 0700 1513 2356	10.2 11.0 2.3 11.8	312 334 70 359	<b>27</b> Su	0325 0639 1446 2315	9.5 10.1 3.1 11.5	290 307 95 351	<b>12</b> M	1558	2.9	89	<b>27</b> W	1503 2324	3.2 11.4	99 348	<b>12</b> Th	0700 1147 1643 2349	6.1 7.3 6.2 10.6	186 224 188 322	<b>27</b> F	0521 1019 1541 2233	5.9 7.9 5.8 10.7	179 240 177 326	
<b>13</b> Su	1607 ●	3.1	94	<b>28</b> M	1524 ○	3.6	111	<b>13</b> Tu	0019 1646	11.7 4.1	358 125	<b>28</b> W	1533 2347	4.1 11.1	125 339	<b>13</b> F	0745 2358	5.2 10.1	159 307	<b>28</b> Sa	0605 1242 1620 2252	4.9 8.0 7.3 10.3	149 243 224 315	
<b>14</b> M	0116 1714	11.6 4.0	354 122	<b>29</b> Tu	0015 1605	11.4 4.3	346 132	<b>14</b> W	0050 0835 1113 1743	11.4 7.5 7.7 5.4	347 228 235 166	<b>29</b> Th	0659 0923 1611	7.6 7.8 5.2	233 239 159	<b>14</b> Sa	0827	4.4	134	<b>29</b> Su	0700 2310	3.9 9.9	119 303	
<b>15</b> Tu	0225 1835	11.5 4.9	352 148	<b>30</b> W	0107 1705	11.2 5.2	342 157	<b>15</b> Th	0118 0904 1407 1856	11.0 6.4 7.9 6.8	336 194 240 206	<b>30</b> F	0006 0737 1227 1714	10.8 6.6 7.6 6.6	329 200 232 200	<b>15</b> Su	0006 0905 1733	9.6 3.7 10.1	294 113 307	<b>30</b> M	0802 1717	3.0 10.3	91 315	
													<b>31</b> Sa	0029 0816 1453 1904	10.5 5.2 8.6 7.8	320 160 261 239								

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Bangkok Bar, Thailand, 2008

Times and Heights of High and Low Waters

July					August					September														
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height										
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm									
<b>1</b> Tu	0907 1808	2.1 11.4	65 348	<b>16</b> W	1000 1830	2.9 11.3	87 344	<b>1</b> F	1111 1922	1.1 12.5	33 381	<b>16</b> Sa	0057 0339	8.3 9.7	252 264	<b>1</b> M	0045 0535	6.6 10.0	202 305	<b>16</b> Tu	0013 0527	6.1 10.2	187 312	
				●					1119 1859	2.4 11.9	74 364		1212 1857	2.9 11.8	87 361		1155 1808	4.3 11.4	131 346					
<b>2</b> W	1011 1856	1.4 12.1	42 370	<b>17</b> Th	1054 1901	2.4 11.6	72 354	<b>2</b> Sa	0131 0411	8.7 9.1	264 277	<b>17</b> Su	0100 0433	8.0 9.0	244 275	<b>2</b> Tu	0108 0627	5.7 10.2	173 311	<b>17</b> W	0033 0614	5.1 10.8	154 329	
					1200 1947	0.9 12.5	26 380		1155 1919	2.4 11.9	72 362		1245 1909	3.7 11.5	113 352		1228 1816	4.9 11.3	150 344					
<b>3</b> Th	1112 1942	0.8 12.5	24 382	<b>18</b> F	1139 1935	2.0 11.8	61 360	<b>3</b> Su	0144 0517	8.1 9.4	247 285	<b>18</b> M	0112 0520	7.5 9.4	230 286	<b>3</b> W	0132 0715	4.8 10.2	147 311	<b>18</b> Th	0058 0702	4.0 11.2	121 342	
				●					1240 2009	1.1 12.3	33 374		1226 1933	2.6 11.7	79 356		1315 1915	4.8 11.3	146 343		1301 1829	5.7 11.3	175 343	
<b>4</b> F	1208 2023	0.4 12.7	12 387	<b>19</b> Sa	0147 0423	8.4 8.8	257 268	<b>4</b> M	0206 0615	7.4 9.4	225 288	<b>19</b> Tu	0128 0606	6.8 9.6	208 294	<b>4</b> Th	0156 0801	4.1 10.1	126 308	<b>19</b> F	0127 0755	3.0 11.4	92 347	
				1218 2005	1.8 11.9	54 362		1315 2027	1.7 12.0	53 365		1254 1941	3.1 11.5	94 350		1342 1924	5.9 11.1	179 337		1335 1845	6.7 11.2	205 341		
<b>5</b> Sa	0231 0443	9.0 9.3	274 282	<b>20</b> Su	0204 0509	8.3 9.0	253 273	<b>5</b> Tu	0231 0709	6.5 9.4	199 285	<b>20</b> W	0148 0654	5.9 9.9	180 301	<b>5</b> F	0220 0848	3.6 10.0	110 304	<b>20</b> Sa	0159 0853	2.4 11.4	72 346	
				1256 2100	0.3 12.6	10 385		1345 2039	2.8 11.6	85 354		1321 1945	3.8 11.3	116 345		1407 1935	6.9 10.9	209 332		1409 1903	7.8 11.1	237 338		
<b>6</b> Su	0259 0550	8.6 9.2	262 281	<b>21</b> M	0221 0552	8.0 9.1	244 276	<b>6</b> W	0255 0801	5.7 9.1	173 277	<b>21</b> Th	0213 0745	4.9 10.0	150 304	<b>6</b> Sa	0245 0941	3.3 9.8	100 300	<b>21</b> Su	0233 1000	2.1 11.1	64 338	
				1338 2128	0.7 12.4	21 378		1318 2049	2.0 11.7	62 357		1412 2045	4.0 11.3	123 344		1431 1945	7.7 10.7	236 325		1443 1924	8.8 10.9	269 333		
<b>7</b> M	0330 0651	8.0 9.1	243 276	<b>22</b> Tu	0239 0638	7.5 9.1	228 276	<b>7</b> Th	0318 0857	4.9 8.8	150 269	<b>22</b> F	0240 0841	4.0 10.0	122 305	<b>7</b> Su	0314 1045	3.2 9.7	98 295	<b>22</b> M	0314 1125	2.2 10.9	66 331	
				1413 2147	1.5 12.0	45 367		1343 2101	2.5 11.5	77 352		1435 2048	5.3 11.0	163 335		1454 2001	8.5 11.1	260 339		1521 1951	9.7 10.4	297 326		
<b>8</b> Tu	0400 0750	7.2 8.7	220 265	<b>23</b> W	0300 0727	6.7 9.0	205 273	<b>8</b> F	0343 0959	4.3 8.6	131 261	<b>23</b> Sa	0310 0944	3.2 9.9	99 301	<b>8</b> M	0348 1219	3.4 9.6	104 293	<b>23</b> Tu	0405 1317	2.5 10.9	77 331	
				1443 2200	2.6 11.6	79 354		1406 2105	3.3 11.3	100 345		1453 2052	6.6 10.7	202 326		1519 2015	9.3 11.0	283 335		1519 1949	9.3 10.2	283 311		
<b>9</b> W	0427 0852	6.4 8.2	195 251	<b>24</b> Th	0326 0821	5.8 8.9	178 270	<b>9</b> Sa	0410 1118	3.9 8.4	120 257	<b>24</b> Su	0345 1106	2.8 9.7	86 296	<b>9</b> Tu	0433 1847	3.7 10.1	114 309	<b>24</b> W	0515 1514	3.1 11.3	94 343	
				1509 2208	4.0 11.2	121 341		1500 2107	4.3 11.1	131 339		2050 10.4	3.18	318		1510 2028	8.4 10.8	256 329		1510 2028	8.4 10.8	256 329		
<b>10</b> Th	0455 1004	5.6 7.8	171 238	<b>25</b> F	0354 0924	4.9 8.7	150 266	<b>10</b> Su	0441 2038	3.8 10.2	116 311	<b>25</b> M	0430 1317	2.7 9.7	83 297	<b>10</b> W	0542 1623	4.1 10.7	125 325	<b>25</b> Th	0646 1604	3.5 11.6	108 355	
				1530 2212	5.5 10.8	167 328		1454 2114	5.5 11.0	169 334		1527 2030	9.6 10.6	292 322		1623 2030	9.6 10.6	292 322		1632 2300	11.8 7.9	360 241		
<b>11</b> F	0527 1143	5.0 7.6	151 231	<b>26</b> Sa	0426 1046	4.1 8.6	126 262	<b>11</b> M	0522 1948	3.8 10.1	117 308	<b>26</b> Tu	0535 1723	2.9 10.7	88 326	<b>11</b> Th	0715 1651	4.3 11.2	130 342	<b>26</b> F	0814 1632	3.8 11.8	115 360	
				1534 2209	7.0 10.3	212 315		1520 2125	7.0 10.7	212 327		1723 2030	9.6 10.6	292 322		1651 2030	11.8 7.9	241 241		1651 2309	11.8 6.9	360 210		
<b>12</b> Sa	0604 2158	4.5 10.0	136 305	<b>27</b> Su	0508 1251	3.5 8.7	107 266	<b>12</b> Tu	0630 1750	3.9 10.4	119 317	<b>27</b> W	0709 1716	3.0 11.5	90 351	<b>12</b> F	0850 1717	4.1 11.6	124 354	<b>27</b> Sa	0232 1651	8.7 11.8	266 360	
				1542 2133	8.4 10.4	256 318		1750 2133	8.4 10.4	256 318		1716 2030	11.5 10.6	351 322		1651 2030	11.8 6.9	210 210		1651 2309	11.8 6.9	210 210		
<b>13</b> Su	0652 2101	4.1 9.8	125 299	<b>28</b> M	0607 2107	3.1 10.2	94 312	<b>13</b> W	0811 1742	3.7 11.0	114 335	<b>28</b> Th	0842 1742	2.7 12.0	83 366	<b>13</b> Sa	0956 2351	3.8 7.7	116 235	<b>28</b> Su	0355 1706	9.5 11.7	290 358	
				1135 2101	9.8 11.4	125 299		1742 2101	11.0 10.2	335 312		1742 2030	12.0 10.6	366 322		1706 2030	11.7 6.9	2328 210		1706 2328	11.7 5.8	358 177		
<b>14</b> M	0754 1815	3.8 10.2	115 311	<b>29</b> Tu	0728 1753	2.7 11.0	83 336	<b>14</b> Th	0935 1806	3.3 11.5	100 350	<b>29</b> F	0955 1805	2.3 12.2	71 373	<b>14</b> Su	0345 1753	8.9 11.7	272 356	<b>29</b> M	0457 1722	10.3 11.6	313 353	
				1805 2158	10.8 10.0	330 305		1806 2158	11.8 10.4	350 336		1805 2030	12.2 10.6	373 350		1753 2030	11.7 7.0	356 214		1753 2352	11.7 4.8	353 145		
<b>15</b> Tu	0900 1805	3.3 10.8	102 330	<b>30</b> W	0854 1819	2.2 11.8	68 361	<b>15</b> F	1034 1833	2.8 11.8	84 360	<b>30</b> Sa	0018 0329	8.3 9.0	253 275	<b>15</b> M	0439 1049	9.6 2.1	292 65	<b>30</b> Tu	0547 1145	10.9 5.3	331 161	
				1805 2158	10.8 10.0	330 305		1833 2158	11.8 10.4	360 336		1833 2030	12.2 10.6	372 350		1833 2030	11.7 7.0	356 214		1833 2352	11.7 4.8	353 145		
							<b>31</b> Th	1010 1852	1.6 12.3	49 376				<b>31</b> Su	0025 0438	7.5 9.6	230 292				<b>31</b> O	0438 1840	9.6 12.1	292 368

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Bangkok Bar, Thailand, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm		h m	ft	cm		h m	ft	cm	
1 W	0016	3.9	119	16 Th	0620	12.0	366	1 Sa	0024	2.3	70
W	0633	11.2	341	Th	1210	7.2	218	Sa	0752	12.0	367
1221	6.1	185		1700	11.1	338	M	1315	8.8	269	
1746	11.1	339			1723	10.5	319	Su	1353	10.0	306
								M	1702	10.9	331
2 Th	0040	3.3	100	17 F	0012	2.2	67	16	0025	1.0	29
715	11.3	345		711	0711	12.4	378	Su	0825	13.0	397
1252	6.9	210		1250	7.9	240	M	1347	9.1	277	
1800	11.0	334		1723	11.1	338	Tu	1745	10.4	316	
								Su	1739	10.7	326
3 F	0104	2.9	88	18 Sa	0047	1.6	48	17	0111	1.0	30
755	11.3	344		806	0806	12.5	381	M	0830	11.9	364
1321	7.6	231		1332	8.7	264	Tu	1428	9.3	284	
1817	10.8	330		1747	11.1	337	Sa	1807	10.2	312	
								M	1024	12.7	388
4 Sa	0130	2.7	82	19 Su	0126	1.3	41	18	0159	1.3	41
836	11.2	341		908	0908	12.3	376	M	0915	11.8	360
1351	8.2	249		1417	9.4	287	Tu	1428	9.3	284	
1835	10.7	325		1815	10.9	333	Sa	1807	10.2	312	
								M	1024	12.7	388
5 Su	0159	2.7	81	20 M	0208	1.5	46	19	0245	2.0	62
922	11.1	337		1017	12.1	368	M	1101	11.6	353	
1423	8.7	264		1515	10.0	305	Tu	1113	12.5	380	
1851	10.5	319		1842	10.7	326	Sa	1113	12.5	380	
								M	1113	12.5	380
6 M	0230	2.9	87	21 Tu	0254	1.9	59	21	0415	4.3	131
1020	10.9	332		1131	11.8	361	M	1157	11.5	349	
1502	9.2	280						Tu	1219	11.8	360
1904	10.2	312						F	1955	7.7	236
								Sa	2238	8.0	244
7 Tu	0308	3.2	99	22 W	0347	2.7	81	21	0312	3.8	116
1133	10.7	327		1243	11.7	357	M	1157	11.5	349	
1600	9.7	296						Tu	1245	11.3	344
1858	10.0	305						F	1245	11.3	344
								Sa	2032	6.6	200
8 W	0353	3.8	115	23 Th	0450	3.6	109	22	0507	5.8	176
1302	10.8	328		1342	11.6	355	M	1324	11.1	339	
								Tu	1432	11.1	339
9 Th	0452	4.4	134	8 Sa	0432	5.6	170	23	0144	8.1	246
1443	11.0	335		1324	11.1	339	M	0615	7.3	222	
								Su	1314	11.1	337
10 F	0612	5.0	151					F	2104	5.4	166
1533	11.3	343		25 Sa	0107	8.2	250	23	0615	7.3	222
				729	0729	5.4	166	M	1314	11.1	337
1456	11.4	348						Tu	2133	4.4	135
2156	6.5	198		25 M	0248	8.4	257	24	0409	9.2	280
				745	0745	7.4	226	M	0758	8.5	258
				1418	10.7	327	Tu	1341	10.7	326	
				2137	5.5	169	Sa	2133	4.4	135	
11 Sa	0742	5.3	162	26 Su	0309	8.9	272	25	0503	10.4	317
1556	11.3	345		846	0846	6.2	188	M	0941	9.1	276
2248	7.5	230		1518	11.3	344	Tu	1408	10.4	318	
				2217	5.3	162	Sa	2202	3.6	109	
12 Su	0243	8.3	254	27 M	0425	10.0	304	10	0443	10.2	311
0902	5.5	168		952	0952	6.7	205	M	0826	9.8	298
1607	11.3	344		1540	11.1	339	Tu	1238	10.5	321	
2243	6.7	203		2242	4.2	129	Sa	2106	3.5	108	
								M	1053	9.3	282
13 M	0353	9.3	284	28 Tu	0516	10.9	333	11	0527	11.5	349
1001	5.7	175		1046	7.2	220	M	0920	7.9	242	
1618	11.2	340		1600	10.9	333	Tu	1437	10.6	324	
2257	5.6	170		2307	3.4	103	Sa	2200	4.2	129	
								M	1053	9.3	282
14 Tu	0446	10.3	315	29 W	0600	11.6	354	26	0540	11.4	346
1048	6.1	185		1131	7.7	234	M	1118	8.7	265	
1630	11.1	337		1618	10.8	328	Tu	1526	10.7	327	
2317	4.4	133		2332	2.8	85	Sa	2300	1.9	59	
								M	1526	10.7	327
15 W	0533	11.3	344	30 Th	0640	12.0	366	28	0646	12.3	374
1130	6.5	199		1210	8.1	247	M	1221	9.4	285	
1643	11.1	337		1639	10.6	324	Tu	1543	10.2	310	
○	2342	3.2	97	2358	2.5	75	Sa	2330	2.4	73	
								M	1323	9.5	291
16 F	0716	12.1	369	31 F	0716	12.1	369	29	0700	12.9	393
				1244	8.5	259	M	1221	9.4	285	
				1700	10.6	322	Tu	1545	10.7	326	
								Sa	1645	10.2	312

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Singapore (Tanjong Pagar), Singapore, 2008

Times and Heights of High and Low Waters

January				February				March					
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height		
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm		
1 Tu	0500	8.2	250	16 W	0416	9.2	280	1 F	0443	7.9	240		
1111	4.6	140	1037	3.6	110	1250	3.6	110	16 Sa	0458	8.5	260	
1713	7.2	220	1648	8.2	250	2122	6.2	190	1245	2.6	80		
2315	4.6	140	2233	4.3	130	2216	6.2	190	2124	7.2	220		
2 W	0539	8.2	250	17 Th	0501	8.9	270	2 Sa	0545	7.5	230		
1233	4.3	130	1145	3.3	100	1411	3.3	100	17 Su	0100	6.6	200	
1903	6.9	210	1824	7.5	230	2231	6.9	210	0624	8.2	250		
			2335	5.6	170				1422	2.3	70		
3 Th	0024	5.6	170	18 F	0556	8.9	270	2228	7.9	240			
0630	7.9	240	1305	2.6	80	3 Su	0215	6.6	200	18 M	0303	6.2	190
1352	3.6	110	2050	7.5	230	0735	7.5	230	0826	8.2	250		
2115	6.9	210				1522	2.6	80	1539	1.6	50		
4 F	0148	5.9	180	19 Sa	0111	6.2	190	2256	7.5	230	2311	8.5	260
0731	8.2	260	0703	8.9	270	19 M	0333	6.2	190	0128	6.2	190	
1456	3.0	90	1422	2.0	60	0905	8.2	250	0826	6.9	210		
2220	7.5	230	2220	8.2	250	1611	2.0	60	1446	2.6	80		
5 Sa	0301	6.2	190	20 Su	0246	6.6	200	2324	8.2	250	2230	7.2	220
0833	8.2	250	0818	8.9	270	5 Tu	0420	5.6	170	18 Tu	0307	5.6	170
1545	2.3	70	1528	1.3	40	0954	8.5	260	0943	7.9	240		
2301	7.9	240	2316	8.9	270	1650	1.6	50	1537	1.6	50		
6 Su	0356	5.9	180	21 M	0358	6.2	190	2350	8.5	260	2241	7.9	240
0924	8.5	260	0928	9.5	290	W	0454	5.2	160	0358	5.2	160	
1624	2.0	60	1624	1.0	30	1030	9.2	280	0933	8.2	250		
2337	8.5	260				1722	1.3	40	1626	1.6	50		
7 M	0437	5.6	170	22 Tu	0001	9.2	280	1756	1.0	30	2313	8.2	250
1005	9.2	280	0450	5.9	180	7 Th	0016	8.9	270	0433	3.9	120	
1700	1.6	50	1024	9.8	300	0524	4.9	150	1028	9.2	280		
			O 1715	0.7	20	1105	9.5	290	1701	1.3	40		
8 Tu	0011	8.5	260	22 F	0043	9.2	280	1752	1.0	30	2328	8.5	260
0511	5.6	170	0533	5.2	160	8 W	0037	8.9	270	0503	3.3	100	
1041	9.5	290	1111	10.2	310	0556	3.6	110	1105	9.5	290		
● 1730	1.3	40	1803	0.7	20	1111	10.2	310	1658	1.3	40		
9 W	0043	8.9	270	24 Th	0116	9.2	280	O 1756	1.0	30	2339	8.5	260
0545	5.2	160	0615	4.9	150	23 M	0056	9.2	280	0503	3.3	100	
1116	9.5	290	1156	10.5	320	0635	3.9	120	1141	9.5	290		
1801	1.3	40	1846	1.0	30	1216	10.5	320	1805	2.0	60		
10 Th	0111	8.9	270	23 Sa	0037	8.9	270	1824	1.0	30	O 2354	8.9	270
0618	4.9	150	0533	5.2	160	Sa 1801	3.0	90	0501	3.9	120		
1150	9.8	300	1111	10.2	310	1228	10.2	310	1028	9.2	280		
1835	1.0	30	1803	0.7	20	1903	1.6	50	1735	1.6	50		
11 F	0139	9.2	280	25 M	0145	9.2	280	● 1756	1.0	30	2339	8.5	260
0654	4.9	150	0654	4.6	140	10 Tu	0116	9.5	290	0503	3.3	100	
1228	10.2	310	1239	10.5	320	0713	3.3	100	1105	9.5	290		
1911	1.0	30	1926	1.3	40	0735	2.6	80	1658	1.3	40		
12 Sa	0205	9.2	280	26 Tu	0207	9.2	280	1935	1.3	40	2339	8.5	260
0733	4.6	140	0805	3.9	120	0143	9.5	290	0146	9.2	280		
1305	10.2	310	1358	9.5	290	0752	3.0	90	0146	9.2	280		
1948	1.3	40	2031	2.3	70	1339	10.2	310	0811	2.3	70		
13 Su	0233	9.2	280	27 Tu	0213	9.5	290	2009	2.0	60	0100	9.8	300
0813	4.3	130	0843	3.6	110	0831	2.6	80	0728	1.3	40		
1348	10.2	310	1439	8.9	270	1428	9.5	290	1335	9.8	300		
2026	1.6	50	2100	3.0	90	1256	8.9	270	1418	8.9	270		
14 M	0303	9.2	280	28 W	0248	8.9	270	2020	3.3	100	1950	3.0	90
0856	3.9	120	0843	3.6	110	0915	2.3	70	0146	9.2	280		
1435	9.5	290	1439	8.9	270	1526	8.9	270	0801	1.3	40		
2105	2.3	70	2100	3.0	90	2115	3.9	120	0728	1.3	40		
15 Tu	0337	9.2	280	28 Sa	0245	9.5	290	2020	3.3	100	1335	9.8	300
0943	3.6	110	1013	3.6	110	0926	2.6	80	0209	8.9	270		
1531	8.9	270	1618	7.2	220	1548	7.2	220	0846	2.3	70		
2146	3.3	100	2122	3.9	120	2045	4.6	140	1500	7.9	240		
16 O	0335	8.5	260	29 M	0311	8.9	270	2033	3.9	120	1430	9.2	280
10943	3.6	110	0922	3.6	110	1005	2.3	70	0209	8.9	270		
1531	8.9	270	1522	8.2	250	1637	7.9	240	0846	2.3	70		
2146	3.3	100	2122	3.9	120	O 2152	4.9	150	1500	7.9	240		
17 Th	0403	8.2	250	30 Th	0335	8.5	260	2246	5.9	180	1536	8.2	250
1122	3.6	110	1103	3.6	110	1111	2.3	70	0256	8.5	260		
1741	6.6	200	1618	7.2	220	1818	6.9	210	1022	3.0	90		
2152	5.6	170	O 2137	4.9	150	2246	5.9	180	1656	6.2	190		
18 Th	0403	8.2	250	31 Th	0403	8.2	250				O 2133	5.2	160
1122	3.6	110	1103	3.6	110	1111	2.3	70	0243	9.2	280		
1741	6.6	200	1618	7.2	220	1818	6.9	210	0945	1.3	40		
2152	5.6	170	O 2137	4.9	150	2246	5.9	180	1646	7.2	220		
19 M	0337	7.2	220	31 M	0337	7.2	220				O 2133	5.2	160
1228	3.0	90	1228	3.6	110	1056	2.0	60	0243	9.2	280		
2048	6.2	190	1811	5.9	180	1905	6.6	200	0937	2.3	70		
2048	6.2	190	O 2131	5.6	170	2233	6.2	190	1641	6.2	190		
2048	6.2	190	31 M	1228	3.0	90			2045	5.2	160		

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Singapore (Tanjong Pagar), Singapore, 2008

Times and Heights of High and Low Waters

April				May				June			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0037 5.9 180	16 W 0243 4.9 150	1 Th 0120 4.9 150	16 F 0258 3.3 100	1 Su 0231 2.0 60	16 M 0346 1.6 50						
0535 6.9 210	0830 7.5 230	0709 7.2 220	0909 7.5 230	0903 7.9 240	1046 7.2 220						
1352 2.6 80	1511 2.0 60	1352 2.3 70	1515 3.0 90	1450 3.3 100	1558 4.3 130						
2126 6.9 210	2150 7.9 240	2043 7.9 240	2116 7.9 240	2054 8.9 270	2135 8.2 250						
2 W 0218 5.2 160	17 Th 0335 3.9 120	2 F 0228 3.9 120	17 Sa 0341 2.3 70	2 M 0320 1.0 30	17 Tu 0426 1.0 30						
0758 7.2 220	0931 8.2 250	0826 7.5 230	1003 7.9 240	1009 8.2 250	1128 7.5 230						
1458 2.3 70	1556 2.0 60	1448 2.3 70	1554 3.0 90	1541 3.6 110	1635 4.3 130						
2152 7.5 230	2215 7.9 240	2113 8.2 250	2143 8.2 250	2133 9.2 280	2213 8.5 260						
3 Th 0318 4.6 140	18 F 0411 3.0 90	3 Sa 0313 3.0 90	18 Su 0415 1.6 50	3 Tu 0405 0.0 0	18 W 0503 0.7 20						
0903 7.9 240	1018 8.5 260	0924 8.2 250	1050 7.9 240	1113 8.5 260	1205 7.5 230						
1545 2.0 60	1633 2.0 60	1533 2.3 70	1630 3.3 100	1631 3.9 120	1711 4.3 130						
2215 8.2 250	2231 8.2 250	2141 8.9 270	2209 8.5 260	2215 9.5 290	2246 8.5 260						
4 F 0356 3.6 110	19 Sa 0441 2.3 70	4 Su 0352 2.0 60	19 M 0446 1.3 40	4 W 0454 -0.7 -20	19 Th 0539 0.7 20						
0950 8.5 260	1058 8.9 270	1013 8.9 270	1131 8.2 250	1215 8.9 270	1241 7.9 240						
1620 1.6 50	1705 2.3 70	1616 2.6 80	1703 3.6 110	1722 4.3 130	1745 4.3 130						
2233 8.9 270	2248 8.5 260	2211 9.2 280	2237 8.9 270	2258 9.8 300	2322 8.9 270						
5 Sa 0430 3.0 90	20 Su 0509 1.6 50	5 M 0431 0.7 20	20 Tu 0518 0.7 20	5 Th 0545 -0.7 -20	20 F 0613 0.7 20						
1030 9.2 280	1135 8.9 270	1103 9.2 280	1211 8.2 250	1311 8.9 270	1315 7.9 240						
1656 1.6 50	1735 2.6 80	1700 3.0 90	1737 3.6 110	1813 4.3 130	1818 3.9 120						
2254 9.2 280	2311 8.9 270	2243 9.5 290	2307 8.9 270	2345 9.8 300	2356 8.9 270						
6 Su 0503 2.0 60	21 M 0539 1.3 40	6 Tu 0515 0.0 0	21 W 0552 0.7 20	6 F 0639 -0.7 -20	21 Sa 0648 0.3 10						
1113 9.8 300	1213 8.9 270	1200 9.2 280	1250 8.2 250	1405 8.5 260	1346 7.9 240						
1733 2.0 60	1807 3.0 90	1745 3.3 100	1809 3.9 120	1901 4.6 140	1854 3.9 120						
● 2320 9.5 290	2335 8.9 270	2320 9.8 300	2337 8.9 270								
7 M 0541 1.0 30	22 Tu 0613 1.0 30	7 W 0600 -0.7 -20	22 Th 0628 0.7 20	7 Sa 0035 9.8 300	22 Su 0030 8.9 270						
1156 9.8 300	1252 8.5 260	1300 9.2 280	1328 7.9 240	0735 -0.7 -20	0722 0.3 10						
1813 2.3 70	1837 3.3 100	1830 3.9 120	1843 3.9 120	1456 8.2 250	1418 7.9 240						
2350 9.8 300				1950 4.6 140	1931 3.9 120						
8 Tu 0620 0.3 10	23 W 0001 9.2 280	8 Th 0000 10.2 310	23 F 0009 8.9 270	8 Su 0126 9.5 290	23 M 0107 9.2 280						
1246 9.8 300	0645 0.7 20	0646 -0.7 -20	0703 0.7 20	0831 0.0 0	0758 0.7 20						
1852 3.0 90	1333 8.2 250	1401 8.9 270	1405 7.9 240	1543 7.9 240	1452 7.9 240						
	1905 3.6 110	1915 4.3 130	1915 4.3 130	2039 4.3 130	2013 3.9 120						
9 W 0024 9.8 300	24 Th 0030 9.2 280	9 F 0043 9.8 300	24 Sa 0041 8.9 270	9 M 0220 9.2 280	24 Tu 0145 8.9 270						
0703 0.0 0	0718 0.7 20	0739 -0.7 -20	0739 0.7 20	0926 0.7 20	0835 0.7 20						
1345 9.2 280	1413 7.9 240	1500 8.5 260	1441 7.5 230	1626 7.9 240	1528 7.9 240						
1931 3.6 110	1931 3.9 120	2000 4.6 140	1946 4.3 130	2128 4.3 130	2056 3.6 110						
10 Th 0101 9.8 300	25 F 0058 8.9 270	10 Sa 0128 9.5 290	25 Su 0115 8.9 270	10 Tu 0316 8.5 260	25 W 0230 8.5 260						
0748 0.0 0	0754 1.0 30	0835 0.0 0	0816 1.0 30	1020 1.3 40	0915 1.0 30						
1446 8.9 270	1454 7.5 230	1556 7.9 240	1520 7.2 220	1711 7.5 230	1605 7.9 240						
2009 4.3 130	1956 4.3 130	2046 4.9 150	2024 4.3 130	2226 4.3 130	2143 3.6 110						
11 F 0139 9.5 290	26 Sa 0126 8.9 270	11 Su 0222 9.2 280	26 M 0152 8.5 260	11 Tu 0420 7.9 240	26 Th 0320 8.2 250						
0839 0.3 10	0830 1.3 40	0937 0.7 20	0856 1.0 30	1116 2.0 60	0958 1.6 50						
1550 7.9 240	1537 7.2 220	1658 7.5 230	1605 7.2 220	1758 7.2 220	1648 7.9 240						
2048 4.9 150	2022 4.6 140	2141 4.9 150	2107 4.6 140	2337 3.9 120	2239 3.3 100						
12 Sa 0224 9.2 280	27 Su 0158 8.5 260	12 M 0324 8.5 260	27 Tu 0237 8.2 250	12 W 0535 7.2 220	27 F 0430 7.5 230						
0937 1.0 30	0915 1.6 50	1048 1.3 40	0943 1.3 40	1216 3.0 90	1048 2.3 70						
1701 7.2 220	1628 6.6 200	1809 7.2 220	1656 7.2 220	1845 7.2 220	1735 7.9 240						
2135 5.6 170	2103 4.9 150	● 2254 4.9 150	2203 4.6 140	2343 3.0 90	2343 3.0 90						
13 Su 0318 8.5 260	28 W 0237 7.9 240	13 Tu 0437 7.9 240	28 F 0333 7.9 240	13 M 0058 3.6 110	28 Th 0554 7.2 220						
1056 1.6 50	1015 2.0 60	1915 7.2 220	1039 1.6 50	0711 6.6 200	1150 3.3 100						
1854 6.9 210	1733 6.6 200	● 2213 5.2 160	1752 7.2 220	1318 3.6 110	1826 7.9 240						
● 2256 5.9 180	● 2213 5.2 160	● 2311 4.3 130	● 2311 4.3 130	1931 7.5 230	● 2239 3.3 100						
14 M 0435 7.9 240	29 Tu 0337 7.5 230	14 W 0033 4.9 150	29 Th 0450 7.2 220	14 M 0207 3.0 90	29 Su 0050 2.3 70						
1239 2.0 60	1130 2.3 70	0615 7.2 220	1141 2.3 70	0846 6.6 200	0726 6.9 210						
2018 6.9 210	1858 6.6 200	1322 2.3 70	1846 7.5 230	1420 3.9 120	1301 3.9 120						
2350 5.2 160	2350 5.2 160	2007 7.2 220	2046 7.5 230	2016 7.5 230	1918 8.2 250						
15 Tu 0113 5.6 170	30 W 0511 6.9 210	15 Th 0158 3.9 120	30 F 0026 3.9 120	15 M 0303 2.3 70	30 M 0158 1.6 50						
0639 7.2 220	1245 2.3 70	0758 7.2 220	0626 7.2 220	0956 6.9 210	0905 7.2 220						
1407 2.0 60	2001 7.2 220	1424 2.6 80	1248 2.6 80	1513 4.3 130	1416 4.6 140						
2113 7.5 230		2046 7.5 230	1933 7.9 240	2058 7.9 240	2011 8.5 260						
			31 Sa 0135 3.3 100								
			0752 7.5 230								
			1352 3.0 90								
			2015 8.2 250								

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Singapore (Tanjong Pagar), Singapore, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
1 Tu	0256 0.7 20	16 W	0409 1.3 40	1 F	0448 0.0 0	16 Sa	0509 0.7 20	1 M	0607 0.7 20	16 Tu	0539 1.3 40
1026 7.9 240	1120 7.2 220	1209 8.2 250	1705 4.3 130	1154 7.9 240	1707 3.6 110	1220 8.5 260	1811 2.3 70	1141 8.9 270	1141 8.9 270	1748 2.0 60	1748 2.0 60
1520 4.6 140	1615 4.6 140	2252 9.5 290	2254 8.9 270	2254 8.9 270	2254 8.9 270	1811 2.3 70	2346 9.8 300	2346 9.8 300	2346 9.8 300	2346 9.8 300	2346 9.8 300
2105 8.9 270	2156 7.9 240	● 2252 9.5 290									
2 W	0350 0.0 0	17 Th	0450 1.0 30	2 Sa	0539 -0.3 -10	17 Su	0539 0.7 20	2 Tu	0011 9.5 290	17 W	0613 1.6 50
1128 8.2 250	1152 7.5 230	1246 8.5 260	1750 3.6 110	1213 8.2 250	1741 3.3 100	0643 1.0 30	1824 1.3 40	1239 8.9 270	1205 9.2 280	1824 1.3 40	1824 1.3 40
1616 4.6 140	1652 4.3 130	2339 9.8 300	2326 9.2 280	2326 9.2 280	1846 2.0 60						
2158 9.2 280	2235 8.5 260	● 2309 8.9 270									
3 Th	0445 -0.3 -10	18 F	0526 0.7 20	3 Su	0626 0.0 0	18 M	0607 0.7 20	3 W	0050 9.5 290	18 Th	0026 9.8 300
1220 8.5 260	1224 7.5 230	1726 3.9 120	1833 3.3 100	1316 8.5 260	1815 3.0 90	0716 1.6 50	1235 9.5 290	1303 8.9 270	0648 2.0 60	1235 9.5 290	1901 1.0 30
1711 4.6 140	1726 3.9 120	○ 2309 8.9 270									
● 2250 9.5 290											
4 F	0541 -0.7 -20	19 Sa	0558 0.7 20	4 M	0022 9.8 300	19 Tu	0000 9.5 290	4 Th	0131 8.9 270	19 F	0113 9.5 290
1307 8.5 260	1252 7.9 240	1801 3.9 120	0709 0.3 10	1341 8.5 260	1250 8.5 260	0639 0.7 20	1307 9.5 290	1330 8.9 270	0726 2.6 80	1307 9.5 290	1943 0.7 20
1801 4.3 130	2343 8.9 270	1915 3.0 90		1915 3.0 90	1852 2.3 70	1852 2.3 70	1958 1.3 40				
2341 9.8 300											
5 Sa	0635 -0.7 -20	20 Su	0630 0.3 10	5 Tu	0107 9.5 290	20 W	0039 9.5 290	5 F	0216 8.2 250	20 Sa	0207 8.9 270
1352 8.5 260	1316 7.9 240	0713 1.0 30	0748 0.7 20	1403 8.5 260	1316 8.9 270	0713 1.0 30	1341 9.5 290	1354 8.9 270	0801 3.3 100	1341 9.5 290	2028 0.7 20
1850 3.9 120	1837 3.6 110	1954 2.6 80	1930 2.0 60	1954 2.6 80	1930 2.0 60	2037 1.6 50					
6 Su	0031 9.8 300	21 M	0016 9.2 280	6 W	0150 9.2 280	21 Th	0120 9.5 290	6 Sa	0303 7.5 230	21 Su	0311 8.2 250
0728 -0.3 -10	0701 0.3 10	1341 8.2 250	0822 1.3 40	1428 8.5 260	1345 8.9 270	0748 1.6 50	1420 8.5 260	0835 3.6 110	0837 4.3 130	1418 9.2 280	2118 1.0 30
1430 8.2 250	1915 3.3 100	1915 3.3 100	2033 2.3 70	2033 2.3 70	2009 1.6 50	2009 1.6 50	2120 1.6 50				
1935 3.9 120											
7 M	0120 9.5 290	22 Tu	0054 9.2 280	7 Th	0235 8.5 260	22 F	0205 8.9 270	7 Su	0358 6.9 210	22 M	0422 7.5 230
0816 0.0 0	0735 0.7 20	1405 8.2 250	0852 2.3 70	1454 8.2 250	1416 8.9 270	0822 2.3 70	1446 8.2 250	0848 4.3 130	0916 4.9 150	1503 8.9 270	2224 1.3 40
1503 8.2 250	1956 3.0 90	1956 3.0 90	2115 2.3 70	2115 2.3 70	2050 1.3 40	2050 1.3 40	2220 2.0 60				
2020 3.6 110											
8 Tu	0209 9.2 280	23 W	0131 9.2 280	8 F	0324 7.5 230	23 Sa	0301 8.2 250	8 M	0501 5.9 180	23 Tu	0556 6.9 210
0858 0.7 20	0811 1.0 30	1435 8.5 260	0920 3.0 90	1520 8.2 250	1520 8.2 250	1452 8.9 270	1516 7.5 230	0901 4.9 150	1016 5.6 170	1605 8.2 250	2339 2.6 80
1533 7.9 240	2035 2.6 80	2035 2.6 80	2201 2.3 70	2201 2.3 70	2139 1.3 40	2139 1.3 40	2339 2.6 80				
2103 3.3 100											
9 W	0300 8.5 260	24 Th	0216 8.9 270	9 Sa	0418 6.9 210	24 Su	0413 7.5 230	9 Tu	0731 5.6 170	24 W	0000 1.6 50
0937 1.6 50	0846 1.3 40	1507 8.5 260	0945 3.9 120	1550 7.9 240	1533 8.5 260	0935 3.9 120	1607 7.2 220	0918 5.6 170	0813 6.9 210	1228 5.9 180	1745 7.5 230
1603 7.9 240	2118 2.3 70	2118 2.3 70	2303 2.3 70	2303 2.3 70	2239 1.3 40	2239 1.3 40					
2150 3.3 100											
10 Th	0352 7.9 240	25 F	0307 8.2 250	10 Su	0531 5.9 180	25 M	0537 6.6 200	10 W	0105 2.6 80	25 Th	0143 1.6 50
1015 2.6 80	0924 2.3 70	1545 8.5 260	1011 4.9 150	1628 7.5 230	1026 4.9 150	1026 4.9 150	1305 5.9 180	0941 6.2 190	0918 7.5 230	1424 5.6 170	2000 7.9 240
1637 7.5 230	2207 2.3 70	2207 2.3 70	2207 2.3 70	2207 2.3 70	1745 7.5 230	1745 7.5 230	1803 6.6 200				
● 2246 3.0 90											
11 F	0456 6.9 210	26 Sa	0415 7.5 230	11 M	0024 2.3 70	26 Tu	0001 1.6 50	11 Th	0226 2.3 70	26 F	0300 1.6 50
1058 3.6 110	1007 3.3 100	1628 8.2 250	0822 5.6 170	1200 5.6 170	0815 6.6 200	1201 5.9 180	1441 5.2 160	1003 6.9 210	1001 7.9 240	1526 4.6 140	2113 8.5 260
1715 7.5 230	2305 2.0 60	2305 2.0 60	1726 6.9 210	1726 6.9 210	1745 7.5 230	1745 7.5 230	2024 6.9 210				
2356 3.0 90											
12 Sa	0618 6.2 190	27 Su	0537 6.9 210	12 Tu	0145 2.3 70	27 W	0139 1.3 40	12 F	0326 1.6 50	27 Sa	0352 1.3 40
1156 4.3 130	1101 4.3 130	1720 8.2 250	1000 6.2 190	1348 5.6 170	1413 5.6 170	0941 7.2 220	1537 4.6 140	1028 7.2 220	1033 8.2 250	1607 3.6 110	2203 8.9 270
1800 7.2 220			1909 6.9 210	1909 6.9 210	1941 7.5 230	1941 7.5 230	2120 7.9 240				
13 Su	0115 2.6 80	28 M	0018 1.6 50	13 W	0258 2.0 60	28 Th	0258 1.0 30	13 Sa	0407 1.3 40	28 Su	0433 1.3 40
0830 5.9 180	0728 6.6 200	1035 6.6 200	1035 6.6 200	1507 5.2 160	1507 5.2 160	1031 7.9 240	1613 3.9 120	1048 7.9 240	1056 8.5 260	1641 3.0 90	2245 9.5 290
1315 4.9 150	1220 4.9 150	1822 7.9 240	2050 7.2 220	2111 8.2 250	2111 8.2 250	2111 8.2 250	2200 8.5 260	1613 3.9 120	1613 3.9 120	2245 9.5 290	2245 9.5 290
1900 7.2 220											
14 M	0224 2.3 70	29 Tu	0139 1.3 40	14 Th	0354 1.3 40	29 F	0400 0.7 20	14 Su	0439 1.3 40	29 M	0509 1.6 50
0952 6.6 200	0935 6.9 210	1400 5.2 160	1103 7.2 220	1558 4.6 140	2143 7.9 240	1111 8.2 250	1616 4.3 130	1105 8.2 250	1105 8.2 250	1713 2.3 70	2324 9.5 290
1430 4.9 150	1939 7.5 230	1939 7.5 230	2220 8.2 250	2220 8.2 250	2205 8.9 270	2205 8.9 270	2233 8.9 270				
2011 7.2 220											
15 Tu	0322 1.6 50	30 W	0250 0.7 20	15 F	0435 1.0 30	30 Sa	0446 0.3 10	15 M	0509 1.0 30	30 Tu	0543 2.0 60
1043 6.9 210	1039 7.5 230	1516 5.2 160	1130 7.5 230	1635 4.3 130	2220 8.2 250	1143 8.2 250	1656 3.6 110	1120 8.5 260	1120 8.5 260	1745 1.6 50	2200 8.9 270
1530 4.9 150	2058 8.5 260	2058 8.5 260	2220 8.2 250	2220 8.2 250	2248 9.5 290	2248 9.5 290	2233 9.5 290				
2111 7.5 230											
31 Th	0352 0.0 0	31 F	0352 0.0 0	31 Su	0528 0.3 10	31 O	0528 0.3 10	31 M	0509 1.0 30	31 Tu	0543 2.0 60
1128 8.2 250	1616 4.9 150	1616 4.9 150	2200 8.9 270	2200 8.9 270	2330 9.8 300	2330 9.8 300	2330 9.8 300				

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Singapore (Tanjong Pagar), Singapore, 2008

Times and Heights of High and Low Waters

October				November				December								
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height					
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm					
<b>1</b> W	0001	9.5	290	<b>16</b> Th	0546	3.0	90	<b>1</b> Sa	0124	8.9	270	<b>16</b> M	0152	8.5	260	
0615	2.3	70	1126	9.8	300	0652	4.3	130	0652	5.2	160	0705	4.9	150		
1152	9.2	280	1754	0.7	20	1215	9.5	290	1216	10.5	320	1228	9.5	290		
1816	1.3	40				1901	1.0	30	1909	0.0	0	1920	1.3	40		
<b>2</b> Th	0043	9.2	280	<b>17</b> F	0026	9.8	300	<b>2</b> Su	0203	8.5	260	<b>2</b> Tu	0226	8.5	260	
0646	3.0	90	0626	3.3	100	0722	4.6	140	<b>17</b> M	0235	9.2	280	0737	4.9	150	
1218	9.2	280	1200	10.2	310	1245	9.2	280	1303	10.2	310	1301	9.5	290		
1852	1.0	30	1835	0.0	0	1937	1.3	40	2003	0.3	10	1954	1.6	50		
<b>3</b> F	0126	8.9	270	<b>18</b> Sa	0122	9.5	290	<b>3</b> M	0243	8.2	250	<b>3</b> W	0301	8.2	250	
0716	3.3	100	0707	3.9	120	0750	4.9	150	<b>18</b> Tu	0330	8.9	270	0813	4.9	150	
1245	9.2	280	1235	10.2	310	1315	9.2	280	1356	9.8	300	1337	9.2	280		
1928	1.0	30	1920	0.0	0	2015	1.6	50	2101	1.0	30	2030	2.0	60		
<b>4</b> Sa	0209	8.2	250	<b>19</b> Su	0224	8.9	270	<b>4</b> Tu	0324	7.5	230	<b>4</b> Th	0337	8.2	250	
0743	3.9	120	0748	4.6	140	0820	5.2	160	<b>19</b> W	0426	8.5	260	0852	5.2	160	
1313	9.2	280	1315	9.8	300	1346	8.9	270	1458	9.2	270	1416	8.9	270		
2003	1.3	40	2011	0.3	10	2058	2.0	60	2207	2.0	60	2107	2.3	70		
<b>5</b> Su	0254	7.9	240	<b>20</b> M	0326	8.5	260	<b>5</b> W	0411	7.2	220	<b>5</b> Th	0528	8.2	250	
0805	4.3	130	0830	5.2	160	0900	5.2	160	<b>20</b> Th	0420	8.2	250	0943	5.2	160	
1339	8.9	270	1400	9.5	290	1424	8.2	250	1607	8.5	260	1503	8.5	260		
2045	1.6	50	2107	1.0	30	2150	2.6	80	<b>5</b> O	2322	2.6	80	2152	3.0	90	
<b>6</b> M	0341	7.2	220	<b>21</b> Tu	0431	7.9	240	<b>6</b> Th	0507	7.2	220	<b>6</b> Sa	0631	7.9	240	
0822	4.9	150	0918	5.6	170	1003	5.6	170	<b>21</b> O	0657	7.2	220	1045	4.9	150	
1405	8.5	260	1454	8.9	270	1518	7.9	240	2258	3.0	90	1609	7.9	240		
2137	2.0	60	<b>22</b> O	2220	1.6	50				<b>6</b> O	2250	3.6	110			
<b>7</b> Tu	0435	6.6	200	<b>22</b> W	0601	7.5	230	<b>7</b> F	0618	7.2	220	<b>7</b> Sa	0726	8.2	250	
0846	5.2	160	1030	5.9	180	1128	5.6	170	<b>22</b> Sa	0741	3.3	100	1156	4.6	140	
1439	7.9	240	1609	8.2	250	1645	7.2	220	<b>7</b> Tu	0726	8.2	250	1748	7.5	230	
<b>8</b> O	2248	2.6	80	2354	2.3	70				<b>7</b> O	2358	3.9	120	2358	3.9	120
<b>8</b> W	0554	6.2	190	<b>23</b> Th	0731	7.5	230	<b>8</b> Sa	0013	3.3	100	<b>8</b> M	0152	3.9	120	
0946	5.6	170	1228	5.6	170	0726	7.5	230	<b>23</b> Tu	0811	8.2	250	1309	3.9	120	
1530	7.2	220	1754	7.9	240	1258	5.2	160	<b>8</b> M	1435	3.9	120	1928	7.5	230	
<b>9</b> Th	0011	3.0	90	<b>24</b> F	0126	2.3	70	<b>9</b> Su	0126	3.3	100	<b>9</b> Tu	0252	4.3	130	
0813	6.2	190	0831	7.9	240	0811	8.2	250	<b>24</b> M	0846	8.5	260	0741	8.9	270	
1218	5.9	180	1407	4.9	150	1407	4.3	130	<b>9</b> O	1524	3.0	90	1409	3.0	90	
1724	6.9	210	1954	7.9	240	2009	7.9	240	<b>24</b> W	2158	8.5	260	2050	8.2	250	
<b>10</b> F	0133	2.6	80	<b>25</b> Sa	0237	2.6	80	<b>10</b> M	0224	3.3	100	<b>10</b> Tu	0339	4.3	130	
0900	6.9	210	0913	8.2	250	0846	8.5	260	<b>25</b> W	0916	8.9	270	0824	9.2	280	
1358	5.2	160	1507	3.9	120	1454	3.3	100	<b>10</b> O	1601	2.3	70	1458	2.0	60	
1937	7.2	220	2107	8.5	260	2111	8.5	260	<b>25</b> O	2248	8.5	260	2203	8.9	270	
<b>11</b> Sa	0239	2.6	80	<b>26</b> Su	0330	2.6	80	<b>11</b> Tu	0311	3.6	110	<b>11</b> W	0416	4.6	140	
0926	7.5	230	0943	8.5	260	0946	9.2	280	<b>26</b> O	0946	9.2	280	0907	9.5	290	
1500	4.6	140	1548	3.3	100	1533	2.3	70	<b>11</b> O	1633	1.6	50	1545	1.0	30	
2048	7.9	240	2200	8.9	270	2201	8.9	270	<b>26</b> F	2330	9.2	280	1656	1.6	50	
<b>12</b> Su	0326	2.3	70	<b>27</b> M	0409	2.6	80	<b>12</b> W	0354	3.6	110	<b>12</b> F	0411	5.2	160	
0948	8.2	250	1003	8.9	270	0946	9.5	290	<b>27</b> O	0950	10.2	310	0509	5.6	170	
1539	3.6	110	1620	2.3	70	1609	1.3	40	<b>12</b> O	1705	1.3	40	1037	9.2	280	
2135	8.5	260	2245	9.2	280	2252	9.5	290	<b>27</b> O	1730	1.3	40				
<b>13</b> M	0401	2.3	70	<b>28</b> Tu	0445	3.0	90	<b>13</b> Th	0435	3.9	120	<b>13</b> Sa	0007	8.9	270	
1011	8.9	270	1024	8.9	270	1018	9.8	300	<b>28</b> F	0526	4.9	150	0501	5.6	170	
1609	2.6	80	1652	1.6	50	1648	0.7	20	<b>13</b> O	1050	9.5	290	1035	10.5	320	
2215	9.2	280	2326	9.2	280	2345	9.8	300	<b>28</b> O	1737	1.3	40	1718	0.0	0	
<b>14</b> Tu	0433	2.3	70	<b>29</b> W	0516	3.3	100	<b>14</b> F	0520	4.3	130	<b>14</b> Sa	0043	8.9	270	
1031	9.2	280	1048	9.2	280	1056	10.2	310	<b>29</b> W	0600	4.9	150	0552	5.6	170	
1641	2.0	60	1722	1.3	40	1731	0.0	0	<b>14</b> O	1122	9.5	290	1122	10.5	320	
2254	9.5	290							<b>29</b> M	1811	1.0	30	1811	0.0	0	
<b>15</b> W	0507	2.3	70	<b>30</b> Th	0005	9.2	280	<b>15</b> Sa	0041	9.8	300	<b>15</b> M	0143	9.8	300	
1058	9.5	290	0548	3.6	110	0605	4.6	140	<b>30</b> Tu	0631	4.9	150	0643	5.6	170	
1716	1.3	40	1115	9.5	290	1135	10.5	320	<b>30</b> O	1156	9.5	290	1211	10.5	320	
2337	9.8	300	1754	1.0	30	1818	0.0	0	<b>31</b> W	1846	1.3	40	1905	0.0	0	
			<b>31</b> F	0045	9.2	280				<b>31</b> W	0620	3.9	120	0720	4.6	140
			1145	9.5	290				1145	9.5	290	1250	9.8	300		
			1828	1.0	30				1828	1.0	30	1935	1.6	50		

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Belawan Channel, Sumatra, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0113	4.2	128	16 W 0031	3.4	104	1 F 0249	3.9	119	1 Sa 0331	3.2	98
0625	5.5	168	0611	6.0	183	0753	4.4	134	0627	4.5	137
1259	3.0	91	1234	2.5	76	1317	3.8	116	1516	4.0	122
2013	6.3	192	● 1927	6.7	204	2111	5.8	177	2159	6.0	183
2 W 0251	4.2	128	17 Th 0200	3.5	107	2 Sa 0508	3.5	107	2 Su 0518	2.6	79
0750	5.0	152	0737	5.3	162	1124	4.6	140	1154	5.4	165
1402	3.4	104	1345	3.0	91	1557	4.1	125	1718	3.7	113
2123	6.4	195	2049	6.6	201	2247	6.0	183	2323	6.5	198
3 Th 0429	3.8	116	18 F 0350	3.2	98	3 Su 0603	2.9	88	18 M 0614	1.8	55
0948	4.9	149	0943	5.1	155	1225	5.1	155	1244	6.1	186
1521	3.7	113	1523	3.4	104	1732	3.8	116	1820	3.2	98
2226	6.6	201	2214	6.8	207	2344	6.4	195	● 0528	3.0	91
4 F 0532	3.3	101	19 Sa 0518	2.6	79	4 M 0637	2.3	70	19 Tu 0017	7.0	213
1119	5.1	155	1129	5.5	168	1258	5.7	174	0655	1.3	40
1636	3.7	113	1656	3.4	104	1822	3.4	104	1320	6.7	204
2317	6.8	207	2323	7.1	216	1903	2.7	82	1903	2.7	82
5 Sa 0615	2.8	85	20 Su 0617	1.9	58	5 Tu 0024	6.8	207	20 W 0059	7.4	226
1217	5.4	165	1235	6.0	183	0706	1.7	52	0729	0.9	27
1734	3.6	110	1805	3.2	98	1326	6.2	189	1350	7.2	219
2358	7.1	216	1859	3.0	91	1859	3.0	91	1938	2.3	70
6 Su 0650	2.3	70	21 M 0017	7.5	229	6 W 0058	7.2	219	21 Th 0134	7.6	232
1259	5.8	177	0703	1.3	40	0733	1.2	37	0759	0.6	18
1820	3.4	104	1323	6.5	198	1352	6.7	204	1418	7.4	226
1857	2.9	88	1857	2.9	88	1932	2.6	79	● 0039	7.0	213
7 M 0034	7.4	226	22 Tu 0102	7.8	238	7 Th 0130	7.5	229	21 Th 0039	7.0	213
0720	1.9	58	0743	0.9	27	0800	0.8	24	0729	1.2	37
1333	6.2	189	1403	6.9	210	1419	7.1	216	1444	7.6	232
1859	3.3	101	● 1941	2.6	79	● 2003	2.3	70	2038	1.9	58
8 Tu 0107	7.6	232	23 W 0142	8.0	244	8 F 0201	7.8	238	23 Sa 0234	7.7	235
0749	1.5	46	0818	0.6	18	0827	0.5	15	0851	0.7	21
1405	6.5	198	1439	7.2	219	1446	7.5	229	1508	7.7	235
● 1934	3.1	94	2019	2.5	76	2035	2.0	61	2105	1.8	55
9 W 0138	7.8	238	24 Th 0218	8.0	244	9 Sa 0232	7.9	241	24 M 0301	7.5	229
0818	1.2	37	0850	0.5	15	0856	0.4	12	0915	0.9	24
1435	6.8	207	1511	7.3	223	1515	7.7	235	1531	7.6	232
2008	2.9	88	2054	2.4	73	2108	1.9	58	2132	1.9	58
10 Th 0209	7.9	241	25 F 0251	7.9	241	10 Su 0305	7.9	241	25 M 0327	7.2	219
0847	1.0	30	0921	0.6	18	0926	0.5	15	0937	1.3	40
1506	7.0	213	1542	7.3	223	1546	7.7	235	1555	7.4	226
2042	2.8	85	2128	2.5	76	2142	1.9	58	2159	2.1	64
11 F 0241	7.9	241	26 Sa 0322	7.6	232	11 M 0339	7.6	232	26 Tu 0353	6.8	207
0917	0.9	27	0949	0.9	27	0957	0.8	24	0959	1.7	52
1538	7.1	216	1612	7.2	219	1619	7.6	232	1619	7.2	219
2118	2.8	85	2200	2.6	79	2220	2.0	61	2228	2.4	73
12 Sa 0314	7.8	238	27 Su 0352	7.2	219	12 Tu 0415	7.2	219	12 W 0419	6.3	192
0948	0.9	27	1016	1.2	37	1031	1.2	37	1021	2.2	67
1613	7.2	219	1641	7.0	213	1655	7.4	226	1645	6.8	207
2156	2.8	85	2233	2.8	85	2303	2.3	70	2300	2.8	85
13 Su 0350	7.6	232	28 M 0421	6.8	207	13 W 0456	6.5	198	28 Th 0447	5.7	174
1023	1.1	34	1043	1.7	52	1107	1.9	58	1043	2.7	82
1650	7.2	219	1711	6.8	207	1737	7.0	213	1713	6.4	195
2238	2.9	88	2309	3.1	94	2356	2.7	82	2341	3.2	98
14 M 0430	7.2	219	29 Tu 0451	6.2	189	14 Th 0546	5.8	177	29 F 0520	5.1	155
1100	1.4	43	1110	2.2	67	1149	2.7	82	1105	3.3	101
1733	7.0	213	1745	6.5	198	1830	6.5	198	1750	5.9	180
2328	3.1	94	2351	3.4	104	● 0539	5.6	171	● 0520	5.1	155
15 Tu 0515	6.6	201	30 W 0524	5.6	171	15 F 0115	3.2	98	15 M 0053	3.0	91
1143	1.9	58	1138	2.7	82	0708	5.0	152	0723	5.0	152
1823	6.9	210	1826	6.2	189	1253	3.5	107	1229	4.2	128
● 0559	5.9	180	1928	5.9	180	1957	6.0	183	1917	5.8	177
31 Th 0051	3.8	116									
0607	5.0	152									
1212	3.3	101									
1928	5.9	180									

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Belawan Channel, Sumatra, 2008

Times and Heights of High and Low Waters

April				May				June						
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height			
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm			
1 Tu	0416	3.2	98	16 W	0513	2.5	76	1 Th	0401	2.9	88			
1121	5.9	180	W 1153	7.2	219	1052	7.1	216	F 1138	7.7	235			
1706	4.2	128	1800	3.4	104	1703	3.7	113	1804	3.2	98			
2236	5.9	180	2341	6.5	198	2241	6.4	195	2349	6.5	198			
2 W	0510	2.6	79	17 Th	0552	2.2	67	2 F	0453	2.5	76			
1150	6.6	201	1222	7.6	232	1129	7.8	238	17 Sa	0539	3.0	91		
1747	3.5	107	1832	2.8	85	1745	3.0	91	1207	8.0	244			
2329	6.4	195				2333	6.9	210	1836	2.8	85			
3 Th	0548	2.1	64	18 F	0020	6.9	210	3 Sa	0537	2.2	67			
1217	7.3	223	0624	2.1	64	1205	8.3	253	18 Su	0027	6.6	201		
1820	2.8	85	1247	7.9	241	1824	2.3	70	0611	3.0	91			
			1901	2.4	73				1234	8.2	250			
4 F	0009	7.0	213	19 F	0053	7.1	216	4 Su	0019	7.3	223			
0622	1.6	49	0652	2.1	64	0617	2.0	61	19 M	0101	6.8	207		
1245	7.9	241	1311	8.2	250	1239	8.8	268	0641	3.0	91			
1852	2.2	67	1927	2.1	64	1902	1.8	55	1300	8.3	253			
5 Sa	0046	7.5	229	20 M	0122	7.2	219	5 M	0102	7.6	232			
0655	1.3	40	0717	2.1	64	0656	1.9	58	20 Tu	0133	6.8	207		
1314	8.4	256	1333	8.3	253	1314	9.0	274	0709	3.1	94			
1924	1.6	49	O 1952	1.9	58	● 1940	1.4	43	1325	8.4	256			
6 Su	0122	7.8	238	21 M	0150	7.2	219	6 O	0227	7.5	229			
0727	1.1	34	0740	2.2	67	0734	2.1	64	20 F	0236	6.8	207		
1345	8.7	265	1355	8.4	256	1350	9.1	277	0800	3.1	94			
● 1958	1.2	37	2017	1.8	55	2019	1.2	37	0803	3.1	94			
7 M	0159	8.0	244	21 W	0216	7.1	216	6 W	0204	6.9	210			
0800	1.1	34	Tu 0803	2.4	73	0737	3.2	98	21 F	0316	7.4	226		
1416	8.8	268	1417	8.3	253	1351	8.4	256	0835	3.4	104			
2033	1.1	34	2043	1.8	55	2029	2.1	64	1437	8.7	265			
8 Tu	0236	7.9	241	23 W	0244	7.0	213	8 Tu	0312	7.4	226			
0834	1.4	43	0827	2.6	79	0853	2.8	85	21 Sa	0405	7.3	223		
1448	8.7	265	1440	8.2	250	1504	8.7	265	22 M	0344	7.0	213		
2110	1.1	34	2110	2.0	61	2144	1.5	46	0912	3.7	113			
9 W	0315	7.6	232	24 M	0313	6.8	207	7 Sa	0236	6.8	207			
0908	1.9	58	0851	3.0	104	0813	2.4	73	0936	3.7	113			
1522	8.4	256	1504	8.0	244	1426	9.0	274	1537	8.2	250			
2149	1.4	43	2139	2.2	67	2100	1.2	37	2225	1.7	52			
10 Th	0357	7.1	216	25 F	0345	6.5	198	10 Sa	0401	7.1	216			
0944	2.6	79	0917	3.4	104	0924	4.0	122	23 M	0458	7.2	219		
1557	8.0	244	1530	7.6	232	1627	7.5	229	0951	4.1	125			
2233	1.9	58	2212	2.4	73	2326	2.3	70	1546	7.8	238			
11 F	0447	6.4	195	26 M	0424	6.2	189	10 Su	0429	6.6	201			
1023	3.3	101	0948	3.8	116	1024	4.0	122	25 W	0002	2.5	76		
1636	7.3	223	Sa 1600	7.2	219	1627	7.5	229	1130	6.9	210			
2328	2.4	73	2253	2.8	85	1627	7.5	229	1238	4.7	143			
12 Sa	0555	5.8	177	27 M	0517	5.9	180	2245	2.5	76	1714	7.1	216	
1113	4.1	125	1027	4.3	131	0033	2.8	85	1806	6.6	201			
1726	6.6	201	1637	6.7	204	0746	6.3	192	2354	2.4	73			
			2349	3.1	94	1314	5.0	152						
13 Su	0047	2.9	88	28 M	0643	5.7	174	● 1840	6.2	189				
0802	5.5	168	1138	4.8	146	0155	3.1	94						
1304	4.8	146	M 1736	6.2	189	0918	6.6	201						
● 1859	5.9	180	O			1520	4.8	146						
14 M	0246	3.1	94	14 Tu	0114	3.3	101	2024	6.2	189				
1019	6.0	183	0848	5.9	180	0314	3.1	94	2047	5.8	177			
1606	4.6	140	Tu 1417	5.0	152	0849	7.0	213	1929	6.3	192			
2125	5.8	177	1935	5.8	177	1638	4.3	131						
15 Tu	0418	2.8	85	15 Th	0415	3.1	94	2200	6.0	183				
1117	6.6	201	1006	6.5	198	1104	7.4	226						
1719	4.0	122	1608	4.5	137	1727	3.7	113						
2250	6.1	186	2130	6.0	183	2302	6.3	192						
16 W	0251	3.2	98	31 Sa	0357	2.9	88							
1006	6.5	198	1041	7.9	241	1041	7.9	241						
1710	4.0	122	1710	3.2	98	1710	3.2	98						
2258	6.6	201	2258	6.6	201	2258	6.6	201						

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Belawan Channel, Sumatra, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0525	3.4	104	16 W 0051	6.1	186	1 F 0140	7.4	226	16 Sa 0137	7.2	219
1151	8.3	253	W 0607	4.1	125	F 0719	3.1	94	Sa 0719	3.3	101
1838	2.1	64	1222	7.5	229	1321	8.4	256	1316	7.8	238
			1911	2.5	76	● 1957	1.1	34	1944	1.6	49
2 W 0050	6.9	210	17 Th 0127	6.4	195	2 Sa 0218	7.7	235	17 Su 0202	7.6	232
0624	3.3	101	0650	3.9	119	0801	2.9	88	0749	2.9	88
1240	8.6	262	1256	7.8	238	1400	8.5	259	1345	8.1	247
1925	1.6	49	1940	2.1	64	2032	1.0	30	○ 2010	1.3	40
3 Th 0141	7.2	219	18 F 0158	6.8	207	3 Su 0253	7.9	241	18 M 0228	7.9	241
0716	3.2	98	0726	3.7	113	0839	2.8	85	0818	2.6	79
1325	8.7	265	1328	8.0	244	1436	8.4	256	1415	8.2	250
● 2008	1.3	40	○ 2008	1.8	55	2104	1.1	34	2036	1.2	37
4 F 0228	7.5	229	19 Sa 0227	7.1	216	4 M 0325	8.0	244	19 Tu 0254	8.1	247
0803	3.2	98	0800	3.5	107	0914	2.8	85	0849	2.4	73
1408	8.7	265	1359	8.1	247	1510	8.2	250	1446	8.2	250
2049	1.1	34	2036	1.6	49	2135	1.3	40	2104	1.2	37
5 Sa 0312	7.6	232	20 Su 0256	7.3	223	5 Tu 0356	7.9	241	20 W 0323	8.2	250
0848	3.3	101	0832	3.3	101	0948	2.9	88	0921	2.4	73
1448	8.6	262	1430	8.2	250	1542	7.8	238	1518	8.1	247
2128	1.2	37	2104	1.5	46	2204	1.7	52	2134	1.4	43
6 Su 0353	7.6	232	21 M 0325	7.5	229	6 W 0427	7.7	235	21 Th 0354	8.2	250
0932	3.4	104	0906	3.2	98	1023	3.1	97	0956	2.4	73
1527	8.3	253	1501	8.1	247	1613	7.4	226	1553	7.7	235
2206	1.4	43	2133	1.4	43	2231	2.1	64	2206	1.8	55
7 M 0434	7.6	232	22 Tu 0356	7.7	235	7 Th 0457	7.5	229	22 F 0427	8.0	244
1015	3.6	110	0941	3.2	98	1058	3.4	104	1036	2.7	82
1606	7.8	238	1535	8.0	244	1644	6.8	207	1632	7.2	219
2242	1.8	55	2204	1.6	49	2259	2.7	82	2241	2.4	73
8 Tu 0515	7.4	226	23 W 0429	7.7	235	8 F 0530	7.2	219	23 Sa 0506	7.6	232
1059	3.8	116	1019	3.2	98	1139	3.7	113	1125	3.0	91
1644	7.3	223	1611	7.7	235	1718	6.2	189	1719	6.5	198
2319	2.2	67	2238	1.8	55	2327	3.2	98	2321	3.1	94
9 W 0557	7.2	219	24 Th 0507	7.6	232	9 Sa 0609	6.8	207	24 Su 0554	7.2	219
1148	4.1	125	1103	3.4	104	1235	4.1	125	1232	3.5	107
1725	6.7	204	1652	7.3	223	1802	5.6	171	1829	5.8	177
2356	2.7	82	2316	2.2	67	● 1849	6.1	186	● 1849	5.0	152
10 Th 0643	7.0	213	25 F 0551	7.5	229	10 Su 0000	3.8	116	10 M 0017	3.8	116
1247	4.3	131	1156	3.6	110	0703	6.5	198	0706	6.7	204
1813	6.2	189	1742	6.7	204	1414	4.3	131	1424	3.7	113
●						1938	5.0	152	2053	5.4	165
11 F 0038	3.2	98	26 Sa 0001	2.7	82	11 M 0058	4.4	134	26 Tu 0213	4.5	137
0738	6.9	210	0644	7.3	223	0838	6.2	189	0902	6.5	198
1405	4.4	134	1307	3.8	116	1637	4.0	122	1628	3.2	98
1918	5.6	171	● 1849	6.1	186	2305	5.1	155	2311	5.9	180
12 Sa 0130	3.7	113	27 Su 0059	3.3	101	12 Tu 0335	4.7	143	27 W 0435	4.3	131
0843	6.8	207	0754	7.1	216	1024	6.4	195	1043	6.8	207
1543	4.3	131	1446	3.8	116	1744	3.5	107	1738	2.6	79
2102	5.3	162	2036	5.6	171						
13 Su 0241	4.1	125	28 M 0224	3.8	116	13 W 0012	5.7	174	28 Th 0011	6.6	201
0952	6.9	210	0921	7.1	216	0519	4.5	137	0549	3.8	116
1705	3.9	119	1629	3.3	101	1128	6.7	204	1146	7.3	223
2253	5.4	165	2240	5.8	177	1821	2.9	88	1824	1.9	58
14 M 0404	4.2	128	29 Tu 0408	4.0	122	14 Th 0045	6.2	189	29 F 0051	7.3	223
1053	7.0	213	1042	7.4	226	0611	4.1	125	0637	3.3	101
1759	3.4	104	1742	2.7	82	1210	7.1	216	1233	7.8	238
●						1851	2.4	73	1902	1.5	46
15 Tu 0004	5.7	174	30 W 0002	6.3	192	15 F 0112	6.7	204	30 Sa 0125	7.8	238
0514	4.2	128	0531	3.8	116	0648	3.7	113	0715	2.8	85
1141	7.3	223	1146	7.8	238	1245	7.5	229	1311	8.1	247
1838	2.9	88	1835	2.0	61	1918	2.0	61	1935	1.2	37
●											
31 Th 0057	6.9	210	31 Th 0631	3.5	107	31 Su 0155	8.1	247	31 Su 0749	2.5	76
			1237	8.1	247				1346	8.3	253
			1918	1.5	46				● 2005	1.2	37

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Belawan Channel, Sumatra, 2008

Times and Heights of High and Low Waters

October				November				December								
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height					
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm					
1 W	0211	8.6	262	16 Th	0150	9.1	277	1 Sa	0224	8.4	256					
0824	2.0	61	0809	1.4	43	0857	2.1	64	16 Su	0239	8.9	271				
1422	7.7	235	1411	8.1	247	1501	6.9	210	1 M	0919	1.3	40				
2020	2.0	61	2007	1.8	55	2035	3.2	98	15 Su	1536	7.3	223				
2 Th	0234	8.5	259	17 F	0221	9.1	277	2110	3.2	98	20 Tu	0234	8.0	244		
0850	2.0	61	0845	1.4	43	0926	2.3	70	16 M	0918	1.9	58				
1449	7.5	229	1450	7.8	238	1533	6.6	201	15 Su	1534	6.6	201				
2042	2.4	73	2041	2.2	67	2102	3.6	110	20 Tu	2058	3.7	113				
3 F	0256	8.4	256	18 Sa	0254	8.9	271	2157	3.8	116	16 Tu	0315	8.3	253		
0916	2.2	67	0923	1.6	49	0959	2.5	76	17 M	0959	1.0	30				
1515	7.1	216	1531	7.4	226	1612	6.3	192	16 Su	1628	7.1	216				
2104	2.8	85	2116	2.8	85	2131	4.1	125	2202	3.4	104					
4 Sa	0319	8.1	247	19 Su	0329	8.4	256	2256	4.4	134	17 W	0358	7.8	238		
0944	2.5	76	1006	2.0	61	1037	2.9	88	18 M	1043	1.4	43				
1544	6.7	204	1620	6.9	210	1703	6.0	183	18 Su	1719	6.9	210				
2126	3.2	98	2155	3.5	107	2209	4.6	140	2254	3.8	116					
5 Su	0342	7.7	235	20 M	0408	7.8	238	1900	6.4	195	18 W	1044	7.2	219		
1016	2.9	88	1058	2.5	76	1129	3.2	98	20 M	1056	2.2	67				
1616	6.2	189	1724	6.3	192	1826	5.8	177	20 Su	1130	1.9	58				
2148	3.8	116	2245	4.3	131	2314	5.0	152	21 M	1816	6.7	204				
6 M	0407	7.2	219	21 Tu	0455	7.1	216	2035	6.6	201	21 Su	1919	6.6	201		
1054	3.3	101	1209	3.0	91	1246	3.4	104	20 O	0116	4.3	131				
1700	5.7	174	1913	6.0	183	2028	6.0	183	20 Sa	0636	5.9	180				
2213	4.4	134	O	O	O	2149	6.9	210	20 M	1318	2.8	85				
7 Tu	0437	6.7	204	22 W	0017	5.0	152	2149	6.9	210	20 Su	2029	6.6	201		
1153	3.7	113	0613	6.4	195	0152	5.2	158	20 O	0038	4.6	140				
1836	5.3	162	1356	3.3	101	0655	5.9	180	21 M	0255	4.2	128				
2246	5.0	152	2133	6.3	192	1422	3.4	104	21 Su	0805	5.4	165				
8 W	0526	6.1	186	23 Th	0318	5.0	152	2148	6.5	198	21 M	1426	3.2	98		
1400	4.0	122	0834	6.1	186	0354	4.7	143	21 O	2013	6.6	201				
2231	5.7	174	1537	3.1	94	0902	5.9	180	22 M	0255	4.2	128				
O	O	O	2243	6.9	210	1536	3.2	98	22 Su	0735	5.8	177				
9 Th	0331	5.3	162	24 F	0448	4.3	131	2233	7.1	216	22 M	1536	3.4	104		
0829	5.7	174	1015	6.3	192	0448	4.0	122	2319	7.7	235	22 Su	2233	6.9	210	
1557	3.6	110	1640	2.8	85	1019	6.3	192	23 M	0347	4.0	122				
2307	6.3	192	2325	7.5	229	1630	2.8	85	23 Su	1109	5.4	165				
10 F	0458	4.6	140	25 Sa	0535	3.7	113	2310	7.7	235	23 M	1639	3.5	107		
1019	6.1	186	1114	6.7	204	0529	3.3	101	2216	7.4	226	23 Su	2319	7.2	219	
1650	3.1	94	1725	2.5	76	1112	6.7	204	23 O	0450	3.3	101				
2333	7.0	213	2357	7.9	241	1713	2.5	76	24 M	1032	6.1	186				
11 Sa	0534	4.0	122	26 Su	0611	3.1	94	2344	8.3	253	24 W	1206	5.6	171		
1111	6.6	201	1158	7.1	216	0605	2.6	79	25 M	0548	3.2	98				
1727	2.6	79	1801	2.3	70	1157	7.1	216	25 Su	0913	5.8	177				
2359	7.6	232	O	O	O	1753	2.3	70	25 M	1524	3.0	91				
12 Su	0604	3.3	101	27 M	0026	8.3	253	1829	3.0	91	25 Su	2044	3.4	104		
1150	7.1	216	0642	2.6	79	0017	8.7	265	2349	8.3	253	25 O	1924	3.3	101	
1800	2.2	67	1234	7.3	223	0642	2.0	61	27 M	0048	8.3	253				
O	O	O	1831	2.3	70	1240	7.5	229	27 Su	0723	2.1	64				
13 M	0025	8.2	250	28 Tu	0051	8.5	259	1832	2.1	64	27 W	0747	1.8	55		
0634	2.6	79	0710	2.3	70	0719	1.5	46	O	1858	3.1	94	27 F	1359	6.4	195
1226	7.6	232	1306	7.4	226	1321	7.7	235	O	1858	2.6	79	O	1924	3.3	101
1831	1.8	55	1858	2.3	70	1910	2.2	67	28 M	0031	8.6	262				
14 Tu	0052	8.6	262	29 W	0115	8.6	262	O	1858	3.1	94	28 Su	0102	7.7	235	
0704	2.1	64	0737	2.0	61	0126	9.2	280	O	1858	2.6	79	28 O	0747	1.8	55
1300	7.9	241	1335	7.4	226	0757	1.2	37	28 M	0723	2.1	64				
1903	1.6	49	●	1923	2.5	76	1404	7.7	235	28 Su	1318	7.1	216			
15 W	0120	9.0	274	30 Th	0138	8.7	265	1948	2.4	73	28 O	1924	3.3	101		
0736	1.7	52	0803	1.9	58	0140	8.3	253	O	1858	2.6	79	O	1924	3.3	101
1335	8.1	247	1403	7.3	223	0837	1.2	37	29 M	0114	8.3	253				
● O	1934	1.6	49	1947	2.7	82	1427	6.7	204	29 Su	0752	1.0	30			
31 F	0201	8.6	262	15 Sa	0202	9.1	277	1956	3.3	101	29 M	1406	7.3	223		
0830	2.0	61	0808	1.9	58	0848	1.8	55	29 Su	1943	2.7	82	29 O	1956	3.2	98
1431	7.1	216	1403	7.3	223	1448	7.5	229	2028	2.7	82	29 M	0234	8.6	262	
2011	2.9	88	1947	2.7	82	2028	2.7	82	2028	3.5	107	29 Su	0917	0.8	24	

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Musi River (Outer Bar), Sumatra, 2008

Times and Heights of High and Low Waters

January					February					March													
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height									
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm									
<b>1</b> Tu	1149 2039	8.9 4.6	270 140	<b>16</b> W	0440 1152 1857	5.9 8.2 5.6	180 250 170	<b>1</b> F	0513 1901	9.2 3.6	280 110	<b>16</b> Sa	0325 1749	11.2 2.6	340 80	<b>1</b> Sa	0311 1655	9.8 3.6	300 110	<b>16</b> Su	0258 1644	11.8 2.0	360 60
●																							
<b>2</b> W	1109 2038	8.2 4.3	250 130	<b>17</b> Th	0221 0842 1036 1852	7.9 6.9 6.9 4.6	240 210 210 140	<b>2</b> Sa	0529 1923	10.2 3.3	310 100	<b>17</b> Su	0442 1847	12.1 2.0	370 60	<b>2</b> Su	0404 1712	10.5 3.3	320 100	<b>17</b> M	0416 1747	12.1 2.3	370 70
<b>3</b> Th	0639 2048	8.5 3.6	260 110	<b>18</b> F	0353 1911	9.5 3.3	290 100	<b>3</b> Su	0553 1947	10.8 3.3	330 100	<b>18</b> M	0544 1958	12.8 2.0	390 60	<b>3</b> M	0448 1736	11.2 3.3	340 100	<b>18</b> Tu	0519 1927	12.1 3.0	370 90
<b>4</b> F	0626 2102	9.5 3.3	290 100	<b>19</b> Sa	0459 1947	11.2 2.3	340 70	<b>4</b> M	0620 2016	11.5 3.0	350 90	<b>19</b> Tu	0637 2116	13.1 2.0	400 60	<b>4</b> Tu	0529 1821	11.5 3.3	350 100	<b>19</b> W	0609 2129	11.8 3.6	360 110
<b>5</b> Sa	0640 2118	10.5 3.0	320 90	<b>20</b> Su	0556 2035	12.5 1.6	380 50	<b>5</b> Tu	0650 2054	12.1 2.6	370 80	<b>20</b> W	0722 2231	12.8 2.3	390 70	<b>5</b> W	0608 1959	11.8 3.3	360 100	<b>20</b> Th	0648 2304	11.2 4.3	340 130
<b>6</b> Su	0700 2135	11.2 2.6	340 80	<b>21</b> M	0648 2128	13.5 1.0	410 30	<b>6</b> W	0723 2144	12.8 2.3	390 70	<b>21</b> Th	0801 2339	12.1 3.0	370 90	<b>6</b> Th	0647 2150	12.1 3.3	370 100	<b>21</b> F	0718 1440 1832	10.2 5.9 6.6	310 180 200
<b>7</b> M	0724 2152	11.8 2.3	360 70	<b>22</b> Tu	0737 2224	13.8 1.0	420 30	<b>7</b> Th	0757 2242	12.8 2.3	390 70	<b>22</b> F	0832 2318	11.5 3.6	350 110	<b>7</b> F	0725 2318	11.8 3.6	360 110	<b>22</b> Sa	0018 1413 1930	4.6 5.9 7.5	140 180 230
<b>8</b> Tu	0751 2215	12.5 2.0	380 60	<b>23</b> W	0821 2318	13.8 1.3	420 40	<b>8</b> F	0833 2343	12.8 2.6	390 80	<b>23</b> Sa	0038 0854 1625 1923	3.6 10.5 6.2 6.6	110 320 190 200	<b>8</b> Sa	0801 1618 1801	11.2 5.9 5.9	340 180 180	<b>23</b> Su	0122 0746 1403 2021	5.2 8.2 5.2 8.2	160 250 160 250
●																							
<b>9</b> W	0822 2244	13.1 1.6	400 50	<b>24</b> Th	0901	13.1	400	<b>9</b> Sa	0908	12.1	370	<b>24</b> Su	0132 0907 1558 2046	4.6 9.5 5.9 7.2	140 290 180 220	<b>9</b> Su	0034 0832 1522 1918	3.6 10.2 6.6 7.2	110 310 200 220	<b>24</b> M	0220 0743 1403 2108	5.9 7.5 4.6 8.9	180 230 140 270
<b>10</b> Th	0856 2320	13.1 1.6	400 50	<b>25</b> F	0010 0935	2.0 12.5	60	<b>10</b> Su	0047 0941	3.0 11.2	90	<b>25</b> M	0222 0909 1553 2158	5.6 8.9 5.6 7.5	170 270 170 230	<b>10</b> M	0146 0858 1453 2022	4.3 8.9 6.2 8.2	130 270 190 250	<b>25</b> Tu	0320 0729 1411 2154	6.6 7.2 4.3 9.2	200 220 130 280
<b>11</b> F	0931	13.1	400	<b>26</b> Sa	0059 1002	2.6 11.5	80	<b>11</b> M	0154 1010 1722 2035	3.6 10.2 6.6 6.9	110 310 200 210	<b>26</b> Tu	0311 0901 1558 2310	6.2 8.2 4.9 8.2	190 250 150 250	<b>11</b> Tu	0302 0910 1439 2126	4.9 7.5 5.6 9.5	150 230 170 290	<b>26</b> W	0443 0648 1422 2241	6.9 6.9 3.6 9.5	210 210 110 290
<b>12</b> Sa	0004 1008	1.6 12.8	50 390	<b>27</b> Su	0143 1020 1902 2043	3.9 10.5 5.9 5.9	120 320 180 180	<b>12</b> Tu	0306 1028 1645 2219	4.6 8.9 6.2 7.9	140 270 190 240	<b>27</b> W	0408 0835 1610	7.2 7.9 4.3	220 240 130	<b>12</b> W	0433 0857 1440 2237	5.6 6.6 4.6 10.2	170 200 140 310	<b>27</b> Th	1434 2331	3.3 9.8	100 300
<b>13</b> Su	0055 1045	2.3 11.8	70 360	<b>28</b> M	0220 1027 1818 2330	4.9 9.5 5.6 6.2	150 290 170 190	<b>13</b> W	0436 1024 1634	5.9 7.5 5.2	180 230 160	<b>28</b> Th	0029 1624	8.5 3.9	260 120	<b>13</b> Th	1454 2356	3.6 10.8	110 330	<b>28</b> F	1445	3.0	90
<b>14</b> M	0151 1119	3.3 10.8	100 330	<b>29</b> Tu	0247 1021 1814	6.2 8.9 4.9	190 270 150	<b>14</b> Th	0001 0750 0838 1641	8.9 6.9 6.9 4.3	270 210 210 130	<b>29</b> F	0157 1640	9.2 3.6	280 110	<b>14</b> F	1520	2.6	80	<b>29</b> Sa	0027 1455	10.2 3.0	310 90
<b>15</b> Tu	0259 1145 1940 2347	4.3 9.5 5.9 6.6	130 290 180 200	<b>30</b> W	0952 1824	8.5 4.6	260 140	<b>15</b> F	0148 1707	9.8 3.3	300 100					<b>15</b> Sa	0126 1557	11.5 2.0	350 60	<b>30</b> Su	0131 1506	10.5 3.0	320 90
																●							
																<b>31</b> M	0236 1519	10.8 2.6	330 80				

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Musi River (Outer Bar), Sumatra, 2008

Times and Heights of High and Low Waters

April					May					June													
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height									
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm								
<b>1</b> Tu	0337 1535	11.2 3.0	340 90	<b>16</b> W	0433 1500	10.8 4.3	330 130	<b>1</b> Th	0328 1348	10.5 3.9	320 120	<b>16</b> F	0345 1120 1832 2322	7.9 4.3 7.2 6.6	240 130 220 200	<b>1</b> Su	0319 1006 1751	6.6 3.9 8.9	200 120 270	<b>16</b> M	1000 1915	2.0 10.2	60 310
<b>2</b> W	0431 1551	11.2 3.6	340 110	<b>17</b> Th	0516 1329	9.8 4.9	300 150	<b>2</b> F	0419 1252 1805 2116	9.5 4.6 5.6 5.2	290 140 170 160	<b>17</b> Sa	0352 1109 1855	7.2 3.9 8.5	220 120 260	<b>2</b> M	1003 1830	3.0 10.5	90 320	<b>17</b> Tu	1016 1941	1.6 10.8	50 330
<b>3</b> Th	0519 1535	11.2 4.3	340 130	<b>18</b> F	0546 1252 1839 2354	8.9 5.2 6.9 5.6	270 160 210 170	<b>3</b> Sa	0501 1208 1801 2336	8.5 4.9 7.2 5.2	260 150 220 160	<b>18</b> Su	0145 0323 1110 1924	6.6 6.6 3.3 9.5	200 200 100 290	<b>3</b> Tu	1017 1915	2.0 11.8	60 360	<b>18</b> W	1033 2007	1.3 11.2	40 340
<b>4</b> F	0602 1436 1749 2236	10.5 5.2 5.2 4.6	320 160 160 140	<b>19</b> Sa	0603 1235 1917	7.9 4.9 8.2	240 150 250	<b>4</b> Su	0533 1142 1831	7.5 4.6 8.5	230 140 260	<b>19</b> M	1118 1954	2.6 10.2	80 310	<b>4</b> W	1042 2003	1.0 12.8	30 390	<b>19</b> Th	1050 2034	1.0 11.5	30 350
<b>5</b> Sa	0640 1351 1821	9.8 5.6 6.6	300 170 200	<b>20</b> Su	0115 0605 1231 ○	5.9 7.2 4.3 9.2	180 220 130 280	<b>5</b> M	0119 0547 1132 ○	5.2 6.2 3.9 10.2	160 190 120 310	<b>20</b> Tu	1129 2023 10.8	2.0 60 330	60	<b>5</b> Th	1116 2053	0.0 13.1	0 400	<b>20</b> F	1107 2103	1.0 11.8	30 360
<b>6</b> Su	0010 0712 1322 ●	4.6 8.9 5.6 8.2	140 270 170 250	<b>21</b> M	0233 0551 1235 2029	6.2 6.6 3.6 9.8	190 200 110 300	<b>6</b> Tu	0312 0531 1136 1959	4.9 5.2 3.0 11.5	150 160 90 350	<b>21</b> W	1142 2052	1.6 11.2	50 340	<b>6</b> F	1154 2144	-0.3 13.5	-10 410	<b>21</b> Sa	1127 2134	0.7 12.1	20 370
<b>7</b> M	0132 0734 1305 1949	4.6 7.5 5.2 9.5	140 230 160 290	<b>22</b> Tu	1244 2105	3.0 10.2	90 310	<b>7</b> W	1153 2049	2.0 12.5	60 380	<b>22</b> Th	1155 2122	1.3 11.5	40 350	<b>7</b> Sa	1234 2234	-0.3 12.8	-10 390	<b>22</b> Su	1150 2209	0.7 11.8	20 360
<b>8</b> Tu	0256 0739 1301 2041	4.9 6.2 4.3 10.8	150 190 130 330	<b>23</b> W	1256 2139	2.6 10.5	80 320	<b>8</b> Th	1219 2143	1.0 13.1	30 400	<b>23</b> F	1208 2154	1.3 11.8	40 360	<b>8</b> Su	1313 2323	0.3 12.1	10 370	<b>23</b> M	1219 2245	1.0 11.5	30 350
<b>9</b> W	0447 0704 1309 2138	5.2 5.2 3.3 11.5	160 160 100 350	<b>24</b> Th	1307 2215	2.3 10.8	70 330	<b>9</b> F	1251 2240	0.3 13.1	10 400	<b>24</b> Sa	1222 2230	1.0 11.8	30 360	<b>9</b> M	1350	1.3	40	<b>24</b> Tu	1252 2323	1.3 10.8	40 330
<b>10</b> Th	1329 2240	2.3 12.1	70 370	<b>25</b> F	1318 2255	2.0 11.2	60 340	<b>10</b> Sa	1326 2341	0.3 12.8	10 390	<b>25</b> Su	1238 2309	1.0 11.8	30 360	<b>10</b> Tu	0008 1413	11.2 2.6	340 80	<b>25</b> W	1329 2245	2.3 11.5	70 350
<b>11</b> F	1357 2350	1.6 12.1	50 370	<b>26</b> Sa	1329 2339	2.0 11.2	60 340	<b>11</b> Su	1400	0.7	20	<b>26</b> M	1257 2354	1.3 11.5	40 350	<b>11</b> W	0046 1259	9.8 3.9	300 120	<b>26</b> Th	0000 1400	9.8 3.3	300 100
<b>12</b> Sa	1431	1.3	40	<b>27</b> Su	1341	2.0	60	<b>12</b> M	0043 1431	12.1 1.6	50	<b>27</b> Tu	1318	1.6	50	<b>12</b> Th	0112 1018	8.5 4.3	260 130	<b>27</b> F	0032 0948	8.5 4.6	260 140
<b>13</b> Su	0107 1507	12.1 1.6	370 50	<b>28</b> M	0031 1354	11.2 2.0	340 60	<b>13</b> Tu	0143 1442	11.2 3.0	340 90	<b>28</b> W	0042 1332	10.8 2.3	330 70	<b>13</b> F	0119 0945	7.5 3.9	230 120	<b>28</b> Sa	0050 0837	7.2 4.3	220 130
<b>14</b> M	0226 1544	11.8 2.3	360 70	<b>29</b> Tu	0130 1409	11.2 2.3	340 70	<b>14</b> W	0237 1314	10.2 3.9	310	<b>29</b> Th	0133 1302	10.2 3.6	310	<b>14</b> Sa	0024 0939	6.9 3.3	210 100	<b>29</b> Su	0012 0818	6.2 3.6	190 110
<b>15</b> Tu	0337 1617	11.5 3.3	350 100	<b>30</b> W	0231 1416	10.8 3.0	330 90	<b>15</b> Th	0319 1153	9.2 4.6	280 140	<b>30</b> F	0220 1128	9.2 4.3	280 130	<b>15</b> Su	0946 1850	2.6 9.2	80 280	<b>30</b> M	0824 1739	2.6 10.2	80 310
									<b>31</b> Sa	0258 1032 1725 2249	7.9 4.6 6.9 5.9	240 140 210 180											

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Musi River (Outer Bar), Sumatra, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m 0850 Tu 1828	ft 1.3 11.5	cm 40 350	h m 0914 W 1915	ft 1.3 10.8	cm 40 330	h m 1002 F 1957	ft 0.0 12.1	cm 0 370	h m 0931 Sa 1938	ft 1.6 11.2	cm 50 340
●				●				●			
2 W 0928 1916	0.3 12.5	10 380	16 Th 0938 1941	1.3 11.2	40 340	2 Sa 1105 2039	0.0 11.8	0 360	17 Su 1033 2011	1.6 10.8	50 330
○				○				○			
3 Th 1012 2005	-0.3 13.1	-10 400	18 F 1004 2009	1.0 11.5	30 350	3 Su 1205 2115	0.7 10.8	20 330	18 M 1137 2044	2.0 10.5	60 320
●				○				●			
4 F 1100 2052	-0.7 13.1	-20 400	19 Sa 1035 2040	1.0 11.8	30 360	4 M 1301 2144	1.6 9.8	50 300	19 Tu 1241 2115	2.3 9.5	70 290
								●			
5 Sa 1149 2136	-0.3 12.5	-10 380	20 Su 1112 2112	1.0 11.5	30 350	5 Tu 1354 2203	2.6 8.9	80 270	20 W 0528 0702	4.9 4.9	150 150
								●			
6 Su 1237 2217	0.3 11.8	10 360	21 M 1155 2146	1.3 11.2	40 340	6 W 0531 0901 1444 2209	4.9 5.2 3.9 7.9	150 160 120 240	21 Th 0429 0838 1456 2156	5.2 5.9 3.6 7.2	160 220 110 220
								●			
7 M 1323 2252	1.0 10.8	30 330	22 Tu 1245 2218	1.6 10.5	50 320	7 Th 0515 1053 1534 2158	4.3 5.9 4.9 7.2	130 180 150 220	22 F 0401 0958 1623 2149	4.9 6.9 4.6 5.9	150 210 140 180
								●			
8 Tu 1405 2318	2.3 9.5	70 290	23 W 1341 2248	2.3 9.2	70 280	8 F 0517 1254 1634 2115	3.6 6.6 6.2 6.6	110 200 190 200	23 Sa 0351 1123	3.9 7.9	120 240
								●			
9 W 1438 2331	3.6 8.5	110 260	24 Th 1448 2309	3.3 8.2	100 250	9 Sa 0531 1511	3.3 7.2	100 220	24 Su 0359 1258	3.0 8.9	90 270
								●			
10 Th 0800 2323	4.3 7.5	130 230	25 F 0641 1110 1618 2311	4.9 5.6 4.6 6.9	150 170 140 210	10 Su 0553 1625	2.6 8.2	80 250	25 M 0424 1437	2.0 9.8	60 300
								●			
11 F 0742 2222	3.9 6.9	120 210	26 Sa 0608 1328 1937 2154	4.3 6.9 5.9 5.9	130 210 180 180	11 M 0618 1705	2.3 8.9	70 270	26 Tu 0504 1601	1.3 10.5	40 320
								●			
12 Sa 0748 1749	3.3 7.9	100 240	27 Su 0606 1511	3.3 8.2	100 250	12 Tu 0646 1736	2.0 9.5	60 290	27 W 0600 1710	0.7 11.2	20 340
								●			
13 Su 0804 1802	2.6 8.9	80 270	28 M 0626 1626	2.3 9.8	70 300	13 W 0716 1805	2.0 10.2	60 310	28 Th 0715 1806	0.7 11.5	20 350
								●			
14 M 0826 1825	2.0 9.5	60 290	29 Tu 0704 1727	1.3 10.8	40 330	14 Th 0751 1835	2.0 10.5	60 320	29 F 0846 1855	1.0 11.5	30 350
								●			
15 Tu 0850 1849	1.6 10.2	50 310	30 W 0757 1822	0.7 11.8	20 360	15 F 0836 1906	1.6 10.8	50 330	30 M 0358 0555 1110 1933	3.9 3.9 3.0 9.5	120 120 90 290
								●			
31 Th 0858 1912	0.0 12.5	0 380				31 Su 1132 2009	2.0 9.8	60 300			
								●			

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Musi River (Outer Bar), Sumatra, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m 0123 W 0809 1436 1915	ft 3.9 7.9 4.9 6.2	cm 120 240 150 190	h m <b>16</b> Th 0036 1455 1858	ft 4.3 8.9 4.6 5.2	cm 130 270 140 160	h m <b>1</b> Sa 0031 0931	ft 1.6 10.8	cm 50 330	h m <b>16</b> Su 0922	ft 13.1	cm 400
0126 0856 1552 1847	3.3 8.5 5.6 5.9	100 260 170 180	<b>17</b> F 0032 0826 1719 1751	3.3 10.2 4.6 4.6	100 310 140 140	<b>2</b> Su 0047 1007	1.6 10.8	50 330	<b>2</b> Tu 0012 1017	1.3 12.1	40 370
0136 0942	2.6 9.2	80 280	<b>18</b> Sa 0040 0917	2.3 11.2	70 340	<b>3</b> M 0102 1043	1.3 10.8	40 330	<b>3</b> W 0028 1051	1.6 11.8	50 360
0151 1028	2.3 9.5	70 290	<b>19</b> Su 0100 1015	1.3 11.8	40 360	<b>4</b> Tu 0115 1123	1.3 10.8	40 330	<b>4</b> Th 0043 1128	2.0 11.5	60 350
0207 1116	2.0 9.5	60 290	<b>20</b> M 0129 1118	0.7 11.8	20 360	<b>5</b> W 0125 1207	1.6 10.8	50 330	<b>5</b> F 0058 1209	2.3 11.2	70 340
0222 1207	2.0 9.5	60 290	<b>21</b> Tu 0203 1228	0.3 11.8	10 360	<b>6</b> Th 0134 1256	2.0 10.8	60 330	<b>6</b> Sa 0102 1251	3.0 10.2	90 310
0234 1304	2.0 9.8	60 300	<b>22</b> W 0240 1342	0.7 11.5	20 350	<b>7</b> F 0138 1350	2.3 10.5	70 320	<b>7</b> Su 0018 1442 2318	3.9 9.2 4.6	120 280 140
0244 1404	2.0 9.8	60 300	<b>23</b> Th 0318 1454	1.3 10.8	40 330	<b>8</b> Sa 0131 1444	3.0 9.8	90 300	<b>8</b> M 1508 2243	7.9 4.6	240 140
0249 1502	2.0 9.8	60 300	<b>24</b> F 0352 1554	2.6 10.2	80 310	<b>9</b> Su 0059 1534	3.6 9.2	110 280	<b>9</b> M 0606 1122 1509 2232	7.5 6.6 6.9 3.9	230 200 210 120
0251 1556	2.3 9.8	70 300	<b>25</b> Sa 0234 1642	3.9 9.2	120 280	<b>10</b> M 0015 1616 2339	4.3 8.2 4.6	130 250 140	<b>10</b> W 0635 2235	8.9 3.3	270 100
0242 1644	3.0 9.8	90 300	<b>26</b> Su 0052 0544 0954 1715	4.6 5.6 4.9 8.2	140 170 150 250	<b>11</b> Tu 0608 1126 1647 2315	6.9 5.6 7.2 4.3	210 170 220 130	<b>11</b> Th 0709 2246	9.8 2.6	300 80
0218 1728	3.3 9.2	100 280	<b>27</b> Su 0014 0621 1152 1733	4.6 6.9 5.2 7.2	140 210 160 220	<b>12</b> M 0628 1322 1658 2305	8.5 5.6 5.9 3.6	260 170 180 110	<b>12</b> F 0743 2303	10.8 2.0	330 60
0146 0627 1021 1806	3.9 4.9 4.6 8.5	120 150 140 260	<b>28</b> M 0001 0700 2355	4.3 8.2 3.6	130 250 110	<b>13</b> Tu 0702 2309	10.2 2.6	310 80	<b>13</b> F 0815 2321	11.5 1.6	350 50
0115 0633 1203 1837	4.6 6.2 4.6 7.5	140 190 140 230	<b>29</b> W 0740 1513 1655	9.2 5.6 5.6	280 170 170	<b>14</b> F 0744 2326	11.5 1.6	350 50	<b>29</b> M 0846 2339	11.8 1.3	360 40
0051 0701 1327 O	4.6 7.5 4.3 6.6	140 230 130 200	<b>30</b> W 0002 0818	2.6 9.8	80 300	<b>15</b> Th 0831 2353	12.5 0.7	380 20	<b>30</b> Tu 0915 2356	11.8 1.3	360 40
1857	6.6	200	<b>31</b> F 0015 0855	2.3 10.5	70 320				<b>31</b> W 0952	12.5	380

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Djakarta (Tandjungpriok), Java, 2008

Times and Heights of High and Low Waters

January					February					March													
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height									
	h m	ft	cm																				
<b>1</b> Tu	0825 1830	2.9 1.2	88 37	<b>16</b> W	0709 1730	2.9 1.0	88 30	<b>1</b> F	0800 1709	3.1 0.8	94 24	<b>16</b> Sa	0718 1639	3.5 0.4	107 12	<b>1</b> Sa	0703 1605	2.9 0.8	88 24	<b>16</b> Su	0647 1540	3.2 0.6	98 18
●																							
<b>2</b> W	0828 1800	3.1 1.0	94 30	<b>17</b> Th	0716 1716	3.2 0.7	98 21	<b>2</b> Sa	0817 1729	3.2 0.7	98 21	<b>17</b> Su	0801 1705	3.6 0.5	110 15	<b>2</b> Su	0729 1626	3.1 0.7	94 21	<b>17</b> M	0736 1603	3.2 0.7	98 21
<b>3</b> Th	0837 1806	3.2 0.8	98 24	<b>18</b> F	0742 1729	3.5 0.5	107 15	<b>3</b> Su	0836 1750	3.4 0.6	104 18	<b>18</b> M	0839 1730	3.6 0.6	110 18	<b>3</b> M	0755 1645	3.2 0.7	98 21	<b>18</b> Tu	0817 1620	3.1 0.9	94 27
<b>4</b> F	0850 1823	3.3 0.7	101 21	<b>19</b> Sa	0816 1753	3.7 0.3	113 9	<b>4</b> M	0857 1813	3.5 0.6	107 18	<b>19</b> Tu	0914 1751	3.6 0.7	110 21	<b>4</b> Tu	0821 1703	3.2 0.8	98 24	<b>19</b> W	0154 0853	1.9 2.9	58 88
<b>5</b> Sa	0905 1845	3.4 0.6	104 18	<b>20</b> Su	0852 1822	3.9 0.3	119 9	<b>5</b> Tu	0918 1834	3.5 0.6	107 18	<b>20</b> W	0944 1808	3.4 0.9	104 27	<b>5</b> W	0847 1716	3.2 0.9	98 27	<b>20</b> Th	0258 0923	1.9 2.7	58 82
<b>6</b> Su	0921 1910	3.5 0.5	107 15	<b>21</b> M	0928 1851	3.9 0.3	119 9	<b>6</b> W	0939 1852	3.5 0.7	107 21	<b>21</b> Th	1008 1820	3.1 1.1	94 34	<b>6</b> Th	0914 1723	3.1 1.1	94 34	<b>21</b> F	0357 0946	1.8 2.4	55 73
<b>7</b> M	0939 1937	3.6 0.5	110 15	<b>22</b> Tu	1001 1919	3.8 0.5	116 15	<b>7</b> Th	1000 1905	3.4 0.9	104 27	<b>22</b> F	1023 1821	2.8 1.3	85 40	<b>7</b> F	0158 0940	1.7 2.9	52 88	<b>22</b> Sa	0459 1607	1.8 1.6	55 49
●																							
<b>8</b> Tu	0958 2003	3.6 0.5	110 15	<b>23</b> W	1030 1943	3.7 0.7	113 21	<b>8</b> F	1020 1910	3.2 1.1	98 34	<b>23</b> Sa	1021 1808	2.5 1.4	76 43	<b>8</b> Sa	0318 1005	1.8 2.6	55 79	<b>23</b> Su	0627 1513	1.8 1.6	55 49
<b>9</b> W	1018 2027	3.6 0.6	110 18	<b>24</b> Th	1052 2002	3.4 0.9	104 27	<b>9</b> Sa	1035 1904	3.0 1.3	91 40	<b>24</b> Su	0939 1728	2.3 1.5	70 46	<b>9</b> Su	0438 1019	1.8 2.2	55 67	<b>24</b> M	1402 2319	1.5 2.6	46 79
<b>10</b> Th	1037 2047	3.6 0.7	110 21	<b>25</b> F	1103 2014	3.1 1.1	94 34	<b>10</b> Su	1034 1840	2.6 1.4	79 43	<b>25</b> M	0714 1623	2.2 1.5	67 46	<b>10</b> M	0644 0943	1.8 1.9	55 58	<b>25</b> Tu	1331 2324	1.3 2.7	40 82
<b>11</b> F	1055 2100	3.4 0.9	104 27	<b>26</b> Sa	1049 2013	2.8 1.2	85 37	<b>11</b> M	0938 1752	2.3 1.5	70 46	<b>26</b> Tu	0521 1536	2.3 1.3	70 40	<b>11</b> Tu	0008 1431	2.7 1.3	82 40	<b>26</b> W	1335 2338	1.1 2.7	34 82
<b>12</b> Sa	1105 2102	3.2 1.0	98 30	<b>27</b> Su	0945 1945	2.6 1.4	79 43	<b>12</b> Tu	0419 1643	2.4 1.3	73 40	<b>27</b> W	0543 1524	2.5 1.2	76 37	<b>12</b> W	0059 1408	2.8 1.0	85 30	<b>27</b> Th	1352 2352	1.0 3.0	30 30
<b>13</b> Su	1057 2047	2.9 1.2	88 37	<b>28</b> M	0815 1824	2.6 1.4	79 43	<b>13</b> W	0456 1600	2.7 1.0	82 30	<b>28</b> Th	0610 1531	2.6 1.0	79 30	<b>13</b> Th	0225 1423	2.9 0.7	88 21	<b>28</b> F	0008 1412	2.7 0.9	82 27
<b>14</b> M	0952 2005	2.6 1.3	79 40	<b>29</b> Tu	0740 1711	2.7 1.3	82 40	<b>14</b> Th	0545 1558	3.0 0.7	91 21	<b>29</b> F	0637 1546	2.8 0.9	85 27	<b>14</b> F	0422 1447	3.1 0.6	94 18	<b>29</b> Sa	0146 1434	2.7 0.8	82 24
<b>15</b> Tu	0751 1842	2.6 1.3	79 40	<b>30</b> W	0737 1651	2.8 1.1	85 34	<b>15</b> F	0633 1615	3.3 0.5	101 15	●				<b>15</b> Sa	0546 1514	3.2 0.5	98 15	<b>30</b> Su	0511 1455	2.7 0.8	82 24
																●							
																<b>31</b> M	0608 1513	2.8 0.8	85 24				

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Djakarta (Tandjungpriok), Java, 2008

Times and Heights of High and Low Waters

April						May						June											
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height		Time	Height						
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm						
<b>1</b> Tu	0652 1528	2.9 0.9	88 27	<b>16</b> W	0235 0747	2.0 2.4	61 73	<b>1</b> Th	0239 0620	2.2 2.3	67 70	<b>16</b> F	0549 0936	1.5 1.6	46 49	<b>1</b> Su	0605 2044	0.9 3.5	27 107	<b>16</b> M	0651 2124	0.7 3.4	21 104
<b>2</b> W	0732 1537 2246	2.8 1.1 2.1	85 34 64	<b>17</b> Th	0344 0832	1.9 2.2	58 67	<b>2</b> F	0345 0739	1.9 2.0	58 61	<b>17</b> Sa	0633 2132	1.2 3.1	37 94	<b>2</b> M	0638 2114	0.6 3.7	18 113	<b>17</b> Tu	0719 2139	0.6 3.4	18
<b>3</b> Th	0140 0811 1540 2211	2.0 2.7 1.3 2.2	61 82 40 67	<b>18</b> F	0452 0917	1.7 1.9	52 58	<b>3</b> Sa	0450 0912	1.5 1.7	46 52	<b>18</b> Su	0714 2142	1.0 3.2	30 98	<b>3</b> Tu	0719 2149	0.4 3.9	12 119	<b>18</b> W	0749 2155	0.6 3.5	18
<b>4</b> F	0253 0851 1534 2200	1.8 2.5 1.5 2.4	55 76 46 73	<b>19</b> Sa	0606 1012	1.6 1.7	49 52	<b>4</b> Su	0558 2130	1.2 3.3	37 101	<b>19</b> M	0755 2152	0.9 3.2	27 98	<b>4</b> W	0804 2228	0.3 3.9	9 119	<b>19</b> Th	0820 2212	0.6 3.5	18
<b>5</b> Sa	0405 0934 1514 2205	1.7 2.2 1.6 2.6	52 67 49 79	<b>20</b> Su	0741 2219	1.4 2.9	43 88	<b>5</b> M	0710 2158	0.9 3.5	27 107	<b>20</b> Tu	0835 2202	0.8 3.3	24 101	<b>5</b> Th	0850 2308	0.3 3.8	9 116	<b>20</b> F	0851 2230	0.6 3.4	18
	●				●				●				●										
<b>6</b> Su	0528 1023 1431 ● 2223	1.5 1.8 1.6 2.9	46 55 49 88	<b>21</b> M	0934 2223	1.3 3.0	40 91	<b>6</b> Tu	0823 2233	0.7 3.6	21 110	<b>21</b> W	0916 2216	0.7 3.3	21 101	<b>6</b> F	0933 2345	0.4 3.6	12 110	<b>21</b> Sa	0919 2248	0.7 3.4	21 104
<b>7</b> M	0725 2250	1.3 3.1	40 94	<b>22</b> Tu	1037 2230	1.1 3.0	34 91	<b>7</b> W	0930 2314	0.5 3.7	15 113	<b>22</b> Th	0956 2235	0.7 3.3	21 101	<b>7</b> Sa	1012 2304	0.5 3.3	15 101	<b>22</b> Su	0942 2304	0.8 3.3	24 101
<b>8</b> Tu	1033 2327	1.1 3.2	34 98	<b>23</b> W	1119 2243	1.0 3.0	30 91	<b>8</b> Th	1029	0.4	12	<b>23</b> F	1033 2257	0.7 3.3	21 101	<b>8</b> Su	0015 1044	3.3 0.7	101 21	<b>23</b> M	0957 2311	0.9 3.1	27 94
<b>9</b> W	1143	0.8	24	<b>24</b> Th	1155 2304	0.9 3.0	27 91	<b>9</b> F	0000 1117	3.5 0.4	107 12	<b>24</b> Sa	1105 2322	0.7 3.2	21 98	<b>9</b> M	0024 1106 2241	2.9 0.9 2.6	88 79	<b>24</b> Tu	1001 2256	1.0 2.8	30 85
<b>10</b> Th	0016 1228	3.3 0.6	101 18	<b>25</b> F	1226 2333	0.8 3.0	24 91	<b>10</b> Sa	0049 1157	3.3 0.5	101 15	<b>25</b> Su	1132 2344	0.8 3.1	24 94	<b>10</b> Tu	1119 2047	1.1 2.7	34 82	<b>25</b> W	0949 2142	1.2 2.6	37 79
	●				●				●				●										
<b>11</b> F	0123 1307	3.2 0.6	98 18	<b>26</b> Sa	1254	0.8	24	<b>11</b> Su	0142 1229	3.1 0.7	94 21	<b>26</b> M	1152 2354	0.9 2.9	27 88	<b>11</b> W	1118 2025	1.3 2.8	40 85	<b>26</b> Th	0912 2006	1.3 2.7	40 82
<b>12</b> Sa	0301 1340	3.1 0.6	94 18	<b>27</b> Su	0012 1317	2.9 0.8	88 24	<b>12</b> M	0237 1252 2203	2.8 0.9 2.5	85 76	<b>27</b> Tu	1203 2322	1.0 2.7	30 82	<b>12</b> Th	1039 2027	1.4 3.0	43 91	<b>27</b> F	0733 1932	1.3 2.9	40 88
	●				●				●														
<b>13</b> Su	0440 1408	3.0 0.7	91 21	<b>28</b> M	0104 1336	2.8 0.9	85 27	<b>13</b> Tu	1307 2115	1.1 2.6	34 79	<b>28</b> W	1204 2143	1.2 2.6	37 79	<b>13</b> F	0603 2039	1.2 3.1	37 94	<b>28</b> Sa	0551 1936	1.1 3.2	34 98
	●				●				●														
<b>14</b> M	0557 1430 2233	2.9 0.9 2.3	88 27 70	<b>29</b> Tu	0248 1349	2.7 1.0	82 30	<b>14</b> W	1313 2107	1.3 2.7	40 82	<b>29</b> Th	1152 2039	1.3 2.7	40 82	<b>14</b> Sa	0605 2053	1.0 3.2	30 98	<b>29</b> Su	0536 1958	0.8 3.5	24 107
<b>15</b> Tu	0111 0656 1446 2202	2.2 2.7 1.0 2.3	67 82 30 70	<b>30</b> W	0453 1355 2157	2.5 1.1 2.4	76 34 73	<b>15</b> Th	0502 0718 1305 2112	1.7 1.8 1.4 2.9	52 55 43 88	<b>30</b> F	1113 2019	1.5 2.9	46 88	<b>15</b> Su	0625 2108	0.8 3.3	24 101	<b>30</b> M	0551 2030	0.5 3.8	15 116
															<b>31</b> Sa	0559 2024	1.3 3.2	40 98					

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Djakarta (Tandjungpriok), Java, 2008

Times and Heights of High and Low Waters

July					August					September						
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height		
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm	
<b>1</b> Tu	0620 2107	0.3 3.9	9 119	<b>16</b> W	0633 2124	0.5 3.5	15 107	<b>1</b> F	0636 2207	0.5 3.6	15 110	<b>16</b> Sa	0608 2136	0.8 3.2	24 98	
	●												<b>1</b> M	0527 1219 1652 2205	1.3 2.2 2.0 2.3	40 67 61 70
<b>2</b> W	0653 2145	0.2 4.0	6 122	<b>17</b> Th	0658 2142	0.6 3.5	18 107	<b>2</b> Sa	0657 2233	0.7 3.3	21 101	<b>17</b> Su	0616 2153	1.0 3.0	30 91	
	○												<b>2</b> Tu	0508 1232	1.4 2.4	43 73
<b>3</b> Th	0728 2222	0.2 3.9	6 119	<b>18</b> F	0721 2159	0.6 3.5	18 107	<b>3</b> Su	0711 2248	0.9 2.9	27 88	<b>18</b> M	0614 2205	1.2 2.7	37 82	
	○												<b>3</b> W	0422 1250	1.5 2.5	46 76
<b>4</b> F	0802 2255	0.4 3.7	12 113	<b>19</b> Sa	0741 2215	0.7 3.4	21 104	<b>4</b> M	0716 2238	1.1 2.6	34 79	<b>19</b> Tu	0601 1307 1528 2201	1.3 2.0 1.9 2.4	40 61 58 73	
													<b>4</b> Th	0314 1312	1.4 2.6	43 79
<b>5</b> Sa	0832 2321	0.6 3.4	18 104	<b>20</b> Su	0756 2229	0.8 3.2	24 98	<b>5</b> Tu	0706 2102	1.3 2.4	40 73	<b>20</b> W	0534 1305 1733 2056	1.4 2.2 2.1 2.2	43 67 64 67	
													<b>5</b> F	0237 1349	1.2 2.6	37 79
<b>6</b> Su	0856 2332	0.8 3.0	24 91	<b>21</b> M	0801 2237	1.0 3.0	30 91	<b>6</b> W	0625 1814	1.4 2.4	43 73	<b>21</b> Th	0447 1333	1.4 2.5	43 76	
													<b>6</b> Sa	0236 1553	1.0 2.7	30 82
<b>7</b> M	0911 2300	1.0 2.7	30 82	<b>22</b> Tu	0755 2228	1.2 2.7	37 82	<b>7</b> Th	0503 1812	1.4 2.6	43 79	<b>22</b> F	0351 1434	1.2 2.7	37 82	
													<b>7</b> Su	0249 1725	0.8 2.7	24 82
<b>8</b> Tu	0914 2043	1.2 2.6	37 79	<b>23</b> W	0731 2128	1.3 2.5	40 76	<b>8</b> F	0411 1834	1.2 2.8	37 85	<b>23</b> Sa	0319 1607	1.0 2.9	30 88	
													<b>8</b> M	0308 1815	0.7 2.8	21 85
<b>9</b> W	0849 1942	1.3 2.7	40 82	<b>24</b> Th	0645 1904	1.4 2.5	43 76	<b>9</b> Sa	0403 1900	1.0 2.9	30 88	<b>24</b> Su	0320 1726	0.7 3.2	21 98	
													<b>9</b> Tu	0330 1852	0.7 2.9	21 88
<b>10</b> Th	0648 1938	1.4 2.9	43 88	<b>25</b> F	0537 1814	1.3 2.8	40 85	<b>10</b> Su	0413 1926	0.8 3.0	24 91	<b>25</b> M	0337 1827	0.5 3.4	15 104	
													<b>10</b> W	0350 1924	0.7 3.0	21 91
<b>11</b> F	0521 1949	1.2 3.0	37 91	<b>26</b> Sa	0447 1828	1.0 3.1	30 94	<b>11</b> M	0431 1951	0.7 3.1	21 94	<b>26</b> F	0340 1103 1403 2015	0.8 2.2 2.1 2.8	24 67 64 85	
													<b>11</b> Th	0409 1952	0.7 3.0	21 91
<b>12</b> Sa	0512 2007	0.9 3.2	27 98	<b>27</b> Su	0438 1901	0.7 3.4	21 104	<b>12</b> Tu	0452 2015	0.6 3.2	18 98	<b>27</b> F	0350 1046 1519 2050	1.1 2.3 1.9 2.5	34 70 58 76	
													<b>12</b> W	0426 2002	0.4 3.5	12 107
<b>13</b> Su	0524 2027	0.8 3.3	24 101	<b>13</b> M	0514 2037	0.6 3.3	18 101	<b>28</b> Th	0450 2041	0.5 3.4	15 104	<b>13</b> Sa	0434 2044	1.0 2.8	30 85	
													<b>28</b> Su	0351 1045 1631 2119	1.3 2.4 1.8 2.2	40 73 55 67
<b>14</b> M	0544 2047	0.6 3.3	18 101	<b>29</b> Tu	0515 2019	0.3 3.8	9 116	<b>14</b> Th	0535 2058	0.6 3.3	18 101	<b>29</b> F	0509 2116	0.7 3.2	21 98	
													<b>14</b> Su	0437 1127 1440 2109	1.1 2.0 1.9 2.6	34 61 58 79
<b>15</b> Tu	0608 2106	0.6 3.4	18 104	<b>30</b> W	0542 2058	0.3 3.8	9 116	<b>15</b> F	0554 2118	0.7 3.3	21 101	<b>30</b> Sa	0524 2144	0.9 3.0	27 91	
													<b>15</b> M	0431 1106 1552 2130	1.3 2.2 1.9 2.4	40 67 58 73
													<b>31</b> Th	0610 2135	0.3 3.8	9 116

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Djakarta (Tandjungpriok), Java, 2008

Times and Heights of High and Low Waters

October					November					December					
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height	
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm
<b>1</b> W	0206 1112	1.5 2.8	46 85	<b>16</b> Th	1035 2220	3.3 0.9	101 27	<b>1</b> Sa	1055 2326	3.2 0.7	98 21	<b>16</b> Su	1140 2252	3.8 0.3	116 9
<b>2</b> Th	0045 1122	1.3 2.9	40 88	<b>17</b> F	1107 2312	3.5 0.7	107 21	<b>2</b> Su	1111 2358	3.2 0.7	98 21	<b>17</b> M	1222 2330	3.6 0.4	110 12
<b>3</b> F	0033 1131	1.1 2.9	34 88	<b>18</b> Sa	1148 2355	3.5 0.5	107 15	<b>3</b> M	1132	3.2	98	<b>18</b> Tu	1302	3.3	101
<b>4</b> Sa	0049 1142	0.9 2.9	27 88	<b>19</b> Su	1239	3.5	107	<b>4</b> Tu	0026 1156	0.7 3.1	21	<b>19</b> W	0000 1327	0.5 3.0	15 91
<b>5</b> Su	0112 1202	0.8 2.9	24 88	<b>20</b> M	0033 1343	0.4 3.3	101	<b>5</b> W	0049 1217	0.7 3.0	21	<b>20</b> Th	0021 1114	0.7 2.7	21 82
<b>6</b> M	0137 1235	0.7 2.9	21 88	<b>21</b> Tu	0106 1504	0.4 3.1	12	<b>6</b> Th	0107 1222	0.8 2.8	24	<b>21</b> F	0034 0925	0.9 2.7	27 82
<b>7</b> Tu	0200 1413	0.7 2.8	21 85	<b>22</b> W	0134 1629	0.5 2.9	15	<b>7</b> F	0117 1131	0.9 2.6	27	<b>22</b> Sa	0037 0904	1.1 2.8	34 85
<b>8</b> W	0222 1649	0.7 2.8	21 85	<b>23</b> Th	0155 1742	0.7 2.6	21	<b>8</b> Sa	0120 1014	1.1 2.6	34	<b>23</b> M	0025 0905	1.3 3.0	40 91
<b>9</b> Th	0239 1751	0.8 2.7	24 82	<b>24</b> F	0209 1002 1453 1844	0.9 2.5 2.2 2.3	27 67 67 70	<b>9</b> Su	0114 0928	1.2 2.6	37	<b>24</b> M	0916 1900	3.2 1.1	98 34
<b>10</b> F	0252 1839	0.9 2.6	27 79	<b>25</b> Sa	0215 0948 1616 1938	1.1 2.6 1.9 2.0	34 79 58 61	<b>10</b> M	0055 0909	1.4 2.8	43	<b>25</b> Tu	0931 1926	3.3 0.9	101 27
<b>11</b> Sa	0259 1047 1427 1922	1.0 2.3 2.2 2.4	30 70 67 73	<b>26</b> Su	0211 0950 1737 2034	1.3 2.8 1.6 1.7	40 85 49 52	<b>11</b> Tu	0009 0910 1851	1.4 3.1 1.2	43	<b>26</b> Th	0946 1958	3.4 0.7	104 21
<b>12</b> Su	0257 1012 1534 2005	1.2 2.4 2.0 2.2	37 73 61 67	<b>27</b> M	0150 0959 1903 2157	1.4 3.0 1.4 1.5	43 91 43 46	<b>12</b> W	0924 1935	3.4 0.8	104	<b>27</b> Th	1001 2032	3.4 0.6	104 18
<b>13</b> M	0247 0958 1646 2049	1.4 2.6 1.7 1.9	43 79 52 58	<b>28</b> Tu	0045 1010 2026	1.4 3.1 1.2	43 94 37	<b>13</b> Th	0949 2025	3.6 0.6	110	<b>28</b> F	1015 2108	3.5 0.6	107 18
<b>14</b> Tu	0222 0959 1815 2140	1.5 2.8 1.5 1.6	46 85 46 49	<b>29</b> W	1022 2126	3.2 1.0	98 30	<b>14</b> F	1021 2117	3.8 0.4	116	<b>29</b> Sa	1029 2144	3.5 0.6	107 18
<b>15</b> W	0131 1012 2028	1.5 3.1 1.2	46 94 37	<b>30</b> Th	1032 2211	3.2 0.9	98 27	<b>15</b> Sa	1059 2207	3.9 0.3	119	<b>30</b> Tu	1044 2218	3.4 0.6	104 18
<b>16</b> O				<b>31</b> F	1043 2250	3.2 0.8	98 24					<b>31</b> W	1057 2146	3.3 0.9	101 27

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Surabaja Strait, Djamuang Reef, Java, 2008

Times and Heights of High and Low Waters

January					February					March													
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height									
	h m	ft	cm																				
<b>1</b> Tu	0845 2121	2.3 4.9	70 150	<b>16</b> W	0701 1943	2.3 4.9	70 150	<b>1</b> F	0530 1710	1.6 5.6	50 170	<b>16</b> Sa	0444 1556	1.0 5.6	30 170	<b>1</b> Sa	0401 1450	1.3 5.9	40 180	<b>16</b> Su	0334 1349	1.0 5.9	30 180
●																							
<b>2</b> W	0740 2029	2.3 5.2	70 160	<b>17</b> Th	0559 1922	2.0 5.2	60 160	<b>2</b> Sa	0530 1742	1.0 5.9	30 180	<b>17</b> Su	0507 1628	0.7 5.9	20 180	<b>2</b> Su	0420 1525	1.0 5.9	30 180	<b>17</b> M	0406 1413	1.0 5.9	30 180
●																							
<b>3</b> Th	0652 1950	2.0 5.2	60 160	<b>18</b> F	0547 1912	1.3 5.6	40 170	<b>3</b> Su	0542 1825	0.7 6.2	20 190	<b>18</b> M	0532 1717	0.3 5.9	10 180	<b>3</b> M	0443 1609	0.7 5.9	20 180	<b>18</b> Tu	0437 1435	1.0 5.6	30 170
●																							
<b>4</b> F	0631 1937	1.3 5.6	40 170	<b>19</b> Sa	0557 1914	1.0 5.9	30 180	<b>4</b> M	0601 1914	0.3 6.2	10 190	<b>19</b> Tu	0559 1825	0.3 5.9	10 180	<b>4</b> Tu	0508 1717	0.7 5.6	20 170	<b>19</b> W	0504 1453	1.0 5.2	30 160
●																							
<b>5</b> Sa	0631 1946	1.0 6.2	30 190	<b>20</b> Su	0616 1929	0.3 6.2	10 190	<b>5</b> Tu	0623 2002	0.3 6.2	10 190	<b>20</b> W	0625 1936	0.7 5.6	20 170	<b>5</b> W	0533 1920	0.7 5.2	20 160	<b>20</b> Th	0528 1455	1.3 4.9	40 150
●																							
<b>6</b> Su	0643 2007	0.7 6.6	20 200	<b>21</b> M	0640 1952	0.3 6.2	10 190	<b>6</b> W	0647 2047	0.3 6.2	10 190	<b>21</b> Th	0648 2033	0.7 5.6	20 170	<b>6</b> Th	0557 2047	1.0 5.2	30 160	<b>21</b> F	0544 1432	1.6 4.6	50 140
●																							
<b>7</b> M	0702 2034	0.3 6.6	10 200	<b>22</b> Tu	0706 2020	0.0 6.6	0 200	<b>7</b> Th	0711 2127	0.3 5.9	10 180	<b>22</b> F	0706 2118	1.0 5.2	30 160	<b>7</b> F	0618 1604 1654 2150	1.3 4.6 4.6 4.9	40 140 140 150	<b>22</b> Sa	0550 1347 1912 2212	2.3 4.3 3.9 3.9	70 130 120 120
●																							
<b>8</b> Tu	0725 2104	0.0 6.9	0 210	<b>23</b> W	0732 2050	0.0 6.6	0 200	<b>8</b> F	0734 2200	0.7 5.6	20 170	<b>23</b> Sa	0716 2150	1.6 4.9	50 150	<b>8</b> Sa	0634 1451 1827 2241	1.6 4.3 4.3 4.3	50 130 130 130	<b>23</b> Su	0536 1258 1942 2317	2.6 4.3 3.3 3.6	80 130 100 110
●																							
<b>9</b> W	0751 2132	0.0 6.9	0 210	<b>24</b> Th	0757 2118	0.3 6.2	10 190	<b>9</b> Sa	0752 2221	1.3 5.2	40 160	<b>24</b> Su	0712 2205	2.0 4.3	60 130	<b>9</b> Su	0640 1415 1941 2324	2.3 4.3 3.6 3.9	70 130 110 120	<b>24</b> M	0453 1222 2034	3.0 4.6 3.0	90 140 90
●																							
<b>10</b> Th	0817 2158	0.0 6.6	0 200	<b>25</b> F	0817 2142	0.7 5.9	20 180	<b>10</b> Su	0802 2210	1.6 4.6	50 140	<b>25</b> M	0647 1459	2.6 4.3	80 130	<b>10</b> M	0623 1348 2120 2354	2.6 4.3 3.3 3.3	80 130 100 100	<b>25</b> Tu	0034 0315 1206 2152	3.0 3.0 4.9 2.6	90 90 150 80
●																							
<b>11</b> F	0842 2216	0.3 6.2	10 190	<b>26</b> Sa	0831 2158	1.0 5.6	30 170	<b>11</b> M	0754 1803	2.3 4.3	70 130	<b>26</b> Tu	0558 1408	2.6 4.6	80 140	<b>11</b> Tu	0516 1325	3.0 4.6	90 140	<b>26</b> W	1207 2345	5.6 2.3	170 70
●																							
<b>12</b> Sa	0903 2221	1.0 5.9	30 180	<b>27</b> Su	0832 2158	1.6 5.2	50 160	<b>12</b> Tu	0709 1646	2.6 4.6	80 140	<b>27</b> W	0456 1354	2.6 4.9	80 150	<b>12</b> W	0213 1310	2.6 4.9	80 150	<b>27</b> Th	1219	5.9	180
●																							
<b>13</b> Su	0918 2158	1.3 5.2	40 160	<b>28</b> M	0812 2126	2.0 4.6	60 140	<b>13</b> W	0538 1607	2.6 4.6	80 140	<b>28</b> Th	0409 1402	2.3 5.2	70 160	<b>13</b> Th	0156 1306	2.3 5.2	70 160	<b>28</b> F	0056 1237	1.6 5.9	50 180
●																							
<b>14</b> M	0916 2107	2.0 4.9	60 150	<b>29</b> Tu	0728 1942	2.3 4.6	70 140	<b>14</b> Th	0438 1544	2.3 4.9	70 150	<b>29</b> F	0354 1422	1.6 5.6	50 170	<b>14</b> F	0227 1313	1.6 5.6	50 170	<b>29</b> Sa	0144 1258	1.3 6.2	40 190
●																							
<b>15</b> Tu	0835 2017	2.3 4.9	70 150	<b>30</b> W	0633 1731	2.3 4.6	70 140	<b>15</b> F	0430 1540	1.6 5.2	50 160	●				<b>15</b> Sa	0300 1328	1.3 5.9	40 180	<b>30</b> Su	0223 1319	1.0 6.2	30 190
●																							
				<b>31</b> Th	0549 1659	2.0 5.2	60 160									<b>31</b> M	0259 1336	1.0 5.9	30 180				

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Surabaja Strait, Djamuang Reef, Java, 2008

Times and Heights of High and Low Waters

April						May						June											
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height		Time	Height						
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm				
<b>1</b> Tu	0332 1345	1.0 5.6	30 170	<b>16</b> W	0324 1251	1.3 5.6	40 170	<b>1</b> Th	0233 1141	2.0 5.2	60 160	<b>16</b> F	0116 1101 2047	2.6 5.2 2.6	80 160 80	<b>1</b> Su	0936 1858	5.6 1.6	170 50	<b>16</b> M	0832 1903	5.9 1.0	180 30
<b>2</b> W	0401 1338	1.3 5.2	40 160	<b>17</b> Th	0348 1244	1.6 5.2	50 160	<b>2</b> F	0252 1120 1954 2144	2.3 5.2 3.0 3.3	70 160 90 100	<b>17</b> Sa	1029 1942	5.2 2.3	160 70	<b>2</b> M	0928 1915	5.9 1.0	180 30	<b>17</b> Tu	0835 1918	6.2 0.7	190 20
<b>3</b> Th	0427 1317	1.6 4.9	50 150	<b>18</b> F	0400 1222	2.3 4.9	70 150	<b>3</b> Sa	0252 1101 1914	2.6 5.2 2.6	80 160 80	<b>18</b> Su	0959 1930	5.2 2.0	160 60	<b>3</b> Tu	0925 1940	6.2 0.7	190 20	<b>18</b> W	0850 1939	6.6 0.3	200 10
<b>4</b> F	0448 1252 1900 2139	2.0 4.6 3.9 3.9	60 140 120 120	<b>19</b> Sa	0353 1148 1949 2357	2.6 4.9 3.0 3.3	80 150 90 100	<b>4</b> Su	1046 1924	5.2 2.0	160 60	<b>19</b> M	0941 1939	5.6 1.3	170 40	<b>4</b> W	0929 2010	6.6 0.3	200 10	<b>19</b> Th	0911 2003	6.9 0.0	210 0
<b>5</b> Sa	0501 1229 1910 2316	2.3 4.6 3.3 3.6	70 140 100 110	<b>20</b> Su	0258 1114 1948	3.3 4.9 2.6	100 150 80	<b>5</b> M	1034 1950	5.6 1.6	170 50	<b>20</b> Tu	0939 2000	6.2 1.0	190 30	<b>5</b> Th	0938 2042	6.9 0.0	210 0	<b>20</b> F	0936 2030	6.9 0.0	210 0
<b>6</b> Su	0457 1210 1941	3.0 4.6 3.0	90 140 90	<b>21</b> M	1052 2008	5.2 2.0	160 60	<b>6</b> Tu	1027 2025	5.9 1.0	180 30	<b>21</b> W	0949 2027	6.6 0.7	200 20	<b>6</b> F	0951 2116	6.9 0.0	210 0	<b>21</b> Sa	1000 2058	6.9 0.3	210 10
●																							
<b>7</b> M	0108 0407 1154 2025	3.3 3.3 4.9 2.3	100 100 150 70	<b>22</b> Tu	1045 2041	5.6 1.6	170 50	<b>7</b> W	1026 2104	6.2 1.0	190 30	<b>22</b> Th	1005 2059	6.9 0.3	210 10	<b>7</b> Sa	1007 2149	6.9 0.3	210 10	<b>22</b> Su	1021 2125	6.9 0.3	210 10
<b>8</b> Tu	1141 2119	5.2 2.0	160 60	<b>23</b> W	1051 2124	5.9 1.3	180 40	<b>8</b> Th	1032 2147	6.6 0.7	200 20	<b>23</b> F	1025 2134	6.9 0.3	210 10	<b>8</b> Su	1023 2219	6.9 0.7	210 20	<b>23</b> M	1035 2149	6.6 1.0	200 30
<b>9</b> W	1135 2224	5.6 1.6	170 50	<b>24</b> Th	1105 2213	6.2 1.0	190 30	<b>9</b> F	1043 2233	6.6 0.7	200 20	<b>24</b> Sa	1045 2211	6.9 0.3	210 10	<b>9</b> M	1036 2245	6.6 1.0	200 30	<b>24</b> Tu	1036 2206	5.9 1.3	180 40
<b>10</b> Th	1137 2334	5.9 1.3	180 40	<b>25</b> F	1123 2305	6.6 1.0	200 30	<b>10</b> Sa	1057 2319	6.9 0.7	210 20	<b>25</b> Su	1103 2247	6.9 0.7	210 20	<b>10</b> Tu	1043 2258	6.2 1.3	190 40	<b>25</b> W	1016 2207	5.6 1.6	170 50
<b>11</b> F	1146	6.2	190	<b>26</b> Sa	1142 2358	6.6 1.0	200 30	<b>11</b> Su	1112	6.6	200	<b>26</b> M	1114 2322	6.6 1.0	200 30	<b>11</b> W	1042 2243	5.9 2.0	180 60	<b>26</b> Th	0939 2125	5.2 2.3	160 70
<b>12</b> Sa	0036 1200	1.0 6.2	30 190	<b>27</b> Su	1159	6.6	200	<b>12</b> M	0003 1125	1.0 6.6	30	<b>27</b> Tu	1113 2351	6.2 1.3	190 40	<b>12</b> Th	1027 2129	5.6 2.3	170 70	<b>27</b> F	0903 1933	5.2 2.3	160 70
●																							
<b>13</b> Su	0130 1217	1.0 6.2	30 190	<b>28</b> M	0046 1210	1.0 6.2	30	<b>13</b> Tu	0043 1134	1.0 6.2	30	<b>28</b> W	1059	5.6	170	<b>13</b> F	0958 1959	5.2 2.3	160 70	<b>28</b> Sa	0838 1830	5.2 2.0	160 60
●				●																			
<b>14</b> M	0214 1233	1.0 6.2	30 190	<b>29</b> Tu	0128 1212	1.0 5.9	30	<b>14</b> W	0114 1135	1.6 5.9	50	<b>29</b> Th	0010 1033 2359	2.0 5.6 2.3	60 170 70	<b>14</b> Sa	0920 1914	5.2 2.0	160 60	<b>29</b> Su	0823 1820	5.6 1.3	170 40
<b>15</b> Tu	0252 1246	1.0 5.9	30 180	<b>30</b> W	0204 1201	1.3 5.6	40	<b>15</b> Th	0131 1124	2.0 5.6	60	<b>30</b> F	1009 2007	5.2 2.6	160 80	<b>15</b> Su	0848 1859	5.6 1.3	170 40	<b>30</b> M	0817 1831	5.9 0.7	180 20

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Surabaja Strait, Djamuang Reef, Java, 2008

Times and Heights of High and Low Waters

July					August					September						
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height		
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm	
<b>1</b> Tu	0820 1852	6.2 0.3	190 10	<b>16</b> W	0738 1845	6.2 0.3	190 10	<b>1</b> F	0805 1910	6.2 0.3	190 10	<b>16</b> Sa	0829 1847	5.9 0.7	180 20	
	●												<b>1</b> M	0917 1851	4.9 2.0	150 60
<b>2</b> W	0829 1917	6.6 0.0	200 0	<b>17</b> Th	0811 1907	6.6 0.0	200 0	<b>2</b> Sa	0839 1935	6.2 0.3	190 10	<b>17</b> Su	0918 1907	5.6 1.0	170 30	
	○												<b>2</b> Tu	0956 1843	4.6 2.3	140 70
<b>3</b> Th	0845 1945	6.6 0.0	200 0	<b>18</b> F	0845 1931	6.6 0.0	200 0	<b>3</b> Su	0910 1955	5.9 1.0	180 30	<b>18</b> M	0959 1923	5.2 1.3	160 40	
	●												<b>3</b> W	0255 0712	4.3 3.9	130 120
<b>4</b> F	0904 2013	6.6 0.0	200 0	<b>19</b> Sa	0919 1954	6.6 0.3	200 10	<b>4</b> M	0934 2008	5.6 1.3	170 40	<b>19</b> Tu	1030 1930	4.9 2.0	150 60	
	○												<b>4</b> Th	0150 1705	4.3 3.0	130 90
<b>5</b> Sa	0924 2040	6.6 0.3	200 10	<b>20</b> Su	0949 2017	6.2 0.7	190 20	<b>5</b> Tu	0949 2006	5.2 2.0	160 60	<b>20</b> Sa	0036 1220	5.2 2.0	160 60	
	○												<b>5</b> F	0116 1553	4.6 2.6	140 80
<b>6</b> Su	0944 2104	6.6 0.7	200 20	<b>21</b> M	1012 2035	5.9 1.0	180 30	<b>6</b> W	0945 1941	4.9 2.3	150 70	<b>21</b> Sa	0109 1512	4.9 2.3	150 70	
	○												<b>21</b> Su	0037 1326	5.6 1.6	170 50
<b>7</b> M	1000 2120	6.2 1.0	190 30	<b>22</b> Tu	1021 2046	5.6 1.3	170 40	<b>7</b> Th	0854 1850	4.6 2.3	140 70	<b>22</b> F	0310 1655	4.6 2.6	140 80	
	○												<b>7</b> Su	0119 1511	5.6 1.6	170 50
<b>8</b> Tu	1008 2123	5.9 1.3	180 40	<b>23</b> W	0958 2040	5.2 2.0	160 60	<b>8</b> F	0511 1753	4.3 2.3	130 70	<b>23</b> Sa	0250 1554	4.9 2.3	150 70	
	○												<b>8</b> M	0139 1527	5.6 1.3	170 40
<b>9</b> W	1004 2101	5.6 2.0	170 60	<b>24</b> Th	0835 2000	4.9 2.3	150 70	<b>9</b> Sa	0350 1716	4.6 2.0	140 60	<b>24</b> Su	0242 1553	5.2 1.6	160 50	
	○												<b>9</b> Tu	0205 1549	5.9 1.0	180 30
<b>10</b> Th	0941 2007	5.2 2.3	160 70	<b>25</b> F	0719 1833	4.6 2.3	140 70	<b>10</b> Su	0342 1702	5.2 1.6	160 50	<b>25</b> M	0246 1611	5.6 1.3	170 40	
	○												<b>10</b> W	0235 1615	5.9 1.0	180 30
<b>11</b> F	0854 1906	4.9 2.3	150 70	<b>26</b> Sa	0641 1733	4.9 2.0	150 60	<b>11</b> M	0401 1706	5.6 1.3	170 40	<b>26</b> F	0148 1634	5.6 1.3	170 40	
	○												<b>11</b> Th	0307 1640	5.9 1.0	180 30
<b>12</b> Sa	0753 1827	4.9 2.0	150 60	<b>27</b> Su	0623 1722	5.2 1.3	160 40	<b>12</b> Tu	0437 1720	5.9 0.7	180 20	<b>27</b> F	0339 1705	5.6 1.0	170 30	
	○												<b>12</b> Sa	0156 1658	5.2 1.6	160 50
<b>13</b> Su	0708 1812	5.2 1.3	160 40	<b>28</b> M	0621 1732	5.6 1.0	170 30	<b>13</b> W	0527 1740	5.9 0.7	180 20	<b>28</b> Su	0152 1715	4.9 2.0	150 60	
	○												<b>13</b> Sa	0359 1728	5.2 1.3	160 40
<b>14</b> M	0657 1814	5.6 1.0	170 30	<b>29</b> Tu	0634 1753	5.9 0.7	180 20	<b>14</b> Th	0628 1802	5.9 0.3	180 10	<b>29</b> F	0452 1759	5.6 0.7	170 20	
	○												<b>14</b> Su	0314 0530	4.9 4.6	150 140
<b>15</b> Tu	0711 1826	5.9 0.7	180 20	<b>30</b> W	0658 1818	5.9 0.3	180 10	<b>15</b> F	0731 1825	5.9 0.3	180 10	<b>30</b> M	0220 0601	4.6 4.3	140 130	
	○												<b>15</b> M	0949 1801	4.6 2.0	140 60
	●												<b>31</b> Su	0820 1842	5.2 1.3	160 40

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Surabaja Strait, Djamuang Reef, Java, 2008

Times and Heights of High and Low Waters

October					November					December													
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height									
1 W	0018 0758 2347	4.6 3.0 4.9	140 90 150	16 Th	0811 2313	2.0 5.6	60 170	1 Sa	0908 2241	1.0 6.6	30 200	16 Su	0923 2227	0.3 6.9	10 210	1 M	0914 2228	0.3 6.9	10 210	16 Tu	0925 2209	0.3 6.6	10 200
2 Th	0836 2333	2.6 5.2	80 160	17 F	0857 2312	1.6 5.9	50 180	2 Su	0949 2300	1.0 6.6	30 200	17 M	1004 2240	0.3 6.9	10 210	2 Tu	0945 2247	0.3 6.9	10 210	17 W	0953 2220	0.7 6.6	20 200
3 F	0931 2336	2.3 5.6	70 170	18 Sa	0950 2316	1.3 6.2	40 190	3 M	1033 2320	0.7 6.9	20 210	18 Tu	1045 2254	0.7 6.6	20 200	3 W	1016 2259	0.7 6.6	20 200	18 Th	1015 2225	1.0 5.9	30 180
4 Sa	1042 2349	2.0 5.9	60 180	19 Su	1048 2326	1.0 6.2	30 190	4 Tu	1118 2338	0.7 6.6	20 200	19 W	1125 2304	0.7 6.6	20 200	4 Th	1044 2259	1.0 5.9	30 180	19 F	1024 2220	1.6 5.6	50 170
5 Su	1155	1.6	50	20 M	1148 2339	1.0 6.6	30 200	5 W	1202 2350	1.0 6.2	30 190	20 Th	1201 2310	1.0 6.2	30 190	5 F	1106 2242	1.3 5.6	40 170	20 Sa	1001 2203	2.0 5.2	60 160
6 M	0008 1253	6.2 1.3	190 40	21 Tu	1243 2353	1.0 6.2	30 190	6 Th	1242 2350	1.3 5.9	40 180	21 F	1228 2309	1.6 5.9	50 180	6 Sa	1112 2211	2.0 5.2	60 160	21 Su	0844 2133	2.3 5.2	70 160
7 Tu	0029 1340	6.2 1.3	190 40	22 W	1331	1.0	30	7 F	1317 2337	1.6 5.6	50 170	22 Sa	1236 2257	2.0 5.6	60 170	7 Su	1035 2141	2.3 5.2	70 160	22 M	0730 2055	2.3 5.2	70 160
8 W	0049 1420	6.2 1.0	190 30	23 Th	0005 1412	6.2 1.3	190 40	8 Sa	1342 2313	2.0 5.2	60 160	23 Su	1119 2235	2.6 5.2	80 160	8 M	0753 2120	2.3 5.2	70 160	23 Tu	0654 2021	1.6 5.6	50 170
9 Th	0105 1455	5.9 1.3	180 40	24 F	0015 1445	5.9 1.6	180 50	9 Su	1354 2249	2.3 5.2	70 160	24 M	0809 2204	2.3 5.2	70 160	9 Tu	0651 2107	2.0 5.6	60 170	24 W	0645 2005	1.3 5.9	40 180
10 F	0111 1525	5.6 1.3	170 40	25 Sa	0017 1510	5.6 2.0	170 60	10 M	0759 1038 1325 2229	3.0 3.0 3.0 5.2	90 90 90 160	25 Tu	0729 2135	2.0 5.6	60 170	10 W	0645 2103	1.3 5.9	40 180	25 Th	0651 2009	1.0 6.2	30 190
11 Sa	0101 1551	5.2 1.6	160 50	26 Su	0008 1519	5.2 2.3	160 70	11 Tu	0708 2216	2.3 5.6	70 170	26 W	0722 2118	1.6 5.9	50 180	11 Th	0700 2105	1.0 6.2	30 190	26 F	0705 2027	0.7 6.6	20 190
12 Su	0038 1609	4.9 2.3	150 70	27 M	0834 1027 1456 2318	3.0 3.0 3.0 4.9	90 90 90 150	12 W	0715 2208	2.0 5.6	60 170	27 Th	0732 2116	1.3 6.2	40 190	12 F	0723 2113	0.3 6.6	10 200	27 Sa	0725 2051	0.3 6.9	10 210
13 M	0012 1618	4.9 2.6	150 80	28 Tu	0746 2247	2.6 5.2	80 160	13 Th	0737 2206	1.3 5.9	40 180	28 F	0750 2127	0.7 6.6	20 180	13 Sa	0752 2125	0.3 6.9	10 210	28 Su	0748 2118	0.0 6.9	0 210
14 Tu	0709 1141 1604 2333	3.0 3.3 3.0 4.9	90 100 90 150	29 W	0747 2225	2.3 5.6	70 170	14 F	0808 2208	1.0 6.2	30 190	29 Sa	0815 2145	0.3 6.9	10 210	14 Su	0822 2139	0.0 6.9	0 210	29 M	0813 2145	0.0 6.9	0 210
15 W	0734 2321	2.6 5.2	80 160	30 Th	0805 2219	1.6 5.9	50 180	15 Sa	0844 2216	0.7 6.6	20 200	30 Su	0843 2206	0.3 6.9	10 210	15 M	0854 2155	0.0 6.9	0 210	30 Tu	0837 2209	0.3 6.6	10 200
				31 F	0833 2226	1.3 6.2	40 190								31 W	0901 2226	0.7 6.2	20 190					

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Kutei River Entrance, Muara Bayor, Borneo, 2008

Times and Heights of High and Low Waters

January				February				March						
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height			
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm			
<b>1</b> Tu	0507 1148 1727 2256	3.3 6.6 4.9 6.2	100 200 150 190	<b>16</b> W F	0442 1111 1224	2.6 7.2 6.2	80 220 190	<b>1</b> Sa	0439 1329	3.3 6.9	100 210			
<b>2</b> W	0550 1316 1929 2334	3.6 6.6 5.2 5.6	110 200 160 170	<b>17</b> Th	0519 1226 1900 2333	3.3 6.9 4.6 5.6	100 210 140 170	<b>2</b> Su	0443 1614	3.9 6.6	120 200			
<b>3</b> Th	0652 1506 2255	3.6 6.6 4.9	110 150 150	<b>18</b> F	0612 1424 2249	3.6 7.2 4.6	110 140 140	<b>3</b> Su	0129 0628 0905 1714	4.3 4.6 4.6 7.2	130 140 140 220			
<b>4</b> F	0156 0823 1622 2346	4.9 3.9 7.2 4.3	150 120 220 130	<b>19</b> Sa	0213 0758 1612 2355	4.6 3.9 7.9 3.6	140 120 240 110	<b>4</b> M	0043 0609 1052 1746	3.6 5.2 3.9 7.9	110 160 120 240			
<b>5</b> Sa	0423 0946 1709	4.9 3.6 7.9	150 110 240	<b>20</b> Su	0457 0954 1716	4.9 3.6 8.5	150 110 260	<b>5</b> Tu	0047 0624 1136 1814	3.0 5.6 3.3 8.5	90 170 100 260			
<b>6</b> Su	0015 0526 1043 1744	3.6 5.2 3.6 8.2	110 160 110 250	<b>21</b> M	0029 0553 1106 1802	3.0 5.2 3.0 9.2	90 160 90 280	<b>6</b> W	0102 0643 1209 1840	2.6 6.2 3.0 9.2	80 190 80 280			
<b>7</b> M	0042 0606 1126 1816	3.3 5.6 3.3 8.9	100 170 100 270	<b>22</b> Tu	0059 0631 1156 1840	2.3 5.9 2.6 9.5	70 180 70 290	<b>7</b> Th	0119 0704 1239 1907	2.0 6.9 2.3 9.5	60 210 70 290			
<b>8</b> Tu	0108 0639 1203 ● 1846	2.6 5.9 3.0 9.2	80 180 90 280	<b>23</b> W	0126 0704 1239 1914	2.0 6.6 2.3 9.8	60 200 70 300	<b>8</b> F	0138 0726 1309 1933	1.6 7.2 2.0 9.8	50 220 60 300			
<b>9</b> W	0133 0708 1236 1914	2.3 6.2 2.6 9.5	70 190 80 290	<b>24</b> Th	0151 0734 1316 1945	2.0 6.9 2.0 9.8	60 210 60 300	<b>9</b> Sa	0159 0749 1339 1959	1.6 7.9 1.6 9.5	50 240 50 290			
<b>10</b> Th	0158 0736 1308 1943	2.3 6.6 2.3 9.5	70 200 70 290	<b>25</b> F	0215 0803 1350 2012	1.6 7.5 2.0 9.5	50 230 60 290	<b>10</b> M	0220 0815 1410 2025	1.3 8.2 1.6 9.5	40 250 50 290			
<b>11</b> F	0223 0804 1341 2013	2.0 6.9 2.3 9.5	60 210 70 290	<b>26</b> Sa	0237 0831 1422 2038	1.6 7.5 2.0 9.2	50 230 60 280	<b>11</b> Tu	0242 0842 1443 2051	1.3 8.2 1.6 8.9	40 250 50 270			
<b>12</b> Sa	0248 0833 1414 2043	2.0 6.9 2.3 9.2	60 210 70 280	<b>27</b> Su	0259 0859 1452 2101	2.0 7.9 2.3 8.5	60 240 70 260	<b>12</b> W	0304 0913 1517 2116	1.6 8.5 2.3 8.2	50 250 50 250			
<b>13</b> Su	0314 0905 1450 2113	2.0 7.2 2.3 8.9	60 220 70 270	<b>28</b> M	0320 0928 1521 2121	2.0 7.9 3.0 7.9	60 240 90 220	<b>13</b> Th	0327 0946 1553 2139	2.0 8.2 3.0 7.2	60 250 90 220			
<b>14</b> M	0341 0940 1529 2144	2.3 7.2 2.6 8.2	70 220 80 250	<b>29</b> Tu	0341 0958 1550 2139	2.3 7.5 3.6 7.2	70 230 120 220	<b>14</b> F	0349 1025 1637 2156	2.3 7.9 3.9 6.2	70 220 120 190			
<b>15</b> Tu	0410 1020 1614 2216	2.6 7.2 3.3 7.2	80 220 100 220	<b>30</b> W	0401 1030 1620 2152	2.6 7.2 4.3 6.6	80 220 130 200	<b>15</b> F	0410 1119 1753 2141	3.0 7.2 4.9 5.2	90 220 150 160			
				<b>31</b> Th	0421 1111 1656 2151	3.0 6.9 4.9 5.9					<b>31</b> M	0310 1300 1630 1050	3.6 6.6 4.9 6.2	110 200 150 190

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Kutei River Entrance, Muara Bayor, Borneo, 2008

## Times and Heights of High and Low Waters

April					May					June															
Time		Height			Time		Height			Time		Height			Time		Height			Time		Height			
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm		h m
<b>1</b> Tu	0017	4.3	130		<b>16</b> W	0500	6.2	190		<b>1</b> Th	0412	5.9	180		<b>16</b> F	0429	6.9	210		<b>1</b> Su	0415	7.5	230		<b>16</b> M
	1610	6.6	200			1034	3.9	120			0936	4.3	130			1045	3.6	110			1045	2.6	80		0502
	2326	3.6	110			1641	7.2	220			1541	6.9	210			1625	6.2	190			1623	5.9	180		1152
						2306	3.0	90			2214	3.3	100			2224	2.6	80			2214	2.0	60		2220
<b>2</b> W	0531	5.9	180		<b>17</b> Th	0517	7.2	220		<b>2</b> F	0433	6.9	210		<b>17</b> Sa	0459	7.5	230		<b>2</b> M	0457	8.2	250		<b>17</b> Tu
	1033	4.3	130			1113	3.3	100			1029	3.6	110			1123	3.0	90			1135	2.0	60		1226
	1649	7.2	220			1716	7.5	230			1628	7.2	220			1701	6.2	190			1711	5.9	180		1746
	2327	3.0	90			2325	2.6	80			2241	2.6	80			2252	2.3	70			2254	1.6	50		2317
<b>3</b> Th	0529	6.6	200		<b>18</b> F	0538	7.9	240		<b>3</b> Sa	0459	7.9	240		<b>18</b> Su	0527	8.2	250		<b>3</b> Tu	0538	8.9	270		<b>18</b> W
	1107	3.6	110			1145	2.6	80			1109	2.6	80			1155	2.6	80			1219	1.6	50		1256
	1719	7.9	240			1743	7.5	230			1706	7.5	230			1732	6.2	190			1755	5.9	180		1822
	2341	2.6	80			2343	2.3	70			2307	2.3	70			2318	2.3	70			2333	1.3	40		2351
<b>4</b> F	0544	7.5	230		<b>19</b> Sa	0559	8.5	260		<b>4</b> Su	0528	8.5	260		<b>19</b> M	0554	8.5	260		<b>4</b> W	0618	9.2	280		<b>19</b> Th
	1137	2.6	80			1213	2.3	70			1147	2.0	60			1224	2.3	70			1301	1.3	40		1326
	1747	8.5	260			1807	7.5	230			1741	7.5	230			1759	6.2	190			1835	5.9	180		1855
	2359	2.0	60								2335	1.6	50											O	
<b>5</b> Sa	0605	8.2	250		<b>20</b> Su	0002	2.0	60		<b>5</b> M	0559	9.5	290		<b>20</b> Tu	0620	8.9	270		<b>5</b> Th	0011	1.3	40		<b>20</b> F
	1208	2.0	60			0621	8.9	270			1223	1.6	50			1252	2.3	70			0657	9.5	290		0708
	1815	8.9	270			1239	2.0	60			1814	7.5	230			1826	6.2	190			1343	1.3	40		1355
						1828	7.5	230												1915	5.6	170		1926	
<b>6</b> Su	0020	1.6	50		<b>21</b> M	0022	2.0	60		<b>6</b> Tu	0003	1.6	50		<b>21</b> W	0007	2.0	60		<b>6</b> F	0050	1.3	40		<b>21</b> Sa
	0628	9.2	280			0643	9.2	280			0631	9.8	300			0646	8.9	270			0737	9.5	290		0738
	1239	1.3	40			1303	2.0	60			1301	1.3	40			1320	2.3	70			1424	1.3	40		1424
	1842	8.9	270			1849	7.5	230			1846	7.2	220			1852	6.2	190			1955	5.6	170		1958
<b>7</b> M	0042	1.3	40		<b>22</b> Tu	0041	1.6	50		<b>7</b> W	0032	1.3	40		<b>22</b> Th	0033	2.0	60		<b>7</b> Sa	0130	1.3	40		<b>22</b> Su
	0655	9.5	290			0706	9.5	290			0705	10.2	310			0712	8.9	270			0817	9.2	280		0808
	1311	1.3	40			1327	2.0	60			1339	1.6	50			1348	2.3	70			1504	1.6	50		1453
	1909	8.5	260			1909	7.2	220			1918	6.9	210			1919	5.9	180			2037	5.6	170		2031
<b>8</b> Tu	0106	1.3	40		<b>23</b> W	0100	1.6	50		<b>8</b> Th	0102	1.3	40		<b>23</b> F	0058	2.0	60		<b>8</b> Su	0211	1.6	50		<b>23</b> M
	0723	10.2	310			0728	9.5	290			0740	10.2	310			1417	2.0	60			0857	8.5	260		0840
	1344	1.3	40			1351	2.3	70			1951	6.6	200			1947	5.9	180			1545	2.0	60		1524
	1937	8.2	250			1930	7.2	220												2122	5.6	170		2106	
<b>9</b> W	0129	1.3	40		<b>24</b> Th	0120	2.0	60		<b>9</b> F	0132	1.6	50		<b>24</b> Sa	0124	2.3	70		<b>9</b> M	0255	2.3	70		<b>24</b> Tu
	0754	10.2	310			0751	9.2	280			0816	9.5	290			0808	8.5	260			0937	7.9	240		0913
	1419	1.6	50			1417	2.6	80			1459	2.3	70			1459	2.6	80			1627	2.3	70		1557
	2003	7.5	230			1951	6.9	210			2026	5.9	180			2019	5.6	170			2215	5.2	160		2145
<b>10</b> Th	0154	1.6	50		<b>25</b> F	0139	2.3	70		<b>10</b> Sa	0204	2.0	60		<b>25</b> Su	0152	2.3	70		<b>10</b> Tu	0345	3.0	90		<b>25</b> W
	0826	9.8	300			0815	8.9	270			0855	8.9	270			0839	8.2	250			1020	6.9	210		0950
	1455	2.3	70			1444	3.0	90			1545	3.0	90			1529	2.6	80			1713	2.6	80		1632
	2029	6.9	210			2013	6.2	190			2104	5.6	170			2056	5.2	160			2320	5.2	160		2232
<b>11</b> F	0217	2.0	60		<b>26</b> Sa	0159	2.6	80		<b>11</b> Su	0238	2.6	80		<b>26</b> M	0223	3.0	90		<b>11</b> W	0450	3.6	110		<b>26</b> Th
	0900	9.2	280			0842	8.5	260			0938	8.2	250			0916	7.9	240			1109	6.2	190		1030
	1534	3.3	100			1517	3.3	100			1641	3.3	100			1614	3.0	90			1805	2.6	80		1712
	2053	6.2	190			2035	5.9	180			2156	5.2	160			2143	5.2	160						O	2331
<b>12</b> Sa	0240	2.6	80		<b>27</b> Su	0218	3.0	90		<b>12</b> M	0317	3.6	110		<b>27</b> Tu	0303	3.3	100		<b>12</b> Th	0045	5.2	160		<b>27</b> F
	0937	8.5	260			0912	7.9	240			1033	7.2	220			1000	7.2	220			1212	5.2	160		1119
	1625	3.9	120			1559	3.9	120			1807	3.9	120			1710	3.3	100			1906	3.0	90		1800
	2112	5.2	160			2101	5.2	160			2348	4.9	150			2255	4.9	150							O
<b>13</b> Su	0257	3.3	100		<b>28</b> M	0236	3.6	110		<b>13</b> Tu	0429	4.3	130		<b>28</b> W	0403	3.6	110		<b>13</b> F	0218	5.9	180		<b>28</b> Sa
	1027	7.2	220			0952	7.2	220			1204	6.6	200			1100	6.6	200			0836	3.9	120		0656
	1841	4.6	140			1720	4.3	130			2002	3.6	110			1823	3.3	100			1339	4.9	150		1226
	2041	4.6	140			2139	4.9	150												2010	2.6	80		1900	
<b>14</b> M	0236	4.3	130		<b>29</b> Tu	0245	4.3	130		<b>14</b> W	0252	5.2	160		<b>29</b> Th	0045	5.2	160		<b>14</b> Sa	0329	6.2	190		<b>29</b> Su
	1253	6.6	200			1111	6.6	200			0803	4.6	140			0555	4.3	130			1013	3.6	110		0906
	2242	3.9	120			2059	4.3	130			1415	5.9	180			1229	6.2	190			1508	4.6	140		1406
											2111	3.6	110			1939	3.3	100			2108	2.6	80		2014
<b>15</b> Tu	0517	5.2	160		<b>30</b> W	0500	4.9	150		<b>15</b> Th	0352	6.2	190		<b>30</b> F	0225	5.6	170		<b>15</b> Su	0421	6.9	210		<b>30</b> M
	0912	4.9	150			0620	4.9	150			0953	3.9	120			0816	3.9	120			1111	3.3	100		1044
	1549	6.9	210	</td																					

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

# Kutei River Entrance, Muara Bayor, Borneo, 2008

Times and Heights of High and Low Waters

July				August				September									
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height						
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm						
1 Tu	0441	7.2	220	16 W	0535	6.6	200	1 F	0621	7.5	230						
1145	2.0	60	1240	2.0	60	1306	0.3	10	16 Sa	0627	7.2	220					
1703	4.3	130	1802	3.9	120	1846	4.9	150	1 M	0654	0.0	0					
2229	1.6	50	2316	2.0	60	●	1302	0.3	10	16 Tu	0708	7.5	230				
							1850	4.9	150	1321	-0.3	-10					
							1921	6.9	210	1921	6.9	210					
										1902	7.2	220					
2 W	0533	7.9	240	17 Th	0609	6.9	210	2 Sa	0021	0.3	10	2 Tu	0124	-0.3	-10		
1231	1.3	40	1302	1.3	40	0657	7.9	240	17 Su	0651	7.5	230	17 W	0107	-0.3	-10	
1757	4.6	140	1835	4.3	130	1332	0.0	0	1910	5.6	170	17 Tu	0732	7.2	220		
2323	1.3	40	2355	1.6	50	1916	5.2	160	●	1320	0.0	0					
●							1945	7.2	220	1945	7.2	220					
3 Th	0618	8.5	260	18 F	0639	7.2	220	3 Su	0101	0.0	0	3 W	0151	0.0	0		
1310	1.0	30	1325	1.0	30	0729	7.9	240	18 M	0056	0.3	10	18 Th	0137	-0.3	-10	
1842	4.9	150	1903	4.6	140	1356	0.0	0	1339	0.0	0	18 Tu	0738	7.2	220		
●			○			1946	5.9	180	1932	5.9	180	18 Sa	1340	0.0	0		
4 F	0011	1.0	30	19 Sa	0029	1.3	40	4 M	0137	0.0	0	19 W	0217	0.3	10		
0659	8.5	260	0706	7.5	230	0758	7.9	240	19 Tu	0124	0.0	0	19 F	0207	0.0	0	
1346	0.7	20	1348	0.7	20	1420	0.0	0	2015	6.2	190	19 Th	0803	6.9	210		
1921	5.2	160	1929	4.9	150	1955	6.6	200	●	0714	7.5	230					
5 Sa	0056	0.7	20	20 Su	0101	1.0	30	5 Tu	0210	0.0	0	20 W	0803	6.9	210		
0737	8.5	260	0733	7.9	240	0824	7.2	220	20 Sa	0153	-0.3	-10	20 F	0240	0.7	20	
1420	0.7	20	1410	0.3	10	1442	0.0	0	20 W	0805	7.5	230	20 Th	0826	6.2	190	
1959	5.2	160	1954	5.2	160	2044	6.2	190	2021	6.6	200	20 Tu	1423	0.3	10		
6 Su	0138	0.7	20	21 M	0132	0.7	20	6 W	0242	0.3	10	21 Sa	0240	0.7	20		
0814	8.2	250	0800	7.9	240	0848	6.9	210	21 Th	0223	0.0	0	21 W	0315	1.3	40	
1451	0.7	20	1433	0.3	10	1503	0.0	0	21 Sa	0306	1.3	40	21 F	0848	5.2	160	
2036	5.6	170	2021	5.6	170	2113	6.2	190	2049	6.9	210	21 Th	0846	5.6	170		
7 M	0218	1.0	30	22 Tu	0204	0.7	20	7 Th	0312	1.0	30	22 Sa	0329	2.0	60		
0847	7.9	240	0828	7.5	230	0910	6.2	190	22 F	0255	0.3	10	22 W	0356	2.3	70	
1520	0.7	20	1457	0.3	10	1524	0.3	10	22 Tu	0855	6.2	190	22 Tu	0905	4.6	140	
2113	5.6	170	2049	5.6	170	2142	6.2	190	22 Sa	1506	1.0	30	22 M	1502	1.3	40	
8 Tu	0258	1.3	40	23 W	0237	0.7	20	8 F	0341	1.6	50	23 M	0357	2.3	70		
0919	7.2	220	0856	7.2	220	0928	5.6	170	23 Sa	0331	1.0	30	23 W	0504	3.3	100	
1549	1.0	30	1521	0.3	10	1544	0.7	20	23 F	0918	5.6	170	23 Tu	0853	3.6	110	
2150	5.6	170	2120	5.9	180	2214	5.6	170	23 Sa	1525	0.3	10	23 M	1512	1.6	50	
9 W	0338	1.6	50	24 Th	0312	1.0	30	9 Sa	0411	2.3	70	24 Th	0423	3.6	110		
0949	6.6	200	0925	6.6	200	0941	4.9	150	24 F	0937	4.6	140	24 W	1224	2.6	80	
1618	1.3	40	1547	0.7	20	1603	1.0	30	24 Sa	1547	1.0	30	●	0423	3.6	110	
2231	5.6	170	2156	5.9	180	●	2251	5.2	160	24 Tu	1450	2.3	70	●	0423	3.6	110
10 Th	0419	2.3	70	25 F	0352	1.3	40	10 Su	0446	3.0	90	25 W	0204	4.3	130		
1016	5.9	180	0954	5.9	180	0943	4.3	130	25 M	0512	3.0	90	25 Th	0346	5.6	170	
1647	1.3	40	1615	1.0	30	1620	1.6	50	25 Sa	0343	4.3	130	25 F	1119	2.3	70	
●	2319	5.6	170	2239	5.9	180	2349	4.6	140	25 Tu	1255	2.3	70	25 Th	1717	4.3	130
11 F	0509	3.0	90	26 Sa	0441	2.0	60	11 M	0610	3.6	110	11 W	0447	5.2	160		
1042	4.9	150	1024	4.9	150	0819	3.6	110	26 Tu	0014	5.2	160	26 F	0445	6.2	190	
1720	1.6	50	1646	1.3	40	1622	2.0	60	11 Th	1200	2.0	60	26 Th	1128	1.6	50	
●	2337	5.6	170	●	2337	5.6	170	26 Sa	1540	2.3	70	26 M	1726	5.2	160		
12 Sa	0023	5.2	160	27 W	0553	3.0	90	12 Tu	0336	4.6	140	27 F	0513	5.9	180		
0625	3.6	110	1056	4.3	130	1338	2.3	70	27 Th	1201	2.0	60	27 Sa	1144	1.3	40	
1107	4.3	130	1726	1.6	50	●	1732	3.3	100	27 M	1157	1.3	40	27 M	1745	6.2	190
1801	2.0	60				2147	2.3	70	27 Tu	1753	4.6	140	27 Tu	2340	1.3	40	
13 Su	0201	5.2	160	28 M	0111	5.2	160	13 W	0345	5.2	160	13 W	0522	6.9	210		
1009	3.6	110	0911	3.0	90	1232	2.0	60	28 Th	1204	1.3	40	13 F	1144	1.3	40	
1127	3.6	110	1148	3.3	100	1803	3.3	100	28 Sa	1746	3.9	120	13 M	1745	6.2	190	
1913	2.3	70	1840	2.0	60	2242	2.3	70	28 Tu	2301	1.6	50	13 Th	2340	1.3	40	
14 M	0348	5.6	170	29 Tu	0324	5.9	180	14 F	0535	5.9	180	14 W	0537	6.6	200		
1155	3.0	90	1137	2.3	70	1233	1.3	40	29 F	1221	0.7	20	28 Th	0551	7.2	220	
1541	3.3	100	1613	3.0	90	1814	3.9	120	14 Th	1808	4.9	150	28 Sa	1203	0.7	20	
2103	2.3	70	2105	2.0	60	2326	1.6	50	29 F	2345	1.0	30	28 M	1807	6.9	210	
15 Tu	0453	5.9	180	30 W	0448	6.6	200	15 F	0602	6.6	200	15 W	0012	0.7	20		
1217	2.3	70	1210	1.6	50	1245	1.0	30	30 F	1241	0.3	10	30 Th	0039	0.3	10	
1718	3.6	110	1731	3.6	110	1831	4.6	140	15 Sa	1832	5.6	170	30 Tu	0640	7.2	220	
2223	2.3	70	2238	1.6	50	2359	1.3	40	30 Tu	1840	6.9	210	30 M	1240	0.3	10	
			31 Th	0540	7.2	220		●	1856	6.2	190		1852	8.2	250		
			31 Th	1239	1.0	30											
			31 Th	1812	4.3	130											
			31 Th	2336	1.0	30											

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Kutei River Entrance, Muara Bayor, Borneo, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
<b>1</b> W 0106 0.3 10 0701 6.9 210 1259 0.3 10 1915 8.2 250	h m ft cm	<b>16</b> Th 0051 0.3 10 0647 7.2 220 1241 0.3 10 1901 9.2 280	h m ft cm	<b>1</b> Sa 0140 1.6 50 0716 6.6 200 1304 1.3 40 1938 8.9 270	h m ft cm	<b>16</b> Su 0159 1.6 50 0734 6.6 200 1314 1.6 50 1958 9.8 300	h m ft cm	<b>1</b> M 0210 2.6 80 0741 6.2 190 1317 2.3 70 1958 8.9 270	h m ft cm	<b>16</b> Tu 0243 2.0 60 0820 6.6 200 1358 2.3 70 2039 9.5 290	
<b>2</b> Th 0130 0.7 20 0721 6.9 210 1317 0.3 10 1938 8.2 250	h m ft cm	<b>17</b> F 0124 0.3 10 0714 6.9 210 1305 0.7 20 1931 9.2 280	h m ft cm	<b>2</b> Su 0206 2.0 60 0739 6.2 190 1325 1.6 50 2003 8.5 260	h m ft cm	<b>17</b> M 0239 2.0 60 0809 6.2 190 1348 2.0 60 2036 9.2 280	h m ft cm	<b>2</b> Tu 0240 2.6 80 0812 6.2 190 1345 2.6 80 2028 8.9 270	h m ft cm	<b>17</b> W 0320 2.3 70 0902 6.6 200 1440 2.6 80 2117 8.9 270	
<b>3</b> F 0154 0.7 20 0740 6.6 200 1335 0.3 10 2001 8.2 250	h m ft cm	<b>18</b> Sa 0158 0.7 20 0741 6.6 200 1330 0.7 20 2003 9.2 280	h m ft cm	<b>3</b> M 0234 2.3 70 0802 5.9 180 1346 2.0 60 2029 8.2 250	h m ft cm	<b>18</b> Tu 0323 2.6 80 0849 5.6 170 1424 2.6 80 2118 8.5 260	h m ft cm	<b>3</b> W 0313 3.0 90 0846 5.9 180 1416 3.0 90 2100 8.2 250	h m ft cm	<b>18</b> Th 0358 2.6 80 0947 6.6 200 1525 3.3 100 2155 8.2 250	
<b>4</b> Sa 0218 1.3 40 0758 6.2 190 1353 0.7 20 2023 7.9 240	h m ft cm	<b>19</b> Su 0234 1.3 40 0809 5.9 180 1355 1.0 30 2038 8.5 260	h m ft cm	<b>4</b> Tu 0306 3.0 90 0827 5.6 170 1406 2.6 80 2058 7.5 230	h m ft cm	<b>19</b> W 0414 3.0 90 0938 5.2 160 1506 3.3 100 2207 7.5 230	h m ft cm	<b>4</b> Th 0350 3.0 90 0927 5.9 180 1452 3.6 110 2136 7.9 240	h m ft cm	<b>19</b> F 0436 3.0 90 1039 6.6 200 1617 3.9 120 O 2235 7.2 220	
<b>5</b> Su 0241 1.6 50 0815 5.6 170 1410 1.3 40 2046 7.2 220	h m ft cm	<b>20</b> M 0314 2.0 60 0836 5.2 160 1420 1.6 50 2116 7.9 240	h m ft cm	<b>5</b> W 0346 3.3 100 0857 4.9 150 1426 3.3 100 2134 6.9 210	h m ft cm	<b>20</b> Th 0519 3.6 110 1058 5.2 160 1607 3.9 120 O 2316 6.9 210	h m ft cm	<b>5</b> F 0434 3.3 100 1021 5.6 170 1538 3.9 120 2221 7.2 220	h m ft cm	<b>20</b> Sa 0518 3.3 100 1145 6.2 190 1728 4.6 140 2320 6.6 200	
<b>6</b> M 0307 2.3 70 0829 5.2 160 1424 1.6 50 2110 6.6 200	h m ft cm	<b>21</b> Tu 0403 3.0 90 0904 4.6 140 1444 2.3 70 O 2204 6.9 210	h m ft cm	<b>6</b> Th 0451 3.9 120 0946 4.6 140 1441 3.9 120 O 2233 6.2 190	h m ft cm	<b>21</b> F 0651 3.6 110 1330 5.2 160 1839 4.6 140 O 2325 6.6 200	h m ft cm	<b>6</b> Sa 0529 3.6 110 1143 5.6 170 1655 4.6 140 O 2325 6.6 200	h m ft cm	<b>21</b> Su 0608 3.6 110 1317 6.6 200 1931 4.9 150	
<b>7</b> Tu 0336 3.0 90 0836 4.6 140 1431 2.3 70 O 2137 5.9 180	h m ft cm	<b>22</b> W 0534 3.6 110 0937 3.9 120 1457 3.3 100 2342 5.9 180	h m ft cm	<b>7</b> F 0736 3.9 120 1441 3.9 120 2115 4.3 130	h m ft cm	<b>22</b> Sa 0109 6.2 190 0820 3.6 110 1514 6.2 190 2115 4.3 130	h m ft cm	<b>7</b> Su 0640 3.6 110 1332 5.9 180 1913 4.6 140	h m ft cm	<b>22</b> M 0027 5.6 170 0714 3.6 110 1457 6.9 210 2204 4.6 140	
<b>8</b> W 0425 3.6 110 0804 3.9 120 1407 3.0 90 2223 5.2 160	h m ft cm	<b>23</b> Th 0936 3.6 110 1643 4.3 130 1940 4.3 130	h m ft cm	<b>8</b> Sa 0116 5.9 180 0910 3.6 110 1555 5.6 170 2113 4.3 130	h m ft cm	<b>23</b> Su 0256 5.9 180 0917 3.3 100 1603 6.9 210 2226 3.6 110	h m ft cm	<b>8</b> M 0102 6.2 190 0755 3.6 110 1458 6.6 200 2118 4.3 130	h m ft cm	<b>23</b> Tu 0226 5.2 160 0832 3.6 110 1608 7.5 230 2318 4.3 130	
<b>9</b> Th 1142 3.3 100 1913 4.3 130 2116 4.3 130	h m ft cm	<b>24</b> F 0255 5.9 180 1009 3.0 90 1628 5.2 160 2200 3.6 110	h m ft cm	<b>9</b> Su 0308 6.2 190 0947 3.0 90 1616 6.2 190 2212 3.6 110	h m ft cm	<b>24</b> M 0400 5.9 180 0958 3.0 90 1640 7.9 240 2310 3.3 100	h m ft cm	<b>9</b> Tu 0245 5.9 180 0858 3.3 100 1555 7.5 230 2231 3.6 110	h m ft cm	<b>24</b> W 0408 5.2 160 0939 3.6 110 1657 7.9 240 2359 3.6 110	
<b>10</b> F 0343 5.2 160 1057 2.6 80 1714 4.9 150 2221 3.6 110	h m ft cm	<b>25</b> Sa 0407 6.2 190 1034 2.6 80 1650 6.2 190 2249 2.6 80	h m ft cm	<b>10</b> M 0403 6.6 200 1016 2.6 80 1641 7.2 220 2253 2.6 80	h m ft cm	<b>25</b> Tu 0444 6.2 190 1031 2.6 80 1712 8.2 250 2346 3.0 90	h m ft cm	<b>10</b> W 0359 5.9 180 0949 3.0 90 1641 8.5 260 2323 3.0 90	h m ft cm	<b>25</b> Th 0508 5.2 160 1032 3.3 100 1735 8.5 260	
<b>11</b> Sa 0427 5.9 180 1103 2.0 60 1712 5.6 170 2252 2.6 80	h m ft cm	<b>26</b> Su 0449 6.6 200 1056 2.0 60 1714 7.2 220 2325 2.0 60	h m ft cm	<b>11</b> Tu 0444 6.9 210 1044 2.3 70 1710 8.2 250 2330 2.3 70	h m ft cm	<b>26</b> W 0519 6.2 190 1100 2.6 80 1742 8.9 270	h m ft cm	<b>11</b> Th 0454 6.2 190 1034 2.6 80 1723 9.2 280	h m ft cm	<b>26</b> F 0030 3.3 100 0549 5.6 170 1114 3.0 90 1807 8.9 270	
<b>12</b> Su 0457 6.6 200 1117 1.6 50 1725 6.6 200 2321 2.0 60	h m ft cm	<b>27</b> M 0520 6.9 210 1118 1.6 50 1738 7.9 240 2355 1.6 50	h m ft cm	<b>12</b> W 0520 6.9 210 1112 1.6 50 1740 8.9 270 2355 1.6 50	h m ft cm	<b>27</b> Th 0017 2.6 80 0548 6.2 190 1129 2.3 70 1810 9.2 280	h m ft cm	<b>12</b> F 0007 2.6 80 0539 6.2 190 1116 2.3 70 1803 9.8 300	h m ft cm	<b>27</b> Sa 0057 3.0 90 0624 5.9 180 1151 3.0 90 1837 9.2 280	
<b>13</b> M 0525 7.2 220 1136 1.3 40 1745 7.2 220 2350 1.3 40	h m ft cm	<b>28</b> Tu 0547 6.9 210 1139 1.3 40 1803 8.5 260	h m ft cm	<b>13</b> F 0006 1.6 50 0553 6.9 210 1141 1.6 50 O 1812 9.5 290	h m ft cm	<b>28</b> Sa 0046 2.6 80 0617 6.2 190 1156 2.3 70 O 1837 9.2 280	h m ft cm	<b>13</b> Su 0049 2.0 60 0621 6.2 190 1157 2.0 60 O 1842 10.2 310	h m ft cm	<b>28</b> W 0123 2.6 80 0654 6.2 190 1224 2.6 80 1904 9.2 280	
<b>14</b> Tu 0553 7.5 230 1156 1.0 30 1808 8.2 250	h m ft cm	<b>29</b> W 0023 1.6 50 0610 6.9 210 1201 1.3 40 ● 1826 8.9 270	h m ft cm	<b>14</b> F 0043 1.3 40 0626 6.9 210 1211 1.3 40 1846 9.8 300	h m ft cm	<b>29</b> Sa 0114 2.3 70 0644 6.2 190 1223 2.3 70 1904 9.2 280	h m ft cm	<b>14</b> Su 0128 2.0 60 0701 6.6 200 1237 2.0 60 1921 10.2 310	h m ft cm	<b>29</b> M 0148 2.3 70 0723 6.2 190 1255 2.6 80 1932 9.2 280	
<b>15</b> W 0020 0.7 20 0619 7.5 230 1218 0.7 20 O 1833 8.9 270	h m ft cm	<b>30</b> Th 0050 1.3 40 0633 6.9 210 1222 1.3 40 1850 9.2 280	h m ft cm	<b>15</b> Sa 0121 1.3 40 0700 6.6 200 1242 1.3 40 1921 10.2 310	h m ft cm	<b>30</b> Su 0141 2.3 70 0712 6.2 190 1249 2.3 70 1931 9.2 280	h m ft cm	<b>15</b> M 0206 2.0 60 0741 6.6 200 1317 2.0 60 2000 10.2 310	h m ft cm	<b>30</b> Tu 0212 2.3 70 0752 6.6 200 1325 2.6 80 1959 9.2 280	
<b>31</b> W 0115 1.6 50 0655 6.6 200 1243 1.3 40 1914 8.9 270	h m ft cm	<b>31</b> F 0115 1.6 50 0655 6.6 200 1243 1.3 40 1914 8.9 270	h m ft cm								

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Barito River (Outer Bar), Borneo, 2008

Times and Heights of High and Low Waters

January				February				March				
	Time	Height			Time	Height			Time	Height		
	h m	ft	cm		h m	ft	cm		h m	ft	cm	
<b>1</b>	0719	3.3	100	<b>16</b>	0626	3.6	110	<b>1</b>	0707	2.3	70	
Tu	1415	5.6	170	W	1313	5.6	170	F	1602	7.5	230	
	1612	5.2	160		1608	5.6	170	Sa	1516	8.9	270	
	2335	7.9	240	●	2254	7.9	240					
<b>2</b>	0737	3.0	90	<b>17</b>	0648	2.6	80	<b>2</b>	0734	2.0	60	
W	1556	6.2	190	Th	1448	6.9	210	Sa	1636	8.2	250	
	1717	6.2	190		1756	6.6	200		1725	9.2	280	
	2339	7.5	230		2306	7.5	230					
<b>3</b>	0756	2.6	80	<b>18</b>	0719	1.6	50	<b>3</b>	0802	1.6	50	
Th	1653	6.9	210	F	1550	7.9	240	Su	1709	8.5	260	
	1906	6.9	210		2011	7.2	220					
	2329	7.2	220		2308	7.5	230					
<b>4</b>	0818	2.0	60	<b>19</b>	0755	1.0	30	<b>4</b>	0831	1.3	40	
F	1733	7.5	230	Sa	1640	8.9	270	M	1740	8.9	270	
									Tu	1720	9.5	290
									●	0851	0.7	20
<b>5</b>	0842	1.6	50	<b>20</b>	0834	0.3	10	<b>5</b>	0903	1.0	30	
Sa	1807	8.2	250	Su	1725	9.5	290	Tu	1811	8.9	270	
									●	0934	1.0	30
<b>6</b>	0908	1.3	40	<b>21</b>	0915	0.0	0	<b>6</b>	0937	1.0	30	
Su	1839	8.5	260	M	1808	9.8	300	W	1841	9.2	280	
									●	1018	1.6	50
<b>7</b>	0936	1.0	30	<b>22</b>	0957	0.3	10	<b>7</b>	1013	1.3	40	
M	1911	9.2	280	Tu	1849	10.2	310	Th	1911	8.9	270	
									●	1018	1.6	50
<b>8</b>	1007	1.0	30	<b>23</b>	1040	0.3	10	<b>8</b>	1051	1.3	40	
Tu	1943	9.2	280	W	1928	9.8	300	F	1939	8.9	270	
									●	0217	5.2	160
<b>9</b>	1041	1.0	30	<b>24</b>	1122	1.0	30	<b>9</b>	1132	2.0	60	
W	2014	9.5	290	Th	2005	9.8	300	Sa	2006	8.5	260	
									●	0244	4.9	150
<b>10</b>	1116	1.0	30	<b>25</b>	1205	1.6	50	<b>10</b>	1216	2.6	80	
Th	2044	9.5	290	F	2040	9.2	280	Su	2031	8.2	250	
									●	0315	4.6	140
<b>11</b>	1153	1.3	40	<b>26</b>	1248	2.6	80	<b>11</b>	0409	5.2	160	
F	2112	9.5	290	Sa	2111	8.9	270	M	0636	5.2	160	
									●	0349	3.9	120
<b>12</b>	1233	1.6	50	<b>27</b>	0534	4.6	140	<b>12</b>	0418	4.6	140	
Sa	2138	9.2	280	Su	0736	4.9	150	Tu	0930	5.6	170	
									●	0424	3.6	110
<b>13</b>	1315	2.6	80		1331	3.6	110	<b>13</b>	1046	6.2	190	
Su	2201	8.9	270		2139	8.2	250	W	1152	6.2	190	
									●	0446	3.6	110
<b>14</b>	1401	3.3	100	<b>28</b>	0535	4.3	130	<b>13</b>	1054	6.2	190	
M	2221	8.5	260	W	1020	4.9	150	Th	1333	7.2	220	
									●	0459	3.3	100
<b>15</b>	0620	4.3	130	<b>14</b>	1416	4.6	140	<b>13</b>	1154	7.9	240	
Tu	1046	4.9	150	W	1641	6.2	190	Th	1154	7.9	240	
	1455	4.3	130		2201	7.9	240					
	2239	8.2	250	●	2225	7.2	220					
				<b>31</b>	0641	3.0	90					
				Th	1522	6.9	210					
					1848	6.9	210					
					2218	6.9	210					

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# **Barito River (Outer Bar), Borneo, 2008**

## Times and Heights of High and Low Waters

April						May						June											
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height					
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm				
<b>1</b> Tu	0616 1445	2.0 8.5	60 260	<b>16</b> W	0050 0701 1445 2152	4.9 2.6 8.9 4.3	150 80 270 130	<b>1</b> Th	0603 1356 2112	3.0 8.2 4.6	90 250 140	<b>16</b> F	0305 0714 1356 2123	5.2 4.6 7.5 3.0	160 140 230 90	<b>1</b> Su	0350 0720 1315 2106	5.9 5.6 7.2 1.6	180 170 220 50	<b>16</b> M	0614 2133	7.2 1.3	220 40
<b>2</b> W	0657 1510 2225	2.3 8.5 5.6	70 260 170	<b>17</b> Th	0209 0750 1510 2209	5.2 3.3 8.2 3.9	160 100 250 120	<b>2</b> F	0112 0652 1416 2119	5.2 3.3 7.9 3.9	160 100 240 120	<b>17</b> Sa	0427 0813 1401 2144	5.9 5.6 7.2 2.3	180 170 220 70	<b>2</b> M	0514 0857 1320 2140	6.9 6.2 7.2 1.0	210 190 220 30				
<b>3</b> Th	0009 0739 1534 2216	5.6 2.3 8.2 5.2	170	<b>18</b> F	0324 0840 1529 2229	5.6 3.9 7.5 3.6	170	<b>3</b> Sa	0241 0746 1432 2139	5.6 4.3 7.5 3.3	170	<b>18</b> Su	0546 0929 1350 2207	6.6 6.2 6.9 2.0	200 190 210 60	<b>3</b> Tu	0623 1137 1247 2220	7.9 6.9 6.9 0.3	240 210 210 10				
<b>4</b> F	0139 0824 1557 2228	5.6 3.0 7.9 4.9	170	<b>19</b> Sa	0440 0933 1541 2251	5.9 4.9 6.9 3.3	180	<b>4</b> Su	0410 0849 1447 2209	5.9 4.9 7.2 2.6	180	<b>19</b> M	0657 2232	7.2 1.6	220 50	<b>4</b> W	0721 2303	8.5 0.0	260 0				
<b>5</b> Sa	0301 0913 1618 2253	5.9 3.3 7.5 4.3	180	<b>20</b> Su	0601 1038 1540 2316	6.2 5.6 6.6 3.0	190	<b>5</b> M	0540 1013 1456 2246	6.9 5.9 6.9 1.6	210	<b>20</b> Tu	0756 2301	7.5 1.6	230 50	<b>5</b> Th	0812 2348	9.5 -0.3	290 -10				
<b>6</b> Su	0428 1009 1638 2326	6.2 4.3 7.2 3.6	190	<b>21</b> M	0725 1224 1510 2345	6.9 6.2 6.2 2.6	210	<b>6</b> Tu	0706 1229 1440 2329	7.5 6.6 6.6 1.3	230	<b>21</b> W	0843 2332	8.2 1.3	250 40	<b>6</b> F	0859	9.8	300				
<b>7</b> M	0605 1120 1654	6.6 5.2 6.6	200	<b>22</b> Tu	0842	7.2	220	<b>7</b> W	0820	8.5	260	<b>22</b> Th	0924	8.5	260	<b>7</b> Sa	0036 0941	0.0 10.2	0 310	<b>22</b> Su	0007 0948	0.7 8.9	20 270
<b>8</b> Tu	0007 0747 1307 1702	3.0 6.9 5.9 6.6	90	<b>23</b> W	0017 0944	2.3 7.9	70	<b>8</b> Th	0015 0920	0.7 9.2	20	<b>23</b> F	0006 0959	1.3 8.9	40	<b>8</b> Su	0125 1021	0.3 9.8	10	<b>23</b> M	0044 1015	1.0 8.9	30
<b>9</b> W	0054 0920	2.3 7.9	70	<b>24</b> Th	0054 1033	2.3 8.2	70	<b>9</b> F	0106 1012	0.7 9.8	20	<b>24</b> Sa	0043 1032	1.3 9.2	40	<b>9</b> M	0215 1058	1.0 9.5	30 290	<b>24</b> Tu	0123 1040	1.3 8.5	40 260
<b>10</b> Th	0145 1033	2.0 8.5	60	<b>25</b> F	0133 1113	2.0 8.5	60	<b>10</b> Sa	0158 1058	0.7 10.2	20	<b>25</b> Su	0121 1102	1.3 9.2	40	<b>10</b> Tu	0305 1130 1944 2246	2.0 9.2 3.6 1.2	60 280 110 120	<b>25</b> W	0203 1100	2.0 8.2	60 250
<b>11</b> F	0239 1130	1.3 9.2	40	<b>26</b> Sa	0215 1148	2.0 8.9	60	<b>11</b> Su	0251 1139	1.0 10.2	30	<b>26</b> M	0202 1130	1.6 9.2	50	<b>11</b> W	0356 1159 1948 2246	3.0 8.5 3.3	90 260 100 120	<b>26</b> Th	0247 1118 1930 2317	2.6 7.9 3.6 4.3	80 240 110 130
<b>12</b> Sa	0333 1218	1.3 9.5	40	<b>27</b> Su	0259 1220	2.0 8.9	60	<b>12</b> M	0344 1216 2106 2151	1.3 9.8 4.3 4.3	40 300 130 130	<b>27</b> Tu	0245 1154	1.6 8.9	50	<b>12</b> Th	0048 0448 1222 2003	4.3 3.9 7.9 3.0	130 120 240 90	<b>27</b> F	0335 1133 1922	3.6 7.5 3.0	110 230 90
<b>13</b> Su	0428 1301	1.3 9.8	40	<b>28</b> M	0344 1248	2.0 8.9	60	<b>13</b> Tu	0437 1249 2040	2.0 9.5 3.9	60 290 120	<b>28</b> W	0330 1215	2.3 8.5	70	<b>13</b> F	0231 0543 1237 2023	4.9 4.6 7.5 2.3	150 140 230 70	<b>28</b> Sa	0139 0434 1146 1937	4.9 4.6 7.5 2.3	150 140 230 70
<b>14</b> M	0520 1340 2141 2313	1.6 9.5 4.9 4.9	50	<b>29</b> Tu	0429 1313	2.3 8.9	70	<b>14</b> W	0006 0529 1318 2049	4.3 3.0 8.9 3.6	130 90 270 110	<b>29</b> Th	0418 1233 2023	3.0 8.2 3.9	90 250 120	<b>14</b> Sa	0402 0648 1241 2044	5.9 5.6 7.2 2.0	180 170 220 60	<b>29</b> Su	0322 0558 1157 2004	5.9 5.6 7.2 1.3	180 170 220 40
<b>15</b> Tu	0612 1414 2140	2.0 9.2 4.6	60	<b>30</b> W	0515 1336 2133 2326	2.3 8.5 4.9	70	<b>15</b> Th	0141 0621 1341 2105	4.9 3.6 8.2 3.3	150 110 250 100	<b>30</b> F	0026 0510 1249 2021	4.6 3.6 7.9 3.3	140 110 240 100	<b>15</b> Su	0516 0816 1230 2108	6.6 6.2 6.9 1.6	200 190 210 50	<b>30</b> M	0433 0753 1204 2038	6.9 6.6 7.2 0.3	210 200 220 10
																<b>31</b> Sa	0215 0608 1303 2038	4.9 4.6 7.5 2.6	150 140 230 80				

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

# Barito River (Outer Bar), Borneo, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m 0527 Tu 1031 1141 2116	ft 7.9 6.9 6.9 -0.3	cm 240 210 210 -10	h m 0617 W 2128	ft 7.9 0.7	cm 240 20	h m 0618 F 2221	ft 8.9 -0.3	cm 270 -10	h m 0614 Sa	ft 7.9 1.0	cm 240 30
●				1		16			1		
2	0615 W 2158	8.5 -0.7	260 -20	17	0652 Th 2158	8.2 0.3	250 10	2	0658 Sa 2307	8.9 0.3	270 10
●				3		18			3		
3	0700 Th 2241	9.2 -0.7	280 -20	18	0724 F 2230	8.2 0.3	250 10	3	0736 Su 2353	8.5 1.0	260 30
●				4		19			4		
4	0743 F 2327	9.5 -0.3	290 -10	19	0756 Sa 2304	8.5 0.7	260 20	4	0812 M 1604	8.2 4.9	250 150
5	0824 Sa	9.5	290	20	0826 Su 2340	8.5 0.7	260 20	5	0041 Tu 0845	2.0 7.9	60 240
6	0013 Su 0902	0.0 9.5	0 290	21	0854 M	8.2	250	6	0133 W 0916	3.0 7.2	90 220
7	0100 M 0939	0.7 9.2	20 280	22	0017 Tu 0919	1.3 7.9	40 240	7	0231 Th 0943	3.9 6.9	120 210
8	0148 Tu 1012	1.6 8.5	50 260	23	0058 W 0941	2.0 7.9	60 240	8	0346 F 1004	4.6 6.6	140 200
9	0237 W 1042	2.6 8.2	80 250	24	0141 Th 1000	2.6 7.5	80 230	9	0123 Sa 0523	5.9 5.2	180 160
10	0329 Th 1106	3.6 7.5	110 230	24	0141 Th 1757	2.6 3.9	80 120	23	0331 Sa 1018	4.9 6.2	150 190
11	0124 F 0428	4.9 4.6	150 140	25	0231 F 1016	3.6 7.2	110 220	24	0044 Su 0538	6.6 5.6	200 170
12	0301 Sa 0546	5.6 5.6	170 170	25	0231 F 1800	3.6 3.3	110 100	25	0123 O 1815	2.3 2.3	70 70
13	0409 Su 0727	6.2 6.2	190 190	26	0033 Sa 0340	4.9 4.6	150 140	26	0239 M 1917	6.9 1.6	210 50
14	0500 M 2031	6.9 1.0	210 30	26	0320 M 1045	6.9 6.6	210 200	27	0239 Tu 1917	6.9 1.6	210 50
15	0541 Tu 2059	7.5 0.7	230 20	27	0217 Su 1045	5.9 6.6	180 200	27	0401 Tu 1854	7.2 1.3	220 40
16	0537 Th 2137	8.9 -0.3	240 -10	28	0320 M 1055	6.9 6.6	210 200	28	0437 W 1931	7.5 0.7	230 30
17	0556 Su 1227	7.9 4.9	240 150	28	0437 W 1931	7.5 0.7	230 30	29	0444 F 1137	8.5 5.6	260 170
18	0003 Th 0617	4.3 6.2	130 190	29	0405 Th 2028	8.5 0.3	260 10	29	0448 Tu 1108	7.5 5.2	230 160
19	0132 F 0633	4.9 5.9	150 180	30	0521 Sa 1159	8.2 5.2	250 160	30	0513 M 1429	7.2 5.6	220 170
20	0351 Sa 1447	5.6 2.3	170 70	30	0543 F 2125	7.9 0.7	240 20	31	0556 Su 1227	7.9 4.9	240 150
21	1541 Su	1.6	50	31	0537 Th 2249	8.9 2.0	270 60	31	0556 O 2249	7.9 2.0	240 60
22	0017 M 1634	8.2 1.3	250 40	31	0537 Th 2249	8.9 2.0	270 60	31	0412 Su 1538	7.5 5.6	230 170
23	0108 Tu 1727	8.5 1.0	260 30	31	0537 Th 2249	8.9 2.0	270 60	31	0152 W 1818	8.9 1.0	270 30
24	0152 W 1818	8.9 1.0	270 30	31	0537 Th 2249	8.9 2.0	270 60	31	0438 M 1654	7.2 5.9	220 180
25	0232 Th 1148	8.9 5.2	270 160	31	0537 O 2249	8.9 2.0	270 60	31	0438 Tu 1815	7.2 6.2	220 190
26	0308 F 1311	8.5 5.2	260 160	31	0537 Th 2249	8.9 2.0	270 60	31	0438 M 2239	7.2 3.9	220 120
27	0342 Sa 1425	8.2 5.6	250 170	31	0537 Tu 2050	8.9 2.3	240 70	31	0438 F 2050	8.2 2.3	250 70
28	0412 Su 1538	7.5 5.6	230 170	31	0537 O 2050	8.9 2.3	240 70	31	0412 M 2142	7.5 3.0	230 90
29	0438 M 1654	7.2 5.9	220 180	31	0537 O 2050	8.9 2.3	240 70	31	0438 Tu 2347	7.2 4.6	220 140
30	0500 Tu 1815	6.6 6.2	200 190	31	0537 O 2050	8.9 2.3	240 70	31	0500 Tu 2347	6.6 4.6	200 140

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Barito River (Outer Bar), Borneo, 2008

Times and Heights of High and Low Waters

October					November					December													
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height									
	h m	ft	cm																				
<b>1</b> W	0514 1211 1942	5.9 3.3 6.6	180 100 200	<b>16</b> Th	0402 1127 1928	6.2 2.6 7.2	190 80 220	<b>1</b> Sa	1223 2200	2.0 8.5	60 260	<b>16</b> Su	1229 2139	0.7 9.8	20 300	<b>1</b> M	1216 2201	1.6 9.5	50 290	<b>16</b> Tu	1253 2146	0.7 10.5	20 320
<b>2</b> Th	0125 0512 1247 2106	5.2 5.6 3.0 6.9	160 170 90 210	<b>17</b> F	0110 0354 1212 2051	5.9 6.2 2.0 7.9	180 190 60 240	<b>2</b> Su	1302 2240	2.0 8.9	60 270	<b>17</b> M	1320 2223	0.7 10.2	20 310	<b>2</b> Tu	1252 2231	1.6 9.5	50 290	<b>17</b> W	1343 2223	1.3 10.2	40 310
<b>3</b> F	1327 2218	2.6 7.2	80 220	<b>18</b> Sa	1302 2159	1.6 8.5	50 260	<b>3</b> M	1342 2315	2.0 8.9	60 270	<b>18</b> Tu	1413 2304	1.0 10.2	30 310	<b>3</b> W	1330 2259	2.0 9.2	60 280	<b>18</b> Th	1434 2256	2.3 9.5	70 290
<b>4</b> Sa	1410 2315	2.6 7.9	80 240	<b>19</b> Su	1355 2254	1.3 9.2	40 280	<b>4</b> Tu	1425 2347	2.0 8.9	60 270	<b>19</b> W	1507 2341	1.6 10.2	50 310	<b>4</b> Th	1409 2323	2.3 9.2	70 280	<b>19</b> O	0703 1028 1529 2326	4.3 4.6 3.3 9.2	130 140 100 280
<b>5</b> Su	1455	2.3	70	<b>20</b> M	1451 2342	1.0 9.5	30 290	<b>5</b> W	1510	2.3	70	<b>20</b> Th	0825 0935 1603	4.3 4.3 2.3	130 130 70	<b>5</b> F	1451 2343	3.0 8.9	90 270	<b>20</b> Sa	0712 1234 1627 2350	3.6 4.9 4.6 8.5	110 150 140 260
<b>6</b> M	0000 1540	7.9 2.3	240 70	<b>21</b> Tu	1548	1.3	40	<b>6</b> Th	0016 1555	8.9 2.6	270 80	<b>21</b> F	0015 0804 1154 1659	9.5 3.9 4.6 3.3	290 120 140 100	<b>6</b> Sa	0855 1010 1536	4.3 4.3 3.6	130 130 110	<b>21</b> Su	0731 1419 1735	3.0 5.9 5.6	90 180 170
<b>7</b> Tu	0039 1625	8.2 2.3	250 70	<b>22</b> W	0024 1643	9.5 1.6	290 50	<b>7</b> F	0041 1642	8.9 3.0	270 90	<b>22</b> Sa	0044 0815 1333 1757	8.9 3.6 5.2 4.3	270 110 160 130	<b>7</b> Su	0000 0801 1333 1626	8.5 3.9 4.9 4.3	260 120 150 130	<b>22</b> M	0006 0754 1544 1858	7.9 2.6 6.6 6.2	240 80 200 190
<b>8</b> W	0113 1708	8.2 2.3	250 70	<b>23</b> Th	0103 0857 1107 1738	9.5 4.6 4.6 2.0	290 140 140 60	<b>8</b> Sa	0103 0901 1155 1730	8.5 4.6 4.6 3.3	260 140 140 100	<b>23</b> Su	0107 0833 1500 1900	8.2 3.0 5.9 5.2	250 90 180 160	<b>8</b> M	0014 0800 1433 1726	8.2 3.6 5.6 5.2	250 110 170 160	<b>23</b> Tu	0012 0818 1651	7.5 2.0 7.5	230 60 230
<b>9</b> Th	0144 1751	8.2 2.3	250 70	<b>24</b> F	0138 0900 1244 1833	9.2 4.3 4.9 2.6	280 130 150 80	<b>9</b> Su	0122 0848 1327 1821	8.2 4.3 4.9 3.9	250 130 150 120	<b>24</b> M	0123 0855 1620 2014	7.9 2.6 6.6 5.9	240 80 200 180	<b>9</b> Tu	0025 0815 1600 1846	7.9 2.6 6.2 6.2	240 80 190 190	<b>24</b> W	0844 1743	1.6 8.2	50 250
<b>10</b> F	0211 1015 1106 1833	8.2 4.9 4.9 2.3	250 150 150 70	<b>25</b> Sa	0208 0914 1406 1928	8.5 3.9 5.2 3.6	260 120 160 110	<b>10</b> M	0138 0854 1451 1918	7.9 3.6 5.6 4.6	240 110 170 140	<b>25</b> Tu	0128 0918 1732 2155	7.2 2.3 7.2 6.6	220 70 220 200	<b>10</b> W	0034 0840 1710 2036	7.5 2.0 7.2 6.9	230 60 220 210	<b>25</b> Th	0912 1828	1.3 8.5	40 260
<b>11</b> Sa	0236 0943 1241 1917	7.9 4.9 5.2 2.6	240 150 160 80	<b>26</b> Su	0234 0933 1523 2026	7.9 3.6 5.9 4.3	240 110 180 130	<b>11</b> Tu	0152 0913 1613 2025	7.5 3.0 6.2 5.6	230 90 190 170	<b>26</b> W	0110 0943 1835	6.9 2.0 7.9	210 60 240	<b>11</b> Th	0035 0912 1806	7.5 1.3 8.2	230 40 250	<b>26</b> F	0940 1907	1.3 8.9	40 270
<b>12</b> Su	0258 0943 1354 2003	7.5 4.6 5.2 3.3	230 140 160 100	<b>27</b> M	0253 0955 1639 2131	7.2 3.0 6.2 5.2	220 70 210 160	<b>12</b> W	0203 0940 1735 2157	7.2 2.3 6.9 6.2	220 70 210 190	<b>27</b> Th	1009 1928	1.6 8.5	50 260	<b>12</b> F	0950 1856	0.7 9.2	20 280	<b>27</b> Sa	1009 1943	1.0 9.2	30 280
<b>13</b> M	0318 0956 1508 2053	7.2 4.3 5.6 3.9	220 130 170 120	<b>28</b> Tu	0304 1019 1755 2254	6.9 2.6 6.9 5.9	210 80 210 180	<b>13</b> Th	0205 1015 1850	6.9 1.6 7.9	210 50 270	<b>28</b> F	1039 2013 1850	1.3 8.9	40	<b>13</b> Sa	1033 1942	0.3 9.8	10	<b>28</b> Su	1039 2016	1.0 9.5	30 290
<b>14</b> Tu	0336 1018 1628 2151	6.9 3.6 5.9 4.6	210 110 180 140	<b>29</b> W	0259 1046 1909	6.2 2.3 7.2	190	<b>14</b> F	1055 1954	1.0 8.9	30	<b>29</b> Sa	1109 2053	1.3 9.2	40	<b>14</b> Su	1117 2026	0.0 10.2	0 310	<b>29</b> M	1111 2047	1.3 9.5	40
<b>15</b> W	0352 1049 1756 O	6.6 3.3 6.6 2.2	200 100 200 160	<b>30</b> Th	1115 2016	2.3 7.9	70	<b>15</b> Sa	1140 2050	0.7 9.5	20	<b>30</b> Su	1142 2128	1.3 9.5	40	<b>30</b> Tu	1143 2117	1.3 9.5	40	<b>31</b> W	1217 2144	1.6 9.2	50
	<b>31</b> F	1148 2112	2.0 8.2	60																			

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.



**Pages 172 through 175 intentionally omitted**

# Davao, Philippines, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0506 0.7 20	16 W 0426 0.3 10	1 F 0501 1.3 40	16 Sa 0039 2.3 70	1 Sa 0339 1.6 50	16 Su 0054 2.3 70						
1149 3.6 110	W 1057 3.9 120	F 1246 3.3 100	Sa 0532 1.6 50	1056 3.6 110	0509 2.0 60						
1806 1.3 40	1728 0.7 20	2043 1.3 40	1320 3.9 120	1905 1.6 50	1305 3.9 120						
2352 2.6 80	● 2326 3.0 90		2118 1.0 30		2103 1.0 30						
2 W 0604 1.0 30	17 Th 0518 1.0 30	2 Sa 0317 2.0 60	17 Su 0350 2.6 80	2 Su 0201 2.0 60	17 M 0341 3.0 90						
1302 3.6 110	1210 3.9 120	0726 1.6 50	0818 1.6 50	0404 2.0 60	0831 2.0 60						
1947 1.3 40	1906 1.0 30	1440 3.6 110	1507 4.3 130	1338 3.6 110	1455 4.3 130						
		2220 0.7 20	2227 0.3 10	2147 1.3 40	2201 0.7 20						
3 Th 0154 2.3 70	18 F 0106 2.6 80	3 Su 0438 2.3 70	18 M 0448 3.0 90	3 M 0420 2.6 80	18 Tu 0423 3.6 110						
0719 1.3 40	0637 1.3 40	0919 1.6 50	0955 1.3 40	0850 2.0 60	0950 1.3 40						
1418 3.6 110	1345 3.9 120	1549 3.9 120	1614 4.9 150	1515 3.9 120	1558 4.9 150						
2126 1.0 30	2102 0.7 20	2257 0.3 10	2308 -0.3 -10	2223 0.7 20	2238 0.3 10						
4 F 0334 2.6 80	19 Sa 0320 2.6 80	4 M 0511 3.0 90	19 Tu 0523 3.6 110	4 Tu 0440 3.3 100	19 W 0451 4.3 130						
0838 1.3 40	0821 1.3 40	1021 1.0 30	1049 0.7 20	0957 1.3 40	1035 0.7 20						
1519 3.9 120	1511 4.3 130	1636 4.6 140	1702 5.2 160	1608 4.6 140	1643 5.2 160						
2223 0.3 10	2221 0.0 0	2326 -0.3 -10	2340 -0.7 -20	2250 0.0 0	2308 0.0 0						
5 Sa 0434 2.6 80	20 Su 0439 3.0 90	5 Tu 0537 3.3 100	20 W 0551 4.3 130	5 W 0502 3.9 120	20 Th 0516 4.9 150						
0943 1.0 30	0946 1.0 30	1103 0.7 20	1131 0.0 0	1039 1.0 30	1112 0.0 0						
1608 4.3 130	1615 4.9 150	1715 4.9 150	1742 5.6 170	1648 5.2 160	1721 5.6 170						
2303 0.0 0	2312 -0.7 -20	2353 -0.7 -20		2318 -0.3 -10	2336 -0.3 -10						
6 Su 0515 3.0 90	21 M 0528 3.3 100	6 W 0603 3.9 120	21 Th 0011 -1.0 -30	6 Th 0527 4.3 130	21 F 0542 5.2 160						
1032 0.7 20	1047 0.3 10	1139 0.3 10	0618 4.6 140	1115 0.3 10	1146 -0.3 -10						
1649 4.6 140	1707 5.2 160	1750 5.6 170	1208 -0.3 -10	1724 5.6 170	1754 5.6 170						
2336 -0.7 -20	2354 -1.3 -40		○ 1818 5.9 180	2346 -0.7 -20							
7 M 0549 3.3 100	22 Tu 0607 3.9 120	7 Th 0020 -1.0 -30	22 F 0040 -1.0 -30	7 F 0554 4.9 150	22 Sa 0002 -0.3 -10						
1113 0.7 20	1135 0.0 0	0630 4.3 130	0645 4.9 150	1148 -0.3 -10	0607 5.6 170						
1727 4.9 150	1752 5.6 170	1212 0.0 0	1242 -0.7 -20	1758 5.9 180	1218 -0.7 -20						
	○ 1823 5.9 180	1851 5.9 180			○ 1824 5.6 170						
8 Tu 0007 -1.0 -30	23 W 0030 -1.3 -40	8 F 0048 -1.3 -40	23 Sa 0106 -1.0 -30	8 Sa 0012 -1.0 -30	23 M 0027 -0.3 -10						
0620 3.6 110	0641 4.3 130	0656 4.6 140	0710 5.2 160	0619 5.6 170	0631 5.9 180						
1150 0.3 10	1218 -0.3 -10	1244 -0.3 -10	1314 -0.7 -20	1221 -0.7 -20	1247 -0.7 -20						
● 1802 5.2 160	1833 5.9 180	1855 5.9 180	1921 5.6 170	1831 6.2 190	1852 5.6 170						
9 W 0038 -1.0 -30	24 Th 0105 -1.6 -50	9 Sa 0114 -1.3 -40	24 Su 0130 -1.0 -30	9 Su 0040 -1.0 -30	24 M 0051 -0.3 -10						
0651 3.9 120	0714 4.6 140	0722 4.9 150	0735 5.2 160	0647 5.9 180	0657 5.9 180						
1223 0.0 0	1258 -0.7 -20	1316 -0.7 -20	1344 -0.7 -20	1255 -1.0 -30	1315 -0.7 -20						
1836 5.2 160	1910 5.9 180	1927 5.9 180	1949 5.2 160	1904 5.9 180	1919 5.2 160						
10 Th 0108 -1.3 -40	25 F 0137 -1.3 -40	10 Su 0141 -1.3 -40	25 M 0154 -0.7 -20	10 M 0108 -1.0 -30	25 Tu 0114 -0.3 -10						
0721 3.9 120	0745 4.6 140	0749 5.2 160	0801 5.2 160	0716 5.9 180	0723 5.6 170						
1255 0.0 0	1335 -0.7 -20	1350 -0.7 -20	1413 -0.3 -10	1331 -1.0 -30	1343 -0.3 -10						
1908 5.6 170	1945 5.6 170	2000 5.6 170	2015 4.9 150	1938 5.6 170	1946 4.6 140						
11 F 0137 -1.3 -40	26 Sa 0206 -1.0 -30	11 M 0209 -1.0 -30	26 Tu 0217 -0.3 -10	11 Tu 0136 -0.7 -20	26 W 0137 0.0 0						
0749 4.3 130	0814 4.6 140	0819 5.2 160	0828 4.9 150	0748 5.9 180	0749 5.6 170						
1328 0.0 0	1410 -0.3 -10	1426 -0.7 -20	1442 0.0 0	1408 -0.7 -20	1411 0.0 0						
1941 5.6 170	2017 5.2 160	2034 5.2 160	2041 4.3 130	2013 4.9 150	2012 4.3 130						
12 Sa 0206 -1.0 -30	27 Su 0234 -0.7 -20	12 Tu 0239 -0.7 -20	27 W 0239 0.0 0	12 W 0206 -0.3 -10	27 Th 0158 0.3 10						
0818 4.3 130	0843 4.6 140	0852 4.9 150	0855 4.9 150	0821 5.9 180	0814 5.2 160						
1402 0.0 0	1444 0.0 0	1506 -0.3 -10	1512 0.3 10	1449 -0.3 -10	1439 0.3 10						
2016 5.2 160	2048 4.6 140	2110 4.6 140	2106 3.6 110	2049 4.3 130	2038 3.9 120						
13 Su 0237 -1.0 -30	28 M 0300 -0.3 -10	13 W 0309 0.0 0	28 Th 0258 0.7 20	13 Th 0235 0.3 10	28 F 0218 1.0 30						
0849 4.3 130	0913 4.3 130	0928 4.9 150	0923 4.3 130	0858 5.2 160	0842 4.9 150						
1441 0.0 0	1519 0.3 10	1553 0.3 10	1546 1.0 30	1535 0.3 10	1512 0.7 20						
2053 4.9 150	2118 4.3 130	2150 3.6 110	2132 3.3 100	2129 3.6 110	2108 3.3 100						
14 M 0310 -0.7 -20	29 Tu 0327 0.0 0	14 Th 0341 0.3 10	29 F 0317 1.0 30	14 Tu 0307 0.7 20	29 M 0242 1.3 40						
0924 4.3 130	0945 4.3 130	1012 4.6 140	0957 3.9 120	0941 4.9 150	0917 4.3 130						
1525 0.3 10	1558 0.7 20	1656 0.7 20	1639 1.3 40	1639 1.0 30	1600 1.3 40						
2134 4.3 130	2149 3.6 110	2244 3.0 90	○ 2211 2.6 80	○ 2226 3.0 90	2157 3.0 90						
15 Tu 0345 0.0 0	30 W 0354 0.7 20	15 F 0420 1.0 30	15 F 1119 3.9 120	15 Sa 0345 1.3 40	30 M 0311 1.6 50						
1005 4.3 130	1022 3.9 120	1843 1.0 30		1048 4.3 130	1012 3.9 120						
1618 0.3 10	1645 1.0 30			1836 1.3 40	1754 1.6 50						
2222 3.6 110	○ 2223 3.0 90										
31 Th 0421 1.0 30											
1112 3.6 110											
1803 1.3 40											
2322 2.3 70											

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Davao, Philippines, 2008

Times and Heights of High and Low Waters

April				May				June			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0301	3.0	90	16 W 0331	3.9	120	1 Th 0226	3.9	120	1 Su 0316	4.6	140
0802	2.3	70	W 0926	1.3	40	0825	1.6	50	F 0941	0.7	20
1423	3.9	120	1531	4.6	140	1434	4.3	130	1549	4.3	130
2117	1.0	30	2152	0.7	20	2052	1.0	30	2139	1.0	30
2 W 0340	3.6	110	17 Th 0404	4.6	140	2 0310	4.6	140	17 Sa 0353	5.2	160
0918	1.6	50	1010	0.7	20	0921	1.0	30	1022	0.3	10
1526	4.6	140	1617	4.9	150	1531	4.9	150	1631	4.3	130
2156	0.7	20	2225	0.3	10	2134	0.7	20	2214	0.7	20
3 Th 0411	4.3	130	18 F 0434	5.2	160	3 Sa 0348	5.2	160	18 Su 0426	5.2	160
1003	1.0	30	1047	0.3	10	1007	0.0	0	1057	0.0	0
1612	5.2	160	1655	5.2	160	1618	4.9	150	1707	4.6	140
2229	0.0	0	2255	0.3	10	2212	0.3	10	2245	0.7	20
4 F 0440	4.9	150	19 Sa 0502	5.6	170	4 Su 0425	5.9	180	19 M 0457	5.6	170
1042	0.3	10	1120	-0.3	-10	1050	-0.3	-10	1129	-0.3	-10
1651	5.6	170	1728	5.2	160	1701	5.2	160	1740	4.3	130
2300	-0.3	-10	2322	0.0	0	2249	0.0	0	2316	0.7	20
5 Sa 0509	5.6	170	20 Su 0529	5.9	180	5 M 0502	6.2	190	20 Tu 0528	5.6	170
1118	-0.3	-10	1151	-0.3	-10	1132	-1.0	-30	1159	-0.3	-10
1729	5.9	180	1759	5.2	160	1743	5.2	160	1812	4.3	130
2330	-0.3	-10	O 2348	0.0	0	2326	0.0	0	2347	0.7	20
6 Su 0539	5.9	180	21 M 0556	5.9	180	6 Tu 0541	6.6	200	21 W 0559	5.6	170
1155	-1.0	-30	1220	-0.7	-20	1214	-1.0	-30	1230	-0.3	-10
1805	5.9	180	M 1828	4.9	150	1825	4.9	150	1845	4.3	130
●											
7 M 0001	-0.7	-20	22 Tu 0014	0.3	10	7 W 0003	0.0	0	22 Th 0017	0.7	20
0610	6.6	200	0623	5.9	180	0620	6.6	200	0629	5.6	170
1233	-1.0	-30	1249	-0.7	-20	1257	-1.0	-30	1301	-0.3	-10
1841	5.6	170	1856	4.6	140	1906	4.6	140	1917	4.3	130
8 Tu 0032	-0.3	-10	23 W 0040	0.3	10	8 Th 0041	0.0	0	23 F 0046	1.0	30
0644	6.6	200	0651	5.9	180	0700	6.6	200	0658	5.2	160
1312	-1.0	-30	1317	-0.3	-10	1341	-0.7	-20	1332	-0.3	-10
1918	5.2	160	1925	4.3	130	1950	4.3	130	1950	3.9	120
9 W 0105	-0.3	-10	24 Th 0105	0.7	20	9 F 0121	0.3	10	24 Sa 0114	1.0	30
0720	6.6	200	0717	5.6	170	0743	6.2	190	0728	5.2	160
1352	-0.7	-20	1346	0.0	0	1427	-0.3	-10	1404	0.0	0
1957	4.6	140	1955	3.9	120	2038	3.9	120	2024	3.9	120
10 Th 0137	0.0	0	25 F 0128	1.0	30	10 Sa 0204	1.0	30	25 Su 0146	1.3	40
0757	6.2	190	0744	5.2	160	0830	5.6	170	0803	4.9	150
1436	-0.3	-10	1417	0.3	10	1519	0.3	10	1441	0.3	10
2037	3.9	120	2025	3.6	110	2133	3.6	110	2102	3.6	110
11 F 0211	0.7	20	26 Sa 0154	1.3	40	11 Su 0256	1.3	40	26 M 0227	1.3	40
0838	5.6	170	0815	4.9	150	0924	4.9	150	0846	4.6	140
1525	0.3	10	1453	0.7	20	1620	0.7	20	1524	0.7	20
2126	3.6	110	2103	3.3	100	2244	3.6	110	2149	3.6	110
12 Sa 0250	1.3	40	27 Su 0226	1.6	50	12 M 0406	1.6	50	27 Tu 0319	1.6	50
0927	4.9	150	0855	4.6	140	1035	4.3	130	0940	4.6	140
1632	1.0	30	1541	1.0	30	1736	1.3	40	1617	1.0	30
2239	3.0	90	2200	3.3	100	●			2248	3.6	110
13 Su 0346	2.0	60	28 M 0313	2.0	60	13 Tu 0012	3.6	110	28 W 0432	1.6	50
1040	4.3	130	0953	4.3	130	0548	2.0	60	1049	4.3	130
1817	1.3	40	1655	1.3	40	1214	3.9	120	1722	1.3	40
●			O 2331	3.0	90	1859	1.3	40	O 2356	3.9	120
14 M 0053	3.0	90	29 Tu 0438	2.3	70	14 W 0133	3.9	120	29 Th 0603	1.6	50
0545	2.3	70	1121	3.9	120	0738	1.6	50	1211	3.9	120
1247	3.9	120	1843	1.6	50	1349	3.9	120	1834	1.3	40
2009	1.3	40				2008	1.3	40			
15 Tu 0243	3.3	100	30 W 0121	3.3	100	15 Th 0231	4.3	130	30 F 0105	4.3	130
0817	2.0	60	0656	2.3	70	0851	1.3	40	0730	1.3	40
1428	4.3	130	1310	3.9	120	1457	3.9	120	1336	3.9	120
2111	1.0	30	2000	1.3	40	2059	1.3	40	1940	1.3	40
●									31 Sa 0207	4.6	140
									0841	0.7	20
									1451	4.3	130
									2037	1.0	30

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Davao, Philippines, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0330	5.6	170	16 W 0421	4.9	150	1 F 0514	5.9	180	1 M 0011	-0.3	-10
1024	-0.3	-10	W 1111	0.0	0	F 1153	-1.0	-30	M 0620	5.9	180
1642	3.9	120	1727	3.6	110	1806	4.6	140	1232	-0.7	-20
2159	1.0	30	2245	1.3	40	2343	0.3	10	1838	5.9	180
2 W 0426	5.9	180	17 Th 0501	4.9	150	2 Sa 0558	6.2	190	2 Tu 0047	-0.3	-10
1115	-0.7	-20	1141	-0.3	-10	1229	-1.0	-30	0652	5.9	180
1732	3.9	120	1757	3.9	120	1840	4.9	150	1258	-0.3	-10
2253	0.7	20	2324	1.0	30	O			1906	5.9	180
3 Th 0517	6.2	190	18 F 0537	5.2	160	3 Su 0026	0.0	0	3 W 0120	-0.3	-10
1200	-1.0	-30	1210	-0.7	-20	0638	6.2	190	0722	5.2	160
1817	4.3	130	1826	4.3	130	1303	-1.0	-30	1322	0.0	0
● 2344	0.3	10	O 2358	0.7	20	1913	5.2	160	1934	5.9	180
4 F 0604	6.2	190	19 Sa 0610	5.6	170	4 M 0107	0.0	0	4 Th 0152	0.0	0
1243	-1.0	-30	1239	-0.7	-20	0716	5.9	180	0751	4.9	150
1859	4.6	140	1855	4.3	130	1334	-0.7	-20	1347	0.3	10
O						1945	5.2	160	2002	5.6	170
5 Sa 0031	0.3	10	20 Su 0030	0.7	20	5 Tu 0146	0.0	0	5 F 0225	0.3	10
0649	6.2	190	0641	5.6	170	0750	5.6	170	0819	4.3	130
1324	-1.0	-30	1306	-0.7	-20	1402	-0.3	-10	1410	0.7	20
1939	4.6	140	1922	4.6	140	2016	5.2	160	2032	5.2	160
6 Su 0118	0.3	10	21 M 0102	0.3	10	6 W 0224	0.3	10	6 Sa 0300	0.7	20
0732	5.9	180	0712	5.6	170	0823	4.9	150	0847	3.6	110
1403	-0.7	-20	1333	-0.3	-10	1430	0.0	0	1430	1.0	30
2018	4.6	140	1948	4.6	140	2047	5.2	160	2102	4.6	140
7 M 0204	0.3	10	22 Tu 0136	0.3	10	7 Th 0303	0.7	20	7 Su 0343	1.3	40
0814	5.6	170	0745	5.6	170	0856	4.3	130	0919	3.0	90
1439	-0.3	-10	1401	-0.3	-10	1457	0.7	20	1429	0.3	10
2057	4.6	140	2017	4.9	150	2121	4.9	150	2050	5.2	160
8 Tu 0250	0.7	20	23 W 0212	0.3	10	8 F 0347	1.0	30	8 M 0500	1.6	50
0855	4.9	150	0820	5.2	160	0930	3.6	110	1017	2.6	80
1514	0.3	10	1431	0.0	0	1525	1.0	30	1512	2.0	60
2136	4.6	140	2049	4.9	150	2200	4.6	140	2243	3.9	120
9 W 0340	1.0	30	24 Th 0255	0.7	20	9 Sa 0443	1.3	40	9 Tu 0726	1.6	50
0938	4.3	130	0859	4.6	140	1011	3.0	90	1512	2.6	80
1551	0.7	20	1504	0.3	10	1552	1.6	50	1615	2.6	80
2220	4.3	130	2126	4.9	150	● 2252	4.3	130	O		
10 Th 0437	1.3	40	25 F 0345	0.7	20	10 Su 0608	1.6	50	10 W 0609	1.3	40
1025	3.6	110	0944	4.3	130	1131	2.6	80	1208	2.6	80
1631	1.0	30	1541	0.7	20	1631	2.0	60	1644	2.0	60
● 2311	4.3	130	2212	4.6	140	O			2043	2.3	70
11 F 0545	1.3	40	26 Sa 0451	1.0	30	11 M 0021	3.9	120	11 W 0131	3.6	110
1128	3.3	100	1044	3.6	110	0817	1.6	50	0912	1.3	40
1723	1.6	50	1626	1.3	40	1502	2.6	80	1549	3.3	100
O			2314	4.6	140	1903	2.3	70	2137	1.6	50
12 Sa 0016	4.3	130	27 Su 0622	1.0	30	12 Tu 0210	3.9	120	12 W 0343	4.6	140
0709	1.3	40	1215	3.0	90	0944	1.0	30	0918	0.3	10
1315	2.6	80	1733	1.6	50	1610	3.0	90	1631	4.3	130
1832	1.6	50	O			2051	2.0	60	2109	1.6	50
13 Su 0132	4.3	130	28 M 0041	4.6	140	13 W 0319	4.3	130	27 F 0411	5.2	160
0844	1.3	40	0804	1.0	30	1025	0.7	20	1031	0.0	0
1502	3.0	90	1421	3.0	90	1643	3.3	100	1641	5.2	160
1953	2.0	60	1917	1.6	50	2152	1.6	50	2243	0.0	0
14 M 0241	4.3	130	29 Tu 0214	4.9	150	14 Th 0406	4.6	140	12 W 0217	4.6	140
0951	0.7	20	0930	0.3	10	1054	0.0	0	0934	0.7	20
1609	3.0	90	1553	3.3	100	1708	3.9	120	1018	0.3	10
2105	1.6	50	2052	1.6	50	2235	1.3	40	1631	4.3	130
15 Tu 0336	4.6	140	30 W 0328	5.2	160	15 F 0445	5.2	160	2215	1.0	30
1037	0.3	10	1028	-0.3	-10	1120	-0.3	-10	2109	1.6	50
1653	3.3	100	1647	3.6	110	1732	4.3	130	2115	1.0	30
2200	1.3	40	2201	1.0	30	2310	0.7	20	2137	1.6	50
O			31 Th 0425	5.6	170	O			2137	1.6	50
			1113	-0.7	-20				2137	1.6	50
			1729	4.3	130				2137	1.6	50
			2256	0.7	20				2137	1.6	50

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Davao, Philippines, 2008

Times and Heights of High and Low Waters

October				November				December			
	Time	Height			Time	Height			Time	Height	
	h m	ft cm		h m	ft cm			h m	ft cm		
<b>1</b> W	0024	-0.7 -20		<b>16</b> Th	0007	-1.0 -30		<b>1</b> Sa	0107	-0.7 -20	
	0630	5.2 160			0616	5.2 160			0124	-1.3 -40	
	1223	0.0 0			1204	-0.3 -10			0133	-0.7 -20	
	1831	6.2 190			1816	6.6 200			0715	4.3 130	
<b>2</b> Th	0055	-0.7 -20		<b>17</b> F	0046	-1.3 -40		<b>2</b> Su	0138	-0.3 -10	
	0658	4.9 150			0653	4.9 150			0210	-1.0 -30	
	1248	0.0 0			1236	0.0 0			0823	3.9 120	
	1859	5.9 180			1851	6.6 200			1350	0.7 20	
<b>3</b> F	0125	-0.3 -10		<b>18</b> Sa	0127	-1.0 -30		<b>3</b> M	0211	0.0 0	
	0726	4.6 140			0732	4.6 140			0300	-0.3 -10	
	1312	0.3 10			1310	0.3 10			0918	3.6 110	
	1927	5.6 170			1929	6.2 190			1442	1.0 30	
<b>4</b> Sa	0155	0.0 0		<b>19</b> Su	0211	-0.7 -20		<b>4</b> Tu	0247	0.3 10	
	0755	3.9 120			0816	3.9 120			0357	0.0 0	
	1335	0.7 20			1346	0.7 20			1025	3.3 100	
	1954	5.2 160			2010	5.6 170			1548	1.3 40	
<b>5</b> Su	0227	0.3 10		<b>20</b> M	0302	0.0 0		<b>5</b> W	0332	0.7 20	
	0824	3.6 110			0908	3.6 110			0504	0.7 20	
	1355	1.3 40			1428	1.3 40			1146	3.6 110	
	2021	4.9 150			2059	4.9 150			1719	1.6 50	
<b>6</b> M	0304	1.0 30		<b>21</b> Tu	0407	0.7 20		<b>6</b> Th	0441	1.0 30	
	0859	3.0 90			1027	3.0 90			0622	0.7 20	
	1419	1.6 50			1527	2.0 60			1307	3.6 110	
	2055	4.3 130			2209	4.3 130			1912	1.3 40	
<b>7</b> Tu	0359	1.3 40		<b>22</b> W	0543	1.0 30		<b>6</b> Sa	0441	1.0 30	
	1003	2.6 80			1238	3.0 90			0622	0.7 20	
	1452	2.3 70			1727	2.3 70			1136	3.0 90	
	2150	3.9 120							1625	2.3 70	
<b>8</b> W	0607	1.6 50		<b>23</b> Th	0010	3.9 120		<b>8</b> Sa	0046	3.6 110	
	1358	2.6 80			0726	1.0 30			0835	0.7 20	
	1624	2.6 80			1412	3.6 110			1415	3.9 120	
	2357	3.6 110			1957	2.0 60			2016	1.6 50	
<b>9</b> Th	0757	1.3 40		<b>9</b> F	0200	3.9 120		<b>24</b> Su	0218	3.9 120	
	1451	3.3 100			0835	0.7 20			0922	0.7 20	
	2011	2.3 70			1501	4.3 130			1540	4.9 150	
					2106	1.3 40			2214	0.0 0	
<b>10</b> F	0212	3.9 120		<b>25</b> Sa	0307	4.3 130		<b>10</b> M	0316	4.3 130	
	0852	1.0 30			0921	0.7 20			0913	0.7 20	
	1520	3.9 120			1537	4.9 150			1617	5.2 160	
	2107	1.6 50			2150	0.3 0			2253	-0.3 -10	
<b>11</b> Sa	0309	4.3 130		<b>26</b> Su	0355	4.6 140		<b>11</b> Tu	0403	4.6 140	
	0929	0.7 20			0958	0.3 10			0952	0.3 10	
	1547	4.6 140			1609	5.2 160			1038	0.3 10	
	2147	1.0 30			2228	0.0 0			1608	5.6 170	
<b>12</b> Su	0352	4.9 150		<b>27</b> M	0436	4.9 150		<b>26</b> W	0503	3.9 120	
	1002	0.3 10			1031	0.0 0			0913	0.7 20	
	1615	5.2 160			1640	5.6 170			1002	0.7 20	
	2222	0.3 10			2303	-0.7 -20			1533	4.9 150	
<b>13</b> M	0429	5.2 160		<b>28</b> Tu	0512	4.9 150		<b>10</b> Tu	0423	3.9 120	
	1032	0.0 0			1101	0.0 0			1002	0.7 20	
	1643	5.6 170			1710	5.9 180			1617	5.2 160	
	2256	-0.3 -10			2336	-0.7 -20			2253	-0.3 -10	
<b>14</b> Tu	0505	5.6 170		<b>29</b> W	0545	4.9 150		<b>11</b> W	0436	3.6 110	
	1102	-0.3 -10			1129	0.0 0			1004	0.3 10	
	1712	6.2 190			1738	5.9 180			1651	5.2 160	
	2331	-1.0 -30							2328	-0.7 -20	
<b>15</b> W	0540	5.6 170		<b>30</b> Th	0007	-1.0 -30		<b>11</b> Th	0436	3.6 110	
	1132	-0.3 -10			0615	4.6 140			1004	0.3 10	
	1743	6.6 200			1157	0.0 0			1224	0.0 0	
					1807	5.9 180			1843	6.2 190	
<b>31</b> F	0037	-1.0 -30		<b>31</b> F	0645	4.3 130					
					1225	0.3 10					
					1836	5.6 170					

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Cebu, Philippines, 2008

Times and Heights of High and Low Waters

January				February				March									
	Time	Height			Time	Height			Time	Height							
	h m	ft cm		h m	ft cm			h m	ft cm		h m	ft cm					
<b>1</b> Tu	0350	3.0 90		<b>16</b> W	0335	3.0 90		<b>1</b> F	0034	1.0 30		<b>16</b> Sa	0114	0.3 10			
	1019	0.7 20		0937	0.7 20			0459	1.3 40		0727	1.0 30					
	1716	3.3 100		1620	3.9 120			0850	1.0 30		1607	3.9 120					
	2356	1.3 40	●	2313	0.7 20			1735	3.9 120								
<b>2</b> W	0458	2.3 70		<b>17</b> Th	0443	2.3 70		<b>2</b> Sa	0310	0.7 20		<b>17</b> Su	0331	-0.3 -10			
	1044	1.0 30		0957	1.0 30			1906	3.9 120		0246	0.7 20	<b>17</b> M	0323	0.0 0		
	1811	3.6 110		1716	4.3 130						1754	3.9 120		1945	4.3 130		
<b>3</b> Th	0156	1.0 30		<b>18</b> F	0114	0.3 40		<b>3</b> Su	0415	0.0 0		<b>18</b> M	0431	-0.7 -150			
	0701	1.6 50		0656	1.3 40			2032	4.3 130		0357	0.0 0		0409	-0.3 -10		
	1115	1.3 40		1007	1.3 40						M	2004	3.9 120	Tu	1108	2.3 70	
	1909	3.9 120		1825	4.6 140									1433	2.0 60		
<b>4</b> F	0322	0.7 20		<b>19</b> Sa	0310	0.0 0		<b>4</b> M	0455	-0.3 -10		<b>19</b> Tu	0511	-1.0 -30			
	0937	1.6 50		1945	4.9 150			1216	2.0 60		0431	-0.3 -10		0441	-0.7 -20		
	1206	1.6 50			1419	2.0 60			1521	1.6 50		Tu	1149	2.3 70	W	1101	2.6 80
	2007	4.3 130			2133	4.6 140			2210	5.2 160			1432	2.0 60		1546	1.3 40
<b>5</b> Sa	0416	0.0 0		<b>20</b> Su	0424	-0.7 -20		<b>5</b> Tu	0528	-1.0 -30		<b>20</b> W	0544	-1.3 -40			
	1101	2.0 60		2059	5.2 160			1212	2.3 70		0459	-0.7 -20		0507	-0.3 -10		
	1325	1.6 50			1536	1.6 50			1623	1.0 30		W	1200	2.3 70	Th	1112	3.3 100
	2059	4.6 140			2220	4.9 150			2259	5.6 170			1539	1.6 50		1634	0.7 20
<b>6</b> Su	0458	-0.3 -10		<b>21</b> M	0516	-1.3 -40		<b>6</b> W	0557	-1.0 -30		<b>21</b> Th	0611	-1.0 -30			
	1143	2.0 60		1222	2.0 60			1223	2.3 70		0524	-0.7 -20		0528	-0.3 -10		
	1438	1.6 50		1437	1.6 50			1623	1.3 40		W	1214	2.6 80	F	1127	3.6 110	
	2145	4.9 150		2202	5.6 170			2259	5.2 160		O	1710	0.7 20		1713	0.0 0	
<b>7</b> M	0536	-1.0 -30		<b>22</b> Tu	0559	-1.6 -50		<b>7</b> Th	0624	-1.3 -40		<b>22</b> F	0634	-1.0 -30			
	1215	2.0 60		1236	2.0 60			1236	2.3 70		0546	-0.7 -20		0546	0.0 0		
	1533	1.6 50		1555	1.3 40			1702	1.0 30		W	1230	3.0 90	Sa	1144	3.9 120	
	2226	5.2 160	●	2255	5.9 180			2335	5.6 170		F	1750	0.3 10		1748	-0.3 -10	
<b>8</b> Tu	0610	-1.0 -30		<b>23</b> W	0636	-1.6 -50		<b>8</b> F	0647	-1.3 -40		<b>23</b> Sa	0014	5.2 160			
	1242	2.3 70		1255	2.0 60			1250	2.6 80		0606	-0.7 -20		0001	4.3 130		
	1616	1.6 50		1651	1.0 30			1740	0.7 20		Sa	0652	-0.7 -20		0600	0.0 0	
	2304	5.6 170		2341	5.9 180							1248	3.3 100		1201	4.6 140	
<b>9</b> W	0642	-1.3 -40		<b>24</b> Th	0708	-1.3 -40		<b>9</b> Sa	0009	5.6 170		<b>24</b> Su	0045	4.6 140			
	1307	2.3 70		1314	2.3 70			0708	-1.0 -30		9	0000	4.9 150				
	1653	1.3 40		1739	1.0 30			1306	3.0 90		W	0623	-0.3 -10				
	2339	5.6 170						1817	0.3 10		1217	3.9 120		1219	4.9 150		
<b>10</b> Th	0712	-1.3 -40		<b>25</b> F	0021	5.6 170		<b>10</b> Su	0044	5.2 160		<b>25</b> M	0113	4.3 130			
	1328	2.3 70		0735	-1.0 -30			0727	-0.7 -20		0035	4.6 140		0056	3.6 110		
	1729	1.3 40		1335	2.6 80			1323	3.3 100		W	0638	0.0 0		0625	0.7 20	
				1823	0.7 20			1858	0.0 0		M	1324	4.3 130		1239	4.9 150	
<b>11</b> F	0013	5.6 170		<b>26</b> Sa	0058	5.2 160		<b>11</b> M	0118	4.9 150		<b>10</b> Tu	0113	4.3 130			
	0740	-1.3 -40		0757	-0.7 -20			0744	-0.3 -10		0035	4.6 140		0122	3.3 100		
	1349	2.3 70		1355	3.0 90			1345	3.9 120		W	0637	0.7 20		0637	0.7 20	
	1807	1.0 30		1906	0.7 20			1943	0.0 0		M	1345	4.3 130		1300	4.9 150	
<b>12</b> Sa	0048	5.6 170		<b>27</b> Su	0131	4.6 140		<b>12</b> Tu	0154	4.3 130		<b>10</b> M	0147	3.3 100			
	0805	-1.0 -30		0814	-0.3 -10			0800	0.0 0		0147	3.3 100		0148	3.0 90		
	1410	2.6 80		1416	3.3 100			1412	4.3 130		W	0741	0.3 10		0649	1.0 30	
	1849	1.0 30		1950	0.7 20			2033	0.0 0		F	1410	4.6 140		1324	4.9 150	
<b>13</b> Su	0124	5.2 160		<b>28</b> M	0202	3.9 120		<b>13</b> W	0233	3.3 100		<b>12</b> W	0206	3.0 90			
	0830	-0.7 -20		0829	0.0 0			0816	0.3 10		0707	0.7 20		0148	3.0 90		
	1434	2.6 80		1441	3.6 110			1444	4.6 140		1330	5.2 160		0649	1.0 30		
	1938	0.7 20		2036	0.7 20			2133	0.0 0		2054	0.3 10		1352	4.9 150		
<b>14</b> M	0203	4.6 140		<b>29</b> Tu	0233	3.3 100		<b>14</b> Th	0317	2.3 70		<b>13</b> F	0225	2.6 80			
	0853	-0.3 -10		0842	0.3 10			0828	0.7 20		0754	1.0 30		0217	2.3 70		
	1502	3.3 100		1510	3.6 110			1525	4.6 140		1514	4.3 130		0659	1.0 30		
	2035	0.7 20		2130	0.7 20			2255	0.3 10		O	2312	1.0 30		1352	4.9 150	
<b>15</b> Tu	0245	3.9 120		<b>30</b> W	0305	2.6 80		<b>15</b> F	0416	1.6 50		<b>14</b> Sa	0305	2.0 60			
	0916	0.0 0		0854	0.7 20			0828	1.0 30		0754	1.0 30		0253	2.0 60		
	1537	3.6 110		1545	3.9 120			1620	4.6 140		1445	5.2 160		0702	1.3 40		
	2143	0.7 20		2239	1.0 30						O	2250	0.0 0		1426	4.6 140	
<b>16</b> Th	0344	2.0 60		<b>31</b> Th	0344	2.0 60								2231	0.7 20		
	0902	1.0 30		0902	1.0 30									1513	4.3 130		
	1630	3.9 120		1630	3.9 120									0404	1.3 40		
														0114	0.7 20		

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Cebu, Philippines, 2008

Times and Heights of High and Low Waters

April					May					June									
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height					
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm					
<b>1</b> Tu	0258	0.3 1919	10	<b>16</b> W	0318 0953	0.3 3.0	10	<b>1</b> Th	0216 0907	0.7 2.0	20	<b>16</b> Su	0234 0831	1.0 4.9	30	<b>16</b> M	0215 0915	2.0 5.2	60
	1450	1.6 2.6	50		1358	2.0	60		0902	3.0	90		0831	4.9	150		0915	5.2	160
	2058	3.9 4.3	120		2000	3.6	110		1538	0.7	20		1548	0.0	0		1654	0.0	0
									2134	3.3	100		2203	3.0	90		2314	2.6	80
<b>2</b> W	0339	0.0 1042	0	<b>17</b> Th	0348 1003	0.3 3.3	10	<b>2</b> F	0254 0916	0.7 3.3	20	<b>17</b> Sa	0303 0928	1.3 4.6	40	<b>2</b> M	0233 0910	1.6 5.6	50
	1426	2.0 2.6	60		1508	1.0	30		1622	0.3	10		1641	-0.7	-20		1731	-0.3	-10
	2045	4.3 4.6	130		2113	3.9	120		2224	3.0	90		2306	2.6	80		2353	2.6	80
<b>3</b> Th	0408	0.0 1031	0	<b>18</b> F	0413 1020	0.3 3.9	10	<b>3</b> Sa	0324 0934	0.7 3.9	20	<b>18</b> Su	0329 0955	1.3 5.2	40	<b>3</b> Tu	0308 0951	2.0 5.9	60
	1528	1.3 3.0	40		1630	0.3	10		1659	-0.3	-10		1730	-1.3	-40		1804	-0.7	-20
	2142	4.6 3.0	140		2238	3.9	120		2306	3.0	90		2359	2.6	80				
<b>4</b> F	0433	0.0 1038	0	<b>19</b> Sa	0433 1040	0.7 4.6	20	<b>4</b> Su	0349 0957	1.0 4.9	30	<b>19</b> M	0353 1021	1.3 5.6	40	<b>4</b> W	0342 1033	2.0 6.6	60
	1613	0.7 3.3	20		1707	-0.3	-10		1644	-0.7	-20		1733	-0.7	-20		1817	-1.3	-40
	2228	4.6 100	140		2315	3.9	120		2300	3.6	110		2342	3.0	90				
<b>5</b> Sa	0454	0.0 1052	0	<b>20</b> Su	0451 1059	0.7 4.9	20	<b>5</b> M	0412 1024	1.3 5.6	40	<b>20</b> Tu	0416 1047	1.3 5.6	40	<b>5</b> Th	0046 0416	2.3 1.6	70
	1653	0.0 3.9	0		1740	-0.7	-20		1727	-1.0	-30		1804	-0.7	-20		1117	6.9	210
	2310	4.6 120	140		2347	3.6	110		2347	3.3	100						1903	-1.3	-40
<b>6</b> Su	0513	0.3 1109	10	<b>21</b> M	0507 1120	1.0 5.2	30	<b>6</b> Tu	0434 1055	1.3 5.9	40	<b>21</b> W	0015 0439	3.0 1.6	90	<b>6</b> F	0130 0453	2.3 1.6	70
	1733	-0.7 4.6	-20		1810	-0.7	-20		1811	-1.3	-40		1114	5.9	180		1201	6.9	210
	2350	4.3 140	130						1835	-0.7	-20						1950	-1.3	-40
<b>7</b> M	0530	0.7 1131	20	<b>22</b> Tu	0017 0522	3.3 1.0	100	<b>7</b> W	0030 0455	3.0 1.3	90	<b>22</b> Th	0048 0501	2.6 1.6	80	<b>7</b> Sa	0211 0532	2.3 1.6	70
	1813	-1.3 5.2	-40		1141	5.6	170		1129	6.6	200		1141	5.9	180		1246	6.6	200
					1839	-0.7	-20		1855	-1.6	-50		1907	-0.7	-20		2036	-0.7	-20
<b>8</b> Tu	0028	3.9 0546	120	<b>23</b> W	0045 0537	3.0 1.0	90	<b>8</b> Th	0114 0516	2.6 1.3	80	<b>23</b> F	0120 0522	2.6 1.6	80	<b>8</b> Su	0253 0616	2.0 1.6	60
	1157	5.6 0.7	170		1203	5.6	170		1205	6.6	200		1210	5.9	180		1333	5.9	180
	1853	-1.3 20	-40		1909	-0.7	-20		1943	-1.3	-40		1942	-0.7	-20		2120	-0.3	-10
<b>9</b> W	0107	3.3 0601	100	<b>24</b> Th	0113 0552	3.0 1.3	90	<b>9</b> F	0158 0538	2.3 1.3	70	<b>24</b> Sa	0154 0545	2.3 1.6	70	<b>9</b> M	0338 0711	2.3 1.6	70
	1226	5.9 1.0	180		1227	5.6	170		1246	6.6	200		1241	5.9	180		1421	5.2	160
	1938	-1.3 30	-40		1942	-0.7	-20		2035	-1.0	-30		2020	-0.3	-10		2204	0.0	0
<b>10</b> Th	0146	2.6 0616	80	<b>25</b> F	0143 0608	2.6 1.3	80	<b>10</b> Sa	0249 0600	2.0 1.3	60	<b>25</b> Su	0234 0609	2.3 1.6	70	<b>10</b> Tu	0429 0823	2.6 2.0	80
	1300	5.9 1.0	180		1254	5.6	170		1330	5.9	180		1316	5.6	170		1514	4.6	140
	2028	-1.0 -1.0	-30		2020	-0.3	-10		2134	-0.3	-10		2103	-0.3	-10		2245	0.7	20
<b>11</b> F	0228	2.0 0629	60	<b>26</b> Sa	0219 0621	2.3 1.3	70	<b>11</b> Su	0401 0618	1.6 1.6	50	<b>26</b> M	0323 0638	2.3 1.6	70	<b>11</b> W	0523 1008	3.0 2.0	90
	1338	5.9 1.0	180		1325	5.2	160		1420	5.2	160		1356	5.2	160		1619	3.6	110
	2129	-0.3 -10	-10		2108	0.0	0		2245	0.0	0		2151	0.0	0		2325	1.0	30
<b>12</b> Sa	0325	1.6 0632	50	<b>27</b> Su	0309 0629	2.0 1.6	60	<b>12</b> M	1525 1402	4.6 4.9	140	<b>27</b> Tu	0425 1444	2.3 4.9	70	<b>12</b> Th	0618 1749	3.3 3.0	100
	1424	5.2 1.3	160		1402	4.9	150		1444	4.9	150		2243	0.3	10		1221	2.0	60
	2257	0.0 40	0		2214	0.3	10										1749	3.0	90
<b>13</b> Su	1527	4.9 1721	150	<b>28</b> M	1451 2348	4.6 0.7	140	<b>13</b> Tu	0003 1700	0.3 3.9	120	<b>28</b> W	0536 0843	2.3 2.3	70	<b>13</b> F	0005 0708	1.3 3.9	40
																	1547	4.3	130
																	1941	2.6	80
																	2337	1.6	50
<b>14</b> M	0107	0.3 1721	10	<b>29</b> Tu	1611	4.3	130	<b>14</b> W	0110 0815	0.7 3.0	20	<b>29</b> Th	0633 1106	3.0 2.3	90	<b>14</b> Sa	0046 0753	1.6 4.6	50
	1245	2.3 2.3	70						1300	2.3	70		1717	3.6	110		1524	1.0	30
	1936	3.9 70	120						1858	3.6	110						2117	2.3	70
																	2225	2.3	70
<b>15</b> Tu	0233	0.3 1028	10	<b>30</b> W	0119 1816	0.7 3.9	20	<b>15</b> Th	0158 0836	1.0 3.6	30	<b>30</b> F	0028 0715	1.0 3.3	30	<b>15</b> Su	0130 0835	1.6 4.9	50
	1245	2.3 2.3	70						1439	1.6	50		2029	3.3	100		1614	0.3	10
	1936	3.9 120															2225	2.3	70
<b>16</b> M	0215	2.0 0915	60					<b>31</b> Sa	0115 0754	1.3 3.9	40					<b>29</b> Su	0636 1428	4.6 0.7	140
	0952	5.6 5.2	160														2038	2.3	70
	1731	-0.3 -10	-10														2357	2.0	60

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Cebu, Philippines, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0054	2.0	60	16 W 0215	2.3	70	1 F 0018	2.6	80	1 M 0003	3.0	90
0838	5.6	170	W 0936	5.2	160	F 0337	2.0	60	Sa 0421	2.0	60
1648	-0.7	-20	W 1729	-0.3	-10	F 1037	6.2	190	Sa 1051	5.6	170
2346	2.3	70	● 1816	-1.0	-30	● 1816	-1.0	-30	1806	-0.7	-20
2 W 0207	2.3	70	17 W 0008	2.6	80	2 Sa 0033	2.6	80	17 Su 0017	3.3	100
0936	6.2	190	Th 0325	2.3	70	2 Sa 0439	1.6	50	Su 0458	1.6	50
1739	-1.0	-30	1020	5.6	170	1126	6.6	200	1126	5.9	180
			1801	-0.7	-20	1847	-1.0	-30	○ 1828	-0.3	-10
3 Th 0025	2.3	70	18 F 0030	2.6	80	3 Su 0052	3.0	90	18 M 0031	3.3	100
0315	2.0	60	0414	2.0	60	0529	1.3	40	0533	1.0	30
1030	6.6	200	1059	5.9	180	1208	6.2	190	1158	5.9	180
● 1823	-1.3	-40	○ 1830	-0.7	-20	1914	-0.7	-20	1847	-0.3	-10
4 F 0057	2.3	70	19 F 0051	3.0	90	4 M 0112	3.3	100	19 Tu 0045	3.6	110
0413	2.0	60	0453	2.0	60	0615	1.0	30	0608	0.7	20
1120	6.6	200	1133	5.9	180	1246	5.9	180	1230	5.6	170
1905	-1.3	-40	1857	-0.7	-20	1936	-0.3	-10	1905	0.0	0
5 Sa 0125	2.3	70	20 Su 0111	3.0	90	5 Tu 0133	3.6	110	20 W 0101	4.3	130
0506	1.6	50	0529	1.6	50	0658	0.7	20	0645	0.3	10
1206	6.6	200	1206	6.2	190	1321	5.2	160	1302	5.2	160
1942	-1.0	-30	1922	-0.7	-20	1954	0.3	10	1920	0.3	10
6 Su 0152	2.6	80	21 M 0130	3.0	90	6 W 0154	3.9	120	21 Th 0120	4.6	140
0557	1.3	40	0604	1.3	40	0741	0.7	20	0724	0.3	10
1250	6.2	190	1238	5.9	180	1353	4.6	140	1335	4.6	140
2015	-0.7	-20	1945	-0.3	-10	2008	0.7	20	1935	0.7	20
7 M 0219	2.6	80	22 Tu 0148	3.3	100	7 Th 0218	4.3	130	22 F 0144	4.9	150
0648	1.3	40	0642	1.3	40	0825	1.0	30	0809	0.3	10
1331	5.9	180	1310	5.6	170	1423	3.9	120	1411	3.9	120
2044	0.0	0	2006	-0.3	-10	2020	1.0	30	1949	1.0	30
8 Tu 0247	3.0	90	23 W 0209	3.6	110	8 F 0245	4.6	140	23 Sa 0213	5.2	160
0741	1.3	40	0724	1.0	30	0915	1.0	30	0901	0.3	10
1411	5.2	160	1345	5.2	160	1453	3.3	100	1450	3.3	100
2108	0.3	10	2026	0.0	0	2029	1.3	40	2001	1.3	40
9 W 0318	3.3	100	24 Th 0233	3.9	120	9 Sa 0317	4.6	140	24 Su 0249	5.2	160
0839	1.6	50	0813	1.0	30	1016	1.3	40	1008	0.7	20
1451	4.3	130	1423	4.6	140	1526	2.6	80	1537	2.3	70
2129	0.7	20	2045	0.7	20	● 2034	1.3	40	● 2006	1.3	40
10 Th 0353	3.6	110	25 F 0302	4.3	130	10 Su 0358	4.6	140	25 M 0337	5.2	160
0948	1.6	50	0910	1.0	30	1157	1.6	50	1200	1.0	30
1533	3.3	100	1505	3.6	110	1616	2.0	60	1727	1.6	50
● 2147	1.0	30	2103	1.0	30	2018	1.6	50	1918	1.6	50
11 F 0436	3.9	120	26 Sa 0339	4.6	140	11 M 0458	4.6	140	26 W 0337	4.3	130
1119	1.6	50	1024	1.0	30	1502	1.3	40	0517	1.0	30
1627	2.6	80	1558	3.0	90	Tu 0448	5.2	160	0650	4.6	140
2202	1.3	40	● 2119	1.3	40	1449	0.7	20	Th 1537	0.3	10
12 Sa 0528	4.3	130	27 Tu 0427	4.9	150	12 Tu 0635	4.3	130	25 Th 0744	4.3	130
1321	1.6	50	1210	1.0	30	Tu 1609	0.7	20	1611	0.3	10
1812	2.0	60	1729	2.0	60	27 W 0646	4.9	150	2325	3.0	90
2214	1.6	50	2122	1.6	50	W 1604	0.0	0	1610	0.0	0
13 Su 0631	4.6	140	28 M 0533	4.9	150	13 W 0818	4.6	140	2247	2.6	80
1511	1.0	30	1430	0.7	20	W 1645	0.3	10	0152	2.6	80
1654	0.0	0				13 M 0836	5.2	160	0837	4.9	150
2350	2.3	70				Th 2334	2.6	80	1610	0.0	0
14 M 0740	4.6	140	29 Tu 0700	5.2	160	14 F 0925	4.9	150	2233	3.3	100
1612	0.7	20	Tu 1602	0.0	0	Th 1714	0.0	0	0459	0.3	10
						2354	3.0	90	1113	4.9	150
15 Tu 0843	4.9	150	30 W 0828	5.6	170	15 F 0334	2.3	70	1723	0.3	10
1654	0.0	0	W 1657	-0.7	-20	1012	5.6	170	● 2322	4.6	140
2350	2.3	70				1742	-0.3	-10	0416	1.6	50
16 Th 0022	2.3	70				2336	3.0	90	1034	5.2	160
0158	2.3	70				1720	-0.3	-10	1725	0.0	0
0940	5.9	180				2327	3.6	110	1111	5.2	160
1739	-1.0	-30				2340	4.3	130	0453	1.0	30
17 Th 0022	2.3	70				● 1812	-0.3	-10	1149	4.6	140
0158	2.3	70							1739	0.7	20
0940	5.9	180							2341	5.2	160
1739	-1.0	-30									

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Cebu, Philippines, 2008

## Times and Heights of High and Low Waters

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

# Manila, Philippines, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
<b>1</b> Tu 1005 1709	0.322 0.7 2.0	1.6 50 60	<b>16</b> W 0909 1610 2337	0.304 0.7 2.3 0.3	1.6 50 70 10	<b>1</b> F 0228 1708	0.0 2.6	0 80	<b>16</b> Sa 0153 1710	-0.7 3.3	-20 100
<b>2</b> W 0431 0945 1744	0038 1.0 0.7 2.3	30 30 20 70	<b>17</b> Th 0846 1659	0447 20 3.0 80	1.0 20 80	<b>2</b> Sa 0331 1809	-0.3 3.0	-10 90	<b>17</b> Su 0314 1827	-1.0 3.6	-30 110
<b>3</b> Th 0656 0839 1826	0223 0.7 0.7 2.6	0.3 10 20 80	<b>18</b> F 0137 1755	0.0 3.3	0 100	<b>3</b> Su 0410 1905	-0.7 3.0	-20 90	<b>18</b> M 0403 1939	-1.0 3.6	-30 110
<b>4</b> F 1908	0334 3.0	0 90	<b>19</b> Sa 0315 1853	-0.7 3.6	-20 110	<b>4</b> M 0441 1954	-1.0 3.3	-30 100	<b>19</b> Tu 0442 2044	-1.0 3.6	-30 110
<b>5</b> Sa 1947	0422 3.3	-0.3 100	<b>20</b> Su 0415 1950	-1.0 3.9	-30 120	<b>5</b> Tu 0508 2039	-1.0 3.6	-30 110	<b>20</b> W 0515 2141	-1.0 3.6	-30 110
<b>6</b> Su 2024	0459 3.3	-0.7 100	<b>21</b> M 0500 2043	-1.3 3.9	-40 120	<b>6</b> W 0532 2123	-1.0 3.6	-30 110	<b>21</b> Th 0543 1208 1434 2232	-0.7 1.0 0.7 3.6	-20 30 20 110
<b>7</b> M 2059	0532 3.6	-1.0 110	<b>22</b> Tu 0540 2135	-1.3 4.3	-40 130	<b>7</b> Th 0557 2208	-1.0 3.6	-30 110	<b>22</b> F 0607 1203 1549 2318	-0.3 1.0 0.7 3.3	-10 30 20 100
<b>8</b> Tu 2134	0602 3.9	-1.0 120	<b>23</b> W 0617 2225	-1.3 3.9	-40 120	<b>8</b> F 0621 1233 1503 2254	-0.7 1.0 0.7 3.6	-20 30 20 110	<b>23</b> Sa 0627 1208 1652	0.0 1.3 0.3	0 40 10
●									<b>8</b> ● 2259	0.0 1.3 3.0	0 40 90
<b>9</b> W 2209	0631 3.9	-1.0 120	<b>24</b> Th 0650 2313	-1.0 3.9	-30 120	<b>9</b> Sa 0646 1235 1612 2341	-0.3 1.0 0.7 3.3	-10 30 20 100	<b>24</b> Su 0000 0640 1221 1754	3.0 0.3 1.6 0.3	90 10 50 10
<b>10</b> Th 2248	0701 3.9	-1.0 120	<b>25</b> F 0721 1355 1549	-0.7 0.7 0.7	-20 20 20	<b>10</b> Su 0709 1250 1720	0.0 1.3 0.3	0 40 10	<b>25</b> M 0040 0647 1240 1901	2.3 0.7 2.0 0.3	70 20 60 10
<b>11</b> F 2331	0731 3.6	-1.0 110	<b>26</b> Sa 0000 0747 1350 1703	3.3 -0.3 1.0 0.7	100 -10 30 20	<b>11</b> M 0029 0726 1313 1838	3.0 0.3 1.6 0.3	90 10 50 10	<b>26</b> Tu 0119 0647 1306 2016	2.0 0.7 2.3 0.3	60 20 80 -10
<b>12</b> Sa 1439 1606	0801 1.0	-0.7 30	<b>27</b> Su 0045 0808 1356 1819	3.0 0.0 1.3 0.7	90 0 40 20	<b>12</b> Tu 0119 0735 1343 2015	2.3 0.3 2.3 0.3	70 10 70 10	<b>27</b> W 0201 0639 1336 2137	1.3 0.7 2.3 0.3	40 20 70 10
<b>13</b> Su 1443 1733	0018 1.0	3.3 30	<b>28</b> M 0127 0820 1415 1958	2.3 0.3 1.6 0.7	70 10 50 20	<b>13</b> W 0214 0728 1419 2157	1.6 0.7 2.6 0.0	50 20 80 0	<b>28</b> Th 0253 0613 1410 2318	1.0 0.7 2.6 0.0	30 20 80 -10
<b>14</b> M 1502 1911	0109 0.0	3.0 40	<b>29</b> Tu 0208 0819 1444 2157	1.6 0.3 2.0 0.7	50 10 60 20	<b>14</b> Th 0325 0701 1504 2346	1.0 0.7 3.0 0.0	30 20 90 0	<b>29</b> F 1427 ●	3.6 110	90
<b>15</b> Tu 1531 2129	0202 0.3	2.3 10	<b>30</b> W 0253 0803 1523 ●	1.3 0.7 2.3	40 20 70 70	<b>15</b> F 1600	3.3	100	<b>15</b> Sa 0000 1527	-0.7 3.6	-20 110
			<b>31</b> Th 0006 0400 0724 1610	0.3 0.7 0.7 2.3	10 20 20 70				<b>30</b> M 0014 1444 ● 1550	-0.3 3.0 -10 90	

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# Manila, Philippines, 2008

## Times and Heights of High and Low Waters

April					May					June														
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height										
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm									
<b>1</b> Tu	0210 1709	-0.3 3.0	-10 90	<b>16</b> W	0232 1918	0.0 2.6	0 80	<b>1</b> Th	0133 0848	0.0 1.6	0 50	<b>16</b> F	0135 0804	1.0 2.3	30 70	<b>1</b> Su	0032 0737	1.3 3.3	40 100	<b>16</b> M	0801 1655	3.6 0.0	110 0	
<b>2</b> W	0244 1833	-0.3 3.0	-10 90	<b>17</b> Th	0259 0928	0.3 1.6	10 50	<b>2</b> F	0159 0820	0.3 2.0	10 60	<b>17</b> Sa	0136 0820	1.3 2.6	40 80	<b>2</b> M	0031 0811	1.3 3.6	40 110	<b>17</b> Tu	0835 1736	3.9 -0.3	120 -10	
<b>3</b> Th	0311 1012 1234 1956	-0.3 1.3 1.3 3.0	-10 40 40 90	<b>18</b> F	0316 0927	0.7 2.0	20 60	<b>3</b> Sa	0219 0833	0.7 2.3	20 70	<b>18</b> Su	0128 0842	1.3 3.0	40 90	<b>3</b> Tu	0849 1716	4.3 -0.7	130 -20	<b>18</b> W	0908 1812	3.9 -0.3	120 -10	
<b>4</b> F	0335 0945 1418 2108	0.0 1.6 1.0 2.6	0 50 30 80	<b>19</b> Sa	0324 0938	1.0 2.3	30 70	<b>4</b> Su	0233 0856	1.0 3.0	30 90	<b>19</b> M	0123 0908	1.3 3.3	40 100	<b>4</b> W	0929 1812	4.6 -1.0	140 -30	<b>19</b> Th	0941 1845	4.3 -0.3	130 -10	
<b>5</b> Sa	0356 0952 1528 2211	0.3 2.0 0.3 2.6	10 60 10 80	<b>20</b> Su	0325 0954	1.0 2.6	30 80	<b>5</b> M	0238 0925	1.3 3.3	40 100	<b>20</b> Tu	0002 0110	1.3 1.3	40 40	<b>5</b> Th	1012 1906	4.9 -1.3	150 -40	<b>20</b> F	1013 1918	4.3 -0.3	130 -10	
<b>6</b> Su	0412 1011 1631 ●	0.7 2.3 0.0 2.3	20 70 0 70	<b>21</b> M	0327 1015	1.0 3.0	30 90	<b>6</b> Tu	0235 0958	1.3 3.9	40 120	<b>21</b> W	1005 1847	3.6 -0.3	110 -10	<b>6</b> F	1058 2000	4.9 -1.0	150 -30	<b>21</b> Sa	1047 1950	4.3 -0.3	130 -10	
<b>7</b> M	0421 1038 1735	1.0 3.0 -0.3	30 90 -10	<b>22</b> Tu	0006 0329	1.3 1.0	40 30	<b>7</b> W	0058 0214	1.3 1.3	40 40	<b>22</b> Th	1033 1928	3.9 -0.3	120 -10	<b>7</b> Sa	1149 2053	4.6 -1.0	140 -30	<b>22</b> Su	1124 2024	4.3 -0.3	130 -10	
<b>8</b> Tu	0005 0421 1109 1840	2.0 1.0 3.3 -0.7	60 30 100 -20	<b>23</b> W	0100 0325	1.3 1.0	40 30	<b>8</b> Th	1116 2002	4.3 -1.0	130 -30	<b>23</b> F	1103 2009	3.9 -0.3	120 -10	<b>8</b> Su	1244 2144	4.3 -0.7	130 -20	<b>23</b> M	1206 2057	3.9 0.0	120 0	
<b>9</b> W	0109 0411 1145 1949	1.3 1.0 3.6 -0.7	40 30 110 -20	<b>24</b> Th	1133 2015	3.6 -0.3	110 -10	<b>9</b> F	1202 2109	4.6 -1.0	140 -30	<b>24</b> Sa	1136 2053	3.9 -0.3	120 -10	<b>9</b> M	1343 2229	3.9 0.0	120 0	<b>24</b> Tu	1253 2127	3.6 0.3	110 10	
<b>10</b> Th	0250 0329 1225 2103	1.0 1.0 3.9 -1.0	30 30 120 -30	<b>25</b> F	1203 2110	3.6 -0.3	110 -10	<b>10</b> Sa	1253 2219	4.3 -1.0	130 -30	<b>25</b> Su	1214 2139	3.9 -0.3	120 -10	<b>10</b> Tu	1442 2305	3.3 0.3	100 10	<b>25</b> W	0452 0543	1.6 1.6	50 50	
<b>11</b> F	1311 2227	3.9 -1.0	120 -30	<b>26</b> Sa	1237 2211	3.6 -0.3	110 -10	<b>11</b> Su	1352 2323	3.9 -0.7	120 -20	<b>26</b> M	1300 2225	3.6 0.0	110 0	<b>11</b> W	0636 0811	1.6 1.6	50 50	<b>26</b> Th	0440 0807	2.0 1.6	60 50	
<b>12</b> Sa	1405 2354	3.9 -0.7	120 -20	<b>27</b> Su	1319 2316	3.6 -0.3	110 -10	<b>12</b> M	1456 1723	3.6 2.6	110 80	<b>27</b> Tu	1354 2307	3.3 0.0	100 0	<b>12</b> Th	0617 1152	2.0 1.6	60 50	<b>27</b> F	0459 1029	2.3 1.6	70 50	
<b>13</b> Su	1509	3.6	110	<b>28</b> M	1412 1606	3.3 3.0	100 90	<b>13</b> Tu	0015 1606	-0.3 3.0	-10 90	<b>28</b> W	1458 2341	3.0 0.3	90 10	<b>13</b> F	0630 1341	2.6 1.3	80 40	<b>28</b> Sa	0530 1230	3.0 1.0	90 30	
<b>14</b> M	0103 1624	-0.7 3.3	-20 100	<b>29</b> Tu	0014 1518	-0.3 3.3	-10 100	<b>14</b> W	0054 1723	0.3 2.6	10 80	<b>29</b> Th	0649 0916	1.6 1.6	50 50	<b>14</b> Sa	0655 1503	3.0 0.7	90 20	<b>29</b> Su	0608 1416	3.3 0.7	100 20	
<b>15</b> Tu	0154 1749	-0.3 3.0	-10 90	<b>30</b> W	0058 1636	0.0 3.0	0 90	<b>15</b> Th	0121 0802	0.7 2.0	20 60	<b>30</b> F	0007 0646	0.7 2.3	20 70	<b>15</b> Su	0726 1606	3.3 0.3	100 10	<b>30</b> M	0652 1537	3.9 0.0	120 0	
													<b>31</b> Sa	0024 0708	1.0 2.6	30 80								

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
 Heights are referred to the chart datum of soundings.

## Manila, Philippines, 2008

Times and Heights of High and Low Waters

July				August				September							
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height				
h m 0738 Tu 1637	ft 4.3 -0.7	cm 130 -20	16 W	0809 1726	ft 3.9 -0.3	cm 120 -10	1 F	0911 1754	ft 4.9 -0.7	cm 150 -20	16 Sa	0911 1742	ft 4.3 0.0	cm 130 0	
●															
2 W	0825 1726	4.6 -1.0	140 -30	17 Th	0847 1756	4.3 -0.3	130 -10	2 Sa	1006 1828	4.9 -0.3	150 -10	17 Su	0955 1804	4.3 0.3	130 10
●								○							
3 Th	0913 1812	4.9 -1.0	150 -30	18 F	0924 1823	4.3 -0.3	130 -10	3 Su	1059 1900	4.6 0.0	140 0	18 M	0004 0254 1040 1825	1.6 1.3 3.9 0.7	50 40 120 20
●															
4 F	1003 1856	4.9 -1.0	150 -30	19 Sa	1002 1849	4.3 -0.3	130 -10	4 M	0125 0355 1150 1928	1.6 1.3 4.3 0.3	50 40 130 10	19 Tu	0008 0405 1126 1845	2.0 1.3 3.9 0.7	60 40 120 20
5 Sa	1054 1937	4.9 -0.7	150 -20	20 Su	1041 1915	4.3 0.0	130 0	5 Tu	0126 0518 1238 1949	1.6 1.3 3.6 1.0	50 40 110 30	20 W	0023 0515 1213 1901	2.3 1.3 3.3 1.0	70 40 100 30
6 Su	1148 2017	4.6 -0.3	140 -10	21 M	1123 1941	4.3 0.3	130 10	6 W	0138 0642 1323 2001	2.0 1.3 3.0 1.3	60 40 90 40	21 Th	0046 0634 1303 1907	2.6 1.0 3.0 1.3	80 30 90 40
7 M	1241 2052	4.3 0.0	130 0	22 Tu	0205 0415 1207 2005	1.6 1.6 3.9 0.7	50 50 120 20	7 Th	0159 0814 1409 1956	2.6 1.3 2.3 1.3	80 40 70 40	22 F	0116 0801 1358 1857	3.0 1.0 2.3 1.6	90 30 70 50
								○							
8 Tu	0404 0522 1333 2119	1.6 1.6 3.6 0.7	50 50 110 20	23 W	0212 0540 1255 2024	2.0 1.6 3.6 1.0	60 50 110 30	8 F	0229 0949 1500 1933	3.0 1.3 2.0 1.3	90 40 60 40	23 M	0152 0929 1514 1830	3.3 0.7 1.6 1.6	100 20 50 50
9 W	0354 0730 1424 2136	2.0 1.6 3.0 1.0	60 50 90 30	24 Th	0231 0716 1345 2035	2.3 1.6 3.0 1.0	70 50 90 30	9 Sa	0309 1141 1629 1835	3.0 1.0 1.3 1.3	90 30 40 40	24 Su	0237 1105 1423 1835	3.6 0.7 0.3 40	110 20 10 40
								○							
10 Th	0407 0947 1518 2131	2.3 1.6 2.3 1.3	70 50 70 40	25 F	0259 0905 1443 2033	2.6 1.3 2.3 1.3	80 40 70 40	10 Su	0358 1402	3.3 0.7	100 20	25 M	0334 1307	3.9 0.3	120 10
11 F	0434 1154 1626 2102	2.6 1.3 1.6 1.3	80 40 50 40	26 Sa	0335 1051 1615 2013	3.0 1.0 1.6 1.3	90 30 50 40	11 M	0455 1512	3.6 0.3	110 10	26 Tu	0443 1438	4.3 0.0	130 0
12 Sa	0512 1358	3.0 1.0	90 30	27 Su	0421 1245	3.3 0.7	100 20	12 Tu	0555 1554	3.6 0.0	110 0	27 F	0557 1531	4.3 -0.3	130 -10
13 Su	0556 1524	3.3 0.7	100 20	28 M	0517 1444	3.9 0.3	120 10	13 W	0650 1627	3.9 0.0	120 0	28 Th	0709 1613	4.6 -0.3	140 -10
14 M	0643 1615	3.6 0.0	110 0	29 Tu	0617 1550	4.3 -0.3	130 -10	14 Th	0740 1654	3.9 0.0	120 0	29 F	0816 1648	4.6 -0.3	140 -10
15 Tu	0727 1654	3.9 0.0	120 0	30 W	0717 1636	4.6 -0.7	140 -20	15 F	0826 1719	4.3 0.0	130 0	30 M	0918 1718 2338	4.3 0.0 1.6	130 0 50
				31 Th	0815 1717	4.9 -0.7	150 -20					31 Su	0220 1013 1745 2336	1.3 4.3 0.3 2.0	40 130 10 60

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
 Heights are referred to the chart datum of soundings.

# Manila, Philippines, 2008

## Times and Heights of High and Low Waters

October					November					December					
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height	
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm
<b>1</b> W	0520	0.7	20	<b>16</b> Th	0518	0.0	0	<b>1</b> Sa	0716	-0.3	-10	<b>16</b> Su	0734	-1.3	-40
	1151	2.6	80		1149	2.0	60		2311	3.6	110		2330	4.6	140
	1645	1.6	50		1547	1.6	50								
	2301	3.3	100		2239	3.6	110								
<b>2</b> Th	0616	0.3	10	<b>17</b> F	0621	-0.3	-10	<b>2</b> Su	0805	-0.3	-10	<b>17</b> M	0836	-1.0	-30
	1236	2.0	60		1255	1.6	50		2341	3.6	110		2354	-0.7	-20
	1641	1.6	50		1532	1.6	50						<b>17</b> W	0017	3.9
	2325	3.3	100		2313	3.9	120						0903	-1.0	-30
<b>3</b> F	0714	0.3	10	<b>18</b> Sa	0726	-0.3	-10	<b>3</b> M	0857	-0.3	-10	<b>18</b> Tu	0021	4.3	130
	1329	1.6	50		2353	4.3	130						0939	-1.0	-30
	1629	1.6	50										<b>18</b> Th	0115	3.6
	2353	3.6	110										0946	-0.3	-10
<b>4</b> Sa	0814	0.3	10	<b>19</b> Su	0836	-0.7	-20	<b>4</b> Tu	0015	3.6	110	<b>19</b> W	0122	3.9	120
									0954	-0.3	-10		1041	-0.7	-20
<b>5</b> Su	0024	3.6	110	<b>20</b> M	0040	4.3	130	<b>5</b> W	0058	3.6	110	<b>20</b> Th	0231	3.6	110
	0918	0.3	10		0953	-0.7	-20		1054	0.0	0		1135	-0.3	-10
	1035	0.3	10										<b>5</b> F	0127	3.0
													1032	0.0	90
<b>6</b> M	0059	3.6	110	<b>21</b> Tu	0137	4.3	130	<b>6</b> Th	0153	3.3	100	<b>21</b> F	0345	3.0	90
	1035	0.3	10		1115	-0.3	-10		1149	0.0	0		1217	0.0	0
													2054	1.6	50
													2207	1.6	50
<b>7</b> Tu	0142	3.6	110	<b>22</b> W	0248	3.9	120	<b>7</b> F	0304	3.0	90	<b>22</b> Sa	0505	2.6	80
	1202	0.3	10		1227	-0.3	-10		1234	0.0	0		1247	0.7	20
													1935	2.0	60
													0343	2.3	70
<b>8</b> W	0239	3.6	110	<b>23</b> Th	0407	3.6	110	<b>8</b> Sa	0424	2.6	80	<b>23</b> Su	0116	1.3	40
	1307	0.0	0		1321	0.0	0		1308	0.3	10		0638	2.0	60
<b>9</b> Th	0351	3.3	100	<b>24</b> F	0531	3.3	100	<b>9</b> Su	0554	2.6	80	<b>24</b> M	0229	0.7	20
	1351	0.0	0		1401	0.3	10		1334	0.7	20		0817	1.6	50
					2133	2.0	60		1957	2.0	60		1307	1.0	30
					2355	1.6	50						2000	2.6	80
<b>10</b> F	0509	3.3	100	<b>25</b> Sa	0657	3.0	90	<b>10</b> M	0132	1.3	40	<b>25</b> Tu	0331	0.3	10
	1425	0.3	10		1431	0.7	20		0732	2.3	70		0944	1.3	40
					2055	2.0	60		1353	1.0	30		1256	1.3	40
									2009	2.6	80		2024	3.0	90
<b>11</b> Sa	0627	3.3	100	<b>26</b> Su	0157	1.3	40	<b>11</b> Tu	0241	0.7	20	<b>10</b> W	0301	0.0	0
	1452	0.3	10		0816	2.6	80		0858	2.0	60		0944	1.0	30
	2132	2.0	60		1451	1.0	30		1404	1.0	30		1141	1.0	30
					2059	2.3	70		2032	3.0	90		1949	3.3	100
<b>12</b> Su	0041	1.6	50	<b>27</b> M	0302	1.0	30	<b>12</b> W	0342	0.0	0	<b>11</b> Th	0425	0.0	0
	0743	3.3	100		0925	2.3	70		1011	1.6	50		1105	1.3	40
	1515	0.7	20		1501	1.3	40		1406	1.3	40		1242	1.3	40
	2114	2.0	60		2112	2.6	80		2100	3.6	110		2052	3.3	100
<b>13</b> M	0212	1.3	40	<b>28</b> Tu	0357	0.7	20	<b>13</b> Th	0440	-0.3	-10	<b>27</b> F	0458	-1.0	-30
	0853	3.0	90		1023	2.3	70		1122	1.6	50		2106	4.3	130
	1534	1.0	30		1501	1.3	40		1359	1.3	40				
	2124	2.3	70		2131	3.0	90		2132	3.9	120				
<b>14</b> Tu	0317	0.7	20	<b>29</b> W	0449	0.3	10	<b>14</b> F	0537	-1.0	-30	<b>28</b> Sa	0556	-0.7	-20
	0954	3.0	90		1115	2.0	60		2207	4.3	130		2149	3.6	140
	1547	1.3	40		1459	1.3	40								
	2143	3.0	90		2152	3.3	100								
<b>15</b> W	0417	0.3	10	<b>30</b> Th	0539	0.0	0	<b>15</b> Sa	0635	-1.0	-30	<b>29</b> M	0639	-1.6	-50
	1051	2.6	80		1208	1.6	50		2246	4.6	140		2233	4.6	140
	1552	1.3	40		1455	1.3	40						2240	3.6	110
	2209	3.3	100		2217	3.6	110						0728	-0.7	-20
<b>31</b> W				<b>31</b> F	0628	0.0	0						2352	3.3	100
					1320	1.3	40								
					1434	1.3	40								
					2243	3.6	110								

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.



**Pages 188 through195 intentionally omitted**

# Guam (Apra Harbor), Mariana Islands, 2008

Times and Heights of High and Low Waters

January				February				March							
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height				
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm				
<b>1</b> Tu	0201	1.6	49	<b>16</b> W	0117	1.8	55	<b>1</b> F	0507	1.7	52	<b>16</b> Sa	0511	2.0	61
1350	1.0	30	0638	1.0	30	0821	1.6	49	0857	1.8	55	0745	1.7	52	
2115	2.3	70	1300	2.5	76	1349	2.1	64	1359	2.3	70	1244	2.0	61	
●	0.5	15	2023	0.2	6	2203	0.1	3	2213	-0.4	-12	2109	0.2	6	
<b>2</b> W	0355	1.6	49	<b>17</b> Th	0310	1.8	55	<b>2</b> Sa	0611	1.9	58	<b>17</b> Su	0615	2.1	64
0811	1.3	40	0738	1.3	40	0957	1.7	52	1036	1.8	55	0928	1.7	52	
1423	2.3	70	1342	2.5	76	1451	2.1	64	1520	2.3	70	1402	2.0	61	
2205	0.3	9	2126	-0.1	-3	2258	-0.1	-3	2318	-0.5	-15	2215	0.1	3	
<b>3</b> Th	0524	1.8	55	<b>18</b> F	0456	1.9	58	<b>3</b> Su	0652	2.0	61	<b>18</b> M	0700	2.3	70
0918	1.5	46	0856	1.6	49	1115	1.7	52	1150	1.7	52	1049	1.7	52	
1501	2.2	67	1433	2.4	73	1555	2.1	64	1636	2.3	70	1525	2.0	61	
2250	0.1	3	2229	-0.4	-12	2348	-0.2	-6	2310	-0.1	-3	2355	-0.1	-3	
<b>4</b> F	0625	1.9	58	<b>19</b> Sa	0614	2.1	64	<b>4</b> M	0724	2.1	64	<b>19</b> Tu	0014	-0.5	-15
1033	1.6	49	1025	1.8	55	1210	1.7	52	0736	2.3	70	1144	1.5	46	
1543	2.2	67	1533	2.5	76	1653	2.2	67	1245	1.5	46	1634	2.2	67	
2333	-0.1	-3	2328	-0.7	-21	1742	2.4	73	1742	-0.2	-6	2358	-0.2	-6	
<b>5</b> Sa	0710	2.1	64	<b>20</b> Su	0711	2.3	70	<b>5</b> Tu	0032	-0.4	-12	<b>20</b> W	0103	-0.5	-15
1139	1.7	52	1145	1.8	55	0754	2.2	67	0806	2.4	73	1227	1.4	43	
1628	2.2	67	1636	2.5	76	1255	1.6	49	1332	1.3	40	1732	2.3	70	
●	1744	2.3	70	1744	2.3	70	1744	2.4	73	1839	2.4	73	1848	2.3	70
<b>6</b> Su	0015	-0.3	-9	<b>21</b> M	0024	-0.8	-24	<b>6</b> W	0111	-0.4	-12	<b>21</b> Th	0147	-0.4	-12
0747	2.2	67	0757	2.4	73	0821	2.3	70	0834	2.4	73	0731	2.4	73	
1233	1.7	52	1248	1.7	52	1334	1.5	46	1414	1.1	34	1306	1.2	37	
1713	2.3	70	1737	2.5	76	1831	2.4	73	1931	2.4	73	1825	2.4	73	
<b>7</b> M	0055	-0.4	-12	<b>22</b> Tu	0115	-0.9	-27	<b>7</b> Th	0148	-0.5	-15	<b>22</b> F	0225	-0.2	-6
0822	2.2	67	0838	2.5	76	0848	2.4	73	0859	2.5	76	0756	2.5	76	
1317	1.7	52	1342	1.6	49	1412	1.4	43	1454	0.9	27	1344	0.9	27	
1757	2.3	70	1833	2.6	79	●	1916	2.5	76	2020	2.4	73	1916	2.5	76
<b>8</b> Tu	0133	-0.5	-15	<b>23</b> W	0202	-0.8	-24	<b>8</b> F	0224	-0.4	-12	<b>23</b> Sa	0301	0.1	3
0855	2.3	70	0914	2.5	76	0914	2.5	76	0922	2.5	76	1422	0.7	21	
1357	1.6	49	1431	1.5	46	1450	1.2	37	1532	0.7	21	2008	2.5	76	
●	1838	2.4	73	1926	2.5	76	2003	2.5	76	2107	2.3	70	2109	2.3	70
<b>9</b> W	0210	-0.6	-18	<b>24</b> Th	0245	-0.7	-21	<b>9</b> Sa	0258	-0.3	-9	<b>24</b> Su	0334	0.4	12
0927	2.4	73	0947	2.5	76	0939	2.5	76	0943	2.4	73	0845	2.5	76	
1436	1.6	49	1517	1.3	40	1530	1.0	30	1609	0.6	18	1501	0.4	12	
1919	2.4	73	2016	2.5	76	2052	2.4	73	2154	2.2	67	2101	2.5	76	
<b>10</b> Th	0245	-0.6	-18	<b>25</b> F	0325	-0.4	-12	<b>10</b> Su	0333	0.0	0	<b>25</b> M	0405	0.7	21
0958	2.4	73	1017	2.5	76	1004	2.5	76	1004	2.4	73	0911	2.5	76	
1515	1.6	49	1603	1.2	37	1612	0.8	24	1646	0.5	15	1543	0.1	3	
2000	2.4	73	2106	2.3	70	2145	2.3	70	2245	2.0	61	2157	2.4	73	
<b>11</b> F	0320	-0.5	-15	<b>26</b> Sa	0402	-0.1	-3	<b>11</b> M	0409	0.3	9	<b>26</b> Tu	0436	0.9	27
1028	2.5	76	1044	2.5	76	1030	2.5	76	1026	2.3	70	0939	2.5	76	
1557	1.5	46	1649	1.0	30	1657	0.5	15	1725	0.4	12	1629	-0.1	-3	
2044	2.3	70	2157	2.1	64	2246	2.1	64	2341	1.9	58	2259	2.3	70	
<b>12</b> Sa	0354	-0.3	-9	<b>27</b> Su	0437	0.3	9	<b>12</b> Tu	0447	0.6	18	<b>27</b> W	0507	1.2	37
1056	2.5	76	1109	2.4	73	1057	2.5	76	1049	2.2	67	1009	2.5	76	
1642	1.3	40	1735	0.9	27	1748	0.3	9	1808	0.3	9	1720	-0.2	-6	
2134	2.2	67	2253	1.9	58	2357	2.0	61	●	1925	-0.3	-9	2238	2.1	64
<b>13</b> Su	0430	-0.1	-3	<b>28</b> M	0510	0.6	18	<b>13</b> W	0528	1.0	30	<b>28</b> Th	0051	1.8	55
1125	2.5	76	1134	2.4	73	1128	2.5	76	0542	1.4	43	0522	1.4	43	
1731	1.1	34	1822	0.7	21	1845	0.1	3	1116	2.1	64	1043	2.4	73	
2232	2.1	64	2358	1.8	55	1859	0.3	9	1818	-0.3	-9	1807	0.1	3	
<b>14</b> M	0508	0.2	6	<b>29</b> Tu	0543	0.9	27	<b>14</b> Th	0130	1.9	58	<b>29</b> F	0228	1.7	52
1154	2.5	76	1158	2.3	70	0617	1.4	43	0628	1.6	49	0617	1.6	49	
1824	0.9	27	1913	0.6	18	1205	2.4	73	1152	2.1	64	1102	2.0	61	
2344	1.9	58	●	1950	-0.1	-3	●	2001	0.2	6	●	1925	-0.3	-9	
<b>15</b> Tu	0550	0.6	18	<b>30</b> W	0124	1.6	49	<b>15</b> F	0327	1.9	58	<b>15</b> Sa	0332	2.0	61
1225	2.5	76	0619	1.2	37	0722	1.6	49	0722	1.6	49	0740	1.8	55	
1922	0.5	15	1226	2.2	67	1253	2.3	70	1253	2.2	67	1223	2.2	67	
●	2007	0.4	12	●	2101	-0.3	-9	●	2101	-0.3	-9	2040	-0.2	-6	
<b>31</b> Th	0320	1.6	49	<b>31</b> Th	0707	1.5	46					<b>31</b> M	0423	2.0	61
	1301	2.2	67		2105	0.3	9					0907	1.7	52	
	2105	0.3	9									1320	1.9	58	
												2119	0.2	6	

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to mean lower low water which is the chart datum of soundings.

# Guam (Apra Harbor), Mariana Islands, 2008

Times and Heights of High and Low Waters

April					May					June					
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height	
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm
<b>1</b> Tu	0504	2.1	64	<b>16</b> W	0528	2.3	70	<b>1</b> Th	0423	2.3	70	<b>16</b> F	0449	2.3	70
	1020	1.5	46	1132	1.0	30	1035	1.0	30	1146	0.4	12	1146	-0.2	-6
	1455	1.9	58	1657	2.0	61	1600	1.9	58	1811	2.0	61	1826	2.2	67
	2218	0.1	3	2323	0.4	12	2216	0.5	15	2330	1.2	37	2331	1.4	43
<b>2</b> W	0536	2.2	67	<b>17</b> Th	0555	2.3	70	<b>2</b> F	0454	2.4	73	<b>17</b> Sa	0515	2.3	70
	1112	1.3	40	1215	0.7	21	1120	0.6	18	1222	0.1	3	1220	-0.6	-18
	1615	2.1	64	1802	2.1	64	1716	2.1	64	1906	2.1	64	1929	2.4	73
	2311	0.1	3				2312	0.7	21				2032	2.2	67
<b>3</b> Th	0603	2.3	70	<b>18</b> F	0010	0.6	18	<b>3</b> Sa	0525	2.5	76	<b>18</b> Su	0021	1.3	40
	1155	1.1	34	0619	2.4	73	1202	0.2	6	0542	2.3	70	0544	1.5	46
	1722	2.2	67	1252	0.4	12	1822	2.3	70	1256	-0.1	-3	1309	-0.9	-27
	2359	0.2	6	1858	2.2	67				1953	2.2	67	2027	2.6	79
<b>4</b> F	0630	2.4	73	<b>19</b> Sa	0053	0.8	24	<b>4</b> Su	0006	0.9	27	<b>19</b> M	0107	1.4	43
	1235	0.7	21	0642	2.4	73	0556	2.5	76	0609	2.3	70	0629	2.6	79
	1822	2.4	73	1326	0.2	6	1244	-0.2	-6	1329	-0.2	-6	1400	-1.1	-34
				1946	2.2	67	1923	2.5	76	2035	2.3	70	2123	2.6	79
<b>5</b> Sa	0044	0.3	9	<b>20</b> Su	0133	1.0	30	<b>5</b> M	0100	1.1	34	<b>20</b> Tu	0151	1.5	46
	0656	2.5	76	0704	2.4	73	0629	2.6	79	0638	2.3	70	0716	2.6	79
	1314	0.4	12	1357	0.0	0	1328	-0.6	-18	1402	-0.3	-9	1451	-1.1	-34
	1919	2.5	76	2030	2.3	70	● 2021	2.6	79	2114	2.3	70	2217	2.6	79
<b>6</b> Su	0128	0.5	15	<b>21</b> M	0211	1.2	37	<b>6</b> Tu	0152	1.3	40	<b>21</b> W	0232	1.6	49
	0723	2.5	76	0727	2.3	70	0704	2.6	79	0708	2.2	67	0806	2.6	79
	1354	0.0	0	1428	-0.1	-3	1414	-0.8	-24	1435	-0.4	-12	1542	-1.0	-30
	● 2014	2.6	79	2112	2.3	70	2118	2.6	79	2153	2.3	70	2309	2.6	79
<b>7</b> M	0212	0.7	21	<b>22</b> Tu	0248	1.3	40	<b>7</b> W	0243	1.4	43	<b>22</b> Th	0311	1.6	49
	0752	2.6	79	0751	2.3	70	0742	2.6	79	0740	2.2	67	0857	2.5	76
	1435	-0.3	-9	1459	-0.2	-6	1502	-0.9	-27	1510	-0.4	-12	1633	-0.8	-24
	2110	2.6	79	2153	2.3	70	2217	2.6	79	2232	2.3	70	2359	2.5	76
<b>8</b> Tu	0257	1.0	30	<b>23</b> W	0324	1.4	43	<b>8</b> Th	0336	1.6	49	<b>23</b> Su	0349	1.6	49
	0822	2.6	79	0816	2.2	67	0823	2.5	76	0813	2.2	67	0953	2.3	70
	1519	-0.5	-15	1531	-0.2	-6	1553	-0.9	-27	1547	-0.3	-9	1723	-0.4	-12
	2209	2.5	76	2235	2.2	67	2318	2.5	76	2314	2.2	67			
<b>9</b> W	0343	1.2	37	<b>24</b> Th	0359	1.5	46	<b>9</b> F	0431	1.7	52	<b>24</b> Sa	0429	1.7	52
	0855	2.5	76	0843	2.2	67	0908	2.5	76	0849	2.1	64	1625	1.4	43
	1607	-0.6	-18	1606	-0.2	-6	1647	-0.8	-24	1625	-0.3	-9	1056	2.1	64
	2312	2.4	73	2321	2.2	67				2357	2.2	67	1812	-0.1	-3
<b>10</b> Th	0432	1.5	46	<b>25</b> F	0437	1.6	49	<b>10</b> Sa	0022	2.4	73	<b>25</b> Su	0515	1.7	52
	0931	2.5	76	0914	2.1	64	0532	1.7	52	0928	2.1	64	0733	1.2	37
	1700	-0.6	-18	1646	-0.1	-3	0958	2.3	70	1706	-0.2	-6	1213	1.8	55
				1743	-0.6	-18	1742	-0.3	-9				1901	0.3	9
<b>11</b> F	0024	2.3	70	<b>26</b> Sa	0014	2.1	64	<b>11</b> Su	0126	2.4	73	<b>26</b> M	0041	2.3	70
	0527	1.6	49	0521	1.6	49	0642	1.6	49	0608	1.6	49	0836	1.0	30
	1013	2.4	73	0948	2.1	64	1057	2.1	64	1014	2.0	61	1350	1.7	55
	1759	-0.5	-15	1732	-0.1	-3	1842	0.1	3	1748	0.0	0	● 1951	0.7	21
<b>12</b> Sa	0146	2.2	67	<b>27</b> Su	0115	2.1	64	<b>12</b> M	0224	2.3	70	<b>27</b> Tu	0122	2.3	70
	0637	1.7	52	0617	1.7	52	0759	1.5	46	0708	1.5	46	0934	0.7	21
	1103	2.2	67	1030	2.0	61	1214	1.9	58	1115	1.7	52	1535	1.7	52
	1905	-0.3	-9	1823	0.0	0	● 1941	0.1	3	1835	0.1	3	2044	1.0	30
<b>13</b> Su	0307	2.2	67	<b>28</b> M	0217	2.1	64	<b>13</b> Tu	0311	2.3	70	<b>28</b> W	0200	2.3	70
	0802	1.7	52	0728	1.7	52	0912	1.3	40	1355	1.8	55	1024	0.4	12
	1213	2.1	64	1127	1.9	58	1355	1.8	55	1236	1.8	55	1706	1.8	55
	● 2015	-0.1	-3	1920	0.1	3	2041	0.4	12	2146	1.3	40	2142	1.3	40
<b>14</b> M	0410	2.2	67	<b>29</b> Tu	0309	2.1	64	<b>14</b> W	0350	2.3	70	<b>29</b> Sa	0235	2.4	73
	0930	1.5	46	0842	1.6	49	1014	1.0	30	0904	1.0	30	1109	0.1	3
	1351	1.9	58	1250	1.8	55	1538	1.8	55	1415	1.8	55	1816	1.9	58
	2124	0.1	3	● 2019	0.2	6	2140	0.7	21	2021	0.6	18	2246	1.5	46
<b>15</b> Tu	0454	2.2	67	<b>30</b> W	0349	2.2	67	<b>15</b> Th	0421	2.3	70	<b>30</b> F	0310	2.4	73
	1039	1.3	40	0945	1.3	40	1104	0.7	21	0955	0.6	18	1149	-0.1	-3
	1534	1.9	58	1429	1.8	55	1704	1.8	55	1552	1.8	55	2122	2.0	61
	2228	0.2	6	2118	0.4	12	2237	0.9	27	2122	0.9	27	2348	1.6	49
<b>31</b> Sa 1044 1715 2226															

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
 Heights are referred to mean lower low water which is the chart datum of soundings.

# Guam (Apra Harbor), Mariana Islands, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0421 2.6 79	16 W 0019 1.7 52	1 F 0109 1.6 49	16 Sa 0118 1.4 43	1 M 0228 0.8 24	16 Tu 0200 0.6 18						
1203 -0.8 -24	0456 2.2 67	0608 2.6 79	0619 2.3 70	0805 2.4 73	0752 2.5 76						
1933 2.4 73	1242 -0.3 -9	1338 -0.8 -24	1333 -0.3 -9	1442 0.2 6	1412 0.4 12						
	2013 2.2 67	● 2047 2.5 76	2027 2.3 70	2055 2.4 73	2016 2.5 76						
2 W 0016 1.7 52	17 Th 0107 1.7 52	2 Sa 0202 1.4 43	17 Su 0156 1.3 40	2 Tu 0309 0.6 18	17 W 0237 0.3 9						
0515 2.6 79	0544 2.2 67	0706 2.6 79	0705 2.4 73	0857 2.4 73	0844 2.5 76						
1257 -1.0 -30	1322 -0.4 -12	1424 -0.6 -18	1408 -0.2 -6	1519 0.5 15	1450 0.6 18						
2026 2.5 76	2045 2.2 67	2122 2.5 76	2051 2.4 73	2119 2.4 73	2041 2.5 76						
3 Th 0120 1.7 52	18 F 0148 1.6 49	3 Su 0252 1.3 40	18 M 0233 1.1 34	3 W 0349 0.4 12	18 Th 0317 0.1 3						
0611 2.6 79	0628 2.3 70	0801 2.5 67	0751 2.4 73	0948 2.2 67	0938 2.4 73						
1350 -1.0 -30	1400 -0.4 -12	1508 -0.4 -12	1441 -0.1 -3	1555 0.8 24	1530 0.9 27						
● 2115 2.5 76	○ 2115 2.3 70	2153 2.5 76	2115 2.4 73	2142 2.3 70	2109 2.5 76						
4 F 0217 1.7 52	19 Sa 0227 1.6 49	4 M 0340 1.1 34	19 Tu 0310 1.0 30	4 Th 0428 0.3 9	19 F 0400 -0.1 -3						
0706 2.6 79	0710 2.3 70	0855 2.4 73	0839 2.4 73	1042 2.1 64	1037 2.3 70						
1440 -1.0 -30	1435 -0.4 -12	1548 -0.1 -3	1515 0.1 3	1632 1.0 30	1613 1.2 37						
2159 2.5 76	2143 2.4 73	2221 2.5 76	2139 2.5 76	2206 2.3 70	2138 2.4 73						
5 Sa 0312 1.6 49	20 Su 0305 1.5 46	5 Tu 0427 0.9 27	20 W 0349 0.7 21	5 F 0509 0.2 6	20 Th 0448 -0.3 -9						
0800 2.6 79	0752 2.3 70	0950 2.2 67	0930 2.3 70	1141 2.0 61	1146 2.2 67						
1528 -0.8 -24	1508 -0.3 -9	1626 0.3 9	1550 0.4 12	1710 1.3 40	1701 1.4 43						
2240 2.5 76	2210 2.4 73	2248 2.4 73	2204 2.5 76	2230 2.2 67	2213 2.4 73						
6 Su 0406 1.4 43	21 M 0344 1.4 43	6 W 0514 0.7 21	21 Th 0431 0.5 15	6 Sa 0553 0.2 6	21 F 0544 -0.3 -9						
0855 2.4 73	0836 2.3 70	1049 2.0 61	1027 2.2 67	1251 1.9 58	1309 2.1 64						
1613 -0.5 -15	1541 -0.2 -6	1703 0.6 18	1628 0.7 21	1754 1.5 46	1759 1.6 49						
2317 2.5 76	2236 2.4 73	2314 2.4 73	2230 2.4 73	2259 2.1 64	2255 2.3 70						
7 M 0500 1.3 40	22 Tu 0425 1.3 40	7 Th 0602 0.6 18	22 F 0518 0.3 9	7 Su 0644 0.2 6	22 M 0649 -0.3 -9						
0952 2.3 70	0923 2.2 67	1155 1.9 58	1133 2.1 64	1422 1.8 55	1445 2.1 64						
1657 -0.2 -6	1615 0.0 0	1741 1.0 30	1709 1.0 30	1851 1.6 49	1916 1.7 52						
2352 2.5 76	2301 2.5 76	2340 2.3 70	2300 2.4 73	2337 2.0 61	2351 2.2 67						
8 Tu 0556 1.1 34	23 W 0508 1.1 34	8 F 0651 0.4 12	23 M 0611 0.1 3	8 M 0743 0.2 6	23 Th 0800 -0.3 -9						
1054 2.0 61	1018 2.1 64	1315 1.8 55	1253 2.0 61	1555 1.9 58	1607 2.1 64						
1738 0.2 6	1650 0.3 9	1821 1.3 40	1756 1.3 40	2009 1.7 52	2048 1.7 52						
	2327 2.5 76		2335 2.4 73	●							
9 W 0023 2.4 73	24 Th 0555 0.8 24	9 Sa 0008 2.2 67	24 Su 0711 -0.1 -3	9 Tu 0033 1.9 58	24 W 0111 2.1 64						
0652 0.9 27	1122 2.0 61	0743 0.3 9	1434 1.9 58	0849 0.2 6	0913 -0.2 -6						
1206 1.8 55	1728 0.6 18	1456 1.7 52	1857 1.6 49	1659 1.9 58	1703 2.2 67						
1819 0.6 18	2356 2.5 76	● 1911 1.5 46		2133 1.6 49	2210 1.6 49						
10 Th 0053 2.4 73	25 F 0646 0.5 15	10 Su 0043 2.1 64	25 M 0021 2.3 70	10 W 0153 1.9 58	25 Th 0248 2.1 64						
0748 0.7 21	1241 1.8 55	0840 0.2 6	0819 -0.2 -6	0953 0.1 3	1020 -0.2 -6						
1336 1.7 52	1812 0.9 27	1635 1.8 55	1615 2.0 61	1740 2.0 61	1743 2.3 70						
● 1902 1.0 30		2021 1.6 49	2018 1.7 52	2239 1.6 49	2312 1.3 40						
11 F 0123 2.3 70	26 Sa 0028 2.4 73	11 M 0130 2.1 64	26 Tu 0123 2.3 70	11 Th 0315 2.0 61	26 F 0415 2.2 67						
0842 0.5 15	0743 0.2 6	0939 0.1 3	0930 -0.4 -12	1049 0.1 3	1119 -0.1 -3						
1522 1.7 52	1418 1.8 55	1744 1.9 58	1729 2.1 64	1811 2.1 64	1815 2.3 70						
1951 1.3 40	● 1905 1.3 40	2145 1.7 52	2150 1.7 52	2329 1.5 46							
12 Sa 0155 2.3 70	27 Su 0107 2.4 73	12 Tu 0232 2.0 61	27 W 0242 2.3 70	12 F 0423 2.1 64	27 Th 0002 1.1 34						
0935 0.3 9	0844 -0.1 -3	1037 0.0 0	1038 -0.4 -12	1137 0.0 0	0526 2.2 67						
1658 1.8 55	1603 1.9 58	1829 2.0 61	1820 2.2 67	1838 2.2 67	1210 0.1 3						
2052 1.5 46	2012 1.5 46	2259 1.7 52	2308 1.6 49		1843 2.4 73						
13 Su 0233 2.2 67	28 M 0155 2.4 73	13 W 0339 2.1 64	28 Th 0402 2.3 70	13 Sa 0010 1.3 40	28 W 0046 0.8 24						
1026 0.1 3	0948 -0.3 -9	1129 -0.1 -3	1139 -0.5 -15	0520 2.2 67	0627 2.3 70						
1810 1.9 58	1731 2.0 61	1904 2.1 64	1859 2.3 70	1218 0.0 0	1255 0.3 9						
2207 1.7 52	2135 1.7 52	2354 1.6 49		1903 2.3 70	1908 2.4 73						
14 M 0317 2.2 67	29 Tu 0255 2.4 73	14 Th 0439 2.2 67	29 F 0008 1.5 46	14 Su 0047 1.1 34	29 W 0125 0.5 15						
1114 -0.1 -3	1051 -0.6 -18	1215 -0.2 -6	0513 2.4 73	0612 2.3 70	0721 2.4 73						
1900 2.0 61	1836 2.2 67	1934 2.2 67	1232 -0.4 -12	1257 0.1 3	1336 0.5 15						
2320 1.7 52	2258 1.8 55		1933 2.4 73	1928 2.4 73	● 1932 2.4 73						
15 Tu 0406 2.2 67	30 W 0401 2.5 76	15 F 0038 1.5 46	30 Sa 0059 1.3 40	15 M 0124 0.9 27	30 Tu 0202 0.3 9						
1159 -0.2 -6	1151 -0.7 -21	0532 2.2 67	0615 2.5 76	0702 2.4 73	0812 2.4 73						
1939 2.1 64	1927 2.3 70	1256 -0.3 -9	1320 -0.3 -9	1335 0.2 6	1414 0.8 24						
	2009 2.4 73	2001 2.2 67	2002 2.4 73	● 1952 2.4 73	1955 2.4 73						
	31 Th 0010 1.7 52		31 F 0145 1.0 30								
	0507 2.5 76		31 Su 0712 2.5 76								
	1247 -0.8 -24		1402 -0.1 -3								
	2009 2.4 73		● 2030 2.4 73								

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to mean lower low water which is the chart datum of soundings.

# Guam (Apra Harbor), Mariana Islands, 2008

Times and Heights of High and Low Waters

October					November					December				
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height
<b>1</b> W 0238 0.1 3 0900 2.3 70 1452 1.0 30 2018 2.3 70	<b>16</b> Th 0208 -0.3 -9 0849 2.5 76 1429 1.1 34 1950 2.5 76	<b>1</b> Sa 0314 -0.3 -9 1029 2.2 67 1550 1.6 49 2020 2.1 64	<b>16</b> Su 0324 -1.0 -30 1050 2.5 76 1559 1.7 52 2037 2.5 76	<b>1</b> M 0331 -0.4 -12 1100 2.3 70 1615 1.7 52 2030 2.1 64	<b>16</b> Tu 0404 -0.9 -27 1127 2.5 76 1648 1.6 49 2125 2.4 73									
	<b>2</b> Th 0312 0.0 0 0947 2.3 70 1529 1.2 37 2041 2.3 70	<b>17</b> F 0251 -0.6 -18 0946 2.5 76 1515 1.3 40 2023 2.5 76	<b>2</b> Su 0351 -0.2 -6 1116 2.2 67 1632 1.6 49 2051 2.1 64	<b>17</b> M 0417 -0.9 -27 1152 2.5 76 1701 1.7 52 2126 2.4 73	<b>2</b> Tu 0408 -0.3 -9 1141 2.3 70 1702 1.7 52 2108 2.1 64	<b>17</b> W 0454 -0.6 -18 1212 2.5 76 1753 1.4 43 2227 2.2 67								
	<b>3</b> F 0346 -0.1 -3 1035 2.2 67 1607 1.4 43 2105 2.2 67	<b>18</b> Sa 0337 -0.7 -21 1047 2.5 76 1605 1.5 46 2059 2.4 73	<b>3</b> M 0431 -0.2 -6 1209 2.1 64 1722 1.7 52 2126 2.0 61	<b>18</b> Tu 0512 -0.7 -21 1254 2.4 73 1812 1.7 52 2225 2.2 67	<b>3</b> W 0446 -0.1 -3 1222 2.3 70 1757 1.6 49 2153 2.0 61	<b>18</b> Th 0543 -0.2 -6 1255 2.5 76 1900 1.2 37 2342 1.9 58								
	<b>4</b> Sa 0423 0.0 0 1128 2.1 64 1648 1.5 46 2132 2.1 64	<b>19</b> Su 0429 -0.7 -21 1156 2.4 73 1702 1.7 52 2140 2.4 73	<b>4</b> Tu 0515 -0.1 -3 1308 2.1 64 1825 1.7 52 2208 1.9 58	<b>19</b> W 0610 -0.4 -12 1351 2.4 73 1929 1.5 46 2340 2.0 61	<b>4</b> Th 0526 0.0 0 1300 2.3 70 1857 1.5 46 2251 1.8 55	<b>19</b> F 0632 0.3 9 1333 2.4 73 2007 0.9 27 <b>O</b>								
<b>5</b> Su 0504 0.0 0 1229 2.0 61 1737 1.6 49 2203 2.0 61	<b>20</b> M 0527 -0.6 -18 1314 2.3 70 1812 1.7 52 2231 2.2 67	<b>5</b> W 0606 0.1 3 1404 2.1 64 1938 1.6 49 2307 1.8 55	<b>20</b> Th 0709 0.0 0 1439 2.4 73 2044 1.3 40	<b>5</b> F 0609 0.2 6 1336 2.3 70 1956 1.3 40	<b>20</b> Sa 0119 1.7 52 0723 0.7 21 1409 2.4 73 2109 0.6 18									
	<b>6</b> M 0553 0.1 3 1346 2.0 61 1840 1.7 52 2244 1.9 58	<b>21</b> Tu 0631 -0.4 -12 1431 2.3 70 1936 1.7 52 <b>O</b> 2339 2.1 64	<b>6</b> Th 0700 0.2 6 1450 2.2 67 2046 1.5 46	<b>21</b> F 0121 1.8 55 0809 0.3 9 1519 2.4 73 2148 0.9 27	<b>6</b> Sa 0011 1.7 52 0657 0.4 12 1410 2.4 73 <b>O</b> 2050 1.0 30	<b>21</b> Su 0314 1.7 52 0818 1.1 34 1443 2.4 73 2204 0.3 9								
	<b>7</b> Tu 0651 0.2 6 1504 2.0 61 2001 1.7 52 <b>O</b> 2343 1.8 55	<b>22</b> W 0739 -0.2 -6 1532 2.3 70 2100 1.5 46	<b>7</b> F 0034 1.7 52 0756 0.3 9 1527 2.3 70 2140 1.3 40	<b>22</b> Sa 0312 1.7 52 0909 0.7 21 1552 2.4 73 2240 0.6 18	<b>7</b> Su 0152 1.6 49 0750 0.7 21 1443 2.4 73 2139 0.6 18	<b>22</b> M 0456 1.8 55 0921 1.4 43 1517 2.3 70 2252 0.1 3								
	<b>8</b> W 0755 0.2 6 1600 2.0 61 2118 1.6 49	<b>23</b> Th 0115 1.9 58 0847 0.0 0 1617 2.3 70 2209 1.3 40	<b>8</b> Sa 0217 1.7 52 0853 0.5 15 1558 2.3 70 2224 1.0 30	<b>23</b> Su 0445 1.8 55 1008 1.0 30 1622 2.4 73 2324 0.3 9	<b>8</b> M 0333 1.7 52 0851 1.0 30 1518 2.5 76 2224 0.2 6	<b>23</b> Tu 0611 1.9 58 1031 1.6 49 1553 2.3 70 2336 -0.1 -3								
<b>9</b> Th 0112 1.8 55 0859 0.2 6 1638 2.1 64 2216 1.4 43	<b>24</b> F 0302 1.9 58 0951 0.2 6 1652 2.4 73 2303 1.0 30	<b>9</b> Su 0347 1.8 55 0949 0.6 18 1627 2.4 73 2303 0.6 18	<b>24</b> M 0557 2.0 61 1105 1.2 37 1650 2.4 73	<b>9</b> Tu 0458 1.9 58 0955 1.2 37 1555 2.5 76 2310 -0.2 -6	<b>24</b> W 0706 2.1 64 1137 1.7 52 1631 2.3 70									
	<b>10</b> F 0247 1.8 55 0956 0.3 9 1708 2.2 67 2300 1.2 37	<b>25</b> Sa 0430 2.0 61 1048 0.5 15 1721 2.4 73 2348 0.6 18	<b>10</b> M 0501 2.0 61 1043 0.8 24 1656 2.5 76 2342 0.2 6	<b>25</b> Tu 0003 0.0 0 0655 2.1 64 1158 1.4 43 1718 2.4 73	<b>10</b> W 0607 2.2 67 1101 1.4 43 1635 2.6 79 2357 -0.6 -18	<b>25</b> Th 0015 -0.3 -9 0748 2.2 67 1234 1.7 52 1711 2.3 70								
	<b>11</b> Sa 0405 2.0 61 1046 0.3 9 1735 2.3 70 2339 1.0 30	<b>26</b> Su 0541 2.1 64 1139 0.7 21 1747 2.4 73	<b>11</b> Tu 0605 2.2 67 1137 1.0 30 1727 2.5 76	<b>26</b> W 0039 -0.2 -6 0744 2.2 67 1248 1.5 46 1747 2.3 70	<b>11</b> Th 0708 2.4 73 1204 1.5 46 1717 2.6 79	<b>26</b> F 0053 -0.4 -12 0824 2.2 67 1321 1.7 52 1751 2.3 70								
	<b>12</b> Su 0510 2.1 64 1133 0.4 12 1800 2.4 73	<b>27</b> M 0027 0.3 9 0641 2.2 67 1226 0.9 27 1812 2.4 73	<b>12</b> W 0021 -0.2 -6 0703 2.4 73 1229 1.2 37 1800 2.6 79	<b>27</b> Th 0113 -0.4 -12 0826 2.3 70 1334 1.6 49 1817 2.3 70	<b>12</b> F 0044 -0.9 -27 0803 2.5 76 1303 1.6 49 1802 2.7 82	<b>27</b> Sa 0130 -0.5 -15 0857 2.3 70 1401 1.7 52 <b>O</b> 1830 2.3 70								
<b>13</b> M 0015 0.6 18 0607 2.3 70 1217 0.5 15 1826 2.5 76	<b>28</b> Tu 0103 0.1 3 0733 2.3 70 1309 1.1 34 1836 2.4 73	<b>13</b> Th 0103 -0.6 -18 0759 2.5 76 1321 1.3 40 <b>O</b> 1834 2.6 79	<b>28</b> F 0146 -0.4 -12 0904 2.3 70 1415 1.6 49 <b>O</b> 1849 2.3 70	<b>13</b> Sa 0134 -1.1 -34 0856 2.6 79 1358 1.7 52 <b>O</b> 1850 2.7 82	<b>28</b> Su 0206 -0.5 -15 0929 2.3 70 1438 1.6 49 1908 2.3 70									
	<b>14</b> Tu 0051 0.3 9 0702 2.4 73 1301 0.7 21 1853 2.5 76	<b>29</b> W 0136 -0.1 -3 0819 2.3 70 1350 1.3 40 <b>O</b> 1900 2.4 73	<b>14</b> F 0147 -0.8 -24 0855 2.6 79 1412 1.5 46 1912 2.6 79	<b>29</b> Sa 0220 -0.5 -15 0942 2.3 70 1455 1.6 49 1921 2.2 67	<b>14</b> Su 0224 -1.1 -34 0948 2.6 79 1453 1.7 52 1939 2.7 82	<b>29</b> M 0241 -0.5 -15 1000 2.3 70 1515 1.6 49 1946 2.3 70								
	<b>15</b> W 0129 0.0 0 0755 2.5 76 1344 0.9 27 <b>O</b> 1921 2.5 76	<b>30</b> Th 0209 -0.3 -9 0903 2.3 70 1430 1.4 43 1925 2.3 70	<b>15</b> Sa 0234 -1.0 -30 0951 2.6 79 1504 1.6 49 1952 2.6 79	<b>30</b> Su 0255 -0.4 -12 1021 2.3 70 1534 1.7 52 1955 2.2 67	<b>15</b> M 0314 -1.1 -34 1038 2.6 79 1549 1.7 52 2030 2.6 79	<b>30</b> Tu 0314 -0.4 -12 1031 2.3 70 1553 1.6 49 2024 2.2 67								
		<b>31</b> F 0241 -0.3 -9 0945 2.3 70 1510 1.5 46 1952 2.2 67				<b>31</b> W 0347 -0.3 -9 1100 2.4 73 1635 1.5 46 2105 2.1 64								

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to mean lower low water which is the chart datum of soundings.

# Malakal Harbor, Palau Islands, Caroline Islands, 2008

Times and Heights of High and Low Waters

January				February				March											
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height								
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm								
<b>1</b> Tu	0047	4.7	143	<b>16</b> W	0020	4.9	149	<b>1</b> F	0217	3.8	116	<b>16</b> Sa	0125	3.8	116	<b>16</b> Su	0322	4.1	125
0709	2.5	76		0616	2.1	64	0732	3.1	94	0828	3.3	101	0553	3.2	98	0847	3.4	104	
1315	5.3	162	1237	5.6	171	1344	4.7	143	1411	5.0	152	1244	4.6	140	1359	4.8	146		
2024	2.2	67	● 1936	1.5	46	2145	1.6	49	2214	0.8	24	2048	1.8	55	2158	1.1	34		
<b>2</b> W	0158	4.3	131	<b>17</b> Th	0137	4.4	134	<b>2</b> Sa	0416	3.7	113	<b>17</b> Su	0524	4.1	125	<b>17</b> M	0320	3.6	110
0805	2.8	85	0716	2.6	79	0936	3.3	101	1030	3.1	94	0837	3.4	104	1031	3.0	91		
1403	5.2	158	1333	5.5	168	1458	4.6	140	1548	5.0	152	1406	4.4	134	1548	4.8	146		
2131	1.9	58	2101	1.2	37	2300	1.3	40	2328	0.4	12	2222	1.5	46	2310	0.8	24		
<b>3</b> Th	0325	4.1	125	<b>18</b> F	0316	4.2	128	<b>3</b> Su	0600	3.9	119	<b>18</b> M	0626	4.5	137	<b>18</b> Tu	0531	3.9	119
0915	3.0	91	0847	3.0	91	1107	3.1	94	1146	2.7	82	1043	3.2	98	1137	2.4	73		
1457	5.1	155	1440	5.3	162	1618	4.7	143	1713	5.2	158	1543	4.5	137	1714	5.1	155		
2234	1.6	49	2225	0.8	24	2357	0.9	27				2326	1.1	34					
<b>4</b> F	0456	4.2	128	<b>19</b> Sa	0506	4.3	131	<b>4</b> M	0644	4.3	131	<b>19</b> Tu	0025	0.1	3	<b>4</b> Tu	0610	4.3	131
1028	3.1	94	1028	3.1	94	1205	2.8	85	0706	5.0	152	1143	2.8	85	0633	5.1	155		
1556	5.1	155	1558	5.4	165	1723	5.0	152	1239	2.1	64	1700	4.8	146	1225	1.7	52		
2329	1.2	37	2336	0.3	9				1817	5.6	171				1812	5.4	165		
<b>5</b> Sa	0605	4.4	134	<b>20</b> Su	0625	4.6	140	<b>5</b> Tu	0041	0.5	15	<b>20</b> W	0110	-0.2	-6	<b>5</b> W	0012	0.7	21
1130	3.0	91	1145	2.9	88	0714	4.6	140	0737	5.3	162	0638	4.7	143	0701	5.5	168		
1653	5.2	158	1712	5.6	171	1247	2.5	76	1322	1.6	49	1225	2.3	70	1304	1.2	37		
						1813	5.4	165	1906	5.9	180	1755	5.3	162	1858	5.7	174		
<b>6</b> Su	0017	0.8	24	<b>21</b> M	0034	-0.2	-6	<b>6</b> W	0118	0.2	6	<b>21</b> Th	0149	-0.2	-6	<b>6</b> Th	0050	0.4	12
0651	4.6	140	0716	5.0	152	0740	5.0	152	0805	5.6	171	0703	5.1	155	0727	5.7	174		
1220	2.9	88	1243	2.5	76	1322	2.2	67	1400	1.3	40	1300	1.8	55	1339	0.8	24		
1744	5.4	165	1814	5.9	180	1855	5.8	177	● 1947	6.1	186	1840	5.7	174	1936	5.9	180		
<b>7</b> M	0058	0.5	15	<b>22</b> Tu	0123	-0.5	-15	<b>7</b> Th	0151	0.0	0	<b>22</b> F	0223	-0.1	-3	<b>7</b> F	0123	0.3	9
0728	4.9	149	0756	5.3	162	0805	5.3	162	0830	5.8	177	0728	5.5	168	0750	5.9	180		
1301	2.7	82	1331	2.2	67	1355	1.9	58	1435	1.0	30	1333	1.3	40	1411	0.5	15		
1827	5.7	174	● 1907	6.2	189	● 1934	6.1	186	2024	6.1	186	1921	6.1	186	● 2009	5.9	180		
<b>8</b> Tu	0135	0.2	6	<b>23</b> W	0206	-0.6	-18	<b>8</b> F	0222	0.0	0	<b>23</b> Sa	0254	0.3	9	<b>8</b> Sa	0154	0.3	9
0759	5.1	155	0831	5.5	168	0831	5.6	171	0855	5.9	180	0754	5.9	180	0813	6.0	183		
1336	2.6	79	1413	1.9	58	1426	1.6	49	1507	0.9	27	1405	0.8	24	1440	0.4	12		
● 1906	5.9	180	1952	6.3	192	2011	6.2	189	2058	6.0	183	● 2001	6.3	192	2041	5.9	180		
<b>9</b> W	0209	0.1	3	<b>24</b> Th	0245	-0.4	-12	<b>9</b> Sa	0251	0.1	3	<b>24</b> Su	0323	0.7	21	<b>9</b> Su	0224	0.5	15
0829	5.3	162	0903	5.7	174	0858	5.8	177	0918	5.9	180	0821	6.1	186	0836	6.0	183		
1408	2.5	76	1453	1.7	52	1459	1.4	43	1538	0.9	27	1439	0.5	15	1508	0.4	12		
1943	6.1	186	2034	6.3	192	2050	6.2	189	2132	5.8	177	2041	6.3	192	2113	5.7	174		
<b>10</b> Th	0241	0.1	3	<b>25</b> F	0320	-0.1	-3	<b>10</b> Su	0320	0.4	12	<b>25</b> M	0349	1.2	37	<b>10</b> M	0255	0.8	24
0858	5.4	165	0932	5.7	174	0926	5.9	180	0943	5.8	177	0850	6.3	192	0900	5.9	180		
1440	2.4	73	1531	1.7	52	1534	1.2	37	1609	1.0	30	1515	0.3	9	1536	0.6	18		
2019	6.2	189	2113	6.1	186	2131	6.1	186	2207	5.4	165	2123	6.1	186	2145	5.4	165		
<b>11</b> F	0312	0.2	6	<b>26</b> Sa	0354	0.4	12	<b>11</b> M	0351	0.8	24	<b>26</b> Tu	0413	1.7	52	<b>11</b> Tu	0326	1.3	40
0929	5.6	171	1001	5.7	174	0957	6.0	183	1008	5.7	174	0922	6.3	192	0925	5.8	177		
1513	2.4	73	1608	1.7	52	1614	1.0	30	1641	1.1	34	1555	0.2	6	1606	0.8	24		
2057	6.2	189	2152	5.8	177	2216	5.7	174	2243	5.1	155	2208	5.7	174	2220	5.1	155		
<b>12</b> Sa	0344	0.4	12	<b>27</b> Su	0425	0.9	27	<b>12</b> Tu	0423	1.3	40	<b>27</b> W	0436	2.1	64	<b>12</b> W	0358	1.8	55
1000	5.7	174	1029	5.7	174	1031	6.0	183	1037	5.5	168	0957	6.2	189	0954	5.6	171		
1550	2.2	67	1647	1.7	52	1700	1.0	30	1717	1.3	40	1641	0.4	12	1639	1.0	30		
2139	6.1	186	2231	5.4	165	2306	5.3	162	2325	4.6	140	2258	5.2	158	2300	4.8	146		
<b>13</b> Su	0416	0.7	21	<b>28</b> M	0455	1.4	43	<b>13</b> W	0458	1.8	55	<b>28</b> Th	0459	2.5	76	<b>13</b> Th	0434	2.3	70
1034	5.7	174	1059	5.5	168	1110	5.8	177	1109	5.2	158	1802	1.5	46	1037	5.9	180		
1633	2.1	64	1727	1.8	55	1755	1.0	30				1736	0.6	18	1720	1.3	40		
2225	5.8	177	2313	5.0	152							2358	4.7	143	2349	4.4	134		
<b>14</b> M	0452	1.1	34	<b>29</b> Tu	0525	1.9	58	<b>14</b> Th	0005	4.7	143	<b>29</b> F	0015	4.2	128	<b>14</b> F	0517	2.8	85
1111	5.7	174	1130	5.4	165	0538	2.4	73	1155	5.6	171	1149	4.9	149	1108	5.0	152		
1723	1.9	58	1812	1.8	55	● 1906	1.1	34	● 1907	1.7	52	● O			1819	1.6	49		
2318	5.4	165																	
<b>15</b> Tu	0530	1.6	49	<b>30</b> W	0001	4.6	140	<b>15</b> F	0121	4.2	128	<b>15</b> Sa	0119	4.2	128	<b>30</b> Su	0055	4.1	125
1151	5.7	174	0555	2.4	73	0634	2.9	88	0634	2.9	88	0628	3.3	101	0529	3.4	104		
1823	1.7	52	1205	5.2	158	1252	5.3	162	2038	1.1	34	1228	5.1	155	1204	4.7	143		
			● 1908	1.8	55							2025	1.2	37	● O	1949	1.8	55	
			<b>31</b> Th	0058	4.1	125									<b>31</b> M	0229	4.0	122	
			0630	2.8	85									0803	3.5	107			
			1248	4.9	149									1326	4.5	137			
			2020	1.8	55									2126	1.7	52			

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.

Heights are referred to the chart datum of soundings which is about 1 foot (30 centimeters) below mean low water springs.

# Malakal Harbor, Palau Islands, Caroline Islands, 2008

Times and Heights of High and Low Waters

April				May				June			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu	0408	4.2	128	16 W	0506	5.0	152	1 Th	0348	4.9	149
Tu	1007	3.2	98	W	1114	2.1	64	F	1023	2.4	73
	1504	4.5	137		1700	4.9	149		1551	4.7	143
	2236	1.5	46		2328	1.3	40		2231	1.7	52
2 W	0504	4.5	137	17 Th	0543	5.3	162	2 F	0435	5.2	158
	1108	2.7	82		1200	1.4	43		1115	1.6	49
	1628	4.8	146		1758	5.2	158		1702	5.0	152
	2328	1.2	37						2323	1.7	52
3 Th	0541	4.9	149	18 F	0011	1.3	40	3 Sa	0517	5.6	171
	1153	2.0	61		0613	5.6	171		1159	0.9	27
	1731	5.2	158		1239	0.9	27		1801	5.4	165
					1843	5.4	165				
4 F	0010	1.0	30	19 Sa	0049	1.3	40	4 Su	0009	1.7	52
	0612	5.4	165		0641	5.8	177		0555	6.0	183
	1231	1.3	40		1314	0.5	15		1241	0.2	6
	1821	5.6	171		1920	5.6	171		1853	5.7	174
5 Sa	0048	0.9	27	20 Su	0123	1.5	46	5 M	0051	1.8	55
	0642	5.8	177		0707	5.9	180		0633	6.3	192
	1307	0.7	21		1345	0.2	6		1322	-0.4	-12
	1906	6.0	183		1954	5.6	171		1941	5.9	180
6 Su	0122	1.0	30	21 M	0153	1.7	52	6 ●	2027	5.6	171
	0712	6.1	186		0732	6.0	183				
	1342	0.1	3		1414	0.2	6				
	● 1949	6.2	189		2025	5.6	171				
7 M	0156	1.2	37	22 Tu	0220	1.9	58	7 W	0210	2.2	67
	0744	6.4	195		0757	6.0	183		0750	6.6	201
	1419	-0.2	-6		1443	0.2	6		1448	-0.6	-18
	2032	6.1	186		2056	5.5	168		2114	5.7	174
8 Tu	0230	1.5	46	23 W	0246	2.2	67	8 Th	0251	2.5	76
	0816	6.5	198		0824	5.9	180		0831	6.5	198
	1458	-0.3	-9		1512	0.4	12		1534	-0.4	-12
	2116	5.9	180		2129	5.3	162		2204	5.5	168
9 W	0304	2.0	61	24 Th	0310	2.6	79	9 F	0336	2.8	85
	0852	6.5	198		0852	5.8	177		0916	6.3	192
	1541	-0.2	-6		1542	0.6	18		1626	0.0	0
	2204	5.6	171		2205	5.1	155		2258	5.2	158
10 Th	0341	2.4	73	25 F	0335	2.8	85	10 Sa	0429	3.1	94
	0931	6.3	192		0923	5.7	174		1006	5.9	180
	1630	0.1	3		1617	0.9	27		1723	0.5	15
	2257	5.2	158		2246	4.9	149		2359	5.0	152
11 F	0424	2.8	85	26 Sa	0403	3.1	94	11 M	0539	3.2	98
	1015	6.0	183		1000	5.5	168		1104	5.5	168
	1728	0.5	15		1659	1.2	37		1827	1.0	30
					2335	4.7	143				
12 Sa	0000	4.8	146	27 W	0441	3.3	101	12 M	0105	4.9	149
	0523	3.2	98		1044	5.2	158		0704	3.2	98
	1109	5.5	168		1752	1.5	46		1215	5.0	152
	1841	1.0	30						1936	1.4	43
13 Su	0121	4.5	137	28 M	0035	4.5	137	13 Tu	0212	5.0	152
	0659	3.4	104		0547	3.5	107		0830	2.9	88
	1220	5.1	155		1141	4.9	149		1341	4.7	143
	● 2007	1.3	40		1900	1.7	52		2043	1.7	52
14 M	0300	4.5	137	29 Tu	0144	4.5	137	14 W	0311	5.1	155
	0851	3.2	98		0740	3.4	104		0942	2.4	73
	1356	4.7	143		1257	4.7	143		1512	4.6	140
	2128	1.4	43		2019	1.8	55		2145	1.9	58
15 Tu	0417	4.7	143	30 W	0252	4.6	140	15 Th	0400	5.2	158
	1014	2.7	82		0918	3.0	91		1040	1.8	55
	1540	4.7	143		1426	4.6	140		1632	4.6	140
	2235	1.4	43		2131	1.8	55		2240	2.0	61

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings which is about 1 foot (30 centimeters) below mean low water springs.

# Malakal Harbor, Palau Islands, Caroline Islands, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0443	5.9	180	16 W 0002	3.1	94	1 F 0104	2.6	79	1 M 0214	1.6	49
1209	-0.1	-3	W 0524	5.4	165	F 0638	6.4	195	Sa 0640	6.1	186
1847	5.0	152	1246	0.6	18	1342	-0.3	-9	1336	0.6	18
			1923	4.8	146	● 2010	5.8	177	1951	5.7	174
2 W 0012	2.8	85	17 Th 0048	2.9	88	2 Sa 0150	2.3	70	2 Tu 0249	1.4	43
0543	6.1	186	0611	5.6	171	0729	6.6	201	17 W 0218	1.3	40
1302	-0.5	-15	1324	0.4	12	1423	-0.2	-6	0842	6.6	201
1940	5.3	162	1954	5.0	152	2043	6.0	183	1504	1.3	40
● 2025	5.5	168	○ 2022	5.3	162	2114	6.1	186	2100	6.6	201
3 Th 0107	2.7	82	18 F 0126	2.8	85	3 Su 0233	2.0	61	3 W 0323	1.4	43
0639	6.4	195	0653	5.9	180	0814	6.7	204	M 0754	6.5	198
1351	-0.7	-21	1359	0.2	6	1501	0.1	3	1433	0.7	21
● 2025	5.5	168	○ 2022	5.3	162	2039	6.2	189	2039	6.2	189
4 F 0157	2.5	76	19 Sa 0200	2.7	82	4 M 0313	1.9	58	4 Th 0356	1.5	46
0730	6.5	198	0730	6.1	186	0856	6.5	198	Tu 0831	6.6	201
1437	-0.6	-18	1430	0.3	9	1536	0.6	30	1500	1.0	30
2106	5.6	171	2049	5.5	168	2144	6.2	189	2106	6.4	195
5 Sa 0243	2.4	73	20 Su 0232	2.6	79	5 Tu 0353	1.8	55	5 F 0431	1.7	52
0818	6.5	198	0806	6.2	189	0937	6.2	189	W 0910	6.5	198
1520	-0.3	-9	1500	0.4	12	1609	1.1	34	1528	1.4	43
2145	5.7	174	2116	5.7	174	2213	6.1	186	2134	6.5	198
6 Su 0330	2.4	73	21 M 0304	2.5	76	6 W 0434	1.9	58	6 Sa 0509	1.9	58
0905	6.4	195	0843	6.2	189	1019	5.8	177	Th 0592	6.2	189
1602	0.1	3	1528	0.6	18	1640	1.7	52	1557	1.8	55
2223	5.7	174	2145	5.8	177	2243	6.1	186	2206	6.5	198
7 M 0418	2.4	73	22 Tu 0338	2.4	73	7 Th 0516	1.9	58	7 F 0557	2.2	67
0953	6.0	183	0922	6.1	186	1102	5.4	165	W 1039	5.8	177
1643	0.7	21	1558	0.9	27	1711	2.3	70	1629	2.3	70
2300	5.7	174	2215	5.9	180	2315	5.9	180	2243	6.4	195
8 Tu 0509	2.3	70	23 W 0417	2.2	67	8 F 0602	2.0	61	8 M 0524	1.5	46
1041	5.6	171	1005	5.9	180	1149	4.9	149	Sa 1135	5.3	162
1723	1.2	37	1629	1.3	40	1742	2.8	85	1705	2.8	85
2337	5.7	174	2249	6.0	183	2350	5.7	174	2325	6.3	192
9 W 0602	2.3	70	24 Th 0501	2.0	61	9 Sa 0657	2.1	64	9 Tu 0032	5.4	165
1133	5.2	158	1054	5.6	171	1246	4.5	137	W 0840	2.4	73
1803	1.8	55	1703	1.7	52	1817	3.2	98	1519	4.4	134
			2325	6.0	183	● 1829	2.7	82	2035	4.1	125
10 Th 0014	5.6	171	25 F 0554	1.9	58	10 Su 0032	5.5	168	10 W 0152	5.2	158
0659	2.2	67	1150	5.1	155	0807	2.1	64	Th 0755	1.6	49
1230	4.7	143	1742	2.2	67	1403	4.2	128	1421	4.5	137
● 1845	2.3	70				1914	3.5	107	1917	3.8	116
11 F 0053	5.5	168	26 Sa 0007	6.0	183	11 M 0126	5.2	158	26 Tu 0130	5.7	174
0801	2.0	61	0658	1.7	52	0927	2.0	61	Th 0932	1.4	43
1337	4.3	131	1258	4.7	143	M 1601	4.1	125	1631	4.6	140
1934	2.7	82	● 1829	2.7	82	2109	3.7	113	2138	3.8	116
12 Sa 0137	5.4	165	27 Su 0056	5.8	177	12 Tu 0237	5.1	155	10 W 0442	5.5	168
0905	1.8	55	0816	1.5	46	1042	1.7	52	Th 1154	1.5	46
1458	4.1	125	1425	4.4	134	1750	4.3	131	1820	5.4	165
2037	3.1	94	1939	3.2	98	2244	3.6	110	2308	3.4	104
13 Su 0228	5.2	158	28 M 0158	5.7	174	13 W 0356	5.2	158	12 F 0442	5.5	168
1010	1.6	49	0942	1.1	34	1140	1.4	43	Th 0538	5.9	180
1634	4.1	125	1613	4.3	131	1833	4.7	143	1231	1.3	40
2153	3.2	98	2126	3.4	104	2346	3.3	101	1844	5.8	177
14 M 0326	5.2	158	29 Tu 0312	5.7	174	14 Th 0505	5.4	165	13 F 0008	2.9	88
1110	1.2	37	1100	0.7	21	1226	1.0	30	W 0543	6.2	189
1755	4.3	131	1750	4.6	140	1902	5.0	152	1243	0.4	12
2305	3.2	98	2302	3.3	101				1911	5.8	177
15 Tu 0428	5.2	158	30 W 0430	5.8	177	15 F 0031	3.0	91	14 F 0043	2.5	76
1202	0.9	27	1203	0.2	6	0557	5.8	177	Th 0622	6.3	192
1846	4.5	137	1850	5.1	155	1303	0.7	21	1304	1.1	34
						1927	5.4	165	1908	6.2	189
31 Th 0011	3.0	91							● 1929	6.7	204
0540	6.1	186									
1256	-0.2	-6									
1934	5.4	165									
31 Th 0011	3.0	91									
0540	6.1	186									
1256	-0.2	-6									
1934	5.4	165									
31 Th 0011	3.0	91									
0540	6.1	186									
1256	-0.2	-6									
1934	5.4	165									

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.

Heights are referred to the chart datum of soundings which is about 1 foot (30 centimeters) below mean low water springs.

# Malakal Harbor, Palau Islands, Caroline Islands, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
1 W 0223 6.6 201 0825 6.6 201 1432 2.1 64 2018 6.8 207	h m ft cm 1.0 30 6.6 201 2.1 64 6.8 207	16 Th 0156 0.6 18 0807 6.8 207 1403 2.3 70 1952 7.2 219	h m ft cm 0.6 18 6.8 207 2.3 70 7.2 219	1 Sa 0301 1.0 30 0915 6.0 183 1457 3.2 98 2038 6.6 201	h m ft cm 1.0 30 6.0 183 3.2 98 6.6 201	16 Su 0309 0.1 3 0935 6.1 186 1505 3.2 98 2051 7.1 216	h m ft cm 0.1 3 6.1 186 3.2 98 7.1 216	1 M 0320 0.9 27 0941 5.6 171 1514 3.3 101 2054 6.3 192	h m ft cm 0.9 27 5.6 171 3.3 101 6.3 192	16 Tu 0353 0.0 0 1018 5.8 177 1559 2.8 85 2138 6.5 198	h m ft cm 0.0 0 5.8 177 2.8 85 6.5 198
2 Th 0254 1.1 34 0858 6.4 195 1458 2.5 76 2043 6.7 204	h m ft cm 1.1 34 6.4 195 2.5 76 6.7 204	17 F 0234 0.5 15 0850 6.6 201 1436 2.7 82 2026 7.3 223	h m ft cm 0.5 15 6.6 201 2.7 82 7.3 223	2 Su 0332 1.3 40 0951 5.7 174 1521 3.5 107 2110 6.4 195	h m ft cm 1.3 40 5.7 174 3.5 107 6.4 195	17 M 0358 0.4 12 1026 5.8 177 1554 3.5 107 2139 6.8 207	h m ft cm 0.4 12 5.8 177 3.5 107 6.8 207	2 Tu 0354 1.1 34 1018 5.5 168 1546 3.4 104 2132 6.1 186	h m ft cm 1.1 34 5.5 168 3.4 104 6.1 186	17 W 0441 0.5 15 1104 5.7 174 1655 2.9 88 2231 6.1 186	h m ft cm 0.5 15 5.7 174 2.9 88 6.1 186
3 F 0324 1.3 40 0931 6.1 186 1522 2.9 88 2109 6.6 201	h m ft cm 1.3 40 6.1 186 2.9 88 6.6 201	18 Sa 0315 0.5 15 0935 6.3 192 1510 3.1 94 2104 7.2 219	h m ft cm 0.5 15 6.3 192 3.1 94 7.2 219	3 M 0407 1.6 49 1031 5.5 168 1549 3.7 113 2146 6.2 189	h m ft cm 1.6 49 5.5 168 3.7 113 6.2 189	18 Tu 0453 0.9 27 1123 5.6 171 1656 3.6 110 2235 6.3 192	h m ft cm 0.9 27 5.6 171 3.6 110 6.3 192	3 W 0431 1.4 43 1058 5.4 165 1627 3.5 107 2214 5.9 180	h m ft cm 1.4 43 5.4 165 3.5 107 5.9 180	18 Th 0530 1.1 34 1150 5.6 171 1759 2.8 85 2330 5.6 171	h m ft cm 1.1 34 5.6 171 2.8 85 5.6 171
4 Sa 0355 1.5 46 1007 5.8 177 1544 3.3 101 2139 6.4 195	h m ft cm 1.5 46 5.8 177 3.3 101 6.4 195	19 Su 0401 0.8 24 1026 5.9 180 1550 3.5 107 2147 6.9 210	h m ft cm 0.8 24 5.9 180 3.5 107 6.9 210	4 Tu 0449 1.9 58 1119 5.3 162 1626 4.0 122 2229 5.9 180	h m ft cm 1.9 58 5.3 162 4.0 122 5.9 180	19 W 0555 1.4 43 1227 5.5 168 1818 3.7 113 2342 5.8 177	h m ft cm 1.4 43 5.5 168 3.7 113 5.8 177	4 Th 0511 1.7 52 1142 5.4 165 1721 3.5 107 2304 5.6 171	h m ft cm 1.7 52 5.4 165 3.5 107 5.6 171	19 O 0622 1.7 52 1238 5.6 171 1909 2.6 79	h m ft cm 1.7 52 5.6 171 2.6 79
5 Su 0430 1.8 55 1047 5.4 165 1607 3.6 110 2212 6.1 186	h m ft cm 1.8 55 5.4 165 3.6 110 6.1 186	20 M 0457 1.2 37 1127 5.5 168 1642 3.9 119 2239 6.5 198	h m ft cm 1.2 37 5.5 168 3.9 119 6.5 198	5 W 0541 2.2 67 1217 5.1 155 1729 4.1 125 2324 5.6 171	h m ft cm 2.2 67 5.1 155 4.1 125 5.6 171	20 Th 0702 1.8 55 1334 5.5 168 1948 3.5 107	h m ft cm 1.8 55 5.5 168 3.5 107	5 F 0556 1.9 58 1229 5.4 165 1830 3.4 104	h m ft cm 1.9 58 5.4 165 3.4 104	20 Sa 0037 5.1 155 0717 2.2 67 1327 5.5 168 2021 2.4 73	h m ft cm 5.1 155 2.2 67 5.5 168 2.4 73
6 M 0513 2.2 67 1137 5.1 155 1634 3.9 119 2254 5.8 177	h m ft cm 2.2 67 5.1 155 3.9 119 5.8 177	21 Tu 0607 1.6 49 1243 5.2 158 1807 4.1 125 2346 6.0 183	h m ft cm 1.6 49 5.2 158 4.1 125 6.0 183	6 Th 0646 2.4 73 1323 5.1 155 1918 4.1 125 2346 6.0 183	h m ft cm 2.4 73 5.1 155 4.1 125 6.0 183	21 F 0103 5.4 165 0811 2.2 67 1436 5.6 171 1948 3.0 91	h m ft cm 5.4 165 2.2 67 5.6 171 3.0 91	6 Sa 0005 5.3 162 0647 2.2 67 1318 5.4 165 1948 3.1 94	h m ft cm 5.3 162 2.2 67 5.4 165 3.1 94	21 Su 0155 4.7 143 0816 2.6 79 1417 5.4 165 2129 2.0 61	h m ft cm 4.7 143 2.6 79 5.4 165 2.0 61
7 Tu 0615 2.5 76 1245 4.8 146 1720 4.2 128 2351 5.5 168	h m ft cm 2.5 76 4.8 146 4.2 128 5.5 168	22 W 0731 1.9 58 1418 5.2 158 2006 4.0 122	h m ft cm 1.9 58 5.2 158 4.0 122	7 F 0036 5.3 162 0800 2.5 76 1430 5.2 158 2056 3.7 113	h m ft cm 5.3 162 2.5 76 5.2 158 3.7 113	22 Sa 0235 5.2 158 0917 2.4 73 1531 5.7 174 2212 2.4 73	h m ft cm 5.2 158 2.4 73 5.7 174 2.4 73	7 Su 0118 5.0 152 0748 2.4 73 1410 5.5 168 2103 2.5 76	h m ft cm 5.0 152 2.4 73 5.5 168 2.5 76	22 M 0324 4.5 137 0921 2.9 88 1510 5.4 165 2231 1.6 49	h m ft cm 4.5 137 2.9 88 5.4 165 1.6 49
8 W 0744 2.6 79 1421 4.7 143 2004 4.3 131	h m ft cm 2.6 79 4.7 143 4.3 131	23 Th 0116 5.6 171 0854 2.1 64 1541 5.4 165 2139 3.6 110	h m ft cm 5.6 171 2.1 64 5.4 165 3.6 110	8 Sa 0201 5.2 158 0909 2.5 76 1526 5.5 168 2203 3.1 94	h m ft cm 5.2 158 2.5 76 5.5 168 3.1 94	23 Su 0403 5.2 158 1016 2.5 76 1618 5.9 180 2306 1.8 55	h m ft cm 5.2 158 2.5 76 5.9 180 1.8 55	8 M 0240 4.8 146 0856 2.7 82 1503 5.6 171 2209 1.9 58	h m ft cm 4.8 146 2.7 82 5.6 171 1.9 58	23 Tu 0451 4.5 137 1027 3.0 91 1604 5.4 165 2325 1.2 37	h m ft cm 4.5 137 3.0 91 5.4 165 1.2 37
9 Th 0112 5.3 162 0913 2.5 76 1556 4.9 149 2151 4.0 122	h m ft cm 5.3 162 2.5 76 4.9 149 4.0 122	24 F 0259 5.5 168 1004 2.1 64 1635 5.7 174 2244 2.9 88	h m ft cm 5.5 168 2.1 64 5.7 174 2.9 88	9 Su 0326 5.3 162 1009 2.5 76 1612 5.7 174 2254 2.4 73	h m ft cm 5.3 162 2.5 76 5.7 174 2.4 73	24 M 0514 5.3 162 1109 2.6 79 1659 6.0 183 2352 1.3 40	h m ft cm 5.3 162 2.6 79 6.0 183 1.3 40	9 Tu 0404 4.9 149 1005 2.8 85 1556 5.8 177 2306 1.2 37	h m ft cm 4.9 149 2.8 85 5.8 177 1.2 37	24 W 0559 4.6 140 1125 2.9 88 1656 5.5 168	h m ft cm 4.6 140 2.9 88 5.5 168
10 F 0248 5.3 162 1018 2.3 70 1646 5.3 162 2251 3.5 107	h m ft cm 5.3 162 2.3 70 5.3 162 3.5 107	25 Sa 0427 5.7 174 1100 2.0 61 1716 6.1 186 2335 2.2 67	h m ft cm 5.7 174 2.0 61 6.1 186 2.2 67	10 M 0438 5.5 168 1100 2.4 73 1654 6.1 186 2339 1.7 52	h m ft cm 5.5 168 2.4 73 6.1 186 1.7 52	25 Tu 0608 5.4 165 1155 2.6 79 1737 6.1 186 2358 0.5 15	h m ft cm 5.4 165 2.6 79 6.1 186 0.5 15	10 W 0519 5.1 155 1107 2.8 85 1649 6.1 186 2358 0.5 15	h m ft cm 5.1 155 2.8 85 6.1 186 0.5 15	25 O 0012 0.8 24 0647 4.8 146 1215 2.8 85 1743 5.6 171	h m ft cm 0.8 24 4.8 146 2.8 85 5.6 171
11 Sa 0409 5.5 168 1108 2.1 64 1721 5.7 174 2334 2.8 85	h m ft cm 5.5 168 2.1 64 5.7 174 2.8 85	26 Su 0531 5.9 180 1147 2.0 61 1750 6.3 192	h m ft cm 5.9 180 2.0 61 6.3 192	11 Tu 0538 5.8 177 1146 2.4 73 1732 6.4 195	h m ft cm 5.8 177 2.4 73 6.4 195	26 W 0032 0.9 27 0652 5.6 171 1236 2.7 82 1812 6.2 189	h m ft cm 0.9 27 5.6 171 2.7 82 6.2 189	11 Th 0621 5.4 165 1202 2.8 85 1739 6.4 195	h m ft cm 5.4 165 2.8 85 6.4 195	26 F 0053 0.5 15 0725 5.0 152 1258 2.7 82 1825 5.7 174	h m ft cm 0.5 15 5.0 152 2.7 82 5.7 174
12 Su 0511 5.9 180 1149 1.9 58 1751 6.1 186	h m ft cm 5.9 180 1.9 58 6.1 186	27 M 0017 1.6 49 0621 6.1 186 1227 2.1 64 1820 6.6 201	h m ft cm 1.6 49 6.1 186 2.1 64 6.6 201	12 Th 0020 1.0 30 0629 6.1 186 1227 2.4 73 1810 6.8 207	h m ft cm 1.0 30 6.1 186 2.4 73 6.8 207	27 F 0047 0.0 0 0729 5.7 174 1312 2.7 82 1845 6.3 192	h m ft cm 0.0 0 5.7 174 2.7 82 6.3 192	12 F 0047 0.0 0 0714 5.7 174 1251 2.7 82 1827 6.7 204	h m ft cm 0.0 0 5.7 174 2.7 82 6.7 204	27 O 0131 0.3 9 0757 5.2 158 1334 2.6 79 1902 5.9 180	h m ft cm 0.3 9 5.2 158 2.6 79 5.9 180
13 M 0012 2.2 67 0600 6.2 189 1226 1.8 55 1820 6.5 198	h m ft cm 2.2 67 6.2 189 1.8 55 6.5 198	28 Tu 0055 1.1 34 0702 6.3 192 1303 2.2 67 1849 6.7 204	h m ft cm 1.1 34 6.3 192 2.2 67 6.7 204	13 Th 0100 0.4 12 0717 6.3 192 1306 2.5 76 1848 7.0 213	h m ft cm 0.4 12 6.3 192 2.5 76 7.0 213	28 F 0143 0.5 15 0802 5.7 174 1345 2.8 85 1917 6.4 195	h m ft cm 0.5 15 5.7 174 2.8 85 6.4 195	13 Sa 0134 -0.4 -12 0802 5.8 177 1337 2.7 82 1914 6.9 210	h m ft cm -0.4 -12 5.8 177 2.7 82 6.9 210	28 Su 0206 0.3 9 0827 5.3 162 1407 2.6 79 1937 6.0 183	h m ft cm 0.3 9 5.3 162 2.6 79 6.0 183
14 Tu 0047 1.5 46 0644 6.5 198 1259 1.9 58 1850 6.8 207	h m ft cm 1.5 46 6.5 198 1.9 58 6.8 207	29 W 0129 0.9 27 0738 6.3 192 1335 2.4 73 1916 6.8 207	h m ft cm 0.9 27 6.3 192 2.4 73 6.8 207	14 F 0141 0.1 3 0802 6.4 195 1345 2.7 82 1927 7.2 219	h m ft cm 0.1 3 6.4 195 2.7 82 7.2 219	29 Sa 0216 0.5 15 0834 5.7 174 1416 2.9 88 1948 6.4 195	h m ft cm 0.5 15 5.7 174 2.9 88 6.4 195	14 M 0220 -0.5 -15 0848 5.9 180 1422 2.7 82 2001 6.9 210	h m ft cm -0.5 -15 5.9 180 2.7 82 6.9 210	29 M 0238 0.3 9 0857 5.4 165 1438 2.7 82 2011 6.1 186	h m ft cm 0.3 9 5.4 165 2.7 82 6.1 186
15 W 0121 1.0 30 0726 6.7 204 1332 2.0 61 1920 7.1 216	h m ft cm 1.0 30 6.7 204 2.0 61 7.1 216	30 Th 0200 0.8 24 0811 6.3 192 1405 2.6 79 1942 6.8 207	h m ft cm 0.8 24 6.3 192 2.6 79 6.8 207	15 Sa 0224 0.0 0 0847 6.3 192 1423 2.9 88 2007 7.2 219	h m ft cm 0.0 0 6.3 192 2.9 88 7.2 219	30 Su 0248 0.7 21 0906 5.6 171 1444 3.1 94 2021 6.3 192	h m ft cm 0.7 21 5.6 171 3.1 94 6.3 192	15 M 0307 -0.3 -9 0933 5.8 177 1508 2.8 85 2048 6.8 207	h m ft cm -0.3 -9 5.8 177 2.8 85 6.8 207	30 Tu 0309 0.4 12 0926 5.4 165 1508 2.7 82 2045 6.1 186	h m ft cm 0.4 12 5.4 165 2.7 82 6.1 186
31 F 0230 0.8 24 0843 6.2 189 1431 2.9 88 2010 6.7 204	h m ft cm 0.8 24 6.2 189 2.9 88 6.7 204	31 O 0339 0.6 18 0956 5.5 168 1540 2.7 82 2122 6.0 183	h m ft cm 0.6 18 5.5 168 2.7 82 6.0 183								

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.

Heights are referred to the chart datum of soundings which is about 1 foot (30 centimeters) below mean low water springs.

# Chuuk, Moen Island, Caroline Islands, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m 1436 Tu 2314	ft 1.2 0.0	cm 37 0	h m 16 W 2244	ft 1.1 -0.1	cm 34 -3	h m 1 F 2214	ft 1.4 -0.3	cm 43 -9	h m 16 Sa 2128	ft 1.8 -0.6	cm 55 -18
●											
2 W 1301 2259	1.3 -0.1	40 -3	17 Th 1145 2203	1.4 -0.3	43 -9	2 Sa 1238 2212	1.6 -0.4	49 -12	17 Su 1254 2136	2.0 -0.6	61 -18
3 Th 1229 2251	1.4 -0.2	43 -6	18 F 1215 2152	1.7 -0.6	52 -18	3 Su 1302 2206	1.8 -0.4	55 -12	18 M 1327 2144	2.2 -0.5	67 -15
4 F 1239 2243	1.6 -0.3	49 -9	19 Sa 1249 2200	2.0 -0.7	61 -21	4 M 1328 2201	2.0 -0.4	61 -12	19 Tu 1355 2149	2.3 -0.4	70 -12
5 Sa 1301 2234	1.8 -0.4	55 -12	20 Su 1324 2215	2.2 -0.8	67 -24	5 Tu 1355 2201	2.2 -0.4	67 -12	5 W 0351 0647	0.6 12	18 1420 2153
6 Su 1328 2230	2.0 -0.4	61 -12	21 M 1357 2231	2.4 -0.7	73 -21	6 W 0402 0642	0.4 0.3	12 9	21 O 0330 0737	0.7 12	27 1442 2155
7 M 1357 2233	2.1 -0.4	64 -12	22 Tu 1428 2246	2.4 -0.6	73 -18	7 Th 0350 0730	0.5 0.2	15 6	22 F 0330 0817	1.0 0.3	30 1449 2155
●			○			●			○		
8 Tu 1427 2244	2.3 -0.5	70 -15	23 W 1456 2258	2.4 -0.4	73 -12	8 F 0354 0810	0.7 0.2	21 6	23 Sa 0340 0852	1.2 0.3	37 1515 2153
●											
9 W 0421 0624 1455 2300	0.1 0.0 2.3 -0.4	3 0 70 -12	24 Th 0420 0732	0.3 0.1	9 3	9 Sa 0407 0849	0.8 0.3	24 9	24 Sa 0340 0921	1.3 0.3	40 1538 2149
10 Th 0425 0711 1523 2318	0.1 0.0 2.3 -0.4	3 0 70 -12	25 F 0425 0816	0.5 0.2	15 6	10 Su 0423 0927	1.0 0.3	25 M 0408 0955	1.0 0.5	49 1556 2142	
11 F 0442 0748 1549 2335	0.2 0.1 2.2 -0.3	6 3 67 -9	26 Sa 0437 0854	0.7 0.3	21 9	11 M 0441 1007	1.2 0.5	26 Tu 0425 1023	1.6 0.6	55 1564 2134	
12 Sa 0504 0822 1611 2349	0.4 0.2 2.0 -0.1	12 6 61 -3	27 Su 0454 0928	0.9 0.4	27 12	12 Tu 0503 1050	1.4 0.7	27 W 0442 1049	1.7 0.7	64 1543 2128	
13 Su 0531 0854 1626 2355	0.5 0.4 1.7 0.0	15 12 52 0	28 M 0514 0959	1.0 0.6	30 13	13 Th 0530 1157	1.5 0.8	28 Th 0502 1115	1.7 0.9	61 1543 2127	
14 M 0605 0926 1623 2349	0.7 0.6 1.4 0.1	21 18 43 3	29 Tu 0537 1027	1.1 0.8	34 14	14 Th 0607 2131	1.5 -0.3	29 F 0528 2128	1.6 -0.2	58 1523 2127	
15 Tu 0657 0952 1520 2327	0.9 0.8 1.1 0.1	27 24 34 3	30 W 0608 1051	1.2 1.0	37 15	15 F 0729 2124	1.5 -0.5	30 Sa 0551 2040	1.8 -0.4	52 1444 2218	
31 Th 0701 1056	1.2 1.1	37 34	31 Th 0701 1056	1.2 1.1	37 37						31 M 1044 2025
		-9									1.6 0.0

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to mean lower low water which is the chart datum of soundings.

# Chuuk, Moen Island, Caroline Islands, 2008

Times and Heights of High and Low Waters

April			May			June						
Time	Height		Time	Height		Time	Height		Time	Height		
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm	
<b>1</b> Tu 2013	1155 0.1	1.7 52 3	<b>16</b> W 0307 0717 1246 1942	1.3 40 1.1 34 1.6 49 0.3 9	1 Th 0218 0641 1142 1845	1.4 43 1.1 34 1.5 46 0.4 12	<b>16</b> F 0122 0859 1245 1749	1.7 52 0.7 21 0.9 27 0.5 15	<b>1</b> Su 0053 0853 1348 1657	2.0 61 0.2 6 0.5 15 0.4 12	<b>16</b> M 0056 1044	2.0 61 0.0 0 0.5 15 0.0 0
<b>2</b> W 0324 0619 1235 2006	1.2 37 1.1 34 1.9 58 0.1 3	<b>17</b> Th 0216 0738 1312 1933	1.4 43 0.9 27 1.5 46 0.4 12	<b>2</b> F 0139 0722 1237 1846	1.5 46 0.8 24 1.4 43 0.4 12	<b>17</b> Sa 0114 0906 1317 1742	1.9 58 0.5 15 0.7 21 0.5 15	<b>2</b> M 0113 0934	2.3 70 -0.1 -3	<b>17</b> Tu 0120 1040	2.1 64 -0.1 -3	
<b>3</b> Th 0235 0701 1309 2005	1.2 37 0.8 24 1.9 58 0.2 6	<b>18</b> F 0158 0804 1333 1927	1.7 52 0.7 21 1.4 43 0.4 12	<b>3</b> Sa 0133 0805 1324 1850	1.8 55 0.5 15 1.3 40 0.4 12	<b>18</b> Su 0121 0920 1341 1745	2.1 64 0.4 12 0.6 18 0.4 12	<b>3</b> Tu 0141 1019	2.5 76 -0.3 -9	<b>18</b> W 0147 1045	2.2 67 -0.1 -3	
<b>4</b> F 0220 0741 1343 2008	1.4 43 0.6 18 1.9 58 0.3 9	<b>19</b> Sa 0158 0830 1352 1924	1.9 58 0.5 15 1.2 37 0.4 12	<b>4</b> Su 0143 0849 1408 1853	2.1 64 0.2 6 1.0 30 0.4 12	<b>19</b> M 0137 0939 1401 1753	2.2 67 0.2 6 0.5 15 0.3 9	<b>4</b> W 0213 1108	2.7 82 -0.4 -12	<b>19</b> Th 0217 1059	2.3 70 -0.1 -3	
<b>5</b> Sa 0222 0821 1415 2013	1.7 52 0.4 12 1.7 52 0.3 9	<b>20</b> Su 0208 0857 1408 1924	2.1 64 0.4 12 1.1 34 0.4 12	<b>5</b> M 0201 0937 1448 1853	2.4 73 0.0 0 0.7 21 0.4 12	<b>20</b> Tu 0157 1002 1419 1806	2.3 70 0.2 6 0.4 12 0.2 6	<b>5</b> Th 0247 1201	2.7 82 -0.4 -12	<b>20</b> F 0246 1119	2.4 73 -0.1 -3	
<b>6</b> Su 0234 0904 1446 ● 2015	2.0 61 0.3 9 1.5 46 0.4 12	<b>21</b> M 0223 0925 1423 1926	2.3 70 0.3 9 0.9 27 0.3 9	<b>6</b> Tu 0225 1029 1524 1848	2.6 79 -0.1 -3 0.5 15 0.3 9	<b>21</b> W 0221 1031 1434 1820	2.4 73 0.1 3 0.3 9 0.2 6	<b>6</b> F 0320 1259	2.6 79 -0.3 -9	<b>21</b> Sa 0316 1142 1634 1837	2.4 73 -0.1 -3 0.2 6 0.1 3	
<b>7</b> M 0251 0949 1512 2013	2.2 67 0.2 6 1.1 34 0.3 9	<b>22</b> Tu 0241 0954 1433 1929	2.3 70 0.3 9 0.8 24 0.3 9	<b>7</b> W 0252 1132 1549 1835	2.7 82 -0.1 -3 0.2 6 0.1 3	<b>22</b> Th 0247 1105 1446 1833	2.4 73 0.1 3 0.3 9 0.1 3	<b>7</b> Sa 0352 1403	2.5 76 -0.2 -6	<b>22</b> Su 0344 1207	2.3 70 0.0 0	
<b>8</b> Tu 1040 1528 2005	2.4 73 0.2 6 0.8 24 0.3 9	<b>23</b> W 0301 1026 1437 1931	2.4 73 0.3 9 0.7 21 0.2 6	<b>8</b> Th 0321 1311 1533 1817	2.7 82 -0.1 -3 0.0 0 -0.1 -3	<b>23</b> F 0314 1148 1454 1844	2.4 73 0.1 3 0.2 6 0.1 3	<b>8</b> Su 0418 1508	2.3 70 0.0 0	<b>23</b> M 0411 1232	2.2 67 0.0 0	
<b>9</b> W 0334 1147 1512 1950	2.5 76 0.3 9 0.5 15 0.1 3	<b>24</b> Th 0322 1102 1432 1935	2.3 70 0.4 12 0.6 18 0.1 3	<b>9</b> F 0350 1812	2.6 79 -0.1 -3	<b>24</b> Sa 0342 1247 1453 1850	2.3 70 0.1 6 0.2 6 0.1 3	<b>9</b> M 0434 1545	2.0 61 0.2 6	<b>24</b> Tu 0435 1254	2.0 61 0.1 3	
<b>10</b> Th 0359 1936	2.4 73 -0.1 -3	<b>25</b> F 0345 1155 1407 1939	2.3 70 0.4 12 0.5 15 0.1 3	<b>10</b> Sa 0418 1823	2.4 73 -0.1 -3	<b>25</b> Su 0412 1844	2.2 67 0.1 3	<b>10</b> Tu 0434 1543	1.7 52 0.4 12	<b>25</b> W 0452 1310	1.8 55 0.2 6	
<b>11</b> F 0424 1933	2.3 70 -0.2 -6	<b>26</b> Sa 0410 1942	2.2 67 0.1 3	<b>11</b> Su 0441 1834	2.1 64 -0.1 -3	<b>26</b> M 0441 1804	2.1 64 0.2 6	<b>11</b> W 0404 1508	1.5 46 0.5 15	<b>26</b> Th 0447 1319	1.5 46 0.3 9	
<b>12</b> Sa 0449 1939	2.1 64 -0.2 -6	<b>27</b> Su 0438 1938	2.0 61 0.1 3	<b>12</b> M 0452 1839	1.8 55 0.1 3	<b>27</b> Tu 0509 1650	1.9 58 0.3 9	<b>12</b> Th 0248 1336	1.4 43 0.5 15	<b>27</b> F 0216 1311 2357	1.2 37 0.4 12 1.4 43	
<b>13</b> Su 0512 1948	1.9 58 -0.2 -6	<b>28</b> M 0510 1925	1.9 58 0.1 3	<b>13</b> Tu 0434 1834	1.6 49 0.3 9	<b>28</b> W 0527 1638	1.6 49 0.4 12	<b>13</b> F 0109 1153	1.5 46 0.4 12	<b>28</b> Sa 1206	0.3 9	
<b>14</b> M 0521 0833 1059 1952	1.6 49 1.5 46 1.6 49 0.0 0	<b>29</b> Tu 0553 1905	1.6 49 0.2 6	<b>14</b> W 0324 1820	1.4 43 0.4 12	<b>29</b> Th 0327 1641	1.4 43 0.4 12	<b>14</b> Sa 0037 1116	1.7 52 0.3 9	<b>29</b> Su 0000 0947	1.7 52 0.0 0	
<b>15</b> Tu 0433 0712 1209 1950	1.4 43 1.3 40 1.6 49 0.1 3	<b>30</b> W 1020 1850	1.5 46 0.3 9	<b>15</b> Th 0202 0907 1157 1803	1.5 46 0.9 27 1.0 30 0.5 15	<b>30</b> F 0113 0805 1010 1647	1.4 43 0.8 24 0.9 27 0.5 15	<b>15</b> Su 0039 1057	1.9 58 0.1 3	<b>30</b> M 0026 0945	2.0 61 -0.3 -9	
						<b>31</b> Sa 0046 0818 1222 1653	1.7 52 0.5 15 0.7 21 0.5 15					

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to mean lower low water which is the chart datum of soundings.

## **Chuuk, Moen Island, Caroline Islands, 2008**

## Times and Heights of High and Low Waters

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to mean lower low water which is the chart datum of soundings.

# Chuuk, Moen Island, Caroline Islands, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 W 0229	1.2	37	16 Th 0249	0.9	27	1 Sa 0217	0.3	9	1 M 0032	-0.4	-12
0808	0.2	6	Th 0743	0.1	3	Sa 0701	-0.1	-3	Su 1533	2.4	73
1454	2.1	64	1448	2.3	70	1506	2.2	67			
2134	0.3	9	2223	0.0	0	2305	0.1	3			
2 Th 0237	1.0	30	17 F 0309	0.5	15	2 Su 0208	0.3	9	17 M 0537	-0.4	-12
0805	0.1	3	F 0737	0.1	3	Su 0706	-0.1	-3	17 Tu 1602	2.3	70
1510	2.1	64	1512	2.4	73	1529	2.1	64			
2205	0.3	9	2329	0.0	0						
3 F 0238	0.8	24	18 Sa 0306	0.2	6	3 M 0711	-0.2	-6	18 Tu 0547	-0.4	-12
0801	0.0	0	Sa 0723	-0.1	-3	M 1552	2.0	61	18 W 1626	2.0	61
1528	2.1	64	1537	2.4	73						
2236	0.4	12									
4 Sa 0228	0.7	21	19 Su 0706	-0.2	-6	4 Tu 0716	-0.2	-6	19 W 0602	-0.3	-9
0759	0.0	0	Su 1603	2.3	70	Tu 1615	1.9	58	W 1637	1.7	52
1546	2.0	61									
2310	0.5	15									
5 Su 0203	0.6	18	20 M 0658	-0.4	-12	5 W 0715	-0.1	-3	20 Th 0609	-0.2	-6
0759	-0.1	-3	M 1628	2.1	64	W 1638	1.7	52	Th 1620	1.5	46
1604	1.9	58									
6 M 0802	-0.2	-6	21 Tu 0703	-0.4	-12	6 Th 0704	-0.1	-3	21 F 0606	0.0	0
1624	1.8	55	Tu 1650	1.8	55	W 1652	1.5	46	W 1515	1.3	40
7 Tu 0805	-0.2	-6	22 W 0713	-0.4	-12	7 F 0641	0.0	0	22 Sa 0553	0.2	6
1646	1.6	49	W 1657	1.5	46	F 1551	1.3	40	Sa 1355	1.3	40
8 W 0805	-0.2	-6	23 Th 0719	-0.3	-9	8 Sa 0620	0.1	3	23 Su 0534	0.3	9
1704	1.4	43	Th 1609	1.3	40	Sa 1409	1.2	37	Su 1314	1.5	46
9 Th 0757	-0.1	-3	24 F 0718	-0.1	-3	8 Sa 1857	0.9	27	23 M 2048	0.3	9
2328	1.5	46	F 1448	1.2	37	Sa 2304	1.1	34	W 2356	0.4	12
10 F 0744	0.0	0	25 Sa 0017	1.3	40	9 Su 0611	0.1	3	8 M 0356	0.2	6
1500	1.1	34	Sa 0712	0.1	3	Su 1325	1.4	43	Tu 1240	1.4	43
1825	1.0	30	Sa 1359	1.3	40	Su 1923	0.6	18	W 2048	0.3	9
11 Sa 0009	1.6	49	26 Su 0050	1.2	37	10 M 0008	1.0	30	8 W 2356	0.4	12
0734	0.0	0	Su 0703	0.2	6	M 0612	0.2	6	M 1241	1.7	52
1413	1.2	37	Su 1341	1.6	49	M 1315	1.6	49	W 2057	-0.1	-3
1856	0.7	21	Su 1940	0.7	21	M 1959	0.3	9			
12 Su 0044	1.6	49	27 M 0114	1.0	30	10 Tu 0025	0.3	9	9 Tu 0409	0.2	6
0730	0.1	3	M 0656	0.2	6	Tu 0507	0.2	6	W 2057	-0.1	-3
1356	1.4	43	M 1341	1.8	55	Tu 1312	1.9	58			
1931	0.5	15	M 2031	0.3	9	Tu 2139	0.1	3			
13 M 0117	1.6	49	28 Tu 0134	0.9	27	12 W 0145	0.7	21	10 W 0146	0.2	6
0733	0.1	3	Tu 0652	0.2	6	W 0623	0.2	6	W 0420	0.1	3
1358	1.7	52	Tu 1351	2.0	61	W 1342	2.2	67	W 1300	2.0	61
2009	0.3	9	Tu 2058	0.2	6	W 2123	-0.2	-6	W 2127	-0.4	-12
14 Tu 0150	1.4	43	29 W 0151	0.7	21	12 Th 0145	0.7	21	10 Th 0146	0.2	6
0738	0.2	6	W 0652	0.1	3	Th 0522	0.0	0	W 0420	0.1	3
1410	1.9	58	W 1407	2.2	67	W 1348	2.2	67	W 1300	2.0	61
2049	0.1	3	W 2126	0.1	3	W 2211	-0.2	-6	W 2127	-0.4	-12
15 W 0221	1.2	37	30 Th 0205	0.6	18	12 F 0207	0.1	3	10 F 1400	2.5	76
0742	0.2	6	Th 0654	0.1	3	Th 0522	0.0	0	W 2247	-0.7	-21
1427	2.1	64	Th 1425	2.3	70	W 1348	2.2	67			
O 2133	0.0	0	Th 2155	0.1	3	W 2211	-0.2	-6			
16 F 0657	0.0	0	31 F 0214	0.4	12	12 M 1400	2.5	76	27 F 1413	2.1	64
			F 1445	2.3	70	M 1400	2.5	76	W 2251	-0.4	-12
			F 2227	0.1	3	W 2247	-0.7	-21			

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to mean lower low water which is the chart datum of soundings.

# Pohnpei Harbor, Caroline Islands, 2008

Times and Heights of High and Low Waters

January				February				March												
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height									
h m	ft	cm		h m	ft	cm		h m	ft	cm										
1 Tu	0225	1.3	40	16	0141	1.1	34	1 Sa	0038	1.3	40	16	0829	2.8	85	16 Su	1211	3.3	101	
	1001	2.8	85	W	0848	2.9	88		1143	2.8	85	Sa	2042	1.0	30		2008	1.1	34	
	1605	2.3	70		1519	1.9	58	F	2238	1.3	40									
	1925	2.4	73	●	1941	2.2	67					Sa	2201	1.4	43					
2 W	0306	1.4	43	17	0222	1.3	40	2 Sa	1302	3.1	94	2 Su	1234	3.0	91	17 M	0231	2.4	73	
	1132	2.9	88	Th	1037	3.0	91		2120	1.1	34	Su	2050	1.2	37		0636	2.0	61	
					1931	1.6	49						1325	3.7	113	M	1312	3.7	113	
					2237	1.7	52						2053	0.7	21		2020	0.9	27	
3 Th	0406	1.5	46	18	0346	1.4	43	3 Su	0306	1.7	52	18 M	0247	2.2	67	3 M	0319	2.1	64	
	1233	3.2	98	F	1217	3.3	101		0604	1.6	49		0723	1.4	43		0729	1.6	49	
	2041	1.6	49		2021	1.1	34		1340	3.5	107		1407	4.0	122		1351	4.0	122	
									2113	0.8	24		2111	0.4	12		2039	0.9	27	
4 F	0032	1.8	55	19	0137	1.7	52	4 M	0255	2.0	61	19 Tu	0302	2.5	76	4 Tu	0240	2.4	73	
	0521	1.4	43	Sa	0547	1.4	43		0717	1.4	43		0809	1.0	30		0806	1.2	37	
	1314	3.5	107		1320	3.7	113		1412	3.8	116		1442	4.3	131		1424	4.2	128	
	2054	1.3	40		2053	0.7	21		2123	0.6	18		2131	0.3	9		2054	0.7	21	
5 Sa	0148	1.8	55	20	0229	1.9	58	5 Tu	0308	2.2	67	20 W	0323	2.9	88	5 W	0244	2.8	85	
	0623	1.4	43	Su	0704	1.2	37		0801	1.1	34		0847	0.8	24		0758	1.3	40	
	1348	3.7	113		1407	4.1	125		1442	4.1	125		1514	4.5	137		1422	4.1	125	
	2113	1.0	30		2123	0.4	12		2140	0.3	9		2152	0.2	6		2104	0.5	15	
6 Su	0230	2.0	61	21	0305	2.2	67	6 W	0328	2.5	76	21 Th	0345	3.2	98	6 Th	0300	3.1	94	
	0712	1.2	37	M	0758	1.0	30		0839	0.9	27		0921	0.6	18		0910	0.8	24	
	1420	4.0	122		1448	4.4	134		1512	4.4	134		1543	4.5	137		1519	4.2	128	
	2134	0.7	21		2152	0.2	6		2201	0.2	6	O	2213	0.2	6		2130	0.6	18	
7 M	0304	2.1	64	22	0336	2.4	73	7 Th	0351	2.8	85	22 F	0409	3.4	104	7 F	0322	3.5	107	
	0754	1.1	34	Tu	0843	0.8	24		0914	0.7	21		0953	0.5	15		0939	0.7	21	
	1450	4.2	128		1525	4.6	140		1543	4.5	137		1610	4.3	131		1542	4.1	125	
	2158	0.5	15		2220	0.1	3	●	2223	0.1	3		2233	0.3	9		2148	0.6	18	
8 Tu	0334	2.2	67	23	0406	2.6	79	8 F	0416	3.1	94	23 Sa	0433	3.6	110	8 Sa	0346	3.8	116	
	0833	1.0	30	W	0923	0.6	18		0948	0.6	18		1023	0.6	18		1007	0.7	21	
	1521	4.4	134		1559	4.6	140		1613	4.5	137		1634	4.1	125		1604	3.8	116	
	● 2223	0.3	9	O	2247	0.1	3		2247	0.2	6		2251	0.4	12	●	2209	0.4	12	
9 W	0404	2.4	73	24	0436	2.8	85	9 Sa	0442	3.3	101	24 Su	0456	3.7	113	9 Su	0412	4.0	122	
	0909	0.9	27	Th	1000	0.6	18		1022	0.6	18		1052	0.7	21		1034	0.9	27	
	1553	4.5	137		1631	4.5	137		1642	4.3	131		1655	3.8	116		1624	3.6	110	
	2250	0.3	9		2313	0.2	6		2310	0.3	9		2307	0.5	15		2219	0.8	24	
10 Th	0434	2.5	76	25	0505	3.0	91	10 Su	0509	3.4	104	25 M	0520	3.7	113	10 M	0440	4.1	125	
	0945	0.8	24	F	1036	0.7	21		1057	0.6	18		1119	1.0	30		1100	1.0	30	
	1624	4.5	137		1700	4.3	131		1711	4.0	122		1712	3.5	107		1640	3.3	101	
	2317	0.3	9		2336	0.3	9		2333	0.4	12		2321	0.7	21		2232	0.9	27	
11 F	0505	2.7	82	26	0534	3.1	94	11 M	0539	3.4	104	26 Tu	0543	3.6	110	11 Tu	0509	4.1	125	
	1021	0.9	27	Sa	1109	0.9	27		1133	0.8	24		1145	1.2	37		1127	0.8	24	
	1656	4.4	134		1726	3.9	119		1738	3.6	110		1724	3.1	94		1654	3.0	91	
	2345	0.4	12		2358	0.5	15		2354	0.6	18		2332	0.8	24		2244	1.0	30	
12 Sa	0536	2.8	85	27	0603	3.1	94	12 Tu	0611	3.4	104	27 W	0606	3.5	107	12 Th	0526	3.9	119	
	1058	1.0	30	Su	1141	1.1	34		1213	1.1	34		1211	1.5	46		1155	1.5	46	
	1728	4.1	125		1747	3.5	107		1802	3.1	94		1728	2.7	82		1704	2.7	82	
													2339	0.9	27		2252	1.1	34	
13 Su	0013	0.5	15	28	0017	0.7	21	13 W	0013	0.8	24	28 Th	0631	3.3	101	13 Th	0550	3.7	113	
	0610	2.8	85	M	0632	3.1	94		0648	3.3	101		1241	1.9	58		1231	1.8	55	
	1138	1.1	34		1212	1.4	43		1303	1.5	46		1718	2.4	73		1705	2.4	73	
	1759	3.7	113		1803	3.1	94		1820	2.5	76		2339	1.1	34		2254	1.3	40	
14 M	0041	0.7	21	29	0032	0.8	24	14 Th	0028	1.1	34	29 F	0705	3.0	91	14 F	0621	3.4	104	
	0649	2.9	88	Tu	0704	3.0	91		0741	3.1	94		1344	2.1	64		1352	2.0	61	
	1223	1.4	43		1245	1.7	52		1446	1.9	58		1559	2.2	67		1616	2.1	64	
	1831	3.3	101		1809	2.7	82	●	1756	2.0	61	O	2321	1.3	40	●	2234	1.6	49	
15 Tu	0109	0.9	27	30	0044	1.0	30	15 F	0027	1.3	40					15 Sa	0859	3.1	94	
	0738	2.9	88	W	0744	2.8	85		0935	3.0	91		2137	1.3	40		30 Su	0716	3.1	94
	1323	1.7	52		1330	2.0	61									O	2040	1.7	52	
	1904	2.8	85		1752	2.4	73									31 M	1111	3.1	94	
								31 Th	0049	1.1	34						1938	1.5	46	
									0853	2.7	82									

Time meridian 165° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.

Heights are referred to the chart datum of soundings which is about 1 foot (30 centimeters) below mean low water springs.

## Pohnpei Harbor, Caroline Islands, 2008

## Times and Heights of High and Low Waters

Time meridian 165° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.

Heights are referred to the chart datum of soundings which is about 1 foot (30 centimeters) below mean low water springs.

# Pohnpei Harbor, Caroline Islands, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm		h m	ft	cm		h m	ft	cm	
1 Tu	0137	4.1	125	16 W	0207	3.8	116	1 F	0304	4.5	137
0853	0.6	18		0928	0.7	21		0958	0.2	6	
1430	2.2	67		1505	2.0	61		1549	2.8	85	Sa
1926	1.0	30		1944	1.2	37		2108	0.7	21	
2 W	0224	4.4	134	17 Th	0239	4.0	122	2 Sa	0341	4.6	140
0935	0.3	9		0949	0.5	15		1026	0.2	6	
1517	2.3	70		1532	2.2	67		1618	3.0	91	
2017	0.9	27		2025	1.1	34		2148	0.7	21	
3 Th	0308	4.5	137	18 F	0310	4.2	128	3 Su	0415	4.5	137
1014	0.2	6		1012	0.4	12		1052	0.2	6	
1559	2.4	73		1558	2.4	73		1648	3.2	98	
● 2104	0.8	24		○ 2102	1.0	30		2226	0.7	21	
4 F	0350	4.6	140	19 Sa	0340	4.3	131	4 M	0446	4.3	131
1051	0.1	3		1035	0.3	9		1117	0.4	12	
1638	2.5	76		1625	2.6	79		1718	3.3	101	
2148	0.8	24		2138	0.9	27		2302	0.8	24	
5 Sa	0430	4.5	137	20 Su	0411	4.3	131	5 Tu	0515	4.0	122
1126	0.2	6		1100	0.3	9		1140	0.5	15	
1716	2.6	79		1652	2.8	85		1748	3.4	104	
2232	0.9	27		2213	0.9	27		2337	1.1	34	
6 Su	0508	4.3	131	21 M	0441	4.2	128	6 W	0540	3.6	110
1200	0.4	12		1125	0.4	12		1200	0.7	24	
1754	2.7	82		1721	2.9	88		1818	3.4	104	
2314	1.0	30		2249	1.0	30					
7 M	0544	4.0	122	22 Tu	0512	4.0	122	7 Th	0013	1.4	43
1232	0.6	18		1150	0.5	15		0559	3.1	94	
1833	2.8	85		1752	3.0	91		1216	0.9	27	
2358	1.2	37		2327	1.1	34		1850	3.3	101	
8 Tu	0618	3.6	110	23 W	0542	3.7	113	8 F	0051	1.7	52
1302	0.8	24		1215	0.7	21		0610	2.7	82	
1915	2.8	85		1826	3.1	94		1228	1.1	34	
9 W	0045	1.5	46	24 Th	0010	1.3	40	9 Sa	0143	2.0	61
0649	3.2	98		0613	3.3	101		0558	2.3	70	
1330	1.0	30		1241	0.9	27		1230	1.3	40	
2004	2.8	85		1906	3.1	94		○ 2024	3.0	91	
10 Th	0142	1.8	55	25 F	0102	1.5	46	10 Su	1207	1.4	43
0716	2.7	82		0645	2.9	88		2244	2.9	88	
1358	1.2	37		1308	1.0	30					
● 2105	2.9	88		1959	3.1	94					
11 F	0315	2.0	61	26 Sa	0223	1.8	55	11 M	1002	1.4	43
0739	2.3	70		0719	2.3	70					
1427	1.3	40		1338	1.2	37					
2226	2.9	88		○ 2121	3.1	94					
12 Sa	1507	1.4	43	27 Su	0543	1.7	52	12 Tu	0036	3.1	94
2350	3.1	94		0827	1.8	55		0902	1.2	37	
				1424	1.4	43		1524	1.9	58	
				2315	3.3	101		1746	1.8	55	
13 Su	0839	1.6	49	28 M	0754	1.3	40	27 W	0046	3.7	113
1216	1.7	52		1309	1.7	52		0823	0.9	27	
1623	1.5	46		1636	1.6	49		1428	2.4	73	
14 M	0049	3.3	101	29 Tu	0041	3.6	110	28 Th	0137	4.1	125
0852	1.2	37		0830	0.9	27		0857	1.0	30	
1358	1.7	52		1413	1.9	58		1454	2.2	67	
1752	1.5	46		1828	1.4	43		1907	1.7	52	
15 Tu	0132	3.5	107	30 W	0138	4.0	122	14 F	0155	3.8	116
0909	1.0	30		0900	0.5	15		0906	0.7	21	
1437	1.9	58		1448	2.2	67		1500	2.4	73	
1856	1.4	43		1935	1.2	37		1951	1.4	43	
16 Th	0224	4.3	131	31 Th	0224	4.3	131	29 F	0216	4.4	134
0930	0.3	9		0930	0.3	9		0904	0.5	15	
17 W	0324	4.0	122	32 W	0225	4.0	122	29 M	0259	4.5	137
1003	0.7	21		1515	2.7	82		0921	0.6	18	
				2027	1.2	37		2027	1.0	30	
18 Th	0427	3.9	119	33 Th	0322	4.6	140	30 Tu	0253	4.2	128
1024	0.9	27		0948	0.5	15		0919	0.6	18	
				1548	3.8	116		1442	3.5	107	
				○ 2138	0.7	21		2017	1.3	40	

Time meridian 165° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.

Heights are referred to the chart datum of soundings which is about 1 foot (30 centimeters) below mean low water springs.

# Pohnpei Harbor, Caroline Islands, 2008

Times and Heights of High and Low Waters

October				November				December				
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	
h m	ft	cm		h m	ft	cm		h m	ft	cm		
1 W	0347	3.9	119	16 Th	0338	3.8	116	1 Sa	0408	2.9	88	
0941	0.9	27		0924	0.9	27		0933	1.2	37		
1603	4.7	143		1551	5.0	152		1625	4.6	140		
2224	1.1	34		2225	0.8	24		2318	1.4	43		
2 Th	0408	3.6	110	17 F	0410	3.5	107	2 Su	0430	2.7	82	
0957	1.0	30		0948	1.1	34		0948	1.4	43		
1626	4.6	140		1623	4.9	149		1650	4.4	134		
2253	1.3	40		2307	1.0	30		2355	1.6	49		
3 F	0427	3.3	101	18 Sa	0443	3.1	94	3 M	0454	2.5	76	
1011	1.1	34		1009	1.2	37		1001	1.6	49		
1649	4.5	137		1658	4.8	146		1717	4.2	128		
2322	1.5	46		2356	1.3	40						
4 Sa	0442	3.0	91	19 Su	0516	2.7	82	4 Tu	0042	1.8	55	
1021	1.3	40		1027	1.5	46		0525	2.3	70		
1712	4.3	131		1736	4.5	137		1008	1.8	55		
2354	1.8	55						1749	3.9	119		
5 Su	0451	2.7	82	20 M	0102	1.6	49	5 W	0158	1.9	58	
1026	1.4	43		0554	2.3	70		0630	2.1	64		
1735	4.0	122		1035	1.8	55		0951	2.0	61		
				1824	4.1	125		1836	3.7	113		
6 M	0036	2.0	61	21 Tu	0319	1.8	55	6 Th	0410	1.9	58	
0448	2.4	73		1949	3.7	113		2019	3.4	104		
1022	1.6	49						2105	3.0	91		
1802	3.7	113		○				1715	2.4	73		
								2254	3.2	98		
7 Tu	0945	1.8	55	22 W	0551	1.7	52	7 F	0519	1.7	52	
1846	3.4	104		2230	3.6	110		1254	2.9	88		
○								1643	2.7	82		
				2236	3.3	101		1836	2.1	64		
8 W	0751	1.8	55	23 Th	0630	1.5	46	8 Sa	0556	1.6	49	
2229	3.3	101		1319	3.0	91		1243	3.3	101		
				1757	2.5	76		1813	2.3	70		
				2359	3.7	113		2352	3.4	104		
9 Th	0711	1.7	52	24 F	0657	1.4	43	9 Su	0626	1.4	43	
1419	2.9	88		1323	3.4	104		1301	3.7	113		
1801	2.6	79		1855	2.1	64		1902	1.9	58		
									1927	1.7	52	
10 F	0003	3.5	107	25 Sa	0050	3.8	116	10 M	0045	3.5	107	
0715	1.5	46		0719	1.3	40		0656	1.2	37		
1343	3.2	98		1340	3.8	116		1326	4.2	128		
1850	2.2	67		1935	1.7	52		1944	1.4	43		
11 Sa	0049	3.8	116	26 Su	0129	3.9	119	11 Tu	0129	3.6	110	
0730	1.3	40		0741	1.2	37		0725	1.1	34		
1348	3.6	110		1401	4.2	128		1356	4.5	137		
1926	1.8	55		2010	1.4	43		2024	1.1	34		
								2116	1.1	34		
12 Su	0125	4.1	125	27 M	0201	3.8	116	12 W	0210	3.5	107	
0749	1.1	34		0801	1.1	34		0755	1.0	30		
1404	4.0	122		1423	4.5	137		1428	4.8	146		
2000	1.4	43		2043	1.2	37		2105	0.8	24		
									2148	1.0	30	
13 M	0159	4.2	128	28 Tu	0230	3.7	113	13 Th	0249	3.4	104	
0812	1.0	30		0821	1.1	34		0825	1.0	30		
1427	4.4	134		1447	4.7	143		1502	5.0	152		
2034	1.1	34		2114	1.1	34		○ 2147	0.7	21		
14 Tu	0233	4.2	128	29 W	0257	3.6	110	14 F	0328	3.2	98	
0836	0.9	27		0840	1.1	34		0856	1.0	30		
1453	4.7	143		1511	4.8	146		1537	5.1	155		
2110	0.9	27		● 2145	1.1	34		2231	0.7	21		
15 W	0305	4.1	125	30 Th	0321	3.4	104	15 Sa	0408	2.9	88	
0900	0.9	27		0859	1.1	34		0926	1.1	34		
1521	4.9	149		1536	4.9	149		1615	5.0	152		
○ 2146	0.8	24		2215	1.1	34		2317	0.8	24		
									2249	1.0	30	
16 F	0345	3.1	94	31 F	0917	1.1	34					
0917				1600	4.8	146						
				2246	1.2	37						

Time meridian 165° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.

Heights are referred to the chart datum of soundings which is about 1 foot (30 centimeters) below mean low water springs.

## Wake Island, 2008

Times and Heights of High and Low Waters

January			February			March		
Time	Height		Time	Height		Time	Height	
h m	ft	cm	h m	ft	cm	h m	ft	cm
<b>1</b> Tu 0935 1547 2143	0.3 1.8 0.6 1.5	9 55 18 46	<b>16</b> W 1523 O	0232 0857 1.6 2121	0.1 2.0 0.3 1.6	<b>1</b> F 1744 2344	0.6 0.9	18 27
	0401 1040 1719 2311	0.5 1.7 0.7 1.3	<b>17</b> Th 1657 2252	0322 1005 0.4 1.3	0.3 1.9 12 40	<b>2</b> Sa 2000	0.7 0.5	21 15
	0510 1156 1857	0.6 1.8 0.6	<b>18</b> F 1851	0436 1137 0.5	0.5 1.9 15	<b>3</b> Su 0215	1.1 0.7	34 21
	0055 0629 1306 2006	1.3 0.6 1.9 0.4	<b>4</b> Sa 0618	0053 1310 0.5	1.2 2.0 15	<b>4</b> M 0822	1.3 0.5	40 15
<b>5</b> Sa 0737 1403 2055	0209 0.5 2.0	43 15 61	<b>5</b> Tu 0906	0335 1519 0.2	1.4 2.3 6	<b>20</b> W 0936	1.8 -0.1	43 -3
	0830 1449 2134	0.4 2.2 -0.1	<b>21</b> M 0849	0222 1515 0.2	1.4 2.5 6	<b>5</b> W 0936	1.6 -0.1	49 6
	0340 0913 1529 2208	1.6 0.2 2.4 -0.2	<b>21</b> Th 1013	0318 1515 0.2	1.6 2.5 6	<b>20</b> Th 0923	0.2 -0.2	61 -6
	0414 0950 1605 ● 2241	1.8 0.1 2.5 -0.4	<b>6</b> W 0942	0404 1554 0.0	1.8 2.5 0	<b>21</b> F 0956	1.9 -0.1	58 -4
<b>7</b> M 0913 1529 2208	0430 0.2 2.4	49 6 -3	<b>21</b> O 2249	0423 1628 -0.7	2.1 2.7 -9	<b>6</b> Th 1013	1.6 -0.3	58 -3
	0446 1025 1639 2312	1.9 0.0 2.6 -0.5	<b>7</b> Tu 1015	0432 1627 -0.6	2.0 2.7 -18	<b>21</b> F 1046	2.1 -0.4	58 -12
	0513 1059 1717 2312	2.1 -0.3 2.8 -0.6	<b>22</b> Th 1015	0451 1659 -0.6	2.3 2.7 -18	<b>7</b> F 1046	2.1 -0.4	64 -12
	0518 1029 1728 2340	2.4 -0.6 2.6 -0.6	<b>22</b> W 1056	0518 1117 -0.5	2.4 -0.5 -15	<b>22</b> Sa 1027	2.4 -0.5	73 -15
<b>8</b> Tu 1605 ● 2241	0446 0.1 2.5	58 3 -12	<b>8</b> F 1048	0459 1659 -0.7	2.1 2.8 -21	<b>8</b> Sa 1029	2.4 -0.6	73 -15
	0513 1059 1717 2344	2.1 -0.3 2.8 -0.6	<b>23</b> W 1117	0527 1728 -0.7	2.3 2.6 -21	<b>23</b> Su 1056	2.4 -0.6	76 -15
	0518 1029 1728 2340	2.4 -0.6 2.6 -0.6	<b>23</b> Sa 1117	0544 1728 -0.6	2.4 2.6 -18	<b>23</b> O 1702	2.5 -0.5	76 -15
	0544 1103 1711 2320	2.4 -0.5 2.7 -0.7	<b>24</b> Su 1147	0548 1147 -0.5	2.5 2.5 -15	<b>24</b> M 1123	2.6 -0.5	79 -15
<b>10</b> Th 1712 2343	0517 -0.1 2.7	61 82 -15	<b>10</b> F 1135	0545 1751	2.2 2.7	<b>25</b> M 1150	0003 1138 -0.4	-15 -21
	0545 1135 1751	2.2 -0.3 2.7	<b>10</b> Su 1154	0555 1803	2.4 2.7	<b>10</b> M 1215	0.5 -0.4	-15 -12
	0555 1154 1803	2.4 -0.5 2.7	<b>25</b> M 1215	0003 1215	2.4 -0.4	<b>25</b> Tu 1245	0.5 -0.4	-15 -12
	0014 0619 1207 1822	-0.5 2.1 -0.1 2.5	<b>11</b> F 0616	0014 1209	-0.5 -0.2	<b>25</b> M 1215	0.5 -0.4	-15 -12
<b>11</b> F 1745	0548 -0.1 2.7	61 82 -15	<b>11</b> Sa 0616	0017 1209	-0.6 -0.2	<b>26</b> Tu 0634	0025 1244	-9 -6
	0014 0619 1242 1851	-0.5 2.1 -0.1 2.3	<b>11</b> M 0625	0017 1230	-0.6 -0.4	<b>26</b> Tu 1244	0.3 -0.2	-9 -6
	0017 0625 1230 1837	-0.6 -0.4 -12	<b>26</b> Tu 1244	0025 1845	-0.6 2.0	<b>11</b> Tu 1215	0.6 -0.7	-9 -21
	0025 0634 1244 1845	-0.3 -0.3 -0.2 2.0	<b>26</b> Tu 1244	0025 1845	-9 61	<b>26</b> W 1215	0.6 -0.7	-9 -21
<b>12</b> Sa 1207 1820	0014 -0.1 2.6	-15 -3 79	<b>12</b> F 0645	0046 1242	-0.4 -0.1	<b>27</b> W 0657	0047 1309	-6 -9
	0046 0645 1242 1851	-0.4 2.2 -0.1 2.3	<b>12</b> Tu 0657	0046 1309	-0.4 -0.3	<b>27</b> W 0700	0047 1313	-6 -9
	0046 0645 1242 1851	-0.4 2.2 -0.1 2.3	<b>27</b> W 0700	0047 1313	-0.2 -9	<b>27</b> W 0630	0016 1254	-12 -15
	0047 0700 1313 1909	-0.2 2.2 -0.1 1.7	<b>27</b> W 0700	0047 1313	-0.2 -9	<b>27</b> W 0630	0016 1254	-12 -15
<b>13</b> Su 1244 1856	0045 -0.1 2.5	-12 -3 76	<b>13</b> M 0715	0115 1315	-0.2 -0.1	<b>28</b> Th 0727	0107 1345	0 -6
	0115 0715 1315 1920	-0.2 2.1 0.0 2.0	<b>13</b> W 0732	0115 1354	-0.2 -0.1	<b>28</b> Th 0727	0107 1345	0 -6
	0115 0732 1354 1949	-0.2 2.2 -0.1 1.7	<b>28</b> Th 0727	0107 1354	0 -3	<b>13</b> Th 0727	0045 1339	0 -6
	0115 0732 1354 1949	-0.2 2.2 -0.1 1.7	<b>28</b> Th 0727	0107 1354	0 -3	<b>13</b> Th 0727	0045 1339	0 -6
<b>14</b> M 1935	0117 0727 1326	-9 -3 0.0	<b>14</b> Tu 0746	0147 1351	0.0 0.2	<b>29</b> F 0759	0128 1452	9 12
	0147 0746 1351 1949	0.0 2.0 0.2 1.7	<b>14</b> Th 0815	0147 1452	0.0 0.1	<b>29</b> F 0759	0128 1452	9 12
	0147 0746 1351 1949	0.0 2.0 0.2 1.7	<b>29</b> F 0759	0128 1452	0.0 0.1	<b>14</b> F 0748	0115 1438	3 3
	0147 0746 1351 1949	0.0 2.0 0.2 1.7	<b>29</b> F 0759	0128 1452	0.0 0.1	<b>14</b> F 0748	0115 1438	3 3
<b>15</b> Tu 1417 2021	0152 0807 1417	-3 -3 -3	<b>30</b> W 1433	0158 0820	0.1 1.9	<b>15</b> F 0205	0151 0849	12 12
	0158 0820 1433 2022	0.1 1.9 0.4 1.4	<b>15</b> F 0915	0158 0915	0.3 1.9	<b>15</b> O 2005	0151 0849	12 12
	0158 0820 1433 2022	0.1 1.9 0.4 1.4	<b>15</b> F 0915	0158 0915	0.3 1.9	<b>15</b> O 2024	0151 0849	12 12
	0158 0820 1433 2022	0.1 1.9 0.4 1.4	<b>31</b> Th 1534	0227 1534	0.4 0.6	<b>31</b> M 1819	0211 1819	9 15
<b>31</b> M 2112	0227 1534 2111	0.4 0.6 1.1	<b>31</b> Th 1534	0227 1534	0.4 0.6	<b>31</b> M 1819	0211 1819	9 15

Time meridian 180° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
 Heights are referred to mean lower low water which is the chart datum of soundings.

# **Wake Island, 2008**

## Times and Heights of High and Low Waters

April						May						June							
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height	
<b>1</b> Tu	0115	1.1	34	<b>16</b> W	0143	1.5	46	<b>1</b> Th	0043	1.5	46	<b>16</b> F	0130	2.0	61	<b>1</b> Su	0122	2.2	67
	0556	0.8	24		0733	0.4	12		0630	0.6	18		0749	0.3	9		0751	0.0	0
	1225	1.6	49		1346	1.9	58		1238	1.8	55		1351	1.8	55		1355	1.9	58
	1937	0.3	9		2009	0.0	0		1910	0.2	6		1951	0.2	6		1949	0.2	6
<b>2</b> W	0159	1.4	43	<b>17</b> Th	0221	1.9	58	<b>2</b> F	0131	1.8	55	<b>17</b> Sa	0209	2.2	67	<b>2</b> M	0212	2.5	76
	0726	0.5	15		0822	0.2	6		0732	0.2	6		0832	0.1	3		0846	-0.2	-6
	1336	1.9	58		1431	2.1	64		1338	2.0	61		1435	1.9	58		1451	2.0	61
	2016	0.0	0		2042	-0.1	-3		1954	0.0	0		2027	0.1	3		2037	0.1	3
<b>3</b> Th	0229	1.7	52	<b>18</b> F	0252	2.1	64	<b>3</b> Sa	0210	2.1	64	<b>18</b> Su	0243	2.4	73	<b>3</b> Tu	0259	2.7	82
	0814	0.2	6		0900	-0.1	-3		0821	-0.1	-3		0910	-0.1	-3		0937	-0.4	-12
	1422	2.1	64		1507	2.2	67		1427	2.2	67		1512	1.9	58		1541	2.0	61
	2048	-0.2	-6		2111	-0.2	-6		2033	-0.1	-3		2101	0.1	3		2123	0.0	0
<b>4</b> F	0257	2.0	61	<b>19</b> Sa	0320	2.4	73	<b>4</b> Su	0247	2.4	73	<b>19</b> M	0315	2.5	76	<b>4</b> W	0345	2.9	88
	0854	-0.1	-3		0934	-0.3	-9		0906	-0.4	-12		0944	-0.2	-6		1025	-0.6	-18
	1502	2.4	73		1539	2.2	67		1512	2.3	70		1547	2.0	61		1628	2.0	61
	2118	-0.4	-12		2139	-0.3	-9		2110	-0.2	-6		2133	0.0	0		2207	0.0	0
<b>5</b> Sa	0327	2.3	70	<b>20</b> Su	0348	2.5	76	<b>5</b> M	0324	2.7	82	<b>20</b> Tu	0347	2.5	76	<b>5</b> O	0430	2.9	88
	0931	-0.4	-12		1004	-0.4	-12		0949	-0.6	-18		1016	-0.3	-9		1111	-0.6	-18
	1539	2.5	76		1609	2.2	67		1555	2.3	70		1620	1.9	58		1714	2.0	61
	2148	-0.5	-15		2205	-0.3	-9		2147	-0.3	-9		2204	0.0	0		2251	0.0	0
<b>6</b> Su	0357	2.6	79	<b>21</b> M	0414	2.6	79	<b>6</b> Tu	0402	2.8	85	<b>21</b> W	0418	2.6	79	<b>6</b> ●	0516	2.9	88
	1008	-0.7	-21		1034	-0.5	-15		1031	-0.7	-21		1048	-0.3	-9		1157	-0.5	-15
	1615	2.6	79		1638	2.2	67		1636	2.2	67		1652	1.9	58		1758	2.0	61
	2219	-0.5	-15		2231	-0.3	-9		2223	-0.3	-9		2235	0.1	3		2335	0.0	0
<b>7</b> M	0428	2.7	82	<b>22</b> Tu	0441	2.6	79	<b>7</b> W	0441	2.9	88	<b>22</b> Th	0449	2.5	76	<b>7</b> Sa	0601	2.8	85
	1045	-0.8	-24		1102	-0.5	-15		1114	-0.7	-21		1120	-0.3	-9		1243	-0.4	-12
	1652	2.5	76		1706	2.1	64		1718	2.1	64		1724	1.9	58		1844	1.9	58
	2249	-0.5	-15		2256	-0.2	-6		2300	-0.2	-6		2305	0.1	3		1827	2.0	61
<b>8</b> Tu	0501	2.8	85	<b>23</b> W	0507	2.6	79	<b>8</b> Th	0521	2.9	88	<b>23</b> F	0520	2.5	76	<b>8</b> Su	0020	0.1	3
	1123	-0.8	-24		1131	-0.4	-12		1159	-0.6	-18		1153	-0.2	-6		0647	2.7	82
	1728	2.3	70		1733	1.9	58		1800	1.9	58		1757	1.8	55		1329	-0.2	-6
	2320	-0.4	-12		2321	-0.1	-3		2338	-0.1	-3		2336	0.2	6		1931	1.8	55
<b>9</b> W	0535	2.8	85	<b>24</b> Th	0534	2.5	76	<b>9</b> F	0603	2.7	82	<b>24</b> Sa	0553	2.4	73	<b>9</b> M	0108	0.3	9
	1203	-0.7	-21		1200	-0.3	-9		1246	-0.4	-12		1228	-0.1	-3		0735	2.4	73
	1806	2.1	64		1801	1.8	55		1845	1.7	52		1832	1.7	52		1416	0.0	0
	2352	-0.3	-9		2346	0.0	0									2021	1.8	55	
<b>10</b> Th	0611	2.7	82	<b>25</b> F	0602	2.3	70	<b>10</b> Sa	0019	0.1	3	<b>25</b> Su	0009	0.3	9	<b>10</b> Tu	0203	0.5	15
	1246	-0.5	-15		1231	-0.1	-3		0649	2.5	76		0629	2.3	70		0826	2.2	67
	1845	1.8	55		1831	1.6	49		1338	-0.2	-6		1306	0.0	0		1505	0.2	6
									1936	1.5	46		1911	1.6	49		2118	1.8	55
<b>11</b> F	0025	-0.1	-3	<b>26</b> Sa	0013	0.2	6	<b>11</b> Su	0105	0.3	9	<b>26</b> M	0047	0.4	12	<b>11</b> O	0307	0.6	18
	0651	2.4	73		0634	2.2	67		0742	2.2	67		0709	2.2	67		0924	1.9	58
	1335	-0.2	-6		1308	0.0	0		1438	0.1	3		1350	0.1	3		1558	0.4	12
	1930	1.5	46		1906	1.4	43		2040	1.4	43		1958	1.6	49		2221	1.8	55
<b>12</b> Sa	0101	0.2	6	<b>27</b> Su	0043	0.4	12	<b>12</b> M	0205	0.5	15	<b>27</b> Tu	0134	0.5	15	<b>12</b> W	0426	0.7	21
	0739	2.1	64		0712	2.0	61		0848	2.0	61		0757	2.1	64		1034	1.7	52
	1440	0.1	3		1355	0.2	6		1552	0.3	9		1442	0.2	6		1656	0.5	15
	2032	1.2	37		1955	1.3	40		2205	1.4	43		2057	1.5	46		2326	1.9	58
<b>13</b> Su	0149	0.5	15	<b>28</b> M	0125	0.6	18	<b>13</b> Tu	0336	0.7	21	<b>28</b> W	0238	0.6	18	<b>13</b> F	0552	0.7	21
	0849	1.8	55		0805	1.8	55		1015	1.8	55		0859	2.0	61		1151	1.6	49
	1622	0.3	9		1505	0.4	12		1712	0.4	12		1543	0.3	9		1755	0.5	15
	2231	1.1	34		2120	1.2	37		2335	1.5	46		2209	1.6	49				
<b>14</b> M	0329	0.7	21	<b>29</b> Tu	0240	0.7	21	<b>14</b> W	0527	0.7	21	<b>29</b> Th	0401	0.7	21	<b>14</b> Sa	0028	2.0	61
	1051	1.7	52		0928	1.7	52		1146	1.7	52		1015	1.9	58		0706	0.5	15
	1819	0.3	9		1646	0.5	15		1819	0.3	9		1651	0.4	12		1304	1.6	49
																1852	0.5	15	
<b>15</b> Tu	0045	1.2	37	<b>30</b> W	0452	0.8	24	<b>15</b> Th	0042	1.7	52	<b>30</b> F	0531	0.5	15	<b>15</b> Su	0121	2.1	64
	0612	0.7	21		1115	1.7	52		0651	0.5	15		1137	1.8	55		0804	0.4	12
	1241	1.8	55		1813	0.4	12		1258	1.8	55		1757	0.3	9		1404	1.6	49
	1926	0.2	6						1910	0.3	9						1943	0.5	15
																<b>31</b> Sa	0027	2.0	61
																0648	0.3	9	
																1252	1.9	58	
																1856	0.3	9	

Time meridian 180° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to mean lower low water which is the chart datum of soundings.

## Wake Island, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0148	2.5	76	16 W 0234	2.3	70	1 F 0337	2.9	88	1 M 0439	3.0	91
0839	0.0	0	W 0924	0.2	6	F 1016	-0.3	-9	M 1054	-0.3	-9
1443	1.8	55	1530	1.7	52	1618	2.2	67	1657	2.8	85
2017	0.4	12	2100	0.5	15	● 2159	0.1	3	2259	-0.2	-6
2 W 0247	2.7	82	17 Th 0318	2.5	76	2 Sa 0421	3.1	94	2 Tu 0510	3.0	91
0934	-0.2	-6	Th 1000	0.1	3	Sa 1053	-0.4	-12	1121	-0.2	-6
1538	1.9	58	1606	1.9	58	1654	2.4	73	1725	2.8	85
2112	0.3	9	2140	0.4	12	2241	0.0	0	2331	-0.1	-3
3 Th 0339	2.9	88	18 F 0355	2.6	79	3 Su 0500	3.1	94	3 W 0539	2.8	85
1023	-0.4	-12	F 1032	-0.1	-3	Su 1126	-0.4	-12	W 1146	-0.1	-3
1626	2.0	61	1638	2.0	61	1728	2.5	76	1753	2.8	85
● 2202	0.1	3	○ 2216	0.3	9	2319	-0.1	-3	18 Th 0521	2.9	88
4 F 0427	3.0	91	19 Sa 0430	2.8	85	4 M 0536	3.0	91	4 Th 0002	0.0	0
1107	-0.4	-12	Sa 1103	-0.2	-6	M 1158	-0.3	-9	0607	2.6	79
1709	2.1	64	1708	2.2	67	1800	2.6	79	1209	0.0	0
2248	0.1	3	2249	0.2	6	2356	0.0	0	1819	2.7	82
5 Sa 0512	3.0	91	20 Su 0502	2.8	85	5 Tu 0609	2.9	88	5 F 0032	0.1	3
1149	-0.4	-12	Su 1132	-0.2	-6	Tu 1227	-0.2	-6	W 0633	2.3	70
1750	2.2	67	1737	2.2	67	1831	2.6	79	F 1232	0.2	6
2331	0.0	0	2322	0.1	3	1804	2.7	82	1846	2.6	79
6 Su 0554	3.0	91	21 M 0534	2.9	88	6 W 0031	0.1	3	6 Sa 0103	0.3	9
1227	-0.3	-9	M 1200	-0.2	-6	W 0640	2.6	79	Sa 0659	2.0	61
1828	2.2	67	1806	2.3	70	1254	0.0	0	1254	0.4	12
			2355	0.1	3	1902	2.5	76	1914	2.4	73
7 M 0014	0.1	3	22 Tu 0606	2.9	88	7 Th 0106	0.2	6	21 Su 0113	0.1	3
0634	2.8	85	Tu 1229	-0.1	-3	F 0711	2.4	73	0710	2.0	61
1303	-0.2	-6	1836	2.4	73	1320	0.2	6	1252	0.4	12
1906	2.2	67			1933	2.4	73	1907	2.6	79	
8 Tu 0056	0.2	6	23 W 0030	0.1	3	8 F 0142	0.4	12	8 M 0223	0.8	24
0712	2.6	79	W 0639	2.7	82	0741	2.1	64	0802	1.5	46
1338	0.0	0	1259	-0.1	-3	1346	0.4	12	1342	0.9	27
1945	2.2	67	1908	2.4	73	2007	2.3	70	● 2042	1.9	58
9 W 0139	0.4	12	24 Th 0108	0.2	6	9 Sa 0224	0.6	18	9 Tu 0403	1.0	30
0750	2.3	70	Th 0716	2.5	76	Sa 0814	1.8	55	W 0595	1.2	37
1413	0.2	6	1330	0.1	3	1415	0.6	18	Tu 1442	1.1	34
2025	2.1	64	1943	2.4	73	● 2049	2.1	64	2252	1.8	55
10 Th 0226	0.5	15	25 F 0152	0.3	9	10 Su 0321	0.8	24	10 W 0718	0.9	27
0831	2.0	61	F 0757	2.3	70	Su 0901	1.5	46	W 1353	1.4	43
1449	0.4	12	1405	0.3	9	1454	0.8	24	1835	1.1	34
● 2110	2.1	64	2026	2.3	70	2153	1.9	58	1731	1.1	34
11 F 0322	0.7	21	26 Sa 0247	0.4	12	11 M 0512	0.9	27	11 Th 0101	1.9	58
0919	1.7	52	Sa 0847	2.0	61	1106	1.3	40	W 0810	0.6	18
1531	0.6	18	Sa 1448	0.5	15	1622	1.0	30	1426	1.7	52
2205	2.0	61	● 2121	2.2	67	2344	1.9	58	1948	0.9	27
12 Sa 0437	0.8	24	27 Su 0403	0.6	18	12 Tu 0735	0.8	24	12 F 0159	2.2	67
1027	1.5	46	Su 0958	1.7	52	Tu 1352	1.4	43	W 0841	0.4	12
1627	0.7	21	1545	0.7	21	1848	1.0	30	1451	2.0	61
2314	2.0	61	2239	2.2	67				2029	0.6	18
13 Su 0615	0.8	24	28 M 0550	0.6	18	13 W 0124	2.0	61	27 Sa 0229	2.6	79
1210	1.4	43	M 1148	1.5	46	W 0835	0.6	18	0853	0.0	0
1745	0.8	24	1716	0.8	24	1446	1.6	49	1459	2.4	73
					2004	0.8	24	2029	0.6	18	
14 M 0032	2.0	61	29 Tu 0019	2.2	67	● 2223	2.2	67	2056	0.2	6
0743	0.6	18	29 Th 0733	0.4	12	14 Th 0912	0.3	9	27 W 0841	0.4	12
1345	1.4	43	1339	1.5	46	F 1519	1.8	55	1451	2.0	61
1907	0.8	24	1900	0.7	21	2051	0.6	18	2029	0.6	18
15 Tu 0141	2.1	64	30 W 0144	2.4	73	2109	0.3	9	2056	0.2	6
0841	0.4	12	W 0843	0.1	3	15 F 0304	2.5	76	27 F 0841	0.4	12
1447	1.6	49	1449	1.7	52	W 0942	0.1	3	1451	2.0	61
2011	0.7	21	2016	0.6	18	1548	2.1	64	2136	0.1	3
					2127	0.4	12	● 2206	-0.2	-6	
16 W 0247	2.7	82	31 Th 0934	-0.1	-3	29 F 0244	2.7	82	29 M 0343	2.8	85
1537	2.0	61	1537	2.0	61	W 0921	0.0	0	W 0952	-0.2	-6
2113	0.3	9	2113	0.3	9	F 1525	2.2	67	M 1557	2.8	85
					2109	0.3	9	● 2206	-0.2	-6	
17 W 0247	2.7	82	31 Th 0934	-0.1	-3	14 F 0244	2.7	82	15 Tu 0345	2.9	88
1537	2.0	61	1537	2.0	61	W 0921	0.0	0	W 1018	-0.2	-6
2113	0.3	9	2113	0.3	9	F 1525	2.2	67	Tu 1625	2.9	88
					2109	0.3	9	● 2206	-0.2	-6	
18 W 0247	2.7	82	31 Th 0934	-0.1	-3	14 F 0244	2.7	82	30 Th 0414	2.8	85
1537	2.0	61	1537	2.0	61	W 0921	0.0	0	15 M 1018	-0.2	-6
2113	0.3	9	2113	0.3	9	F 1525	2.2	67	2237	-0.2	-6
					2109	0.3	9	● 2206	-0.2	-6	

Time meridian 180° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
 Heights are referred to mean lower low water which is the chart datum of soundings.

# Wake Island, 2008

Times and Heights of High and Low Waters

October					November					December					
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height	
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm
<b>1</b> W	0443	2.7	82	<b>16</b>	0427	2.7	82	<b>1</b>	0518	2.1	64	<b>16</b>	0535	2.1	64
	1043	-0.1	-3	Th	1022	-0.2	-6	Sa	1104	0.2	6	M	1113	0.0	0
	1651	3.0	91		1635	3.1	94		1718	2.7	82	Su	1738	2.9	88
	2306	-0.2	-6		2258	-0.5	-15		2346	-0.1	-3		1740	2.5	76
<b>2</b> Th	0511	2.6	79	<b>17</b>	0503	2.6	79	<b>2</b>	0547	2.0	61	<b>2</b>	0020	-0.3	-9
	1107	0.0	0	F	1053	-0.1	-3	Su	1130	0.3	9	M	0620	1.9	58
	1717	2.9	88		1708	3.1	94		1747	2.6	79		1154	0.2	6
	2335	-0.1	-3		2338	-0.4	-12						1823	2.7	82
<b>3</b> F	0537	2.4	73	<b>18</b>	0540	2.4	73	<b>3</b>	0019	0.1	3	<b>3</b>	0111	-0.1	-3
	1131	0.1	3	Sa	1125	0.0	0	M	0618	1.8	55	W	0709	1.7	52
	1743	2.8	85		1745	3.0	91		1158	0.4	12		1240	0.4	12
									1819	2.4	73		1915	2.5	76
<b>4</b> Sa	0004	0.0	0	<b>19</b>	0020	-0.2	-6	<b>4</b>	0056	0.3	9	<b>4</b>	0209	0.1	3
	0604	2.2	67	Su	0620	2.1	64	Tu	0654	1.6	49	W	0809	1.6	49
	1154	0.3	9		1159	0.2	6		1229	0.6	18		1337	0.6	18
	1809	2.6	79		1825	2.8	85		1857	2.2	67		2017	2.2	67
<b>5</b> Su	0033	0.2	6	<b>20</b>	0109	0.0	0	<b>5</b>	0142	0.5	15	<b>5</b>	0214	0.3	9
	0630	1.9	58	M	0705	1.8	55	W	0743	1.5	46	W	0828	1.6	49
	1216	0.5	15		1237	0.4	12		1310	0.8	24		1409	0.7	21
	1838	2.4	73		1913	2.5	76		1948	2.0	61		2027	2.0	61
<b>6</b> M	0107	0.4	12	<b>21</b>	0212	0.3	9	<b>6</b>	0249	0.6	18	<b>6</b>	0309	0.4	12
	0700	1.7	52	Tu	0806	1.5	46	Th	0907	1.4	43	F	1057	1.6	49
	1240	0.7	21		1325	0.7	21		1425	1.0	30		1648	0.8	24
	1912	2.2	67	O	2019	2.2	67	O	2107	1.9	58		2310	1.9	58
<b>7</b> Tu	0153	0.7	21	<b>22</b>	0344	0.5	15	<b>7</b>	0423	0.7	21	<b>7</b>	0413	0.4	12
	0740	1.4	43	W	0952	1.4	43	F	1108	1.5	46	Su	1048	1.7	52
	1309	0.9	27		1456	1.0	30		1633	1.0	30		1657	0.7	21
O	2003	1.9	58		2208	2.0	61		2251	1.8	55		2301	1.8	55
<b>8</b> W	0320	0.9	27	<b>23</b>	0536	0.6	18	<b>8</b>	0549	0.6	18	<b>8</b>	0522	0.4	12
	0936	1.3	40	Th	1203	1.5	46	Sa	1223	1.7	52	M	1157	1.9	58
	1417	1.1	34		1729	0.9	27		1811	0.8	24		1821	0.5	15
	2155	1.8	55										1927	0.4	12
<b>9</b> Th	0605	0.8	24	<b>24</b>	0002	2.0	61	<b>9</b>	0015	2.0	61	<b>9</b>	0022	1.8	55
	1258	1.4	43	F	0651	0.4	12	Su	0646	0.4	12	W	0729	0.3	9
	1750	1.1	34		1310	1.8	55		1310	2.0	61		1348	2.3	70
					1901	0.7	21		1912	0.5	15		2016	0.2	6
<b>10</b> F	0009	1.9	58	<b>25</b>	0114	2.2	67	<b>10</b>	0115	2.1	64	<b>10</b>	0131	1.8	55
	0715	0.6	18	Sa	0739	0.3	9	M	0730	0.3	9	W	0723	0.3	9
	1339	1.7	52		1352	2.1	64		1348	2.3	70		1425	2.5	76
	1910	0.9	27		1955	0.4	12		2000	0.2	6		2055	0.0	-3
<b>11</b> Sa	0116	2.1	64	<b>26</b>	0204	2.3	70	<b>11</b>	0204	2.3	70	<b>11</b>	0229	1.9	58
	0753	0.4	12	Su	0815	0.2	6	Tu	0808	0.1	3	W	0843	0.2	6
	1408	2.0	61		1426	2.4	73		1424	2.6	79		1459	2.6	79
	1956	0.5	15		2037	0.2	6		2044	-0.1	-3		2131	-0.1	-3
<b>12</b> Su	0201	2.4	73	<b>27</b>	0243	2.4	73	<b>12</b>	0248	2.4	73	<b>12</b>	0320	2.0	61
	0824	0.2	6	M	0847	0.1	3	W	0845	0.0	0	F	0917	0.1	3
	1435	2.3	70		1457	2.6	79		1500	2.8	85		1532	2.7	82
	2033	0.2	6		2113	0.0	0		2125	-0.4	-12		2204	-0.2	-6
<b>13</b> M	0239	2.6	79	<b>28</b>	0318	2.4	73	<b>13</b>	0330	2.4	73	<b>13</b>	0407	2.0	61
	0853	0.0	0	Tu	0916	0.0	0	Th	0921	-0.1	-3	F	0949	0.1	3
	1503	2.6	79		1526	2.8	85		1537	3.0	91		1604	2.7	82
	2109	-0.1	-3		2146	-0.2	-6	O	2207	-0.5	-15		2236	-0.2	-6
<b>14</b> Tu	0315	2.7	82	<b>29</b>	0350	2.4	73	<b>14</b>	0412	2.4	73	<b>14</b>	0451	2.0	61
	0923	-0.1	-3	W	0944	0.0	0	F	0958	-0.1	-3	Sa	1021	0.1	3
	1532	2.8	85		1554	2.9	88		1616	3.1	94		1636	2.7	82
	2145	-0.3	-9		2217	-0.2	-6		2250	-0.6	-18		2308	-0.2	-6
<b>15</b> W	0351	2.8	85	<b>30</b>	0420	2.4	73	<b>15</b>	0453	2.3	70	<b>15</b>	0512	1.9	58
	0952	-0.2	-6	Th	1011	0.0	0	Sa	1035	-0.1	-3	W	1052	0.2	6
	1603	3.0	91		1622	2.9	88		1656	3.0	91		1707	2.6	79
O	2221	-0.4	-12		2246	-0.2	-6		2334	-0.5	-15		2341	-0.2	-6
				<b>31</b>	0449	2.3	70								
				F	1037	0.1	3								
					1650	2.8	85								
					2316	-0.2	-6								

Time meridian 180° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to mean lower low water which is the chart datum of soundings.

# Kwajalein Atoll, Marshall Islands, 2008

Times and Heights of High and Low Waters

January				February				March											
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height								
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm								
<b>1</b> Tu	0337 1016 1623 2207	0.8 2.7 1.4 2.4	24 82 43 73	<b>16</b> W 1549 O	0.4 0.933 1.0 2.7	12 F 1942 82	1.2 2.6 1.4 0.9	37 79 43 82	<b>16</b> Sa	0.502 1239 0.8 2006	1.2 3.1 0.8 24	37 94 24	<b>16</b> Su	0154 0928 2000	1.1 2.5 1.5	34 76 46	<b>0019</b> <b>0514</b> <b>1241</b> <b>2002</b>	1.8 1.4 3.0 0.7	55 43 91 21
<b>2</b> W	0439 1142 1819 2349	1.0 2.8 1.4 2.2	30 85 43 67	<b>17</b> Th 1102 2335	0.7 3.2 1.1 2.3	21 Sa 98 70	1.8 40 85 27	55 40 85 9	<b>17</b> Su	0205 0728 1.0 1409	2.2 3.6 30 110	67 110 9 9	<b>0118</b> <b>0347</b> <b>1307</b> <b>2034</b>	1.6 1.5 2.6 1.0	49 46 79 30	<b>0211</b> <b>0736</b> <b>1403</b> <b>2045</b>	2.3 1.1 3.4 0.3	70 34 104 9	
<b>3</b> Th	0600 1301 1949	1.0 3.0 1.1	30 91 34	<b>18</b> F 0541 1245 1944	0.9 3.4 0.7	27 Su 104	2.1 1.0 30	64 30 101	<b>18</b> M	0300 0836 0.5 1502	2.7 1.2 15 125	82 94 15 2138	<b>0231</b> <b>0744</b> <b>1414</b> <b>2057</b>	2.1 1.2 3.1 0.5	64 37 94 15	<b>0250</b> <b>0832</b> <b>1449</b> <b>2116</b>	2.9 0.5 3.9 -0.1	88 15 119 -3	
<b>4</b> F	0126 0713 1359 2042	2.2 0.9 3.3 0.7	67 27 101 21	<b>19</b> Sa 0134 0718 1403 2052	2.4 0.7 3.8 0.2	73 M 1944 21	2.5 0.6 3.8 0.0	76 18 116 0	<b>19</b> Tu	0337 0922 4.5 2209	3.2 0.0 137 -0.6	98 0 -6 -18	<b>0255</b> <b>0832</b> <b>1451</b> <b>2121</b>	2.6 0.7 3.7 0.1	79 21 113 3	<b>0320</b> <b>0911</b> <b>1524</b> <b>2143</b>	3.4 0.1 4.3 -0.4	104 3 131 -12	
<b>5</b> Sa	0228 0809 1443 2121	2.4 0.7 3.6 0.3	73 21 110 9	<b>20</b> Su 0247 0828 1500 2140	2.7 0.4 4.3 -0.3	82 M 121 -9	2.9 0.2 131	88 6 131	<b>20</b> W	0409 0959 4.2 2238	3.6 -0.3 128 -0.8	110 -9 146 -24	<b>0320</b> <b>0907</b> <b>1523</b> <b>2146</b>	3.1 0.2 4.2 -0.4	94 6 128 -12	<b>0347</b> <b>0943</b> <b>1554</b> <b>2208</b>	3.8 -0.3 4.5 -0.6	116 -9 137 -18	
<b>6</b> Su	0311 0853 1521 2155	2.7 0.4 3.9 0.0	82 12 119 0	<b>21</b> M 0337 0920 1546 2220	3.1 0.0 4.6 -0.6	94 0 140 -18	3.4 -0.2 140	104 -6 -18	<b>21</b> W	0410 0958 4.6 2241	3.4 -0.2 140	104 -6 -18	<b>0346</b> <b>0939</b> <b>1553</b> <b>2212</b>	3.6 -0.3 4.6 -0.7	110 -9 140 -21	<b>0413</b> <b>1013</b> <b>1621</b> <b>2231</b>	4.2 -0.5 4.6 -0.7	128 -15 140 -21	
<b>7</b> M	0348 0931 1556 2226	2.9 0.1 4.2 -0.3	88 3 128 -9	<b>22</b> Tu 0418 1004 1627 2256	3.4 -0.3 4.9 -0.8	104 -9 149 -24	3.7 -0.5 149	113 -15 149	<b>22</b> Th	0439 1030 1647 2308	3.7 -0.5 149 -0.8	113 -15 149 -24	<b>0414</b> <b>1011</b> <b>1624</b> <b>2239</b>	4.1 -0.6 4.9 -1.0	125 -18 149 -30	<b>0438</b> <b>1042</b> <b>1647</b> <b>2254</b>	4.4 -0.6 4.5 -0.8	134 -18 137 -24	
<b>8</b> Tu	0421 1006 1629 ● 2257	3.2 -0.1 4.5 -0.5	98 -3 137 -15	<b>23</b> W 0454 1043 1704 ○ 2329	3.7 -0.5 5.0 -0.9	113 -15 152 -27	4.0 -0.7 152	122 -21 -27	<b>23</b> Sa	0508 1101 1717 2336	4.0 -0.7 152 -0.9	122 -21 -27	<b>0443</b> <b>1044</b> <b>1741</b> <b>2353</b>	4.5 -0.9 143 -21	131 -27 143 -34	<b>0502</b> <b>1109</b> <b>1712</b> <b>2316</b>	4.6 -0.7 4.3 -0.7	140 -21 131 -21	
<b>9</b> W	0452 1039 1700 2327	3.4 -0.3 4.6 -0.6	104 -9 140 -18	<b>24</b> Th 0528 1119 1737	3.8 -0.6 4.9	116 -18 149	4.2 -0.7 149	128 -21	<b>24</b> Sa	0537 1134 1747	4.2 -0.7 152	128 -21	<b>0513</b> <b>1118</b> <b>1726</b> <b>2336</b>	4.7 -1.0 149 -30	143 -30 149 -30	<b>0526</b> <b>1136</b> <b>1736</b> <b>2337</b>	4.6 -0.6 4.1 -0.5	140 -18 131 -15	
<b>10</b> Th	0523 1112 1732 2357	3.5 -0.3 4.7 -0.6	107 -9 143 -18	<b>25</b> F 0000 0600 1153 1808	-0.8 3.9 -0.5 4.7	-24 119 -15 143	0.8 4.3 -15 146	-24	<b>25</b> M	0005 0608 1207 1818	-0.9 4.3 -18 4.8	-27 131 -18 146	<b>0545</b> <b>0623</b> <b>1227</b> <b>1829</b>	4.8 4.2 -6 4.0	146 128 -6 122	<b>0550</b> <b>1202</b> <b>1759</b> <b>2358</b>	4.4 -0.4 3.7 -0.3	134 -12 113 -9	
<b>11</b> F	0555 1145 1804	3.6 -0.3 4.7	110 -9 143	<b>26</b> Sa 0029 0630 1225 1837	-0.6 3.8 -0.3 4.4	-18 116 -9 134	-0.8 4.3 -12 131	-24	<b>26</b> Tu	0034 0641 1243 1850	-0.8 4.3 -12 4.3	-24 131 -12 131	<b>0005</b> <b>0648</b> <b>1254</b> <b>1851</b>	-0.9 4.0 0.1 3.5	-27 143 3 107	<b>0614</b> <b>1229</b> <b>1822</b>	4.2 -0.1 3.3	128 -3 101	
<b>12</b> Sa	0029 0628 1219 1837	-0.5 3.6 -0.2 4.6	-15 110 -6 140	<b>27</b> Su 0055 0700 1256 1904	-0.4 3.7 0.0 4.0	-12 113 0 122	-0.5 125 0 122	-15	<b>27</b> W	0056 0716 1322 1924	0.0 4.1 0.0 3.8	0 125 -6 116	<b>0034</b> <b>0652</b> <b>1227</b> <b>1912</b>	-0.5 4.4 -6 91	-15 134 -6 125	<b>0018</b> <b>0638</b> <b>1256</b> <b>1845</b>	0.0 3.9 0.3 2.9	0 119 9 88	
<b>13</b> Su	0101 0703 1256 1911	-0.4 3.6 0.0 4.3	-12 110 0 131	<b>28</b> M 0121 0729 1327 1930	-0.1 3.5 0.4 3.5	-3 107 12 107	-0.1 3.8 0.5 94	-3	<b>28</b> Th	0135 0756 1409 2003	-0.1 3.8 0.5 3.1	-3 116 15 76	<b>0115</b> <b>0739</b> <b>1354</b> <b>1933</b>	0.3 3.3 0.9 2.5	9 101 27 85	<b>0039</b> <b>0705</b> <b>1328</b> <b>1910</b>	0.3 3.5 0.7 2.5	9 107 21 76	
<b>14</b> M	0136 0743 1339 1950	-0.2 3.5 0.3 3.8	-6 107 9 116	<b>29</b> Tu 0145 0801 1401 1955	0.2 3.3 0.8 3.0	6 101 24 91	0.3 3.4 1.0 2.4	9	<b>29</b> F	0134 0814 1441 ○ 2056	0.7 2.9 1.3 73	21 88 40 61	<b>0139</b> <b>0821</b> <b>1508</b> <b>○ 2041</b>	0.5 3.5 1.0 2.1	15 107 64	<b>0101</b> <b>0739</b> <b>1415</b> <b>1942</b>	0.7 3.1 1.1 2.0	21 94 34 61	
<b>15</b> Tu	0214 0831 1432 2037	0.1 3.4 0.7 3.3	3 104 21 101	<b>30</b> W 0210 0838 1445 ○ 2024	0.5 3.0 1.2 2.5	15 91 37 76	0.8 3.1 1.2 1.9	24 94 37 58	<b>15</b> F	0302 1015 1743 2320	0.8 3.1 1.2 1.9	24 94 37 58	<b>0225</b> <b>0954</b> <b>1806</b>	1.0 3.0 1.2	30 91 37	<b>0127</b> <b>0842</b> <b>1639</b> <b>○ 2217</b>	1.1 2.7 1.4 1.7	34 82 43 52	
				<b>31</b> Th	0240 0934 1610 2112	0.9 2.7 1.5 2.0	27 82 46 61										<b>3037</b> <b>M</b> <b>1149</b> <b>1928</b>	1.5 2.6 1.1 1.1	46 79 34 34

Time meridian 180° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings which is one-half foot below mean low water springs.

# Kwajalein Atoll, Marshall Islands, 2008

Times and Heights of High and Low Waters

April			May			June											
Time	Height		Time	Height		Time	Height		Time	Height							
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm						
<b>1</b> Tu 0139 0657 1.3 40	2.1 0.6 3.0 91	64	<b>16</b> W 0217 0809 3.0 18	3.0 0.6 3.6 110	91	<b>1</b> Th 0111 0703 2.8 15	2.8 0.9 3.4 104	85	<b>16</b> Su 0207 0818 3.5 15	4.0 0.5 3.2 98	122	<b>16</b> M 0242 0914 3.8 9	0.1 0.3 2.8 85	116			
1324 2007 0.6 18	3.0 2038 0.1 3	91	1418 2056 3.6 110	3.6 0.2 -6	110	1314 1939 3.4 6	3.4 0.2 -6	104	1414 2049 3.2 0	3.2 0.0	98	1417 2103 3.4 -9	3.4 -0.3	104	10.2 -6	-6	122
<b>2</b> W 0212 0755 0.8 24	2.7 0.8 3.6 110	82	<b>17</b> Th 0248 0848 3.5 6	3.5 0.2 3.8 116	107	<b>2</b> F 0154 0757 3.4 12	3.4 0.4 3.8 116	104	<b>17</b> Sa 0240 0855 3.8 6	3.8 0.2 3.3 101	116	<b>2</b> M 0243 0910 4.5 -9	4.5 -0.3 3.5 107	137	<b>17</b> Tu 0318 0950 4.0 3	0.1 0.1 2.9 88	122
1410 2036 0.1 3	3.6 2105 -0.2 -6	110	1453 2105 3.8 -6	3.8 -0.2 -6	116	1403 2018 3.8 -6	3.8 -0.2 -6	116	1450 2049 3.3 0	3.3 0.0	101	1508 2103 3.5 -9	3.5 -0.3	107	1542 2127 2.9 6	2.9 0.2	88
<b>3</b> Th 0242 0835 0.2 6	3.3 0.2 4.1 125	101	<b>18</b> F 0316 0920 3.9 -3	3.9 -0.1 4.0 122	119	<b>3</b> Sa 0233 0842 4.0 -3	4.0 -0.1 4.0 122	122	<b>18</b> Su 0309 0929 4.1 0	4.1 0.0 3.4 104	125	<b>3</b> Tu 0328 0958 4.8 -7	4.8 -0.7 3.6 110	146	<b>18</b> W 1024 1617 4.0 0	0.1 -0.1 3.0 91	125
1447 2105 -0.3 -9	4.1 -0.3 -9	125	1523 2130 4.0 -0.3	4.0 -0.3 -9	122	1447 2054 4.0 -0.5	4.0 -0.5 -15	122	1523 2118 3.4 -0.1	3.4 -0.1	104	1557 2148 3.6 -0.5	3.6 -0.5	110	1651 2203 3.1 0	3.1 0.0	91
<b>4</b> F 0312 0912 -0.3 -9	3.9 0.3 -0.3 -9	119	<b>19</b> Sa 0341 0950 4.2 -3	4.2 -0.3 4.0 122	128	<b>4</b> Su 0310 0925 4.5 -6	4.5 -0.6 4.2 128	137	<b>19</b> M 0338 1000 4.3 -2	4.3 -0.2 3.4 104	131	<b>4</b> W 0413 1045 5.0 -8	5.0 -0.8 3.6 110	152	<b>19</b> Th 1057 1651 4.2 0	-0.3 -0.3 -24	128
1521 2135 -0.7 -21	4.5 -0.7 -21	137	1551 2154 4.0 -0.4	4.0 -0.4 -12	122	1528 2131 4.2 -0.7	4.2 -0.7 -21	128	1555 2147 3.4 -0.2	3.4 -0.2	104	1643 2232 3.6 -0.5	3.6 -0.5	110	1651 2237 3.1 0	3.1 0.0	94
<b>5</b> Sa 0343 0948 -0.7 -21	4.4 0.7 -0.7 -21	134	<b>20</b> Su 0407 1019 4.5 -5	4.5 -0.5 4.0 137	137	<b>5</b> M 0348 1008 4.9 -8	4.9 -0.8 4.1 125	149	<b>20</b> Tu 0407 1032 4.4 -3	4.4 -0.3 3.3 101	134	<b>5</b> Th 0458 1131 5.0 -8	5.0 -0.8 3.5 107	152	<b>20</b> F 0500 1129 4.3 -9	-0.3 -0.3 -24	131
1555 2205 -0.9 -27	4.7 -0.9 -27	143	1618 2218 4.0 -0.5	4.0 -0.5 -15	122	1609 2207 4.1 -0.8	4.1 -0.8 -24	125	1626 2216 3.3 -0.2	3.3 -0.2	101	1729 2316 3.5 -0.4	3.5 -0.4	107	1724 2310 3.1 0	3.1 0.0	94
<b>6</b> Su 0415 1024 -1.0 -30	4.8 -1.0 -30	146	<b>21</b> M 0432 1047 4.6 -5	4.6 -0.5 4.3 140	140	<b>6</b> Tu 0426 1050 5.1 -10	5.1 -1.0 4.0 155	155	<b>21</b> W 0437 1103 4.4 -3	4.4 -0.3 3.2 98	134	<b>6</b> F 0543 1218 4.9 -6	4.9 -0.6 3.3 101	149	<b>21</b> Sa 0533 1202 4.3 -9	-0.3 -0.3 -18	131
1630 ● 2236 -1.0 -30	4.7 -1.0 -30	143	1645 2242 3.8 -0.5	3.8 -0.5 -15	140	1650 2244 4.0 -0.7	4.0 -0.7 -21	122	1657 2245 3.2 -0.1	3.2 -0.1	98	1815 2343 3.3 0	3.3 0.0	101	1757 2343 3.2 0	3.2 0.0	98
<b>7</b> M 0448 1102 -1.0 -30	5.1 -1.0 -30	155	<b>22</b> Tu 0457 1115 4.6 -5	4.6 -0.5 4.3 140	140	<b>7</b> W 0506 1133 5.1 -9	5.1 -0.9 3.7 155	155	<b>22</b> Th 0507 1134 4.3 -9	4.3 -0.3 3.1 94	131	<b>7</b> Sa 0001 0628 -0.2 -2	-0.2 -0.6 -140	140	<b>22</b> Su 0606 1235 4.3 -6	-0.2 -0.2 -6	131
1705 2307 -1.0 -30	4.5 -1.0 -30	137	1711 2306 3.6 -0.3	3.6 -0.3 -9	110	1731 2323 3.7 -0.5	3.7 -0.5 -15	110	1728 2315 3.1 0.0	3.1 0.0	94	1832 1902 3.1 0	3.1 0.0	94	1832 1909 3.1 0	3.1 0.0	94
<b>8</b> Tu 0522 1140 -0.9 -27	5.1 -0.9 -27	155	<b>23</b> W 0523 1144 4.4 -3	4.4 -0.3 4.0 134	134	<b>8</b> Th 0547 1219 4.9 -6	4.9 -0.6 4.1 149	149	<b>23</b> F 0538 1207 4.2 -1	4.2 -0.1 3.0 128	128	<b>8</b> Su 0047 0715 0.1 -3	0.1 4.2 0.0 0	128	<b>23</b> M 0018 0640 0.2 -3	0.2 4.2 0.0 0	6
1741 2340 -0.7 -21	4.2 -0.7 -21	128	1738 2330 3.4 -0.2	3.4 -0.2 -6	104	1801 2346 3.0 0.2	3.0 0.2 6	91	1801 2346 3.0 0.2	3.0 0.2	91	1953 1909 2.9 0.0	2.9 0.0	88	1909 1951 3.1 0.0	3.1 0.0	94
<b>9</b> W 0558 1221 -0.6 -18	4.9 -0.6 -18	149	<b>24</b> Th 0550 1213 4.2 -1	4.2 -0.1 3.1 128	128	<b>9</b> F 0003 0631 -0.2 -6	0.2 4.5 -0.2 137	137	<b>24</b> Sa 0611 1243 4.0 0.1	4.0 0.1 3.1 85	122	<b>9</b> M 0137 1245 0.5 0.3	0.5 3.8 0.3 85	15	<b>24</b> Tu 0056 0717 0.3 -1	0.3 4.0 0.1 0	9
1818 ● 2355 3.7 113	4.9 0.1 3	149	1805 2355 3.1 0.1	3.1 0.1 3	94	1308 1902 -0.2 2.9	0.2 2.9 88	88	1445 2051 0.3 2.8	0.3 2.8	85	1445 2051 0.3 2.8	0.3 2.8	85	1348 1951 0.1 3.1	0.1 3.1	94
<b>10</b> Th 0013 0637 -0.4 -12	-0.4 4.5 -0.4 -12	12	<b>25</b> F 0618 1245 3.9 0.2	3.9 0.2 3.6 6	119	<b>10</b> Sa 0046 1245 0.2 6	0.2 4.1 0.2 6	6	<b>25</b> Su 0020 1020 0.4 6	0.4 4.1 0.2 6	12	<b>10</b> Tu 0235 0859 0.8 104	0.8 3.4 0.8 104	24	<b>25</b> W 0139 0758 0.5 116	0.5 3.8 0.2 6	15
1305 1858 -0.2 3.1	-0.6 3.1	12	1835 2000 2.8 2.6	2.8 2.6	85	1404 2000 0.2 79	0.2 2.6	79	1323 2197 0.3 72	0.3 2.7	82	1541 2159 0.6 82	0.6 2.7	82	1430 2042 0.2 3.1	0.2 3.1	94
<b>11</b> F 0048 0720 -0.1 -12	0.1 4.0 -0.1 -12	3	<b>26</b> Sa 0022 0650 0.4 3.6	0.4 0.4 3.6 110	12	<b>11</b> Su 0138 0650 0.7 110	0.7 4.1 0.6 110	21	<b>26</b> M 0059 0730 0.6 110	0.6 3.6 0.5 110	18	<b>11</b> W 0348 1003 1.1 91	1.1 3.0 1.1 91	34	<b>26</b> Th 0234 0848 0.8 104	0.8 3.4 0.4 104	24
1359 1946 0.4 2.5	0.4 2.5	12	1323 1910 0.5 2.5	0.5 2.5	115	1516 2120 0.6 70	0.6 2.3	70	1411 2010 0.5 76	0.5 2.5	76	1642 2010 0.7 85	0.7 2.5	82	1521 2144 0.4 94	0.4 3.1	94
<b>12</b> Sa 0129 0817 -0.6 -18	0.6 3.5 -0.6 -18	18	<b>27</b> Su 0053 0732 0.7 101	0.7 3.3 0.7 101	21	<b>12</b> M 0253 0939 1.1 98	1.1 3.2 1.1 98	34	<b>27</b> Tu 0150 0823 0.9 104	0.9 3.4 0.7 104	27	<b>12</b> F 0346 0953 0.9 94	0.9 3.1 0.9 94	27			
1520 2109 0.9 2.0	0.9 2.0	21	1417 2003 0.9 2.2	0.9 2.2	27	1647 2309 0.8 73	0.8 2.4	73	1511 2120 0.7 76	0.7 2.5	76	1622 2300 0.5 98	0.5 3.2	98	1622 2300 0.5 98	0.5 3.2	98
<b>13</b> Su 0236 0956 -1.0 -30	1.2 3.0 -1.0 -30	37	<b>28</b> M 0140 0836 1.1 2.9	1.1 2.9 1.1 88	40	<b>13</b> Tu 0445 1116 1.3 91	1.3 3.0 1.3 91	40	<b>28</b> W 0302 0932 1.1 98	1.1 3.2 1.1 98	34	<b>13</b> F 0024 0641 3.0 116	3.0 1.1 0.6 116	91	<b>28</b> Sa 0519 1116 1.0 2.8	1.0 2.8 0.5 85	30
1744 ● 2155 1.0 61	1.0 2.0	37	1550 2155 1.1 2.0	1.1 2.0	34	1623 2245 0.7 82	0.7 2.7	82	1230 1841 2.6 71	2.6 0.7 79	79	1230 1841 2.6 71	2.6 0.7 79	79	1116 1734 2.8 15	2.8 0.5 15	30
<b>14</b> M 0010 0523 -2.0 -43	2.0 1.4 -2.0 -43	61	<b>29</b> Tu 0322 1027 1.4 2.8	1.4 2.8 1.4 85	43	<b>14</b> W 0035 0626 2.7 34	2.7 1.1 2.7 34	82	<b>29</b> Th 0437 1054 1.1 94	1.1 3.1 1.1 94	34	<b>14</b> Sa 0119 0746 3.3 27	3.3 0.9 2.6 27	101	<b>29</b> Su 0018 0652 3.5 21	3.5 0.7 2.7 21	107
1214 1919 3.0 0.7	3.0 0.7	43	1745 2006 1.0 0.4	1.0 0.4	30	1236 1906 3.0 0.6	3.0 0.6	91	1332 1946 3.1 18	3.1 0.4	91	1332 1946 3.1 18	3.1 0.4	91	1245 1847 2.7 12	2.7 0.4	82
<b>15</b> Tu 0136 0714 -2.5 -34	2.5 1.1 -2.5 -34	76	<b>30</b> W 0007 0543 2.3 40	2.3 1.3 2.3 40	70	<b>15</b> Th 0128 0731 3.1 24	3.1 0.8 3.1 24	94	<b>30</b> F 0003 0607 3.0 27	3.0 0.9 3.0 27	91	<b>15</b> Su 0203 0834 3.5 18	3.5 0.6 3.5 18	107	<b>30</b> M 0128 0807 3.8 9	3.8 0.3 3.8 9	116
1331 2006 3.3 0.4	3.3 0.4	101	1210 1853 3.0 0.6	3.0 0.6	91	1332 1946 3.1 0.4	3.1 0.4	91	1213 1836 3.2 12	3.2 0.4	98	1213 1836 3.2 12	3.2 0.4	98	1402 1953 2.9 6	2.9 0.4	88
1301 2006 3.3 0.4	3.3 0.4	101	1210 1853 3.0 0.6	3.0 0.6	91	1332 1946 3.1 0.4	3.1 0.4	91	1213 1836 3.2 12	3.2 0.4	98	1213 1836 3.2 12	3.2 0.4	98	1402 1953 2.9 6	2.9 0.4	88

Time meridian 180° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings which is one-half foot below mean low water springs.

# Kwajalein Atoll, Marshall Islands, 2008

Times and Heights of High and Low Waters

July					August					September					
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height	
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm	
<b>1</b> Tu	0228	4.3	131	<b>16</b> W	0308	3.7	113	<b>1</b> F	0404	4.8	146	<b>16</b> Sa	0401	4.4	134
	0907	-0.1	-3	0944	0.1	3	1034	-0.8	-24	1023	-0.5	-15	1108	-0.9	-27
	1503	3.1	94	1538	2.8	85	1633	3.7	113	1622	3.7	113	1713	4.4	134
	2050	0.0	0	2120	0.3	9	2223	-0.5	-15	2214	-0.4	-12	2315	-0.7	-21
<b>2</b> W	0320	4.6	140	<b>17</b> Th	0344	4.0	122	<b>2</b> Sa	0443	5.0	152	<b>17</b> Su	0429	4.7	143
	0957	-0.5	-15	1016	-0.1	-3	1109	-0.9	-27	1049	-0.7	-21	1134	-0.8	-24
	1555	3.3	101	1611	3.1	94	1709	3.9	119	1650	4.0	122	1741	4.4	134
	2141	-0.2	-6	2156	0.1	3	2302	-0.6	-18	2244	-0.5	-15	2345	-0.5	-15
<b>3</b> Th	0408	4.9	149	<b>18</b> F	0418	4.3	131	<b>3</b> Su	0520	5.0	152	<b>18</b> M	0458	4.8	146
	1043	-0.7	-21	1046	-0.3	-9	1142	-0.8	-24	1115	-0.8	-24	1157	-0.5	-15
	1641	3.5	107	1642	3.3	101	1743	4.0	122	1718	4.2	128	1807	4.3	131
	● 2228	-0.4	-12	○ 2230	-0.1	-3	2338	-0.6	-18	2315	-0.6	-18	1833	4.1	125
<b>4</b> F	0453	5.0	152	<b>19</b> Sa	0450	4.5	137	<b>4</b> M	0553	4.8	146	<b>19</b> Tu	0527	4.8	146
	1126	-0.8	-24	1115	-0.5	-15	1213	-0.7	-21	1142	-0.8	-24	0014	-0.3	-9
	1724	3.6	110	1713	3.5	107	1815	4.0	122	1747	4.3	131	0615	3.9	119
	2312	-0.4	-12	2302	-0.2	-6	1918	3.7	113	2347	-0.6	-18	1219	-0.3	-9
<b>5</b> Sa	0536	5.0	152	<b>20</b> Su	0520	4.6	140	<b>5</b> Tu	0013	-0.4	-12	<b>20</b> W	0556	4.6	140
	1207	-0.7	-21	1144	-0.5	-15	0625	4.5	137	1210	-0.7	-21	0043	0.1	3
	1805	3.6	110	1743	3.6	110	1241	-0.5	-15	1818	4.3	131	0638	3.4	104
	2355	-0.3	-9	2333	-0.3	-9	1847	3.9	119	1926	3.3	101	1239	0.1	3
<b>6</b> Su	0617	4.8	146	<b>21</b> M	0550	4.6	140	<b>6</b> W	0046	-0.1	-3	<b>21</b> Th	0021	-0.4	-12
	1245	-0.5	-12	1213	-0.5	-15	0654	4.0	122	0627	4.3	131	0701	2.9	88
	1845	3.5	107	1813	3.7	113	1308	-0.2	-6	1238	-0.5	-15	1259	0.4	12
	1925	3.4	104	1846	3.7	113	1918	3.7	113	1851	4.2	128	1926	3.3	101
<b>7</b> M	0036	-0.1	-3	<b>22</b> Tu	0006	-0.2	-6	<b>7</b> Th	0120	0.3	9	<b>22</b> F	0059	-0.1	-3
	0655	4.4	134	0621	4.5	137	0721	3.5	107	0700	3.8	116	0723	2.4	73
	1322	-0.3	-9	1243	-0.4	-12	1333	0.2	6	1309	-0.2	-6	1318	0.8	24
	1925	3.4	104	1846	3.7	113	1950	3.5	107	1928	3.9	119	2002	2.9	88
<b>8</b> Tu	0117	0.2	6	<b>23</b> W	0040	-0.1	-3	<b>8</b> F	0156	0.7	21	<b>23</b> Sa	0143	0.3	9
	0733	4.0	122	0653	4.3	131	0748	3.0	91	0738	3.2	98	0749	1.9	58
	1358	0.0	0	1314	-0.3	-9	1358	0.5	15	1343	0.2	6	1336	1.2	37
	2006	3.3	101	1922	3.7	113	2026	3.1	94	2015	3.6	110	2123	2.5	76
<b>9</b> W	0200	0.6	18	<b>24</b> Th	0119	0.2	6	<b>9</b> Sa	0240	1.1	34	<b>24</b> M	0242	0.8	24
	0810	3.5	107	0728	3.9	119	0819	2.5	76	0827	2.5	76	0749	1.9	58
	1435	0.4	12	1348	-0.1	-3	1427	0.9	27	1429	0.7	21	1336	1.2	37
	2051	3.1	94	2003	3.6	110	● 2118	2.8	85	● 2127	3.2	98	● 2123	2.5	76
<b>10</b> Th	0249	0.9	27	<b>25</b> F	0206	0.5	15	<b>10</b> Su	0400	1.4	43	<b>25</b> M	0434	1.1	34
	0850	3.0	91	0810	3.4	104	0910	2.0	61	1014	2.0	61	0812	1.0	30
	1514	0.7	21	1428	0.2	6	1515	1.2	37	1602	1.1	34	1417	2.1	64
	● 2145	2.9	88	2055	3.4	104	2304	2.6	79	2338	3.1	94	1934	1.2	37
<b>11</b> F	0355	1.2	37	<b>26</b> Sa	0308	0.8	24	<b>11</b> M	0711	1.4	43	<b>26</b> W	0713	0.9	27
	0942	2.5	76	0903	2.9	88	1242	1.7	52	1316	2.1	64	0837	0.5	15
	1604	0.9	27	1521	0.5	15	1751	1.4	43	1839	1.1	34	1439	2.6	79
	2257	2.9	88	● 2207	3.3	101	1942	1.1	34	2018	0.7	21	2044	0.1	3
<b>12</b> Sa	0532	1.4	43	<b>27</b> Su	0444	1.0	30	<b>12</b> Tu	0114	2.8	85	<b>27</b> W	0127	3.4	104
	1104	2.2	67	1031	2.4	73	0828	0.9	27	0824	0.3	9	0900	0.1	3
	1714	1.0	30	1640	0.8	24	1421	2.1	64	1426	2.6	79	1502	3.1	94
	2345	3.3	101	2345	3.3	101	1942	1.1	34	2002	0.6	18	2050	0.3	9
<b>13</b> Su	0021	2.9	88	<b>28</b> M	0648	0.9	27	<b>13</b> W	0217	3.2	98	<b>28</b> Th	0229	4.0	122
	0718	1.2	37	1238	2.3	70	0902	0.5	15	1508	3.1	94	0907	-0.1	-3
	1253	2.1	64	1825	0.8	24	1458	2.5	76	2053	0.1	3	2121	-0.2	-6
	1838	1.0	30	1838	1.0	30	2034	0.7	21	1527	3.6	110	2152	-0.5	-15
<b>14</b> M	0133	3.1	94	<b>29</b> Tu	0119	3.6	110	<b>14</b> Th	0257	3.6	110	<b>29</b> F	0313	4.4	134
	0825	0.8	24	0815	0.4	12	0930	0.1	3	0941	-0.5	-15	0941	-0.6	-18
	1411	2.3	70	1411	2.5	76	1528	2.9	88	1543	3.6	110	1553	4.1	125
	1947	0.9	27	1951	0.5	15	2111	0.3	9	2134	-0.3	-9	2151	-0.5	-15
<b>15</b> Tu	0226	3.4	104	<b>30</b> W	0227	4.0	122	<b>15</b> F	0330	4.0	122	<b>30</b> Sa	0351	4.7	143
	0909	0.5	15	0911	-0.1	-3	0957	-0.2	-6	1013	-0.8	-24	1013	-0.8	-24
	1500	2.5	76	1509	2.9	88	1555	3.3	101	1615	4.0	122	1620	4.4	134
	2039	0.6	18	2052	0.1	3	2144	-0.1	-3	2210	-0.6	-18	● 2222	-0.7	-21
<b>31</b> Th	0319	4.5	137	<b>31</b> W	0955	-0.5	-15	<b>31</b> Th	0424	4.9	149	<b>31</b> Su	1042	-0.9	-27
	1554	3.3	101	1554	3.3	101	1554	4.3	131	1645	4.3	131	1645	-0.9	-27
	2141	-0.2	-6	2141	-0.2	-6	● 2244	-0.7	-21	● 2244	-0.7	-21	● 2244	-0.7	-21

Time meridian 180° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings which is one-half foot below mean low water springs.

# Kwajalein Atoll, Marshall Islands, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm		h m	ft	cm		h m	ft	cm	
1 W	0453	4.3	131	16 Th	0439	4.4	134	1 Sa	0522	3.3	101
1055	-0.7	-21		1039	-0.9	-27		1112	-0.2	-6	
1707	4.7	143		1656	5.1	155		1734	4.3	131	
2320	-0.6	-18		2315	-0.9	-27					
2 Th	0518	4.0	122	17 F	0514	4.1	125	2 Su	0000	-0.1	-3
1117	-0.5	-15		1111	-0.8	-24		0550	3.0	91	
1732	4.5	137		1731	5.0	152		1138	0.1	3	
2347	-0.4	-12		2354	-0.7	-21		1803	4.0	122	
3 F	0543	3.6	110	18 Sa	0551	3.7	113	3 M	0032	0.2	6
1139	-0.3	-9		1144	-0.4	-12		0620	2.7	82	
1757	4.2	128		1809	4.7	143		1204	0.4	12	
4 Sa	0015	-0.1	-3	19 Su	0038	-0.3	-9	18 Tu	0134	0.0	0
0607	3.2	98		0631	3.1	94		0729	2.7	82	
1200	0.0	0		1220	0.0	0		1309	0.5	15	
1822	3.9	119		1852	4.2	128		1947	3.8	116	
5 Su	0044	0.3	9	20 M	0130	0.2	6	3 W	0105	0.2	6
0631	2.8	85		0719	2.6	79		0658	2.7	82	
1220	0.4	12		1301	0.5	15		1240	0.5	15	
1849	3.5	107		1946	3.6	110		1909	3.7	113	
6 M	0118	0.7	21	21 Tu	0245	0.7	21	4 Th	0147	0.4	12
0657	2.3	70		0834	2.1	64		0640	2.4	73	
1241	0.8	24		1402	1.1	34		1414	1.0	30	
1924	3.0	91		● 2113	3.1	94		2058	3.4	104	
7 Tu	0210	1.1	34	21 ●	0245	0.7	21	4 Th	0147	0.4	12
0733	1.9	58		0834	2.1	64		0743	2.6	79	
1304	1.2	37		1402	1.1	34		1323	0.8	24	
● 2029	2.6	79		● 2113	3.1	94		1953	3.4	104	
8 W	0505	1.4	43	22 W	0453	0.9	27	5 F	0238	0.6	18
1210	1.7	52		1119	2.0	61		0844	2.5	76	
1516	1.6	49		1630	1.4	43		1422	1.1	34	
2342	2.5	76		2327	3.0	91		2051	3.2	98	
9 Th	0714	1.0	30	23 Th	0641	0.7	21	6 Sa	0342	0.7	21
1333	2.2	67		1303	2.5	76		1005	2.6	79	
1851	1.4	43		1839	1.1	34		1551	1.3	40	
10 F	0109	3.0	91	24 F	0056	3.3	101	● 6 O	2209	3.0	91
0749	0.6	18		0735	0.3	9		0532	0.7	21	
1359	2.7	82		1350	3.1	94		1202	2.6	79	
1942	0.9	27		1942	0.7	21		1752	1.2	37	
11 Sa	0152	3.5	107	24 ●	0056	3.3	101	7 Su	0456	0.7	21
0816	0.2	6		0735	0.3	9		1131	2.8	85	
1425	3.3	101		1350	3.1	94		1306	3.2	98	
2018	0.3	9		1942	0.7	21		2336	2.9	88	
12 Su	0226	3.9	119	25 F	0150	3.6	110	8 M	0605	0.6	18
0843	-0.2	-6		0811	0.0	0		1240	3.3	101	
1452	3.9	119		1425	3.6	110		1856	0.8	24	
2052	-0.1	-3		2025	0.3	9		● 2051	0.0	0	
13 M	0229	3.8	116	26 F	0224	3.8	116	9 Th	0247	3.4	104
0841	-0.2	-6		0831	-0.4	-12		0841	-0.2	-6	
1454	4.0	122		1449	4.4	134		1509	4.7	143	
2101	-0.1	-3		2105	-0.4	-12		2139	-0.6	-18	
14 F	0226	3.9	119	27 M	0302	3.9	119	10 W	0339	2.9	88
0939	-0.8	-24		0908	-0.4	-12		0923	0.2	6	
1551	4.8	146		1522	4.3	131		1548	4.2	128	
2201	-0.8	-24		2133	-0.3	-9		2220	-0.2	-6	
15 W	0405	4.5	137	27 ●	0302	3.9	119	11 F	0413	3.0	91
1009	-1.0	-30		0934	-0.5	-15		0957	0.0	0	
1623	5.0	152		1549	4.6	140		1621	4.3	131	
● 2237	-1.0	-30		2203	-0.5	-15		2250	-0.3	-9	
16 M	0455	3.6	110	28 F	0332	4.0	122	12 F	0336	3.5	107
1048	-0.4	-12		0934	-0.5	-15		0927	-0.5	-15	
1707	4.5	137		1641	5.2	158		1553	5.0	152	
2330	-0.3	-9		2309	-0.9	-27		2225	-0.8	-24	
17 F	0455	3.6	110	28 ●	0344	4.0	122	13 O	0422	3.6	110
1048	-0.4	-12		0942	-0.8	-24		1011	-0.6	-18	
1707	4.5	137		1603	5.1	155		1637	5.2	158	
2330	-0.3	-9		● 2227	-0.9	-27		● 2309	-0.9	-27	
18 F	0455	3.6	110	29 F	0425	3.9	119	14 W	0506	3.6	110
1048	-0.4	-12		1019	-0.8	-24		1054	-0.6	-18	
1707	4.5	137		1641	5.2	158		1721	5.1	155	
2330	-0.3	-9		2309	-0.9	-27		2354	-0.8	-24	
19 W	0428	3.8	116	29 ●	0506	3.7	113	15 M	0551	3.5	107
1023	-0.5	-15		1057	-0.6	-18		1138	-0.4	-12	
1641	4.6	140		1722	5.1	155		1805	4.9	149	
2301	-0.5	-15		2353	-0.7	-21		2355	-0.2	-6	
20 F	0455	3.6	110	30 F	0455	3.6	110	16 W	0019	-0.3	-9
1048	-0.4	-12		1048	-0.4	-12		0615	3.3	101	
1707	4.5	137		1707	4.5	137		1203	0.0	0	
2330	-0.3	-9		2330	-0.3	-9		1823	4.3	131	

Time meridian 180° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings which is one-half foot below mean low water springs.

# Sand Island, Midway Islands, 2008

Times and Heights of High and Low Waters

January					February					March					
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height	
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm
<b>1</b> Tu	0510	0.6	18	<b>16</b>	0434	0.7	21	<b>1</b>	0048	1.3	40	<b>16</b>	0042	1.4	43
	1013	1.0	30	W	0928	1.1	34	F	0644	0.8	24	Sa	0644	0.8	24
	1709	0.1	3	1634	-0.1	-3	1031	1.0	30	1046	1.0	30	1702	0.1	3
<b>2</b> W	0036	1.2	37	<b>17</b>	0000	1.4	43	<b>2</b>	0149	1.3	40	<b>17</b>	0149	1.4	43
	0623	0.7	21	Th	0549	0.8	24	Sa	0757	0.8	24	Su	0803	0.8	24
	1047	1.0	30	1006	1.1	34	1116	0.9	27	1204	1.0	30	1047	0.9	27
	1750	0.1	3	1727	-0.1	-3	1840	0.1	3	1915	0.0	0	1759	0.1	3
<b>3</b> Th	0135	1.3	40	<b>18</b>	0107	1.4	43	<b>3</b>	0247	1.3	40	<b>18</b>	0250	1.4	43
	0739	0.8	24	F	0710	0.9	27	Su	0907	0.8	24	M	0912	0.7	21
	1124	0.9	27	1056	1.0	30	1214	0.9	27	1333	0.9	27	1157	0.8	24
	1835	0.1	3	1825	-0.2	-6	1935	0.1	3	2022	0.0	0	1901	0.1	3
<b>4</b> F	0231	1.3	40	<b>19</b>	0212	1.5	46	<b>4</b>	0338	1.4	43	<b>19</b>	0343	1.4	43
	0850	0.8	24	Sa	0830	0.9	27	M	1004	0.8	24	Tu	1007	0.6	18
	1208	0.9	27	1201	1.0	30	1325	0.9	27	1459	1.0	30	1320	0.8	24
	1921	0.1	3	1926	-0.1	-3	2029	0.1	3	2125	0.1	3	2004	0.1	3
<b>5</b> Sa	0322	1.4	43	<b>20</b>	0312	1.5	46	<b>5</b>	0421	1.4	43	<b>20</b>	0428	1.3	40
	0953	0.7	21	Su	0939	0.8	24	Tu	1046	0.7	21	W	1052	0.5	15
	1300	0.8	24	1319	1.0	30	1438	0.9	27	1612	1.0	30	1439	0.9	27
	2009	0.0	0	2028	-0.1	-3	2121	0.1	3	O	2224	0.1	3	2107	0.2
<b>6</b> Su	0409	1.4	43	<b>21</b>	0406	1.5	46	<b>6</b>	0458	1.4	43	<b>21</b>	0508	1.3	40
	1044	0.7	21	M	1035	0.7	21	W	1120	0.6	18	Th	1131	0.4	12
	1355	0.8	24	1441	1.0	30	1547	0.9	27	1715	1.1	34	1549	1.0	30
	2056	0.0	0	2129	-0.1	-3	●	2212	0.2	6	2318	0.2	6	2206	0.2	6
<b>7</b> M	0451	1.5	46	<b>22</b>	0454	1.5	46	<b>7</b>	0531	1.4	43	<b>22</b>	0543	1.3	40
	1127	0.7	21	Tu	1123	0.6	18	Th	1150	0.5	15	F	1205	0.3	9
	1453	0.8	24	1558	1.0	30	1650	1.0	30	1809	1.2	37	1650	1.1	34
	2141	0.0	0	O	2226	0.0	0	2302	0.2	6	●	2303	0.2	6	
<b>8</b> Tu	0530	1.5	46	<b>23</b>	0537	1.5	46	<b>8</b>	0600	1.4	43	<b>23</b>	0009	0.3	9
	1204	0.7	21	W	1205	0.5	15	F	1217	0.4	12	Sa	0616	1.2	37
	1550	0.8	24	1708	1.0	30	1749	1.1	34	1236	0.2	6	1744	1.2	37
	● 2224	0.1	3	2320	0.1	3	2353	0.3	9	1858	1.2	37	2357	0.3	9
<b>9</b> W	0604	1.5	46	<b>24</b>	0615	1.5	46	<b>9</b>	0628	1.3	40	<b>24</b>	0058	0.3	9
	1237	0.6	18	Th	1245	0.4	12	Sa	1246	0.3	9	Su	1157	0.0	0
	1647	0.8	24	1812	1.1	34	1845	1.2	37	1306	0.2	6	1836	1.3	40
	2307	0.1	3	2320	0.1	3	2353	0.3	9	1944	1.3	40	1918	1.3	40
<b>10</b> Th	0636	1.5	46	<b>25</b>	0012	0.2	6	<b>10</b>	0044	0.3	9	<b>10</b>	0048	0.4	12
	1306	0.5	15	F	0651	1.4	43	Sa	0654	1.3	40	M	0714	1.1	34
	1745	0.9	27	1321	0.3	9	1317	0.2	6	1337	0.1	3	1235	-0.1	-3
	2352	0.1	3	1911	1.1	34	1940	1.3	40	2029	1.3	40	1927	1.4	43
<b>11</b> F	0705	1.4	43	<b>26</b>	0103	0.3	9	<b>11</b>	0136	0.5	15	<b>11</b>	0138	0.4	12
	1334	0.4	12	Sa	0724	1.4	43	M	0722	1.2	37	Tu	0742	1.0	30
	1843	1.0	30	1355	0.3	9	1352	0.0	0	1409	0.1	3	1316	-0.2	-6
	2007	1.2	37	2035	1.4	43	2115	1.3	40	2115	1.3	40	2019	1.4	43
<b>12</b> Sa	0040	0.2	6	<b>27</b>	0154	0.4	12	<b>12</b>	0229	0.6	18	<b>12</b>	0227	0.5	15
	0733	1.4	43	Su	0754	1.3	40	W	0751	1.1	34	W	0721	1.0	30
	1402	0.3	9	1427	0.2	6	1432	-0.1	-3	1445	0.1	3	1402	-0.3	-9
	1943	1.0	30	2100	1.2	37	2132	1.4	43	2203	1.3	40	2112	1.4	43
<b>13</b> Su	0131	0.3	9	<b>28</b>	0246	0.5	15	<b>13</b>	0324	0.7	21	<b>13</b>	0317	0.6	18
	0800	1.3	40	M	0824	1.2	37	W	0823	1.1	34	Th	0841	0.9	27
	1433	0.2	6	1501	0.2	6	1517	-0.1	-3	1525	0.0	0	1452	-0.3	-9
	2045	1.1	34	2154	1.3	40	O	2232	1.4	43	O	2257	1.2	37	
<b>14</b> M	0226	0.5	15	<b>29</b>	0339	0.6	18	<b>14</b>	0423	0.7	21	<b>14</b>	0411	0.6	18
	0827	1.2	37	Tu	0853	1.1	34	Th	0901	1.1	34	F	0915	0.9	27
	1508	0.1	3	1536	0.1	3	1608	-0.1	-3	1611	0.1	3	1547	-0.2	-6
	2148	1.2	37	O	2249	1.3	40	2335	1.4	43	2355	1.2	37	2308	1.3	40
<b>15</b> Tu	0327	0.6	18	<b>30</b>	0435	0.7	21	<b>15</b>	0529	0.8	24	<b>15</b>	0513	0.6	18
	0855	1.2	37	W	0922	1.0	30	F	0947	1.0	30	Sa	0948	0.9	27
	1548	0.0	0	1615	0.1	3	1705	-0.1	-3	1648	-0.1	-3	1618	0.0	0
	● 2253	1.3	40	2347	1.3	40	31	0536	0.8	24	31	0615	0.5	15	
				Th	0954	1.0	30		1658	0.1	3	M	1039	0.7	21
												1719	0.1	3	

Time meridian 165° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to mean lower low water which is the chart datum of soundings.

# Sand Island, Midway Islands, 2008

Times and Heights of High and Low Waters

April				May				June									
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height						
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm						
1 Tu	0054	1.0	30	16 W	0123	0.9	27	1 Th	0027	0.8	24						
0711	0.4	12		0758	0.1	3	0658	0.0	0	16 F	0110	0.6	18				
1200	0.7	21		1419	0.8	24	1325	0.8	24	16 Su	0040	0.6	18				
1829	0.1	3		2016	0.2	6	1928	0.2	6	0740	-0.5	-15					
										1516	1.2	37					
										2146	0.4	12					
2 W	0143	1.0	30	17 Th	0212	0.8	24	2 F	0110	0.7	21	2 M	0133	0.6	18		
0759	0.3	9		0843	0.0	0	0739	-0.1	-3	17 Sa	0155	0.6	18				
1326	0.8	24		1523	0.9	27	1433	1.0	30	17 Tu	0831	-0.2	-6				
1944	0.2	6		2126	0.2	6	2049	0.2	6	16 M	1557	1.1	34				
										2221	0.3	9					
										2244	0.4	12					
3 Th	0227	0.9	27	18 F	0257	0.7	21	3 Sa	0152	0.6	18	3 Tu	0231	0.6	18		
0839	0.2	6		0921	-0.1	-3	0822	-0.3	-6	18 W	0238	0.5	15				
1441	0.9	27		1615	1.0	30	1532	1.1	34	18 O	0907	-0.3	-9				
2057	0.2	6		2226	0.2	6	2159	0.3	9	17 O	1639	1.1	34				
										2312	0.2	6					
										2334	0.4	12					
4 F	0306	0.9	27	19 Sa	0337	0.7	21	4 Su	0235	0.6	18	4 W	0332	0.6	18		
0917	0.1	3		0955	-0.1	-3	0907	-0.4	-12	19 M	0318	0.5	15				
1545	1.0	30		1659	1.1	34	1626	1.2	37	19 Th	0944	-0.3	-9				
2204	0.2	6		O	2319	0.2	6	2258	0.3	9	19 O	1719	1.2	37			
										2355	0.2	6					
5 Sa	0343	0.8	24	20 Su	0414	0.6	18	5 M	0320	0.6	18	5 Th	0021	0.3	9		
0954	-0.1	-3		1028	-0.2	-6	0954	-0.5	-15	20 Tu	0357	0.5	15				
1641	1.2	37		1739	1.2	37	1717	1.3	40	20 W	1020	-0.3	-9				
2303	0.2	6					●	2349	0.3	9	20 F	0436	0.6	18			
										1115	-0.5	-15	20 O	1110	-0.2	-6	
6 Su	0418	0.8	24	21 M	0004	0.2	6	6 Tu	0408	0.6	18	6 F	0106	0.3	9		
1033	-0.2	-6		0448	0.6	18	1043	-0.6	-18	21 Sa	0536	0.6	18				
1732	1.3	40		1100	-0.2	-6	1806	1.4	43	21 O	1150	-0.1	-3				
2357	0.3	9		1817	1.2	37				2123	1.3	40	21 O	1922	1.2	37	
7 M	0454	0.8	24	22 Tu	0045	0.2	6	7 W	0036	0.3	9	7 Sa	0153	0.2	6		
1115	-0.4	-12		0520	0.6	18	0458	0.6	18	22 Th	0513	0.5	15				
1822	1.4	43		1132	-0.2	-6	1134	-0.6	-18	7 O	0648	0.7	21				
				1855	1.2	37	1855	1.3	40	7 O	1304	-0.3	-9				
										2006	1.2	37	22 O	1952	1.2	37	
8 Tu	0046	0.3	9	23 W	0122	0.2	6	8 Th	0122	0.3	9	8 Su	0239	0.1	3		
0533	0.7	21		0551	0.6	18	0552	0.6	18	23 M	0759	0.7	21				
1200	-0.4	-12		1207	-0.2	-6	1226	-0.6	-18	23 O	1400	-0.2	-6				
1911	1.4	43		1932	1.2	37	1943	1.3	40	2047	1.1	34	23 O	2020	1.1	34	
9 W	0133	0.3	9	24 Th	0159	0.3	9	9 F	0208	0.2	6	9 M	0326	0.0	0		
0614	0.8	24		0624	0.6	18	0649	0.6	18	24 Sa	0912	0.7	21				
1247	-0.5	-15		1243	-0.2	-6	1319	-0.5	-15	24 O	1458	0.0	0				
2001	1.4	43		2011	1.1	34	2031	1.2	37	2127	1.0	30	24 O	2048	1.1	34	
10 Th	0219	0.3	9	25 F	0236	0.3	9	10 Sa	0257	0.2	6	10 Tu	0412	0.0	0		
0701	0.8	24		0700	0.6	18	0753	0.6	18	25 Su	0727	0.8	24				
1338	-0.4	-12		1321	-0.2	-6	1415	-0.3	-9	10 W	1027	0.2	6				
2052	1.3	40		2051	1.1	34	2118	1.1	34	25 F	1602	0.2	6				
										2206	0.9	27	25 O	2116	1.0	30	
11 F	0308	0.4	12	26 Sa	0316	0.3	9	11 Su	0349	0.1	3	11 W	0456	-0.1	-3		
0753	0.8	24		0740	0.6	18	0905	0.6	18	26 Th	1140	0.8	24				
1432	-0.4	-12		1403	-0.2	-6	1513	-0.2	-6	11 O	1420	-0.1	-3				
2144	1.2	37		2133	1.0	30	●	2205	1.0	30	2245	0.8	24	26 O	2145	0.9	27
12 Sa	0401	0.4	12	27 Su	0400	0.3	9	12 M	0443	0.1	3	12 Th	0539	-0.1	-3		
0853	0.7	21		0828	0.6	18	1025	0.6	18	27 F	1248	0.9	27				
1530	-0.2	-6		1448	-0.1	-3	1618	0.0	0	27 O	1830	0.4	12				
●	2239	1.1	34	2217	1.0	30	2251	0.9	27	2325	0.7	21	2218	0.8	24		
13 Su	0501	0.3	9	28 M	0446	0.3	9	13 Tu	0536	0.0	0	13 F	0621	-0.2	-6		
1006	0.7	21		0930	0.5	15	1148	0.7	21	28 W	1049	0.7	21				
1633	-0.1	-3		1541	0.0	0	1730	0.1	3	13 O	1625	0.2	6				
2334	1.0	30		●	2301	0.9	27	2238	0.8	24	2240	0.8	24	28 O	2257	0.8	24
14 M	0604	0.3	9	29 Tu	0532	0.2	6	14 W	0626	-0.1	-3	14 Sa	0526	0.7	21		
1132	0.7	21		1045	0.6	18	1307	0.8	24	29 O	1204	0.8	24				
1744	0.0	0		1646	0.1	3	1849	0.2	6	14 Th	1745	0.3	9				
				2344	0.8	24				2316	0.7	21	14 O	2101	0.4	12	
15 Tu	0030	0.9	27	30 W	0616	0.1	3	15 Th	0024	0.7	21	15 Su	0607	-0.2	-6		
0705	0.2	6		1207	0.7	21	0711	-0.1	-3	30 F	1314	1.0	30				
1301	0.7	21		1803	0.1	3	1413	0.9	27	30 O	1913	0.4	12				
1900	0.1	3					2008	0.3	9	31 Sa	0651	-0.4	-12				
										1417	1.1	34	30 M	1458	1.4	43	
										2036	0.4	12	30 O	2124	0.6	18	

Time meridian 165° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to mean lower low water which is the chart datum of soundings.

# Sand Island, Midway Islands, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0050 0.8 24	16 W 0139 0.7 21	1 F 0326 1.0 30	16 Sa 0339 0.9 27	1 M 0548 1.3 40	16 Tu 0526 1.3 40	17 W 0008 0.2 6	17 Th 0614 1.4 43	17 M 1151 0.3 9	16 Tu 1140 0.4 12	17 Tu 1719 1.1 34	17 O 2331 0.1 3
0809 -0.4 -12	0842 0.0 0	1000 -0.1 -3	1001 0.2 6	1151 0.3 9	1140 0.4 12	0639 1.3 40	1229 0.5 15	1750 1.2 37	1747 1.1 34	1719 1.1 34	
1554 1.4 43	1637 1.3 40	1709 1.4 43	1712 1.3 40	1742 0.4 12	1747 1.1 34	1242 0.4 12	1747 1.1 34	1823 1.2 37			
2223 0.6 18	2309 0.6 18	2332 0.5 15	2329 0.5 15	1826 0.4 12		1855 1.1 34		1856 1.0 30			
2 W 0202 0.8 24	17 Th 0239 0.7 21	2 F 0441 1.0 30	17 Su 0439 1.0 30	2 Th 0008 0.2 6	17 W 0614 1.4 43	18 Tu 0007 0.0 0		18 M 0726 1.4 43	17 W 1229 0.5 15	17 W 1747 1.1 34	
0908 -0.4 -12	0928 0.0 0	1058 0.0 0	1050 0.3 9	18 M 1330 0.5 15	18 M 1317 0.5 15	18 Th 0702 1.5 46		1850 1.1 34			
1646 1.4 43	1716 1.3 40	1749 1.4 43	1741 1.3 40	1855 1.1 34	1855 1.0 30	1818 1.0 30					
● 2313 0.5 15	O 2347 0.6 18		2356 0.4 12								
3 Th 0317 0.8 24	18 F 0339 0.7 21	3 Su 0013 0.4 12	18 M 0535 1.1 34	3 W 0042 0.2 6	18 Th 0702 1.5 46	19 Th 0007 0.0 0		19 M 1300 0.5 15	18 W 1317 0.5 15	18 W 1818 1.0 30	
1007 -0.4 -12	1013 0.0 0	0549 1.1 34	1138 0.3 9	19 F 1400 1.4 43	19 F 1404 0.6 18	19 F 1404 0.6 18		1950 1.1 34			
1733 1.4 43	1750 1.3 40	1153 0.1 3	1807 1.3 40	1926 1.2 37	1926 1.1 34	1852 1.0 30					
4 F 0000 0.4 12	19 Sa 0020 0.5 15	4 M 0052 0.3 9	19 Tu 0024 0.3 9	4 Th 0115 0.1 3	19 W 0751 1.5 46	19 M 0046 -0.1 -3		1955 1.0 30			
0431 0.8 24	0438 0.8 24	0650 1.1 34	0627 1.2 37	0811 1.4 43	1404 1.4 43	1404 1.4 43					
1103 -0.3 -9	1056 0.0 0	1246 0.2 6	1227 0.4 12	1417 0.5 15	1404 1.4 43	1404 1.4 43					
1817 1.4 43	1821 1.3 40	1901 1.3 40	1833 1.2 37	1926 1.1 34	1926 1.1 34	1852 1.0 30					
5 Sa 0045 0.3 9	20 Su 0049 0.4 12	5 Tu 0129 0.2 6	20 W 0718 1.3 40	5 F 0150 0.1 3	20 Sa 0843 1.5 46	20 M 0130 -0.1 -3		1956 1.0 30			
0543 0.8 24	0535 0.8 24	0747 1.2 37	1317 0.5 15	0857 1.4 43	1452 0.7 21	1452 0.7 21					
1159 -0.2 -6	1139 0.1 3	1339 0.3 9	1859 1.2 37	1503 0.6 18	1931 1.0 30	1931 1.0 30					
1858 1.4 43	1849 1.3 40	1934 1.2 37		1956 1.0 30							
6 Su 0128 0.2 6	21 M 0116 0.4 12	6 W 0205 0.1 3	21 Th 0125 0.1 3	6 Sa 0227 0.1 3	21 Su 0937 1.5 46	21 M 0219 -0.1 -3		2029 1.0 30			
0652 0.9 27	0631 0.9 27	0842 1.2 37	0809 1.4 43	0946 1.4 43	1543 0.7 21	1543 0.7 21					
1253 0.0 0	1225 0.2 6	1431 0.5 15	1408 0.6 18	1550 0.7 21	2017 1.0 30	2017 1.0 30					
1936 1.3 40	1915 1.3 40	2006 1.1 34	1926 1.1 34	2029 1.0 30							
7 M 0210 0.1 3	22 Tu 0143 0.3 9	7 Th 0240 0.1 3	22 F 0203 0.0 0	7 Su 0308 0.1 3	22 M 1035 1.4 43	22 M 0313 -0.1 -3		2039 1.3 40			
0759 0.9 27	0727 1.0 30	0935 1.3 40	0903 1.4 43	1641 0.7 21	1641 0.7 21	1641 0.7 21					
1348 0.1 3	1314 0.3 9	1525 0.6 18	1459 0.7 21	2105 1.0 30	2115 1.0 30	2115 1.0 30					
2012 1.2 37	1940 1.2 37	2038 1.1 34	1956 1.1 34								
8 Tu 0250 0.1 3	23 W 0212 0.2 6	8 F 0317 0.1 3	23 M 1000 1.4 43	8 M 0355 0.2 6	23 Tu 1136 1.3 40	23 M 0414 0.0 0		2149 0.9 27			
0904 1.0 30	0824 1.1 34	1029 1.3 40	1621 0.6 18	1137 1.3 40	2230 1.0 30	2230 1.0 30					
1445 0.3 9	1406 0.4 12	1621 0.6 18	1554 0.7 21	1739 0.8 24	2230 1.0 30	2230 1.0 30					
2047 1.1 34	2006 1.1 34	2110 1.0 30	2032 1.1 34	2149 0.9 27							
9 W 0330 0.0 0	24 Th 0244 0.0 0	9 Sa 0358 0.1 3	24 Su 1101 1.4 43	9 Tu 0448 0.2 6	24 W 1237 1.3 40	24 M 0522 0.1 3		2245 0.9 27			
1008 1.0 30	0922 1.2 37	1126 1.3 40	1655 0.8 24	1238 1.3 40	1857 0.6 18	1857 0.6 18					
1545 0.4 12	1503 0.5 15	1720 0.7 21	2116 1.1 34	1844 0.8 24	2051 0.4 12	2051 0.4 12					
● 2122 1.0 30	2032 1.1 34	2144 1.0 30	2116 1.1 34	2245 0.9 27							
10 Th 0409 0.0 0	25 F 0321 -0.1 -3	10 Su 0442 0.1 3	25 M 1206 1.4 43	10 W 0547 0.2 6	25 Th 0635 0.2 6	25 M 0001 1.0 30		2358 0.9 27			
1111 1.1 34	1022 1.3 40	1227 1.3 40	1804 0.8 24	1337 1.2 37	1335 1.2 37	1335 1.2 37					
1650 0.5 15	1605 0.6 18	1825 0.8 24	2213 1.0 30	1949 0.7 21	1959 0.5 15	1959 0.5 15					
2156 0.9 27	2102 1.0 30	2222 0.9 27	2213 1.0 30	2358 0.9 27							
11 F 0449 0.0 0	26 Sa 0404 -0.1 -3	11 M 0532 0.1 3	26 Tu 1312 1.4 43	11 W 0650 0.3 9	26 F 0749 0.3 9	26 M 0134 1.0 30		2042 0.7 21			
1212 1.1 34	1125 1.3 40	1328 1.3 40	1919 0.8 24	1428 1.2 37	1427 1.2 37	1427 1.2 37					
1759 0.6 18	1713 0.7 21	1934 0.8 24	2329 1.0 30	2042 0.7 21	2051 0.4 12	2051 0.4 12					
2231 0.9 27	2137 1.0 30	2309 0.9 27									
12 Sa 0531 -0.1 -3	27 Su 0454 -0.2 -6	12 Tu 0626 0.1 3	27 W 0642 0.0 0	12 F 0119 0.9 27	27 Sa 0900 0.3 9	27 M 0253 1.1 34		2123 0.6 18			
1312 1.2 37	1231 1.4 43	1427 1.3 40	1414 1.4 43	0754 0.3 9	1514 1.2 37	1514 1.2 37					
1912 0.6 18	1827 0.8 24	2042 0.8 24	2029 0.8 24	1511 1.2 37	2135 0.3 9	2135 0.3 9					
2308 0.8 24	2222 1.0 30			2123 0.6 18							
13 Su 0616 -0.1 -3	28 M 0551 -0.2 -6	13 W 0723 0.1 3	28 Th 0751 0.1 3	13 F 0235 1.0 30	28 Su 1003 0.4 12	28 M 0357 1.2 37		2135 0.3 9			
1409 1.2 37	1337 1.4 43	1945 0.8 24	1519 1.3 40	0856 0.3 9	1555 1.2 37	1555 1.2 37					
2024 0.7 21	2322 0.9 27	2139 0.7 21	2126 0.6 18	1548 1.2 37	2158 0.5 15	2158 0.5 15					
2351 0.8 24				2158 0.5 15							
14 M 0704 -0.1 -3	29 Tu 0653 -0.2 -6	14 F 0818 0.2 6	29 F 0857 0.1 3	14 M 0340 1.1 34	29 M 1059 0.4 12	29 M 0451 1.3 40		2229 0.4 12			
1503 1.3 40	1439 1.4 43	2056 0.8 24	1603 1.3 40	0954 0.4 12	1634 1.1 34	1634 1.1 34					
2129 0.6 18			2223 0.7 21	1620 1.2 37	2249 0.1 3	2249 0.1 3					
15 Tu 0042 0.7 21	30 W 0038 0.9 27	15 F 0910 0.2 6	30 Sa 1000 0.2 6	1048 0.4 12	2322 0.1 3	30 Tu 1150 0.4 12					
0753 0.0 0	0756 -0.2 -6	1640 1.4 43	1637 1.3 40	1048 0.4 12	2322 0.1 3	30 M 1709 1.0 30					
1553 1.3 40	1536 1.4 43	2156 0.7 21	2258 0.6 18	2259 0.2 6	2322 0.1 3	30 Tu 2322 0.1 3					
2224 0.6 18											
31 Th 0204 0.9 27	31 Su 1057 0.3 9		31 Su 1057 0.3 9								
0900 -0.1 -3	1625 1.4 43		1714 1.3 40								
● 2247 0.6 18	2247 0.6 18		2334 0.3 9	2334 0.3 9							

Time meridian 165° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to mean lower low water which is the chart datum of soundings.

# Sand Island, Midway Islands, 2008

Times and Heights of High and Low Waters

October					November					December					
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height	
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm
<b>1</b> W	0620	1.4	43	<b>16</b>	0558	1.6	49	<b>1</b>	0717	1.4	43	<b>16</b>	0732	1.4	43
	1237	0.4	12	Th	1226	0.5	15	Sa	1345	0.5	15	M	1407	0.5	15
	1742	1.0	30		1703	0.9	27		1807	0.8	24		1825	0.8	24
	2354	0.1	3		2330	-0.2	-6						1930	1.0	30
<b>2</b> Th	0701	1.5	46	<b>17</b>	0646	1.6	49	<b>2</b>	0026	0.0	0	<b>2</b>	0037	0.1	3
	1320	0.5	15	F	1311	0.5	15	Su	0755	1.4	43	Tu	0806	1.3	40
	1814	0.9	27		1743	0.9	27		1423	0.5	15		1442	0.5	15
									1844	0.8	24		1916	0.8	24
<b>3</b> F	0028	0.1	3	<b>18</b>	0016	-0.3	-9	<b>3</b>	0105	0.0	0	<b>3</b>	0118	0.1	3
	0741	1.4	43	Sa	0734	1.6	49	M	0835	1.3	40	W	0839	1.3	40
	1401	0.5	15		1355	0.6	18		1503	0.5	15		1518	0.4	12
	1845	0.9	27		1827	0.9	27		1927	0.8	24		2033	0.9	27
<b>4</b> Sa	0103	0.1	3	<b>19</b>	0106	-0.2	-6	<b>4</b>	0146	0.1	3	<b>4</b>	0203	0.2	6
	0823	1.4	43	Su	0823	1.5	46	Tu	0916	1.3	40	Th	0911	1.2	37
	1441	0.6	18		1442	0.6	18		1546	0.5	15		1553	0.3	9
	1917	0.9	27		1919	0.9	27		2018	0.8	24		2121	0.8	24
<b>5</b> Su	0142	0.1	3	<b>20</b>	0159	-0.2	-6	<b>5</b>	0231	0.1	3	<b>5</b>	0256	0.3	9
	0907	1.3	40	M	0914	1.4	43	W	0957	1.2	37	F	0942	1.2	37
	1523	0.6	18		1533	0.6	18		1631	0.5	15		1628	0.3	9
	1953	0.9	27		2019	0.9	27		2122	0.8	24		2232	0.9	27
<b>6</b> M	0224	0.1	3	<b>21</b>	0256	-0.1	-3	<b>6</b>	0323	0.2	6	<b>6</b>	0400	0.5	15
	0955	1.3	40	Tu	1007	1.3	40	Th	1038	1.1	34	Sa	1013	1.1	34
	1610	0.6	18		1630	0.5	15		1716	0.4	12		1704	0.2	6
	2035	0.9	27		2133	0.9	27		2237	0.8	24		2344	1.0	30
<b>7</b> Tu	0310	0.1	3	<b>22</b>	0400	0.1	3	<b>7</b>	0426	0.3	9	<b>7</b>	0518	0.6	18
	1046	1.2	37	W	1100	1.2	37	F	1119	1.1	34	Su	1047	1.0	30
	1703	0.6	18		1731	0.4	12		1758	0.3	9		1743	0.0	0
	2128	0.9	27		2301	0.9	27		2358	0.9	27				
<b>8</b> W	0403	0.2	6	<b>23</b>	0511	0.2	6	<b>8</b>	0543	0.4	12	<b>8</b>	0052	1.2	37
	1139	1.2	37	Th	1153	1.2	37	Sa	1200	1.0	30	M	0645	0.7	21
	1800	0.6	18		1830	0.4	12		1838	0.2	6		1238	0.9	27
	2237	0.8	24										1927	0.0	0
<b>9</b> Th	0504	0.3	9	<b>24</b>	0033	1.0	30	<b>9</b>	0113	1.0	30	<b>9</b>	0155	1.3	40
	1231	1.1	34	F	0629	0.3	9	Su	0709	0.5	15	W	0810	0.7	21
	1854	0.5	15		1246	1.1	34		1241	0.9	27		1205	0.9	27
					1924	0.3	9		1918	0.1	3		1913	-0.2	-6
<b>10</b> F	0000	0.9	27	<b>25</b>	0154	1.0	30	<b>10</b>	0218	1.2	37	<b>10</b>	0253	1.5	46
	0615	0.3	9	Sa	0748	0.4	12	M	0830	0.5	15	W	0924	0.7	21
	1319	1.1	34		1336	1.0	30		1323	0.9	27		1256	0.8	24
	1940	0.5	15		2011	0.2	6		1959	0.0	0		2048	0.0	0
<b>11</b> Sa	0122	0.9	27	<b>26</b>	0300	1.2	37	<b>11</b>	0314	1.3	40	<b>11</b>	0347	1.6	49
	0731	0.4	12	Su	0901	0.4	12	Tu	0940	0.5	15	W	1055	0.5	15
	1402	1.1	34		1423	0.9	27		1405	0.8	24		1457	0.7	21
	2019	0.3	9		2053	0.1	3		2041	-0.2	-6		2127	0.0	0
<b>12</b> Su	0232	1.1	34	<b>27</b>	0354	1.3	40	<b>12</b>	0405	1.5	46	<b>12</b>	0439	1.6	49
	0843	0.4	12	M	1005	0.4	12	W	1039	0.5	15	F	1113	0.7	21
	1441	1.0	30		1507	0.9	27		1449	0.8	24		1457	0.9	27
	2055	0.2	6		2130	0.0	0		2127	-0.3	-9		2205	0.0	0
<b>13</b> M	0331	1.2	37	<b>28</b>	0440	1.4	43	<b>13</b>	0455	1.6	49	<b>13</b>	0528	1.6	49
	0948	0.4	12	Tu	1100	0.4	12	Th	1130	0.5	15	F	1220	0.5	15
	1516	1.0	30		1547	0.8	24		1535	0.8	24		1618	0.7	21
	2130	0.1	3		2205	0.0	0		2215	-0.3	-9		2243	0.0	0
<b>14</b> Tu	0423	1.4	43	<b>29</b>	0521	1.4	43	<b>14</b>	0543	1.6	49	<b>14</b>	0614	1.6	49
	1046	0.5	15	W	1148	0.4	12	F	1215	0.5	15	Sa	1256	0.5	15
	1551	0.9	27		1625	0.8	24		1625	0.8	24		1658	0.7	21
	O	2207	0.0		2239	0.0	0		2305	-0.4	-12		2321	0.0	0
<b>15</b> W	0511	1.5	46	<b>30</b>	0600	1.4	43	<b>15</b>	0630	1.6	49	<b>15</b>	0658	1.6	49
	1138	0.5	15	Th	1230	0.4	12	Sa	1258	0.5	15	Su	1331	0.5	15
	1626	0.9	27		1659	0.8	24		1718	0.9	27		1739	0.8	24
	2247	-0.2	-6		2314	0.0	0		2356	-0.3	-9		2358	0.0	0
				<b>31</b>	0638	1.4	43								
				F	1308	0.5	15								
					1733	0.8	24								
					2349	0.0	0								

Time meridian 165° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to mean lower low water which is the chart datum of soundings.

# Nawiliwili, Kauai Island, Hawaii, 2008

Times and Heights of High and Low Waters

January					February					March														
Time		Height			Time		Height			Time		Height			Time		Height							
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm					
<b>1</b> Tu	0002 1626	1.4 0.1	43 3		<b>16</b> W	1556 1709	-0.1 0.0	-3 0	<b>1</b> F	0058 1709	1.7 0.0	52 0	<b>16</b> Sa	0100 0911 1219 1743	2.0 0.3 0.4 -0.2	61 9 12 -6	<b>1</b> Sa	0017 1635	1.6 0.1	49 3	<b>16</b> Su	0033 0814 1240 1742	1.8 0.2 0.5 0.0	55 6 15 0
<b>2</b> W	0047 1704	1.6 0.0	49 0		<b>17</b> Th	0024 1651	1.8 -0.2	55 -6	<b>2</b> Sa	0139 0958 1234 1807	1.8 0.4 0.5 0.0	55 12 15 0	<b>17</b> Su	0147 0921 1323 1846	2.1 0.3 0.5 -0.2	64 9 15 -6	<b>2</b> Su	0103 0901 1234 1745	1.7 0.4 0.5 0.0	52 12 15 0				
<b>3</b> Th	0126 1745	1.8 0.0	55 0		<b>18</b> F	0116 0938 1138 1749	2.1 0.4 0.5 -0.3	64 12 15 -9	<b>3</b> Su	0215 0954 1322 1856	1.9 0.4 0.5 -0.1	58 12 15 -3	<b>18</b> M	0228 0938 1411 1939	2.1 0.2 0.7 -0.2	64 6 21 -6	<b>3</b> M	0140 0857 1316 1840	1.8 0.3 0.6 -0.1	55 9 18 -3				
<b>4</b> F	0202 1015 1231 1827	2.0 0.5 0.6 -0.1	61 15 18 -3		<b>19</b> Sa	0202 0953 1303 1846	2.3 0.4 0.5 -0.3	70 12 15 -9	<b>4</b> M	0247 1001 1402 1940	2.0 0.4 0.6 -0.2	61 12 18 -6	<b>19</b> Tu	0304 0956 1453 2025	2.1 0.2 0.8 -0.2	64 6 24 -6	<b>19</b> W	0212 0904 1355 1927	1.8 0.3 0.8 -0.1	55 9 24 -3				
<b>5</b> Sa	0236 1025 1323 1909	2.1 0.5 0.6 -0.1	64 15 18 -3		<b>20</b> Su	0246 1015 1402 1938	2.4 0.3 0.6 -0.4	73 9 18 -12	<b>5</b> Tu	0317 1014 1441 2020	2.1 0.3 0.7 -0.3	64 9 21 -9	<b>5</b> W	0336 1015 1534 2109	2.0 0.1 1.0 -0.1	61 3 30 -3	<b>20</b> Th	0241 0917 1434 2012	1.9 0.2 0.9 -0.2	58 6 27 -6				
<b>6</b> Su	0309 1039 1404 1949	2.1 0.4 0.6 -0.2	64 12 18 -6		<b>21</b> M	0326 1040 1452 2026	2.4 0.3 0.6 -0.3	73 9 18 -9	<b>6</b> W	0346 1033 1521 2100	2.1 0.2 0.8 -0.2	64 6 24 -6	<b>21</b> Th	0405 1035 1615 2151	1.9 0.1 1.1 0.0	58 3 34 0	<b>21</b> F	0324 0935 1601 2154	1.4 -0.1 1.4 0.2	43 -3 43 6				
<b>7</b> M	0341 1058 1442 2028	2.2 0.4 0.6 -0.2	67 12 18 -6		<b>22</b> Tu	0403 1106 1538 2111	2.3 0.2 0.7 -0.3	70 6 21 -9	<b>7</b> Th	0414 1055 1605 2141	2.0 0.2 0.9 -0.1	61 6 27 -3	<b>22</b> F	0431 1055 1656 2233	1.7 0.0 1.2 0.1	52 0 37 3	<b>22</b> Sa	0336 0958 1558 2145	1.7 -0.1 1.3 0.0	52 -3 46 0				
<b>8</b> Tu	0413 1121 1521 2106	2.2 0.4 0.7 -0.2	67 12 21 -6		<b>23</b> W	0438 1132 1625 2154	2.2 0.2 0.8 -0.2	67 6 24 -6	<b>8</b> F	0441 1119 1652 2226	1.9 0.1 1.0 0.0	58 3 30 0	<b>23</b> Sa	0454 1116 1739 2319	1.5 0.0 1.3 0.3	46 0 40 9	<b>23</b> Su	0403 1022 1643 2236	1.6 -0.2 1.4 0.1	49 -6 49 3				
<b>9</b> W	0444 1147 1604 2144	2.2 0.3 0.7 -0.2	67 9 21 -6		<b>24</b> Th	0510 1158 1714 2237	2.1 0.2 0.9 0.0	64 6 27 0	<b>9</b> Sa	0507 1145 1745 2316	1.8 0.0 1.1 0.2	55 0 34 6	<b>9</b> Su	0513 1138 1825 2334	1.3 0.0 1.3 0.3	40 0 49 9	<b>24</b> M	0427 1035 1751 2327	0.9 -0.1 1.6 0.3	27 -3 49 9				
<b>10</b> Th	0514 1216 1653 2223	2.1 0.3 0.7 0.0	64 9 21 0		<b>25</b> F	0538 1224 1808 2321	1.8 0.1 1.0 0.3	55 3 30 9	<b>10</b> Su	0532 1213 1846	1.5 -0.1 1.2	46 -3 37	<b>25</b> M	0011 0526 1201 1919	0.5 1.0 0.0 1.3	15 30 0 40	<b>25</b> Tu	0455 0526 1118 1828	1.1 1.0 -0.3 1.6	34 -9 21 49				
<b>11</b> F	0544 1246 1752 2307	2.0 0.2 0.8 0.2	61 6 24 6		<b>26</b> Sa	0603 1250 1909	1.6 0.1 1.0	49 3 30	<b>11</b> M	0016 0555 1245 1959	0.5 1.3 -0.1 1.4	15 40 -3 43	<b>11</b> Tu	0118 0526 1226 2025	0.6 0.9 0.0 1.4	18 27 -9 52	<b>26</b> W	0045 0517 1151 1933	0.5 0.9 -0.3 1.7	15 18 -9 52				
<b>12</b> Sa	0612 1317 1904 2359	1.9 0.1 0.9 0.4	58 3 27 12		<b>27</b> Su	0011 0622 1317 2020	0.5 1.4 0.1 1.1	15 15 3 34	<b>12</b> Tu	0139 0610 1321 2124	0.7 1.0 -0.1 1.5	21 30 -6 46	<b>27</b> W	0226 0526 1231 2052	0.6 0.7 -0.2 1.7	18 21 -6 52								
<b>13</b> Su	0640 1350 2031	1.6 0.1 1.0	49 3 30		<b>28</b> M	0117 0630 1346 2143	0.7 1.1 0.1 1.2	21 34 3 37	<b>13</b> W	1408 2250	-0.1 1.7	55 52	<b>13</b> Th	1347 2314	0.1 1.5	3 46	<b>28</b> F	1247 2205	0.1 1.5	3 46				
<b>14</b> M	0112 0705 1426 2204	0.7 1.4 0.0 1.3	21 21 0 40		<b>14</b> Tu	0315 0557 1420 2304	0.8 0.9 0.1 1.4	24 27 3 43	<b>29</b> F	1511	-0.1	-3	<b>14</b> F	1443 2333	0.0 1.8	0 55	<b>29</b> O	1411 2315	0.2 1.5	6 46				
<b>15</b> Tu	0308 0725 1507 2322	0.9 1.1 -0.1 1.6	27 34 -3 49		<b>15</b> F	0002 1629	1.8 -0.1	55 -3	<b>29</b> O	0806 1128 1620	0.3 0.4 0.0	9 12 0	<b>15</b> Sa	0759 1127 1552	0.3 0.4 0.2	9 12 6	<b>31</b> M	0007 0742 1223 1713	1.6 0.3 0.6 0.2	49 9 18 6				
					<b>31</b> Th	0008 1604	1.6 0.1	49 3																

Time meridian 150° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to mean lower low water which is the chart datum of soundings.

# Nawiliwili, Kauai Island, Hawaii, 2008

## Times and Heights of High and Low Waters

April					May					June					
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height	
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm	
<b>1</b> Tu	0047	1.6 49		<b>16</b> W	0112	1.4 43		<b>1</b> Th	0016	1.3 40		<b>16</b> Su	0042	0.7 21	
	0745	0.2 6		0744	0.0 0		0650	-0.1 -3		0656	-0.4 -12		0712	-0.2 -6	
	1306	0.8 24		1405	1.2 37		1332	1.3 40		1426	1.7 52		1514	2.1 64	
	1818	0.1 3		1943	0.3 9		1911	0.4 12		2102	0.5 15		2254	0.4 12	
<b>2</b> W	0121	1.6 49		<b>17</b> Th	0144	1.3 40		<b>2</b> F	0054	1.2 37		<b>2</b> M	0133	0.6 18	
	0758	0.1 3		0801	-0.1 -3		0714	-0.2 -6		0723	-0.2 -6		0748	-0.2 -6	
	1345	1.0 30		1440	1.4 43		1412	1.6 49		1458	1.9 58		1547	2.1 64	
	1914	0.1 3		2035	0.3 9		2017	0.3 9		2152	0.4 12		2320	0.4 12	
<b>3</b> Th	0152	1.6 49		<b>18</b> F	0212	1.1 36		<b>3</b> Sa	0132	1.1 34		<b>3</b> Tu	0223	0.5 15	
	0815	0.0 0		0818	-0.2 -6		0742	-0.3 -9		0747	-0.2 -6		0819	-0.5 -15	
	1425	1.2 37		1513	1.6 49		1453	1.9 58		1529	2.0 61		1621	2.1 64	
	2008	0.1 3		2123	0.3 9		2119	0.3 9		2236	0.4 12		2348	0.4 12	
<b>4</b> F	0222	1.5 46		<b>19</b> Sa	0238	1.0 30		<b>4</b> Su	0209	0.9 27		<b>4</b> W	0315	0.5 15	
	0837	-0.2 -6		0837	-0.2 -6		0813	-0.4 -12		0814	-0.2 -6		0904	-0.5 -15	
	1505	1.5 46		1545	1.7 52		1536	2.1 64		1601	2.0 61		1659	2.4 73	
	2102	0.1 3		2209	0.3 9		2220	0.3 9		2317	0.4 12				
<b>5</b> Sa	0253	1.3 40		<b>20</b> Su	0303	0.9 27		<b>5</b> M	0248	0.7 21		<b>5</b> Tu	0256	0.5 15	
	0902	-0.3 -9		0858	-0.2 -6		0847	-0.5 -15		0844	-0.2 -6		0409	0.5 15	
	1547	1.7 52		1617	1.8 55		1621	2.2 67		1635	2.0 61		0951	-0.4 -12	
	2157	0.1 3		2255	0.3 9		2323	0.3 9		2359	0.4 12		1747	2.3 70	
<b>6</b> Su	0324	1.1 34		<b>21</b> M	0327	0.7 21		<b>6</b> Tu	0327	0.6 18		<b>6</b> W	0120	0.3 9	
	0929	-0.4 -12		0921	-0.2 -6		0924	-0.5 -15		0917	-0.2 -6		0511	0.5 15	
	1632	1.9 58		1650	1.8 55		1709	2.3 70		1711	2.0 61		1040	-0.2 -6	
	2257	0.2 6		2343	0.4 12								1834	2.2 67	
<b>7</b> M	0355	0.9 27		<b>22</b> Tu	0350	0.6 18		<b>7</b> W	0028	0.3 9		<b>7</b> Sa	0043	0.4 12	
	1000	-0.4 -12		0947	-0.2 -6		0410	0.5 15		0356	0.5 15		0626	0.5 15	
	1720	2.0 61		1727	1.8 55		1005	-0.4 -12		0951	-0.1 -3		1131	0.0 0	
							1801	2.2 67		1750	1.9 58		1921	2.0 61	
<b>8</b> Tu	0002	0.3 9		<b>23</b> W	0037	0.4 12		<b>8</b> Th	0140	0.3 9		<b>8</b> Su	0133	0.4 12	
	0425	0.7 21		0409	0.5 15		0459	0.4 12		0431	0.5 15		0758	0.6 18	
	1034	-0.4 -12		1015	-0.1 -3		1050	-0.3 -9		1027	-0.1 -3		1229	0.2 6	
	1813	2.0 61		1808	1.8 55		1857	2.1 64		1831	1.9 58		2006	1.8 55	
<b>9</b> W	0121	0.4 12		<b>24</b> Th	0144	0.4 12		<b>9</b> F	0258	0.3 9		<b>9</b> Sa	0227	0.3 9	
	0455	0.6 18		0421	0.5 15		0612	0.4 12		0520	0.4 12		0937	0.8 24	
	1112	-0.3 -9		1046	-0.1 -3		1142	-0.1 -3		1106	0.0 0		1341	0.5 15	
	1914	1.9 58		1856	1.7 52		1957	1.9 58		1914	1.8 55		2049	1.5 46	
<b>10</b> Th	0315	0.3 9		<b>25</b> F	1123	0.0 0		<b>10</b> Sa	0408	0.2 6		<b>10</b> Tu	0410	0.1 3	
	0522	0.4 12		1954	1.6 49		0805	0.4 12		0648	0.4 12		1104	1.0 30	
	1158	-0.2 -6					1244	0.1 3		1151	0.2 6		1521	0.7 21	
	2025	1.8 55					2058	1.8 55		1958	1.7 52		2130	1.3 40	
<b>11</b> F	1259	0.0 0		<b>26</b> Sa	1212	0.1 3		<b>11</b> Su	0457	0.2 6		<b>11</b> W	0441	0.0 0	
	2141	1.8 55		2057	1.6 49		1004	0.5 15		0857	0.5 15		1207	1.3 40	
							1405	0.3 9		1253	0.3 9		1730	0.8 24	
							2156	1.6 49		2043	1.6 49		2211	1.1 34	
<b>12</b> Sa	0626	0.3 9		<b>27</b> Su	0616	0.3 9		<b>12</b> M	0531	0.1 3		<b>12</b> Tu	0424	0.2 6	
	1003	0.4 12		0909	0.4 12		1130	0.8 24		1040	0.7 21		1255	1.5 46	
	1426	0.1 3		1324	0.2 6		1546	0.5 15		1422	0.5 15		1935	0.8 24	
	2251	1.7 52		2159	1.5 46		2248	1.4 43		2128	1.4 43		2254	0.9 27	
<b>13</b> Su	0648	0.2 6		<b>28</b> M	0604	0.3 9		<b>13</b> Tu	0557	0.0 0		<b>13</b> W	0450	0.1 3	
	1141	0.5 15		1109	0.5 15		1230	1.0 30		1145	1.0 30		1333	1.7 52	
	1608	0.2 6		1502	0.3 9		1727	0.6 18		1611	0.7 21		2100	0.6 18	
	2349	1.6 49		<b>O</b>	2251	1.5 46		2333	1.3 40		2214	1.3 40		2342	0.7 21
<b>14</b> M	0709	0.1 3		<b>29</b> Tu	0614	0.2 6		<b>14</b> W	0620	0.0 0		<b>14</b> Th	0518	-0.1 -3	
	1241	0.8 24		1208	0.7 21		1315	1.3 40		1233	1.3 40		1758	0.7 21	
	1736	0.3 9		1637	0.4 12		1853	0.6 18		1758	0.7 21		2301	1.1 34	
				2336	1.4 43					2301	1.1 34				
<b>15</b> Tu	0035	1.5 46		<b>30</b> W	0630	0.1 3		<b>15</b> Th	0013	1.1 34		<b>15</b> Sa	0547	-0.2 -6	
	0727	0.1 3		1252	1.0 30		0640	-0.1 -3		1317	1.6 49		0638	-0.1 -3	
	1326	1.0 30		1759	0.4 12		1353	1.5 46		1930	0.6 18		1441	2.0 61	
	1846	0.3 9					2003	0.5 15		2351	0.9 27		2227	0.4 12	
										<b>31</b> Sa	0620	-0.3 -9			
										1359	2.0 61		2045	0.5 15	

Time meridian 150° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to mean lower low water which is the chart datum of soundings.

# Nawiliwili, Kauai Island, Hawaii, 2008

Times and Heights of High and Low Waters

July					August					September					
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height	
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm	
<b>1</b> Tu	0120	0.5 -15		<b>16</b> W	0158 0737	0.6 -0.1	<b>1</b> F	0316 0853	0.9 -0.2	<b>16</b> Sa	0308 0846	1.0 0.0	<b>1</b> M	0440 1023	1.5 0.4
	0717	-0.4 -12		1530	2.2 67	2.6	1618	2.3 70	2.7	1554 O	2.1 0.3	64 9	1634 2230	1.6 0.3	49 9
	1517	2.5 76		2248	0.5 15		● 2307	0.3 9		2251	0.2	6	2251	0.2	6
	2247	0.4 12											2218	0.0	0
<b>2</b> W	0220	0.6 -12		<b>17</b> Th	0236 0817	0.7 -0.1	<b>2</b> Sa	0406 0939	1.0 -0.1	<b>17</b> Su	0349 0926	1.1 0.1	<b>2</b> Tu	0524 1112	1.6 0.5
	0808	-0.4 -12		1601	2.5 76	2.6	1651	2.2 67	2.7	1619	2.0 61	2.6	1656 2314	1.4 0.2	43 6
	● 2323	0.3 9		O 2307	0.4 12		2333	0.3 9		2252	0.3	9	2246	0.0	0
<b>3</b> Th	0315	0.6 -12		<b>18</b> F	0314 0854	0.7 -0.1	<b>3</b> Su	0457 1025	1.1 0.1	<b>18</b> M	0433 1009	1.2 0.2	<b>3</b> W	0610 1208	1.6 0.7
	0857	-0.4 -12		1630	2.5 67	2.6	1721	2.0 61	2.7	1643	1.9 58	2.6	1712 2338	1.2 0.2	37 6
	1643	2.5 76		2330	0.4 12					2317	0.2	6	2319	0.0	0
<b>4</b> F	0411	0.7 -9		<b>19</b> Sa	0355 0931	0.8 -0.1	<b>4</b> M	0000 0551	0.2 1.2	<b>19</b> Tu	0522 1057	1.4 0.4	<b>4</b> Th	0702 1321	1.7 0.8
	0945	-0.3 -9		1658	2.1 64	2.6	1113	0.4 12	2.7	1707	1.7 52	2.6	1715	1.0	30
	1724	2.3 70		2354	0.3 9		1748	1.7 52		2343	0.1	3	2357	0.1	3
<b>5</b> Sa	0033	0.3 21		<b>20</b> Su	0442 1010	0.8 0.1	<b>5</b> Tu	0026 0650	0.2 1.3	<b>20</b> W	0617 1155	1.5 0.6	<b>5</b> F	0004 0806	0.2 1.7
	0509	0.7 -3		1725	2.0 61	2.6	1206	0.6 18	2.7	1730	1.4 43	2.6	20	0812	2.0
	1032	-0.1 -3					1809	1.5 46					Sa		
<b>6</b> Su	0108	0.2 24		<b>21</b> M	0021 0535	0.3 0.9	<b>6</b> W	0053 0757	0.2 1.4	<b>21</b> Th	0013 0722	0.1 1.6	<b>6</b> Sa	0038 0926	0.3 1.7
	0614	0.8 1		1052	0.2 6	2.6	1315	0.8 24	2.7	1311	0.8 24	2.7	21	0048 0936	0.1 2.0
	1121	0.1 3		1751	1.9 58	2.6	1822	1.2 37	2.7	1747	1.2 37		O		
<b>7</b> M	0141	0.2 27		<b>22</b> Tu	0049 0638	0.2 1.0	<b>7</b> Th	0123 0914	0.2 1.5	<b>22</b> F	0048 0840	0.1 1.7	<b>7</b> Su	0128 1048	0.4 1.7
	0729	0.9 27		1142	0.5 15	2.6	1512	0.9 27	2.7	1517	0.9 30	2.7	22	0204 1054	0.3 2.0
	1214	0.4 12		1816	1.7 52	2.6	1800	1.0 30	2.7	1744	1.0 30		M	1932 2253	0.5 0.6
<b>8</b> Tu	0214	0.2 30		<b>23</b> W	0118 0753	0.1 1.1	<b>8</b> F	0157 1033	0.2 1.6	<b>23</b> Sa	0132 1006	0.1 1.8	<b>8</b> M	0251 1153	0.4 1.8
	0853	1.0 21		1247	0.7 21	2.6	1247	0.7 43	2.7	1839	1.4 43	2.6	23	0341 1157	0.3 2.1
	1322	0.7 43					O						Tu	1940	0.5
<b>9</b> W	0247	0.1 37		<b>24</b> Th	0151 0917	0.1 1.3	<b>9</b> Sa	0243 1141	0.2 1.7	<b>24</b> Su	0233 1123	0.1 2.0	<b>9</b> Tu	0423 1242	0.4 1.9
	1017	1.2 27		1424	0.9 27	2.6	1424	0.9 27	2.7	1858	1.2 37	2.6	24	0012 0509	0.8 0.3
	1505	0.9 1.1					O						F	1247 1956	2.1 0.4
<b>10</b> Th	0321	0.1 43		<b>25</b> F	0230 1039	0.0 1.6	<b>10</b> Su	0344 1236	0.3 1.8	<b>25</b> M	0351 1225	0.1 2.1	<b>10</b> W	0031 1230	0.8 1.9
	1128	1.4 43					1039	0.6 49	2.6	2041	0.5 15	2.6	2030	0.5	15
				O					2.6	2343	0.6 18	2.6	2014	0.3	9
<b>11</b> F	0357	0.1 52		<b>26</b> Sa	0317 1147	0.0 1.8	<b>11</b> M	0452 1320	0.2 1.9	<b>26</b> Tu	0510 1317	0.1 2.2	<b>11</b> Th	0109 0627	0.9 0.3
	1223	1.7 52					1147	0.5 55	2.6	2132	0.6 18	2.7	2038	0.5	15
									2.6	2050	0.5 15	2.6	2031	0.3	9
<b>12</b> Sa	0438	0.1 55		<b>27</b> Su	0414 1244	-0.1 2.1	<b>12</b> Tu	0030 0553	0.7 0.2	<b>27</b> W	0053 0617	0.8 0.0	<b>12</b> F	0145 0713	1.1 0.2
	1308	1.8 55					1244	0.6 64	2.6	1358	2.0 61	2.7	2051	0.4	12
									2.6	2133	0.6 18	2.7	2050	0.2	6
<b>13</b> Su	0523	0.0 61		<b>28</b> M	0516 1335	-0.1 2.3	<b>13</b> W	0115 0644	0.7 0.1	<b>28</b> Th	0144 0714	0.9 0.0	<b>13</b> Sa	0221 0757	1.2 0.2
	1347	2.0 15					1335	0.5 15	2.6	1431	2.1 64	2.7	2108	0.3	9
	2215	0.5 15							2.6	2141	0.5 15	2.7			
<b>14</b> M	0017	0.6 0		<b>29</b> Tu	0025 0617	0.6 -0.2	<b>14</b> Th	0153 0727	0.8 0.0	<b>29</b> F	0230 0805	1.1 0.0	<b>14</b> Su	0259 0841	1.4 0.2
	0609	0.0 64					0617	-0.6 0	2.6	1501	2.1 64	2.7	2051	0.4	6
	1423	2.1 64							2.6	2153	0.5 15	2.7	2129	0.2	6
	2221	0.5 15							2.6	2147	0.3 9	2.7	2128	0.1	3
<b>15</b> Tu	0115	0.6 0		<b>30</b> W	0132 0713	0.7 -0.3	<b>15</b> F	0230 0807	0.9 0.0	<b>30</b> Sa	0314 0851	1.2 0.1	<b>15</b> M	0338 0927	1.6 0.3
	0655	0.0 64					0713	-9 0	2.6	1528	2.1 64	2.7	2152	0.1	3
	1457	2.1 64							2.6	2210	0.4 12	2.7	2149	0.1	3
	2232	0.5 15							2.6	2208	0.2 6	2.7			
				<b>31</b> Th	0226 0805	0.8 -0.3	<b>31</b> Su	0357 0937	1.4 0.2	<b>31</b> Th	0357 1610	1.4 1.9	<b>31</b> M	0420 1547	1.8 1.3
							0805	-9 6	2.6	1542	2.4 73	2.7	2229	0.2	6
							1542	2.4 73	2.6	2241	0.4 12	2.7			

Time meridian 150° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to mean lower low water which is the chart datum of soundings.

# Nawiliwili, Kauai Island, Hawaii, 2008

Times and Heights of High and Low Waters

October					November					December					
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height	
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm
<b>1</b> W	0457	1.9	58	<b>16</b>	0453	2.3	70	<b>1</b>	0552	2.1	64	<b>16</b>	0627	2.4	73
	1121	0.6	18	Th	1139	0.6	18	Sa	1340	0.6	18	M	1420	0.5	15
	1608	1.1	34		1554	1.0	30		1607	0.7	21	Su	1730	0.6	18
	2211	0.1	3		2203	-0.1	-3		2227	0.2	6		2313	0.0	0
<b>2</b> Th	0536	2.0	61	<b>17</b>	0544	2.3	70	<b>2</b>	0639	2.0	61	<b>17</b>	0724	2.2	67
	1219	0.7	21	F	1253	0.6	18	Su	2303	0.3	9	M	1530	0.5	15
	1623	0.9	27		1624	0.8	24		1914	0.6	18	Tu	1914	0.6	18
	2236	0.2	6		2241	-0.1	-3						2329	0.3	9
<b>3</b> F	0620	1.9	58	<b>18</b>	0642	2.2	67	<b>3</b>	0734	1.9	58	<b>18</b>	0011	0.2	6
	1335	0.7	21	Sa	1436	0.6	18	M	2347	0.4	12	Tu	0823	2.1	64
	1625	0.8	24		1652	0.7	21						1622	0.4	12
	2303	0.2	6		2326	0.0	0						2122	0.7	21
<b>4</b> Sa	0714	1.8	55	<b>19</b>	0749	2.2	67	<b>4</b>	0834	1.8	55	<b>19</b>	0126	0.5	15
	2336	0.3	9	Su				Tu	1746	0.5	15	W	0920	1.9	58
									2127	0.6	18		1700	0.3	9
												O	2302	0.9	27
<b>5</b> Su	0824	1.8	55	<b>20</b>	0023	0.2	6	<b>5</b>	0055	0.5	15	<b>4</b>	0021	0.5	15
				M	0903	2.1	64	W	0933	1.7	52	Th	0810	1.7	52
					1754	0.5	15		1743	0.5	15		1556	0.3	9
					2120	0.6	18	O	2312	0.8	24		2225	0.8	24
<b>6</b> M	0024	0.4	12	<b>21</b>	0145	0.4	12	<b>6</b>	0235	0.7	21	<b>21</b>	0009	1.2	37
	0944	1.7	52	Tu	1014	2.0	61	Th	1024	1.7	52	F	0459	0.8	24
	2003	0.5	15		1816	0.4	12		1752	0.4	12		1102	1.5	46
	O	2203	0.6	18	O	2312	0.8	24					1755	0.1	3
<b>7</b> Tu	0152	0.5	15	<b>22</b>	0328	0.5	15	<b>7</b>	0004	1.0	30	<b>22</b>	0058	1.5	46
	1053	1.8	55	W	1114	1.9	58	F	0417	0.7	21	Sa	0638	0.8	24
	1921	0.6	18		1838	0.4	12		1108	1.6	49		1145	1.3	40
	2336	0.7	21						1807	0.3	9		1818	0.0	0
<b>8</b> W	0337	0.6	18	<b>23</b>	0017	1.0	30	<b>8</b>	0044	1.2	37	<b>23</b>	0138	1.7	52
	1144	1.8	55	Th	0504	0.6	18	Sa	0543	0.7	21	M	0757	0.8	24
	1916	0.5	15		1203	1.8	55		1148	1.5	46		1225	1.1	34
					1858	0.3	9		1826	0.2	6		1841	0.0	0
<b>9</b> Th	0021	0.9	27	<b>24</b>	0106	1.3	40	<b>9</b>	0120	1.5	46	<b>24</b>	0213	2.0	61
	0500	0.5	15	F	0622	0.6	18	Su	0657	0.7	21	M	0858	0.7	21
	1224	1.8	55		1243	1.7	52		1225	1.4	43		1302	0.9	27
	1921	0.4	12		1917	0.2	6		1849	0.0	0		1905	-0.1	-3
<b>10</b> F	0058	1.1	34	<b>25</b>	0147	1.5	46	<b>10</b>	0156	1.8	55	<b>10</b>	0223	2.3	70
	0604	0.5	15	Sa	0726	0.6	18	M	0802	0.6	18	W	0933	0.5	15
	1256	1.8	55		1317	1.5	46		1302	1.2	37		1306	0.7	21
	1932	0.3	9		1935	0.1	3		1916	-0.1	-3		1930	-0.1	-3
<b>11</b> Sa	0134	1.3	40	<b>26</b>	0223	1.8	55	<b>11</b>	0234	2.1	64	<b>11</b>	0305	2.5	76
	0700	0.5	15	Su	0822	0.6	18	Tu	0902	0.6	18	W	1031	0.6	18
	1326	1.7	52		1347	1.4	43		1339	1.1	34		1412	0.7	21
	1949	0.2	6		1954	0.0	0		1946	-0.2	-6		1959	-0.1	-3
<b>12</b> Su	0210	1.5	46	<b>27</b>	0257	1.9	58	<b>12</b>	0314	2.3	70	<b>12</b>	0348	2.2	67
	0752	0.4	12	M	0913	0.6	18	W	1000	0.5	15	F	1109	0.5	15
	1355	1.6	49		1415	1.2	37		1418	0.9	27		1445	0.7	21
	2009	0.1	3		2014	0.0	0	O	2020	-0.3	-9		2030	-0.1	-3
<b>13</b> M	0247	1.8	55	<b>28</b>	0330	2.1	64	<b>13</b>	0357	2.5	76	<b>13</b>	0421	2.2	67
	0845	0.4	12	Tu	1001	0.6	18	Th	1059	0.5	15	F	1147	0.5	15
	1424	1.5	46		1442	1.0	30		1457	0.8	24		1516	0.7	21
	2033	0.0	0	O	2036	0.0	0		2058	-0.3	-9		2103	0.0	0
<b>14</b> Tu	0326	2.0	61	<b>29</b>	0402	2.1	64	<b>14</b>	0444	2.5	76	<b>14</b>	0456	2.2	67
	0938	0.5	15	W	1049	0.6	18	F	1200	0.5	15	Sa	1227	0.5	15
	1453	1.3	40		1507	0.9	27		1538	0.7	21		1548	0.6	18
	O	2100	-0.1	-3	2100	0.0	0		2139	-0.3	-9		2137	0.0	0
<b>15</b> W	0408	2.2	67	<b>30</b>	0435	2.2	67	<b>15</b>	0533	2.5	76	<b>15</b>	0606	2.4	73
	1036	0.5	15	Th	1138	0.6	18	Sa	1307	0.5	15	M	1311	0.5	15
	1524	1.1	34		1532	0.8	24		1626	0.6	18		1622	0.7	21
	2130	-0.2	-6		2126	0.0	0		2223	-0.2	-6		2212	0.1	3
<b>31</b> F	0512	2.1	64	<b>31</b>	0512	2.1	64					<b>15</b>	0521	2.5	76
	1232	0.6	18	F	1232	0.6	18					<b>16</b>	1244	0.4	12
	1553	0.7	21		1553	0.7	21					<b>17</b>	1639	0.6	18
		2155	0.1	3		2155	0.1	3					2217	-0.2	-6

Time meridian 150° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to mean lower low water which is the chart datum of soundings.

# Honolulu, Oahu Island, Hawaii, 2008

Times and Heights of High and Low Waters

January				February				March								
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height					
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm					
1 Tu	0005	1.6	49	16 W	0619	0.7	21	1 F	0056	1.8	55					
0646	0.8	24	W 0922	0.8	24	0910	0.3	9	16 Sa	0059	2.1	64				
0953	0.9	27	W 1618	-0.2	-6	1200	0.4	12	1253	0.4	12					
1654	0.0	0				1733	0.0	0	1804	-0.2	-6					
2 W	0050	1.8	55	17 Th	0020	2.0	61	2 Sa	0139	1.9	58					
0819	0.6	18	Th 0804	0.5	15	0927	0.3	9	17 Su	0150	2.2	67				
1100	0.7	21	Th 1053	0.6	18	1307	0.5	15	1353	0.5	15					
1730	0.0	0	Th 1711	-0.2	-6	1828	-0.1	-3	1907	-0.2	-6					
3 Th	0128	1.9	58	18 F	0114	2.2	67	3 Su	0218	2.0	61					
0911	0.5	15	F 0900	0.3	9	0947	0.2	6	18 M	0234	2.2	67				
1211	0.6	18	F 1227	0.5	15	1353	0.5	15	18 Tu	0143	1.9	58				
1808	0.0	0	F 1809	-0.3	-9	1916	-0.2	-6	18 Sa	0859	0.1	3				
4 F	0204	2.1	64	19 Sa	0204	2.4	73	4 M	1008	0.1	3					
0945	0.4	12	Sa 0941	0.1	3	1008	0.1	3	19 Tu	0313	2.2	67				
1311	0.6	18	Sa 1339	0.5	15	1433	0.6	18	19 Tu	1011	-0.1	-3				
1848	-0.1	-3	Sa 1905	-0.3	-9	1959	-0.2	-6	19 Tu	1522	0.8	24				
5 Sa	0239	2.2	67					1959	-0.2	-6	19 Tu	2050	-0.2	-6		
1014	0.3	9	20 Su	0250	2.5	76	5 Tu	0324	2.2	67	19 Tu	0217	2.0	61		
1359	0.5	15	Su 1017	0.0	0	1031	0.1	3	20 Su	0348	2.1	64				
1928	-0.2	-6	Su 1436	0.5	15	1512	0.7	21	5 W	0250	2.0	61				
			Su 1958	-0.4	-12	2040	-0.3	-9	20 W	0937	0.0	0				
6 Su	0313	2.3	70	21 M	0332	2.5	76	6 W	0356	2.2	67	20 Th	0313	1.7	52	
1042	0.2	6	M 1051	0.0	0	1054	0.0	0	6 Th	0419	2.0	61	20 Th	0940	-0.2	-6
1440	0.6	18	M 1526	0.6	18	1552	0.8	24	6 Th	1059	-0.1	-3				
2007	-0.2	-6	M 2048	-0.4	-12	2121	-0.2	-6	6 Th	1642	1.2	37				
7 M	0347	2.3	70	22 Tu	0412	2.5	76	6 Th	2219	0.0	0	21 O	0342	1.5	46	
1110	0.2	6	Tu 1123	0.0	0	1119	0.0	0	6 Th	0321	2.0	61	21 F	1000	-0.2	-6
1520	0.6	18	Tu 1614	0.7	21	1635	0.9	27	6 Th	0959	-0.1	-3				
2046	-0.2	-6	O 2135	-0.3	-9	2204	-0.1	-3	6 Th	1539	1.2	37				
8 Tu	0421	2.4	73	23 W	0450	2.4	73	8 F	0426	2.2	67	21 O	2223	0.1	3	
1139	0.1	3	W 1154	-0.1	-3	1144	-0.1	-3	7 F	0448	1.8	55	22 M	0410	1.4	43
1601	0.6	18	W 1701	0.8	24	1721	1.1	34	7 F	1122	-0.1	-3				
● 2123	-0.2	-6	W 2220	-0.1	-3	2250	0.0	0	7 F	1722	1.3	40				
9 W	0454	2.4	73	24 Th	0524	2.2	67	9 Sa	0527	1.9	58	22 Sa	1020	-0.2	-6	
1210	0.1	3	Th 1224	-0.1	-3	1210	-0.1	-3	9 Sa	1803	1.4	43				
1645	0.7	21	Th 1750	0.9	27	1811	1.2	37	9 Sa	2353	0.3	9				
2202	-0.2	-6	Th 2306	0.1	3	2344	0.2	6	9 Sa	1113	-0.3	-9				
10 Th	0526	2.3	70	25 F	0556	2.0	61	10 Su	0542	1.3	40	23 M	0504	1.0	30	
1240	0.1	3	F 1253	0.0	0	1238	-0.2	-6	10 Su	1207	-0.1	-3				
1735	0.7	21	F 1842	1.0	30	1908	1.4	43	10 Su	1847	1.4	43				
2243	0.0	0	F 2354	0.3	9				10 Su	1750	1.7	52				
11 F	0559	2.2	67	26 Sa	0626	1.7	52	11 M	0049	0.4	12	24 M	0504	1.0	30	
1311	0.0	0	Sa 1321	0.0	0	0629	1.4	43	11 M	0606	1.1	34				
1832	0.8	24	Sa 1938	1.1	34	1309	-0.2	-6	11 M	1229	0.0	0				
2331	0.2	6				2012	1.5	46	11 M	1936	1.5	46				
12 Sa	0632	2.0	61	27 Su	0052	0.5	15	12 Tu	0218	0.6	18	25 Tu	0053	0.3	9	
1343	0.0	0	Su 0653	1.4	43	0702	1.0	30	12 Tu	0400	0.6	18				
1937	1.0	30	Su 1349	0.0	0	1346	-0.2	-6	12 Tu	0640	0.7	21				
			Su 2042	1.3	40	2127	1.7	52	12 Tu	1326	0.1	3				
13 Su	0030	0.4	12	28 M	0209	0.7	21	12 Tu	2148	1.5	46	25 Tu	0345	0.4	12	
0706	1.8	55	M 0718	1.2	37	0740	0.7	21	12 Tu	0255	0.4	12				
1415	0.0	0	M 1418	0.1	3	1431	-0.1	-3	12 Tu	0643	0.6	18				
2051	1.2	37	M 2152	1.4	43	● 2246	1.8	55	12 Tu	1253	-0.2	-6				
14 M	0152	0.7	21	29 Th	0414	0.8	24	12 Tu	2055	1.9	58	25 Tu	0626	0.5	15	
0742	1.5	46	Th 0737	0.9	27	2358	2.0	61	12 Tu	0325	0.4	12				
1451	-0.1	-3	Th 1452	0.1	3				12 Tu	1220	0.1	3				
2207	1.4	43	Th 2303	1.5	46				12 Tu	2046	1.6	49				
15 Tu	0352	0.8	24	30 W	1536	0.1	3	13 Th	0435	0.6	18	27 Th	0345	0.4	12	
0824	1.1	34	W 1536	0.1	3	13 Th	0740	0.7	21	13 Th	1415	0.1	3			
1531	-0.1	-3				1431	-0.1	-3	13 Th	2307	1.6	49				
● 2318	1.7	52				● 2246	1.8	55	13 Th	2215	1.9	58				
16 Th	0005	1.7	52	31 Th	0005	1.7	52				27 F	0309	0.1	3		
			Th 1632	0.1	3						27 F	2202	1.5	46		

Time meridian 150° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to mean lower low water which is the chart datum of soundings.

# Honolulu, Oahu Island, Hawaii, 2008

Times and Heights of High and Low Waters

April					May					June						
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height		
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm	
<b>1</b> Tu	0051	1.7	52	<b>16</b> W	0125	1.5	46	<b>1</b> Th	0031	1.5	46	<b>16</b> Su	0111	1.0	30	
	0757	0.0	0		0802	-0.2	-6		0711	-0.2	-6		0717	-0.4	-12	
	1327	0.8	24		1424	1.3	40		1344	1.5	46		1436	1.9	58	
	1842	0.1	3		2011	0.2	6		1936	0.3	9		2117	0.4	12	
<b>2</b> W	0129	1.7	52	<b>17</b> Th	0200	1.4	43	<b>2</b> F	0114	1.3	40	<b>17</b> Sa	0148	0.8	24	
	0816	-0.1	-3		0823	-0.2	-6		0736	-0.3	-9		0746	-0.2	-6	
	1405	1.1	34		1456	1.6	49		1423	1.8	55		1506	2.0	61	
	1938	0.0	0		2101	0.2	6		2039	0.2	6		2204	0.3	9	
<b>3</b> Th	0204	1.7	52	<b>18</b> F	0232	1.2	37	<b>3</b> Sa	0156	1.2	37	<b>18</b> Su	0225	0.7	21	
	0837	-0.2	-6		0842	-0.2	-6		0804	-0.4	-12		0809	-0.2	-6	
	1443	1.4	43		1527	1.8	55		1503	2.1	64		1537	2.1	64	
	2032	0.0	0		2148	0.2	6		2140	0.1	3		2248	0.2	6	
<b>4</b> F	0239	1.6	49	<b>19</b> Sa	0302	1.1	34	<b>4</b> Su	0239	1.0	30	<b>19</b> M	0301	0.6	18	
	0900	-0.3	-9		0901	-0.2	-6		0834	-0.5	-15		0835	-0.2	-6	
	1522	1.6	49		1557	1.9	58		1546	2.3	70		1608	2.2	67	
	2126	0.0	0		2233	0.2	6		2240	0.1	3		2330	0.2	6	
<b>5</b> Sa	0314	1.4	43	<b>20</b> Su	0332	0.9	27	<b>5</b> M	0323	0.8	24	<b>20</b> Tu	0337	0.5	15	
	0925	-0.3	-9		0922	-0.2	-6		0907	-0.5	-15		0904	-0.2	-6	
	1602	1.9	58		1628	2.0	61		1631	2.5	76		1642	2.2	67	
	2222	0.0	0		2319	0.2	6		2341	0.0	0		1756	2.5	76	
<b>6</b> Su	0351	1.2	37	<b>21</b> M	0403	0.8	24	<b>6</b> Tu	0409	0.6	18	<b>21</b> W	0013	0.2	6	
	0952	-0.4	-12		0944	-0.2	-6		0944	-0.5	-15		0415	0.5	15	
	1645	2.1	64		1701	2.0	61		1718	2.5	76		0935	-0.2	-6	
	2322	0.1	3										1719	2.1	64	
<b>7</b> M	0428	1.0	30	<b>22</b> Tu	0007	0.2	6	<b>7</b> W	0046	0.0	0	<b>22</b> Th	0059	0.2	6	
	1022	-0.4	-12		0434	0.6	18		0500	0.5	15		0456	0.4	12	
	1732	2.2	67		1008	-0.2	-6		1024	-0.4	-12		1008	-0.1	-3	
					1738	2.0	61		1810	2.4	73		1759	2.1	64	
<b>8</b> Tu	0028	0.1	3	<b>23</b> W	0100	0.2	6	<b>8</b> Th	0154	0.0	0	<b>23</b> Su	0148	0.2	6	
	0509	0.7	21		0508	0.5	15		0601	0.3	9		0543	0.4	12	
	1055	-0.4	-12		1035	-0.1	-3		1110	-0.3	-9		1043	-0.1	-3	
	1824	2.2	67		1819	1.9	58		1906	2.3	70		1841	2.0	61	
<b>9</b> W	0145	0.2	6	<b>24</b> Th	0203	0.2	6	<b>9</b> F	0304	0.0	0	<b>24</b> Sa	0240	0.1	3	
	0555	0.5	15		0546	0.4	12		0721	0.3	9		0644	0.4	12	
	1132	-0.3	-9		1105	0.0	0		1203	-0.1	-3		1122	0.1	3	
	1923	2.1	64		1907	1.8	55		2005	2.1	64		1925	1.9	58	
<b>10</b> Th	0317	0.2	6	<b>25</b> F	0319	0.2	6	<b>10</b> Sa	0408	0.0	0	<b>25</b> Su	0328	0.1	3	
	0657	0.3	9		0639	0.3	9		0905	0.4	12		0806	0.4	12	
	1218	-0.2	-6		1141	0.0	0		1311	0.1	3		1211	0.2	6	
	2030	2.0	61		2002	1.7	52		2106	1.9	58		2011	1.8	55	
<b>11</b> F	0452	0.1	3	<b>26</b> Sa	0436	0.2	6	<b>11</b> Su	0459	-0.1	-3	<b>26</b> W	0408	0.1	3	
	0843	0.3	9		0813	0.3	9		1046	0.6	18		0940	0.5	15	
	1321	0.0	0		1229	0.1	3		1446	0.4	12		1321	0.4	12	
	2144	1.9	58		2103	1.7	52		2206	1.7	52		2058	1.7	52	
<b>12</b> Sa	0558	0.0	0	<b>27</b> Su	0527	0.1	3	<b>12</b> M	0540	-0.1	-3	<b>27</b> Tu	0441	0.0	0	
	1052	0.4	12		1014	0.4	12		1159	0.8	24		1058	0.8	24	
	1457	0.2	6		1349	0.3	9		1631	0.5	15		1501	0.6	18	
	2255	1.8	55		2203	1.6	49		2301	1.5	46		2147	1.6	49	
<b>13</b> Su	0641	0.0	0	<b>28</b> M	0600	0.1	3	<b>13</b> Tu	0612	-0.1	-3	<b>28</b> W	0511	-0.1	-3	
	1215	0.6	18		1135	0.6	18		1250	1.1	34		1154	1.1	34	
	1642	0.2	6		1534	0.4	12		1804	0.5	15		1649	0.6	18	
	2355	1.7	52		2258	1.6	49		2349	1.3	40		2238	1.4	43	
<b>14</b> M	0713	-0.1	-3	<b>29</b> Tu	0625	0.0	0	<b>14</b> W	0639	-0.2	-6	<b>29</b> Su	0539	-0.2	-6	
	1307	0.8	24		1225	0.8	24		1331	1.4	43		1239	1.5	46	
	1807	0.2	6		1709	0.4	12		1920	0.5	15		1826	0.6	18	
					2346	1.6	49						2330	1.2	37	
<b>15</b> Tu	0045	1.6	49	<b>30</b> W	0648	-0.1	-3	<b>15</b> Th	0032	1.2	37	<b>30</b> Su	0609	-0.3	-9	
	0740	-0.1	-3		1306	1.1	34		0702	-0.2	-6		1322	1.8	55	
	1348	1.1	34		1828	0.4	12		1405	1.7	52		1947	0.5	15	
	1914	0.2	6						2024	0.5	15					
<b>31</b> Sa	0023	1.0	30						<b>31</b> Sa	0641	-0.4	-12				
	0641	0.0	0							1404	2.2	67				
	1404	0.2	6							2057	0.3	9				

Time meridian 150° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to mean lower low water which is the chart datum of soundings.

# Honolulu, Oahu Island, Hawaii, 2008

Times and Heights of High and Low Waters

July					August					September														
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height										
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm										
<b>1</b>	0202	0.5	15	<b>16</b>	0232	0.6	18	<b>1</b>	0351	0.9	27	<b>16</b>	0337	1.0	30	<b>1</b>	0504	1.6	49	<b>16</b>	0439	1.9	58	
Tu	0736	-0.4	-12	W	0756	-0.1	-3	F	0916	-0.2	-6	Sa	0907	0.0	0	M	1055	0.3	9	Tu	1044	0.3	9	
	1522	2.7	82		1536	2.3	70		1629	2.5	76		1607	2.3	70		1658	1.7	52		1629	1.6	49	
	2252	0.1	3		2258	0.2	6	●	2329	0.0	0	○	2254	0.2	6		2320	0.1	3		2242	0.0	0	
<b>2</b>	0301	0.5	15	<b>17</b>	0311	0.6	18	<b>2</b>	0440	1.0	30	<b>17</b>	0417	1.2	37	<b>2</b>	0546	1.7	52	<b>17</b>	0523	2.0	61	
W	0826	-0.4	-12	Th	0835	-0.1	-3	Sa	1005	-0.1	-3	Su	0949	0.1	3	Tu	1147	0.5	15	W	1142	0.4	12	
●	1608	2.7	82		1608	2.3	70		1705	2.3	70		1635	2.2	67		1726	1.5	46		1702	1.4	43	
	2334	0.0	0	○	2324	0.2	6		2359	0.0	0		2318	0.1	3		2343	0.1	3		2309	0.0	0	
<b>3</b>	0357	0.6	18	<b>18</b>	0351	0.7	21	<b>3</b>	0530	1.1	34	<b>18</b>	0500	1.3	40	<b>3</b>	0630	1.8	55	<b>18</b>	0612	2.1	64	
Th	0917	-0.4	-12	F	0913	-0.1	-3	Su	1055	0.1	3	M	1034	0.2	6	W	1247	0.6	18	Th	1251	0.5	15	
	1652	2.6	79		1640	2.3	70		1739	2.1	64		1704	2.0	61		2342	0.1	3		2341	0.0	0	
<b>4</b>	0015	0.0	0	<b>19</b>	0433	0.8	24	<b>4</b>	0028	0.1	3	<b>19</b>	0547	1.5	46	<b>4</b>	0006	0.2	6	<b>19</b>	0709	2.1	64	
F	0453	0.6	18	Sa	0951	-0.1	-3	M	0622	1.3	40	Tu	1125	0.4	12	Th	0719	1.8	55	F	1422	0.6	18	
	1007	-0.3	-9		1710	2.3	70		1147	0.4	12		1734	1.8	55		1403	0.7	21		1816	0.9	27	
	1735	2.5	76						1811	1.8	55					1820	1.0	30						
<b>5</b>	0054	0.0	0	<b>20</b>	0019	0.1	3	<b>5</b>	0056	0.1	3	<b>20</b>	0008	0.0	0	<b>5</b>	0032	0.3	9	<b>20</b>	0018	0.1	3	
Sa	0552	0.7	21	Su	0520	0.8	24	Tu	0717	1.4	43	W	0638	1.6	49	F	0816	1.8	55	Sa	0816	2.1	64	
	1058	-0.1	-3		1031	0.1	3		1247	0.6	18		1227	0.6	18		1601	0.7	21		1625	0.5	15	
	1816	2.3	70		1740	2.2	67		1840	1.5	46		1805	1.5	46		1846	0.8	24		1916	0.6	18	
<b>6</b>	0132	0.0	0	<b>21</b>	0046	0.1	3	<b>6</b>	0125	0.1	3	<b>21</b>	0037	0.0	0	<b>6</b>	0105	0.3	9	<b>21</b>	0108	0.1	3	
Su	0655	0.8	24	M	0611	1.0	30	W	0818	1.5	46	Th	0737	1.7	52	Sa	0927	1.8	55	Su	0934	2.1	64	
	1151	0.2	6		1117	0.3	9		1405	0.8	24		1347	0.7	21					O	2126	0.5	15	
	1854	2.0	61		1811	2.0	61		1908	1.3	40		1838	1.2	37									
<b>7</b>	0208	0.0	0	<b>22</b>	0114	0.1	3	<b>7</b>	0155	0.2	6	<b>22</b>	0112	0.0	0	<b>7</b>	0156	0.4	12	<b>22</b>	0225	0.2	6	
M	0806	1.0	30	Tu	0709	1.1	34	Th	0924	1.6	49	F	0845	1.9	58	Su	1044	1.8	55	M	1052	2.1	64	
	1253	0.5	15		1211	0.5	15		1601	0.9	27		1545	0.8	15		1935	0.5	15		1859	0.3	9	
	1931	1.8	55		1842	1.8	55		1935	1.0	30		1916	0.9	27		O	2241	0.6	18		2330	0.6	18
<b>8</b>	0243	0.0	0	<b>23</b>	0144	0.0	0	<b>8</b>	0229	0.2	6	<b>23</b>	0155	0.1	3	<b>8</b>	0321	0.4	12	<b>23</b>	0406	0.3	9	
Tu	0920	1.2	37	W	0814	1.3	40	F	1035	1.7	52	Sa	1002	2.0	61	M	1151	1.9	58	Tu	1158	2.2	67	
	1413	0.7	21		1323	0.7	21		1816	0.6	18		1816	0.6	18		1956	0.5	15		1933	0.2	6	
	2006	1.5	46		1915	1.5	46	●				O	2022	0.7	21									
<b>9</b>	0317	0.0	0	<b>24</b>	0216	0.0	0	<b>9</b>	0314	0.2	6	<b>24</b>	0254	0.1	3	<b>9</b>	0010	0.7	21	<b>24</b>	0041	0.8	24	
W	1033	1.4	43	Th	0925	1.5	46	Sa	1140	1.8	55	W	1118	2.1	64	Tu	0450	0.4	12	W	0534	0.3	9	
	1605	0.9	27		1506	0.8	24		1936	0.5	15		1243	1.9	58		1243	1.9	58		1252	2.2	67	
●	2042	1.2	37		1952	1.2	37		2236	0.6	18		2016	0.4	12		2002	0.2	6					
<b>10</b>	0351	0.0	0	<b>25</b>	0254	0.0	0	<b>10</b>	0413	0.3	9	<b>25</b>	0411	0.1	3	<b>10</b>	0057	0.8	24	<b>25</b>	0130	1.0	30	
Th	1135	1.6	49	F	1036	1.7	52	Su	1236	1.9	58	M	1223	2.3	70	W	0557	0.3	9	Th	0644	0.3	9	
	1821	0.8	24		1725	0.8	24		2046	0.5	15		2014	0.3	9		1323	2.0	61		1336	2.1	64	
	2125	0.9	27	O	2041	0.9	27		2359	0.6	18		2046	0.2	6		2035	0.3	9		2027	0.1	3	
<b>11</b>	0426	0.1	3	<b>26</b>	0339	-0.1	-3	<b>11</b>	0518	0.2	6	<b>26</b>	0017	0.6	18	<b>11</b>	0134	0.9	27	<b>26</b>	0212	1.3	40	
F	1227	1.8	55	Sa	1142	2.0	61	M	1322	2.0	61	Tu	0530	0.0	0	Th	0650	0.2	6	F	0742	0.2	6	
	2010	0.6	18		1927	0.6	18		2107	0.4	12		1318	2.4	73		1358	2.1	64		1414	2.0	61	
	2231	0.7	21		2202	0.7	21						2046	0.2	6		2053	0.3	9		2051	0.1	3	
<b>12</b>	0505	0.1	3	<b>27</b>	0434	-0.1	-3	<b>12</b>	0101	0.6	18	<b>27</b>	0123	0.7	21	<b>12</b>	0209	1.1	34	<b>27</b>	0251	1.5	46	
Sa	1311	1.9	58	Su	1241	2.2	67	Tu	0616	0.1	3	W	0638	0.0	0	F	0736	0.2	6	Sa	0835	0.3	9	
	2105	0.5	15		2032	0.4	12		1402	2.1	64		1405	2.4	73		1429	2.1	64		1448	1.9	58	
	2352	0.6	18		2344	0.6	18		2128	0.4	12		2115	0.2	6		2112	0.2	6		2112	0.0	0	
<b>13</b>	0547	0.0	0	<b>28</b>	0535	-0.2	-6	<b>13</b>	0144	0.7	21	<b>28</b>	0213	0.9	27	<b>13</b>	0244	1.3	40	<b>28</b>	0327	1.7	52	
Su	1350	2.1	64	M	1335	2.4	73	W	0704	0.1	3	Th	0737	0.0	0	Sa	0820	0.2	6	Su	0924	0.3	9	
	2139	0.4	12		2115	0.3	9		1437	2.2	67		1446	2.4	73		1458	2.1	64		1519	1.7	52	
									2149	0.3	9		2142	0.1	3		2132	0.1	3		●	2133	0.0	0
<b>14</b>	0059	0.6	18	<b>29</b>	0105	0.6	18	<b>14</b>	0222	0.8	24	<b>29</b>	0258	1.1	34	<b>14</b>	0321	1.5	46	<b>29</b>	0402	1.9	58	
M	0631	0.0	0	Tu	0635	-0.2	-6	Th	0747	0.0	0	F	0829	0.0	0	Su	0905	0.2	6	M	1012	0.4	12	
	1427	2.2	67		1423	2.6	79		1508	2.3	70		1523	2.3	70		1528	2.0	61		1548	1.5	46	
	2206	0.3	9		2151	0.2	6		2210	0.3	9		2208	0.1	3		O	2153	0.1	3		2154	0.0	0
<b>15</b>	0150	0.6	18	<b>30</b>	0207	0.6	18	<b>15</b>	0259	0.9	27	<b>30</b>	0341	1.3	40	<b>15</b>	0359	1.7	52	<b>30</b>	0437	2.0	61	
Tu	0715	-0.1	-3	W	0733	-0.3	-9	F	0828	0.0	0	Sa	0918	0.1	3	M	1101	0.4	12	Tu	1101	0.4	12	
	1502	2.2	67		1508	2.6	79		1538	2.3	70		1557	2.2	67		1558	1.8	55		1618	1.3	40	

# Honolulu, Oahu Island, Hawaii, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
W 0512 0.5 15	2.1 64	Th 1203 0.4 12	2.5 76	Sa 0603 0.4 12	2.2 67	M 1430 0.2 6	2.5 76	1 M 0623 0.3 9	2.2 67	16 Tu 1416 0.3 9	2.3 70
1647 1.1 34	1.0 30	1638 1.0 30	0.6 18	1355 0.5 15	0.4 12	1839 0.5 15	0.5 15	1416 0.3 9	0.3 9	1437 0.0 0	0.0 0
2236 0.1 3	2224 -0.1 -3	2244 0.2 6	0.2 6	1735 0.6 18	0.6 18	2332 0.0 0	0.0 0	1825 0.5 15	0.5 15	1959 0.7 21	0.7 21
2 0550 0.5 18	2.1 64	F 1316 0.4 12	2.5 76	Sa 0649 0.4 12	2.1 64	M 2017 0.5 15	2.4 73	2 Tu 0704 0.3 9	2.1 64	17 W 0033 0.3 9	0.3 9
1251 0.6 18	1.2 58	1723 0.8 24	0.4 12	1507 0.4 12	0.4 12	1533 0.5 15	0.2 6	1502 0.6 18	0.3 9	0750 2.0 61	2.0 61
1717 0.9 27	0.9 27	2300 -0.1 -3	0.8 24	1833 0.5 15	0.5 15	2017 0.5 15	0.5 15	1942 0.6 18	0.6 18	1520 0.0 0	0.0 0
2259 0.2 6				2318 0.3 9	0.3 9			2349 0.4 12	0.4 12	2129 0.9 27	0.9 27
3 0633 0.6 18	2.0 61	Sa 1443 0.4 12	2.4 73	M 0743 0.5 15	2.0 61	Tu 1626 0.1 3	0.3 9	3 W 0746 0.2 6	2.0 61	18 Th 0152 0.6 18	0.6 18
1403 0.6 18	1.4 58	1822 0.6 18	0.4 12	1618 0.4 12	0.4 12	2206 0.7 21	0.1 3	1542 0.2 6	0.2 6	0835 1.7 52	1.7 52
1749 0.8 24	0.8 24	2344 0.0 0	0.0 0	2013 0.5 15	0.5 15			2116 0.7 21	0.7 21	1600 0.0 0	0.0 0
2324 0.3 9										2252 1.2 37	1.2 37
4 0724 0.5 15	1.9 58	Sa 1616 0.3 9	2.3 70	4 Tu 0003 0.4 12	0.4 12	19 0203 0.5 15	0.5 15	4 Th 0050 0.6 18	0.6 18	19 F 0341 0.8 24	0.8 24
1545 0.5 15	1.5 58	2000 0.5 15	0.3 9	0841 0.9 15	1.9 58	W 0931 0.2 6	2.0 61	0829 1.8 55	1.8 55	0922 1.4 43	1.4 43
1831 0.6 18	0.6 18			1707 0.3 9	0.3 9	1709 0.1 3	0.1 3	1616 0.2 6	0.2 6	1636 0.0 0	0.0 0
2355 0.3 9				2218 0.6 18		O 2330 1.0 30	1.0 30	2241 0.9 27	0.9 27	2357 1.5 46	1.5 46
5 0828 0.6 18	1.9 58	M 0906 0.2 6	0.2 6	5 W 0120 0.5 15	0.5 15	20 Th 0353 0.7 21	0.7 21	5 F 0226 0.8 24	0.8 24	20 Sa 0546 0.9 27	0.9 27
1737 0.5 15	1.5 58	0924 0.3 9	2.2 67	0939 1.8 55	1.8 55	1027 1.7 52	1.7 52	0914 1.7 52	1.7 52	1012 1.2 37	1.2 37
2016 0.6 18	0.6 18	1724 0.3 9	0.3 9	1739 0.3 9	0.3 9	1744 0.0 0	0.0 0	1645 0.1 3	0.1 3	1710 0.0 0	0.0 0
2213 0.6 18				O 2334 0.8 24	0.8 24			2339 1.2 37	1.2 37		
6 0044 0.4 12	0.4 12	21 Tu 0212 0.4 12	0.4 12	6 Th 0312 0.7 21	0.7 21	21 F 0028 1.3 40	1.3 40	6 Sa 0423 0.9 27	0.9 27	21 Su 0046 1.8 55	1.8 55
0942 1.8 55	1.8 55	1017 2.1 64	2.1 64	1032 1.8 55	1.8 55	0538 0.8 24	0.8 24	1004 1.5 46	1.5 46	0732 0.7 21	0.7 21
1826 0.5 15	0.5 15	1809 0.2 6	0.2 6	1804 0.2 6	0.2 6	1119 1.5 46	1.5 46	1714 0.0 0	0.0 0	1109 0.9 27	0.9 27
O 2252 0.6 18		O 2345 0.8 24				1813 0.0 0	0.0 0			1742 0.0 0	0.0 0
7 0219 0.5 15	0.5 15	22 W 0402 0.5 15	0.5 15	7 F 0019 1.1 34	1.1 34	22 Sa 0112 1.6 49	1.6 49	7 Su 0024 1.5 46	1.5 46	22 M 0127 2.0 61	2.0 61
1051 1.8 55	1.8 55	1120 2.0 61	2.0 61	0452 0.7 21	0.7 21	0704 0.7 21	0.7 21	0608 0.8 24	0.8 24	0845 0.6 18	0.6 18
1853 0.4 12	0.4 12	1842 0.1 3	0.1 3	1120 1.7 52	1.7 52	1206 1.3 40	1.3 40	1057 1.3 40	1.3 40	1209 0.7 21	0.7 21
				1825 0.1 3	0.1 3	1839 0.0 0	0.0 0	1744 -0.1 -3	-0.1 -3	1815 -0.1 -3	-0.1 -3
8 0002 0.7 21	0.7 21	23 Th 0042 1.1 34	1.1 34	8 Sa 0055 1.4 43	1.4 43	23 Su 0149 1.9 58	1.9 58	8 M 0105 1.9 58	1.9 58	23 Tu 0203 2.1 64	2.1 64
0409 0.5 15	0.5 15	0536 0.5 15	0.5 15	0613 0.7 21	0.7 21	0813 0.6 18	0.6 18	0733 0.7 21	0.7 21	0934 0.4 12	0.4 12
1145 1.9 58	1.9 58	1212 1.9 58	1.9 58	1204 1.6 49	1.6 49	1249 1.1 34	1.1 34	1153 1.1 34	1.1 34	1307 0.6 18	0.6 18
1914 0.3 9	0.3 9	1910 0.1 3	0.1 3	1847 0.0 0	0.0 0	1903 -0.1 -3	-0.1 -3	1817 -0.2 -6	-0.2 -6	1848 -0.1 -3	-0.1 -3
9 0043 0.9 27	0.9 27	24 F 0126 1.4 43	1.4 43	9 Su 0130 1.7 52	1.7 52	24 M 0222 2.1 64	2.1 64	9 Tu 0145 2.2 67	2.2 67	24 W 0236 2.2 67	2.2 67
0528 0.5 15	0.5 15	0651 0.5 15	0.5 15	0722 0.6 18	0.6 18	0910 0.5 15	0.5 15	0841 0.5 15	0.5 15	1011 0.3 9	0.3 9
1229 1.9 58	1.9 58	1256 1.8 55	1.8 55	1246 1.5 46	1.5 46	1330 1.0 30	1.0 30	1250 0.9 27	0.9 27	1356 0.6 18	0.6 18
1933 0.2 6	0.2 6	1934 0.0 0	0.0 0	1911 -0.1 -3	-0.1 -3	1927 -0.1 -3	-0.1 -3	1853 -0.3 -9	-0.3 -9	1924 -0.1 -3	-0.1 -3
10 0118 1.1 34	1.1 34	25 Sa 0204 1.7 52	1.7 52	10 M 0206 2.0 61	2.0 61	25 Tu 0253 2.3 70	2.3 70	10 W 0227 2.5 76	2.5 76	25 Th 0309 2.3 70	2.3 70
0630 0.5 15	0.5 15	0753 0.5 15	0.5 15	0823 0.5 15	0.5 15	0958 0.5 15	0.5 15	0939 0.3 9	0.3 9	1042 0.3 9	0.3 9
1306 1.9 58	1.9 58	1334 1.6 49	1.6 49	1328 1.3 40	1.3 40	1409 0.8 24	0.8 24	1345 0.7 21	0.7 21	1438 0.6 18	0.6 18
1951 0.2 6	0.2 6	1956 0.0 0	0.0 0	1938 -0.2 -6	-0.2 -6	1953 -0.1 -3	-0.1 -3	1933 -0.4 -12	-0.4 -12	2000 -0.1 -3	-0.1 -3
11 0152 1.4 43	1.4 43	26 Su 0238 1.9 58	1.9 58	11 Tu 0243 2.3 70	2.3 70	26 W 0324 2.3 70	2.3 70	11 Th 0311 2.7 82	2.7 82	26 F 0342 2.3 70	2.3 70
0725 0.4 12	0.4 12	0847 0.5 15	0.5 15	0922 0.4 12	0.4 12	1040 0.4 12	0.4 12	1032 0.2 6	0.2 6	1112 0.2 6	0.2 6
1340 1.9 58	1.9 58	1408 1.4 43	1.4 43	1410 1.1 34	1.1 34	1447 0.7 21	0.7 21	1439 0.6 18	0.6 18	1517 0.6 18	0.6 18
2011 0.1 3	0.1 3	2017 0.0 0	0.0 0	2007 -0.3 -9	-0.3 -9	2020 -0.1 -3	-0.1 -3	2016 -0.4 -12	-0.4 -12	2036 -0.1 -3	-0.1 -3
12 0226 1.7 52	1.7 52	27 M 0311 2.1 64	2.1 64	12 W 0323 2.5 76	2.5 76	27 Th 0356 2.4 73	2.4 73	12 F 0356 2.8 85	2.8 85	27 Sa 0416 2.3 70	2.3 70
0817 0.4 12	0.4 12	0938 0.5 15	0.5 15	1019 0.3 9	0.3 9	1120 0.3 9	0.3 9	1122 0.1 3	0.1 3	1142 0.2 6	0.2 6
1413 1.8 55	1.8 55	1440 1.2 37	1.2 37	1454 1.0 30	1.0 30	1525 0.7 21	0.7 21	1532 0.6 18	0.6 18	1554 0.6 18	0.6 18
2032 0.0 0		2038 0.0 0		O 2040 -0.3 -9	-0.3 -9	O 2049 -0.1 -3	-0.1 -3	O 2101 -0.4 -12	-0.4 -12	O 2112 -0.1 -3	-0.1 -3
13 0302 1.9 58	1.9 58	28 Tu 0342 2.2 67	2.2 67	13 Th 0406 2.7 82	2.7 82	28 F 0429 2.4 73	2.4 73	13 Sa 0442 2.8 85	2.8 85	28 Su 0449 2.3 70	2.3 70
0909 0.3 9	0.3 9	1025 0.4 12	0.4 12	1117 0.2 6	0.2 6	1200 0.3 9	0.3 9	1212 0.1 3	0.1 3	1214 0.2 6	0.2 6
1447 1.6 49	1.6 49	1512 1.1 34	1.1 34	1539 0.8 24	0.8 24	1603 0.6 18	0.6 18	1628 0.6 18	0.6 18	1634 0.6 18	0.6 18
2056 -0.1 -3	-0.1 -3	O 2059 0.0 0		2117 -0.3 -9	-0.3 -9	2121 0.0 0		2148 -0.4 -12	-0.4 -12	2148 -0.1 -3	-0.1 -3
14 0340 2.2 67	2.2 67	29 W 0413 2.3 70	2.3 70	14 F 0452 2.7 82	2.7 82	29 Sa 0505 2.3 70	2.3 70	14 Su 0530 2.7 82	2.7 82	29 M 0522 2.3 70	2.3 70
1003 0.3 9	0.3 9	1112 0.4 12	0.4 12	1218 0.2 6	0.2 6	1243 0.3 9	0.3 9	1302 0.0 0	0.0 0	1246 0.2 6	0.2 6
1522 1.4 43	1.4 43	1545 0.9 27	0.9 27	1628 0.7 21	0.7 21	1642 0.6 18	0.6 18	1728 0.6 18	0.6 18	1718 0.6 18	0.6 18
O 2122 -0.1 -3	-0.1 -3	2122 0.0 0		2157 -0.3 -9	-0.3 -9	2154 0.0 0		2238 -0.2 -6	-0.2 -6	2223 0.0 0	
15 0421 2.4 73	2.4 73	30 Th 0446 2.3 70	2.3 70	15 Sa 0542 2.7 82	2.7 82	30 Su 0543 2.2 67	2.2 67	15 M 0617 2.5 76	2.5 76	30 Tu 0554 2.2 67	2.2 67
1100 0.3 9	0.3 9	1200 0.4 12	0.4 12	1323 0.2 6	0.2 6	1329 0.3 9	0.3 9	1350 0.0 0	0.0 0	1318 0.1 3	0.1 3
1559 1.2 37	1.2 37	1618 0.8 24	0.8 24	1725 0.6 18	0.6 18	1728 0.5 15	0.5 15	1837 0.6 18	0.6 18	1809 0.7 21	0.7 21
2151 -0.2 -6	-0.2 -6	2147 0.0 0		2241 -0.2 -6	-0.2 -6	2229 0.1 3	0.1 3	2331 0.0 0		2302 0.1 3	0.1 3
		31 F 0522 2.3 70	2.3 70							31 W 0625 2.1 64	2.1 64
		1253 0.4 12	0.4 12							1350 0.1 3	0.1 3
		1654 0.7 21	0.7 21							1909 0.7 21	0.7 21
		2214 0.1 3	0.1 3							2346 0.3 9	0.3 9

Time meridian 150° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to mean lower low water which is the chart datum of soundings.

## **Moku O Loe, Oahu Island, Hawaii, 2008**

## Times and Heights of High and Low Waters

January						February						March											
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height					
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm				
<b>1</b> Tu	0026 1555	1.5 0.2	46 6	<b>16</b> W	1512	-0.1	-3	<b>1</b> F	0102 1638	2.0 0.1	61 3	<b>16</b> Sa	0044 1710	2.4 -0.2	73 -6	<b>1</b> Sa	0022 1601	1.9 0.3	58 9	<b>16</b> Su	0012 1705	2.3 0.1	70 3
<b>2</b> W	0050 1633	1.8 0.1	55 3	<b>17</b> Th	0011 1614	2.0 -0.2	61 -6	<b>2</b> Sa	0125 1734	2.2 0.0	67 0	<b>17</b> Su	0121 0839 1137 1809	2.5 0.8 1.0 -0.3	76 24 30 -9	<b>2</b> Su	0048 1711	2.1 0.1	64 3	<b>17</b> M	0047 0743 1208 1803	2.3 0.7 1.1 0.1	70 21 34 3
<b>3</b> Th	0114 1712	2.0 -0.1	61 -3	<b>18</b> F	0056 1714	2.3 -0.4	70 -12	<b>3</b> Su	0148 0916 1122 1819	2.3 0.9 1.0 -0.2	70 27 30 -6	<b>18</b> M	0152 0841 1240 1857	2.6 0.8 1.1 -0.3	79 24 34 -9	<b>3</b> M	0110 0814 1141 1800	2.2 0.8 1.0 0.0	67 24 30 0	<b>18</b> Tu	0115 0751 1255 1849	2.3 0.5 1.3 0.1	70 15 40 3
<b>4</b> F	0139 1751	2.2 -0.2	67 -6	<b>19</b> Sa	0135 1809	2.6 -0.5	79 -15	<b>4</b> M	0211 0904 1223 1858	2.4 0.9 1.1 -0.3	73 27 34 -9	<b>19</b> Tu	0221 0854 1328 1938	2.6 0.6 1.3 -0.3	79 18 40 -9	<b>4</b> Tu	0132 0810 1230 1841	2.3 0.7 1.2 -0.1	70 21 37 -3	<b>19</b> W	0139 0804 1335 1929	2.2 0.4 1.5 0.1	67 12 46 3
<b>5</b> Sa	0205 1829	2.3 -0.3	70 -9	<b>20</b> Su	0212 0919 1212 1859	2.7 0.9 1.0 -0.6	82 27 30 -18	<b>5</b> Tu	0235 0912 1309 1934	2.5 0.8 1.2 -0.4	76 24 37 -12	<b>20</b> W	0246 0912 1411 2015	2.5 0.5 1.4 -0.2	76 15 43 -6	<b>5</b> W	0153 0819 1314 1920	2.3 0.6 1.4 -0.1	70 18 43 -3	<b>20</b> Th	0159 0819 1412 2006	2.1 0.2 1.7 0.2	64 6 52 6
<b>6</b> Su	0231 0939 1206 1906	2.4 1.0 1.1 -0.4	73 30 34 -12	<b>21</b> M	0246 0936 1312 1943	2.8 0.8 1.1 -0.6	85 24 34 -18	<b>6</b> W	0258 0928 1352 2009	2.5 0.7 1.3 -0.3	76 21 40 -9	<b>21</b> Th	0309 0931 1452 2050	2.4 0.4 1.5 0.0	73 12 46 0	<b>6</b> Th	0215 0835 1356 1958	2.3 0.4 1.6 -0.1	70 12 49 -3	<b>21</b> F	0218 0836 1448 2042	2.0 0.1 1.8 0.4	61 3 55 12
<b>7</b> M	0259 0952 1255 1942	2.5 1.0 1.1 -0.4	76 30 34 -12	<b>22</b> Tu	0319 0959 1402 2024	2.7 0.7 1.2 -0.5	82 21 37 -15	<b>7</b> Th	0321 0948 1436 2043	2.5 0.6 1.4 -0.2	76 18 43 -6	<b>22</b> F	0329 0951 1533 2124	2.2 0.3 1.6 0.2	67 9 49 6	<b>7</b> F	0237 0856 1440 2038	2.3 0.2 1.7 0.1	70 6 52 3	<b>22</b> Sa	0234 0854 1524 2118	1.8 0.0 1.9 0.6	55 0 58 18
<b>8</b> Tu	0327 1012 1338 ●	2.6 0.9 1.2 -0.4	79 27 37 -12	<b>23</b> W	0349 1024 1450 2101	2.7 0.7 1.3 -0.3	82 21 40 -9	<b>8</b> F	0344 1011 1522 2119	2.4 0.4 1.5 0.0	73 12 46 0	<b>23</b> Sa	0346 1012 1615 2156	2.0 0.2 1.6 0.5	61 6 49 15	<b>8</b> Sa	0258 0919 1527 2120	2.1 0.1 1.9 0.3	64 3 58 9	<b>23</b> Su	0249 0913 1601 2155	1.7 -0.1 2.0 0.8	52 -3 61 24
<b>9</b> W	0355 1037 1421 2050	2.6 0.8 1.2 -0.4	79 24 37 -12	<b>24</b> Th	0416 1051 1537 2136	2.5 0.6 1.3 -0.1	76 18 40 -3	<b>9</b> Sa	0406 1037 1613 2156	2.3 0.3 1.5 0.3	70 9 46 9	<b>24</b> Su	0359 1032 1659 2230	1.8 0.1 1.6 0.8	55 3 49 24	<b>9</b> Su	0319 0945 1617 2205	2.0 -0.1 2.0 0.6	61 -3 61 18	<b>24</b> M	0301 0933 1640 2236	1.5 -0.1 2.0 1.0	46 -3 61 30
<b>10</b> Th	0423 1105 1507 2123	2.5 0.8 1.2 -0.2	76 24 37 -6	<b>25</b> F	0440 1118 1626 2208	2.3 0.5 1.3 0.2	70 15 40 6	<b>10</b> Su	0426 1105 1712 2237	2.1 0.2 1.5 0.6	64 6 46 18	<b>25</b> M	0407 1053 1751 2304	1.7 0.1 1.6 1.1	52 3 49 34	<b>10</b> M	0337 1014 1714 2257	1.8 -0.2 2.0 0.9	55 -6 61 27	<b>25</b> Tu	0307 0954 1724 2324	1.4 -0.1 1.9 1.1	43 -3 58 34
<b>11</b> F	0449 1135 1559 2157	2.4 0.7 1.1 0.0	73 21 34 0	<b>26</b> Sa	0459 1145 1722 2238	2.1 0.4 1.3 0.6	64 12 40 18	<b>11</b> M	0442 1137 1826 2326	1.9 0.1 1.5 1.0	58 3 46 30	<b>26</b> Tu	0402 1116 1904 2348	1.5 0.1 1.6 1.3	46 3 49 40	<b>11</b> Tu	0349 1046 1824 2157	1.6 -0.2 1.9 0.9	49 -6 58 27	<b>26</b> W	0301 1018 1822 2155	1.3 0.0 1.8 1.8	40 0 55 55
<b>12</b> Sa	0515 1208 1703 2234	2.3 0.5 1.1 0.3	70 15 34 9	<b>27</b> Su	0512 1212 1832 2306	1.9 0.3 1.3 0.9	58 9 40 27	<b>12</b> Tu	0450 1215 2019	1.7 0.0 1.6	52 0 49 64	<b>27</b> W	0329 1145 2137	1.4 0.2 1.6	43 6 49	<b>12</b> W	0013 0342 1125 2004	1.2 1.4 -0.1 1.9	37 43 -3 58	<b>27</b> Th	1046 1953 2153 2324	0.1 1.7 52 1.1	3 52 -3 34
<b>13</b> Su	0538 1244 1829 2315	2.1 0.4 1.1 0.7	64 12 34 21	<b>28</b> M	0514 1242 2030 2326	1.7 0.3 1.3 1.2	52 9 40 37	<b>13</b> W	0057 0423 1306 2244	1.4 1.5 0.0 1.9	43 46 0 58	<b>28</b> Th	1229 2345 1306 ●	0.3 1.8 0 ●	9 55 ●	<b>13</b> Th	1219 2206 2206 ●	0.0 2.0 0 ●	0 61 0 ●	<b>28</b> F	1127 2156 2156 ●	0.2 1.8 0.8 ●	6 55 40 ●
<b>14</b> M	0558 1325 2037	1.9 0.2 1.3	58 6 40	<b>29</b> Tu	0450 1319	1.5 0.3	46 9	<b>14</b> Th	1421 2359	0.0 2.1	0 64	<b>29</b> F	1404 2324	0.3 2.2	9 67	<b>14</b> F	1348 2324	0.1 2.2	3 67	<b>29</b> Sa	1249 2304	0.4 1.9	12 58
<b>15</b> Tu	0017 0609 1414 ●	1.2 1.6 1.1 1.6	37 49 3 49	<b>30</b> W	0044 1412	1.5 0.2	46 6	<b>15</b> F	1553	-0.1	-3	<b>30</b> Sa	1543	0.1	3	<b>15</b> Sa	1543	0.1	3	<b>30</b> Su	1503 2341	0.4 2.0	12 61
<b>16</b> W	0040 1526	1.8 0.2	55 6	<b>31</b> Th	0040 1526	1.8 0.2	55 6									<b>31</b> M	0725 1040 1630	0.8 0.9 0.3	24 27 9				

Time meridian 150° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to mean lower low water which is the chart datum of soundings.

# Moku O Loe, Oahu Island, Hawaii, 2008

Times and Heights of High and Low Waters

April				May				June							
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height				
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm				
1 Tu	0009	2.1	64	16 W	0019	1.9	58	1 Th	0605	0.2	6				
0704	0.7	21	W	0656	0.3	9	1226	1.6	49	F	1337	2.0	61		
1142	1.1	34		1301	1.6	49	1800	0.7	21		1936	1.0	30		
1729	0.3	9		1839	0.5	15	2348	1.8	55		2348	1.4	43		
2 W	0033	2.1	64	17 Th	0041	1.8	55	2 F	0626	-0.1	-3				
0708	0.5	15		0711	0.1	3	1311	2.0	61	17 Sa	0637	-0.2	-6		
1229	1.4	43		1337	1.8	55	1901	0.7	21	M	1407	2.2	67		
1819	0.2	6		1923	0.6	18	2024	1.0	30		2029	1.0	30		
3 Th	0056	2.1	64	18 F	0100	1.7	52	3 Sa	0017	-0.3	-9				
0722	0.3	9		0726	0.0	0	0652	2.3	70	18 Su	0009	1.3	40		
1313	1.7	52		1410	2.0	61	1356	0.8	24	M	0659	-0.3	-9		
1905	0.3	9		2004	0.7	21	1959	0.8	24		1437	2.3	70		
4 F	0120	2.0	61	19 Sa	0117	1.6	49	4 Su	0046	1.5	46				
0741	0.1	3		0744	-0.1	-3	0721	-0.5	-15	19 M	0032	1.2	37		
1356	1.9	58		1442	2.1	64	1441	2.5	76		0724	-0.3	-9		
1952	0.3	9		2045	0.8	24	2058	0.8	24	O	1509	2.4	73		
5 Sa	0144	1.9	58	20 Su	0134	1.5	46	2227	1.0	30	2122	1.0	30		
0805	-0.2	-6		0803	-0.2	-6	0115	1.4	43	5 Th	0201	1.1	34		
1441	2.2	67		1515	2.2	67	0755	-0.6	-18	20 F	0845	-0.3	-9		
2040	0.5	15		2126	0.9	27	1529	2.7	82		0901	-0.6	-18		
6 Su	0207	1.8	55	2027	●	2200	0.9	27	2237	1.0	30	20 G	1639	2.4	73
0832	-0.3	-9		21 M	0150	1.4	43	0143	1.3	40		2345	0.9	27	
1528	2.3	70		0825	-0.2	-6	0831	-0.7	-21	6 F	0222	0.9	27		
2132	0.7	21		1550	2.3	70	1619	2.7	82		0252	1.0	30		
7 M	0229	1.6	49	2210	1.0	30	2309	1.0	30	O	0946	-0.4	-12		
0902	-0.4	-12		2122	1.0	30	2328	1.0	30		1749	2.6	79		
1618	2.4	73		2024	1.0	30	2309	1.0	30	21 H	0233	1.0	30		
2230	0.9	27		2122	1.1	34	2119	1.2	37	Sa	0919	-0.2	-6		
8 Tu	0249	1.4	43	2222	1.0	30	0911	-0.6	-18	21 I	0322	1.0	30		
0935	-0.4	-12		0914	-0.2	-6	0848	-0.2	-6	Su	0952	-0.1	-3		
1715	2.4	73		1710	2.1	64	1627	2.2	67		1742	2.3	70		
2344	1.1	34		1710	2.1	64	2300	1.1	34	22 J	0023	0.9	27		
9 W	0258	1.3	40	2322	1.0	30	1042	-0.2	-6	Sa	0322	1.0	30		
1012	-0.4	-12		0943	-0.1	-3	1916	-0.2	-6	M	0952	-0.1	-3		
1822	2.3	70		1801	2.0	61	1042	-0.2	-6		1835	2.4	73		
10 Th	1055	-0.2	-6	2323	1.0	30	1826	0.0	0	23 K	0101	0.8	24		
1946	2.2	67		1017 F	1017	0.0	0	1138	0.1	3	Su	0426	0.9	27	
				1906	2.0	61	2021	0.2	67	M	1028	0.2	6		
				2021	2.0	61	2121	2.0	61		1812	2.2	67		
11 F	1153	0.0	0	26 Sa	1059	0.2	6	1138	0.1	3	24 L	0138	0.6	18	
2117	2.1	64		2020	1.9	58	2021	0.2	67	Sa	0557	0.9	27		
				0724	0.7	21	1138	0.2	67	M	1108	0.5	15		
				1255	0.4	12	1138	0.1	3		1840	2.0	61		
				2117	2.0	61	2117	2.0	61	O	2028	1.7	52		
12 Sa	1326	0.3	9	27 Su	1202	0.4	12	1138	0.1	3	25 M	0214	0.5	15	
2228	2.1	64		2124	1.9	58	2124	0.4	12	Su	0802	1.0	30		
				1016	0.9	27	2124	0.4	12	M	1204	0.8	24		
				1439	0.7	21	2203	1.9	58		1908	1.8	55		
				2203	1.9	58	2036	1.9	58	25 N	0251	0.3	9		
13 Su	0648	0.7	21	28 M	1347	0.5	15	1137	1.2	37	Sa	1013	1.3	40	
0959	0.8	24		2211	1.9	58	1618	0.8	24	M	1353	1.2	37		
1522	0.4	12		1347	0.5	15	2238	1.8	55		1937	1.6	49		
2317	2.1	64		1347	0.5	15	2115	1.8	55	26 O	0251	0.3	9		
				1347	0.5	15	2115	1.8	55	Sa	1013	1.3	40		
14 M	0636	0.6	18	28 W	0549	0.6	18	1304	1.8	55	M	1647	1.3	40	
1129	1.0	30		1035	0.9	27	1841	1.0	30		2008	1.4	43		
1647	0.4	12		1533	0.6	18	2327	1.5	46	27 P	0330	0.0	0		
2353	2.0	61		2247	1.9	58	2327	1.5	46	Sa	1134	1.7	52		
15 Tu	0644	0.4	12	30 W	0550	0.4	12	1304	1.8	55	M	1647	1.3	40	
1221	1.3	40		1138	1.3	40	1841	1.0	30		2008	1.4	43		
1749	0.5	15		1653	0.6	18	2327	1.5	46	27 Q	0330	0.0	0		
				2319	1.9	58	2327	1.5	46	Sa	1227	2.1	64		
				1311	2.2	67	2327	1.5	46	M	1355	2.7	82		
				1921	1.1	34	2327	1.5	46		2317	1.1	34		
				2310	1.4	43	2327	1.5	46	28 R	0548	-0.6	-18		

Time meridian 150° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to mean lower low water which is the chart datum of soundings.

# Moku O Loe, Oahu Island, Hawaii, 2008

Times and Heights of High and Low Waters

July				August				September																
	Time	Height			Time	Height			Time	Height														
	h m	ft	cm		h m	ft	cm		h m	ft	cm													
<b>1</b> Tu	0636 1437 2141	-0.7 2.8 1.0	-21 85 30		<b>16</b> W	0654 1447 2141	-0.3 2.5 1.0	-9 76 30	<b>1</b> F	0141 0805 1527 2158	1.3 -0.5 2.6 0.6	40 -15 79 18	<b>16</b> Sa	0138 0752 1458 2121	1.3 -0.2 2.4 0.6	40 -6 73 18	<b>1</b> M	0318 0910 1523 2147	1.7 0.3 2.0 0.1	52 9 61 3	<b>16</b> Tu	0304 0857 1448 2113	1.9 0.4 1.9 -0.1	58 12 58 -3
<b>2</b> W	0023 0724 1518 ● 2215	1.1 -0.7 2.9 0.9	34 -21 88 27		<b>17</b> Th	0043 0730 1513 ○ 2157	1.1 -0.3 2.5 0.9	34 -9 76 27	<b>2</b> Sa	0232 0845 1555 2225	1.3 -0.3 2.5 0.5	40 -9 76 15	<b>17</b> Su	0220 0825 1519 2143	1.4 -0.1 2.3 0.4	43 -3 70 12	<b>2</b> Tu	0402 0947 1537 2208	1.7 0.6 1.8 0.1	52 18 55 3	<b>17</b> W	0351 0941 1505 2141	2.0 0.6 1.7 -0.2	61 18 52 -6
<b>3</b> Th	0123 0810 1558 2250	1.1 -0.7 2.8 0.8	34 -21 85 24		<b>18</b> F	0128 0804 1539 2218	1.2 -0.4 2.5 0.8	37 -12 76 24	<b>3</b> Su	0322 0923 1620 2253	1.4 -0.1 2.3 0.4	43 0 70 12	<b>18</b> M	0303 0859 1540 2207	1.5 0.0 2.2 0.3	46 0 67 9	<b>3</b> W	0448 1025 1544 2230	1.7 0.8 1.6 0.1	52 24 49 3	<b>18</b> Th	0444 1033 1518 2212	2.0 0.9 1.5 -0.2	61 27 46 -6
<b>4</b> F	0220 0855 1636 2327	1.1 -0.5 2.7 0.8	34 -15 82 24		<b>19</b> Sa	0211 0836 1605 2243	1.2 -0.3 2.5 0.7	37 -9 76 21	<b>4</b> M	0414 0959 1641 2321	1.4 0.3 2.1 0.3	43 9 64 9	<b>19</b> Tu	0351 0936 1559 2233	1.6 0.3 2.0 0.2	49 9 61 6	<b>19</b> F	0548 1145 1513 2249	2.0 1.2 1.4 -0.2	61 37 43 -6				
<b>5</b> Sa	0317 0937 1710	1.1 -0.3 2.5	34 -9 76		<b>20</b> Su	0256 0909 1629 2310	1.2 -0.2 2.4 0.6	37 -6 73 18	<b>5</b> Tu	0512 1034 1655 2350	1.4 0.6 1.8 0.3	43 18 55 9	<b>5</b> W	0445 1016 1614 2303	1.6 0.6 1.8 0.1	49 18 43 3	<b>20</b> Sa	0718 2338	2.0 -0.1	61 -3				
<b>6</b> Su	0005 0418 1017 1742	0.7 1.1 0.0 2.3	21 34 0 70		<b>21</b> M	0345 0942 1652 2340	1.2 0.1 2.2 0.5	37 3 67 15	<b>6</b> W	0622 1111 1659	1.4 1.0 1.6	43 30 49	<b>21</b> Th	0552 1104 1623 2339	1.6 1.0 1.6 0.0	49 30 49 0	<b>21</b> Su	0917	2.0	61				
<b>7</b> M	0044 0531 1055 1808	0.6 1.1 0.4 2.0	18 34 12 61		<b>22</b> Tu	0444 1017 1713	1.2 0.3 2.1	37 9 64	<b>7</b> Th	0021 0808 1200 1633	0.3 1.4 1.3 1.5	9 43 40 46	<b>22</b> F	0728 1226 1607	1.7 1.3 1.5	52 40 46	<b>7</b> Su	0005 1111	0.3 1.8	55 55	<b>22</b> M	0100 1044	0.1 2.1	3 64
<b>8</b> Tu	0124 0706 1134 1827	0.5 1.1 0.8 1.8	15 34 24 55		<b>23</b> W	0011 0558 1057 1731	0.4 1.2 0.7 1.9	12 37 21 58	<b>8</b> F	0058 1101	0.3 1.6	9 49	<b>23</b> Sa	0027 0946	0.0 1.8	0 55	<b>8</b> M	0150 1156	0.4 1.9	12 58	<b>23</b> Tu	0301 1137 1921 2236	0.2 2.3 0.7 0.9	6 70 21 27
<b>9</b> W	0204 0926 1228 ● 1834	0.3 1.2 1.1 1.6	9 37 34 49		<b>24</b> Th	0048 0743 1152 1743	0.2 1.3 1.1 1.7	6 40 34 52	<b>9</b> Sa	0151 1205	0.3 1.8	9 55	<b>9</b> Tu	0354 1225 2012 2247	0.3 2.0 0.8 0.9	9 61 24 27	<b>24</b> W	0433 1215 1913 2346	0.1 2.3 0.6 1.1	3 70 18 34				
<b>10</b> Th	0244 1138	0.2 1.5	6 46		<b>25</b> F	0133 1002 1418 ● 1729	0.1 1.6 1.4 1.5	3 49 43 46	<b>10</b> Su	0309 1238	0.2 2.0	6 61	<b>25</b> M	0313 1210	0.0 2.3	0 70	<b>10</b> W	0501 1248 1946 2342	0.2 2.1 0.8 1.1	6 64 24 34	<b>25</b> Th	0536 1245 1922	0.1 2.3 0.5	3 70 15
<b>11</b> F	0325 1227	0.2 1.8	6 55		<b>26</b> Sa	0229 1133	0.0 1.9	0 58	<b>11</b> M	0424 1306	0.2 2.1	6 64	<b>26</b> Tu	0437 1250 2008 2308	-0.1 2.5 0.8 1.0	-3 76 24 30	<b>11</b> Th	0547 1309 1944	0.1 2.2 0.7	3 67 21	<b>26</b> F	0035 0626 1310 1936	1.4 0.1 2.2 0.3	43 3 67 9
<b>12</b> Sa	0408 1259	0.1 2.0	3 61		<b>27</b> Su	0335 1226	-0.2 2.2	-6 67	<b>12</b> Tu	0522 1330 2049 2322	0.0 2.2 0.9 1.0	0 67 27 30	<b>27</b> W	0540 1323 2010 2132	-0.2 2.5 0.7 2.2	-6 76 21 67	<b>12</b> F	0023 0626 1329 1953	1.2 0.0 2.2 0.5	37 0 67 15	<b>27</b> Sa	0117 0709 1332 1953	1.6 0.2 2.1 0.1	49 6 64 3
<b>13</b> Su	0451 1327	0.0 2.2	0 67		<b>28</b> M	0441 1308	-0.3 2.5	-9 76	<b>13</b> W	0606 1353 2041	-0.1 2.3 0.9	-3 70 27	<b>28</b> Th	0015 0632 1353 2024	1.2 -0.3 2.5 0.6	37 -9 76 18	<b>13</b> Sa	0102 0703 1348 2008	1.4 0.0 2.2 0.4	43 0 67 12	<b>28</b> ●	0156 0749 1351 2011	1.8 0.3 2.0 0.0	55 9 61 0
<b>14</b> M	0534 1354	-0.1 2.3	-3 70		<b>29</b> Tu	0540 1346 2055 2340	-0.5 2.7 0.9 1.1	-15 82 27 34	<b>14</b> Th	0015 0644 1415 2048	1.1 -0.2 2.4 0.8	34 -6 73 24	<b>29</b> F	0106 0716 1420 2043	1.4 -0.3 2.5 0.5	43 -9 76 15	<b>14</b> Su	0141 0739 1408 2027	1.6 0.1 2.2 0.2	49 3 67 6	<b>29</b> M	0233 0827 1408 2030	2.0 0.5 1.8 -0.1	61 15 55 -3
<b>15</b> Tu	0615 1420 2134 2351	-0.2 2.4 0.9 1.0	-6 73 27 30		<b>30</b> W	0633 1422 2110	-0.6 2.7 0.9	-18 82 27	<b>15</b> F	0058 0719 1437 2103	1.2 -0.3 2.4 0.7	37 -9 73 21	<b>30</b> Sa	0151 0756 1443 2103	1.5 -0.2 2.3 0.3	46 -6 70 9	<b>15</b> M	0221 0817 1429 2049	1.8 0.2 2.1 0.0	55 6 64 0	<b>30</b> Tu	0310 0906 1423 2049	2.1 0.6 1.6 -0.2	64 18 49 -6
					<b>31</b> Th	0046 0721 1456 2133	1.2 -0.6 2.7 0.8	37 -18 82 24		<b>31</b> Su	0235 0834 1505 2125	1.6 0.0 2.2 0.2	49 0 67 6											

Time meridian 150° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
 Heights are referred to mean lower low water which is the chart datum of soundings.

# Moku O Loe, Oahu Island, Hawaii, 2008

Times and Heights of High and Low Waters

October				November				December							
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height				
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm				
1 W	0347	2.1	64	16 Th	0351	2.4	73	1 Sa	0454	2.2	67	1 M	0519	2.3	70
	0947	0.8	24		1004	0.9	27		2124	-0.1	-3		2146	-0.1	-3
	1435	1.5	46		1417	1.4	43								
	2110	-0.2	-6		2104	-0.5	-15								
2 Th	0427	2.1	64	17 F	0444	2.4	73	2 Su	0543	2.1	64	17 M	0639	2.4	73
	1031	1.0	30		1113	1.1	34		2155	0.0	0		2303	0.0	0
	1440	1.4	43		1429	1.3	40								
	2131	-0.1	-3		2140	-0.4	-12								
3 F	0511	2.0	61	18 Sa	0547	2.3	70	3 M	0643	2.0	61	18 Tu	0741	2.2	67
	1129	1.2	37		2221	-0.3	-9		2230	0.2	6				
	1428	1.3	40												
	2154	0.0	0												
4 Sa	0609	1.9	58	19 Su	0705	2.2	67	4 Tu	0753	1.9	58	19 W	0008	0.3	9
	2220	0.1	3		2313	0.0	0		2319	0.4	12		0839	2.1	64
													1646	0.6	18
													2139	0.8	24
5 Su	0739	1.8	55	20 M	0834	2.2	67	5 W	0857	1.9	58	20 Th	0147	0.7	21
	2256	0.3	9										0928	1.9	58
													1703	0.4	12
													2322	1.2	37
6 M	0935	1.8	55	21 Tu	0035	0.2	6	6 Th	0059	0.6	18	21 F	0346	0.9	27
													0945	1.9	58
													1738	0.6	18
													2247	0.9	27
7 Tu	0011	0.4	12	22 W	0237	0.4	12	7 F	0306	0.7	21	22 Sa	0017	1.5	46
	1043	1.9	58		1044	2.1	64		1021	1.8	55		0522	1.0	30
					1812	0.5	15		1735	0.4	12		1039	1.6	49
					2309	1.0	30		2339	1.2	37		1742	0.0	0
8 W	0249	0.5	15	23 Th	0416	0.5	15	8 Sa	0436	0.8	24	23 Su	0057	1.8	55
	1120	1.9	58		1122	2.0	61		1052	1.8	55		0636	1.0	30
	1858	0.7	21		1819	0.4	12		1746	0.2	6		1106	1.5	46
	2258	0.9	27										1802	-0.1	-3
9 Th	0418	0.4	12	24 F	0004	1.3	40	9 Su	0020	1.6	49	24 M	0130	2.1	64
	1146	2.0	61		0526	0.5	15		0545	0.8	24		0736	1.0	30
	1843	0.6	18		1151	1.9	58		1120	1.7	52		1130	1.3	40
	2343	1.1	34										1805	-0.1	-3
10 F	0516	0.4	12	25 Sa	0047	1.6	49	10 M	0100	1.9	58	25 Tu	0200	2.2	67
	1209	2.0	61		0621	0.6	18		0645	0.8	24		0928	1.1	34
	1846	0.4	12		1215	1.8	55		1149	1.6	49		1150	1.2	37
					1848	0.0	0		1829	-0.3	-9		1847	-0.3	-9
11 Sa	0022	1.4	43	26 Su	0124	1.9	58	11 Tu	0140	2.3	70	10 W	0141	2.5	76
	0603	0.4	12		0709	0.7	21		0742	0.8	24		0825	1.0	30
	1230	2.0	61		1235	1.7	52		1218	1.5	46		1154	1.2	37
	1858	0.2	6		1906	-0.1	-3		1858	-0.5	-15		1847	-0.3	-9
12 Su	0101	1.7	52	27 M	0158	2.1	64	12 W	0221	2.5	76	10 Th	0227	2.4	73
	0648	0.4	12		0753	0.8	24		0838	0.9	27		0945	1.0	30
	1252	1.9	58		1254	1.6	49		1248	1.4	43		1152	1.0	30
	1916	0.0	0										1831	-0.7	-21
13 M	0140	1.9	58	28 Tu	0231	2.2	67	11 Th	0229	2.4	73	26 F	0255	2.5	76
	0733	0.5	15		0836	0.8	24		0908	1.0	30		0959	1.0	30
	1314	1.8	55		1311	1.4	43		1220	1.2	37		1239	1.1	34
	1938	-0.2	-6		1944	-0.3	-9		1913	-0.4	-12		1932	-0.4	-12
14 Tu	0221	2.2	67	29 W	0303	2.3	70	27 Th	0259	2.5	76	26 Th	0323	2.5	76
	0819	0.6	18		0918	0.9	27		0947	1.0	30		1019	0.9	27
	1336	1.7	52		1328	1.3	40		1247	1.1	34		1320	1.1	34
	O 2004	-0.4	-12		2006	-0.3	-9		1941	-0.4	-12		2005	-0.4	-12
15 W	0304	2.3	70	30 Th	0337	2.3	70	28 F	0331	2.5	76	27 M	0352	2.5	76
	0908	0.7	21		1003	1.0	30		1025	1.0	30		1043	0.9	27
	1358	1.6	49		1343	1.3	40		1317	1.3	40		1359	1.1	34
	2032	-0.5	-15		2030	-0.3	-9		2007	-0.7	-21		2038	-0.3	-9
31 F	0413	2.3	70	31 F	1054	1.1	34					31 W	0514	2.3	70
					1352	1.2	37						1214	0.7	21
					2056	-0.2	-6						1611	1.0	30
													2209	0.1	3

Time meridian 150° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to mean lower low water which is the chart datum of soundings.

# Kahului, Maui Island, Hawaii, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0337 0658 1540	1.4 1.5 0.3	43 46 9	16 W 0305 0609 1458 2343	1.4 1.5 0.0 2.0	43 46 0 61	1 F 0045 1636	2.0 0.1	61 3	16 Sa 0029 1706	2.3 -0.2	70 -6
2 W 0014 1625	1.8 0.1	55 3	17 Th 1605	-0.2	-6	2 Sa 0111	2.2 -0.1	67 -3	2 Su 0107	2.5 0.7	76 21
3 Th 0048 1708	2.1 0.0	64 0	18 F 0035 1709	2.4 -0.3	73 -9	3 Su 0136	2.3 0.9	70 27	18 M 0140 0825 1247 1854	2.6 0.6 1.2 0.4	79 18 37 -12
4 F 0118 1749	2.3 -0.1	70 -3	19 Sa 0117 0834 1116 1805	2.6 0.9 1.0 -0.5	79 27 30 -15	4 M 0200 0845 1235 1857	2.5 0.8 1.1 -0.4	76 24 34 -12	19 Tu 0209 0841 1331 1935	2.7 0.4 1.4 -0.4	82 12 37 -12
5 Sa 0147 0849 1138 1829	2.4 1.0 1.1 -0.3	73 30 34 -9	20 Su 0155 0851 1226 1854	2.8 0.8 -0.6	85 24 -18	5 Tu 0224 0857 1317 1932	2.6 0.7 -0.5	79 21 40 -15	20 W 0235 0859 1410 2011	2.6 0.3 1.6 -0.3	79 9 -9
6 Su 0216 0906 1227 1906	2.6 0.9 1.2 -0.4	79 27 37 -12	21 M 0231 0915 1319 1939	2.9 0.7 -0.6	88 21 -18	6 W 0248 0915 1357 2006	2.7 0.6 1.4 -0.5	82 18 43 -15	21 Th 0259 0920 1448 2046	2.5 0.2 1.7 -0.2	76 6 52 -6
7 M 0245 0927 1309 1941	2.7 0.9 1.2 -0.5	82 27 37 -15	22 Tu 0304 0940 1406 2019	2.9 0.6 -0.6	88 18 -18	7 Th 0311 0937 1437 2040	2.7 0.4 1.5 -0.4	82 12 46 -12	22 F 0321 0940 1525 2119	2.4 0.1 1.8 0.0	73 3 55 0
8 Tu 0314 0952 1349 2014	2.7 0.8 1.3 -0.5	82 24 40 -15	23 W 0335 1007 1450 2056	2.8 0.5 -0.4	85 15 43 -12	8 F 0335 1000 1519 2115	2.6 0.3 1.6 -0.2	79 9 49 -6	23 Sa 0340 1001 1603 2152	2.2 0.1 1.8 0.3	67 3 55 9
9 W 0343 1019 1429 2047	2.8 0.8 1.3 -0.4	85 24 40 -12	24 Th 0403 1033 1534 2132	2.7 0.5 -0.2	82 15 46 -6	9 Sa 0357 1025 1605 2151	2.5 0.2 1.7 0.1	76 6 52 3	24 Su 0356 1021 1641 2223	2.0 0.0 1.8 0.6	64 0 55 18
10 Th 0410 1048 1511 2120	2.7 0.7 1.3 -0.3	82 21 40 -9	25 F 0428 1100 1618 2205	2.5 0.4 1.5 0.1	76 12 46 3	10 Su 0419 1052 1656 2231	2.3 0.1 1.7 0.5	70 3 52 15	25 M 0407 1041 1724 2255	1.8 0.0 1.7 0.9	55 0 52 27
11 F 0437 1119 1559 2153	2.6 0.6 1.3 0.0	79 18 40 0	26 W 0449 1127 1706 2236	2.3 0.4 1.4 0.5	70 12 43 15	11 M 0438 1122 1759 2317	2.0 0.0 1.7 0.9	61 0 52 27	26 Tu 0410 1103 1819 2329	1.6 0.1 1.6 1.1	49 3 49 34
12 Sa 0503 1151 1656 2230	2.5 0.5 1.3 0.3	76 15 40 9	27 Su 0505 1153 1803 2308	2.0 0.3 1.4 0.8	61 9 43 24	12 Tu 0450 1158 1929	1.8 0.0 1.7 1.7	55 0 52 52	27 Th 0355 1129 2001	1.4 0.1 1.5 1.5	43 3 46 58
13 Su 0528 1226 1810 2312	2.3 0.4 1.3 0.7	70 12 40 21	28 M 0514 1222 1925 2340	1.8 0.3 1.4 1.2	55 9 43 37	13 W 0027 0444 1246 2154	1.3 1.5 0.0 1.8	40 46 0 55	28 F 1207 2335 2126	0.2 1.6 1.9 0.8	6 58
14 M 0550 1307 1956	2.0 0.3 1.4	61 9 43	29 Tu 0506 1257 2221	1.6 1.5 1.5	49 64	14 Th 1400 2338	0.0 2.1	0 64	29 Sa 1320 2307	0.1 2.1	3 64
15 Tu 0014 0609 1356 2216	1.1 1.8 0.1 1.7	34 55 3 52	30 W 0102 0328 1351	1.4 1.5 0.3	43 46 9	15 F 1542	-0.1	-3	30 Su 1532	0.1	3
31 Th 0014 1514	1.7	52	31 Th 0014 1514	1.7 0.2	52 6				31 M 0721 1055 1629	0.6 0.8 0.3	18 24 9

Time meridian 150° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to mean lower low water which is the chart datum of soundings.

# Kahului, Maui Island, Hawaii, 2008

Times and Heights of High and Low Waters

April					May					June					
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height	
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm
<b>1</b> Tu	0004	2.1	64	<b>16</b> W	0015	2.0	61	<b>1</b> Th	0600	0.1	3	<b>16</b> F	0613	-0.1	-3
	0700	0.5	15		0649	0.1	3		1219	1.6	49		1319	2.1	64
	1149	1.1	34		1253	1.6	49		1756	0.5	15		1920	0.8	24
	1729	0.2	6		1835	0.4	12		2348	1.9	58				
<b>2</b> W	0028	2.1	64	<b>17</b> Th	0039	1.9	58	<b>2</b> F	0621	-0.2	-6	<b>17</b> Sa	0001	1.4	43
	0703	0.3	9		0705	0.0	0		1301	2.0	61		0635	-0.3	-9
	1230	1.4	43		1327	1.9	58		1853	0.5	15		1350	2.3	70
	1817	0.1	3		1918	0.4	12						2004	0.8	24
<b>3</b> Th	0052	2.2	67	<b>18</b> F	0101	1.8	55	<b>3</b> Sa	0019	1.8	55	<b>18</b> Su	0027	1.3	40
	0717	0.1	3		0722	-0.2	-6		0647	-0.4	-12		0658	-0.4	-12
	1310	1.7	52		1358	2.1	64		1342	2.4	73		1420	2.4	73
	1902	0.1	3		1956	0.5	15		1947	0.6	18		2044	0.8	24
<b>4</b> F	0116	2.1	64	<b>19</b> Sa	0122	1.7	52	<b>4</b> Su	0051	1.6	49	<b>19</b> M	0054	1.3	40
	0736	-0.1	-3		0741	-0.3	-9		0717	-0.6	-18		0725	-0.4	-12
	1349	2.0	61		1429	2.2	67		1425	2.6	79		1452	2.5	76
	1946	0.1	3		2034	0.5	15		2040	0.6	18		2123	0.8	24
<b>5</b> Sa	0141	2.0	61	<b>20</b> Su	0142	1.6	49	<b>5</b> M	0123	1.5	46	<b>20</b> Tu	0120	1.2	37
	0800	-0.3	-9		0801	-0.4	-12		0750	-0.8	-24		0753	-0.5	-15
	1430	2.3	70		1500	2.3	70		1509	2.7	82		1526	2.5	76
	2031	0.3	9		2111	0.6	18		2134	0.7	21		2204	0.8	24
<b>6</b> Su	0207	1.9	58	<b>21</b> M	0202	1.4	43	<b>6</b> Tu	0154	1.3	40	<b>21</b> W	0146	1.1	34
	0826	-0.5	-15		0823	-0.4	-12		0826	-0.8	-24		0823	-0.4	-12
	1512	2.4	73		1532	2.3	70		1557	2.8	85		1602	2.4	73
	2118	0.4	12		2149	0.7	21		2233	0.8	24		2247	0.9	27
<b>7</b> M	0232	1.7	52	<b>22</b> Tu	0220	1.3	40	<b>7</b> W	0225	1.2	37	<b>22</b> Th	0210	1.1	34
	0855	-0.6	-18		0847	-0.4	-12		0904	-0.7	-21		0853	-0.4	-12
	1558	2.5	76		1607	2.3	70		1648	2.7	82		1641	2.4	73
	2209	0.6	18		2230	0.8	24		2341	0.9	27		2339	0.9	27
<b>8</b> Tu	0255	1.5	46	<b>23</b> W	0234	1.2	37	<b>8</b> Th	0255	1.1	34	<b>23</b> Su	0231	1.0	30
	0927	-0.6	-18		0912	-0.3	-9		0945	-0.6	-18		0925	-0.3	-9
	1649	2.4	73		1647	2.2	67		1744	2.5	76		1723	2.3	70
	2308	0.9	27		2319	0.9	27						1111	0.1	3
<b>9</b> W	0314	1.3	40	<b>24</b> Th	0241	1.1	34	<b>9</b> F	0113	0.8	24	<b>24</b> Tu	0229	0.6	18
	1002	-0.5	-15		0938	-0.2	-6		0322	0.9	27		0709	0.9	27
	1748	2.3	70		1734	2.0	61		1030	-0.3	-9		0957	-0.1	-3
									1847	2.3	70		1807	2.2	67
<b>10</b> Th	0036	1.0	30	<b>25</b> F	1008	-0.1	-3	<b>10</b> Sa	1123	0.0	0	<b>10</b> Tu	0314	0.4	12
	0316	1.1	34		1835	1.9	58		1955	2.2	67		0921	1.1	34
	1041	-0.3	-9						1852	2.1	64		1325	0.9	27
	1906	2.1	64									<b>10</b> O	2017	1.8	55
<b>11</b> F	1132	-0.1	-3	<b>26</b> Sa	1044	0.1	3	<b>11</b> M	0433	0.6	18	<b>11</b> W	0351	0.3	9
	2045	2.0	61		1953	1.8	55		0656	0.7	21		1102	1.4	43
									1237	0.3	9		1527	1.1	34
									2058	2.0	61		2053	1.6	49
<b>12</b> Sa	1259	0.2	6	<b>27</b> Su	1137	0.2	6	<b>12</b> M	0452	0.5	15	<b>12</b> Tu	0343	0.6	18
	2211	2.0	61		2109	1.9	58		0958	0.9	27		0756	0.8	24
									1426	0.6	18		1229	0.6	18
									2151	1.9	58		2024	1.9	58
<b>13</b> Su	0636	0.6	18	<b>28</b> M	1325	0.4	12	<b>13</b> Tu	0512	0.3	9	<b>13</b> F	0404	0.4	12
	1000	0.7	21		2203	1.9	58		1121	1.2	37		1009	1.1	34
	1511	0.3	9						1611	0.8	24		1423	0.8	24
	2307	2.0	61						2232	1.8	55		2108	1.8	55
<b>14</b> M	0625	0.4	12	<b>29</b> Tu	0546	0.5	15	<b>14</b> W	0533	0.2	6	<b>14</b> Th	0429	0.2	6
	1129	1.0	30		1039	0.9	27		1210	1.5	46		1120	1.5	46
	1644	0.3	9		1527	0.5	15		1729	0.8	24		1619	1.0	30
	2345	2.0	61		2243	1.9	58		2305	1.7	52		2152	1.7	52
<b>15</b> Tu	0635	0.3	9	<b>30</b> W	0546	0.3	9	<b>15</b> Th	0552	0.0	0	<b>15</b> F	0458	-0.1	-3
	1216	1.3	40		1136	1.2	37		1247	1.8	55		1210	1.9	58
	1747	0.4	12		1651	0.6	18		1830	0.8	24		1751	1.0	30
					2316	1.9	58		2334	1.5	46		2236	1.6	49
<b>31</b> Sa	0531	-0.3	-9	<b>31</b> Sa	1254	2.3	70	<b>31</b> Sa	1254	2.3	70	<b>31</b> Su	1344	2.4	73
					1903	0.9	27		1903	0.9	27		2032	1.0	30
									2320	1.4	43		2338	1.1	34

Time meridian 150° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to mean lower low water which is the chart datum of soundings.

# Kahului, Maui Island, Hawaii, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm		h m	ft	cm		h m	ft	cm	
1 Tu 0631 0.7 -21	16 W 0016 1.1 34	1 F 0147 1.4 43	16 Sa 0144 1.6 49	1 M 0310 2.1 64	16 Tu 0256 2.3 70						
1420 2.9 88	0654 -0.3 -9	0801 -0.5 -15	0751 -0.2 -6	0906 0.3 9	0852 0.4 12						
2113 0.9 27	1436 2.6 79	1515 2.9 88	1451 2.7 82	1519 2.3 70	1446 2.3 70						
	2119 0.9 27	● 2144 0.6 18	○ 2114 0.6 18	2138 0.2 6	2107 -0.1 -3						
2 W 0040 1.2 37	17 Th 0101 1.2 37	2 Sa 0234 1.5 46	17 Su 0223 1.7 52	2 Tu 0350 2.1 64	17 W 0338 2.4 73						
0719 -0.8 -24	0730 -0.4 -12	0841 -0.4 -12	0824 -0.1 -3	0942 0.5 15	0933 0.7 21						
1502 3.0 91	1503 2.7 82	1544 2.8 85	1513 2.6 79	1536 2.1 64	1507 2.1 64						
● 2150 0.8 24	○ 2141 0.8 24	2211 0.5 15	2136 0.4 12	2200 0.2 6	2134 -0.1 -3						
3 Th 0136 1.2 37	18 F 0142 1.3 40	3 Su 0321 1.6 49	18 M 0303 1.8 55	3 W 0430 2.1 64	18 Th 0425 2.4 73						
0805 -0.7 -21	0804 -0.4 -12	0919 -0.1 -3	0858 0.1 3	1018 0.8 24	1019 0.9 27						
1542 3.0 91	1530 2.7 82	1610 2.6 79	1534 2.5 76	1549 1.9 58	1524 1.8 55						
2226 0.7 21	2205 0.8 24	2239 0.4 12	2159 0.3 9	2221 0.2 6	2204 -0.1 -3						
4 F 0228 1.2 37	19 Sa 0222 1.3 40	4 M 0407 1.7 52	19 Tu 0346 1.9 58	4 Th 0515 2.0 61	19 F 0521 2.3 70						
0850 -0.6 -18	0836 -0.3 -9	0956 0.2 6	0933 0.3 9	1056 1.1 34	1118 1.2 37						
1620 2.9 88	1555 2.7 82	1633 2.4 73	1554 2.3 70	1552 1.7 52	1532 1.6 49						
2303 0.7 21	2230 0.7 21	2306 0.4 12	2224 0.2 6	2244 0.2 6	2238 -0.1 -3						
5 Sa 0321 1.2 37	20 Su 0303 1.4 43	5 Tu 0457 1.7 52	20 W 0433 1.9 58	5 F 0611 1.9 58	20 Sa 0637 2.2 67						
0932 -0.4 -12	0908 -0.2 -6	1032 0.6 18	1012 0.6 18	1145 1.4 43	2322 0.1 3						
1655 2.7 82	1620 2.6 79	1651 2.1 64	1613 2.1 64	1533 1.5 46	2309 0.3 9						
2341 0.6 18	2257 0.6 18	2333 0.3 9	2253 0.1 3	2309 0.3 9	2322 0.1 3						
6 Su 0417 1.2 37	21 M 0348 1.4 43	6 W 0553 1.6 49	21 Th 0530 1.9 58	6 Sa 0749 1.8 55	21 Su 0833 2.2 67						
1012 -0.1 -3	0940 0.0 0	1110 0.9 27	1057 1.0 30	2347 0.4 12	○ 0						
1727 2.5 76	1643 2.5 76	1701 1.8 55	1627 1.9 58	2326 0.1 3	2242 1.0 30						
7 M 0018 0.5 15	22 Tu 0440 1.4 43	7 Th 0001 0.3 9	22 F 0646 1.9 58	7 Su 1042 1.9 58	22 M 0036 0.2 6						
0519 1.2 37	1015 0.3 9	0708 1.6 49	1201 1.3 40	1021 2.3 70	1021 2.3 70						
1052 0.3 9	1705 2.3 70	1155 1.3 40	1628 1.7 52	○ 0	○ 0						
1755 2.2 67	2356 0.4 12	1656 1.6 49	2257 1.0 30	2242 1.0 30	2242 1.0 30						
8 Tu 0056 0.5 15	23 W 0542 1.4 43	8 F 0036 0.3 9	23 M 0009 0.1 3	8 M 0119 0.5 15	23 Tu 0245 0.3 9						
0635 1.2 37	1055 0.7 21	0916 1.7 52	0848 1.9 58	1144 2.0 61	1122 2.4 73						
1134 0.7 21	1726 2.1 64	○ 0	○ 0	1904 0.8 24	1904 0.8 24						
1818 2.0 61	1743 1.9 58	2257 1.0 30	2257 1.0 30	2242 1.0 30	2242 1.0 30						
9 W 0135 0.4 12	24 Th 0030 0.3 9	9 Sa 0126 0.4 12	24 Su 0115 0.1 3	9 Tu 0345 0.5 15	24 W 0426 0.3 9						
0819 1.3 40	0706 1.5 46	1131 1.1 34	1051 2.1 64	1216 2.2 67	1203 2.5 76						
1229 1.1 34	1147 1.1 34	1743 1.9 58	1131 1.8 55	1956 0.9 27	1900 0.7 21						
● 1833 1.7 52	1749 1.6 49	2257 1.0 30	2257 1.0 30	2257 1.0 30	2347 1.3 40						
10 Th 0217 0.3 9	25 F 0114 0.2 6	10 Su 0248 0.4 12	25 M 0255 0.1 3	10 W 0458 0.3 9	25 Th 0531 0.2 6						
1026 1.5 46	0906 1.6 49	1221 2.1 64	1154 2.4 73	1240 2.3 70	1235 2.6 79						
1438 1.4 43	1334 1.4 43	○ 1749 1.6 49	2348 1.2 37	1935 0.9 27	1912 0.5 15						
1831 1.5 46	2348 1.2 37	2257 1.0 30	2257 1.0 30	2348 1.2 37	2348 1.2 37						
11 F 0303 0.2 6	26 Sa 0210 0.1 3	11 M 0416 0.3 9	26 Tu 0429 0.0 0	11 Th 0545 0.2 6	26 F 0032 1.6 49						
1149 1.8 55	1100 2.0 61	1253 2.2 67	1236 2.6 79	1301 2.5 76	0621 0.2 6						
○ 1749 1.8 55	○ 1749 1.6 49	2348 1.1 34	1950 0.9 27	1936 0.7 21	1302 2.5 76						
12 Sa 0354 0.2 6	27 Su 0320 0.0 0	12 Tu 0519 0.1 3	27 W 0535 -0.1 -3	12 0026 1.5 46	27 Th 0112 1.9 58						
1233 2.0 61	1205 2.3 70	1319 2.4 73	1311 2.7 82	0624 0.1 3	0704 0.2 6						
○ 1749 1.8 55	2026 1.0 30	2026 1.0 30	1957 0.8 24	1322 2.5 76	1326 2.4 73						
2226 1.1 34	2338 1.1 34	2338 1.1 34	1946 0.6 18	1946 0.6 18	1945 0.2 6						
13 Su 0444 0.1 3	28 M 0431 -0.2 -6	13 W 0605 0.0 0	28 Th 0020 1.3 40	13 Th 0102 1.7 52	28 W 0148 2.1 64						
1307 2.2 67	1251 2.6 79	1344 2.5 76	0627 -0.2 -6	0700 0.1 3	0744 0.3 9						
2023 1.0 30	2027 0.9 27	2027 0.9 27	1342 2.8 85	1342 2.6 79	1348 2.3 70						
2319 1.1 34	2355 1.1 34	2038 0.8 24	2033 0.5 15	2002 0.4 12	● 2004 0.1 3						
14 M 0532 -0.1 -3	29 Tu 0534 -0.4 -12	14 Th 0025 1.3 40	29 F 0108 1.6 49	14 Th 0139 1.9 58	29 M 0223 2.3 70						
1338 2.4 73	1332 2.8 85	0643 -0.2 -6	0712 -0.2 -6	0736 0.1 3	0821 0.5 15						
2054 1.0 30	2032 0.9 27	1407 2.6 79	1410 2.8 85	1403 2.5 76	1408 2.2 67						
2319 1.1 34	2355 1.1 34	2038 0.8 24	2033 0.5 15	2021 0.2 6	2024 0.0 0						
15 Tu 0615 -0.2 -6	30 W 0629 -0.5 -15	15 F 0106 1.4 43	30 Sa 0151 1.8 55	15 M 0217 2.1 64	30 Tu 0257 2.4 73						
1407 2.5 76	1409 2.9 88	0718 -0.2 -6	0752 -0.1 -3	0813 0.2 6	0858 0.6 18						
2103 0.9 27	2053 0.8 24	1429 2.7 82	1435 2.7 82	1425 2.4 73	1426 2.0 61						
		2054 0.7 21	● 2054 0.4 12	2043 0.1 3	2044 -0.1 -3						
31 Th 0056 1.3 40	31 Th 0717 -0.6 -18	31 Su 0231 2.0 61	31 Su 0830 0.0 0	31 Su 1458 2.5 76	31 Su 2116 0.2 6						
1443 3.0 91	1443 3.0 91	1458 2.5 76	1458 2.5 76	2116 0.2 6	2116 0.2 6						
2118 0.7 21	2118 0.7 21										

Time meridian 150° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to mean lower low water which is the chart datum of soundings.

# Kahului, Maui Island, Hawaii, 2008

Times and Heights of High and Low Waters

October				November				December				
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm	
1 W 0332	2.5	76	16 Th 0333	2.8	85	1 Sa 0433	2.5	76	1 M 0515	2.8	85	
0935	0.8	24	0945	0.9	27	1115	1.2	37	1230	1.1	34	
1442	1.8	55	1425	1.7	52	1421	1.3	40	1500	1.2	37	
2105	0.0	0	2058	-0.4	-12	2120	0.0	0	2203	-0.2	-6	
2 Th 0407	2.4	73	17 F 0422	2.7	82	2 0520	2.3	70	17 M 0614	2.6	79	
1014	1.0	30	1043	1.1	34	2149	0.1	3	2253	0.1	3	
1454	1.6	49	1444	1.5	46	2 Tu 0543	2.4	73	2213	0.2	6	
2126	0.0	0	2132	-0.3	-9	17 W 0623	2.4	73	17 W 1342	0.7	21	
3 F 0447	2.3	70	18 Sa 0519	2.6	79	3 M 0618	2.2	67	18 Tu 2357	0.4	12	
1058	1.2	37	1206	1.3	40	2221	0.3	9	18 W 0623	2.3	70	
1455	1.5	46	1450	1.4	43	2 Tu 0623	2.3	70	18 Th 1433	0.5	15	
2149	0.1	3	2211	-0.2	-6	W 2249	0.5	15	2031	1.2	37	
4 Sa 0537	2.1	64	19 Su 0631	2.4	73	4 Tu 0731	2.1	64	4 Th 0704	2.2	67	
1209	1.3	40	2259	0.1	3	2305	0.5	15	W 1621	0.7	21	
1425	1.4	43	2117	1.0	30	○	1913	0.9	27	2340	0.8	24
2214	0.2	6	2116	0.9	27	○	2340	0.8	24	2242	1.5	46
5 Su 0653	2.0	61	20 M 0803	2.3	70	5 W 0843	2.1	64	5 F 0745	2.1	64	
2245	0.4	12	20 M 0803	2.3	70	20 Th 0916	2.1	64	20 Sa 0249	1.3	40	
2301	1.4	43	2301	1.4	43	W 1646	0.5	15	Sa 0814	1.7	52	
2344	0.6	18	2116	0.9	27	2301	1.4	43	1559	0.3	9	
○	1.9	58	21 Tu 0015	0.4	12	21 F 0338	1.0	30	20 F 0854	1.5	46	
○	0.6	18	0930	2.3	70	1001	2.0	61	21 Su 1636	0.1	3	
○	2116	0.9	1811	0.8	24	1729	0.7	21	21 W 0530	1.4	43	
○	0.9	27	2244	1.1	34	2255	1.7	52	21 M 0854	1.5	46	
6 M 0904	1.9	58	21 Tu 0015	0.4	12	21 F 0338	1.0	30	22 M 0530	1.4	43	
2344	0.6	18	0930	2.3	70	1001	2.0	61	22 Su 0854	1.5	46	
○	2116	0.9	1811	0.8	24	1729	0.7	21	○	1.9	58	
○	0.9	27	2244	1.1	34	2355	1.7	52	○	1.9	58	
7 Tu 1032	2.0	61	22 W 0224	0.6	18	7 F 0303	0.9	27	6 Sa 0126	1.1	34	
1757	0.7	21	1030	2.3	70	1016	2.1	64	6 Sa 0828	1.9	58	
2304	1.2	37	1757	0.7	21	1728	0.5	15	6 Sa 1606	0.4	12	
2355	1.6	49	2304	1.2	37	2331	1.5	46	6 Sa 2314	1.6	49	
W W 0237	0.7	21	23 Th 0409	0.6	18	8 Sa 0432	0.9	27	21 M 0530	1.4	43	
1112	2.1	64	1112	2.3	70	1049	2.1	64	21 M 0854	1.5	46	
1849	0.8	24	1807	0.5	15	1740	0.3	9	21 Su 1636	0.1	3	
2302	1.1	34	2355	1.6	49	2331	1.5	46	22 M 0530	1.4	43	
2343	1.4	43	2355	1.6	49	1754	0.0	0	22 M 0854	1.5	46	
9 Th 0415	0.6	18	24 F 0520	0.7	21	9 Su 0009	1.8	55	9 Tu 0411	2.4	73	
1140	2.2	67	1145	2.2	67	538	0.9	27	9 Tu 0650	1.1	34	
1836	0.7	21	1823	0.3	9	1120	2.0	61	1051	1.5	46	
2343	1.4	43	1823	0.3	9	1759	0.1	3	1746	-0.4	-12	
10 F 0513	0.5	15	25 Sa 0035	1.9	58	10 F 0046	2.2	67	10 W 0122	2.7	82	
1203	2.3	70	0614	0.7	21	635	0.9	27	10 W 0750	1.1	34	
1840	0.5	15	1211	2.1	64	1151	1.9	58	1209	1.5	46	
1840	0.1	3	1840	0.1	3	1824	-0.2	-6	1843	-0.2	-6	
11 Sa 0019	1.7	52	26 Su 0110	2.2	67	25 Tu 0139	2.5	76	10 W 1825	-0.6	-18	
0600	0.5	15	0700	0.7	21	758	1.0	30	11 W 0122	2.7	82	
1225	2.3	70	1235	2.0	61	1307	1.4	43	11 W 0750	1.1	34	
1852	0.3	9	1859	0.0	0	1925	-0.6	-18	1225	1.4	43	
12 W 0055	2.0	61	27 M 0143	2.4	73	27 Th 0241	2.7	82	12 W 1825	-0.6	-18	
0643	0.5	15	0742	0.8	24	915	1.0	30	12 W 0122	2.7	82	
1248	2.3	70	1257	1.9	58	1307	1.4	43	12 W 0750	1.1	34	
1911	0.1	3	1919	-0.1	-3	1939	-0.3	-9	1225	1.4	43	
13 M 0131	2.3	70	28 Tu 0214	2.6	79	26 W 0210	2.6	79	1907	-0.7	-21	
0726	0.5	15	0822	0.8	24	838	1.0	30	1907	-0.7	-21	
1312	2.2	67	1319	1.8	55	1238	1.4	43	1931	-0.4	-12	
1933	-0.1	-3	1940	-0.2	-6	1910	-0.3	-9	1931	-0.4	-12	
14 Tu 0209	2.5	76	29 W 0246	2.6	79	28 F 0314	2.7	82	26 W 0929	0.9	27	
0809	0.6	18	0900	0.9	27	911	0.9	27	26 W 1336	1.2	37	
1337	2.1	64	1339	1.6	49	1326	1.6	49	26 W 2005	-0.4	-12	
○	1958	-0.3	2003	-0.2	-6	2001	-0.6	-18	○	2005	-0.4	-12
15 W 0249	2.7	82	30 Th 0319	2.6	79	29 F 0348	2.7	82	27 M 0309	2.7	82	
0855	0.7	21	0940	1.0	30	1006	1.0	30	27 M 0951	0.9	27	
1401	1.9	58	1358	1.5	46	1358	1.4	43	27 M 1336	1.2	37	
2027	-0.4	-12	2028	-0.2	-6	2039	-0.6	-18	27 M 2005	-0.4	-12	
31 F 0354	2.6	79	31 F 1023	1.1	34	14 Tu 0332	3.0	91	28 M 0339	2.7	82	
1414	1.4	43	1414	1.4	43	1006	1.0	30	28 M 1020	0.9	27	
2053	-0.1	-3	2053	-0.1	-3	1358	1.4	43	28 M 1411	1.2	37	

Time meridian 150° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to mean lower low water which is the chart datum of soundings.

# Hilo, Hawaii Island, Hawaii, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm		h m	ft	cm		h m	ft	cm	
1 Tu 0436 0839 1612	1.3 1.5 0.2	40 46 6		16 W 0412 0806 1537 2340	1.3 1.5 -0.1 2.3	40 46 -3 70		1 Sa 0031 1707	2.1 0.1	64 3	
2 W 0008 0643 0934 1656	2.0 1.2 1.3 0.1	61 37 40 3		17 Th 0639 0924 1640	1.1 1.2 -0.2	34 37 -6		16 Sa 0032 0756 1131 1740	2.5 0.7 0.9 -0.2	76 21 27 -6	
3 Th 0052 0752 1048 1741	2.3 1.1 1.2 0.0	70 34 37 0		18 F 0041 0750 1105 1743	2.6 0.9 1.1 -0.3	79 27 34 -9		17 Su 0120 0818 1243 1841	2.7 0.5 1.1 -0.3	82 15 34 -9	
4 F 0130 0829 1154 1824	2.5 1.0 1.2 -0.1	76 30 37 -3		19 M 0130 0832 1225 1840	2.8 0.7 1.1 -0.5	85 21 34 -15		18 M 0159 0842 1334 1930	2.8 0.4 1.3 -0.4	85 12 40 -12	
5 Sa 0204 0857 1247 1905	2.6 0.9 1.2 -0.2	79 27 37 -6		20 Su 0214 0906 1325 1932	3.0 0.6 1.2 -0.6	91 18 37 -18		19 Tu 0234 0906 1409 2011	2.8 0.2 1.4 -0.4	85 6 43 -12	
6 Su 0237 0924 1332 1943	2.7 0.8 1.2 -0.3	82 24 37 -9		21 M 0254 0938 1416 2018	3.1 0.5 1.3 -0.6	94 12 40 -18		20 W 0304 0931 1458 2053	2.8 0.1 1.7 -0.3	85 3 52 -9	
7 M 0309 0952 1413 2020	2.8 0.7 1.3 -0.4	85 21 40 -12		22 Th 0331 1009 1503 2101	3.1 0.4 1.5 -0.5	94 12 46 -15		21 O 0332 0955 1536 2130	2.7 0.0 1.9 -0.1	82 0 58 -3	
8 Tu 0341 1021 1452 2056	2.9 0.6 1.3 -0.4	88 18 40 -12		23 W 0406 1040 1547 2142	3.0 0.3 1.6 -0.3	91 9 49 -9		22 F 0358 1011 1529 2124	2.5 0.2 1.7 -0.3	76 6 52 -9	
9 W 0412 1052 1533 2132	2.9 0.5 1.4 -0.3	88 15 43 -9		24 Th 0437 1110 1632 2221	2.9 0.2 1.6 -0.1	88 6 49 -3		23 M 0421 1043 1653 2244	2.3 0.0 2.0 0.3	70 0 61 9	
10 Th 0443 1124 1616 2208	2.9 0.5 1.4 -0.2	88 15 43 -6		25 F 0506 1140 1717 2259	2.6 0.2 1.6 0.2	79 6 49 6		24 F 0442 1107 1733 2322	2.1 0.0 2.0 0.6	64 0 61 18	
11 F 0514 1157 1705 2247	2.8 0.4 1.4 0.1	85 12 43 3		26 Sa 0532 1210 1807 2339	2.4 0.2 1.7 0.6	73 6 52 18		25 M 0505 1137 1750 2333	2.4 0.0 1.9 0.5	73 0 58 15	
12 Sa 0544 1231 1802 2332	2.6 0.3 1.5 0.4	79 9 46 12		27 M 0555 1240 1905	2.1 0.2 1.6 1.6	64 6 49 52		26 Tu 0006 0515 1157 1913	0.8 1.6 0.1 1.8	24 24 55 55	
13 Su 0615 1308 1913	2.4 0.2 1.6	73 6 49		28 W 0555 0620 1313 2018	2.1 0.8 1.4 1.7	64 55 43 52		27 W 0056 0519 1229 2034	0.9 1.3 0.1 1.8	27 40 40 55	
14 M 0028 0647 1350 2041	0.7 2.1 0.2 1.7	21 64 6 52		29 M 0624 0614 1313 2155	0.9 1.8 0.2 2.1	27 55 43 64		28 Th 0056 0519 1229 2034	0.9 1.3 0.1 1.8	27 40 40 55	
15 Tu 0152 0721 1439 2218	1.1 1.8 0.1 2.0	34 55 3 61		30 F 0625 1351 2331	0.3 0.2 1.9	9 58		29 O 0302 0538 1301 2132	1.0 1.1 0.1 2.1	30 34 34 64	
31 Th 0130 1453 2327	1.2 1.6 2.3	37 70		31 W 0622 1622	0.0 -0.1	0 -3		30 M 0701 1022 1616	0.6 0.8 0.1	18 24 3 3	
31 Th 1556	0.2	6									

Time meridian 150° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to mean lower low water which is the chart datum of soundings.

# Hilo, Hawaii Island, Hawaii, 2008

Times and Heights of High and Low Waters

April					May					June									
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height					
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm					
<b>1</b>	0017	2.2	67	<b>16</b>	0043	2.1	64	<b>1</b>	0625	-0.1	-3	<b>16</b>	0015	1.6	49	<b>1</b>	0014	1.5	46
Tu	0705	0.4	12	W	0714	0.0	0	Th	1247	1.8	55	F	0645	-0.2	-6	Su	0643	-0.6	-18
	1223	1.2	37		1326	1.8	55		1833	0.4	12		1347	2.3	70		1403	2.8	85
	1803	0.1	3		1914	0.3	9						1957	0.7	21		2036	0.6	18
<b>2</b>	0050	2.3	70	<b>17</b>	0112	2.0	61	<b>2</b>	0024	2.0	61	<b>17</b>	0047	1.5	46	<b>2</b>	0103	1.3	40
W	0724	0.2	6	Th	0735	-0.2	-6	<b>2</b>	0652	-0.3	-9	Sa	0710	-0.3	-9	M	0725	-0.8	-24
	1305	1.6	49		1401	2.1	64		1330	2.2	67		1420	2.4	73		1450	3.1	94
	1853	0.0	0		1957	0.3	9		1931	0.4	12		2042	0.7	21		2132	0.5	15
<b>3</b>	0121	2.3	70	<b>18</b>	0139	1.9	58	<b>3</b>	0101	1.9	58	<b>18</b>	0118	1.4	43	<b>3</b>	0152	1.2	37
Th	0746	0.0	0	F	0756	-0.3	-9	<b>3</b>	0723	-0.5	-15	Sa	0736	-0.4	-12	Tu	0808	-0.8	-24
	1345	1.9	58		1434	2.3	70		1413	2.6	79		1451	2.6	79		1537	3.2	98
	1940	0.0	0		2038	0.4	12		2026	0.4	12		2123	0.6	18		2225	0.5	15
<b>4</b>	0151	2.3	70	<b>19</b>	0204	1.7	52	<b>4</b>	0139	1.7	52	<b>19</b>	0149	1.3	40	<b>4</b>	0242	1.2	37
F	0810	-0.3	-9	Sa	0818	-0.3	-9	<b>4</b>	0756	-0.7	-21	M	0804	-0.4	-12	W	0854	-0.8	-24
	1426	2.2	67		1505	2.4	73		1457	2.9	88		1524	2.6	79		1624	3.1	94
	2027	0.0	0		2117	0.4	12		2121	0.4	12		2202	0.6	18		2318	0.4	12
<b>5</b>	0222	2.2	67	<b>20</b>	0229	1.6	49	<b>5</b>	0217	1.5	46	<b>20</b>	0222	1.2	37	<b>5</b>	0334	1.1	34
Sa	0838	-0.5	-15	Su	0841	-0.4	-12	<b>5</b>	0831	-0.8	-24	Tu	0834	-0.4	-12	Th	0941	-0.7	-21
	1508	2.5	76		1537	2.5	76		1543	3.0	91		1558	2.6	79		1712	3.0	91
	2115	0.1	3	O	2156	0.5	15		2216	0.4	12		2243	0.6	18		2350	0.6	18
<b>6</b>	0253	2.0	61	<b>21</b>	0254	1.5	46	<b>6</b>	0257	1.3	40	<b>21</b>	0254	1.1	34	<b>6</b>	0011	0.4	12
Su	0907	-0.6	-18	M	0905	-0.4	-12	<b>6</b>	0910	-0.8	-24	W	0905	-0.4	-12	F	0430	1.1	34
	1551	2.7	82		1610	2.5	76		1631	3.0	91		1634	2.6	79		1030	-0.5	-15
	2205	0.2	6		2236	0.5	15		2315	0.5	15		2326	0.6	18		1800	2.8	85
<b>7</b>	0325	1.7	52	<b>22</b>	0319	1.3	40	<b>7</b>	0339	1.2	37	<b>22</b>	0328	1.0	30	<b>7</b>	0104	0.4	12
M	0939	-0.6	-18	Tu	0931	-0.3	-9	<b>7</b>	0952	-0.7	-21	W	0938	-0.3	-9	Sa	0534	1.0	30
	1638	2.7	82		1645	2.4	73		1723	2.9	88		1713	2.5	76		1121	-0.2	-6
	2300	0.4	12		2320	0.6	18									1848	2.6	79	
<b>8</b>	0358	1.5	46	<b>23</b>	0344	1.2	37	<b>8</b>	0020	0.5	15	<b>23</b>	0014	0.6	18	<b>8</b>	0157	0.4	12
Tu	1014	-0.6	-18	W	0958	-0.3	-9	<b>8</b>	0425	1.0	30	<b>23</b>	0404	1.0	30	<b>8</b>	0651	1.0	30
	1729	2.7	82		1725	2.3	70	<b>8</b>	1037	-0.5	-15	M	1013	-0.2	-6	M	1216	0.2	6
								1819	2.7	82		1755	2.4	73		1934	2.4	73	
<b>9</b>	0004	0.6	18	<b>24</b>	0012	0.7	21	<b>9</b>	0133	0.6	18	<b>24</b>	0107	0.7	21	<b>9</b>	0248	0.3	9
W	0431	1.2	37	Th	0407	1.0	30	<b>9</b>	0524	0.9	27	<b>24</b>	0447	0.9	27	<b>9</b>	0822	1.1	34
	1054	-0.5	-15		1029	-0.2	-6	<b>9</b>	1129	-0.3	-9	<b>24</b>	1051	-0.1	-3	<b>9</b>	1322	0.5	15
	1829	2.5	76		1811	2.2	67	<b>9</b>	1920	2.5	76	<b>24</b>	1839	2.3	70	<b>9</b>	2019	2.1	64
<b>10</b>	0128	0.7	21	<b>25</b>	0121	0.8	24	<b>10</b>	0252	0.5	15	<b>25</b>	0205	0.6	18	<b>10</b>	0334	0.2	6
Th	0508	1.0	30	F	0431	0.9	27	<b>10</b>	0650	0.8	24	<b>25</b>	0549	0.8	24	<b>10</b>	0957	1.3	40
	1140	-0.3	-9		1104	0.0	0	<b>10</b>	1232	0.0	0	<b>25</b>	1135	0.1	3	<b>10</b>	1446	0.9	27
	1940	2.4	73		1908	2.1	64	<b>10</b>	2023	2.3	70	<b>25</b>	1925	2.3	70	<b>10</b>	2102	1.9	58
<b>11</b>	0329	0.7	21	<b>26</b>	1151	0.1	3	<b>11</b>	0359	0.4	12	<b>26</b>	0259	0.5	15	<b>11</b>	0415	0.1	3
F	0604	0.8	24	Sa	2014	2.0	61	<b>11</b>	0848	0.9	27	<b>26</b>	0720	0.9	27	<b>11</b>	1115	1.6	49
	1242	0.0	0					<b>11</b>	1354	0.3	9	<b>26</b>	1232	0.4	12	<b>11</b>	1627	1.0	30
	2103	2.2	67	O	2125	2.2	67	<b>11</b>	2125	2.2	67	<b>26</b>	2012	2.2	67	<b>11</b>	2144	1.7	52
<b>12</b>	0513	0.6	18	<b>27</b>	0446	0.6	18	<b>12</b>	0448	0.3	9	<b>27</b>	0342	0.4	12	<b>12</b>	0451	0.0	0
Sa	0831	0.7	21	Su	0659	0.7	21	<b>12</b>	1032	1.1	34	<b>27</b>	0907	1.0	30	<b>12</b>	1115	2.0	61
	1415	0.2	6		1301	0.3	9	<b>12</b>	1530	0.6	18	<b>27</b>	1351	0.6	18	<b>12</b>	1802	1.1	34
	2222	2.2	67		2122	2.0	61	<b>12</b>	2219	2.0	61	<b>27</b>	2100	2.1	64	<b>12</b>	2227	1.5	46
<b>13</b>	0556	0.4	12	<b>28</b>	0515	0.6	18	<b>13</b>	0524	0.1	3	<b>28</b>	0418	0.2	6	<b>13</b>	0524	-0.1	-3
Su	1046	0.9	27	M	0941	0.8	24	<b>13</b>	1143	1.4	43	<b>28</b>	1034	1.3	40	<b>13</b>	1256	2.2	67
	1601	0.3	9		1441	0.4	12	<b>13</b>	1657	0.7	21	<b>28</b>	1529	0.8	24	<b>13</b>	1917	1.0	30
	2322	2.2	67	O	2219	2.0	61	<b>13</b>	2304	1.9	58	<b>28</b>	2148	1.9	58	<b>13</b>	2311	1.3	40
<b>14</b>	0626	0.3	9	<b>29</b>	0537	0.4	12	<b>14</b>	0554	0.0	0	<b>29</b>	0452	0.0	0	<b>14</b>	0557	-0.2	-6
M	1158	1.2	37	Tu	1107	1.1	34	<b>14</b>	1233	1.7	52	<b>29</b>	1138	1.7	52	<b>14</b>	1333	2.4	73
	1723	0.3	9		1615	0.5	15	<b>14</b>	1809	0.7	21	<b>29</b>	1704	0.8	24	<b>14</b>	2012	0.9	27
					2306	2.0	61	<b>14</b>	2342	1.7	52	<b>29</b>	2237	1.8	55	<b>14</b>	2357	1.2	37
<b>15</b>	0007	2.1	64	<b>30</b>	0600	0.2	6	<b>15</b>	0620	-0.1	-3	<b>30</b>	0527	-0.2	-6	<b>15</b>	0631	-0.3	-9
Tu	0651	0.1	3	W	1201	1.4	43	<b>15</b>	1313	2.0	61	<b>30</b>	1230	2.1	64	<b>15</b>	1407	2.5	76
	1247	1.5	46		1730	0.5	15	<b>15</b>	1908	0.7	21	<b>30</b>	1826	0.8	24	<b>15</b>	2054	0.8	24
	1824	0.3	9		2346	2.0	61	<b>15</b>				<b>31</b>	0604	-0.4	-12	<b>15</b>	1317	2.5	76
								<b>15</b>				<b>31</b>	1935	0.7	21	<b>15</b>			

Time meridian 150° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to mean lower low water which is the chart datum of soundings.

# Hilo, Hawaii Island, Hawaii, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0047 0.7 -21	16 W 0120 0.3 -9	1 F 0241 0.5 -15	16 Sa 0234 0.2 -6	1 M 0358 0.3 9	16 Tu 0339 0.3 9						
1443 3.1 94	1459 2.7 82	1545 3.1 94	0831 0.2 -6	0953 0.3 9	0939 0.3 9						
2134 0.6 18	2143 0.7 21	2218 0.3 9	1523 2.8 85	1602 2.4 73	1533 2.4 73						
2 W 0146 0.8 -24	17 Th 0202 0.3 -9	2 0328 0.3 -9	0907 0.1 -3	1033 0.5 15	17 W 0423 1.0 18						
1528 3.2 98	1529 2.8 85	1618 2.9 88	1549 2.8 85	1625 2.2 67	1601 2.1 64						
● 2216 0.5 15	○ 2210 0.6 18	2249 0.2 6	2215 0.3 9	2247 0.1 3	2222 0.2 -6						
3 Th 0241 0.7 -21	18 F 0242 0.3 -9	3 Su 0415 0.1 -3	0353 1.9 58	0520 2.3 70	18 Th 0511 0.8 24						
0847 -0.7 -21	0844 -0.3 -9	1007 0.1 -3	0944 0.1 3	1115 0.8 24	1118 0.8 24						
1610 3.2 98	1559 2.8 85	1648 2.7 82	1615 2.7 82	1645 1.9 58	1628 1.9 58						
2257 0.4 12	2238 0.5 15	2320 0.2 6	2242 0.2 6	2312 0.1 3	2255 -0.1 -3						
4 F 0334 0.6 -18	19 Sa 0322 0.3 -9	4 M 0503 0.2 6	0436 2.0 61	0606 2.2 67	19 F 0607 1.0 30						
0934 -0.6 -18	0919 -0.3 -9	1048 0.2 6	1024 0.3 9	1204 1.0 30	1226 1.0 30						
1651 3.1 94	1627 2.8 85	1716 2.5 76	1641 2.5 76	1701 1.7 52	1654 1.6 49						
2337 0.3 9	2306 0.4 12	2350 0.2 6	2310 0.1 3	2339 0.2 6	2335 0.0 0						
5 Sa 0428 0.3 40	20 Su 0404 0.1 -3	5 Tu 0554 0.6 18	0525 2.1 64	0702 2.1 64	20 Sa 0718 1.2 37						
1020 -0.3 -9	0954 -0.1 -3	1131 0.6 18	1110 0.6 18	1314 1.3 40	1416 1.2 37						
1730 2.9 88	1655 2.8 85	1740 2.2 67	1706 2.2 67	1706 1.5 46	1717 1.3 40						
6 Su 0016 0.3 9	21 M 0449 0.1 3	6 W 0021 0.9 27	0622 2.1 64	0013 0.3 9	21 Su 0027 0.1 3						
0525 1.4 43	1031 2.6 79	0651 1.8 55	1206 0.9 27	0822 2.0 61	0850 0.1 73						
1106 0.0 0	1723 2.6 79	1220 0.9 27	1732 1.9 58	● O	● O						
1805 2.6 79		1801 1.9 58									
7 M 0056 0.3 9	22 Tu 0007 0.3 9	7 Th 0054 0.2 6	0018 0.0 0	0103 0.5 15	22 M 0148 0.3 9						
0627 1.4 43	0541 1.5 46	0801 1.8 55	0734 2.1 64	1009 2.0 61	1023 2.5 76						
1153 0.4 12	1112 0.4 12	1329 1.2 37	1328 1.2 37	● O	1827 0.9 27						
1838 2.3 70	1751 2.4 73	1815 1.6 49	1756 1.6 49		2135 1.0 30						
8 Tu 0135 0.2 6	23 W 0040 0.2 6	8 F 0132 0.3 9	0106 0.1 3	0237 0.5 15	23 Tu 0335 0.3 9						
0740 1.5 46	0643 1.6 49	0931 1.9 58	0907 2.2 67	1130 2.1 64	1131 2.6 79						
1248 0.8 24	1202 0.7 21	1600 1.3 40	1944 0.9 27	1944 0.9 27	1847 0.7 21						
1909 2.0 61	1819 2.2 67	● O 1802 1.4 43		2214 1.0 30	2323 1.2 37						
9 W 0215 0.2 6	24 Th 0116 0.1 3	9 Sa 0223 0.3 9	0213 0.1 3	0421 0.5 15	24 W 0503 0.3 9						
0904 1.6 49	0759 1.7 52	1105 2.0 61	1044 2.4 73	1218 2.3 70	1221 2.7 82						
1402 1.1 34	1312 1.0 30	1849 1.9 58		1931 0.9 27	1911 0.5 15						
● 1937 1.8 55				2341 1.2 37							
10 Th 0257 0.2 6	25 F 0200 0.0 0	10 Su 0335 0.3 9	0340 0.1 3	0529 0.3 9	25 Th 0023 1.5 46						
1032 1.8 55	0930 1.9 58	1211 2.2 67	1156 2.6 79	1253 2.5 76	0607 0.2 6						
1600 1.3 40	1507 1.3 40	2057 1.6 49	1926 0.9 27	1941 0.7 21	1259 2.7 82						
● 1925 1.5 46			2247 1.1 34		1934 0.4 12						
11 F 0341 0.1 3	26 Sa 0255 0.0 0	11 M 0450 0.2 6	0504 0.0 0	0028 1.4 43	26 F 0109 1.8 55						
1144 2.0 61	1058 2.2 67	1256 2.3 70	1249 2.8 85	0618 0.2 6	0658 0.2 6						
1831 1.2 37	1748 1.2 37	2016 0.9 27	1949 0.7 21	1322 2.6 79	1332 2.7 82						
2046 1.3 40	2023 1.3 40	2336 1.1 34	1956 0.6 18	1956 0.6 18	1957 0.2 6						
12 Sa 0429 0.1 3	27 Su 0359 -0.1 -3	12 Tu 0551 0.1 3	0010 1.2 37	0107 1.6 49	27 M 0150 2.1 64						
1236 2.2 67	1208 2.5 76	1332 2.5 76	0610 -0.1 -3	0659 0.1 3	0743 0.2 6						
1957 1.0 30	1923 1.0 30	2027 0.8 24	1331 2.9 88	1348 2.7 82	1400 2.6 79						
2206 1.1 34	2210 1.1 34		2014 0.5 15	2015 0.4 12	2020 0.1 3						
13 Su 0518 0.0 0	28 M 0507 -0.3 -9	13 W 0034 1.2 37	0106 1.5 46	0107 1.6 49	28 Su 0227 2.3 70						
1318 2.4 73	1302 2.8 85	0639 0.0 0	0704 -0.2 -6	0659 0.1 3	0825 0.3 9						
2031 0.9 27	2008 0.8 24	1402 2.6 79	1407 2.9 88	1427 2.4 73	1427 2.4 73						
2329 1.1 34	2345 1.1 34	2044 0.7 21	2040 0.4 12	2036 0.3 9	● 2042 0.0 0						
14 M 0606 -0.1 -3	29 Tu 0609 -0.4 -12	14 Th 0117 1.3 40	0153 1.7 52	0221 2.1 64	29 M 0303 2.5 76						
1354 2.5 76	1349 3.0 91	0719 -0.1 -3	0750 -0.2 -6	0816 0.1 3	0905 0.4 12						
2055 0.8 24	2042 0.7 21	1430 2.7 82	1440 2.9 88	1440 2.7 82	1451 2.3 70						
		2104 0.6 18	2105 0.3 9	● 2059 0.1 3	2105 -0.1 -3						
15 Tu 0031 1.1 34	30 W 0055 1.2 37	15 F 0156 1.5 46	0236 1.9 58	0259 2.3 70	30 Tu 0339 2.6 79						
0650 -0.2 -6	0705 -0.5 -15	0756 -0.2 -6	0833 -0.1 -3	0856 0.2 6	0944 0.6 18						
1427 2.6 79	1431 3.1 94	1457 2.8 85	1509 2.8 85	1506 2.6 79	1515 2.1 64						
2118 0.7 21	2115 0.5 15	2126 0.5 15	● 2131 0.2 6	2125 0.0 0	2128 -0.1 -3						
31 Th 0151 1.4 43	31 Th 0755 -0.6 -18		0317 2.1 64	0913 0.0 0							
			1510 3.1 94	1537 2.7 82							
			2147 0.4 12	2157 0.1 3							

Time meridian 150° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to mean lower low water which is the chart datum of soundings.

# Hilo, Hawaii Island, Hawaii, 2008

Times and Heights of High and Low Waters

October				November				December											
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height								
W 1 1025 1537 2152	h m 0414 0.7 1.9 0.0	ft 2.6 0.7 58 0	cm 79 21 55 -12	Th 16 1034 1528 2146	h m 0412 0.7 1.8 -0.4	ft 3.0 0.7 55 -12	cm 91 21 55 -12	Sa 1 1202 1552 2213	h m 0511 1.3 1.3 0.1	ft 2.6 30 40 3	cm 79 30 40 -3	M 16 1256 1651 2301	h m 0550 1.2 1.2 -0.1	ft 3.1 37 37 -3	cm 94 24 27 -3				
	0451 1108 1558 2217	2.6 0.9 1.6 0.1	79 27 49 3		0557 1311 1618 2248	2.5 1.1 1.2 0.3	76 34 37 9		0648 1411 1808	2.9 0.8 24	88 24 34		0617 1334 1729 2316	2.6 0.8 1.1 0.3	79 24 34 9				
	0532 1200 1615 2244	2.5 1.1 1.5 0.2	76 34 46 6		0651 1254 1639 2310	2.4 1.0 1.3 -0.1	73 30 40 -3		0000 0749 1521 1959	0.2 2.7 0.7 1.1	6 82 21 34		0659 1426 1849	2.4 0.8 1.1	73 24 34				
	0621 1316 1623 2316	2.3 1.2 1.3 0.3	70 37 40 9		0755 1445 1731	2.3 1.0 1.1	70 30 34		0116 0850 1615 2154	0.5 2.5 0.5 1.3	15 76 15 40		0004 0742 1513 2035	0.6 2.3 0.7 1.2	18 61 21 55				
Su 5 0729	0.22 0008	67	20	M 5 0826 1634 1939	0.2 2.6 0.9	6	5	W 5 0900 1657 2134	0.6 2.2 0.8	18	Th 5 0947 1656 2317	0.8 2.3 0.4	24	F 5 0827 1552 2212	0.8 2.2 0.5	24	Sa 20 0914 1627 2356	0.400 1.8 2.1	37
	0900 0.21	64	21		0135 0945 1724	0.4 2.5 0.7	12		0217 0956 1719	0.8 2.2 0.7	24	0251 1036 1730	0.9 2.1 0.2	27	0400 1003 1706	1.2 1.5 0.1	37		
	0003 0.5	15	22		0322 1048 1757	0.6 2.5 0.5	18		0354 1041 1740	0.9 2.2 0.5	27	0253 1036 1730	1.1 2.1 0.3	34	0554 1003 1706	1.2 1.5 0.1	37		
	0900 2.1	64	23		2207	1.1	34		2258	1.3	40	2321	1.8	55	0400 1003 1706	1.2 1.5 0.1	37		
Tu 7 1024 1830 2215	0.6 2.2 0.9	18	22	W 7 1048 1757 2329	0.6 0.5 1.4	18	7	F 7 1041 1740 2350	0.9 0.5 1.7	27	Sa 7 0014 0549 1118	2.0 1.0 2.0	61	M 7 0438 1004 1703	1.1 1.9 0.1	34	Tu 22 0045 0718 1057	2.3 1.1 1.4	70
	1024 1830 2215	2.2 0.9 1.0	23		0322 1136 1824	0.6 2.4 0.4	18		0354 1121 1804	0.9 2.2 0.2	27	0014 0654 1155	2.0 1.0 1.8	55	0045 0718 1057	2.3 1.1 1.4	70		
	1118 1832 2328	2.3 0.8 1.3	24		0451 1136 1824	0.6 2.4 0.4	18		0511 1121 1804	0.9 2.2 0.2	27	0057 0654 1155	2.3 1.0 1.8	67	0124 0812 1151	2.5 1.0 1.3	76		
	1118 1832 2328	2.3 0.8 1.3	25		0451 1136 1824	0.6 2.4 0.4	18		0511 1121 1804	0.9 2.2 0.2	27	0057 0654 1155	2.3 1.0 1.8	67	0124 0812 1151	2.5 1.0 1.3	76		
Th 9 1156 1845	0.6 2.4	18	26	F 9 0023 0558 1215	1.8 0.6 2.4	55	9	M 9 0032 0614 1158	2.1 0.8 2.2	64	Tu 9 0134 0747 1229	2.6 1.0 1.7	79	W 9 0059 0717 1148	2.6 1.0 1.6	79	Th 24 0159 0851 1240	2.7 0.9 1.2	82
	1156 1845	2.4 0.6	27		0023 0558 1215	1.8 0.6 2.4	55		0032 0614 1158	2.1 0.8 2.2	64	0134 0747 1229	2.6 1.0 1.7	55	0159 0851 1240	2.7 0.9 1.2	82		
	1156 1845	2.4 0.6	28		0023 0558 1215	1.8 0.6 2.4	55		0032 0614 1158	2.1 0.8 2.0	64	0134 0747 1229	2.6 1.0 1.7	55	0159 0851 1240	2.7 0.9 1.2	82		
	1156 1845	2.4 0.6	29		0023 0558 1215	1.8 0.6 2.4	55		0032 0614 1158	2.1 0.8 2.0	64	0134 0747 1229	2.6 1.0 1.7	55	0159 0851 1240	2.7 0.9 1.2	82		
F 10 0547 1227 1902	1.5 2.4	46	30	F 10 0106 0652 1247	2.1 0.6 2.3	64	10	M 10 0113 0711 1235	2.5 0.8 2.1	76	Tu 10 0207 0833 1303	2.7 0.9 1.6	82	W 10 0144 0816 1239	2.9 0.8 1.5	88	Th 25 0231 0922 1324	2.8 0.8 1.2	85
	0547 1227 1902	0.5 2.4	46		0106 0652 1247	2.1 0.6 2.3	64		0113 0711 1235	2.5 0.8 2.1	76	0207 0833 1303	2.7 0.9 1.6	82	0231 0922 1324	2.8 0.8 1.2	85		
	0547 1227 1902	0.5 2.4	46		0106 0652 1247	2.1 0.6 2.3	64		0113 0711 1235	2.5 0.8 2.1	76	0207 0833 1303	2.7 0.9 1.6	82	0231 0922 1324	2.8 0.8 1.2	85		
	0547 1227 1902	0.5 2.4	46		0106 0652 1247	2.1 0.6 2.3	64		0113 0711 1235	2.5 0.8 2.1	76	0207 0833 1303	2.7 0.9 1.6	82	0231 0922 1324	2.8 0.8 1.2	85		
Sa 11 0635 1256 1922	1.9 2.5	58	31	F 11 0143 0740 1315	2.4 0.7 2.1	73	11	M 11 0153 0805 1312	2.8 0.7 1.9	85	Tu 11 0239 0913 1312	2.8 0.9 1.9	85	W 11 0228 0909 1330	3.2 0.7 1.4	98	Th 26 0303 0951 1404	2.8 0.7 1.3	85
	0635 1256 1922	0.4 2.5	58		0143 0740 1315	2.4 0.7 2.1	73		0153 0805 1312	2.8 0.7 1.9	85	0239 0913 1312	2.8 0.9 1.9	85	0303 0951 1404	2.8 0.7 1.3	85		
	0635 1256 1922	0.4 2.5	58		0143 0740 1315	2.4 0.7 2.1	73		0153 0805 1312	2.8 0.7 1.9	85	0239 0913 1312	2.8 0.9 1.9	85	0303 0951 1404	2.8 0.7 1.3	85		
	0635 1256 1922	0.4 2.5	58		0143 0740 1315	2.4 0.7 2.1	73		0153 0805 1312	2.8 0.7 1.9	85	0239 0913 1312	2.8 0.9 1.9	85	0303 0951 1404	2.8 0.7 1.3	85		
Tu 12 0721 1325 1945	2.2 2.4	67	32	M 12 0217 0823 1342	2.6 0.7 2.0	79	12	W 12 0235 0857 1350	3.1 0.7 1.8	94	Tu 12 0311 0951 1409	2.9 0.8 1.4	88	W 12 0314 0958 1419	3.3 0.6 1.4	101	Th 27 0335 1020 1441	2.8 0.7 1.3	85
	0721 1325 1945	0.4 2.4	67		0217 0823 1342	2.6 0.7 2.0	79		0235 0857 1350	3.1 0.7 1.8	94	0311 0951 1409	2.9 0.8 1.4	88	0335 1020 1441	2.8 0.7 1.3	85		
	0721 1325 1945	0.4 2.4	67		0217 0823 1342	2.6 0.7 2.0	79		0235 0857 1350	3.1 0.7 1.8	94	0311 0951 1409	2.9 0.8 1.4	88	0335 1020 1441	2.8 0.7 1.3	85		
	0721 1325 1945	0.4 2.4	67		0217 0823 1342	2.6 0.7 2.0	79		0235 0857 1350	3.1 0.7 1.8	94	0311 0951 1409	2.9 0.8 1.4	88	0335 1020 1441	2.8 0.7 1.3	85		
M 13 0806 1355 2011	2.5 2.4	76	33	F 13 0250 0904 1408	2.8 0.7 1.8	85	13	M 13 0319 0951 1429	3.2 0.7 1.6	98	Tu 13 0345 1029 1443	2.9 0.8 1.3	88	W 13 0400 1047 1510	3.4 0.6 1.4	104	Th 28 0407 1051 1519	2.8 0.7 1.3	85
	0806 1355 2011	0.4 2.4	76		0250 0904 1408	2.8 0.7 1.8	85		0319 0951 1429	3.2 0.7 1.6	98	0345 1029 1443	2.9 0.8 1.3	88	0407 1051 1519	2.8 0.7 1.3	85		
	0806 1355 2011	0.4 2.4	76		0250 0904 1408	2.8 0.7 1.8	85		0319 0951 1429	3.2 0.7 1.6	98	0345 1029 1443	2.9 0.8 1.3	88	0407 1051 1519	2.8 0.7 1.3	85		
	0806 1355 2011	0.4 2.4	76		0250 0904 1408	2.8 0.7 1.8	85		0319 0951 1429	3.2 0.7 1.6	98	0345 1029 1443	2.9 0.8 1.3	88	0407 1051 1519	2.8 0.7 1.3	85		
Tu 14 0852 1425 2040	2.8 2.2	85	34	W 14 0322 0944 1434	2.8 0.8 1.7	85	14	M 14 0406 1047 1511	3.3 0.7 1.5	101	Tu 14 0420 1109 1517	2.8 0.8 1.3	85	W 14 0446 1136 1517	3.3 0.6 1.4	101	Th 29 0439 1123 1557	2.8 0.6 1.3	85
	0852 1425 2040	0.5 2.2	85		0322 0944 1434	2.8 0.8 1.7	85		0406 1047 1511	3.3 0.7 1.5	101	0420 1109 1517	2.8 0.8 1.3	85	0439 1123 1557	2.8 0.6 1.3	85		
	0852 1425 2040	0.5 2.2	85		0322 0944 1434	2.8 0.8 1.7	85		0406 1047 1511	3.3 0.7 1.5	101	0420 1109 1517	2.8 0.8 1.3	85	0439 1123 1557	2.8 0.6 1.3	85		
	0852 1425 2040	0.5 2.2	85		0322 0944 1434	2.8 0.8 1.7	85		0406 1047 1511	3.3 0.7 1.5	101	0420 1109 1517	2.8 0.8 1.3	85</					

## Johnston Island, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0005	1.9	58	16 W 0626	0.5	15	1 F 0114	1.7	52	1 Sa 0156	1.9	58
0652	0.8	24	W 1149	1.3	40	F 0843	0.5	15	Sa 0907	0.1	3
1200	1.3	40	W 1747	0.3	9	F 1407	1.0	30	Sa 1504	1.2	37
1804	0.5	15				F 1938	0.5	15	Sa 2036	0.3	9
2 W 0106	1.9	58	17 Th 0053	2.2	67	2 Sa 0230	1.8	55	17 Su 0309	2.1	64
0812	0.6	18	Th 0801	0.4	12	Sa 0938	0.3	9	Su 0959	-0.1	-3
1324	1.2	37	Th 1327	1.2	37	Sa 1523	1.2	37	Su 1603	1.5	46
1912	0.5	15	Th 1913	0.3	9	Sa 2052	0.4	12	Su 2140	0.1	3
3 Th 0206	2.0	61	18 F 0208	2.2	67	3 Su 0327	2.0	61	18 M 0403	2.2	67
0910	0.5	15	F 0913	0.1	3	Su 1017	0.1	3	M 1040	-0.3	-9
1441	1.3	40	F 1457	1.3	40	Su 1611	1.3	40	M 1647	1.7	52
2017	0.5	15	F 2033	0.3	9	Su 2145	0.2	6	M 2230	0.0	0
4 F 0259	2.1	64	19 Sa 0314	2.3	70	4 M 0412	2.1	64	19 Tu 0447	2.3	70
0955	0.3	9	Sa 1008	-0.1	-3	M 1051	-0.1	-3	Tu 1115	-0.4	-12
1539	1.3	40	Sa 1604	1.5	46	M 1649	1.5	46	Tu 1724	1.9	58
2111	0.4	12	Sa 2138	0.1	3	M 2228	0.1	3	Tu 2312	-0.1	-3
5 Sa 0346	2.2	67	20 Su 0410	2.5	76	5 Tu 0450	2.3	70	20 W 0525	2.4	73
1034	0.1	3	Su 1054	-0.3	-9	Tu 1122	-0.3	-9	W 1146	-0.5	-15
1625	1.5	46	Su 1655	1.7	52	Tu 1724	1.7	52	W 1758	2.1	64
2157	0.3	9	Su 2232	0.0	0	Tu 2307	0.0	0	O 2349	-0.2	-6
6 Su 0427	2.3	70	21 M 0458	2.5	76	6 W 0525	2.4	73	21 Th 0558	2.4	73
1109	0.0	0	M 1134	-0.4	-12	W 1153	-0.4	-12	Th 1215	-0.5	-15
1704	1.6	49	M 1739	1.8	55	W 1758	1.9	58	Th 1829	2.2	67
2239	0.2	6	M 2319	-0.1	-3	O 2344	-0.1	-3	Th 2330	-0.3	-9
7 M 0505	2.4	73	22 Tu 0540	2.6	79	7 Th 0559	2.5	76	22 F 0025	-0.2	-6
1142	-0.1	-3	Tu 1211	-0.5	-15	Th 1222	-0.5	-15	F 0630	2.3	70
1740	1.7	52	Tu 1819	2.0	61	Th 1832	2.1	64	F 1242	-0.4	-12
2317	0.1	3	O 2344	-0.1	-3	Th 1859	2.3	70	F 1859	2.3	70
8 Tu 0541	2.5	76	23 W 0001	-0.1	-3	8 F 0022	-0.2	-6	23 Sa 0058	-0.1	-3
1215	-0.2	-6	W 0618	2.6	79	Sa 0632	2.5	76	Sa 0700	2.1	64
1815	1.8	55	W 1245	-0.5	-15	F 1252	-0.5	-15	Sa 1307	-0.4	-12
● 2353	0.1	3	W 1856	2.0	61	F 1907	2.2	67	Sa 1928	2.3	70
9 W 0616	2.5	76	24 Th 0041	0.0	0	9 Sa 0101	-0.1	-3	9 Su 0049	-0.4	-12
1247	-0.3	-9	Th 0654	2.5	76	Sa 0707	2.4	73	Su 0649	2.2	67
1851	1.9	58	Th 1317	-0.4	-12	Sa 1323	-0.5	-15	Su 1332	-0.2	-6
			Th 1932	2.1	64	Sa 1944	2.3	70	Su 1957	2.2	67
10 Th 0031	0.1	3	25 F 0119	0.0	0	10 Su 0143	-0.1	-3	10 M 0205	0.0	0
0650	2.5	76	F 0727	2.3	70	Su 0743	2.2	67	M 0759	1.8	55
1319	-0.3	-9	F 1346	-0.3	-9	Su 1355	-0.4	-12	M 1357	-0.1	-3
1928	2.0	61	F 2006	2.1	64	Su 2023	2.3	70	M 2028	2.1	64
11 F 0110	0.1	3	26 Sa 0157	0.2	6	11 M 0228	0.0	0	11 W 0240	0.2	6
0725	2.4	73	Sa 0759	2.1	64	M 0822	1.9	58	Tu 0829	1.5	46
1351	-0.3	-9	Sa 1415	-0.2	-6	M 1429	-0.3	-9	Tu 1423	0.0	0
2008	2.0	61	Sa 2041	2.1	64	M 2106	2.3	70	Tu 2102	1.9	58
12 Sa 0152	0.2	6	27 Su 0236	0.3	9	12 Tu 0320	0.2	6	12 W 0322	0.3	9
0801	2.3	70	Su 0832	1.9	58	Tu 0907	1.6	49	W 0905	1.3	40
1426	-0.2	-6	Su 1442	0.0	0	Tu 1508	-0.1	-3	W 1453	0.2	6
2051	2.1	64	Su 2117	2.0	61	Tu 2157	2.1	64	W 2145	1.8	55
13 Su 0240	0.3	9	28 M 0318	0.4	12	13 F 0426	0.3	9	13 W 0417	0.5	15
0842	2.1	64	M 0906	1.6	49	W 1004	1.3	40	Th 0952	1.1	34
1503	-0.1	-3	M 1511	0.1	3	W 1557	0.1	3	Th 1532	0.4	12
2138	2.1	64	M 2157	1.9	58	O 2302	2.0	61	O 2247	1.6	49
14 M 0338	0.4	12	O 2247	1.8	55	W 2247	1.6	49	W 2238	1.8	55
0929	1.8	55									
1545	0.0	0									
2234	2.1	64									
15 Tu 0451	0.5	15	29 Th 0411	0.6	18	14 Th 0602	0.4	12	29 F 0557	0.6	18
1029	1.6	49	Th 0946	1.4	43	Th 1129	1.1	34	F 1643	0.5	15
1638	0.2	6	Th 1545	0.3	9	Th 1711	0.3	9	F 1903	0.4	12
● 2339	2.1	64	O 2247	1.8	55						
16 Th 0715	0.6	18									
17 Th 1214	1.0	30									
18 Th 1753	0.6	18									

Time meridian 150° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to mean lower low water which is the chart datum of soundings.

# Johnston Island, 2008

Times and Heights of High and Low Waters

April					May					June						
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height		
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm	
<b>1</b>	0211	1.7	52	<b>16</b>	0314	1.7	52	<b>1</b>	0217	1.7	52	<b>16</b>	0320	1.5	46	
Tu	0854	0.0	0	W	0930	-0.1	-3	Th	0838	-0.1	-3	Su	0915	0.0	0	
	1504	1.5	46		1553	1.9	58		1504	2.1	64		1602	2.6	79	
	2100	0.2	6		2202	0.0	0		2123	0.0	0		2218	-0.4	-12	
<b>2</b>	0305	1.8	55	<b>17</b>	0356	1.7	52	<b>2</b>	0311	1.8	55	<b>2</b>	0403	1.5	46	
W	0932	-0.2	-6	Th	1002	-0.2	-6	F	0920	-0.3	-9	Sa	0950	0.0	0	
	1545	1.8	55		1625	2.1	64		1546	2.4	73		1619	2.3	70	
	2148	0.0	0		2239	-0.1	-3		2211	-0.2	-6		2253	-0.1	-3	
<b>3</b>	0349	2.0	61	<b>18</b>	0433	1.8	55	<b>3</b>	0401	1.8	55	<b>3</b>	0441	1.5	46	
Th	1006	-0.3	-9	F	1031	-0.2	-6	Sa	1001	-0.4	-12	Su	1023	0.0	0	
	1623	2.1	64		1654	2.3	70		1628	2.6	79		1651	2.3	70	
	2231	-0.2	-6		2313	-0.2	-6		2257	-0.4	-12		2326	-0.2	-6	
<b>4</b>	0431	2.1	64	<b>19</b>	0507	1.8	55	<b>4</b>	0449	1.8	55	<b>4</b>	0518	1.5	46	
F	1040	-0.5	-15	Sa	1059	-0.2	-6	Su	1041	-0.4	-12	M	1056	0.0	0	
	1700	2.4	73		1722	2.3	70		1710	2.7	82		1723	2.3	70	
	2313	-0.4	-12		2345	-0.3	-9		2341	-0.5	-15	O	2359	-0.2	-6	
<b>5</b>	0511	2.1	64	<b>20</b>	0539	1.7	52	<b>5</b>	0536	1.8	55	<b>5</b>	0553	1.5	46	
Sa	1114	-0.6	-18	Su	1127	-0.2	-6	M	1123	-0.4	-12	Tu	1129	0.0	0	
	1736	2.6	79		1750	2.4	73		1752	2.7	82		1756	2.3	70	
●	2355	-0.5	-15	○	●							Th	1242	-0.1	-3	
<b>6</b>	0552	2.0	61	<b>21</b>	0016	-0.3	-9	<b>6</b>	0026	-0.6	-18	<b>6</b>	0150	-0.4	-12	
Su	1149	-0.6	-18	M	0610	1.6	49	Tu	0623	1.7	52	W	0628	1.4	43	
	1814	2.7	82		1155	-0.2	-6		1205	-0.4	-12		1202	0.0	0	
	1819	2.3	70		1836	2.6	79		1830	2.2	67		1830	2.2	67	
<b>7</b>	0037	-0.5	-15	<b>22</b>	0047	-0.3	-9	<b>7</b>	0112	-0.5	-15	<b>22</b>	0107	-0.2	-6	
M	0633	1.9	58	Tu	0642	1.6	49	W	0711	1.6	49	Sa	0704	1.4	43	
	1226	-0.5	-15		1224	-0.1	-3		1249	-0.2	-6		1236	0.0	0	
	1854	2.6	79		1849	2.2	67		1922	2.5	76		1906	2.1	64	
<b>8</b>	0120	-0.5	-15	<b>23</b>	0119	-0.2	-6	<b>8</b>	0200	-0.4	-12	<b>23</b>	0143	-0.2	-6	
Tu	0716	1.7	52	W	0715	1.5	46	Th	0803	1.5	46	Su	0743	1.4	43	
	1304	-0.4	-12		1253	0.0	0		1337	-0.1	-3		1313	0.1	3	
	1936	2.5	76		1922	2.1	64		2011	2.3	70		1944	2.1	64	
<b>9</b>	0207	-0.4	-12	<b>24</b>	0154	-0.1	-3	<b>9</b>	0253	-0.3	-9	<b>9</b>	0223	-0.1	-3	
W	0803	1.5	46	Th	0750	1.3	40	F	0901	1.4	43	Sa	0828	1.3	40	
	1345	-0.2	-6		1325	0.1	3		1430	0.1	3		1354	0.2	6	
	2022	2.3	70		1959	1.9	58		2104	2.0	61		2025	2.0	61	
<b>10</b>	0300	-0.2	-6	<b>25</b>	0234	0.0	0	<b>10</b>	0352	-0.1	-3	<b>10</b>	0306	0.0	0	
Th	0858	1.3	40	F	0832	1.2	37	Sa	1008	1.3	40	Tu	1148	1.7	52	
	1432	0.1	3		1402	0.2	6		1536	0.4	12		1443	0.4	12	
	2116	2.0	61		2042	1.8	55		2205	1.8	55		2113	1.9	58	
<b>11</b>	0405	0.0	0	<b>26</b>	0323	0.1	3	<b>11</b>	0459	0.0	0	<b>11</b>	0558	0.2	6	
F	1007	1.2	37	Sa	0927	1.1	34	Su	1125	1.4	43	M	1020	1.4	43	
	1534	0.3	9		1450	0.3	9		1704	0.5	15		1548	0.5	15	
	2223	1.8	55		2137	1.7	52	○	2314	1.6	49		2208	1.7	52	
<b>12</b>	0530	0.1	3	<b>27</b>	0428	0.2	6	<b>12</b>	0607	0.1	3	<b>27</b>	0451	0.1	3	
Sa	1141	1.1	34	Su	1041	1.1	34	M	1240	1.5	46	Tu	1126	1.5	46	
	1712	0.5	15		1601	0.5	15		1841	0.5	15		1712	0.6	18	
●	2347	1.6	49		2246	1.6	49	○	2312	1.6	49		2312	1.6	49	
<b>13</b>	0659	0.1	3	<b>28</b>	0546	0.2	6	<b>13</b>	0026	1.5	46	<b>28</b>	0550	0.0	0	
Su	1319	1.2	37	M	1207	1.2	37	Tu	0708	0.1	3	F	1230	1.7	52	
	1907	0.5	15		1745	0.5	15		1343	1.7	52		1841	0.5	15	
	○				1957	0.4	12		1957	0.3	9		2114	0.3	9	
<b>14</b>	0114	1.6	49	<b>29</b>	0003	1.6	49	<b>14</b>	0134	1.5	46	<b>29</b>	0022	1.6	49	
M	0805	0.0	0	Tu	0657	0.1	3	W	0757	0.1	3	Th	0648	0.0	0	
	1429	1.5	46		1321	1.5	46		1432	1.9	58		1329	2.0	61	
	2025	0.3	9		1920	0.4	12		2054	0.3	9		1957	0.3	9	
<b>15</b>	0222	1.6	49	<b>30</b>	0115	1.6	49	<b>15</b>	0232	1.5	46	<b>30</b>	0132	1.5	46	
Tu	0852	-0.1	-3	W	0752	0.0	0	Th	0838	0.0	0	F	0744	-0.1	-3	
	1516	1.7	52		1417	1.8	55		1512	2.0	61		1423	2.2	67	
	2120	0.2	6		2028	0.2	6		2139	0.2	6		2100	0.1	3	
												○	237	1.5	46	
												Sa	0837	-0.1	-3	
													1514	2.5	76	
													2154	-0.2	-6	
													31	0237	1.5	46
													Sa	1514	2.5	76
														2154	-0.2	-6
														2236	0.0	0

Time meridian 150° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to mean lower low water which is the chart datum of soundings.

## Johnston Island, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 0426	1.5	46	16 0449	1.5	46	1 0555	2.0	61	16 0538	2.0	61
Tu 1004	-0.1	-3	W 1023	0.2	6	F 1139	0.0	0	Sa 1125	0.1	3
1639	2.6	79	1652	2.3	70	1758	2.7	82	Sa 1739	2.6	79
2322	-0.4	-12	2331	-0.1	-3	●			O		
2 0520	1.7	52	17 0527	1.6	49	2 0025	-0.4	-12	17 0002	-0.2	-6
W 1057	-0.1	-3	Th 1102	0.1	3	Sa 0636	2.1	64	Su 0611	2.2	67
1728	2.7	82	1728	2.4	73	1222	0.0	0	1201	0.1	3
●			O			1836	2.6	79	1812	2.6	79
3 0007	-0.5	-15	18 0003	-0.2	-6	3 0059	-0.3	-9	18 0031	-0.2	-6
Th 0609	1.8	55	F 0602	1.7	52	Su 0714	2.2	67	M 0644	2.4	73
1147	-0.1	-3	1139	0.1	3	1303	0.1	3	1239	0.1	3
1814	2.7	82	1802	2.5	76	1912	2.5	76	1844	2.5	76
4 0049	-0.5	-15	19 0034	-0.2	-6	4 0131	-0.2	-6	19 0100	-0.2	-6
F 0656	1.8	55	Sa 0637	1.8	55	M 0751	2.3	70	Tu 0719	2.4	73
1234	-0.1	-3	1216	0.1	3	1343	0.2	6	1318	0.1	3
1857	2.6	79	1835	2.5	76	1946	2.3	70	1919	2.3	70
5 0130	-0.4	-12	20 0104	-0.2	-6	5 0201	-0.1	-3	20 0131	-0.2	-6
Sa 0742	1.9	58	Su 0713	1.9	58	Tu 0827	2.2	67	W 0756	2.5	76
1321	0.1	3	1253	0.1	3	1424	0.4	12	1401	0.2	6
1939	2.4	73	1908	2.4	73	2021	2.0	61	1957	2.1	64
6 0209	-0.3	-9	21 0134	-0.2	-6	6 0231	0.1	3	21 0204	-0.1	-3
Su 0827	1.9	58	M 0750	2.0	61	W 0904	2.2	67	Th 0838	2.4	73
1408	0.2	6	1333	0.2	6	1508	0.5	15	1450	0.3	9
2019	2.2	67	1942	2.3	70	2056	1.8	55	2040	1.9	58
7 0246	-0.2	-6	22 0206	-0.2	-6	7 0301	0.2	6	22 0242	0.1	3
M 0912	1.9	58	Tu 0829	2.1	64	Th 0945	2.1	64	F 0927	2.3	70
1457	0.4	12	1418	0.3	9	1600	0.7	21	1551	0.5	15
2059	2.0	61	2020	2.1	64	2138	1.5	46	2134	1.6	49
8 0324	0.0	0	23 0241	-0.1	-3	8 0336	0.4	12	23 0329	0.3	9
Tu 0959	1.9	58	W 0913	2.1	64	F 1035	2.0	61	Sa 1029	2.2	67
1553	0.6	18	1509	0.4	12	1711	0.8	24	Sa 1716	0.6	18
2142	1.7	52	2103	1.9	58	● 2233	1.3	40	O 2250	1.4	43
9 0402	0.1	3	24 0319	0.0	0	9 0423	0.6	18	24 0437	0.5	15
W 1048	1.9	58	Th 1003	2.2	67	Sa 1139	1.9	58	Su 1149	2.1	64
1659	0.7	21	1613	0.5	15	1854	0.8	24	1905	0.5	15
● 2231	1.5	46	2156	1.7	52	2359	1.2	37	● 2250	1.4	43
10 0444	0.3	9	25 0406	0.1	3	10 0541	0.7	21	25 0038	1.3	40
Th 1142	1.9	58	F 1103	2.2	67	Su 1258	1.8	55	M 0620	0.6	18
1820	0.7	21	1736	0.6	18	2023	0.6	18	1318	2.1	64
2332	1.3	40	● 2305	1.4	43	2030	0.4	12	2030	0.4	12
11 0537	0.4	12	26 0507	0.2	6	11 0144	1.2	37	26 0219	1.4	43
F 1240	1.9	58	Sa 1213	2.2	67	M 0722	0.7	21	W 0819	0.7	21
1943	0.6	18	1912	0.5	15	1413	1.9	58	1444	2.0	61
12 0049	1.2	37	27 0034	1.3	40	2120	0.5	15	2030	0.4	12
Sa 0642	0.5	15	Su 0627	0.3	9	12 0301	1.3	40	10 0238	1.4	43
1341	2.0	61	1328	2.2	67	W 0835	0.5	15	W 0819	0.7	21
2049	0.5	15	2034	0.3	9	Tu 1511	2.1	64	1517	2.3	70
13 0210	1.2	37	28 0209	1.3	40	2200	0.3	9	2126	0.4	12
Su 0750	0.5	15	M 0752	0.3	9	12 0835	0.5	15	11 0315	1.9	58
1438	2.0	61	1439	2.3	70	1511	2.1	64	W 0908	0.3	9
2139	0.3	9	2136	0.1	3	2200	0.3	9	1605	2.4	73
14 0316	1.2	37	29 0325	1.5	46	13 0351	1.5	46	12 0401	1.9	58
M 0849	0.4	12	Tu 0903	0.2	6	W 0928	0.4	12	W 0952	0.3	9
1529	2.1	64	1539	2.5	76	1556	2.2	67	1605	2.4	73
2220	0.2	6	2226	-0.1	-3	2234	0.1	3	2228	0.0	0
15 0407	1.3	40	30 0423	1.7	52	14 0430	1.7	52	27 0432	2.4	73
Tu 0939	0.3	9	W 1002	0.1	3	W 1046	0.1	3	Sa 1035	0.1	3
1613	2.2	67	1631	2.6	79	1633	2.4	73	1712	2.4	73
2257	0.0	0	2310	-0.3	-9	2305	0.0	0	● 2316	-0.1	-3
31 0512	1.8	55	31 0512	1.8	55	2321	-0.2	-6	28 0504	2.6	79
Th 1053	0.0	0	Th 1053	0.0	0	2352	-0.3	-9	Su 1111	0.1	3
1717	2.7	82	1717	2.7	82	● 2326	-0.2	-6	1712	2.4	73
2349	-0.4	-12	2349	-0.4	-12	2334	-0.1	-3	● 2334	0.0	0
31 0607	2.5	76	31 0607	2.5	76	14 0456	2.1	64	29 0534	2.7	82
Th 1204	0.0	0	Th 1204	0.0	0	W 1048	0.2	6	M 1145	0.0	0
1810	2.5	76	1810	2.5	76	1700	2.6	79	1744	2.3	70
2355	-0.2	-6	2355	-0.2	-6	2321	-0.2	-6	2343	0.0	0

Time meridian 150° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
 Heights are referred to mean lower low water which is the chart datum of soundings.

# Johnston Island, 2008

Times and Heights of High and Low Waters

October			November			December					
Time	Height		Time	Height		Time	Height		Time	Height	
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
<b>1</b> W 0010 0.0 0 0631 2.7 82 1250 0.1 3 1846 2.1 64	<b>16</b> Th 0624 3.0 91 1251 -0.1 -3 1847 2.1 64	<b>1</b> Sa 0037 0.3 9 0704 2.4 73 1337 0.2 6 1934 1.7 52	<b>16</b> Su 0110 0.2 6 0742 2.6 79 1421 0.0 0 2028 1.8 55	<b>1</b> M 0059 0.4 12 0726 2.3 70 1402 0.1 3 2007 1.7 52	<b>16</b> Tu 0158 0.3 9 0819 2.4 73 1453 -0.1 -3 2114 1.9 58						
	<b>2</b> Th 0036 0.1 3 0700 2.6 79 1322 0.2 6 1917 1.9 58	<b>17</b> F 0036 0.0 0 0705 2.8 85 1336 0.0 0 1933 1.9 58	<b>2</b> Su 0110 0.4 12 0740 2.3 70 1415 0.3 9 2015 1.6 49	<b>17</b> M 0201 0.4 12 0834 2.4 73 1517 0.1 3 2132 1.7 52	<b>2</b> Tu 0137 0.5 15 0804 2.2 67 1441 0.2 6 2054 1.6 49	<b>17</b> W 0254 0.5 15 0907 2.2 67 1539 0.1 3 2211 1.9 58					
	<b>3</b> F 0103 0.3 9 0731 2.4 73 1356 0.3 9 1950 1.7 52	<b>18</b> Sa 0116 0.1 3 0751 2.6 79 1427 0.1 3 2026 1.7 52	<b>3</b> M 0146 0.6 18 0823 2.1 64 1503 0.5 15 2108 1.5 46	<b>18</b> Tu 0303 0.6 18 0933 2.2 67 1621 0.3 9 2247 1.7 52	<b>3</b> W 0222 0.6 18 0847 2.1 64 1525 0.3 9 2149 1.7 52	<b>18</b> Th 0359 0.6 18 0958 1.9 58 1629 0.2 6 2312 1.9 58					
	<b>4</b> Sa 0132 0.4 12 0806 2.2 67 1435 0.5 15 2028 1.6 49	<b>19</b> Su 0203 0.4 12 0845 2.4 73 1529 0.3 9 2133 1.6 49	<b>4</b> Tu 0232 0.7 21 0916 2.0 61 1604 0.6 18 2222 1.5 46	<b>19</b> W 0426 0.8 24 1041 2.0 61 1731 0.4 12 <b>O</b>	<b>4</b> Th 0319 0.7 21 0937 2.0 61 1615 0.4 12 2252 1.8 55	<b>19</b> F 0520 0.8 24 1057 1.7 52 1723 0.4 12 <b>O</b>					
<b>5</b> Su 0205 0.6 18 0849 2.0 61 1527 0.6 18 2121 1.4 43	<b>20</b> M 0302 0.6 18 0951 2.2 67 1651 0.5 15 2304 1.5 46	<b>5</b> W 0341 0.9 27 1024 1.9 58 1722 0.6 18 <b>O</b> 2348 1.5 46	<b>20</b> Th 0006 1.8 55 0607 0.8 24 1156 1.8 55 1837 0.4 12	<b>5</b> F 0436 0.8 24 1038 1.8 55 1713 0.4 12 <b>O</b> 2358 1.9 58	<b>20</b> Sa 0015 2.0 61 0650 0.8 24 1208 1.5 46 1822 0.4 12						
	<b>6</b> M 0249 0.7 21 0951 1.9 58 1651 0.8 24 <b>O</b> 2249 1.3 40	<b>21</b> Tu 0435 0.8 24 1115 2.0 61 1823 0.5 15	<b>6</b> Th 0526 0.9 27 1142 1.8 58 1835 0.5 15	<b>21</b> F 0115 2.0 61 0734 0.7 21 1310 1.7 52 1933 0.4 12	<b>6</b> Sa 0609 0.8 24 1149 1.7 52 1814 0.4 12	<b>21</b> Su 0116 2.1 64 0808 0.6 18 1326 1.4 43 1922 0.5 15					
	<b>7</b> Tu 0406 0.9 27 1120 1.8 55 1843 0.7 21	<b>22</b> W 0043 1.6 49 0634 0.8 24 1243 1.9 58 1935 0.4 12	<b>7</b> F 0102 1.8 55 0705 0.8 24 1256 1.9 58 1930 0.4 12	<b>22</b> Sa 0210 2.2 67 0837 0.6 18 1414 1.7 52 2019 0.3 9	<b>7</b> Su 0101 2.1 64 0733 0.6 18 1303 1.7 52 1915 0.3 9	<b>22</b> M 0210 2.1 64 0906 0.5 15 1438 1.4 43 2018 0.5 15					
	<b>8</b> W 0042 1.4 43 0621 0.9 27 1251 1.8 55 1953 0.6 18	<b>23</b> Th 0158 1.9 58 0759 0.7 21 1355 2.0 61 2026 0.3 9	<b>8</b> Sa 0157 2.0 61 0812 0.6 18 1358 1.9 58 2016 0.3 9	<b>23</b> Su 0253 2.3 70 0925 0.4 12 1507 1.7 52 2059 0.3 9	<b>8</b> M 0157 2.3 70 0838 0.4 12 1413 1.7 52 2012 0.2 6	<b>23</b> Tu 0258 2.2 67 0951 0.3 9 1535 1.4 43 2107 0.4 12					
<b>9</b> Th 0158 1.6 49 0750 0.8 24 1358 2.0 61 2036 0.4 12	<b>24</b> F 0249 2.1 64 0857 0.5 15 1451 2.1 64 2106 0.2 6	<b>9</b> Su 0242 2.3 70 0904 0.4 12 1451 2.0 61 2057 0.1 3	<b>24</b> M 0331 2.5 76 1005 0.3 9 1552 1.8 55 2136 0.3 9	<b>9</b> Tu 0250 2.6 79 0933 0.1 3 1516 1.7 52 2105 0.1 3	<b>24</b> W 0341 2.3 70 1029 0.2 6 1620 1.5 46 2151 0.3 9						
	<b>10</b> F 0246 1.9 58 0845 0.6 18 1447 2.1 64 2112 0.2 6	<b>25</b> Sa 0329 2.4 73 0942 0.3 9 1535 2.1 64 2140 0.1 3	<b>10</b> M 0324 2.6 79 0950 0.1 3 1539 2.1 64 2137 0.0 0	<b>25</b> Tu 0405 2.6 79 1040 0.1 3 1631 1.8 55 2211 0.3 9	<b>10</b> W 0339 2.7 82 1022 -0.1 -3 1611 1.8 55 2155 0.0 0	<b>25</b> Th 0421 2.4 73 1104 0.0 0 1659 1.6 49 2231 0.3 9					
	<b>11</b> Sa 0325 2.2 67 0930 0.4 12 1529 2.3 70 2144 0.1 3	<b>26</b> Su 0403 2.5 76 1020 0.2 6 1614 2.1 64 2211 0.1 3	<b>11</b> Tu 0404 2.8 85 1034 -0.1 -3 1625 2.1 64 2217 -0.1 -3	<b>26</b> W 0437 2.6 79 1113 0.0 0 1707 1.8 55 2245 0.2 6	<b>11</b> Th 0427 2.9 88 1108 -0.3 -9 1703 1.9 58 2244 -0.1 -3	<b>26</b> F 0458 2.4 73 1137 -0.1 -3 1735 1.6 49 2308 0.2 6					
	<b>12</b> Su 0400 2.5 76 1010 0.2 6 1608 2.4 73 2216 -0.1 -3	<b>27</b> M 0434 2.7 82 1055 0.1 3 1649 2.1 64 2240 0.1 3	<b>12</b> W 0444 3.0 91 1117 -0.2 -6 1710 2.1 64 <b>O</b> 2258 -0.1 -3	<b>27</b> Th 0510 2.6 79 1146 0.0 0 1742 1.8 55 <b>O</b> 2318 0.2 6	<b>12</b> F 0514 2.9 88 1154 -0.4 -5 1752 1.9 58 <b>O</b> 2332 -0.1 -3	<b>27</b> Sa 0533 2.4 73 1209 -0.1 -3 1809 1.7 52 <b>O</b> 2344 0.2 6					
<b>13</b> M 0434 2.7 82 1050 0.0 0 1647 2.4 73 2249 -0.1 -3	<b>28</b> Tu 0503 2.7 82 1127 0.0 0 1722 2.1 64 <b>O</b> 2309 0.1 3	<b>13</b> Th 0526 3.0 91 1200 -0.3 -9 1756 2.1 64 2340 -0.1 -3	<b>28</b> F 0543 2.6 79 1218 0.0 0 1815 1.8 55 2351 0.2 6	<b>13</b> Sa 0601 2.9 88 1238 -0.4 -12 1841 1.9 58	<b>28</b> Su 0607 2.4 73 1240 -0.1 -3 1842 1.8 55						
	<b>14</b> Tu 0509 2.9 88 1129 -0.1 -3 1726 2.4 73 <b>O</b> 2323 -0.2 -6	<b>29</b> W 0532 2.7 82 1159 0.0 0 1754 2.0 61 2338 0.2 6	<b>14</b> F 0609 3.0 91 1244 -0.3 -9 1843 2.0 61	<b>29</b> Sa 0616 2.5 76 1251 0.0 0 1850 1.7 52	<b>14</b> Su 0020 0.0 0 0647 2.8 85 1323 -0.3 -9 1930 1.9 58	<b>29</b> M 0018 0.2 6 0640 2.4 73 1311 -0.1 -3 1916 1.8 55					
	<b>15</b> W 0546 3.0 91 1209 -0.2 -6 1805 2.3 70 2358 -0.1 -3	<b>30</b> Th 0601 2.7 82 1230 0.0 0 1826 1.9 58	<b>15</b> Sa 0023 0.0 0 0654 2.8 85 1331 -0.2 -6 1932 1.9 58	<b>30</b> Su 0025 0.3 9 0651 2.4 73 1325 0.1 3 1927 1.7 52	<b>15</b> M 0108 0.1 3 0733 2.6 79 1407 -0.2 -6 2021 1.9 58	<b>30</b> Tu 0053 0.2 6 0712 2.4 73 1342 -0.1 -3 1952 1.8 55					
		<b>31</b> F 0007 0.2 6 0631 2.6 79 1302 0.1 3 1859 1.8 55				<b>31</b> W 0129 0.3 9 0745 2.3 70 1414 -0.1 -3 2031 1.9 58					

Time meridian 150° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to mean lower low water which is the chart datum of soundings.

# Papeete Harbor, Tahiti Island, 2008

Times and Heights of High and Low Waters

January					February					March								
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height				
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm				
<b>1</b> Tu	0943	0.5 15		<b>16</b> W	0532 1316	0.5 0.5	<b>1</b> F	0008 1159 1806 2352	0.4 0.5 0.1 0.5	<b>16</b> Sa	0532 1149 1739 2328	0.1 0.6 0.1 0.6	<b>1</b> Sa	0017 1209 1800 2348	0.4 0.5 0.1 0.5	<b>16</b> Su	0523 1133 1712 2311	0.0 0.5 0.1 0.7
	1713	0.3 9		<b>17</b> Th	0245 1100	0.3 0.5	<b>2</b> Sa	0551 1159 1802 2358	0.1 0.6 0.0 0.6	<b>17</b> Su	0544 1155 1745 2346	0.0 0.6 0.0 0.7	<b>2</b> Su	0552 1155 1745 2344	0.0 0.6 0.0 0.6	<b>17</b> M	0530 1135 1721 2328	-0.1 0.6 0.0 0.8
	2143	0.4 12		<b>18</b> F	0444 1121 1727 2309	0.2 0.6 0.2 0.6	<b>3</b> Su	0603 1209 1809	0.0 0.6 0.0	<b>18</b> M	0603 1209 1801	-0.1 0.7 -0.1	<b>3</b> M	0554 1156 1747 2352	-0.1 0.6 0.0 0.8	<b>18</b> Tu	0545 1147 1738 2349	-0.1 0.7 -0.1 0.9
<b>4</b> F	0344	0.3 9		<b>19</b> Sa	0524 1145	0.3 0.6	<b>4</b> M	0011 0619	0.7 -0.1	<b>19</b> Tu	0009 0624	0.9 -0.2	<b>4</b> Tu	0604 1204	-0.1 0.7	<b>19</b> W	0603 1202	-0.2 0.8
	1039	0.5 15		<b>19</b> Sa	1733	0.3 9	<b>4</b> M	1223 1821	0.7 -0.1	<b>19</b> Tu	1226 1820	0.8 -0.2	<b>4</b> Tu	1756	-0.1	<b>19</b> W	1757	-0.2
	1710	0.3 9		<b>20</b> Su	0558 1210	-0.1 0.7	<b>5</b> Tu	0027 0637	0.8 -0.2	<b>20</b> W	0032 0645	0.9 -0.2	<b>5</b> W	0005 0617	0.9 -0.2	<b>20</b> Th	0010 0621	1.0 -0.2
<b>5</b> Sa	2241	0.5 15		<b>20</b> Su	1807	0.0 0	<b>5</b> Tu	1239 1835	0.7 -0.1	<b>20</b> ○	1244 1841	0.8 -0.2	<b>5</b> W	1216 1809	0.8 -0.1	<b>20</b> Th	1218 1817	0.9 -0.2
	0544	0.0 0		<b>21</b> Su	0558 1210	-0.1 0.7	<b>6</b> W	0045 0656	0.9 -0.2	<b>21</b> Th	0055 0705	1.0 -0.2	<b>6</b> Th	0022 0633	1.0 -0.2	<b>21</b> F	0031 0638	1.0 -0.1
	1157	0.6 18		<b>21</b> M	1234	0.7 21	<b>6</b> W	1255	0.8 24	<b>21</b> Th	1301	0.9 27	<b>6</b> Th	1229 1825	0.8 -0.2	<b>21</b> O	1234 1837	0.9 -0.2
<b>6</b> Su	1806	0.0 0		<b>22</b> M	0011 0628	0.8 -0.2	<b>7</b> Th	0105 0715	0.9 -0.2	<b>22</b> F	0117 0723	1.0 -0.1	<b>7</b> F	0040 0650	1.0 -0.2	<b>22</b> Sa	0050 0654	1.0 -0.1
	1220	0.7 21		<b>22</b> Tu	1258	0.8 24	<b>7</b> Th	1311 1909	0.8 -0.2	<b>22</b> F	1318 1922	0.9 -0.2	<b>7</b> F	1244 1844	0.9 -0.2	<b>22</b> Sa	0050 1250	1.0 0.9
	1825	-0.1 -3		<b>22</b> ○	1855	-0.2 -6	<b>8</b> F	0125 0734	1.0 -0.1	<b>23</b> Sa	0137 0740	1.0 -0.1	<b>8</b> Sa	0100 0707	1.1 -0.1	<b>23</b> Su	0108 1304	1.0 0.9
<b>7</b> M	0029	0.7 21		<b>23</b> Tu	0109 0723	0.9 -0.2	<b>8</b> F	0128 1328	1.0 -0.1	<b>23</b> Sa	0137 1334	1.0 -0.1	<b>8</b> Sa	0100 1300	1.1 -0.1	<b>23</b> Su	0108 1913	1.0 -0.2
	0637	-0.1 -3		<b>23</b> ○	1920	-0.2 -6	<b>8</b> F	1928	-0.2	<b>23</b> ○	1941	-0.2	<b>8</b> ○	1904	-0.2	<b>23</b> ○	1913	-0.2
	1243	0.7 21		<b>24</b> W	0137 0747	0.9 -0.1	<b>9</b> Th	0147 0753	1.0 -0.1	<b>24</b> Sa	0155 0754	0.9 0.0	<b>9</b> Su	0121 0725	1.0 -0.1	<b>24</b> M	0124 0723	0.9 -0.1
<b>8</b> Tu	1845	-0.1 -3		<b>24</b> W	1342	0.8 24	<b>9</b> Th	1344 1944	0.8 -0.2	<b>24</b> Sa	1347 1949	0.8 -0.2	<b>9</b> Su	0121 0725	1.0 -0.1	<b>24</b> M	0124 1318	0.9 0.8
	0702	-0.1 -3		<b>24</b> ○	1920	-0.2 -6	<b>9</b> Th	1944	-0.2	<b>24</b> ○	1958	-0.1	<b>9</b> ○	1925	-0.2	<b>24</b> ○	1929	-0.1
	1305	0.7 21		<b>25</b> W	0203 0809	0.9 0.0	<b>10</b> Su	0209 0812	1.0 0.0	<b>25</b> M	0210 0805	0.8 0.0	<b>10</b> M	0142 0742	1.0 0.0	<b>25</b> Tu	0137 0734	0.8 0.0
<b>9</b> W	● 1904	-0.1 -3		<b>25</b> F	1402	0.8 24	<b>10</b> Su	0812 1400	0.0 0.8	<b>25</b> M	0210 1358	0.8 0.8	<b>10</b> M	0142 1334	1.0 0.9	<b>25</b> Tu	0137 1330	0.8 0.8
	0727	-0.1 -3		<b>25</b> F	2008	-0.1 -3	<b>10</b> Su	0810	-0.1	<b>25</b> M	0211 2011	-0.1	<b>10</b> M	0142 1946	1.0 -0.2	<b>25</b> Tu	0137 1941	0.8 -0.1
	1326	0.7 21		<b>26</b> W	0227	0.9 0.0	<b>11</b> M	0231 0829	0.9 0.1	<b>26</b> Tu	0220 0811	0.7 0.1	<b>11</b> Tu	0202 0758	0.9 0.0	<b>26</b> W	0146 0741	0.7 0.0
<b>10</b> Th	1924	-0.1 -3		<b>26</b> F	1419	0.8 24	<b>11</b> M	0829 1416	0.1 0.8	<b>26</b> Tu	0220 1404	0.7 0.7	<b>11</b> Tu	0202 1351	0.9 0.8	<b>26</b> W	0146 1338	0.7 0.7
	1945	-0.1 -3		<b>26</b> F	2029	-0.1 -3	<b>11</b> M	1416 2031	-0.1	<b>26</b> Tu	2019 2011	0.0	<b>11</b> Tu	0207 2007	-0.1	<b>26</b> W	0146 1949	0.0
	0816	0.0 0		<b>27</b> F	0233	0.8 0.1	<b>12</b> Su	0231 0844	0.9 0.1	<b>27</b> W	0223 0808	0.6 0.1	<b>12</b> W	0219 0808	0.7 0.1	<b>27</b> Th	0149 0740	0.6 0.1
<b>11</b> F	1405	0.7 21		<b>27</b> F	1424	0.7 21	<b>12</b> Su	0844 1427	0.1 0.7	<b>27</b> W	0223 1400	0.6 0.6	<b>12</b> W	0219 1403	0.7 0.7	<b>27</b> Th	0149 1339	0.6 0.6
	2007	-0.1 -3		<b>27</b> F	2048	0.0 0	<b>12</b> Su	1427 2050	0.0	<b>27</b> W	2014 2011	0.1 0.1	<b>12</b> W	0219 2023	0.7 0.0	<b>27</b> Th	0149 1946	0.1 0.1
	0840	0.1 3		<b>28</b> M	0248	0.8 0.1	<b>13</b> Su	0252 0854	0.8 0.2	<b>28</b> W	0223 0808	0.6 0.1	<b>13</b> W	0219 0808	0.7 0.1	<b>28</b> F	0149 0722	0.6 0.1
<b>12</b> Sa	1424	0.7 21		<b>28</b> M	1433	0.7 21	<b>13</b> Su	0252 0844	0.8 0.2	<b>28</b> W	0223 1428	0.6 0.6	<b>13</b> W	0219 1336	0.6 0.5	<b>28</b> F	0149 1323	0.6 0.5
	2057	0.0 0		<b>28</b> M	1443	0.6 18	<b>13</b> Su	0252 1440	0.8 0.6	<b>28</b> W	0223 1428	0.6 0.6	<b>13</b> W	0219 1404	0.6 0.6	<b>28</b> F	0149 1918	0.2 0.2
	0904	0.2 6		<b>29</b> M	2100	0.1 3	<b>13</b> Su	0259	0.1	<b>29</b> W	0223 1428	0.6 0.5	<b>13</b> W	0226 1404	0.6 0.6	<b>29</b> F	0135 1323	0.5 0.5
<b>13</b> Su	1443	0.7 21		<b>29</b> M	2059	0.2 6	<b>14</b> Tu	0302 0800	0.6 0.3	<b>29</b> W	0223 0558	0.5 0.2	<b>14</b> F	0157 0653	0.4 0.6	<b>29</b> Sa	0050 0637	0.4 0.1
	2057	0.0 0		<b>29</b> M	2126	0.1 3	<b>14</b> Tu	0302 1432	0.6 0.6	<b>29</b> W	0223 1347	0.5 0.5	<b>14</b> F	0157 1347	0.4 0.4	<b>29</b> ○	0050 1813	0.4 0.2
	0928	0.3 9		<b>30</b> Tu	2126	0.1 3	<b>14</b> Tu	0302 1432	0.6 0.6	<b>29</b> W	0223 1347	0.5 0.5	<b>14</b> F	0157 1347	0.4 0.4	<b>29</b> ○	0050 2344	0.4 0.4
<b>14</b> M	1458	0.6 18		<b>30</b> W	0303	0.5 9	<b>15</b> F	0057 0558	0.4 0.2	<b>30</b> W	0223 0558	0.5 0.6	<b>15</b> F	0547 0653	0.1 0.6	<b>30</b> Sa	0547 0637	0.1 0.1
	2126	0.1 3		<b>30</b> W	0809	0.3 9	<b>15</b> F	0057 0558	0.4 0.2	<b>30</b> W	0223 0558	0.5 0.6	<b>15</b> F	0547 0653	0.1 0.6	<b>30</b> Sa	0547 0637	0.1 0.1
	0928	0.3 9		<b>30</b> W	1228	0.5 15	<b>15</b> F	1216	0.5	<b>30</b> W	1216 1810	0.5 0.2	<b>15</b> F	0547 1200	0.1 0.5	<b>30</b> Su	0547 1150	0.1 0.5
<b>15</b> Tu	1503	0.5 15		<b>30</b> W	2011	0.2 6	<b>15</b> F	1216	0.5	<b>30</b> W	1216 1810	0.5 0.2	<b>15</b> F	0547 1200	0.1 0.5	<b>30</b> Su	0547 1150	0.1 0.5
	2159	0.2 6		<b>31</b> Th	0135	0.4 9	<b>15</b> F	1216	0.5	<b>31</b> Th	0135 0629	0.4 0.3	<b>15</b> F	0547 0637	0.1 0.6	<b>31</b> M	0526 1128	0.0 0.5
	0950	0.4 12		<b>31</b> Th	0629	0.3 9	<b>15</b> F	1216	0.5	<b>31</b> Th	0135 1228	0.4 0.5	<b>15</b> F	0547 1128	0.1 0.5	<b>31</b> M	0526 1128	0.0 0.5
<b>16</b> W	1503	0.5 15		<b>31</b> Th	1228	0.5 15	<b>15</b> F	1216	0.5	<b>31</b> Th	1228	0.5	<b>15</b> F	0547 1128	0.1 0.5	<b>31</b> M	0526 1128	0.0 0.5
	2159	0.2 6		<b>31</b> Th	1842	0.2 6	<b>15</b> F	1216	0.5	<b>31</b> Th	1842	0.2 6	<b>15</b> F	0547 1128	0.1 0.5	<b>31</b> M	0526 1128	0.0 0.5
	0950	0.4 12		<b>31</b> Th	1842	0.2 6	<b>15</b> F	1216	0.5	<b>31</b> Th	1842	0.2 6</						

# Papeete Harbor, Tahiti Island, 2008

Times and Heights of High and Low Waters

April					May					June							
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height			
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm		
<b>1</b> Tu	0525	0.0	0	<b>16</b> W	0516	0.0	0	<b>1</b> Th	0457	0.1	3	<b>16</b> F	0506	0.1	3		
	1124	0.6	18	1112	0.7	21	1045	0.6	18	1058	0.7	21	1058	0.7	21		
	1707	0.0	0	1706	-0.1	-3	1634	0.0	0	1701	0.0	0	1708	0.0	0		
	2317	0.8	24	2321	0.9	27	2256	0.9	27	2320	0.8	24	2332	0.8	24		
<b>2</b> W	0534	-0.1	-3	<b>17</b> Th	0534	-0.1	-3	<b>2</b> F	0513	0.0	0	<b>17</b> Sa	0529	0.0	0		
	1130	0.7	21	1130	0.8	24	1101	0.7	21	1122	0.7	21	1133	0.7	21		
	1718	0.0	0	1728	-0.1	-3	1658	0.0	0	1728	-0.1	-3	1747	-0.1	-3		
	2333	0.9	27	2344	0.9	27	2320	0.9	27	2344	0.8	24	1826	-0.1	-3		
<b>3</b> Th	0547	-0.1	-3	<b>18</b> F	0553	-0.1	-3	<b>3</b> Sa	0533	0.0	0	<b>18</b> Su	0552	0.0	0		
	1141	0.8	24	1148	0.8	24	1122	0.8	24	1146	0.7	21	1209	0.8	24		
	1735	-0.1	-3	1750	-0.1	-3	1725	-0.1	-3	1754	-0.1	-3	1826	-0.1	-3		
	2351	1.0	30				2346	1.0	30				●	1856	-0.1	-3	
<b>4</b> F	0603	-0.1	-3	<b>19</b> Sa	0005	0.9	27	<b>4</b> Su	0554	0.0	0	<b>19</b> M	0008	0.8	24		
	1156	0.9	27	0611	-0.1	-3	1145	0.8	24	0614	0.0	0	1247	0.8	24		
	1754	-0.2	-6	1206	0.9	27	1754	-0.2	-6	1210	0.7	21	1905	-0.1	-3		
				1811	-0.2	-6				1819	-0.1	-3				1925	-0.1	-3
<b>5</b> Sa	0012	1.0	30	<b>20</b> Su	0025	0.9	27	<b>5</b> M	0012	0.9	27	<b>20</b> Tu	0030	0.7	21		
	0621	-0.1	-3	0629	-0.1	-3	0617	0.0	0	0636	0.0	0	0712	0.7	21		
	1213	0.9	27	1224	0.8	24	1212	0.8	24	1235	0.7	21	1326	0.8	24		
	●	1816	-0.2	1832	-0.2	-6	●	1824	-0.2	-6	1844	-0.1	-3	1946	-0.1	-3	
<b>6</b> Su	0033	1.0	30	<b>21</b> M	0043	0.9	27	<b>6</b> Tu	0039	0.9	27	<b>21</b> W	0053	0.7	21		
	0639	-0.1	-3	0645	-0.1	-3	0642	0.0	0	0657	0.0	0	0746	0.0	0		
	1232	0.9	27	1241	0.8	24	1240	0.8	24	1300	0.6	18	1408	0.7	21		
	1840	-0.2	-6	1851	-0.1	-3	1855	-0.1	-3	1909	0.0	0	2028	0.0	0		
<b>7</b> M	0056	1.0	30	<b>22</b> Tu	0100	0.8	24	<b>7</b> W	0107	0.8	24	<b>22</b> Th	0115	0.6	18		
	0659	-0.1	-3	0701	0.0	0	0707	0.0	0	0718	0.0	0	0822	0.0	0		
	1253	0.9	27	1259	0.7	21	1311	0.8	24	1326	0.6	18	1453	0.7	21		
	1904	-0.2	-6	1908	-0.1	-3	1929	-0.1	-3	1936	0.0	0	2115	0.1	3		
<b>8</b> Tu	0119	0.9	27	<b>23</b> W	0116	0.7	21	<b>8</b> Th	0135	0.7	21	<b>23</b> F	0137	0.5	15		
	0718	0.0	0	0716	0.0	0	0733	0.0	0	0739	0.0	0	0903	0.1	3		
	1315	0.8	24	1316	0.7	21	1345	0.7	21	1355	0.6	18	1548	0.6	18		
	1929	-0.1	-3	1925	0.0	0	2005	0.0	0	2006	0.1	3	2211	0.2	6		
<b>9</b> W	0140	0.8	24	<b>24</b> Th	0129	0.6	18	<b>9</b> F	0203	0.5	15	<b>24</b> Sa	0159	0.5	15		
	0736	0.0	0	0728	0.0	0	0759	0.1	3	0801	0.1	3	0804	0.1	3		
	1337	0.8	24	1331	0.6	18	1423	0.6	18	1429	0.5	15	1521	0.7	21		
	1954	-0.1	-3	1940	0.0	0	2048	0.1	3	2042	0.2	6	2132	0.2	6		
<b>10</b> Th	0158	0.6	18	<b>25</b> F	0137	0.5	15	<b>10</b> Sa	0231	0.4	12	<b>25</b> Su	0222	0.4	12		
	0750	0.1	3	0734	0.1	3	0826	0.1	3	0824	0.1	3	0955	0.2	6		
	1357	0.7	21	1345	0.5	15	1518	0.5	15	1516	0.5	15	1706	0.6	18		
	2016	0.1	3	1949	0.1	3	2208	0.2	6	2138	0.3	9	2323	0.4	12		
<b>11</b> F	0206	0.5	15	<b>26</b> Sa	0132	0.4	12	<b>11</b> Su	0300	0.3	9	<b>26</b> W	0159	0.3	9		
	0750	0.1	3	0727	0.1	3	0853	0.2	6	0856	0.2	6	0955	0.2	6		
	1408	0.5	15	1350	0.4	12	1840	0.5	15	1650	0.5	15	1706	0.6	18		
	2023	0.2	6	1936	0.2	6	●			2050	0.6	18	2323	0.4	12		
<b>12</b> Sa	0120	0.4	12	<b>27</b> Su	0040	0.4	12	<b>12</b> M	0324	0.2	6	<b>27</b> Tu	1029	0.3	9		
	0651	0.2	6	0641	0.2	6	0915	0.4	12	1947	0.5	15	0900	0.5	15		
	1320	0.4	12	1313	0.4	12	1406	0.3	9	●			1506	0.2	6		
	●	1759	0.3	1734	0.3	9	2103	0.6	18				2154	0.6	18		
<b>13</b> Su	0501	0.2	6	<b>28</b> M	0516	0.2	6	<b>13</b> Tu	0351	0.2	6	<b>28</b> W	0330	0.3	9		
	1112	0.4	12	1120	0.4	12	0942	0.5	15	0830	0.4	12	0958	0.5	15		
	1618	0.2	6	1558	0.3	9	1518	0.2	6	1346	0.3	9	1605	0.1	3		
	2216	0.6	18	●	2208	0.5	15	2149	0.7	21	2103	0.6	18	2237	0.7	21	
<b>14</b> M	0447	0.1	3	<b>29</b> Tu	0444	0.1	3	<b>14</b> W	0417	0.1	3	<b>29</b> Th	0354	0.3	9		
	1050	0.5	15	1038	0.5	15	1008	0.6	18	0918	0.5	15	1040	0.6	18		
	1624	0.1	3	1556	0.2	6	1558	0.1	3	1500	0.2	6	1648	0.1	3		
	2235	0.7	21	2216	0.7	21	2224	0.8	24	2148	0.7	21	2311	0.7	21		
<b>15</b> Tu	0458	0.0	0	<b>30</b> W	0445	0.1	3	<b>15</b> Th	0442	0.1	3	<b>30</b> F	0419	0.2	6		
	1058	0.6	18	1035	0.6	18	1033	0.6	18	0952	0.5	15	1115	0.6	18		
	1644	0.0	0	1612	0.1	3	1631	0.0	0	1548	0.1	3	1724	0.0	0		
	2258	0.8	24	2234	0.8	24	2253	0.8	24	2225	0.8	24	2342	0.7	21		
<b>31</b> Sa 1025 1629 2259																	
<b>31</b> Sa 1025 1629 2259																	

Time meridian 150° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
 Heights are referred to mean lower low water which is the chart datum of soundings.

# Papeete Harbor, Tahiti Island, 2008

Times and Heights of High and Low Waters

July			August			September											
Time	Height		Time	Height		Time	Height		Time	Height							
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm						
<b>1</b> Tu 1144 1802	0.7 -0.1	21 -3	<b>16</b> W 0623 1227 1836	0.6 0.6 -0.1	18 -3	<b>1</b> F 0639 1254 1909	0.7 0.9 -0.2	21 -3 -6	<b>16</b> Sa 0638 1251 1901	0.8 0.9 -0.1	24 -3	<b>1</b> M 0704 1319 1922	0.9 1.0 -0.1	27 -6 -3	<b>16</b> Tu 0642 1259 1904	0.9 1.0 -0.1	27 -6 -3
<b>2</b> W 1222 ● 1841	0.7 -0.1	21 -3	<b>17</b> Th 0642 1250 1900	0.6 0.7 -0.1	18 -3	<b>2</b> Sa 0705 1322 1934	0.8 0.9 -0.1	24 -6 -3	<b>17</b> Su 0655 1311 1920	0.8 1.0 -0.1	24 -6 -3	<b>2</b> Tu 0725 1339 1938	0.9 0.9 0.0	27 -6 0	<b>17</b> W 1320 1921	0.9 0.0	27 0
<b>3</b> Th 0646 1259 1917	0.7 0.8 -0.1	21 -3	<b>18</b> F 0701 1313 1924	0.7 0.8 -0.1	21 -3	<b>3</b> Su 0731 1350 1957	0.8 0.9 -0.1	24 -6 -3	<b>18</b> M 0713 1331 1938	0.8 1.0 0.0	24 -6 0	<b>3</b> W 0744 1356 1950	0.8 0.8 0.0	24 -6 0	<b>18</b> Th 0724 1339 1937	0.9 0.9 0.0	27 27 0
<b>4</b> F 0717 1335 1952	0.7 0.8 -0.1	21 -3	<b>19</b> Sa 0721 1336 1947	0.7 0.8 -0.1	21 -3	<b>4</b> M 0756 1416 2018	0.8 0.9 0.0	24 -3 0	<b>19</b> Tu 0733 1352 1956	0.8 0.9 0.0	24 -3 0	<b>4</b> Th 0759 1408 1957	0.8 0.7 0.1	24 -3 3	<b>19</b> F 0745 1357 1948	0.8 0.7 0.1	24 -3 3
<b>5</b> Sa 0748 1410 2024	0.7 0.8 -0.1	21 -3	<b>20</b> Su 0741 1400 2009	0.7 0.8 -0.1	21 -3	<b>5</b> Tu 0820 1439 2036	0.8 0.8 0.1	24 -3 3	<b>20</b> W 0753 1414 2013	0.8 0.9 0.1	24 -3 3	<b>5</b> F 0808 1411 1955	0.7 0.6 0.1	21 18 3	<b>20</b> Sa 0803 1407 1949	0.7 0.6 0.2	21 18 6
<b>6</b> Su 0820 1445 2056	0.7 0.8 -0.1	21 -3	<b>21</b> M 0801 1425 2032	0.7 0.8 -0.1	21 -3	<b>6</b> W 0842 1459 2049	0.7 0.7 0.2	21 -21 6	<b>21</b> Th 0814 1434 2027	0.8 0.8 0.2	24 -24 6	<b>6</b> Sa 0804 1354 1930	0.6 0.5 0.2	18 15 6	<b>21</b> Su 0809 1348 1913	0.6 0.4 0.2	18 12 6
<b>7</b> M 0852 1521 2126	0.7 0.7 0.2	21 -3 6	<b>22</b> Tu 0824 1451 2054	0.7 0.8 -0.1	21 -3	<b>7</b> Th 0859 1513 2051	0.7 0.6 0.2	21 -3 6	<b>22</b> F 0834 1452 2033	0.7 0.6 0.2	21 -3 6	<b>7</b> Su 0728 1256 1832	0.5 0.4 0.2	15 12 6	<b>22</b> M 0712 1146 1832	0.5 0.4 0.2	15 12 6
<b>8</b> Tu 0924 1558 2156	0.6 0.7 -0.3	18 -3 9	<b>23</b> W 0848 1518 2116	0.7 0.8 -0.2	21 -3	<b>8</b> F 0905 1510 2023	0.6 0.5 0.3	18 -15 9	<b>23</b> Sa 0848 1456 2011	0.6 0.5 0.3	18 -15 9	<b>8</b> M 0616 1148 1744	0.4 0.4 0.1	12 12 15	<b>23</b> Tu 1036 1657 2307	0.5 0.1 0.5	15 13 15
<b>9</b> W 0959 1642 ● 2230	0.6 0.6 -0.3	18 -3 9	<b>24</b> Th 0913 1549 2136	0.1 0.7 -0.3	21 -3	<b>9</b> Sa 0832 1351 1838	0.5 0.4 0.3	15 -12 9	<b>24</b> Su 0831 1332 1811	0.5 0.3 0.2	15 -12 6	<b>9</b> Tu 1122 1730 2333	0.1 0.0 0.5	3 0 15	<b>24</b> W 1041 1703 2307	0.1 0.0 0.6	3 0 18
<b>10</b> Th 1044 1813	0.5 0.2 -0.5	15 6 15	<b>25</b> F 0942 1630 ● 2149	0.2 0.5 -0.4	18 -12 12	<b>10</b> Su 0942 1630 2149	0.6 0.5 0.4	18 -6 12	<b>25</b> M 0643 1157 1741	0.4 0.4 0.2	15 -12 6	<b>10</b> W 1122 1733 2335	0.0 -0.1 0.6	0 -3 18	<b>25</b> Th 1100 1719 2319	0.0 -0.1 0.7	0 -3 21
<b>11</b> F 0313 1342 2225	0.3 0.3 -0.5	9 9 15	<b>26</b> Sa 1022 2329	0.2 0.5 -0.5	15 -15 15	<b>11</b> M 1137 1740 2348	0.5 0.1 0.5	15 -3 15	<b>26</b> Tu 1103 1722 2333	0.2 0.0 0.6	18 -3 18	<b>11</b> Th 1131 1743 2344	0.0 -0.1 0.7	0 -3 21	<b>26</b> F 1122 1737 2335	-0.1 -0.1 0.8	-3 -3 24
<b>12</b> Sa 1016 1626 2305	0.3 0.4 -0.5	9 6 15	<b>27</b> Su 0958 1620 2312	0.4 0.2 -0.5	12 -6 15	<b>12</b> Tu 1144 1751 2357	0.6 0.0 0.6	18 -3 18	<b>27</b> W 1121 1740 2346	0.7 -0.1 0.7	21 -3 21	<b>12</b> F 1145 1757 2356	-0.1 -0.1 0.8	-3 -3 24			
<b>13</b> Su 1106 1712 2332	0.2 0.1 -0.6	6 3 18	<b>28</b> M 1051 1709 2332	0.5 0.1 -0.6	15 -3 18	<b>13</b> W 1158 1807	0.7 -0.1 -0.1	21 -3 -3	<b>28</b> Th 1145 1802 1844	0.9 -0.2 -0.2	27 -3 -6	<b>13</b> Sa 1202 1813 ●	0.9 -0.1 -0.1	27 -3 -3			
<b>14</b> M 1137 1744 2356	0.1 0.0 -0.6	3 0 18	<b>29</b> Tu 1124 1742 2355	0.6 0.0 -0.6	18 -3 18	<b>14</b> Th 1214 1824	0.7 -0.1 -0.1	21 -3 -3	<b>29</b> F 1209 1823	0.9 -0.2 -0.2	27 -3 -6	<b>14</b> Su 1220 1830	0.8 -0.1 -0.1	27 -3 -3			
<b>15</b> Tu 1203 1811	0.0 0.6 -0.0	0 18 0	<b>30</b> W 1154 1813	0.7 -0.1 -3	0 -3	<b>15</b> F 0622 1232 1842	0.7 0.8 -0.2	21 -24 -6	<b>30</b> Sa 0619 1234 1844	0.8 1.0 -0.2	24 -30 -6	<b>15</b> M 0623 1239 1847	0.9 1.0 -0.1	27 -30 -3			
			<b>31</b> Th 0614 1225 1842	0.7 0.8 -0.2	21 -24 -6				<b>31</b> Su 0641 1257 1904	0.9 1.0 -0.1	27 -30 -3						

Time meridian 150° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
 Heights are referred to mean lower low water which is the chart datum of soundings.

# Papeete Harbor, Tahiti Island, 2008

Times and Heights of High and Low Waters

October					November					December					
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height	
<b>1</b> W	0044	0.9	27	<b>16</b>	0030	0.9	27	<b>1</b>	0100	0.7	21	<b>16</b>	0124	0.7	21
	0654	-0.2	-6	Th	0640	-0.2	-6	Sa	0710	0.0	0	Su	0742	0.0	0
	1305	0.9	27		1254	0.9	27		1311	0.6	18		1341	0.6	18
	1903	0.0	0		1855	0.0	0		1910	0.0	0		1939	0.0	0
<b>2</b> Th	0059	0.8	24	<b>17</b>	0051	0.8	24	<b>2</b>	0117	0.6	18	<b>2</b>	0202	0.6	18
	0711	-0.1	-3	F	0705	-0.1	-3	Su	0725	0.0	0	M	0823	0.1	3
	1319	0.8	24		1316	0.8	24		1319	0.5	15		1410	0.5	15
	1915	0.0	0		1913	0.0	0		1918	0.1	3		2007	0.1	3
<b>3</b> F	0112	0.7	21	<b>18</b>	0114	0.8	24	<b>3</b>	0132	0.5	15	<b>3</b>	0252	0.6	18
	0725	-0.1	-3	Sa	0730	-0.1	-3	M	0735	0.1	3	W	0926	0.2	6
	1328	0.6	18		1335	0.6	18		1313	0.4	12		1441	0.4	12
	1922	0.0	0		1929	0.1	3		1912	0.1	3		2041	0.2	6
<b>4</b> Sa	0121	0.6	18	<b>19</b>	0136	0.7	21	<b>4</b>	0138	0.4	12	<b>4</b>	0454	0.5	15
	0733	0.0	0	Su	0754	0.1	3	Tu	0719	0.3	9	W	1450	0.2	6
	1329	0.5	15		1346	0.5	15		1218	0.4	12		2014	0.3	9
	1921	0.1	3		1934	0.1	3		1824	0.2	6	O			
<b>5</b> Su	0122	0.5	15	<b>20</b>	0154	0.5	15	<b>5</b>	0057	0.4	12	<b>5</b>	0042	0.2	6
	0728	0.1	3	M	0811	0.2	6	W	0504	0.3	9	F	1614	0.2	6
	1312	0.4	12		1317	0.4	12		1018	0.4	12	Sa	2004	0.3	9
	1900	0.1	3		1853	0.2	6	O	1657	0.2	6		2115	0.4	12
<b>6</b> M	0103	0.5	15	<b>21</b>	0135	0.4	12	<b>6</b>	0337	0.3	9	<b>6</b>	0246	0.2	6
	0652	0.2	6	Tu	0610	0.3	9	Th	0950	0.5	15	F	0925	0.7	21
	1217	0.4	12		0959	0.4	12		1627	0.2	6	Sa	1557	0.2	6
	1808	0.1	3	O	1643	0.2	6		2259	0.4	12		2145	0.5	15
<b>7</b> Tu	0011	0.4	12	<b>22</b>	0342	0.3	9	<b>7</b>	0338	0.2	6	<b>7</b>	0334	0.1	3
	0536	0.2	6	W	0944	0.6	18	F	0959	0.7	21	Sa	1003	0.8	24
	1110	0.4	12		1620	0.1	3		1628	0.1	3		1624	0.1	3
	1719	0.1	3		2222	0.5	15		2218	0.5	15		2213	0.6	18
<b>8</b> W	0449	0.2	6	<b>23</b>	0352	0.2	6	<b>8</b>	0355	0.1	3	<b>8</b>	0411	0.1	3
	1044	0.5	15	Th	1006	0.7	21	Sa	1017	0.8	24	M	1036	0.8	24
	1701	0.0	0		1632	0.0	0		1640	0.1	3	Su	1650	0.1	3
	2301	0.5	15		2230	0.6	18		2228	0.6	18		2240	0.7	21
<b>9</b> Th	0438	0.1	3	<b>24</b>	0414	0.1	3	<b>9</b>	0416	0.1	3	<b>9</b>	0444	0.0	0
	1045	0.7	21	F	1031	0.8	24	Su	1038	0.9	27	M	1105	0.8	24
	1702	0.0	0		1650	0.0	0		1656	0.0	0	Tu	1714	0.0	0
	2301	0.6	18		2246	0.7	21		2243	0.7	21		2306	0.7	21
<b>10</b> F	0444	0.0	0	<b>25</b>	0439	0.0	0	<b>10</b>	0439	0.0	0	<b>10</b>	0513	-0.1	-3
	1055	0.8	24	Sa	1056	0.9	27	M	1102	0.9	27	Tu	1131	0.8	24
	1712	-0.1	-3		1710	0.0	0		1715	0.0	0		1738	0.0	0
	2308	0.7	21		2304	0.8	24		2303	0.8	24		2332	0.7	21
<b>11</b> Sa	0456	0.0	0	<b>26</b>	0504	-0.1	-3	<b>11</b>	0505	-0.1	-3	<b>11</b>	0541	-0.1	-3
	1111	0.9	27	Su	1120	1.0	30	Tu	1126	0.9	27	W	1155	0.8	24
	1726	-0.1	-3		1730	-0.1	-3		1735	0.0	0		1801	0.0	0
	2320	0.8	24		2324	0.8	24		2326	0.8	24		2358	0.7	21
<b>12</b> Su	0513	-0.1	-3	<b>27</b>	0528	-0.1	-3	<b>12</b>	0533	-0.1	-3	<b>12</b>	0608	-0.1	-3
	1129	1.0	30	M	1143	1.0	30	W	1152	0.9	27	Th	1219	0.7	21
	1741	-0.1	-3		1750	-0.1	-3		1758	0.0	0		1823	0.0	0
	2334	0.8	24		2344	0.9	27	O	2352	0.8	24				
<b>13</b> M	0532	-0.1	-3	<b>28</b>	0551	-0.2	-6	<b>13</b>	0602	-0.2	-6	<b>13</b>	0023	0.7	21
	1149	1.0	30	Tu	1205	0.9	27	Th	1218	0.9	27	F	0633	-0.1	-3
	1759	-0.1	-3		1808	-0.1	-3		1821	-0.1	-3	Sa	1241	0.7	21
	2351	0.9	27	O					1844	-0.1	-3		1855	-0.1	-3
<b>14</b> Tu	0553	-0.2	-6	<b>29</b>	0004	0.8	24	<b>14</b>	0020	0.8	24	<b>14</b>	0108	0.8	24
	1211	1.0	30	W	0613	-0.2	-6	F	0634	-0.1	-3	Sa	0659	-0.1	-3
	1817	-0.1	-3		1225	0.9	27		1245	0.8	24		1303	0.6	18
	O				1826	-0.1	-3		1846	-0.1	-3		1906	0.0	0
<b>15</b> W	0009	0.9	27	<b>30</b>	0023	0.8	24	<b>15</b>	0050	0.8	24	<b>15</b>	0146	0.8	24
	0616	-0.2	-6	Th	0633	-0.1	-3	Sa	0707	-0.1	-3	Tu	0725	-0.1	-3
	1232	1.0	30		1242	0.8	24		1313	0.7	21		1327	0.7	21
	1836	-0.1	-3		1843	0.0	0		1912	0.0	0		1926	-0.1	-3
<b>31</b> F	0042	0.7	21	<b>31</b>	0653	-0.1	-3	<b>14</b>	0049	0.7	21	<b>14</b>	0132	0.7	21
	0653	-0.1	-3		1258	0.7	21	Sa	0659	-0.1	-3	M	0741	-0.1	-3
	1258	0.7	21		1858	0.0	0		1858	0.0	0	Tu	1339	0.6	18
	1858	0.0	0										1400	0.6	18

Time meridian 150° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to mean lower low water which is the chart datum of soundings.

# Apia, Samoa Islands, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0144	2.3	70	16 W 0107	2.6	79	1 F 0304	2.2	67	1 Sa 0229	2.2	67
0815	0.8	24	W 0733	0.5	15	F 0920	0.8	24	Sa 0846	0.9	27
1419	2.6	79	1344	3.0	91	F 1519	2.7	82	1442	2.7	82
2104	0.8	24	2032	0.4	12	2210	0.6	18	2135	0.6	18
2 W 0241	2.3	70	17 Th 0219	2.6	79	2 Sa 0351	2.3	70	2 0318	2.4	73
0904	0.8	24	0841	0.4	12	Sa 1002	0.7	21	17 Su 0418	2.8	85
1507	2.7	82	1450	3.2	98	1601	2.9	88	0931	0.2	6
2153	0.7	21	2136	0.2	6	2248	0.4	12	1634	3.4	104
3 Th 0331	2.3	70	18 F 0326	2.7	82	M 1117	0.1	3	2211	-0.1	-3
0947	0.7	21	0941	0.3	9	1040	0.6	18	1721	3.5	107
1549	2.8	85	1550	3.4	104	1639	3.1	94	2354	-0.1	-3
2235	0.6	18	2233	0.0	0	2322	0.3	9	2247	0.3	9
4 F 0415	2.4	73	19 Sa 0425	2.8	85	4 M 0507	2.6	79	3 0358	2.6	79
1027	0.7	21	1037	0.2	6	1116	0.4	12	18 M 0506	3.0	91
1628	3.0	91	1644	3.5	107	1717	3.2	98	1011	0.6	18
2314	0.4	12	2324	-0.2	-6	2355	0.1	3	1608	3.1	94
5 Sa 0454	2.5	76	20 Su 0517	2.9	88	Tu 1201	0.0	0	2247	0.3	9
1104	0.6	18	1128	0.0	0	1803	3.5	107	1101	0.2	6
1705	3.1	94	1734	3.6	110	Tu 1754	0.3	104	1702	3.3	101
2350	0.3	9	Tu 1754	3.4	104	W 0628	3.1	94	2329	0.0	0
6 Su 0532	2.6	79	21 M 0012	-0.2	-6	O 1843	3.4	104	2006	0.1	3
1140	0.5	15	0605	3.0	91	6 W 0029	0.0	0	0601	3.2	98
1741	3.2	98	1216	0.0	0	620	2.9	88	1222	0.2	6
			1821	3.6	110	1228	0.2	6	1817	3.2	98
7 M 0024	0.2	6	22 Tu 0057	-0.2	-6	● 1832	3.4	104	21 F 0041	0.2	6
0609	2.6	79	0651	3.1	94	21 W 0029	0.0	0	0636	3.2	98
1215	0.5	15	1302	0.0	0	7 Th 0706	3.1	94	1300	0.2	6
1818	3.3	101	○ 1905	3.6	110	744	0.1	3	1852	3.1	94
8 Tu 0058	0.2	6	23 W 0141	-0.2	-6	1405	0.3	9	22 M 0115	0.3	9
0646	2.7	82	0735	3.0	91	1912	3.4	104	0630	3.4	104
1251	0.4	12	1348	0.1	3	226 Sa 0149	0.1	3	0711	3.1	94
● 1856	3.3	101	1949	3.4	104	0822	3.0	91	1338	0.4	12
9 W 0133	0.2	6	24 Th 0223	0.0	0	23 Sa 0147	0.5	15	1928	2.9	88
0724	2.8	85	0818	3.0	91	0902	2.8	85	23 F 0148	0.4	12
1328	0.4	12	1434	0.3	9	1532	0.7	21	0746	3.0	91
1935	3.3	101	2031	3.2	98	2118	2.6	79	1418	0.5	15
10 Th 0209	0.2	6	25 F 0306	0.2	6	2037	2.8	85	2005	2.7	82
0804	2.8	85	0901	2.9	88	2226	0.3	9	23 M 0223	0.6	18
1408	0.4	12	1521	0.4	12	2112	3.4	104	0825	2.9	88
2017	3.2	98	2114	2.9	88	2040	3.2	98	1501	0.7	21
11 F 0248	0.2	6	26 Sa 0350	0.4	12	2040	3.2	98	2045	2.5	76
0847	2.8	85	0946	2.7	82	2229	2.7	82	25 Th 0345	1.0	30
1454	0.4	12	1613	0.6	18	2229	2.7	82	0955	2.7	82
2102	3.1	94	2159	2.6	79	2232	1.0	30	1651	1.0	30
12 Sa 0331	0.3	9	27 Su 0436	0.6	18	2301	2.2	67	2227	2.2	67
0935	2.8	85	1034	2.6	79	2332	2.5	76	27 F 0443	1.1	34
1546	0.5	15	1711	0.8	24	27 W 0451	0.5	15	1051	2.6	79
2153	3.0	91	2250	2.4	73	1136	2.5	76	1801	1.0	30
13 Su 0420	0.4	12	28 M 0529	0.8	24	1847	1.0	30	2333	2.1	64
1028	2.8	85	1129	2.5	76	27 Th 0532	1.0	30	27 F 0443	1.1	34
1648	0.6	18	1819	0.9	27	1243	2.5	76	1049	3.1	94
2250	2.8	85	2348	2.2	67	1956	0.9	27	1741	0.5	15
14 M 0517	0.5	15	● O 0628	0.9	27	2051	0.8	24	2332	2.5	76
1128	2.8	85	1230	2.5	76	2026	0.4	12	2049	0.7	21
1801	0.6	18	Tu 1930	0.9	27	1332	3.0	91	31 M 0234	2.5	76
2355	2.6	79	● O			1348	2.6	79	0853	0.8	24
15 Tu 0623	0.5	15	30 Th 0056	2.1	64	2026	0.4	12	1446	2.9	88
1235	2.9	88	0731	0.9	27	2051	0.8	24	2129	0.5	15
1919	0.5	15	1333	2.5	76	2130	0.2	6	2049	0.7	21
● O			2034	0.9	27	2115	0.3	9	31 M 0234	2.5	76
31 Th 0205	2.1	64	31 Th 0830	0.9	27	2115	0.3	9	0853	0.8	24
			1431	2.6	79				1446	2.9	88
			2127	0.7	21				2129	0.5	15

Time meridian 165° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Apia, Samoa Islands, 2008

Times and Heights of High and Low Waters

April				May				June			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0318	2.7	82	16 W 0422	3.0	91	1 Th 0322	3.1	94	1 Su 0435	3.4	104
0936	0.6	18	1042	0.3	9	0948	0.2	6	1112	-0.2	-6
1531	3.1	94	1637	3.0	91	1543	3.1	94	1706	2.9	88
2206	0.3	9	2301	0.2	6	2206	0.1	3	2318	-0.1	-3
2 W 0359	3.0	91	17 Th 0459	3.1	94	2 F 0408	3.3	101	2 M 0527	3.5	107
1017	0.3	9	1122	0.3	9	1035	0.0	0	1205	-0.3	-9
1615	3.3	101	1715	3.0	91	1632	3.2	98	1800	3.0	91
2243	0.1	3	2336	0.3	9	2251	0.0	0	2341	0.4	12
3 Th 0439	3.2	98	18 F 0533	3.1	94	3 Sa 0455	3.5	107	17 Tu 0011	-0.1	-3
1059	0.1	3	1201	0.3	9	1124	-0.1	-3	0620	3.6	110
1658	3.4	104	1750	2.9	88	1721	3.2	98	1259	-0.4	-12
2321	0.0	0				2336	-0.1	-3	1854	2.9	88
4 F 0521	3.4	104	19 Sa 0010	0.3	9	4 Su 0543	3.6	110	4 W 0104	-0.1	-3
1142	0.0	0	0606	3.1	94	1215	-0.2	-6	0713	3.5	107
1743	3.4	104	1238	0.3	9	1812	3.2	98	1354	-0.4	-12
			O 1825	2.8	85				1949	2.9	88
5 Sa 0001	0.0	0	20 Su 0042	0.4	12	5 M 0024	0.0	0	5 Th 0200	0.0	0
0604	3.6	110	0641	3.1	94	0633	3.7	113	0807	3.4	104
1228	-0.1	-3	1316	0.4	12	1307	-0.2	-6	1450	-0.3	-9
1828	3.4	104	1901	2.7	82	1904	3.1	94	2046	2.8	85
6 Su 0044	0.0	0	21 M 0116	0.5	15	6 Tu 0116	0.0	0	6 F 0258	0.1	3
0650	3.6	110	0716	3.0	91	0725	3.6	110	0903	3.3	101
1317	-0.1	-3	1355	0.5	15	1403	-0.2	-6	1547	-0.2	-6
1917	3.3	101				2000	3.0	91	2144	2.7	82
7 M 0130	0.1	3	22 Tu 0150	0.7	21	7 W 0211	0.1	3	7 Sa 0359	0.2	6
0739	3.6	110	0755	3.0	91	0820	3.5	107	1001	3.1	94
1410	0.0	0	1437	0.6	18	1503	-0.1	-3	1646	0.0	0
2009	3.1	94	2021	2.5	76	2059	2.8	85	2244	2.6	79
8 Tu 0222	0.2	6	23 W 0228	0.8	24	8 Th 0312	0.3	9	8 Su 0503	0.3	9
0832	3.5	107	0836	2.8	85	0919	3.3	101	1100	2.8	85
1510	0.1	3	1524	0.7	21	1607	0.1	3	1745	0.1	3
2106	2.9	88	2107	2.3	70	2202	2.7	82	2346	2.5	76
9 W 0321	0.4	12	24 Th 0312	0.9	27	9 F 0418	0.4	12	9 M 0609	0.4	12
0931	3.3	101	0922	2.7	82	1023	3.1	94	1202	2.6	79
1618	0.3	9	1617	0.8	24	1714	0.2	6	1844	0.2	6
2212	2.7	82	2159	2.2	67	2311	2.6	79	2221	2.3	70
10 Th 0429	0.6	18	25 F 0405	1.0	30	10 Sa 0529	0.5	15	10 Tu 0426	0.8	24
1038	3.1	94	1014	2.7	82	1130	3.0	91	0714	0.5	15
1732	0.4	12	1715	0.8	24	1820	0.2	6	1304	2.5	76
2326	2.6	79	2257	2.2	67				1939	0.3	9
11 F 0546	0.7	21	26 Sa 0508	1.1	34	11 M 0020	2.6	79	11 W 0145	2.5	76
1151	3.0	91	1111	2.6	79	0639	0.5	15	0815	0.5	15
1846	0.4	12	1813	0.8	24	1238	2.9	88	1403	2.4	73
			2358	2.3	70	1922	0.3	9	2031	0.4	12
12 Sa 0043	2.6	79	27 Su 0615	1.0	30	12 M 0125	2.6	79	11 O 0145	2.5	76
0702	0.7	21	1210	2.6	79	0745	0.5	15	0657	0.4	12
1305	3.0	91	1907	0.7	21	1342	2.8	85	1250	2.5	76
1953	0.3	9				2018	0.3	9	1916	0.3	9
13 Su 0154	2.7	82	28 M 0055	2.4	73	13 Tu 0222	2.7	82	27 F 0237	2.6	79
0809	0.6	18	0716	0.9	27	0843	0.4	12	0805	0.4	12
1412	3.0	91	1308	2.7	82	1439	2.7	82	1354	2.5	76
2050	0.3	9	1956	0.6	18	2107	0.3	9	2017	0.2	6
14 M 0253	2.8	85	29 Tu 0148	2.6	79	14 W 0935	0.4	12	27 F 0126	2.7	82
0907	0.4	12	0810	0.7	21	1528	2.7	82	0805	0.3	9
1508	3.1	94	1403	2.8	85	2151	0.3	9	1354	2.5	76
2139	0.2	6	2040	0.4	12						
15 Tu 0341	2.9	88	30 W 0236	2.8	85	15 Th 0353	2.8	85	13 Sa 0322	2.6	79
0957	0.3	9	0900	0.5	15	1021	0.3	9	1000	0.4	12
1556	3.1	94	1454	3.0	91	1611	2.6	79	1454	2.3	70
2222	0.2	6	2123	0.3	9	2230	0.3	9	2200	0.4	12
16 Sa 0343	3.2	98									
17 Sa 1018	-0.1	-3									
18 Sa 1611	2.9	88									
19 Sa 2227	0.0	0									

Time meridian 165° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Apia, Samoa Islands, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0516 0.5 104 1156 -0.4 -12 1749 2.8 85	16 W 0530 2.9 88 1214 0.1 3 1758 2.4 73	1 F 0037 -0.3 -9 0642 3.4 104 1316 -0.4 -12 1911 3.0 91	16 Sa 0013 0.1 3 0614 3.2 98 1245 0.0 0 1838 2.8 85	1 M 0147 0.1 3 0742 3.0 91 1408 0.1 3 2005 3.0 91	16 Tu 0105 0.1 3 0708 3.3 101 1323 0.1 3 1930 3.3 101						
2 W 0000 -0.2 -6 0608 3.5 107 1248 -0.5 -15 1842 2.9 88	17 Th 0005 0.3 9 0606 2.9 88 1247 0.0 0 1834 2.4 73	2 Sa 0125 -0.2 -6 0727 3.3 101 1400 -0.3 -9 1956 2.9 88	17 Su 0049 0.1 3 0652 3.2 98 1318 0.0 0 1916 2.9 88	2 Tu 0232 0.3 9 0823 2.8 85 1448 0.4 12 2047 2.8 85	17 W 0152 0.1 3 0754 3.1 94 1407 0.2 6 2017 3.3 101						
3 Th 0053 -0.2 -6 0659 3.5 107 1338 -0.5 -15 1933 2.9 88	18 F 0040 0.2 6 0642 3.0 91 1320 0.0 0 1910 2.5 76	3 Su 0213 -0.1 -3 0812 3.1 94 1445 -0.1 -3 2041 2.8 85	18 M 0127 0.1 3 0732 3.1 94 1354 0.0 0 1956 2.9 88	3 W 0320 0.5 15 0907 2.5 18 1532 0.6 18 2133 2.7 82	18 Th 0245 0.2 6 0845 2.9 88 1457 0.4 12 2111 3.2 98						
4 F 0145 -0.2 -6 0750 3.4 104 1429 -0.4 -12 2024 2.8 85	19 Sa 0115 0.2 6 0719 3.0 91 1354 0.0 0 1947 2.6 79	4 M 0303 0.1 3 0858 2.8 85 1530 0.1 3 2128 2.7 82	19 Tu 0210 0.1 3 0815 3.0 91 1433 0.1 3 2041 2.9 88	4 Th 0416 0.7 21 0956 2.3 70 1623 0.8 24 2225 2.5 76	19 F 0348 0.4 12 0945 2.7 82 1559 0.6 18 2214 3.1 94						
5 Sa 0238 -0.1 -3 0840 3.2 98 1519 -0.3 -9 2116 2.7 82	20 Su 0153 0.2 6 0759 2.9 88 1429 0.0 0 2027 2.6 79	5 Tu 0355 0.3 9 0945 2.6 79 1619 0.3 9 2218 2.5 76	20 W 0258 0.2 6 0903 2.8 85 1519 0.2 6 2131 2.9 88	5 F 0522 0.8 24 1054 2.1 64 1725 0.9 27 2326 2.4 73	20 Sa 0503 0.5 15 1055 2.5 76 1714 0.7 21 2326 3.0 91						
6 Su 0333 0.1 3 0931 2.9 88 1611 -0.1 -3 2208 2.6 79	21 M 0234 0.2 6 0841 2.8 85 1507 0.1 3 2111 2.6 79	6 W 0454 0.5 15 1036 2.3 70 1712 0.5 15 2313 2.4 73	21 Th 0357 0.3 9 0958 2.6 79 1614 0.4 12 2230 2.8 85	6 Sa 0635 0.9 27 1205 2.0 61 1836 1.0 30	21 Su 0623 0.5 15 1213 2.5 76 1835 0.7 21 O						
7 M 0431 0.2 6 1024 2.7 82 1704 0.1 3 2304 2.5 76	22 Tu 0320 0.3 9 0927 2.7 82 1551 0.2 6 2159 2.6 79	7 Th 0601 0.7 21 1136 2.1 64 1812 0.7 21	22 F 0508 0.4 12 1102 2.4 73 1723 0.5 15 2338 2.8 85	7 Su 0033 2.4 73 0742 0.8 24 1320 2.0 61 O 1942 1.0 30	22 M 0042 3.0 91 0737 0.4 12 1331 2.6 79 1949 0.6 18						
8 Tu 0533 0.4 12 1120 2.4 73 1800 0.3 9	23 W 0416 0.4 12 1019 2.6 79 1642 0.3 9 2255 2.6 79	8 F 0014 2.3 70 0712 0.7 21 1244 2.0 61 O 1916 0.7 21	23 Sa 0630 0.5 15 1217 2.3 70 1841 0.5 15 O	8 M 0137 2.5 76 0837 0.7 21 1421 2.2 67 2035 0.9 27	23 Tu 0154 3.1 94 0840 0.3 9 1437 2.7 82 2052 0.4 12						
9 W 0002 2.4 73 0639 0.5 15 1220 2.2 67 O 1857 0.4 12	24 Th 0522 0.4 12 1119 2.4 73 1743 0.3 9 2357 2.6 79	9 Sa 0119 2.3 70 0817 0.7 21 1354 1.9 58 2015 0.7 21	24 Su 0052 2.8 85 0747 0.3 9 1335 2.4 73 1956 0.4 12	9 Tu 0230 2.6 79 0921 0.6 18 1507 2.3 70 2120 0.7 21	24 W 0255 3.2 98 0933 0.1 3 1531 2.9 88 2146 0.3 9						
10 Th 0101 2.4 73 0744 0.5 15 1323 2.1 64 1954 0.5 15	25 F 0638 0.4 12 1228 2.3 70 1852 0.4 12	10 Su 0218 2.4 73 0912 0.6 18 1454 2.0 61 2107 0.7 21	25 M 0204 3.0 91 0854 0.2 6 1445 2.5 76 2101 0.3 9	10 W 0313 2.8 85 0958 0.4 12 1544 2.5 76 2158 0.6 18	25 Th 0348 3.3 101 1020 0.0 0 1618 3.1 94 2234 0.1 3						
11 F 0159 2.4 73 0845 0.5 15 1425 2.0 61 2046 0.5 15	26 Sa 0105 2.7 82 0753 0.3 9 1340 2.3 70 2001 0.3 9	11 M 0307 2.5 76 0957 0.4 12 1540 2.1 64 2150 0.6 18	26 Tu 0307 3.2 98 0950 0.0 0 1544 2.7 82 2157 0.1 3	11 Th 0352 3.0 91 1031 0.3 9 1619 2.7 82 2234 0.4 12	26 F 0435 3.4 104 1102 0.0 0 1659 3.2 98 2318 0.1 3						
12 Sa 0251 2.5 76 0938 0.4 12 1519 2.0 61 2133 0.5 15	27 Su 0212 2.9 88 0901 0.1 3 1449 2.4 73 2106 0.2 6	12 Tu 0349 2.7 82 1035 0.3 9 1619 2.3 70 2229 0.5 15	27 W 0402 3.3 101 1040 -0.2 -6 1635 2.9 88 2248 0.0 0	12 F 0430 3.1 94 1103 0.2 6 1654 2.9 88 2309 0.3 9	27 Sa 0517 3.4 104 1142 0.0 0 1738 3.3 101						
13 Su 0337 2.5 76 1023 0.3 9 1605 2.1 64 2216 0.5 15	28 M 0315 3.1 94 1001 -0.1 -3 1551 2.6 79 2204 0.0 0	13 W 0426 2.8 85 1109 0.2 6 1654 2.4 73 2304 0.3 9	28 Th 0452 3.4 104 1125 -0.3 -9 1720 3.0 91 2335 -0.1 -3	13 Sa 0507 3.3 101 1135 0.1 3 1730 3.1 94 2345 0.1 3	28 F 0000 0.1 3 0556 3.3 101 1219 0.1 3 O 1816 3.3 101						
14 M 0417 2.7 82 1103 0.2 6 1645 2.2 67 2254 0.4 12	29 Tu 0413 3.3 101 1054 -0.3 -9 1646 2.7 82 2258 -0.1 -3	14 Th 0502 3.0 91 1141 0.1 3 1728 2.6 79 2339 0.2 6	29 F 0537 3.5 107 1208 -0.3 -9 1803 3.1 94	14 Su 0545 3.3 101 1209 0.0 0 1807 3.2 98 O	29 M 0041 0.2 6 0634 3.1 94 1256 0.3 9 1853 3.2 98						
15 Tu 0454 2.8 85 1140 0.1 3 1722 2.3 70 2331 0.3 9	30 W 0505 3.4 104 1144 -0.4 -12 1737 2.9 88 2349 -0.2 -6	15 F 0538 3.1 94 1213 0.0 0 1803 2.7 82	30 Sa 0019 -0.1 -3 0620 3.4 104 1248 -0.2 -6 O 1844 3.1 94	15 M 0024 0.1 3 0625 3.3 101 1244 0.0 0 1847 3.3 101	30 Tu 0122 0.3 9 0712 3.0 91 1332 0.4 12 1931 3.1 94						
		31 Th 0555 3.5 107 1230 -0.5 -15 1825 2.9 88	31 Su 0103 -0.1 -3 0701 3.2 98 1328 -0.1 -3 1924 3.1 94								

Time meridian 165° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Apia, Samoa Islands, 2008

Times and Heights of High and Low Waters

October					November					December						
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height		
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm	
<b>1</b> W	0204	0.5	15	<b>16</b> Th	0140	0.1	3	<b>1</b> Sa	0313	0.8	24	<b>16</b> Su	0331	0.2	6	
	0752	2.8	85		0739	3.2	98		0855	2.4	73		0927	2.9	88	
	1409	0.6	18		1349	0.3	9		1502	1.0	30		1540	0.5	15	
	2010	3.0	91		2001	3.5	107		2108	2.9	88		2147	3.4	104	
<b>2</b> Th	0250	0.6	18	<b>17</b> F	0237	0.2	6	<b>2</b> Su	0405	0.9	27	<b>17</b> M	0436	0.3	9	
	0834	2.6	79		0835	3.0	91		0947	2.4	73		1033	2.8	85	
	1450	0.8	24		1445	0.5	15		1555	1.1	34		1650	0.6	18	
	2054	2.9	88		2058	3.4	104		2159	2.8	85		2253	3.2	98	
<b>3</b> F	0342	0.8	24	<b>18</b> Sa	0342	0.3	9	<b>3</b> M	0502	0.9	27	<b>18</b> Tu	0543	0.3	9	
	0922	2.4	73		0937	2.8	85		1044	2.3	70		1142	2.8	85	
	1538	1.0	30		1551	0.6	18		1658	1.2	37		1803	0.7	21	
	2143	2.7	82		2202	3.3	101		2255	2.7	82		2302	2.7	82	
<b>4</b> Sa	0444	0.9	27	<b>19</b> Su	0454	0.4	12	<b>4</b> Tu	0600	0.9	27	<b>19</b> W	0002	3.1	94	
	1019	2.2	67		1048	2.7	82		1144	2.3	70		0648	0.4	12	
	1639	1.1	34		1706	0.7	21		1803	1.2	37		1250	2.8	85	
	2240	2.6	79		2313	3.2	98		2353	2.7	82		1912	0.6	18	
<b>5</b> Su	0552	1.0	30	<b>20</b> M	0608	0.5	15	<b>5</b> W	0653	0.9	27	<b>20</b> Th	0109	3.0	91	
	1126	2.2	67		1204	2.7	82		1241	2.5	76		0747	0.4	12	
	1750	1.2	37		1824	0.7	21		1903	1.1	34		1352	2.9	88	
	2344	2.6	79		●				2015	0.6	18		2052	0.6	18	
<b>6</b> M	0657	0.9	27	<b>21</b> Tu	0027	3.1	94	<b>6</b> Th	0050	2.7	82	<b>21</b> Sa	0211	2.9	88	
	1236	2.2	67		0717	0.4	12		0740	0.8	24		0841	0.4	12	
	1858	1.2	37		1316	2.8	85		1332	2.6	79		1446	3.0	91	
	●				●	0.6	18		1956	0.9	27		2112	0.5	15	
<b>7</b> Tu	0047	2.6	79	<b>22</b> W	0136	3.1	94	<b>7</b> F	0143	2.8	85	<b>22</b> Sa	0306	2.9	88	
	0751	0.8	24		0817	0.3	9		0823	0.6	18		0929	0.4	12	
	1335	2.3	70		1419	2.9	88		1418	2.8	85		1533	3.1	94	
	1955	1.0	30		2036	0.5	15		2044	0.7	21		2202	0.4	12	
<b>8</b> W	0143	2.7	82	<b>23</b> Th	0237	3.2	98	<b>8</b> Sa	0233	3.0	91	<b>23</b> Su	0354	2.8	85	
	0835	0.7	21		0910	0.3	9		0904	0.5	15		1012	0.5	15	
	1422	2.5	76		1511	3.0	91		1502	3.1	94		1615	3.1	94	
	2041	0.9	27		2130	0.4	12		2129	0.5	15		2247	0.4	12	
<b>9</b> Th	0231	2.9	88	<b>24</b> F	0329	3.2	98	<b>9</b> Su	0321	3.1	94	<b>24</b> M	0436	2.8	85	
	0913	0.6	18		0956	0.3	9		0945	0.4	12		1051	0.5	15	
	1503	2.7	82		1557	3.2	98		1546	3.3	101		1652	3.2	98	
	2122	0.7	21		2218	0.3	9		2215	0.3	9		2329	0.4	12	
<b>10</b> F	0314	3.0	91	<b>25</b> Sa	0414	3.2	98	<b>10</b> M	0408	3.2	98	<b>25</b> Tu	0515	2.7	82	
	0948	0.4	12		1037	0.3	9		1026	0.2	6		1128	0.5	15	
	1541	3.0	91		1637	3.3	101		1631	3.5	107		1728	3.2	98	
	2201	0.5	15		2302	0.3	9		2301	0.1	3		2339	-0.1	-3	
<b>11</b> Sa	0355	3.2	98	<b>26</b> Su	0455	3.1	94	<b>11</b> Tu	0456	3.3	101	<b>26</b> W	0008	0.4	12	
	1023	0.3	9		1115	0.3	9		1110	0.2	6		0552	2.7	82	
	1619	3.2	98		1714	3.3	101		1717	3.7	113		1203	0.6	18	
	2240	0.3	9		2343	0.3	9		2349	0.0	0		1804	3.2	98	
<b>12</b> Su	0436	3.3	101	<b>27</b> M	0534	3.0	91	<b>12</b> W	0545	3.3	101	<b>27</b> F	0046	0.4	12	
	1059	0.2	6		1151	0.4	12		1156	0.1	3		0629	2.7	82	
	1658	3.4	104		1750	3.3	101		1805	3.8	116		1238	0.6	18	
	2320	0.1	3		●				●	3.2	98		●	1844	3.8	116
<b>13</b> M	0518	3.4	104	<b>28</b> Tu	0023	0.3	9	<b>13</b> Th	0039	-0.1	-3	<b>28</b> Sa	0125	0.5	15	
	1136	0.1	3		0610	2.9	88		0636	3.2	98		0707	2.6	79	
	1739	3.5	107		1226	0.5	15		1245	0.2	6		1314	0.7	21	
	●	1826	3.3		●	3.0	101		1856	3.8	116		1917	3.1	94	
<b>14</b> Tu	0003	0.1	3	<b>29</b> W	0102	0.4	12	<b>14</b> F	0133	0.0	0	<b>29</b> M	0204	0.5	15	
	0602	3.4	104		0648	2.8	85		0729	3.2	98		0747	2.6	79	
	1216	0.1	3		1301	0.6	18		1338	0.3	9		1352	0.8	24	
	●	1823	3.6		1902	3.2	98		1949	3.7	113		1956	3.1	94	
<b>15</b> W	0050	0.0	0	<b>30</b> Th	0143	0.5	15	<b>15</b> Sa	0230	0.0	0	<b>30</b> Su	0244	0.6	18	
	0649	3.3	101		0726	2.7	82		0826	3.0	91		0829	2.5	76	
	1300	0.2	6		1338	0.8	24		1436	0.4	12		1432	0.9	27	
	1910	3.6	110		1941	3.1	94		2046	3.6	110		2037	3.0	91	
	●	31	0226		0.7	21							<b>15</b> M	0313	-0.1	-3
			0808		2.6	79							<b>30</b> Tu	0247	0.4	12
			1417		0.9	27							<b>30</b> W	0840	2.6	79
			2022		3.0	91							<b>21</b> M	1443	0.7	21
													<b>2048</b> F	2048	3.0	91
													<b>31</b> W	0323	0.5	15
													<b>2131</b> M	0921	2.6	79
													<b>1525</b> W	1525	0.7	21
													<b>2131</b> F	2131	2.8	85

Time meridian 165° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Suva, Suva Harbor, 2008

Times and Heights of High and Low Waters

January				February				March								
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height					
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm					
<b>1</b> Tu	0045	3.6	110	<b>16</b> W	0601	0.5	15	<b>1</b> F	0206	3.1	94	<b>16</b> Sa	0202	3.6	110	
0652	0.8	24	1230	4.5	137	0751	1.3	40	0752	0.9	27	0710	1.4	43		
1318	4.1	125	1859	0.6	18	1413	3.9	119	1415	4.4	134	1329	3.7	113		
1945	1.0	30	●			2056	0.9	27	2057	0.1	3	2013	0.9	27		
<b>2</b> W	0146	3.4	104	<b>17</b> Th	0101	3.7	113	<b>2</b> Sa	0308	3.1	94	<b>17</b> Su	0312	3.7	113	
0743	1.0	30	0659	0.7	21	0848	1.4	43	0900	0.8	24	0811	1.4	43		
1408	4.1	125	1328	4.6	140	1506	3.9	119	1520	4.5	137	1427	3.7	113		
2042	0.9	27	2005	0.4	12	2149	0.7	21	2159	0.0	0	2109	0.8	24		
<b>3</b> Th	0246	3.3	101	<b>18</b> F	0210	3.7	113	<b>3</b> Su	0403	3.2	98	<b>18</b> M	0414	3.8	116	
0835	1.2	37	0802	0.8	24	0942	1.3	40	1004	0.7	24	0908	1.2	37		
1456	4.1	125	1429	4.6	140	1556	4.0	122	1620	4.6	140	1521	3.9	119		
2135	0.8	24	2109	0.2	6	2236	0.6	18	2254	-0.2	-6	2157	0.6	18		
<b>4</b> F	0343	3.3	101	<b>19</b> Sa	0319	3.7	113	<b>4</b> M	0450	3.4	104	<b>19</b> Tu	0509	4.0	122	
0925	1.2	37	0907	0.8	24	1030	1.2	37	1101	0.5	15	0959	1.1	34		
1543	4.1	125	1529	4.7	143	1642	4.2	128	1714	4.7	143	1609	4.1	125		
2223	0.7	21	2210	-0.1	-3	2318	0.4	12	2343	-0.3	-9	2240	0.4	12		
<b>5</b> Sa	0434	3.3	101	<b>20</b> Su	0422	3.9	119	<b>5</b> Tu	0532	3.6	110	<b>20</b> W	0558	4.2	128	
1013	1.2	37	1010	0.7	21	1115	1.0	30	1153	0.4	12	1045	0.8	24		
1627	4.2	128	1628	4.9	149	1724	4.3	131	1803	4.8	146	1654	4.3	131		
2307	0.5	15	2306	-0.3	-9	2357	0.2	6	2320	0.1	3	1139	0.3	9		
<b>6</b> Su	0520	3.4	104	<b>21</b> M	0521	4.1	125	<b>6</b> W	0611	3.8	116	<b>21</b> Th	0029	-0.3	-9	
1058	1.2	37	1109	0.6	18	1158	0.8	24	0643	4.4	134	1130	0.6	18		
1709	4.3	131	1723	5.0	152	1805	4.5	137	1241	0.3	9	1737	4.5	137		
2347	0.3	9	2359	-0.5	-15	●	1849	4.8	146	2359	0.0	0	1830	4.4	134	
<b>7</b> M	0601	3.5	107	<b>22</b> Tu	0614	4.2	128	<b>7</b> Th	0034	0.0	0	<b>22</b> F	0111	-0.3	-9	
1141	1.1	34	1204	0.4	12	0650	4.0	122	0726	4.5	137	1214	0.4	12		
1750	4.3	131	1816	5.0	152	1240	0.7	21	1326	0.3	9	1819	4.6	140		
●	1830	4.4	134	○	1906	5.0	152	1846	4.6	140	1933	4.6	140	1912	4.3	131
<b>8</b> Tu	0026	0.2	6	<b>23</b> W	0048	-0.5	-15	<b>8</b> F	0112	-0.1	-3	<b>23</b> Sa	0038	-0.2	-6	
0641	3.7	113	0704	4.4	134	0728	4.2	128	0806	4.5	137	1258	0.2	6		
1223	1.0	30	1256	0.4	12	1322	0.6	18	1411	0.3	9	1953	4.1	125		
●	1830	4.4	134	○	1906	5.0	152	1927	4.7	143	2016	4.5	137	1903	4.7	143
<b>9</b> W	0104	0.1	3	<b>24</b> Th	0135	-0.5	-15	<b>9</b> Sa	0149	-0.1	-3	<b>24</b> Su	0231	0.0	0	
0720	3.8	116	0751	4.5	137	0807	4.4	134	1406	0.5	15	0734	4.7	143		
1304	0.9	27	1346	0.4	12	1406	0.5	15	1454	0.4	12	1344	0.0	0		
1910	4.5	137	1954	4.9	149	2010	4.6	140	2059	4.2	128	1949	4.6	140		
<b>10</b> Th	0141	0.0	0	<b>25</b> F	0220	-0.4	-12	<b>10</b> Su	0228	-0.1	-3	<b>25</b> M	0309	0.3	9	
0759	3.9	119	0837	4.5	137	0848	4.6	140	0925	4.4	134	0816	4.8	146		
1345	0.9	27	1435	0.5	15	1453	0.4	12	1539	0.6	18	1432	-0.1	-3		
2041	4.5	137	2041	4.7	143	2055	4.5	137	2143	3.9	119	2038	4.5	137		
<b>11</b> F	0219	0.0	0	<b>26</b> Sa	0304	-0.2	-6	<b>11</b> M	0310	0.0	0	<b>26</b> Tu	0244	0.0	0	
0838	4.1	125	0922	4.5	137	0931	4.6	140	0925	4.4	134	0846	4.2	128		
1428	0.8	24	1524	0.6	18	1542	0.4	12	1539	0.6	18	1507	0.4	12		
2031	4.5	137	2128	4.4	134	2144	4.3	131	2230	3.6	110	2116	3.7	113		
<b>12</b> Sa	0258	0.0	0	<b>27</b> Su	0347	0.1	3	<b>12</b> Tu	0354	0.2	6	<b>27</b> W	0431	0.9	27	
0919	4.2	128	1006	4.4	134	1017	4.6	140	1049	4.0	122	0951	4.7	143		
1514	0.8	24	1613	0.7	21	1637	0.4	12	1716	0.8	24	1619	0.0	0		
2115	4.4	134	2216	4.1	125	2239	4.1	125	2322	3.3	101	2228	4.0	122		
<b>13</b> Su	0338	0.1	3	<b>28</b> M	0430	0.4	12	<b>13</b> W	0443	0.4	12	<b>28</b> Th	0517	1.1	34	
1002	4.3	131	1051	4.3	131	1108	4.6	140	1137	3.8	116	1046	4.6	140		
1603	0.8	24	1705	0.8	24	1736	0.4	12	1811	0.9	27	1720	0.0	0		
2203	4.2	128	2306	3.8	116	2340	3.8	116	2332	3.8	116	2346	3.1	94		
<b>14</b> M	0421	0.2	6	<b>29</b> Tu	0514	0.7	21	<b>14</b> Th	0539	0.6	18	<b>14</b> F	0021	3.1	94	
1047	4.4	134	1138	4.2	128	1206	4.5	137	0610	1.3	40	1148	4.4	134		
1657	0.8	24	1800	1.0	30	1841	0.4	12	1231	3.7	113	1827	0.1	3		
2255	4.1	125	●	1858	1.0	30	●	1912	0.9	27	●	0527	0.6	18		
<b>15</b> Tu	0508	0.4	12	<b>30</b> W	0001	3.5	107	<b>15</b> F	0049	3.6	110	<b>15</b> Sa	0042	3.6	110	
1137	4.4	134	0602	1.0	30	0643	0.8	24	0635	0.8	24	0632	1.3	40		
1756	0.7	21	1227	4.0	122	1309	4.4	134	1256	4.3	131	1246	3.5	107		
2355	3.9	119	●	1958	1.0	30	1950	0.3	9	1936	0.1	3	1926	0.8	24	
<b>31</b> Th	0102	3.3	101	<b>31</b> Th	0654	1.2	37					<b>31</b> M	0147	3.1	94	
				1319	3.9	119						0734	1.3	40		
				1958	1.0	30						1345	3.6	110		
												2021	0.7	21		

Time meridian 180° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Suva, Suva Harbor, 2008

Times and Heights of High and Low Waters

April				May				June								
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height					
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm					
<b>1</b> Tu	0241	3.2	98	<b>16</b> W	0337	4.0	122	<b>1</b> Th	0244	3.7	113	<b>16</b> Su	0354	4.1	125	
0832	1.1	34	0943	0.5	15	0850	0.7	21	F	1013	0.3	9	0340	4.4	134	
1440	3.7	113	1551	4.0	122	1452	3.8	116	1619	3.6	110	1008	-0.2	-6		
2111	0.5	15	2208	0.1	3	2108	0.2	6	2220	0.4	12	1614	3.8	116		
										2211	0.0	0	2025	0.0	0	
<b>2</b> W	0329	3.5	107	<b>17</b> Th	0425	4.1	125	<b>2</b> F	0330	4.0	122	<b>17</b> Sa	0436	4.1	125	
0924	0.9	27	1035	0.4	12	0942	0.4	12	1059	0.2	6	M	0431	4.6	140	
1531	3.9	119	1642	4.0	122	1545	3.9	119	1706	3.6	110	1102	-0.5	-15		
2155	0.3	9	2253	0.1	3	2155	0.1	3	2301	0.5	15	1711	3.9	119		
										2305	0.0	0	2355	0.7	21	
<b>3</b> Th	0413	3.8	116	<b>18</b> F	0508	4.2	128	<b>3</b> Sa	0415	4.3	131	<b>18</b> Su	0515	4.1	125	
1013	0.6	146	1121	0.3	9	1033	0.0	0	1141	0.1	3	Tu	0522	4.8	146	
1619	4.1	125	1728	4.0	122	1638	4.1	125	1750	3.5	107	1807	-0.8	-24		
2238	0.1	3	2334	0.2	6	2242	0.0	0	2341	0.5	15	2359	-0.1	-3		
<b>4</b> F	0455	4.2	128	<b>19</b> Sa	0547	4.3	131	<b>4</b> Su	0501	4.6	140	<b>19</b> M	0552	4.1	125	
1101	0.3	9	1203	0.2	6	1123	-0.3	-9	1221	0.0	0	W	0615	4.9	149	
1706	4.3	131	1810	3.9	119	1730	4.2	128	1832	3.5	107	1249	-1.0	-30		
2320	-0.1	-3				2330	-0.1	-3				1903	4.1	125		
												●				
<b>5</b> Sa	0536	4.5	137	<b>20</b> Su	0012	0.3	9	<b>5</b> M	0547	4.8	146	<b>20</b> Tu	0020	0.6	18	
1147	0.0	0	0623	4.3	131	1213	-0.6	-18	0629	4.1	125	<b>5</b> Th	0054	-0.1	-3	
1753	4.5	137	1243	0.1	3	1823	4.2	128	1259	0.0	0	2011	0.6	18		
			O	1851	3.8	116				1912	3.4	104	F	0115	3.9	119
												●	0722	-0.1	-3	
<b>6</b> Su	0003	-0.2	-6	<b>21</b> M	0049	0.4	12	<b>6</b> Tu	0020	-0.1	-3	<b>21</b> W	0059	0.6	18	
0619	4.8	146	0659	4.3	131	0635	5.0	152	0706	4.0	122	F	0150	-0.1	-3	
1235	-0.3	-9	1321	0.1	3	1305	-0.8	-24	1338	0.0	0	2054	4.8	146		
●	1842	4.5	137	1931	3.7	113	●	1916	4.2	128	1952	3.4	104	2051	3.9	101
													●	0802	-0.1	-3
<b>7</b> M	0047	-0.2	-6	<b>22</b> Tu	0126	0.5	15	<b>7</b> W	0111	-0.1	-3	<b>22</b> Th	0138	0.7	21	
0702	4.9	149	0735	4.2	128	0726	5.0	152	0745	3.9	119	Sa	0247	0.0	0	
1323	-0.4	-12	1400	0.1	3	1357	-0.9	-27	1417	0.0	0	2033	-0.9	-27		
1931	4.5	137	2012	3.6	110	2011	4.2	128	2033	3.3	101	2151	4.0	122		
													●	1512	-0.1	-3
<b>8</b> Tu	0133	-0.2	-6	<b>23</b> W	0204	0.7	21	<b>8</b> Th	0205	0.0	0	<b>23</b> Su	0219	0.8	24	
0749	5.0	152	0812	4.1	125	0819	4.9	149	0825	3.8	116	M	0346	0.1	3	
1414	-0.5	-15	1440	0.2	6	1452	-0.8	-24	1458	0.1	3	2248	-0.7	-21		
2024	4.3	131	2053	3.4	104	2108	4.1	125	2116	3.2	98	2213	0.0	0		
													●	1552	3.5	107
<b>9</b> W	0222	0.0	0	<b>24</b> Th	0243	0.8	24	<b>9</b> F	0301	0.1	3	<b>24</b> Sa	0301	0.8	24	
0838	4.9	149	0851	3.9	119	0915	4.7	143	0907	3.7	113	M	0447	0.3	9	
1507	-0.5	-15	1522	0.3	9	1550	-0.7	-21	1540	0.1	3	2346	4.1	122		
2119	4.2	128	2137	3.3	101	2208	4.0	122	2200	3.2	98	2257	3.6	110		
													●	1633	0.0	0
<b>10</b> Th	0315	0.2	6	<b>25</b> F	0325	0.9	27	<b>10</b> Sa	0402	0.3	9	<b>25</b> W	0346	0.9	27	
0931	4.7	143	0934	3.8	116	1015	4.4	134	0950	3.7	113	1055	3.9	119		
1604	-0.4	-12	1607	0.4	12	1649	-0.5	-15	1624	0.2	6	1716	0.1	3		
2219	3.9	119	2225	3.2	98	2310	3.9	119	2246	3.2	98	2343	3.7	113		
													●	1803	0.2	6
<b>11</b> F	0413	0.4	12	<b>26</b> Sa	0411	1.1	34	<b>11</b> Su	0506	0.4	12	<b>26</b> M	0434	1.0	30	
1030	4.5	137	1020	3.6	110	1118	4.2	128	1037	3.6	110	W	0643	3.9	119	
1706	-0.3	-9	1655	0.5	15	1751	-0.3	-9	1709	0.3	9	1258	3.6	110		
2324	3.8	116	2316	3.1	94				2334	3.3	101	●	1913	0.1	3	
													●	1149	3.5	107
<b>12</b> Sa	0518	0.6	18	<b>27</b> Su	0502	1.1	34	<b>12</b> M	0014	3.8	116	<b>27</b> Th	0138	3.9	119	
1134	4.3	131	1110	3.5	107	0613	0.5	15	1127	3.5	107	0755	0.5	15		
1812	-0.1	-3	1747	0.5	15	1223	4.0	122	1756	0.3	9	1359	3.4	104		
						●	1852	-0.2	-6			2006	0.3	9		
												●	1855	0.2	6	
<b>13</b> Su	0032	3.7	113	<b>28</b> M	0010	3.1	94	<b>13</b> Tu	0116	3.8	116	<b>28</b> F	0023	3.4	104	
0628	0.7	21	0558	1.2	37	0720	0.5	15	1328	3.8	116	0854	0.4	12		
1242	4.1	125	1205	3.5	107	1951	0.0	0	1221	3.5	107	1458	3.3	101		
●	1918	0.0	0	1839	0.5	15			●	1844	0.3	9	2057	0.5	15	
													●	1951	0.3	9
<b>14</b> M	0140	3.7	113	<b>29</b> Tu	0104	3.2	98	<b>14</b> W	0214	3.9	119	<b>29</b> Sa	0112	3.6	110	
0738	0.7	21	0657	1.1	34	0824	0.5	15	0720	0.7	21	0947	0.3	9		
1351	4.0	122	1301	3.5	107	1430	3.7	113	1319	3.5	107	1553	3.2	98		
2021	0.0	0	●	1931	0.5	15	2045	0.1	3	1934	0.3	9	2145	0.6	18	
													●	2049	0.2	6
<b>15</b> Tu	0242	3.8	116	<b>30</b> W	0156	3.4	104	<b>15</b> Th	0307	4.0	122	<b>30</b> Su	0201	3.9	119	
0844	0.6	18	0755	1.0	30	0922	0.4	12	1527	3.7	113	1034	0.2	6		
1454	4.0	122	1358	3.6	110	2135	0.3	9	1417	3.6	110	1643	3.2	98		
2118	0.0	0	2021	0.4	12				2025	0.2	6	2230	0.7	21		
									<b>31</b> Sa	0251	4.1	125				
									1516	0.2	6					
									1518	0.1	3					

Time meridian 180° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Suva, Suva Harbor, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0409 4.5 137	16 0459 3.8 116	1 F 0549 4.7 143	16 Sa 0553 4.0 122	1 M 0102 -0.2 -6	16 0039 0.0 0						
1046 -0.6 -18	W 1134 0.0 0	F 1219 -0.9 -27	Sa 1219 -0.1 -3	0712 4.5 137	Tu 0644 4.3 131						
1658 3.7 113	1748 3.1 94	1834 4.1 125	1832 3.6 110	1327 -0.5 -15	1254 -0.2 -6						
2248 0.1 3	2331 0.7 21	●		1940 4.4 134	1909 4.4 134						
2 W 0505 4.7 143	17 0540 3.9 119	2 Sa 0028 -0.1 -3	17 Su 0025 0.4 12	2 Tu 0149 -0.1 -3	17 0121 -0.1 -3						
1141 -0.9 -27	Th 1214 -0.1 -3	0641 4.7 143	0632 4.1 125	0757 4.3 131	0728 4.3 131						
1755 3.9 119	1827 3.2 98	1308 -0.9 -27	1254 -0.2 -6	1409 -0.2 -6	1334 -0.1 -3						
2345 0.0 0		1923 4.2 128	1908 3.8 116	2022 4.4 134	1949 4.5 137						
3 Th 0600 4.8 146	18 0012 0.6 18	3 Su 0120 -0.2 -6	18 M 0105 0.3 9	3 W 0234 -0.1 -3	18 0207 -0.2 -6						
1235 -1.0 -30	F 0620 3.9 119	0731 4.6 140	0711 4.2 128	0843 4.1 125	0814 4.2 128						
1850 4.0 122	1251 -0.2 -6	1355 -0.8 -24	1330 -0.3 -9	1450 0.0 0	1417 0.0 0						
● O 1905 3.4 104		2010 4.3 131	1945 4.0 122	2104 4.2 128	2032 4.6 140						
4 F 0041 -0.1 -3	19 0052 0.5 15	4 M 0211 -0.1 -3	19 Tu 0146 0.2 6	4 Th 0320 0.1 3	19 0255 -0.3 -9						
0654 4.8 146	Sa 0659 4.0 122	0820 4.5 137	0751 4.2 128	0929 3.8 116	0904 4.0 122						
1327 -1.1 -34	1328 -0.2 -6	1440 -0.6 -18	1407 -0.2 -6	1533 0.3 9	1503 0.1 3						
1943 4.1 125	1943 3.5 107	2056 4.3 131	2023 4.1 125	2146 4.0 122	2119 4.5 137						
5 Sa 0136 -0.1 -3	20 0132 0.5 15	5 Tu 0301 0.0 0	20 W 0230 0.1 3	5 F 0408 0.2 6	20 0348 -0.2 -6						
0748 4.7 143	Su 0737 4.0 122	0908 4.2 128	0834 4.1 125	1018 3.5 107	0959 3.8 116						
1418 -1.0 -30	1404 -0.2 -6	1526 -0.4 -12	1446 -0.2 -6	1618 0.6 18	1555 0.3 9						
2035 4.2 128	2020 3.6 110	2143 4.2 128	2103 4.2 128	2231 3.8 116	2212 4.3 131						
6 Su 0231 -0.1 -3	21 0212 0.5 15	6 W 0352 0.1 3	21 Th 0316 0.1 3	6 Sa 0459 0.4 12	21 0446 -0.1 -3						
0841 4.6 140	M 0816 4.0 122	0958 3.9 119	0920 3.9 119	1112 3.2 98	1100 3.6 110						
1509 -0.8 -24	1440 -0.2 -6	1611 0.0 0	1528 0.0 0	1707 0.9 27	1654 0.5 15						
2127 4.2 128	2058 3.7 113	2229 4.1 125	2147 4.2 128	2321 3.6 110	2312 4.2 128						
7 M 0326 0.0 0	22 0255 0.4 12	7 Th 0444 0.3 9	22 F 0406 0.1 3	7 Su 0555 0.6 18	22 0550 -0.1 -3						
0934 4.3 131	Tu 0857 4.0 122	1050 3.6 110	1011 3.7 113	1212 3.0 91	1208 3.5 107						
1559 -0.6 -18	1518 -0.2 -6	1658 0.3 9	1615 0.2 6	1803 1.1 34	1801 0.7 21						
2219 4.1 125	2138 3.8 116	2317 3.9 119	2236 4.2 128	●							
8 Tu 0422 0.2 6	23 0340 0.4 12	8 F 0539 0.4 12	23 Sa 0502 0.1 3	8 M 0017 3.4 104	23 0019 4.1 125						
1028 4.0 122	W 0941 3.8 116	1147 3.3 101	1109 3.5 107	0656 0.6 18	0658 0.0 0						
1649 -0.3 -9	1558 -0.1 -3	1748 0.6 18	1708 0.4 12	1316 2.9 88	1318 3.5 107						
2310 4.0 122	2220 3.9 119		2331 4.1 125	● 1904 1.1 34	1913 0.7 21						
9 W 0520 0.3 9	24 0429 0.4 12	9 Sa 0008 3.7 113	24 Su 0605 0.1 3	9 Tu 0117 3.4 104	24 0129 4.0 122						
1124 3.7 113	Th 1030 3.7 113	0638 0.5 15	1215 3.4 104	0757 0.6 18	0805 -0.1 -3						
1739 0.0 0	1642 0.1 3	1248 3.0 91	1809 0.5 15	1418 2.9 88	1426 3.6 110						
● O 2306 3.9 119		● 1843 0.8 24		2006 1.1 34	2023 0.6 18						
10 Th 0002 3.9 119	25 0524 0.4 12	10 Su 0102 3.6 110	25 M 0032 4.0 122	10 W 0217 3.4 104	25 0237 4.1 125						
0619 0.4 12	F 1125 3.5 107	0739 0.6 18	0712 0.0 0	0854 0.6 18	0907 -0.1 -3						
1223 3.4 104	Tu 1731 0.2 6	1352 2.9 88	1325 3.3 101	1513 3.0 91	1526 3.8 116						
● O 1831 0.3 9	2357 4.0 122	1941 1.0 30	1917 0.6 18	2102 1.0 30	2127 0.4 12						
11 F 0055 3.8 116	26 0624 0.3 9	11 M 0159 3.5 107	26 Tu 0139 4.0 122	11 Th 0311 3.5 107	26 0338 4.2 128						
0720 0.5 15	Sa 1226 3.4 104	0839 0.5 15	0819 -0.1 -3	0942 0.4 12	1002 -0.2 -6						
1324 3.2 98	Sa 1826 0.3 9	1454 2.9 88	1435 3.4 104	1559 3.2 98	1619 4.1 125						
1924 0.6 18	● O	2039 1.0 30	2027 0.5 15	2150 0.8 24	2223 0.2 6						
12 Sa 0147 3.8 116	27 0053 4.0 122	12 Tu 0254 3.5 107	27 W 0246 4.1 125	12 F 0358 3.7 113	27 0433 4.3 131						
0819 0.5 15	Su 0728 0.1 3	0934 0.4 12	0923 -0.3 -9	1025 0.3 9	1051 -0.2 -6						
1426 3.0 91	1334 3.3 101	1549 2.9 88	1539 3.6 110	1640 3.5 107	1706 4.3 131						
2018 0.7 21	1928 0.4 12	2133 0.9 27	2132 0.4 12	2235 0.6 18	2313 0.1 3						
13 Su 0238 3.7 113	28 0154 4.1 125	13 W 0345 3.6 110	28 Th 0348 4.3 131	13 Sa 0441 3.9 119	28 0522 4.3 131						
0915 0.4 12	M 0832 -0.1 -3	1022 0.3 9	1020 -0.4 -12	1103 0.1 3	1136 -0.2 -6						
1525 3.0 91	1442 3.3 101	1636 3.1 94	1636 3.8 116	1718 3.7 113	1750 4.4 134						
2111 0.8 24	2033 0.4 12	2221 0.8 24	2231 0.2 6	2316 0.4 12	● 1830 4.5 137						
14 M 0328 3.7 113	29 0256 4.2 128	14 Th 0431 3.7 113	29 F 0445 4.4 134	14 Su 0522 4.1 125	29 0000 0.0 0						
1006 0.3 9	Tu 0935 -0.3 -9	1104 0.1 3	1112 -0.6 -18	1140 0.0 0	0609 4.3 131						
1619 3.0 91	1547 3.5 107	1718 3.2 98	1727 4.0 122	1754 4.0 122	1218 -0.1 -3						
2201 0.8 24	2137 0.3 9	2305 0.6 18	2325 0.0 0	2357 0.2 6	● 1830 4.5 137						
15 Tu 0415 3.7 113	30 0356 4.4 134	15 F 0514 3.9 119	30 Sa 0537 4.5 137	15 M 0603 4.2 128	30 0044 -0.1 -3						
1052 0.2 6	W 1034 -0.6 -18	1142 0.0 0	1200 -0.6 -18	1217 -0.1 -3	0653 4.2 128						
1706 3.0 91	1647 3.7 113	1756 3.4 104	1814 4.2 128	1831 4.2 128	1258 0.0 0						
2248 0.8 24	2238 0.1 3	2346 0.5 15	● 1858 4.4 134		1909 4.5 137						
● Th 0454 4.5 137	31 1128 -0.8 -24		31 0015 -0.1 -3								
1742 3.9 119	1742 3.9 119		Su 0625 4.6 140								
2335 0.0 0	2335 0.0 0		1245 -0.6 -18								
			● 1858 4.4 134								

Time meridian 180° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Suva, Suva Harbor, 2008

Times and Heights of High and Low Waters

October				November				December								
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height					
h m	ft	cm		h m	ft	cm		h m	ft	cm						
1 W	0126	-0.1	-3	16 Th	0059	-0.4	-12	1 Sa	0225	0.1	3	1 M	0223	-0.7	-21	
W	0736	4.1	125	Th	0708	4.3	131	Sa	0842	3.6	110	Su	0840	3.6	110	
1337	0.2	6		1306	0.0	0		1429	0.9	27		1431	0.3	9		
1947	4.4	134		1920	4.9	149		2034	4.1	125		2043	4.9	149		
2 Th	0208	0.0	0	17 F	0147	-0.5	-15	2 Su	0307	0.2	6	17 M	0318	-0.6	-18	
W	0819	3.9	119	F	0758	4.3	131	M	0926	3.5	107	Tu	0938	4.2	128	
1417	0.4	12		1353	0.1	3		1513	1.1	34		1530	0.5	15		
2026	4.2	128		2007	4.9	149		2117	3.9	119		2141	4.7	143		
3 F	0250	0.1	3	18 Sa	0238	-0.5	-15	3 M	0352	0.4	12	18 Tu	0416	-0.5	-15	
W	0903	3.7	113	Sa	0851	4.1	125	M	1014	3.4	104	W	1038	4.2	128	
1458	0.7	21		1445	0.3	9		1600	1.2	37		1633	0.6	18		
2106	4.0	122		2058	4.7	143		2204	3.7	113		2242	4.5	137		
4 Sa	0334	0.2	6	19 Su	0332	-0.5	-15	4 Tu	0439	0.5	15	19 W	0516	-0.3	-9	
W	0950	3.4	104	Su	0949	4.0	122	M	1105	3.3	101	Th	1140	4.2	128	
1542	0.9	27		1542	0.5	15		1652	1.3	40		1740	0.7	21		
2150	3.8	116		2155	4.5	137		2254	3.6	110		2347	4.3	131		
5 Su	0422	0.4	12	20 M	0432	-0.3	-9	5 W	0529	0.6	18	20 Th	0616	0.0	0	
W	1041	3.2	98	M	1052	3.9	119	M	1158	3.3	101	W	1242	4.2	128	
1631	1.1	34		1645	0.6	18		1748	1.4	43		1848	0.7	21		
2239	3.6	110		2258	4.3	131		2348	3.5	107	O	2358	3.7	113		
6 M	0515	0.6	18	21 Tu	0535	-0.2	-6	6 Th	0621	0.7	21	21 F	0054	4.1	125	
W	1137	3.1	94	Tu	1158	3.8	116	M	1250	3.4	104	Th	0716	0.1	3	
1726	1.2	37		1754	0.7	21		1846	1.3	40		1342	4.3	131		
2334	3.4	104	O					1955	0.7	21	O	1900	1.2	37		
7 Tu	0612	0.7	21	22 W	0006	4.2	128	7 F	0044	3.5	107	7 Sa	0159	4.0	122	
W	1238	3.0	91	W	0641	-0.1	-3	M	0711	0.7	21	Sa	0813	0.3	9	
1827	1.3	40	O	1305	3.9	119		1340	3.6	110	M	1437	4.4	134		
				1905	0.7	21		1942	1.2	37	Tu	2056	0.6	18		
8 W	0034	3.4	104	23 Th	0115	4.1	125	8 Sa	0140	3.6	110	8 M	0301	3.9	119	
W	0711	0.7	21	Th	0745	0.0	0	Sa	0800	0.7	21	W	0906	0.5	15	
1337	3.1	94		1409	4.0	122		1427	3.8	116	M	1528	4.4	134		
1928	1.2	37		2013	0.6	18		2036	1.0	30	Tu	2152	0.5	15		
9 Th	0133	3.4	104	24 F	0222	4.1	125	9 Su	0234	3.7	113	9 M	0357	3.8	116	
W	0805	0.7	21	F	0844	0.1	3	Sa	0846	0.6	18	W	0955	0.6	18	
1429	3.3	101		1506	4.2	128		1510	4.1	125	M	1613	4.5	137		
2024	1.1	34		2115	0.5	15		2126	0.7	21	Tu	2241	0.3	9		
10 F	0228	3.5	107	25 Sa	0322	4.1	125	10 M	0326	3.8	116	10 W	0449	3.8	116	
W	0854	0.6	18	Sa	0937	0.1	3	M	0932	0.5	15	W	1041	0.7	21	
1515	3.5	107		1556	4.3	131		1553	4.4	134	M	1655	4.5	137		
2115	0.9	27		2210	0.3	9		2214	0.3	9	Tu	2326	0.2	6		
11 Sa	0318	3.7	113	26 Su	0417	4.1	125	11 Tu	0418	4.0	122	11 W	0536	3.8	116	
W	0937	0.4	12	Su	1025	0.2	6	M	1018	0.4	12	W	1123	0.8	24	
1557	3.8	116		1641	4.5	137		1637	4.7	143	M	1734	4.5	137		
2201	0.7	21		2259	0.2	6		2302	0.0	0	Tu	1655	5.0	152		
12 Su	0404	3.9	119	27 M	0506	4.1	125	12 W	0543	4.2	128	12 F	0007	0.2	6	
W	1018	0.3	9	M	1109	0.3	9	M	0619	3.7	113	W	0644	3.6	110	
1636	4.1	125		1723	4.5	137		1721	4.9	149	M	1204	0.9	27		
2245	0.4	12		2343	0.1	3		2350	-0.3	-9	Tu	1813	4.4	134		
13 M	0449	4.1	125	28 Tu	0552	4.0	122	13 Th	0559	4.3	131	13 F	0046	0.1	3	
W	1058	0.1	3	Tu	1150	0.4	12	M	1153	0.2	6	W	0701	3.7	113	
1714	4.4	134		1801	4.6	140		1808	5.1	155	M	1245	0.9	27		
2329	0.1	3		●	1839	4.5	137		●	1851	4.4	134	O	1840	5.2	158
14 Tu	0534	4.2	128	29 W	0025	0.0	0	14 F	0039	-0.6	-18	14 Su	0125	0.1	3	
W	1139	0.0	0	W	0635	4.0	122	M	0651	4.3	131	Sa	0742	3.7	113	
1754	4.6	140		1229	0.5	15		1243	0.2	6	M	1325	1.0	30		
				●	1839	4.5	137		1857	5.1	155	Tu	1930	4.3	131	
15 W	0013	-0.2	-6	30 Th	0105	0.0	0	15 Sa	0130	-0.7	-21	15 M	0204	0.2	6	
W	0620	4.3	131	Th	0717	3.9	119	Sa	0745	4.3	131	W	0822	3.6	110	
1221	0.0	0		1308	0.6	18		1335	0.2	6	M	1406	1.1	34		
O	1836	4.8	146	1916	4.4	134		1948	5.1	155	Tu	2010	4.2	128		
				31 F	0145	0.0	0					15 W	0256	0.2	6	
				F	0759	3.8	116					W	0917	3.8	116	
				1348	0.8	24						1505	1.1	34		
				1954	4.2	128						2105	4.2	128		

Time meridian 180° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Pago Pago, 2008

Times and Heights of High and Low Waters

January				February				March				
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm	
1 Tu	0219	2.1	64	16 W	0127	2.4	73	1 F	0326	1.9	58	
0824	0.4	12	W 0737	0.1	3	0918	0.5	15	16 Sa	0330	2.4	73
1445	2.3	70	1406	2.8	85	1540	2.3	70	Sa 0932	0.0	0	
2110	0.5	15	2029	0.1	3	2210	0.4	12	1557	3.0	91	
									2222	-0.2	-6	
2 W	0310	2.0	61	17 Th	0232	2.4	73	2 Sa	0411	1.9	58	
0909	0.4	12	0838	0.0	0	1002	0.4	12	17 Su	0426	2.5	76
1530	2.4	73	1506	2.9	88	1622	2.4	73	Su 1027	-0.1	-3	
2157	0.4	12	2132	-0.1	-3	2250	0.2	6	1650	3.0	91	
									2313	-0.3	-9	
3 Th	0357	2.0	61	18 F	0334	2.4	73	3 Su	0451	2.0	61	
0951	0.4	12	0938	-0.1	-3	1043	0.2	6	18 M	0517	2.6	79
1611	2.4	73	1604	3.0	91	1701	2.6	79	M 1118	-0.2	-6	
2239	0.3	9	2230	-0.3	-9	2327	0.1	3	1739	3.1	94	
4 F	0439	2.0	61	19 Sa	0432	2.5	76	4 M	0529	2.2	67	
1031	0.3	9	1034	-0.2	-6	1123	0.1	3	19 Tu	0000	-0.3	-9
1650	2.5	76	1659	3.2	98	1740	2.7	82	Tu 0604	2.7	82	
2318	0.2	6	2324	-0.4	-12				1206	-0.2	-6	
									1825	3.1	94	
5 Sa	0518	2.0	61	20 Su	0527	2.6	79	5 Tu	0004	0.0	0	
1110	0.3	9	1128	-0.3	-9	0607	2.3	70	20 W	0043	-0.3	-9
1729	2.6	79	1751	3.2	98	1203	0.0	0	W 0648	2.7	82	
2356	0.2	6				1819	2.8	85	O 1252	-0.2	-6	
									1909	3.0	91	
6 Su	0557	2.1	64	21 M	0015	-0.4	-12	6 W	0040	-0.1	-3	
1149	0.2	6	0619	2.7	82	0646	2.4	73	21 Th	0125	-0.2	-6
1807	2.6	79	1220	-0.3	-9	1243	0.0	0	Th 0731	2.7	82	
									1336	-0.1	-3	
									1951	2.9	88	
7 M	0033	0.1	3	22 Tu	0105	-0.4	-12	6 Th	0006	-0.1	-3	
0635	2.2	67	0709	2.7	82	0726	2.5	76	21 F	0054	-0.1	-3
1228	0.1	3	1310	-0.3	-9	1326	0.0	0	F 0702	2.7	82	
1845	2.7	82	O 1931	3.2	98	1939	2.9	88	1313	0.0	0	
										1923	2.6	79
8 Tu	0111	0.0	0	23 W	0152	-0.4	-12	7 F	0206	-0.1	-3	
0714	2.2	67	0757	2.7	82	0813	2.7	82	F 0740	2.6	79	
1308	0.1	3	1359	-0.2	-6	1420	0.1	3	Sa 1353	0.1	3	
● 1925	2.7	82	2019	3.0	91	2033	2.7	82	2002	2.5	76	
9 W	0149	0.0	0	24 Th	0239	-0.3	-9	8 Sa	0246	0.0	0	
0755	2.3	70	0846	2.6	79	0855	2.6	79	Sa 0742	2.9	88	
1349	0.1	3	1449	0.0	0	1412	0.0	0	1352	-0.2	-6	
2005	2.8	85	2106	2.9	88	2023	2.9	88	2001	3.0	91	
10 Th	0229	0.0	0	25 F	0325	-0.1	-3	9 Su	0213	-0.2	-6	
0837	2.3	70	0934	2.5	76	0421	-0.1	-3	Su 0830	3.0	91	
1433	0.2	6	1539	0.2	6	0854	2.7	82	M 0859	2.4	73	
2048	2.7	82	2155	2.6	79	1501	0.0	0	1519	0.3	9	
									2203	2.3	70	
11 F	0311	0.0	0	26 Sa	0412	0.1	3	9 M	0411	0.4	12	
0922	2.4	73	1024	2.4	73	0944	2.7	82	M 0923	2.9	88	
1521	0.2	6	1633	0.3	9	1556	0.1	3	1542	-0.1	-3	
2134	2.7	82	2245	2.4	73	2203	2.7	82	2149	2.6	79	
									2253	2.0	61	
12 Sa	0356	0.1	3	27 Su	0500	0.3	9	10 Tu	0303	-0.1	-3	
1011	2.4	73	1116	2.3	70	0944	2.7	82	Tu 0943	2.3	70	
1614	0.3	9	1729	0.5	15	1556	0.1	3	1608	0.4	12	
2224	2.6	79	2339	2.2	67	1645	0.5	15	2215	1.9	58	
									2302	2.5	76	
13 Su	0445	0.1	3	28 M	0551	0.4	12	11 Tu	0358	0.0	0	
1104	2.5	76	1210	2.3	70	0618	0.2	6	Tu 1021	2.9	88	
1712	0.3	9	1831	0.6	18	1248	2.7	82	1645	0.0	0	
2320	2.5	76				O 1914	0.1	3	2252	2.5	76	
14 M	0538	0.1	3	29 Tu	0037	2.0	61	12 F	0459	0.1	3	
1202	2.6	79	0644	0.5	15	0725	0.1	3	F 0717	0.1	3	
1816	0.3	9	Tu 1306	2.2	67	1355	2.8	85	1345	2.8	85	
			O 1934	0.6	18	2023	0.0	0	2014	0.0	0	
15 Tu	0021	2.4	73	30 W	0137	1.9	58	13 O	0054	1.8	55	
0636	0.1	3	0738	0.5	15	0831	0.1	3	O 1906	0.0	0	
1304	2.6	79	1402	2.2	67	1459	2.8	85	1905	0.5	15	
● 1923	0.2	6	2034	0.6	18	2126	-0.1	-3				
			31 Th	0235	1.9	58						
			0830	0.5	15							
			1453	2.2	67							
			2126	0.5	15							

Time meridian 165° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Pago Pago, 2008

Times and Heights of High and Low Waters

April					May					June					
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height	
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm
<b>1</b> Tu	0337	2.2	67	<b>16</b> W	0441	2.6	79	<b>1</b> Th	0342	2.6	79	<b>16</b> F	0455	2.6	79
	0936	0.2	6	1050	0.1	3	0950	0.0	0	1113	0.2	6	1113	-0.4	-12
	1549	2.6	79	1701	2.7	82	1558	2.7	82	1717	2.3	70	1719	2.8	85
	2208	0.1	3	2311	0.0	0	2211	-0.1	-3	2317	0.2	6	2323	-0.3	-9
<b>2</b> W	0418	2.5	76	<b>17</b> Th	0521	2.7	82	<b>2</b> F	0428	2.9	88	<b>17</b> Sa	0531	2.6	79
	1021	0.1	3	1133	0.1	3	1041	-0.1	-3	1152	0.2	6	1211	-0.5	-15
	1632	2.8	85	1741	2.6	79	1647	2.8	85	1755	2.3	70	1815	2.8	85
	2248	-0.1	-3	2347	0.1	3	2257	-0.2	-6	2352	0.2	6			
<b>3</b> Th	0500	2.7	82	<b>18</b> F	0558	2.7	82	<b>3</b> Sa	0515	3.1	94	<b>18</b> Su	0607	2.6	79
	1106	-0.1	-3	1212	0.1	3	1132	-0.3	-9	1230	0.2	6	0018	-0.4	-12
	1716	2.9	88	1819	2.5	76	1738	2.9	88	1833	2.2	67	0641	3.4	104
	2330	-0.2	-6				2345	-0.3	-9				1307	-0.6	-18
<b>4</b> F	0543	2.9	88	<b>19</b> Sa	0022	0.1	3	<b>4</b> Su	0605	3.2	98	<b>19</b> M	0027	0.3	9
	1154	-0.2	-6	0633	2.7	82	1225	-0.4	-12	0643	2.6	79	0113	-0.4	-12
	1802	3.0	91	1250	0.1	3	1831	2.9	88	1308	0.2	6	0737	3.3	101
				O	1856	2.4	73				1911	2.1	64	1404	-0.6	-18
<b>5</b> Sa	0014	-0.3	-9	<b>20</b> Su	0057	0.2	6	<b>5</b> M	0036	-0.4	-12	<b>20</b> Tu	0105	0.3	9
	0629	3.1	94	0709	2.6	79	0657	3.3	101	0721	2.5	76	0211	-0.3	-9
	1243	-0.3	-9	1329	0.2	6	1320	-0.5	-15	1348	0.2	6	0835	3.3	101
	1851	3.0	91	1934	2.3	70	1926	2.8	85	1952	2.0	61	1503	-0.5	-15
<b>6</b> Su	0100	-0.3	-9	<b>21</b> M	0133	0.2	6	<b>6</b> Tu	0130	-0.3	-9	<b>21</b> W	0144	0.3	9
	0717	3.2	98	0747	2.5	76	0752	3.3	101	0801	2.5	76	0311	-0.2	-6
	1335	-0.4	-12	1409	0.2	6	1418	-0.5	-15	1430	0.2	6	0934	3.2	98
	1942	2.9	88	2015	2.1	64	2024	2.7	82	2034	2.0	61	1602	-0.4	-12
<b>7</b> M	0149	-0.3	-9	<b>22</b> Tu	0212	0.3	9	<b>7</b> W	0227	-0.3	-9	<b>22</b> Th	0226	0.4	12
	0809	3.2	98	0827	2.4	73	0851	3.2	98	0844	2.4	73	0413	-0.1	-3
	1430	-0.4	-12	1452	0.3	9	1518	-0.4	-12	1513	0.3	9	1035	3.0	91
	2037	2.8	85	2058	2.0	61	2126	2.6	79	2120	1.9	58	1701	-0.3	-9
<b>8</b> Tu	0243	-0.2	-6	<b>23</b> W	0254	0.4	12	<b>8</b> Th	0328	-0.2	-6	<b>23</b> F	0311	0.1	3
	0906	3.1	94	0910	2.3	70	0952	3.1	94	0928	2.4	73	1136	2.8	85
	1530	-0.3	-9	1539	0.4	12	1621	-0.3	-9	1559	0.3	9	1801	-0.1	-3
	2137	2.6	79	2146	1.9	58	2230	2.5	76	2207	1.9	58			
<b>9</b> W	0342	-0.1	-3	<b>24</b> Th	0340	0.5	15	<b>9</b> F	0432	-0.1	-3	<b>24</b> Sa	0358	0.5	15
	1007	3.0	91	0958	2.2	67	1057	3.0	91	1015	2.3	70	0015	2.5	76
	1635	-0.2	-6	1630	0.4	12	1726	-0.2	-6	1646	0.4	12	0622	0.2	6
	2243	2.5	76	2238	1.8	55	2337	2.5	76	2257	1.9	58	1238	2.7	82
<b>10</b> Th	0447	0.0	0	<b>25</b> F	0430	0.6	18	<b>10</b> Sa	0540	0.0	0	<b>25</b> Su	0448	0.5	15
	1113	2.9	88	1049	2.2	67	1203	2.9	88	1103	2.3	70	0726	0.3	9
	1743	-0.1	-3	1724	0.5	15	1831	-0.2	-6	1734	0.4	12	1337	2.5	76
	2352	2.4	73	2334	1.8	55				2348	2.0	61	1953	0.1	3
<b>11</b> F	0556	0.1	3	<b>26</b> Sa	0525	0.6	18	<b>11</b> Su	0043	2.4	73	<b>26</b> M	0542	0.5	15
	1223	2.8	85	1144	2.2	67	0648	0.1	3	1154	2.3	70	0826	0.3	9
	1852	-0.1	-3	1818	0.5	15	1308	2.8	85	1822	0.3	9	1433	2.4	73
				O	1932	-0.1	-3						2043	0.2	6
<b>12</b> Sa	0102	2.3	70	<b>27</b> Su	0030	1.8	55	<b>12</b> M	0145	2.5	76	<b>27</b> Tu	0038	2.1	64
	0706	0.1	3	0622	0.6	18	0752	0.2	6	0637	0.5	15	0302	2.5	76
	1330	2.8	85	1238	2.2	67	1408	2.7	82	1247	2.4	73	0921	0.3	9
	1957	-0.1	-3	1909	0.4	12	2027	0.0	0	1910	0.3	9	1525	2.3	70
<b>13</b> Su	0208	2.4	73	<b>28</b> M	0122	2.0	61	<b>13</b> Tu	0242	2.5	76	<b>28</b> W	0129	2.3	70
	0812	0.1	3	0717	0.5	15	0852	0.2	6	0733	0.4	12	0347	2.5	76
	1433	2.8	85	1330	2.3	70	1503	2.6	79	1340	2.5	76	1009	0.3	9
	2055	-0.1	-3	O	1957	0.3	9	2117	0.0	0	1958	0.2	6	1611	2.2	67
<b>14</b> M	0306	2.5	76	<b>29</b> Tu	0210	2.2	67	<b>14</b> W	0332	2.6	79	<b>29</b> Th	0219	2.5	76
	0912	0.1	3	0809	0.4	12	0944	0.2	6	0829	0.2	6	1053	0.3	9
	1528	2.8	85	1420	2.5	76	1553	2.5	76	1434	2.5	76	1653	2.1	64
	2146	-0.1	-3	2041	0.2	6	2201	0.1	3	2048	0.0	0	2247	0.3	9
<b>15</b> Tu	0357	2.6	79	<b>30</b> W	0256	2.4	73	<b>15</b> Th	0416	2.6	79	<b>30</b> F	0310	2.8	85
	1004	0.1	3	0900	0.2	6	1031	0.2	6	0925	0.0	0	1020	-0.2	-6
	1617	2.7	82	1509	2.6	79	1637	2.4	73	1529	2.6	79	1132	0.3	9
	2231	-0.1	-3	2126	0.1	3	2240	0.2	6	2138	-0.1	-3	1732	2.1	64
												<b>31</b> Sa	0401	3.0	91
												1020	-0.2	-6	
												1624	2.7	82	
												2230	-0.2	-6	

Time meridian 165° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Pago Pago, 2008

Times and Heights of High and Low Waters

July					August					September					
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height	
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm	
<b>1</b>	0533	3.3 101		<b>16</b>	0556	2.6 79	<b>1</b>	0043	-0.4 -12	<b>16</b>	0027	0.1 3	<b>1</b>	0201	-0.1 -3
Tu	1158	-0.5 -15		W	1222	0.1 3	F	0704	3.3 101	Sa	0641	2.8 85	M	0814	2.8 85
	1802	2.7 82			1824	2.1 64		1326	-0.5 -15		1300	0.0 0		1426	-0.1 -3
								1931	2.8 85	O	1907	2.5 76		2036	2.7 82
<b>2</b>	0003	-0.4 -12		<b>17</b>	0016	0.2 6	<b>2</b>	0135	-0.3 -9	<b>17</b>	0107	0.1 3	<b>2</b>	0249	0.1 3
W	0627	3.4 104		Th	0633	2.6 79	Sa	0754	3.2 98	Su	0719	2.8 85	Tu	0901	2.6 79
●	1253	-0.6 -18			1259	0.1 3		1414	-0.4 -12		1337	0.0 0		1510	0.1 3
	1857	2.7 82		O	1902	2.2 67		2021	2.8 85		1947	2.6 79		2123	2.6 79
<b>3</b>	0058	-0.4 -12		<b>18</b>	0055	0.2 82	<b>3</b>	0226	-0.2 -6	<b>18</b>	0150	0.1 3	<b>3</b>	0340	0.3 9
Th	0722	3.3 101		F	0711	2.7 82	Su	0844	3.0 91	M	0801	2.8 85	W	0950	2.3 70
	1347	-0.6 -18			1335	0.1 3		1502	-0.2 -6		1417	0.0 0		1557	0.3 9
	1953	2.7 82			1940	2.2 67		2112	2.7 82		2030	2.6 79		2212	2.4 73
<b>4</b>	0154	-0.3 -9		<b>19</b>	0135	0.2 82	<b>4</b>	0319	0.0 0	<b>19</b>	0236	0.1 3	<b>4</b>	0435	0.4 12
F	0817	3.3 101		Sa	0750	2.7 82	M	0935	2.8 85	Tu	0845	2.7 82	Th	1043	2.1 64
	1441	-0.5 -18			1413	0.1 3		1551	0.0 0		1500	0.0 0		1647	0.4 12
	2048	2.7 82			2020	2.3 70		2203	2.6 79		2116	2.6 79		2306	2.3 70
<b>5</b>	0250	-0.2 -6		<b>20</b>	0216	0.2 82	<b>5</b>	0414	0.2 6	<b>20</b>	0328	0.1 3	<b>5</b>	0535	0.5 15
Sa	0911	3.1 94		Su	0829	2.7 82	Tu	1027	2.5 76	W	0935	2.6 79	Sa	1143	1.9 58
	1535	-0.4 -12			1452	0.1 3		1642	0.2 6		1548	0.1 3		1743	0.5 15
	2144	2.7 82			2102	2.3 70		2257	2.5 76		2208	2.6 79		2359	2.7 82
<b>6</b>	0348	-0.1 -3		<b>21</b>	0300	0.3 88	<b>6</b>	0513	0.4 12	<b>21</b>	0425	0.2 6	<b>6</b>	0005	2.2 67
Su	1007	2.9 88		M	0912	2.6 88	W	1123	2.3 79	Th	1030	2.4 73	Sa	0640	0.5 15
	1629	-0.2 -6			1533	0.1 3		1734	0.3 9		1641	0.2 6		1247	1.8 55
	2241	2.6 79			2146	2.4 73		2353	2.4 73		2307	2.6 79		1843	0.6 18
<b>7</b>	0448	0.1 3		<b>22</b>	0349	0.3 9	<b>7</b>	0615	0.5 15	<b>22</b>	0529	0.2 6	<b>7</b>	0106	2.1 64
M	1104	2.7 82		Tu	0958	2.6 79	Th	1223	2.1 64	F	1133	2.3 70	Su	0743	0.5 15
	1724	0.0 0			1617	0.2 6		1829	0.4 12		1742	0.2 6		1348	1.8 55
	2339	2.5 76			2235	2.4 73							O	1941	0.6 18
<b>8</b>	0550	0.3 9		<b>23</b>	0443	0.3 76	<b>8</b>	0051	2.3 76	<b>23</b>	0011	2.6 79	<b>8</b>	0202	2.2 67
Tu	1202	2.5 76		W	1049	2.5 76	F	0720	0.5 15	Sa	0637	0.2 6	M	0837	0.5 15
	1818	0.2 6			1706	0.2 6		1324	2.0 61		1241	2.3 70		1441	1.9 58
					2329	2.5 76	O	1925	0.5 15		1847	0.2 6		2033	0.5 15
<b>9</b>	0037	2.5 76		<b>24</b>	0543	0.3 70	<b>9</b>	0148	2.2 67	<b>24</b>	0117	2.7 82	<b>9</b>	0252	2.3 70
W	0653	0.4 12		Th	1147	2.4 73	Sa	0821	0.5 6	Su	0746	0.1 3	Tu	0922	0.4 12
	1302	2.3 70			1801	0.2 6		1423	1.9 58		1350	2.3 70		1526	2.0 61
O	1912	0.3 9						2018	0.5 15		1954	0.1 3		2118	0.4 12
<b>10</b>	0133	2.4 73		<b>25</b>	0028	2.6 79	<b>10</b>	0241	2.3 70	<b>25</b>	0222	2.8 85	<b>10</b>	0335	2.4 73
Th	0755	0.4 12		F	0647	0.3 9	Su	0914	0.4 12	M	0850	-0.1 -3	W	1000	0.3 9
	1400	2.2 67			1250	2.3 70		1515	1.9 58		1454	2.4 73		1605	2.1 64
	2005	0.4 12		O	1900	0.2 6		2107	0.4 12		2056	0.0 0		2159	0.3 9
<b>11</b>	0227	2.4 73		<b>26</b>	0129	2.7 82	<b>11</b>	0328	2.3 70	<b>26</b>	0322	2.9 88	<b>11</b>	0414	2.5 76
F	0853	0.4 12		Sa	0753	0.1 3	M	0959	0.4 12	Tu	0948	-0.2 -6	Th	1036	0.2 6
	1455	2.1 64			1355	2.3 70		1600	1.9 58		1552	2.5 76		1641	2.3 70
	2053	0.4 12			2001	0.1 3		2151	0.4 12		2154	-0.1 -3		2239	0.2 6
<b>12</b>	0315	2.4 73		<b>27</b>	0231	2.8 85	<b>12</b>	0410	2.4 73	<b>27</b>	0417	3.1 94	<b>12</b>	0452	2.7 82
Sa	0944	0.4 12		Su	0857	0.0 0	Tu	1039	0.3 9	W	1040	-0.3 -9	F	1111	0.1 3
	1544	2.0 61			1459	2.4 73		1639	2.0 61		1645	2.6 79		1718	2.4 73
	2138	0.4 12			2102	0.0 0		2231	0.3 9		2247	-0.2 -6		2318	0.1 3
<b>13</b>	0359	2.4 73		<b>28</b>	0330	3.0 91	<b>13</b>	0449	2.5 76	<b>28</b>	0509	3.1 94	<b>13</b>	0529	2.8 85
Su	1029	0.3 9		M	0956	-0.2 -6	W	1115	0.2 6	Th	1129	-0.4 -12	Sa	1146	0.0 0
	1628	2.0 61			1559	2.5 76		1716	2.1 64		1734	2.7 82		1755	2.6 79
	2220	0.4 12			2201	-0.2 -6		2310	0.2 6		2338	-0.3 -9		2358	0.0 0
<b>14</b>	0440	2.4 73		<b>29</b>	0427	3.1 94	<b>14</b>	0526	2.6 79	<b>29</b>	0557	3.2 98	<b>14</b>	0609	2.8 85
M	1109	0.3 9		Tu	1052	-0.3 -9	Th	1149	0.1 3	F	1215	-0.4 -12	Su	1223	-0.1 -3
	1708	2.0 61			1655	2.6 79		1753	2.2 67		1821	2.8 85		1834	2.7 82
	2259	0.3 9			2257	-0.3 -9		2348	0.1 3				O		
<b>15</b>	0518	2.5 76		<b>30</b>	0521	3.2 98	<b>15</b>	0603	2.7 82	<b>30</b>	0026	-0.3 -9	<b>15</b>	0041	-0.1 -3
Tu	1146	0.2 6		W	1145	-0.5 -15	F	1224	0.0 0	Sa	0643	3.1 94	M	0650	2.9 88
	1746	2.1 64			1749	2.7 82		1829	2.4 73		1259	-0.3 -9		1303	-0.1 -3
	2338	0.2 6			2350	-0.3 -9				O	1906	2.8 85		1916	2.8 85
<b>31</b>	0613	3.3 101		<b>31</b>	0613	3.3 101	<b>31</b>	0114	-0.2 -6	<b>31</b>	0729	3.0 91	<b>30</b>	0136	0.0 0
Th	1236	-0.5 -15		Th	1840	2.8 85	Su	1343	-0.2 -6		1343	-0.2 -6	Tu	0745	2.5 76
								1951	2.8 85					2002	2.7 82

Time meridian 165° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Pago Pago, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
<b>1</b> W 0220 0.2 6 0828 2.3 70 1430 0.2 6 2044 2.5 76	0201 -0.3 -9 0806 2.7 82 1411 -0.2 -6 2033 3.1 94	<b>16</b> Th 0258 -0.3 -9 0904 2.6 79 1508 -0.1 -3 2133 3.0 91	0327 0.3 9 0933 1.9 58 1526 0.5 15 2144 2.3 70	<b>1</b> Sa 0418 0.4 12 1027 1.8 55 1618 0.6 18 2236 2.2 67	0347 -0.4 -12 0955 2.5 76 1557 -0.1 -3 2222 3.0 91	<b>16</b> M 0343 0.3 9 0951 1.9 58 1541 0.5 15 2157 2.3 70	0427 -0.4 -12 1038 2.6 79 1642 0.0 0 2303 2.9 88				
<b>2</b> Th 0307 0.3 9 0915 2.1 64 1514 0.4 12 2131 2.4 73	0258 -0.3 -9 0904 2.6 79 1508 -0.1 -3 2133 3.0 91	<b>2</b> Su 0418 0.4 12 1027 1.8 55 1618 0.6 18 2236 2.2 67	0451 -0.3 -9 1101 2.5 76 1704 0.0 0 2327 2.9 88	<b>2</b> Tu 0429 0.4 12 1040 1.9 58 1631 0.6 18 2245 2.3 70	0429 0.4 12 1040 1.9 58 1631 0.6 18 2245 2.3 70	<b>17</b> W 0527 -0.2 -6 1141 2.6 79 1748 0.1 3	0427 -0.4 -12 1038 2.6 79 1642 0.0 0 2303 2.9 88				
<b>3</b> F 0358 0.4 12 1006 2.0 61 1603 0.5 15 2222 2.2 67	0401 -0.2 -6 1008 2.4 73 1611 0.0 0 2238 2.9 88	<b>3</b> M 0512 0.5 15 1124 1.8 55 1713 0.6 18 2331 2.2 67	0556 -0.2 -6 1208 2.5 76 1812 0.1 3 2331 2.2 67	<b>3</b> W 0516 0.4 12 1130 2.0 61 1723 0.6 18 2334 2.3 70	0516 0.4 12 1130 2.0 61 1723 0.6 18 2334 2.3 70	<b>18</b> Th 0005 2.8 85 0627 -0.1 -3 1244 2.6 79 1855 0.2 6	0427 -0.4 -12 1038 2.6 79 1642 0.0 0 2303 2.9 88				
<b>4</b> Sa 0455 0.5 15 1104 1.8 55 1659 0.6 18 2319 2.1 64	0508 -0.2 -6 1117 2.4 73 1719 0.1 3 2346 2.8 85	<b>4</b> Tu 0607 0.5 15 1220 1.8 55 1810 0.6 18 2346 2.8 85	0033 2.8 85 0658 -0.1 -3 1312 2.5 76 1920 0.1 3	<b>4</b> Th 0602 0.4 12 1220 2.1 64 1818 0.6 18 2000 0.3 9	0602 0.4 12 1220 2.1 64 1818 0.6 18 2000 0.3 9	<b>19</b> F 0108 2.6 79 0725 0.1 3 1344 2.6 79 2000 0.3 9	0427 -0.4 -12 1038 2.6 79 1642 0.0 0 2303 2.9 88				
<b>5</b> Su 0557 0.5 15 1207 1.8 55 1759 0.6 18	0617 -0.1 -3 1227 2.4 73 1830 0.1 3	<b>5</b> M 0025 2.2 67 0657 0.5 15 1312 1.9 58 1905 0.6 18	0136 2.8 85 0757 -0.1 -3 1412 2.6 79 2023 0.1 3	<b>5</b> Th 0026 2.3 70 0649 0.4 12 1310 2.2 67 1913 0.5 15	0026 2.3 70 0649 0.4 12 1310 2.2 67 1913 0.5 15	<b>20</b> Sa 0209 2.4 73 0820 0.1 3 1440 2.6 79 2101 0.3 9	0427 -0.4 -12 1038 2.6 79 1642 0.0 0 2303 2.9 88				
<b>6</b> M 0019 2.1 64 0657 0.5 15 1307 1.8 55 1858 0.6 18	0054 2.8 85 0722 -0.1 -3 1333 2.4 73 1938 0.1 3	<b>6</b> Tu 0116 2.2 67 0743 0.4 12 1358 2.1 64 1956 0.5 15	0235 2.7 82 0850 0.0 0 1506 2.7 82 2120 0.1 3	<b>6</b> F 0118 2.3 70 0736 0.3 9 1359 2.4 73 2008 0.4 12	0118 2.3 70 0736 0.3 9 1359 2.4 73 2008 0.4 12	<b>21</b> Su 0306 2.3 70 0910 0.2 6 1530 2.6 79 2155 0.3 9	0427 -0.4 -12 1038 2.6 79 1642 0.0 0 2303 2.9 88				
<b>7</b> Tu 0117 2.1 64 0751 0.5 15 1400 1.9 58 1952 0.5 15	0158 2.8 85 0822 -0.1 -3 1433 2.5 76 2039 0.0 0	<b>7</b> W 0204 2.4 73 0825 0.3 9 1441 2.3 70 2044 0.4 12	0329 2.6 79 0938 0.0 0 1554 2.7 82 2211 0.1 3	<b>7</b> Sa 0211 2.4 73 0824 0.2 6 1447 2.6 79 2102 0.2 6	0211 2.4 73 0824 0.2 6 1447 2.6 79 2102 0.2 6	<b>22</b> M 0357 2.2 67 0955 0.3 9 1615 2.6 79 2242 0.3 9	0427 -0.4 -12 1038 2.6 79 1642 0.0 0 2303 2.9 88				
<b>8</b> W 0207 2.2 67 0836 0.4 12 1445 2.0 61 2039 0.4 12	0256 2.8 85 0915 -0.2 -6 1527 2.6 79 2135 0.0 0	<b>8</b> Th 0251 2.5 76 0907 0.2 6 1524 2.5 76 2132 0.2 6	0417 2.5 76 1021 0.1 3 1637 2.7 82 2257 0.1 3	<b>8</b> Sa 0304 2.5 76 0913 0.0 0 1537 2.8 85 2156 0.0 0	0304 2.5 76 0913 0.0 0 1537 2.8 85 2156 0.0 0	<b>23</b> Tu 0442 2.2 67 1037 0.3 9 1655 2.6 79 2323 0.2 6	0427 -0.4 -12 1038 2.6 79 1642 0.0 0 2303 2.9 88				
<b>9</b> Th 0252 2.4 73 0915 0.3 9 1525 2.2 67 2123 0.3 9	0349 2.8 85 1003 -0.1 -3 1614 2.7 82 2225 0.0 0	<b>9</b> F 0337 2.6 79 0948 0.0 0 1607 2.8 85 2219 0.0 0	0500 2.4 73 1100 0.1 3 1716 2.7 82 2338 0.1 3	<b>9</b> M 0358 2.6 79 1004 -0.1 -3 1627 3.0 91 2250 0.2 6	0358 2.6 79 1004 -0.1 -3 1627 3.0 91 2250 0.2 6	<b>24</b> W 0523 2.1 64 1115 0.3 9 1733 2.6 79	0427 -0.4 -12 1038 2.6 79 1642 0.0 0 2303 2.9 88				
<b>10</b> F 0333 2.5 76 0952 0.2 6 1603 2.4 73 2205 0.2 6	0436 2.8 85 1046 -0.1 -3 1657 2.8 85 2311 0.0 0	<b>10</b> Sa 0424 2.7 82 1032 -0.1 -3 1651 3.0 91 2308 -0.2 -6	0541 2.3 70 1137 0.2 6 1753 2.7 82 2343 -0.4 -12	<b>10</b> W 0452 2.6 79 1055 -0.2 -6 1719 3.2 98 2343 -0.4 -12	0452 2.6 79 1055 -0.2 -6 1719 3.2 98 2343 -0.4 -12	<b>25</b> Th 0001 0.2 6 0601 2.1 64 1152 0.2 6 1809 2.6 79	0427 -0.4 -12 1038 2.6 79 1642 0.0 0 2303 2.9 88				
<b>11</b> Sa 0414 2.7 82 1029 0.0 0 1641 2.6 79 2247 0.0 0	0519 2.7 82 1125 0.0 0 1737 2.8 85 2353 0.0 0	<b>11</b> Su 0512 2.8 85 1118 -0.2 -6 1739 3.1 94 2359 -0.3 -9	0018 0.1 3 0620 2.2 67 1213 0.2 6 1830 2.6 79	<b>11</b> Th 0547 2.7 82 1148 -0.3 -9 1812 3.3 101 2184 2.6 79	0547 2.7 82 1148 -0.3 -9 1812 3.3 101 2184 2.6 79	<b>26</b> F 0037 0.2 6 0638 2.1 64 1229 0.2 6 1846 2.6 79	0427 -0.4 -12 1038 2.6 79 1642 0.0 0 2303 2.9 88				
<b>12</b> Su 0455 2.8 85 1107 -0.1 -3 1721 2.8 85 2331 -0.1 -3	0600 2.6 79 1203 0.0 0 1815 2.8 85 1907 2.6 79	<b>12</b> M 0603 2.8 85 1207 -0.3 -9 1829 3.2 98 1907 2.6 79	0056 0.2 6 0658 2.1 64 1251 0.2 6 1907 3.4 104	<b>12</b> F 0038 -0.5 -15 0642 2.7 82 1243 -0.4 -12 1907 3.4 104	0038 -0.5 -15 0642 2.7 82 1243 -0.4 -12 1907 3.4 104	<b>27</b> Sa 0114 0.1 3 0716 2.1 64 1307 0.2 6 1924 2.6 79	0427 -0.4 -12 1038 2.6 79 1642 0.0 0 2303 2.9 88				
<b>13</b> M 0538 2.8 85 1148 -0.2 -6 1804 3.0 91 1853 2.7 82	0034 0.1 3 0640 2.4 73 1239 0.1 3 1931 2.6 79	<b>13</b> Tu 0052 -0.4 -12 0656 2.8 85 1259 -0.3 -9 1922 3.3 101	0135 0.2 6 0738 2.1 64 1330 0.3 9 1947 2.5 76	<b>13</b> Sa 0134 -0.6 -18 0738 2.7 82 1339 -0.4 -12 2003 3.3 101	0134 -0.6 -18 0738 2.7 82 1339 -0.4 -12 2003 3.3 101	<b>28</b> Su 0151 0.1 3 0754 2.1 64 1346 0.3 9 2002 2.6 79	0427 -0.4 -12 1038 2.6 79 1642 0.0 0 2303 2.9 88				
<b>14</b> Tu 0018 -0.2 -6 0624 2.8 85 1232 -0.2 -6 1850 3.1 94	0114 0.1 3 0719 2.3 70 1317 0.2 6 1931 2.6 79	<b>14</b> W 0147 -0.5 -15 0752 2.7 82 1354 -0.3 -9 2018 3.2 98	0215 0.2 6 0820 2.0 61 1411 0.3 9 2028 2.4 73	<b>14</b> Sa 0230 -0.6 -18 0836 2.7 82 1438 -0.3 -9 2101 3.3 101	0230 -0.6 -18 0836 2.7 82 1438 -0.3 -9 2101 3.3 101	<b>29</b> M 0229 0.2 6 0834 2.1 64 1426 0.3 9 2041 2.5 76	0427 -0.4 -12 1038 2.6 79 1642 0.0 0 2303 2.9 88				
<b>15</b> W 0107 -0.3 -9 0713 2.8 85 1319 -0.2 -6 1939 3.1 94	0156 0.2 6 0801 2.1 64 1356 0.3 9 2012 2.5 76	<b>15</b> Th 0246 -0.4 -12 0852 2.6 79 1453 -0.2 -6 2118 3.1 94	0258 0.3 9 0904 2.0 61 1454 0.4 12 2112 2.4 73	<b>15</b> Sa 0328 -0.5 -15 0936 2.7 82 1539 -0.2 -6 2201 3.1 94	0328 -0.5 -15 0936 2.7 82 1539 -0.2 -6 2201 3.1 94	<b>30</b> Tu 0307 0.2 6 0915 2.1 64 1508 0.4 12 2122 2.5 76	0427 -0.4 -12 1038 2.6 79 1642 0.0 0 2303 2.9 88				
<b>31</b> F 0239 0.3 9 0845 2.0 61 1439 0.4 12 2056 2.4 73	0034 0.1 3 0640 2.4 73 1239 0.1 3 1931 2.6 79	<b>31</b> F 0239 0.3 9 0845 2.0 61 1439 0.4 12 2056 2.4 73	0135 0.2 6 0738 2.1 64 1330 0.3 9 1947 2.5 76	<b>31</b> W 0347 0.3 9 0958 2.1 64 1554 0.5 15 2205 2.4 73	0347 0.3 9 0958 2.1 64 1554 0.5 15 2205 2.4 73						

Time meridian 165° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

## **Wellington, New Zealand, 2008**

## Times and Heights of High and Low Waters

Time meridian 180° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

# Wellington, New Zealand, 2008

Times and Heights of High and Low Waters

April				May				June							
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height				
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm				
<b>1</b> Tu	0015 0634 1234 1836	5.2 2.0 4.9 2.0	160 60 150 60	<b>16</b> W 0115 0732 1343 1954	5.6 2.0 5.2 2.0	170 60 160 60	<b>1</b> Th	0023 0641 1246 1850	5.2 2.0 4.9 2.0	160 60 150 60	<b>16</b> Su	0140 0749 1415 2029	5.2 2.0 4.9 2.0	160 60 170 50	
<b>2</b> W	0056 0713 1317 1919	5.2 2.0 4.9 2.0	160 60 150 60	<b>17</b> Th	0206 0821 1435 2046	5.2 2.0 4.9 2.0	<b>2</b> F	0110 0724 1334 1941	5.2 2.0 5.2 2.0	160 60 160 60	<b>2</b> M	0237 0844 1504 2119	5.2 1.6 5.6 2.3	160 50 170 50	
<b>3</b> Th	0140 0754 1404 2006	5.2 2.0 4.9 2.0	160 60 150 60	<b>18</b> F	0257 0910 1527 2139	5.2 2.3 4.9 2.0	<b>3</b> Sa	0201 0811 1428 2036	5.2 2.0 5.2 1.6	160 60 160 50	<b>3</b> Tu	0337 0943 1603 2222	5.2 1.6 5.9 1.6	160 50 180 50	
<b>4</b> F	0228 0840 1455 2058	5.2 2.0 4.9 2.0	160 60 150 60	<b>19</b> Sa	0347 1000 1618 2231	4.9 2.3 4.9 2.3	<b>4</b> Su	0256 0905 1524 2135	5.2 2.0 5.2 1.6	140 60 150 50	<b>4</b> W	0438 1045 1638 2258	5.2 1.6 4.9 2.3	160 50 180 50	
<b>5</b> Sa	0321 0933 1550 2156	5.2 2.0 5.2 2.0	160 60 160 60	<b>20</b> Su	0437 1051 1707 2324	4.9 2.3 4.9 2.3	<b>5</b> M	0356 1005 1623 2239	5.2 2.0 5.6 1.6	160 60 170 50	<b>5</b> Th	0539 1146 1800 2348	5.2 1.6 5.9 2.3	160 50 180 50	
<b>6</b> Su	0418 1032 1648 ● 2258	5.2 2.0 5.2 1.6	160 60 160 50	<b>21</b> M	0527 1141 1755	4.6 2.3 4.9	<b>6</b> Tu	0458 1107 1722 2345	5.2 1.6 5.6 1.6	160 60 170 50	<b>6</b> W	0548 1151 1807	4.6 2.3 4.9	140 50 150	
<b>7</b> M	0518 1134 1746	5.2 2.0 5.2	160 60 160	<b>22</b> Tu	0017 0617 1230 1842	2.3 4.6 2.3 4.9	<b>7</b> W	0559 1209 1821	5.2 1.6 5.9	160 50 180	<b>7</b> Th	0038 0635 1236 1850	2.3 4.6 2.3 4.9	140 50 150	
<b>8</b> Tu	0003 0619 1235 1844	1.6 5.2 2.0 5.6	50 160 60 170	<b>23</b> W	0109 0706 1316 1927	2.3 4.6 2.3 4.9	<b>8</b> Th	0050 0659 1309 1920	1.6 5.2 1.6 5.9	50 160 50 180	<b>8</b> Su	0126 0720 1320 1933	2.3 4.6 2.3 4.9	70 140 70 150	
<b>9</b> W	0108 0720 1334 1941	1.6 5.2 1.6 5.6	50 160 170 170	<b>24</b> Th	0158 0753 1400 2012	2.3 4.6 2.3 4.9	<b>9</b> F	0152 0758 1407 2018	1.3 5.6 1.6 5.9	40 170 70 180	<b>9</b> M	0213 0804 1403 2016	2.3 4.6 2.3 4.9	70 140 70 150	
<b>10</b> Th	0210 0818 1431 2039	1.6 5.2 1.6 5.9	50 160 170 180	<b>25</b> F	0245 0838 1442 2055	2.3 4.6 2.3 4.9	<b>10</b> Sa	0252 0854 1504 2116	1.3 5.6 1.6 5.9	40 170 50 180	<b>10</b> Tu	0421 0846 1445 2059	1.6 4.6 2.3 4.9	50 160 50 150	
<b>11</b> F	0310 0914 1526 2136	1.3 5.6 1.6 5.9	40 170 170 180	<b>26</b> Sa	0329 0920 1523 2137	2.3 4.6 2.3 4.9	<b>11</b> Su	0349 0949 1600 2213	1.3 5.6 1.6 5.9	40 170 50 180	<b>11</b> W	0512 1116 1527 2142	1.6 5.2 2.3 4.9	50 160 50 160	
<b>12</b> Sa	0407 1009 1621 2233	1.3 5.6 1.6 5.9	40 170 170 180	<b>27</b> Su	0410 1001 1602 2217	2.3 4.9 2.3 4.9	<b>12</b> M	0443 1044 1656 2309	1.3 5.2 1.6 5.6	40 170 50 170	<b>12</b> Tu	0416 1008 1609 2225	2.3 4.9 2.3 4.9	70 150 70 150	
<b>13</b> Su	0501 1103 1714 ● 2328	1.3 5.2 1.6 5.9	40 160 170 180	<b>28</b> M	0448 1040 1642 2258	2.0 4.9 2.3 4.9	<b>13</b> Tu	0534 1138 1750 2309	1.6 5.2 1.6 5.2	60 160 50 160	<b>13</b> W	0454 1049 1653 2309	2.0 4.9 2.3 5.2	60 160 70 160	
<b>14</b> M	0553 1157 1808	1.6 5.2 1.6	50 160 170	<b>29</b> Tu	0525 1120 1722 ● 2339	2.0 4.9 2.3 5.2	<b>14</b> W	0004 0624 1231 1844	5.6 1.6 5.2 1.6	170 50 160 50	<b>14</b> Th	0533 1133 1739 2356	2.0 4.9 2.0 5.2	160 150 60 160	
<b>15</b> Tu	0022 0643 1250 1901	5.6 1.6 5.2 1.6	170 50 160 50	<b>15</b> W	0602 1201 1805	2.0 4.9 2.0	<b>15</b> Th	0056 0712 1324 1937	5.2 2.0 5.2 2.0	160 60 160 60	<b>15</b> Su	0614 1220 1829 2054	2.0 5.2 60 2.3	160 160 70 70	
								<b>31</b> Sa	0046 0659 1312 1922	5.2 2.0 5.2 2.0	160 60 160 60				

Time meridian 180° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Wellington, New Zealand, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm		h m	ft	cm		h m	ft	cm	
1 Tu	0220	5.2	160	16 W	0309	4.6	140	1 F	0401	5.2	160
	0827	1.6	50		0908	2.3	70		1007	1.6	50
	1447	5.9	180		1531	4.9	150		1623	5.9	180
	2104	1.6	50		2150	2.3	70	●	2248	1.6	50
2 W	0320	5.2	160	17 Th	0355	4.6	140	2 Sa	0459	5.2	160
	0925	1.6	50		0951	2.3	70		1106	1.6	50
	1544	5.9	180		1612	4.9	150		1720	5.9	180
	2205	1.6	50		2237	2.3	70		2349	1.6	50
3 Th	0420	5.2	160	18 F	0440	4.6	140	3 Su	0556	5.2	160
	1025	1.6	50		1035	2.3	70		1204	1.6	50
	1642	5.9	180		1654	4.9	150	●	1816	5.6	170
	2308	1.6	50	○	2325	2.3	70		1135	2.3	70
4 F	0519	5.2	160	19 Sa	0526	4.6	140	4 M	0047	1.6	50
	1125	1.6	50		1120	2.3	70		0651	5.2	160
	1739	5.9	180		1737	4.9	150		1302	1.6	60
5 Sa	0010	1.6	50	20 Su	0013	2.3	70		1913	5.6	170
	0617	5.2	160		0612	4.6	140	5 Tu	0144	2.0	60
	1224	1.6	50		1207	2.3	70		0746	5.2	160
	1837	5.9	180		1823	4.9	150		1359	1.6	50
6 Su	0110	1.6	50	21 M	0101	2.3	70	6 W	0238	2.0	60
	0713	5.2	160		0657	4.6	140		0839	5.2	160
	1322	1.6	50		1254	2.3	70		1456	1.6	50
	1934	5.9	180		1910	4.9	150		2103	5.2	160
7 M	0208	1.6	50	22 Tu	0148	2.3	70	7 Th	0328	2.0	60
	0809	5.2	160		0742	4.9	150		0932	5.2	160
	1420	1.6	50		1343	2.3	70		1551	2.0	60
	2032	5.6	170		1958	4.9	150		2156	5.2	160
8 Tu	0304	1.6	50	23 W	0233	2.3	70	8 F	0416	2.0	60
	0904	5.2	160		0827	4.9	150		1024	5.2	160
	1517	1.6	50		1433	2.3	70		1643	2.0	60
	2128	5.6	170		2047	4.9	150		2246	4.9	150
9 W	0356	1.6	50	24 Th	0318	2.3	70	9 Sa	0502	2.0	60
	0958	5.2	160		0913	4.9	150		1114	5.2	160
	1614	1.6	50		1524	2.0	60		1605	1.6	50
	2223	5.2	160		2137	5.2	160	●	2333	4.9	150
10 Th	0446	2.0	60	25 F	0402	2.0	60	10 Su	0545	2.0	60
	1052	5.2	160		1001	5.2	160		1202	5.2	160
	1708	2.0	60		1616	2.0	60		1819	2.0	60
●	2316	5.2	160		2228	5.2	160		2358	5.2	160
11 F	0534	2.0	60	26 Sa	0447	2.0	60	11 M	0019	4.9	150
	1144	5.2	160		1052	5.2	160		0626	2.3	70
	1801	2.0	60		1709	2.0	60		1247	4.9	150
	2320	5.2	160		2320	5.2	160		1902	2.3	70
12 Sa	0006	4.9	150	27 Su	0534	2.0	60	12 Tu	0102	4.9	150
	0619	2.0	60		1144	5.6	170		0706	2.3	70
	1235	5.2	160		1802	1.6	50		1224	5.6	170
	1850	2.0	60		1329	4.9	150		1844	1.6	50
13 Su	0054	4.9	150	28 M	0013	5.2	160	13 M	0146	4.6	140
	0702	2.0	60		0624	1.6	50		0747	2.3	70
	1323	4.9	150		1239	5.6	170		1409	4.9	150
	1937	2.3	70		1856	1.6	50		2025	2.3	70
14 M	0139	4.9	150	29 Tu	0108	5.2	160	14 Th	0230	4.6	140
	0744	2.3	70		0716	1.6	50		0828	2.3	70
	1407	4.9	150		1334	5.6	170		1451	4.9	150
	2022	2.3	70		1952	1.6	50		2108	2.3	70
15 Tu	0224	4.6	140	30 W	0204	5.2	160	15 F	0315	4.6	140
	0826	2.3	70		0811	1.6	50		0912	2.3	70
	1450	4.9	150		1431	5.9	180		1533	4.9	150
	2106	2.3	70		2049	1.6	50		2154	2.3	70
31 Th	0303	5.2	160		0909	1.6	50		1049	1.6	50
					1527	5.9	180		1701	5.6	170
					2148	1.6	50	●	2327	2.0	60
31 Th	0440	5.2	160								
					1049	1.6	50				
					1527	5.9	180				
					2148	1.6	50				

Time meridian 180° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Wellington, New Zealand, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m W 0606 1225 1829	ft 5.2 2.0 4.9	cm 160 60 150	h m Th 0524 1142 1757	ft 5.2 2.0 5.2	cm 160 60 160	h m 1 Sa 0103 0714 1345 1940	ft 2.3 4.9 2.0 4.9	cm 70 150 60 150	h m 16 Su 0041 0652 1324 1930	ft 1.6 5.9 1.6 5.6	cm 50 180 50 170
1 W 0606 1225 1829	ft 5.2 2.0 4.9	cm 160 60 150	16 Th 0524 1142 1757	ft 5.2 2.0 5.2	cm 160 60 160	1 M 0109 0722 1400 1951	ft 2.3 4.9 2.3 4.6	cm 70 150 70 140	16 Tu 0115 0728 1402 2004	ft 1.3 5.9 1.3 5.6	cm 40 180 40 170
2 Th 0049 0657 1319 1921	ft 2.3 5.2 2.0 4.9	cm 70 160 60 150	17 F 0011 0620 1243 1855	ft 2.0 5.6 1.6 5.2	cm 60 170 50 160	2 Su 0147 0759 1431 2024	ft 2.3 4.9 2.0 4.9	cm 70 150 60 150	2 Tu 0151 0804 1443 2033	ft 2.3 4.9 2.3 4.9	cm 70 150 70 150
3 F 0138 0745 1411 2010	ft 2.3 5.2 2.0 4.9	cm 70 160 60 150	18 Sa 0108 0715 1343 1951	ft 2.0 5.6 1.6 5.2	cm 60 170 50 160	3 M 0229 0842 1515 2107	ft 2.3 4.9 2.0 4.9	cm 70 150 60 150	3 W 0233 0846 1519 2120	ft 2.3 4.9 2.3 5.6	cm 70 150 70 170
4 Sa 0223 0833 1500 2056	ft 2.3 5.2 2.0 4.9	cm 70 160 60 150	19 Su 0202 0810 1441 2046	ft 1.6 5.9 1.6 5.2	cm 50 180 60 160	4 Tu 0309 0923 1556 2147	ft 2.3 4.9 2.0 4.9	cm 70 150 60 150	4 Th 0314 0927 1613 2214	ft 2.3 4.9 2.0 5.6	cm 70 150 60 150
5 Su 0306 0918 1546 2140	ft 2.3 5.2 2.0 4.9	cm 70 160 60 150	20 M 0256 0906 1537 2139	ft 1.6 5.9 1.3 5.6	cm 50 180 40 170	5 W 0349 1004 1634 2226	ft 2.3 4.9 2.0 4.9	cm 70 150 60 150	5 F 0355 1009 1639 2232	ft 2.3 4.9 2.0 4.9	cm 70 150 60 160
6 M 0348 1002 1628 2222	ft 2.3 4.9 2.0 4.9	cm 70 150 60 150	21 Tu 0350 1001 1631 2232	ft 1.6 5.9 1.3 5.6	cm 50 180 40 170	6 Th 0428 1044 1711 2305	ft 2.3 4.9 2.0 4.9	cm 70 150 60 150	6 Sa 0436 1051 1715 2314	ft 2.3 4.9 2.0 4.9	cm 70 150 60 150
7 Tu 0427 1043 1708 2302	ft 2.3 4.9 2.0 4.9	cm 70 150 60 150	22 W 0443 1057 1723 2326	ft 1.6 5.9 1.3 5.2	cm 50 180 40 160	7 F 0508 1124 1748 2345	ft 2.3 4.9 2.0 4.9	cm 70 150 60 150	7 Su 0520 1134 1754 2358	ft 2.0 4.9 2.0 4.9	cm 60 150 60 150
8 W 0506 1124 1747 2342	ft 2.3 4.9 2.0 4.9	cm 70 150 60 150	23 Th 0537 1152 1814	ft 1.6 5.9 1.6	cm 50 180 50	8 Sa 0549 1206 1825	ft 2.3 4.9 2.0	cm 70 150 60	8 M 0606 1221 1835	ft 2.0 4.9 2.0	cm 60 150 60
9 Th 0545 1203 1824	ft 2.3 4.9 2.0	cm 70 150 60	24 F 0020 0632 1247 1905	ft 5.2 1.6 5.6 1.6	cm 160 50 170 50	9 Su 0028 0633 1251 1906	ft 4.9 2.0 4.9 2.0	cm 150 60 150 60	9 Tu 0046 0656 1414 2025	ft 5.2 2.0 4.9 2.0	cm 160 60 160 60
10 F 0023 0625 1244 1902	ft 4.9 2.3 4.9 2.3	cm 150 70 150 70	25 Sa 0115 0728 1341 1957	ft 5.2 1.6 5.6 2.0	cm 160 50 170 60	10 M 0115 0721 1340 1952	ft 4.9 2.0 4.9 2.0	cm 150 60 150 60	10 W 0244 0900 1505 2114	ft 5.2 2.0 4.9 2.3	cm 160 60 150 70
11 Sa 0105 0708 1327 1943	ft 4.9 2.3 4.9 2.3	cm 150 70 150 70	26 Su 0211 0824 1435 2049	ft 5.2 2.0 5.2 2.0	cm 160 60 160 60	11 Tu 0206 0814 1434 2043	ft 5.2 2.0 4.9 2.0	cm 160 60 150 60	11 Th 0235 0848 1506 2112	ft 5.6 1.6 5.2 2.0	cm 170 50 160 60
12 Su 0151 0754 1414 2028	ft 4.9 2.3 4.9 2.3	cm 150 70 150 70	27 M 0306 0920 1529 2143	ft 5.2 2.0 5.2 2.3	cm 160 60 160 70	12 W 0302 0913 1532 2141	ft 5.2 2.0 5.2 2.0	cm 160 60 160 60	12 F 0333 0951 1608 2214	ft 5.6 1.6 5.2 1.6	cm 170 50 160 50
13 M 0241 0845 1505 2118	ft 4.9 2.0 4.9 2.3	cm 150 60 150 70	28 Tu 0400 1016 1622 2236	ft 5.2 2.0 4.9 2.3	cm 160 60 160 70	13 Th 0359 1015 1633 2242	ft 5.2 2.0 5.2 2.0	cm 160 60 160 60	13 F 0510 1136 1735 2339	ft 4.9 2.3 4.6 2.3	cm 150 70 140 70
14 Tu 0334 0940 1601 2214	ft 4.9 2.0 5.2 2.3	cm 150 60 160 70	29 W 0451 1111 1714 2328	ft 4.9 2.0 4.9 2.3	cm 150 60 150 70	14 F 0457 1119 1734 2342	ft 5.6 1.6 5.2 1.6	cm 170 50 160 50	29 Sa 0555 1226 1822	ft 4.9 2.3 4.6 2.0	cm 150 70 140 60
15 W 0429 1040 1659 2313	ft 5.2 2.0 5.2 2.0	cm 160 60 160 60	30 Th 0541 1204 1805	ft 4.9 2.3 4.9	cm 150 70 150	15 Sa 0555 1223 1833	ft 5.6 1.6 5.2	cm 170 50 160	30 M 0016 0629 1314 1908	ft 1.6 5.9 2.3 4.6	cm 50 180 70 170
			31 F 0017 0628 1256 1854	ft 2.3 4.9 2.3 4.9	cm 70 150 70 150				31 W 0114 0728 1409 1959	ft 2.3 4.9 2.3 4.6	cm 70 150 70 140

Time meridian 180° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Auckland, New Zealand, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm		h m	ft	cm		h m	ft	cm	
1 Tu 0122	9.2	280		16 0041	9.8	300		1 0222	8.9	270	
0718	3.0	90		W 0641	2.3	70		Sa 0821	3.6	110	
1342	9.5	290		1310	10.2	310		F 1430	8.9	270	
1952	3.0	90	● 1915	2.0	60		2044	3.3	100		
2 W 0214	8.9	270		17 0136	9.8	300	1 0221	9.8	300		
0813	3.3	100		Th 0740	2.6	80	Sa 0828	3.0	90	1 Sa 0136	
1431	9.2	280		1404	9.8	300	F 1447	9.5	290	0738	
2043	3.0	90		2011	2.0	60	2055	2.3	70	120	
3 Th 0310	8.9	270		18 0238	9.5	290	2 0234	8.9	270		
0910	3.6	110		W 0844	3.0	90	Su 0935	3.9	120	17 0314	
1521	8.9	270		1504	9.8	300	1524	8.5	260	0923	
2136	3.3	100		2113	2.3	70	2142	3.3	100	M 1541	
4 F 0407	8.9	270		19 0345	9.5	290	18 0436	9.8	300	2148	
1005	3.6	110		Sa 0950	3.0	90	3 0420	8.9	270	18 0419	
1612	8.9	270		M 1607	9.8	300	Su 1016	3.9	120	0427	
2229	3.3	100		2218	2.0	60	1622	8.5	260	1646	
5 Sa 0503	8.9	270		20 0451	9.8	300	2241	3.3	100	2253	
1057	3.6	110		Tu 1054	2.6	80	5 0605	9.2	280	2.6	
1705	8.9	270		Su 1713	9.8	300	20 0007	2.0	60	80	
2321	3.0	90		2322	2.0	60	W 0634	10.5	320	1126	
6 Su 0553	9.2	280		21 0553	10.2	310	5 0526	9.2	280	1747	
1146	3.6	110		W 1155	2.3	70	W 1123	3.3	100	2350	
1756	8.9	270		M 1816	9.8	300	1901	10.2	310	2.6	
7 M 0009	3.0	90		6 0023	3.0	90	O 1952	10.2	310	80	
0640	9.2	280		21 0725	10.5	320	6 0614	9.8	300	21	
1232	3.3	100		W 1246	3.0	90	Th 1213	3.0	90	040	
1846	8.9	270		1905	9.2	280	1833	9.5	290	0701	
8 Tu 0053	2.6	80		7 0107	2.3	70	● 1952	10.2	310	1308	
0723	9.5	290		22 0148	1.6	50	6 0725	10.5	320	1931	
1316	3.0	90		Tu 0734	10.2	310	7 0035	2.6	80	2.3	
● 1932	9.2	280		Th 1331	2.6	80	22 0125	2.0	60	310	
9 W 0135	2.3	70		● 1951	9.5	290	F 0813	10.8	330	0746	
0804	9.8	300		23 0149	2.0	60	7 0700	10.2	310	1352	
1358	2.6	80		F 0816	10.5	320	1300	2.3	70	2015	
2016	9.5	290		1415	2.3	70	2040	10.5	320	310	
10 Th 0215	2.0	60		2035	10.2	310	● 1951	9.5	290	2.6	
0844	10.2	310		24 0207	1.3	40	22 0148	1.6	50	320	
1441	2.6	80		W 0834	11.2	340	8 0120	2.0	60	2056	
2059	9.5	290		Th 1439	1.6	50	Sa 0857	10.8	330	0206	
11 F 0255	2.0	60		2101	10.5	320	23 0232	1.6	50	0829	
0924	10.2	310		21 0207	1.3	40	Sa 1502	2.0	60	1433	
1523	2.3	70		26 0339	1.3	40	2123	10.5	320	2056	
2141	9.8	300		Sa 1008	10.8	330	● 2008	10.5	320	0246	
12 Sa 0335	2.0	60		1613	2.0	60	9 0205	1.6	50	0909	
1005	10.5	320		2232	10.5	320	Su 0940	10.5	320	1511	
1606	2.0	60		2315	10.2	310	24 0314	1.6	50	2135	
2223	9.8	300		12 0423	1.6	50	Su 1544	2.0	60	310	
13 Su 0417	2.0	60		Tu 1111	10.8	330	2204	10.5	320	0424	
1048	10.5	320		1657	2.0	60	9 0205	1.6	50	0442	
1650	2.0	60		2332	10.5	320	Su 1544	2.0	60	1102	
2306	10.2	310		11 0356	1.6	50	22 0434	2.3	70	2.3	
14 M 0501	2.0	60		1025	10.8	330	Tu 1701	2.3	70	310	
1132	10.5	320		1627	1.3	40	11 0336	1.3	40	0947	
1736	2.0	60		2201	10.5	320	Tu 1701	11.2	340	1548	
2351	9.8	300		12 0442	1.6	50	11 0336	1.3	40	2212	
15 Tu 0548	2.3	70		1111	10.8	330	M 0916	11.2	340	310	
1219	10.2	310		1713	1.6	50	M 1020	10.5	320	0324	
1823	2.0	60		2332	10.5	320	M 1623	2.0	60	0947	
16 Sa 0636	2.0	60		1627	1.3	40	2244	10.2	310	10.2	
1258	9.5	290		2201	10.5	320	11 0336	1.3	40	310	
2358	9.8	300		12 0442	1.6	50	Tu 1701	11.2	340	0403	
1739	2.3	70		1137	9.8	300	11 0336	1.3	40	1025	
2358	9.8	300		1739	2.6	80	M 1051	10.8	330	9.8	
1801	1.6	50		1739	2.6	80	2314	10.8	330	300	
1801	1.6	50		1820	3.0	90	● 1904	3.3	100	2.6	
1801	1.6	50		1820	3.0	90	13 0515	2.0	60	300	
1801	1.6	50		1820	3.0	90	Su 1142	10.8	330	0525	
1801	1.6	50		1820	3.0	90	Th 1741	1.6	50	1141	
1801	1.6	50		1820	3.0	90	● 1904	3.3	100	1741	
1801	1.6	50		1820	3.0	90	14 0046	9.2	280	0011	
1801	1.6	50		1820	3.0	90	F 0645	3.6	110	0611	
1801	1.6	50		1820	3.0	90	F 1259	9.2	280	1224	
1801	1.6	50		1820	3.0	90	● 1835	2.0	60	1824	
1801	1.6	50		1820	3.0	90	15 0104	10.2	310	0111	
1801	1.6	50		1820	3.0	90	Su 0711	2.6	80	0611	
1801	1.6	50		1820	3.0	90	Su 1333	9.8	300	1224	
1801	1.6	50		1820	3.0	90	1934	2.3	70	1824	
1801	1.6	50		1820	3.0	90	● 1914	3.6	110	3.3	
1801	1.6	50		1820	3.0	90	31 0153	8.9	270	100	
1801	1.6	50		1820	3.0	90	M 0757	3.9	120	280	
1801	1.6	50		1820	3.0	90	M 1403	8.5	260	0559	
1801	1.6	50		1820	3.0	90	Su 0702	3.6	110	0702	
1801	1.6	50		1820	3.0	90	Su 1310	8.9	270	1310	
1801	1.6	50		1820	3.0	90	● 1914	3.6	110	1914	
1801	1.6	50		1820	3.0	90	31 0153	8.9	270	280	
1801	1.6	50		1820	3.0	90	M 1403	8.5	260	0559	
1801	1.6	50		1820	3.0	90	2012	3.6	110	2012	

Time meridian 180° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Auckland, New Zealand, 2008

Times and Heights of High and Low Waters

April				May				June			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0251	8.9	270	16 W 0357	9.8	300	1 Th 0306	9.5	290	16 Su 0421	9.8	300
0855	3.6	110	1009	3.0	90	0912	3.0	90	1029	2.0	60
1501	8.5	260	1627	9.5	290	1526	9.2	280	1656	10.2	310
2115	3.6	110	2232	3.0	90	2137	3.3	100	2300	2.3	70
2 W 0348	9.2	280	17 Th 0453	9.8	300	2 F 0400	9.5	290	2 M 0516	10.2	310
0951	3.6	110	1104	3.0	90	1007	2.6	80	1126	1.6	50
1603	8.9	270	1725	9.5	290	1627	9.5	290	1755	10.5	320
2216	3.3	100	2326	2.6	80	2235	3.0	90	2356	2.0	60
3 Th 0442	9.5	290	18 F 0544	9.8	300	3 Sa 0454	9.8	300	3 Tu 0615	10.5	320
1045	3.0	90	1154	2.6	80	1101	2.3	70	1223	1.3	40
1703	9.2	280	1818	9.8	300	1725	9.8	300	1852	10.8	330
2311	3.0	90				2329	2.3	70	● 1946	11.2	340
4 F 0533	9.8	300	19 Sa 0014	2.6	80	4 Su 0547	10.5	320	4 W 0051	1.6	50
1137	2.6	80	0631	9.8	300	1155	1.6	50	0713	10.8	330
1759	9.8	300	1240	2.6	80	1821	10.5	320	1318	1.0	30
			1905	9.8	300				● 1946	11.2	340
5 Sa 0002	2.3	70	20 Su 0058	2.6	80	5 M 0021	2.0	60	5 Th 0146	1.6	50
0623	10.2	310	0716	9.8	300	0641	10.8	330	0810	10.8	330
1227	2.0	60	1322	2.3	70	1247	1.3	40	1411	1.0	30
1851	10.2	310	○ 1947	10.2	310	1914	11.2	340	2040	11.5	350
6 Su 0050	2.0	60	21 M 0138	2.6	80	6 Tu 0113	1.6	50	6 W 0241	1.6	50
0712	10.8	330	0757	9.8	300	0735	10.8	330	0807	9.5	290
1316	1.6	50	1402	2.3	70	1339	1.0	30	1409	2.3	70
● 1940	10.8	330	2028	10.2	310	● 2006	11.5	350	2038	10.2	310
7 M 0138	1.6	50	22 Tu 0217	2.6	80	7 W 0205	1.3	40	7 Th 0149	3.0	90
0801	11.2	340	0837	9.8	300	0829	11.2	340	0847	9.5	290
1404	1.0	30	1439	2.3	70	1431	0.7	30	1447	2.3	70
2029	11.2	340	2106	10.2	310	2058	11.5	350	2117	10.2	310
8 Tu 0226	1.3	40	23 W 0255	2.6	80	8 Th 0257	1.3	40	8 F 0309	3.0	90
0851	11.2	340	0916	9.8	300	0923	11.2	340	0927	9.5	290
1453	1.0	30	1516	2.3	70	1522	1.0	30	1524	2.6	80
2117	11.5	350	2143	10.2	310	2150	11.5	350	2155	9.8	300
9 W 0316	1.3	40	24 Th 0334	3.0	90	9 F 0352	1.6	50	9 M 0351	3.0	90
0942	11.2	340	0954	9.5	290	1017	10.8	330	1007	9.2	280
1542	1.0	30	1552	2.6	80	1614	1.0	30	1602	2.6	80
2207	11.5	350	2220	9.8	300	2243	11.2	340	2234	9.8	300
10 Th 0407	1.6	50	25 F 0415	3.0	90	10 Sa 0448	2.0	60	10 W 0433	3.0	90
1033	11.2	340	1033	9.5	290	1112	10.5	320	0927	9.5	290
1632	1.0	30	1630	2.6	80	1707	1.6	50	1642	2.6	80
2258	11.2	340	2259	9.8	300	2338	10.8	330	2316	9.8	300
11 F 0501	2.0	60	26 Sa 0457	3.3	100	11 M 0546	2.3	70	11 W 0518	3.3	100
1127	10.8	330	1113	9.2	280	1207	10.2	310	1130	9.2	280
1724	1.6	50	1709	3.0	90	1803	2.0	60	1724	3.0	90
2353	10.8	330	2341	9.5	290				● 1935	3.0	90
12 Sa 0559	2.3	70	27 Su 0543	3.3	100	12 M 0036	10.5	320	12 W 0000	9.5	290
1222	10.2	310	1155	9.2	280	0646	2.3	70	0604	3.3	100
1819	2.0	60	1752	3.3	100	1304	9.8	300	1215	9.2	280
● 1920	2.3	70				● 1902	2.3	70	1811	3.0	90
13 Su 0052	10.5	320	28 M 0027	9.2	280	13 Tu 0134	10.2	310	28 W 0047	9.5	290
0701	2.6	80	0632	3.6	110	0746	2.6	80	0652	3.0	90
1320	9.8	300	1241	8.9	270	1403	9.5	290	1303	9.2	280
● 1920	2.3	70	1840	3.3	100	2004	3.0	90	● 1903	3.3	100
14 M 0154	10.2	310	29 Tu 0118	9.2	280	14 W 0232	9.8	300	29 F 0136	9.5	290
0805	3.0	90	0724	3.6	110	0845	3.0	90	0743	3.0	90
1422	9.5	290	1331	8.9	270	1502	9.5	290	1356	9.2	280
2025	3.0	90	● 1935	3.6	110	2106	3.0	90	2000	3.3	100
15 Tu 0256	9.8	300	30 W 0211	9.2	280	15 M 0328	9.8	300	30 F 0228	9.8	300
0908	3.0	90	0818	3.3	100	0941	3.0	90	0837	2.6	80
1525	9.5	290	1427	8.9	270	1601	9.5	290	1453	9.2	280
2131	3.0	90	2036	3.6	110	2204	3.0	90	2101	3.0	90
									31 Sa 0323	9.8	300
									0932	2.3	70
									1555	9.5	290
									2202	3.0	90

Time meridian 180° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Auckland, New Zealand, 2008

Times and Heights of High and Low Waters

July				August				September							
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height				
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm				
1 Tu	0453	10.2	310	16 W	0537	8.9	270	1 F	0020	2.0	60				
1104	1.6	50	1150	3.0	90	0643	10.2	310	16 Sa	0029	3.0	90			
1734	10.5	320	1820	9.5	290	1246	1.3	40	1 M	0646	9.2	280			
2336	2.3	70	● 1913	10.8	330	1249	2.6	80	16 M	0813	10.5	320			
● 1913	10.8	330	1904	9.5	290	1915	9.8	300	1407	1.3	40				
2 W	0555	10.2	310	17 Th	0013	3.3	100	2 Sa	0117	1.6	50				
1203	1.3	40	0627	8.9	270	0740	10.5	320	17 Su	0112	2.6	80			
1833	10.8	330	1235	2.6	80	1338	1.0	30	2 Tu	0236	1.3	40			
● 1929	11.2	340	1904	9.5	290	2005	11.2	340	17 W	0859	10.8	330			
● 1929	11.2	340	○ 1945	9.8	300	● 1955	10.2	310	1451	1.3	40				
3 Th	0034	2.0	60	18 F	0057	3.3	100	3 Su	0210	1.6	50				
0656	10.5	320	0714	9.2	280	0833	10.8	330	18 M	0154	2.3	70			
1300	1.0	30	1317	2.6	80	1428	1.0	30	3 W	0813	9.8	300			
● 1929	11.2	340	○ 1945	9.8	300	2055	11.2	340	18 M	1410	2.0	60			
4 F	0131	1.6	50	19 Sa	0140	3.0	90	4 M	0300	1.3	40				
0755	10.8	330	0758	9.2	280	0922	10.8	330	19 Tu	0235	2.0	60			
1354	1.0	30	1356	2.3	70	1515	1.3	40	4 Th	0855	10.2	310			
2023	11.5	350	2025	10.2	310	2143	11.2	340	19 F	1024	10.2	310			
5 Sa	0226	1.6	50	20 Su	0221	2.6	80	5 Tu	0348	1.6	50				
0850	10.8	330	0840	9.5	290	1009	10.5	320	20 W	0317	1.6	50			
1447	1.0	30	1435	2.3	70	1601	1.3	40	5 W	0936	10.2	310			
2115	11.5	350	2104	10.2	310	2229	10.8	330	5 M	1531	1.6	50			
6 Su	0320	1.6	50	21 M	0303	2.3	70	6 Th	0400	1.6	50				
0943	10.8	330	0920	9.8	300	1054	10.5	320	6 F	1019	10.5	320			
1537	1.0	30	1514	2.0	60	1646	2.0	60	6 Sa	1146	2.3	70			
2207	11.2	340	2144	10.2	310	2314	10.5	320	21 W	1741	3.0	90			
7 M	0413	1.6	50	22 Tu	0344	2.3	70	7 Th	0518	2.0	60				
1034	10.5	320	1001	9.8	300	1139	9.8	300	22 F	1103	10.2	310			
1626	1.3	40	1554	2.0	60	1731	2.3	70	7 M	1701	2.0	60			
2257	10.8	330	2225	10.2	310	2358	9.8	300	22 F	2329	10.2	310			
8 Tu	0504	2.0	60	23 W	0426	2.0	60	8 Sa	0602	2.3	70				
1123	10.5	320	1042	9.8	300	1224	9.5	290	8 M	1151	10.2	310			
1716	2.0	60	1636	2.3	70	1819	3.0	90	8 F	1752	2.3	70			
2346	10.5	320	2307	10.2	310	● 1910	3.3	100	8 W	0019	10.2	310			
9 W	0554	2.0	60	24 Th	0510	2.0	60	9 Sa	0042	9.5	290				
1212	9.8	300	1125	9.8	300	0647	2.6	80	24 M	0647	2.0	60			
1806	2.3	70	1721	2.3	70	1313	9.2	280	24 F	0741	3.3	100			
● 1858	3.0	90	2352	10.2	310	● 1910	3.3	100	24 W	1420	8.5	260			
10 Th	0035	10.2	310	25 Tu	0555	2.0	60	9 M	0134	8.5	260				
0643	2.3	70	1212	9.8	300	0735	3.0	90	25 W	0806	2.3	70			
1302	9.5	290	1810	2.6	80	1406	8.9	270	25 M	1440	9.5	290			
● 1858	3.0	90	2006	3.6	110	2006	3.6	110	25 F	2050	2.6	80			
11 F	0123	9.8	300	26 W	0040	10.2	310	11 M	0217	8.9	270				
0732	2.6	80	0644	2.0	60	0828	3.3	100	11 F	0820	2.3	70			
1354	9.2	280	1304	9.8	300	1504	8.9	270	11 M	1453	9.5	290			
1953	3.3	100	● 1906	2.6	80	2104	3.6	110	11 Th	2100	3.0	90			
12 Sa	0211	9.5	290	27 W	0132	9.8	300	12 M	0214	9.5	290				
0822	3.0	90	0738	2.3	70	0735	3.0	90	12 F	0914	8.2	250			
1449	9.2	280	1402	9.5	290	1406	8.9	270	12 W	0842	3.6	110			
2049	3.6	110	2008	3.0	90	2006	3.6	110	12 M	1517	8.5	260			
13 Su	0301	9.2	280	28 M	0229	9.8	300	13 F	0218	2.3	70				
0915	3.0	90	0838	2.3	70	1025	3.3	100	13 W	0525	8.9	270			
1545	8.9	270	1507	9.5	290	1658	8.9	270	13 M	1133	3.0	90			
2144	3.6	110	2114	3.0	90	2254	3.6	110	13 F	1756	9.5	290			
14 M	0352	8.9	270	29 Tu	0331	9.8	300	2207	2.6	80	28 W	0614	9.8	300	
1008	3.0	90	0942	2.0	60	1119	3.0	90	2207	2.6	80	28 M	1213	2.0	60
1641	8.9	270	1615	9.8	300	1748	9.2	280	2207	2.6	80	28 F	1834	10.2	310
2237	3.6	110	2219	2.6	80	2343	3.3	100	2207	2.6	80	● 1921	10.5	320	
15 Tu	0445	8.9	270	30 W	0437	9.8	300	15 F	0504	8.5	260				
1101	3.0	90	1047	2.0	60	1119	3.0	90	30 F	0007	2.0	60			
1733	9.2	280	1719	10.2	310	1206	3.0	90	15 M	0630	10.2	310			
2326	3.6	110	2321	2.3	70	1833	9.5	290	15 F	1231	1.6	50			
● 1921	10.8	330	● 1945	1.6	50	● 1945	10.8	330	15 M	1855	10.5	320			
● 1921	10.8	330	Th 1818	10.5	320	31 W	0542	9.8	300	15 F	0128	1.6	50		
● 1921	10.8	330	Th 1818	10.5	320	● 1945	1.6	50	15 M	0701	9.5	290			
● 1921	10.8	330	● 1945	1.6	50	● 1945	10.8	330	15 F	1344	1.6	50			
● 1921	10.8	330	● 1945	1.6	50	● 1945	10.8	330	15 M	2006	10.5	320			

Time meridian 180° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Auckland, New Zealand, 2008

Times and Heights of High and Low Waters

October				November				December				
	Time	Height			Time	Height			Time	Height		
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm	
<b>1</b> W	0210	1.6 50		<b>16</b> Th	0140 10.8 330		<b>1</b> Sa	0300 2.0 60		<b>1</b> M	0312 2.0 60	
	0834	10.5 320			0804 10.8 330			0928 10.2 310			0942 9.8 300	
	1426	1.6 50			1401 1.3 40			1519 2.3 70			1524 1.3 40	
	2048	10.2 310			2024 10.8 330			2139 9.5 290			2149 10.8 330	
<b>2</b> Th	0251	1.6 50		<b>17</b> F	0227 0.7 20		<b>2</b> Su	0337 2.0 60		<b>2</b> Tu	0349 2.3 70	
	0915	10.5 320			0851 11.2 340			1006 9.8 300			1020 9.8 300	
	1506	2.0 60			1449 1.3 40			1600 2.6 80			1619 2.6 80	
	2128	10.2 310			2113 10.8 330			2218 9.2 280			2234 9.2 280	
<b>3</b> F	0329	1.6 50		<b>18</b> Sa	0314 0.7 20		<b>3</b> M	0414 2.3 70		<b>3</b> W	0427 2.3 70	
	0954	10.2 310			0939 11.2 340			1045 9.5 290			1100 9.5 290	
	1545	2.3 70			1538 1.3 40			1642 3.0 90			1715 3.0 90	
	2207	9.8 300			2204 10.8 330			2258 9.2 280			2338 10.2 310	
<b>4</b> Sa	0407	2.0 60		<b>19</b> Su	0403 0.7 20		<b>4</b> Tu	0453 2.6 80		<b>4</b> Th	0507 2.6 80	
	1033	9.8 300			1029 10.8 330			1126 9.5 290			1141 9.5 290	
	1626	2.6 80			1631 1.6 50			1727 3.0 90			1744 3.0 90	
	2246	9.5 290			2256 10.5 320			2339 8.9 270			2355 8.9 270	
<b>5</b> Su	0445	2.3 70		<b>20</b> M	0454 1.0 30		<b>5</b> W	0535 3.0 90		<b>5</b> F	0550 3.0 90	
	1113	9.5 290			1122 10.8 330			1210 9.2 280			1225 9.5 290	
	1709	3.0 90			1727 2.0 60			1814 3.3 100			1830 3.0 90	
	2326	9.2 280			2351 10.2 310			● 1913 2.3 70			● 1943 2.3 70	
<b>6</b> M	0525	2.6 80		<b>21</b> Tu	0547 1.6 50		<b>6</b> Th	0024 8.5 260		<b>6</b> Sa	0040 8.9 270	
	1155	9.2 280			1219 10.2 310			0621 3.0 90			0638 3.0 90	
	1755	3.3 100			1827 2.3 70			1259 8.9 270			1311 9.2 280	
	● 1846	3.3 100			● 1905 3.3 100			● 1905 3.3 100			● 1918 3.0 90	
<b>7</b> Tu	0009	8.9 270		<b>22</b> W	0049 9.8 300		<b>7</b> F	0113 8.5 260		<b>7</b> Su	0130 8.9 270	
	0608	3.0 90			0646 2.0 60			0714 3.3 100			0732 3.3 100	
	1243	8.9 270			1320 9.8 300			1351 8.9 270			1401 9.2 280	
	● 1846	3.3 100			1931 2.3 70			1957 3.3 100			2009 2.6 80	
<b>8</b> W	0056	8.5 260		<b>23</b> Th	0150 9.5 290		<b>8</b> Sa	0207 8.5 260		<b>8</b> M	0225 8.9 270	
	0658	3.3 100			0751 2.3 70			0813 3.3 100			0831 3.3 100	
	1337	8.9 270			1424 9.8 300			1444 8.9 270			1454 9.2 280	
	1942	3.6 110			2035 2.6 80			2051 3.0 90			2104 2.6 80	
<b>9</b> Th	0149	8.2 250		<b>24</b> F	0254 9.2 280		<b>9</b> Su	0305 8.5 260		<b>9</b> Tu	0326 9.2 280	
	0756	3.6 110			0859 2.6 80			0914 3.3 100			0933 3.0 90	
	1435	8.5 260			1526 9.8 300			1538 9.2 280			1550 9.5 290	
	2040	3.6 110			2138 2.6 80			2145 2.6 80			2202 2.3 70	
<b>10</b> F	0247	8.2 250		<b>25</b> Sa	0358 9.2 280		<b>10</b> M	0405 8.9 270		<b>10</b> W	0428 9.5 290	
	0859	3.6 110			1003 2.6 80			1013 3.0 90			1033 2.6 80	
	1532	8.9 270			1624 9.8 300			1631 9.5 290			1649 9.8 300	
	2136	3.3 100			2236 2.3 70			2239 2.3 70			2300 2.0 60	
<b>11</b> Sa	0348	8.5 260		<b>26</b> Su	0458 9.5 290		<b>11</b> Tu	0503 9.5 290		<b>11</b> Th	0529 9.8 300	
	1000	3.3 100			1101 2.3 70			1107 2.6 80			1131 2.3 70	
	1625	9.2 280			1718 9.8 300			1724 9.8 300			1748 10.2 310	
	2228	3.0 90			2329 2.3 70			2332 2.0 60			2357 1.3 40	
<b>12</b> Su	0446	8.9 270		<b>27</b> M	0553 9.8 300		<b>12</b> W	0558 9.8 300		<b>12</b> F	0626 10.5 320	
	1054	3.0 90			1151 2.3 70			1159 2.0 60			1226 2.0 60	
	1715	9.5 290			1808 9.8 300			1816 10.2 310			1847 10.5 320	
	2318	2.6 80									1911 9.5 290	
<b>13</b> M	0540	9.2 280		<b>28</b> Tu	0018 2.0 60		<b>13</b> Th	0023 1.3 40		<b>13</b> Sa	0053 1.0 30	
	1143	2.6 80			0642 9.8 300			0650 10.5 320			0721 10.8 330	
	1802	9.8 300			1237 2.0 60			1249 1.6 50			1322 1.6 50	
					1855 9.8 300			● 1909 10.5 320			● 1944 10.5 320	
<b>14</b> Tu	0006	2.0 60		<b>29</b> W	0102 2.0 60		<b>14</b> F	0114 1.0 30		<b>14</b> Sa	0147 0.7 20	
	0630	9.8 300			0728 10.2 310			0741 10.8 330			0826 9.8 300	
	1229	2.0 60			1320 2.0 60			1340 1.3 40			1417 2.6 80	
	1849	10.2 310			● 1938 9.8 300			2002 10.8 330			2036 9.5 290	
<b>15</b> W	0053	1.6 50		<b>30</b> Th	0144 1.6 50		<b>15</b> Sa	0205 0.7 20		<b>15</b> M	0239 0.7 20	
	0717	10.5 320			0810 10.2 310			0832 11.2 340			0908 11.5 350	
	1315	1.6 50			1401 2.0 60			1431 1.3 40			1511 1.3 40	
	● 1936	10.5 320			2020 9.8 300			2056 10.8 330			2116 9.2 280	
				<b>31</b> F	0223 1.6 50							
					0849 10.2 310							
					1440 2.3 70							
					2100 9.8 300							

Time meridian 180° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Dreger Harbor, New Guinea, 2008

Times and Heights of High and Low Waters

January				February				March																			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height																
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm																
<b>1</b> Tu	0045 1129 1530 1719	3.0 4.3 3.9 4.3	90 130 120 130	<b>16</b> W	0033 0835 2333	3.0 4.3 3.0	90 130 90	<b>1</b> F	0845 2303	4.6 2.6	140 80	<b>16</b> Sa	0740 2217	4.9 2.3	150 70	<b>1</b> Sa	0714 2211	4.6 2.6	140 80	<b>16</b> Su	0626 2136	4.9 2.3	150 70				
<b>2</b> W	0011 1200 2352	3.0 4.6 3.0	90 140 90	<b>17</b> Th	0909 2253	4.6 2.6	140 80	<b>2</b> Sa	0954 1044 1235 2302	4.6 4.6 4.6 2.3	140 140 140 70	<b>17</b> Su	0815 1130 1254 2236	4.9 4.6 4.6 2.0	150 140 140 60	<b>2</b> Su	0738 2211	4.6 2.6	140 80	<b>17</b> M	0646 1120 1311 2155	4.9 4.3 4.3 70					
<b>3</b> Th	1237 2345	4.6 2.6	140 80	<b>18</b> F	1010 2250	4.6 2.3	140 70	<b>3</b> Su	1330 2302	4.6 2.3	140 70	<b>18</b> M	0916 1030 1357 2255	4.6 4.6 4.9 2.3	140 140 150 70	<b>3</b> M	0814 1036 1312 2211	4.6 4.6 4.6 2.6	140 140 140 80	<b>18</b> Tu	0655 1049 1407 2211	4.6 4.3 4.6 80					
<b>4</b> F	1311 2343	4.6 2.6	140 80	<b>19</b> Sa	1245 2305	4.9 2.0	150 60	<b>4</b> M	1407 2303	4.9 2.3	150 70	<b>19</b> Tu	1434 2310	4.9 2.3	150 70	<b>4</b> Tu	1356 2212	4.6 2.6	140 80	<b>19</b> W	0523 1024 1440 2217	4.3 4.3 4.6 90					
<b>5</b> Sa	1342 2340	4.9 2.6	150 80	<b>20</b> Su	1339 2327	4.9 2.0	150 60	<b>5</b> Tu	1439 2305	4.9 2.3	150 70	<b>20</b> W	1503 2316	4.9 2.6	150 80	<b>5</b> W	0551 0814 1430 2214	4.3 4.3 4.9 80	130 130 150 80	<b>20</b> Th	0418 0933 1503 2208	4.3 3.9 4.6 100					
<b>6</b> Su	1410 2338	4.9 2.3	150 70	<b>21</b> M	1418 2348	5.2 2.0	160 60	<b>6</b> W	1509 2310	5.2 2.3	160 70	<b>21</b> Th	0559 0833 1526 O	3.9 3.9 4.9 3.0	120 120 150 90	<b>6</b> Th	0521 0847 1501 2215	4.3 3.9 4.9 2.6	130 120 150 80	<b>21</b> F	0359 0931 1520 2144	4.6 3.6 4.6 100					
<b>7</b> M	1437 2341	5.2 2.3	160 70	<b>22</b> Tu	1450 2316	5.2 2.6	160 80	<b>7</b> Th	1539 2316	5.2 2.6	160 80	<b>22</b> F	0515 0930 1545 2255	3.9 3.6 4.6 3.0	120 110 140 90	<b>7</b> F	0454 0920 1531 2218	4.3 3.6 4.9 3.0	130 110 130 90	<b>22</b> O	0355 0955 1535 2128	4.6 3.3 4.3 100					
<b>8</b> Tu	1505 2349	5.2 2.3	160 70	<b>23</b> W	0007 1518	2.3 5.2	70 160	<b>8</b> F	0630 0904 1609 2324	3.9 3.6 5.2 2.6	120 110 160 80	<b>23</b> Sa	0507 1013 1603 2245	4.3 3.6 4.6 3.0	130 110 140 90	<b>8</b> Sa	0439 0953 1601 ●	4.3 3.6 4.9 3.0	130 110 150 90	<b>23</b> Su	0400 1023 1551 2125	4.9 3.3 4.3 100					
●				<b>24</b> W	0015 1543	2.3 4.9	70 150	<b>9</b> Sa	0602 0959 1638 2330	3.9 3.6 4.9 2.6	120 110 150 80	<b>24</b> M	0512 1052 1621 2241	4.6 3.3 4.6 3.0	140 100 140 90	<b>9</b> Su	0435 1029 1630 2223	4.6 3.3 4.6 100	140 100 140 90	<b>24</b> M	0413 1055 1608 2126	4.9 3.3 3.9 100					
<b>10</b> Th	0002 1606	2.3 5.2	70 160	<b>25</b> F	0012 1606	2.6 4.9	80 150	<b>10</b> Su	0559 1045 1705 2335	3.9 3.6 4.9 3.0	120 110 150 90	<b>25</b> M	0525 1130 1640 2240	4.6 3.3 4.3 3.0	140 100 130 90	<b>10</b> M	0441 1106 1654 2222	4.6 3.3 4.3 100	160 90 120 100	<b>25</b> Tu	0430 1129 1626 2128	5.2 3.0 3.9 100					
<b>11</b> F	0016 1640	2.3 5.2	70 160	<b>26</b> Sa	0001 0646 1019 1628 2355	3.0 3.9 3.6 4.9 3.0	90 120 110 150 90	<b>11</b> M	0604 1131 1725 2335	4.3 3.6 4.3 3.0	130 110 130 90	<b>26</b> Tu	0544 1211 1656 2235	4.9 3.3 3.9 3.0	150 100 120 90	<b>11</b> Tu	0451 1146 1706 2213	4.9 3.3 3.9 3.3	150 100 120 100	<b>26</b> W	0449 1205 1644 2125	5.2 3.0 3.6 90					
<b>12</b> Sa	0031 1711	2.6 4.9	80 150	<b>27</b> Su	0644 1120 1649 2350	3.9 3.6 4.6 3.0	120 110 140 90	<b>12</b> Tu	0616 1221 1723 2323	4.6 3.6 3.9 3.0	140 110 120 90	<b>27</b> W	0605 1257 1706 2227	4.9 3.3 3.9 3.0	150 100 120 90	<b>12</b> W	0505 1233 1643 2145	4.9 3.3 3.6 3.0	150 100 110 90	<b>27</b> Th	0510 1249 1657 2117	5.2 3.3 3.6 90					
<b>13</b> Su	0044 0754 1002 1737	2.6 3.6 3.6 4.9	80 110 110 150	<b>28</b> M	0655 1216 1707 2344	4.3 3.6 4.3 3.0	130 110 130 90	<b>13</b> W	0631 1325 1610 2248	4.6 3.6 3.6 3.0	140 110 110 90	<b>28</b> Th	0628 1404 1650 2217	4.9 3.6 3.6 3.0	150 100 110 90	<b>13</b> Th	0523 2108	5.2 3.0	160 90	<b>28</b> F	0531 1409 1648 2110	4.9 3.3 3.3 90					
<b>14</b> M	0053 0757 1129 1749	3.0 3.9 3.9 4.6	90 120 120 140	<b>29</b> Tu	0715 1317 1718 2330	4.3 3.6 4.3 3.0	130 110 130 90	<b>14</b> Th	0650 2213	4.9 2.6	150 80	<b>29</b> F	0650 2212	4.9 2.6	150 80	<b>14</b> F	0543 2102	5.2 2.6	160 80	<b>29</b> Sa	0551 2105	4.9 3.0	150 90				
<b>15</b> Tu	0053 0812 1314 1711	3.0 4.3 3.9 3.9	90 130 120 120	<b>30</b> W	0739 1441 1707 ●	4.6 3.9 3.9 3.0	140 120 120 90	<b>15</b> F	0713 2206	4.9 2.3	150 70	<b>31</b> Th	0809 2306	4.6 2.6	140 80	<b>15</b> Sa	0604 2116	5.2 2.3	160 70	<b>30</b> Su	0607 2102	4.9 3.0	150 90	<b>31</b> M	0611 2100	4.6 2.6	140 80

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Dreger Harbor, New Guinea, 2008

Times and Heights of High and Low Waters

April				May				June													
	Time	Height		Time	Height		Time	Height		Time	Height										
	h m	ft	cm		h m	ft	cm		h m	ft	cm										
<b>1</b> Tu	0503	4.6	140	<b>16</b> W	0400	4.6	140	<b>1</b> Th	0307	4.6	140	<b>16</b> F									
	1101	4.3	130	1057	3.9	120	0959	3.9	120	0156	4.9	150	1121	3.3	100						
	1213	4.3	130	1418	4.3	130	1254	4.3	130	1032	3.0	90									
	2100	3.0	90	2109	3.3	100	1915	3.3	100	0125	4.9	150									
<b>2</b> W	0427	4.6	140	<b>17</b> Th	0311	4.6	140	<b>2</b> F	0246	4.6	140	<b>17</b> Sa	0157	4.9	150	<b>16</b> M					
	0938	4.3	130	1042	3.6	110	0939	3.6	110	1109	3.3	100	1059	2.6	80	0127	5.2	160	1136	2.6	80
	1331	4.6	140	1449	4.3	130	1412	4.3	130				0150	5.2	160						
	2102	3.0	90	2050	3.6	110	1923	3.6	110				1130	2.6	80						
<b>3</b> Th	0405	4.6	140	<b>18</b> F	0256	4.6	140	<b>3</b> Sa	0232	4.9	150	<b>18</b> Su	0206	5.2	160	<b>19</b> Tu					
	0907	3.9	120	1028	3.6	110	0955	3.3	100	1100	3.0	90	1132	2.3	70	0213	5.2	160			
	1415	4.6	140	1511	3.9	120	1507	3.9	120				1132	2.3	70						
	2104	3.0	90	2002	3.6	110	1925	3.6	110												
<b>4</b> F	0346	4.6	140	<b>19</b> Sa	0255	4.9	150	<b>4</b> Su	0229	4.9	150	<b>19</b> M	0219	5.2	160	<b>19</b> W					
	0920	3.6	110	1015	3.3	100	1023	3.0	90	1100	3.0	90	1208	2.3	70	0237	5.6	170			
	1453	4.6	140	1526	3.9	120	1602	3.9	120				1144	2.3	70						
	2105	3.3	100	1945	3.6	110	1922	3.6	110							O					
<b>5</b> Sa	0333	4.6	140	<b>20</b> Su	0300	5.2	160	<b>5</b> M	0232	5.2	160	<b>20</b> Tu	0234	5.6	170	<b>5</b> Th					
	0945	3.3	100	1020	3.3	100	1059	3.0	90	1113	2.6	80	1245	2.3	70	0302	5.6	170			
	1528	4.6	140	1539	3.9	120	1714	3.6	110				1905	3.6	110	O					
	2106	3.3	100	O	1947	3.6	110														
<b>6</b> Su	0329	4.9	150	<b>21</b> M	0312	5.2	160	<b>6</b> Tu	0244	5.6	170	<b>21</b> W	0253	5.6	170	<b>6</b> F					
	1017	3.3	100	1040	3.0	90	1139	2.6	80	1133	2.6	80	1322	2.3	70	0331	5.6	170			
	1602	4.3	130	1553	3.6	110							1219	2.3	70						
	●	2106	3.3	100	1953	3.3	100														
<b>7</b> M	0332	4.9	150	<b>22</b> Tu	0327	5.2	160	<b>7</b> W	0259	5.6	170	<b>22</b> Th	0314	5.6	170	<b>7</b> Sa					
	1053	3.0	90	1107	3.0	90	1224	2.6	80	1201	2.6	80	1351	2.6	80	0401	5.2	160			
	1636	3.9	120	1611	3.6	110							1240	2.6	80						
	2102	3.6	110	1958	3.3	100															
<b>8</b> Tu	0342	5.2	160	<b>23</b> W	0345	5.6	170	<b>8</b> Th	0316	5.9	180	<b>23</b> F	0336	5.6	170	<b>8</b> Su					
	1133	3.0	90	1139	3.0	90	1320	2.6	80	1233	2.6	80	1404	3.0	90	0433	5.2	160			
	1706	3.6	110	1634	3.6	110							1317	2.6	80						
	2048	3.3	100	1956	3.3	100															
<b>9</b> W	0356	5.6	170	<b>24</b> Th	0405	5.6	170	<b>9</b> F	0338	5.9	180	<b>24</b> Sa	0401	5.6	170	<b>9</b> M					
	1221	3.0	90	1217	3.0	90	1451	2.6	80	1309	2.6	80	1357	3.0	90	0502	4.9	150			
	1716	3.3	100	1700	3.3	100							1317	2.6	80						
	1953	3.3	100	1945	3.3	100															
<b>10</b> Th	0414	5.6	170	<b>25</b> F	0427	5.2	160	<b>10</b> Sa	0400	5.6	170	<b>25</b> Su	0428	5.2	160	<b>10</b> Tu					
	1345	3.0	90	1307	3.0	90	1730	3.0	90	1349	2.6	80	1337	3.3	100	0430	4.9	150			
	1556	3.0	90	1730	3.3	100							1330	3.0	90	0522	4.9	150			
	1902	3.0	90	1924	3.3	100							2230	4.6	140						
<b>11</b> F	0433	5.6	170	<b>26</b> Sa	0448	5.2	160	<b>11</b> Su	0423	5.6	170	<b>26</b> M	0454	5.2	160	<b>11</b> W					
	1924	3.0	90	1424	3.0	90	1811	3.0	90	1432	3.0	90	1253	3.3	100	0444	4.6	140			
				1853	3.0	90							O			0508	4.6	140			
<b>12</b> Sa	0455	5.6	170	<b>27</b> Su	0509	5.2	160	<b>12</b> M	0444	5.2	160	<b>27</b> Tu	0515	4.9	150	<b>12</b> Th					
	1952	2.6	80	1616	3.0	90	1900	3.0	90	1616	3.0	90	1207	3.3	100	0055	4.6	140			
													O			1251	3.3	100			
																2251	4.6	140			
<b>13</b> Su	0515	5.2	160	<b>28</b> M	0524	4.9	150	<b>13</b> Tu	0457	4.9	150	<b>28</b> W	0502	4.6	140	<b>13</b> F					
	2020	2.6	80	1802	3.0	90	1922	3.3	100	1551	3.3	100	1150	3.0	90	0040	4.6	140			
													O			1136	3.0	90			
																2330	4.9	150			
<b>14</b> M	0532	4.9	150	<b>29</b> Tu	0503	4.9	150	<b>14</b> W	0332	4.6	140	<b>29</b> Th	0222	4.6	140	<b>14</b> Sa					
	2045	3.0	90	1841	3.0	90	1400	3.6	110	1616	3.3	100	1145	3.0	90	0048	4.9	150			
							1734	3.6	110				1142	3.0	90	1055	2.6	80			
<b>15</b> Tu	0534	4.6	140	<b>30</b> W	0337	4.6	140	<b>15</b> Th	0209	4.6	140	<b>30</b> F	0145	4.6	140	<b>15</b> Su					
	1139	3.9	120	1902	3.3	100	1140	3.6	110	1629	3.6	110	1142	3.0	90	0105	4.9	150			
	1322	3.9	120				1510	3.6	110				1022	3.3	100	0127	5.2	160			
	2102	3.0	90				1641	3.6	110							1056	2.3	80			
<b>16</b> M													<b>31</b> Sa	0127	4.9	150					

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Dreger Harbor, New Guinea, 2008

Times and Heights of High and Low Waters

July					August					September													
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height									
	h m	ft	cm																				
<b>1</b> Tu	0053 1115	5.2 2.0	160 60	<b>16</b> W	0139 1121	5.2 2.3	160 70	<b>1</b> F	0227 1139	5.2 2.0	160 60	<b>16</b> Sa	0245 1045 1917 2022	4.9 2.3 4.3 4.3	150 70 130 130	<b>1</b> M	0321 1033 1706 2216	4.6 3.0 4.6 3.6	140 90 140 110	<b>16</b> Tu	0330 0953 1630 2226	4.6 3.0 4.6 3.3	140 90 140 100
<b>2</b> W	0130 1141	5.6 2.0	170 60	<b>17</b> Th	0213 1120	5.2 2.3	160 70	<b>2</b> Sa	0259 1149	5.2 2.3	160 70	<b>17</b> Su	0314 1049 1820 2123	4.9 2.3 4.3 3.9	150 70 130 120	<b>2</b> Tu	0336 1017 1706 2254	4.6 3.0 4.6 3.6	140 90 140 110	<b>17</b> W	0359 0956 1633 2304	4.3 3.0 4.9 3.3	130 90 150 100
<b>3</b> Th	0202 1206	5.6 2.0	170 60	<b>18</b> F	0243 1125	5.2 2.3	160 70	<b>3</b> Su	0323 1146 1926 2129	4.9 2.6 3.9 3.9	150 80 120 120	<b>18</b> M	0342 1054 1753 2206	4.9 2.6 4.3 3.9	150 80 130 120	<b>3</b> W	0351 1010 1715 2332	4.3 3.0 4.9 3.3	130 90 150 100	<b>18</b> Th	0422 0957 1645 2348	3.9 3.0 4.9 3.3	120 90 150 100
●				○																			
<b>4</b> F	0232 1230	5.6 2.3	170 70	<b>19</b> Sa	0313 1133	5.2 2.3	160 70	<b>4</b> M	0343 1135 1842 2236	4.9 3.0 4.3 3.9	150 90 130 120	<b>19</b> Tu	0409 1100 1746 2248	4.9 2.6 4.3 3.6	150 80 130 110	<b>4</b> Th	0406 1007 1730	3.9 3.0 4.9	120 90 150	<b>19</b> F	0436 0952 1701	3.6 3.0 5.2	110 90 160
<b>5</b> Sa	0300 1244	5.6 2.3	170 70	<b>20</b> Su	0343 1144	5.2 2.3	160 70	<b>5</b> Tu	0400 1124 1833 2329	4.6 3.0 4.3 3.9	140 90 130 120	<b>20</b> W	0434 1104 1751 2332	4.6 2.6 4.6 3.6	140 80 140 110	<b>5</b> F	0014 0419 1004 1751	3.3 3.9 2.6 4.9	100 120 80 150	<b>20</b> Sa	0045 0414 0930 1721	3.3 3.3 3.0 5.2	100 100 90 160
<b>6</b> Su	0326 1245	5.2 2.6	160 80	<b>21</b> M	0413 1155 1938 2135	5.2 2.6 3.9 3.9	160 80 120 120	<b>6</b> W	0416 1115 1838	4.6 3.0 4.6	140 90 140	<b>21</b> Th	0454 1105 1804	4.3 3.0 4.9	130 150	<b>6</b> Sa	0104 0427 1000 1815	3.3 3.6 2.6 4.9	100 110 80 150	<b>21</b> Su	0852 1743	2.6 5.2	80 160
<b>7</b> M	0350 1237	4.9 3.0	150 90	<b>22</b> Tu	0442 1204 1918 2256	4.9 2.6 4.3 3.9	150 80 130 120	<b>7</b> Th	0020 0431 1106 1852	3.9 4.3 3.0 4.9	120 130 90 150	<b>22</b> F	0022 0454 1059 1821	3.6 3.9 3.0 4.9	110 120 90 150	<b>7</b> Su	0242 0348 0955 1839	3.6 3.6 2.6 4.9	110 110 80 150	<b>22</b> M	0838 1805 1839	2.3 5.2	70 160 150
<b>8</b> Tu	0413 1226 2103 2342	4.9 3.0 4.3 4.3	150 90 130 130	<b>23</b> W	0506 1212 1923	4.9 2.6 4.3	150 80 130	<b>8</b> F	0118 0438 1057 1913	3.9 3.9 2.6 4.9	120 120 80 150	<b>23</b> Sa	0133 0335 1034 1842	3.6 3.6 3.0 4.9	110 110 90 150	<b>8</b> M	0952 1903 1903 1903	2.6 4.9 4.9 150	80 150 150 150	<b>23</b> Tu	0849 1826	2.3 4.9	70 150
<b>9</b> W	0431 1210 2042	4.6 3.0 4.3	140 90 130	<b>24</b> Th	0003 0517 1212 1937	3.9 4.6 3.0 4.6	120 140 90 140	<b>9</b> Sa	0248 0414 1047 1938	3.9 3.9 2.6 4.9	120 120 80 150	<b>24</b> Su	1000 1905	2.6 5.2	80 160	<b>9</b> Tu	0951 1928	2.3 4.9	70 150	<b>24</b> W	0909 1845	2.3 4.9	70 150
<b>10</b> Th	0131 0443 1149 2051	4.3 4.3 3.0 4.6	130 130 90 140	<b>25</b> F	0127 0443 1158 1958	3.9 3.9 3.0 4.6	120 120 90 140	<b>10</b> Su	1044 2007	2.6 4.9	80 150	<b>25</b> M	0947 1930	2.3 4.9	70 150	<b>10</b> W	0951 1954	2.3 4.6	70 140	<b>25</b> Th	0930 1855 2302	2.3 4.6 4.3	70 140 130
<b>11</b> F	0338 0415 1132 2120	4.3 4.3 3.0 4.6	130 130 90 140	<b>26</b> Sa	1119 2024	3.0 4.9	90 150	<b>11</b> M	1043 2043	2.3 4.9	70	<b>26</b> Tu	0954 1957	2.0 4.9	60	<b>11</b> Th	0951 2038 2202	2.3 4.6 4.6	70 140 140	<b>26</b> F	0112 0946 1753 2241	4.3 2.3 4.3 4.3	130 70 130 130
<b>12</b> Sa	1125 2216	2.6 4.9	80 150	<b>27</b> Su	1043 2059	2.6 4.9	80 150	<b>12</b> Tu	1044 2144 2256	2.3 4.6 4.6	70 140 140	<b>27</b> W	1011 2031 2308	2.0 4.9 4.6	60 150 140	<b>12</b> F	0117 0949 1746 2012	4.6 2.3 4.3 4.3	140 70 130 130	<b>27</b> Sa	0203 0957 1627 2223	4.3 2.6 4.3 3.9	130 80 130 120
<b>13</b> Su	1123	2.6	80	<b>28</b> M	1033 2152	2.3 4.9	70 150	<b>13</b> W	0041 1045	4.6 2.3	140 70	<b>28</b> Th	0107 1030	4.9 2.0	150 60	<b>13</b> Sa	0159 0948 1715 2048	4.6 2.6 4.3 3.9	140 80 130 120	<b>28</b> Su	0234 0951 1601 2203	4.3 3.0 4.6 3.6	130 90 140 110
<b>14</b> M	0004 1123	4.9 2.3	150 70	<b>29</b> Tu	1043	2.0	60	<b>14</b> Th	0136 1044	4.9 2.3	150	<b>29</b> F	0202 1045	4.9 2.3	150	<b>14</b> Su	0231 0948 1654 2119	4.6 2.6 4.3 3.9	140 80 130 120	<b>29</b> M	0254 0923 1553 2209	4.3 3.3 4.6 3.6	130 100 140 110
<b>15</b> Tu	0100 1123	4.9 2.3	150 70	<b>30</b> W	0043 1101	4.9 2.0	150 60	<b>15</b> F	0213 1044	4.9 2.3	150	<b>30</b> Sa	0237 1055 1807 2051	4.9 2.3 4.3 4.3	150 70 130 130	<b>15</b> M	0302 0950 1637 2151	4.6 2.6 4.3 3.6	140 80 130 110	<b>30</b> Tu	0308 0859 1556 2231	3.9 3.3 4.9 3.3	120 100 150 100
				<b>31</b> Th	0146 1121	5.2 2.0	160 60					<b>31</b> Su	0302 1051 1721 2138	4.6 2.6 4.3 3.9	140 80 130 120								

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Dreger Harbor, New Guinea, 2008

Times and Heights of High and Low Waters

October				November				December						
	Time	Height		Time	Height		Time	Height		Time	Height			
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm			
<b>1</b> W	0319	3.9 120	<b>16</b> Th	0401	3.6 110	<b>1</b> Sa	0354	3.3 100	<b>16</b> Su	0134	2.6 80	<b>1</b> M	0039	2.6 80
	0851	3.0 90		0836	3.3 100		0726	3.0 90		1544	5.6 170		1615	5.2 160
	1605	4.9 150		1537	5.2 160		1604	5.2 160						
	2300	3.3 100		2343	3.0 90									
<b>2</b> Th	0333	3.6 110	<b>17</b> F	0432	3.3 100	<b>2</b> Su	0036	3.0 90	<b>17</b> M	0315	2.6 80	<b>2</b> Tu	0111	2.6 80
	0852	3.0 90		0828	3.3 100		0422	3.0 90		1608	5.6 170		1645	5.2 160
	1621	5.2 160		1554	5.2 160		0720	3.0 90						
	2335	3.0 90					1630	5.2 160						
<b>3</b> F	0350	3.6 110	<b>18</b> Sa	0044	3.0 90	<b>3</b> M	0129	3.0 90	<b>18</b> Tu	0454	2.6 80	<b>3</b> W	0145	2.6 80
	0855	3.0 90		0448	3.0 90		0456	3.0 90		1631	5.2 160		1715	4.9 150
	1641	5.2 160		0745	3.0 90		0701	3.0 90						
				1614	5.6 170		1656	5.2 160						
<b>4</b> Sa	0015	3.0 90	<b>19</b> Su	0628	3.0 90	<b>4</b> Tu	0238	3.0 90	<b>19</b> W	0550	2.6 80	<b>4</b> Th	0222	2.6 80
	0406	3.3 100		1636	5.6 170		0554	3.0 90		1653	4.9 150		1742	4.9 150
	0857	3.0 90					0618	3.0 90						
	1704	5.2 160					1722	4.9 150						
<b>5</b> Su	0111	3.0 90	<b>20</b> M	0647	2.6 80	<b>5</b> W	0402	3.0 90	<b>20</b> Th	0631	3.0 90	<b>5</b> F	0257	3.0 90
	0419	3.3 100		1659	5.2 160		1746	4.9 150		1711	4.9 150		1759	4.6 140
	0854	2.6 80												
	1729	5.2 160												
<b>6</b> M	0848	2.6 80	<b>21</b> Tu	0718	2.3 70	<b>6</b> Th	0513	3.0 90	<b>21</b> F	0700	3.0 90	<b>6</b> Sa	0329	3.0 90
	1753	4.9 150		1721	5.2 160		1804	4.6 140		1716	4.6 140		1733	4.3 130
<b>7</b> Tu	0845	2.6 80	<b>22</b> W	0748	2.3 70	<b>7</b> F	0555	3.0 90	<b>22</b> Sa	0658	3.3 100	<b>7</b> Su	0352	3.0 90
	1815	4.9 150		1740	4.9 150		1709	4.6 140		1420	4.3 130		1356	4.3 130
<b>8</b> W	0841	2.6 80	<b>23</b> Th	0816	2.6 80	<b>8</b> Sa	0619	3.0 90	<b>23</b> Su	0018	3.3 100	<b>8</b> M	0406	3.3 100
	1833	4.9 150		1750	4.6 140		1512	4.6 140		0223	3.3 100		1330	4.6 140
<b>9</b> Th	0837	2.6 80	<b>24</b> F	0838	2.6 80	<b>9</b> Su	0636	3.0 90	<b>24</b> M	1354	4.9 150	<b>9</b> Tu	0259	3.3 100
	1834	4.6 140		1707	4.6 140		1449	4.6 140		2350	3.0 90		0354	3.3 100
				2335	3.9 120		2205	3.6 110					1324	4.6 140
										2250	3.0 90			
<b>10</b> F	0833	2.6 80	<b>25</b> Sa	0109	3.9 120	<b>10</b> M	0105	3.9 120	<b>25</b> Tu	1402	4.9 150	<b>10</b> W	1333	4.9 150
	1630	4.6 140		0849	3.0 90		0647	3.3 100		2345	3.0 90		2304	2.6 80
	2223	4.3 130		1517	4.6 140		1433	4.6 140						
				2303	3.6 110		2204	3.3 100						
<b>11</b> Sa	0028	4.3 130	<b>26</b> Su	0212	3.9 120	<b>11</b> Tu	0223	3.6 110	<b>26</b> W	1416	5.2 160	<b>11</b> Th	1353	5.2 160
	0832	2.6 80		0836	3.3 100		0653	3.3 100		2340	3.0 90		2332	2.3 70
	1604	4.3 130		1456	4.6 140		1426	4.9 150						
	2127	3.9 120		2257	3.6 110		2229	3.0 90						
<b>12</b> Su	0132	4.3 130	<b>27</b> M	0244	3.6 110	<b>12</b> W	0325	3.6 110	<b>27</b> Th	1434	5.2 160	<b>12</b> F	1417	5.2 160
	0832	3.0 90		0731	3.3 100		0654	3.3 100		2340	2.6 80		2348	2.3 70
	1546	4.6 140		1452	4.9 150		1429	4.9 150						
	2125	3.6 110		2253	3.3 100		2303	3.0 90						
<b>13</b> M	0215	4.3 130	<b>28</b> Tu	0301	3.6 110	<b>13</b> F	0435	3.3 100	<b>28</b> Sa	1456	5.2 160	<b>13</b> Su	0006	2.3 70
	0834	3.0 90		0706	3.3 100		0644	3.3 100		2351	2.6 80		1444	5.6 170
	1531	4.6 140		1456	4.9 150		1441	5.2 160						
	2147	3.6 110		2253	3.3 100		2345	2.6 80						
<b>14</b> Tu	0253	4.3 130	<b>29</b> W	0310	3.6 110	<b>14</b> F	1459	5.6 170	<b>29</b> Sa	1519	5.2 160	<b>14</b> Su	0044	2.3 70
	0836	3.0 90		0705	3.3 100					1511	5.6 170		1511	5.6 170
	1524	4.9 150		1506	5.2 160									
	2219	3.3 100		2303	3.0 90									
<b>15</b> W	0328	3.9 120	<b>30</b> Th	0318	3.3 100	<b>15</b> Sa	0032	2.6 80	<b>30</b> Su	0012	2.6 80	<b>15</b> M	0122	2.3 70
	0837	3.3 100		0713	3.3 100		1520	5.6 170		1546	5.2 160		1538	5.2 160
	1527	4.9 150		1522	5.2 160									
	O 2258	3.0 90		2326	3.0 90									
			<b>31</b> F	0332	3.3 100							<b>31</b> W	0030	2.6 80
				0721	3.0 90								1650	5.2 160
				1542	5.2 160									
				2357	3.0 90									

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

## Darwin, Australia, 2008

Times and Heights of High and Low Waters

January				February				March							
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height				
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm				
1 Tu	0610	8.9	270	16	0526	6.9	210	1 Sa	0631	9.2	280				
1159	16.7	510	W	1123	19.0	580	F	1314	16.1	490					
1726	11.8	360	1651	10.5	320	1845	14.8	450	Sa	1348	17.4	530			
2337	19.0	580	●	2300	20.7	630	2310	16.4	500	1918	14.8	450			
2 W	0703	8.9	270	17	0618	7.2	220	2345	16.7	510	2345	16.7	510		
1319	16.1	490	Th	1235	18.0	550	2 Sa	0750	9.5	290	2136	16.4	500		
1843	13.1	400	1758	12.5	380	1628	17.1	520	2 Su	0838	8.2	250			
			2341	19.4	590	2305	14.8	450	1610	18.7	570				
3 Th	0022	17.7	540	18	0729	7.2	220	2210	13.8	420	2210	13.8	420		
0806	8.9	270	F	1417	18.0	550	3 Su	0200	15.1	460	1839	10.2	310		
1514	16.7	510	1942	13.8	420	0934	8.9	270	18	0304	16.1	490			
2018	14.1	430				1712	18.7	570	M	1021	7.2	220			
4 F	0134	16.7	510	19	0048	18.0	550	2336	13.5	410	1715	20.7	630		
0915	8.2	250	Sa	0858	6.6	200	2328	11.8	360	2328	11.8	360			
1630	18.4	560	1606	19.4	590	4 M	0349	16.1	490	3 M	0839	10.2	310		
2204	13.5	410	2134	13.8	420	1047	7.9	240	19	0431	18.0	550			
5 Sa	0302	16.7	510	20	0241	17.4	530	1745	20.3	620	Tu	0345	15.4	470	
1015	7.2	220	Su	1018	5.6	170	2359	12.1	370	1126	5.6	170			
1718	19.7	600	1716	21.3	650	20	0012	9.8	300	1800	22.6	690			
2313	12.8	390	2301	12.5	380	W	0530	19.7	600	1213	4.3	130			
6 Su	0404	17.1	520	21	0408	18.4	560	1840	24.0	730	1840	24.0	730		
1102	6.2	190	M	1121	4.3	130	5	0443	17.4	530	20	0436	17.4	530	
1757	21.0	640	1810	23.0	700	Tu	1135	6.2	190	W	1115	7.2	220		
2352	11.8	360				1818	21.7	660	1213	4.3	130				
7 M	0449	18.0	550	6	0022	10.8	330	1913	24.9	760	1747	21.3	650		
1144	5.2	160	W	0525	19.0	580	21	0048	7.9	240	2359	10.2	310		
1832	22.0	670	1214	4.9	150	Th	0618	21.3	650	6 Th	0518	19.4	590		
			1856	24.3	740	1250	3.6	110	O	1154	5.6	170			
8 Tu	0023	10.8	330	7	0049	9.5	290	1913	24.9	760	1817	22.6	690		
0530	19.0	580	22	0002	10.8	330	21	0048	7.9	240	21	0025	6.6	200	
1220	4.6	140	Tu	0510	19.7	600	Th	0605	20.3	620	W	0614	22.3	680	
● 1906	23.0	700	1214	3.0	90	1248	3.9	120	O	1921	24.0	730			
8 F	0053	10.2	310	8	0120	8.2	250	1921	24.0	730	7 F	0026	8.2	250	
0607	20.0	610	W	0603	20.7	630	22	0121	6.6	200	0600	21.3	650		
1255	3.9	120	23	0050	9.5	290	Th	0700	22.6	690	1229	4.6	140		
1939	23.6	720	1258	2.6	80	1322	3.3	100	1846	24.0	730	O	1900	24.0	730
9 M	0053	10.2	310	9	0152	6.9	210	1942	25.3	770	22	0054	5.2	160	
0607	20.0	610	Th	0653	21.7	660	Sa	0738	23.3	710	0651	23.3	710		
1255	3.9	120	1336	2.3	70	1319	3.3	100	1351	3.9	120	Sa	1258	5.2	160
1939	23.6	720	2010	25.6	780	1950	24.9	760	2005	25.3	770	O	1900	24.0	730
10 Th	0125	9.5	290	10	0225	5.9	180	● 1914	24.9	760	2024	24.6	750		
0645	20.7	630	F	0740	22.3	680	2211	23.3	710	9 0129	4.6	140			
1328	3.6	110	1412	3.0	90	Su	0803	23.3	710	2024	24.6	750			
2011	24.0	730	2040	25.3	770	1415	3.6	110	W	0720	24.3	740			
11 F	0159	8.9	270	20	0212	7.2	220	2041	24.0	730	1328	3.9	120		
0723	21.0	640	Sa	0822	22.0	670	2041	25.3	770	● 1914	24.9	760			
1359	3.6	110	1442	4.3	130	2057	22.6	690	2024	24.6	770	9 0129	4.6	140	
2040	24.3	740	2106	24.6	750	2057	22.6	690	W	0720	24.3	740			
12 Sa	0236	8.2	250	27	0324	6.2	190	2057	22.6	690	13 0343	3.0	90		
0802	21.3	650	Su	0901	21.7	660	1017	19.7	600	Th	0956	22.6	690		
1429	3.9	120	1507	5.9	180	1541	8.5	260	1519	10.8	330	1526	9.2	280	
2107	24.0	730	2128	24.0	730	2144	22.3	680	2128	19.7	600	2110	22.0	670	
13 Su	0315	7.5	230	28	0357	6.6	200	2144	22.3	680	2045	23.6	720		
0845	21.0	640	M	0938	20.7	630	1009	21.7	660	2045	23.6	720			
1459	4.9	150	1524	7.5	230	1541	8.5	260	1519	10.8	330	2045	23.6	720	
2133	23.6	720	2145	22.6	690	2144	22.3	680	2128	19.7	600	2052	19.4	590	
14 M	0356	7.2	220	29	0428	6.9	210	1059	20.3	620	14 0422	4.6	140		
0931	20.7	630	Tu	1015	19.4	590	1059	18.0	550	29 0407	7.2	220			
1530	6.6	200	1536	9.2	280	1615	10.8	330	F	1043	20.7	630			
2200	23.0	700	2202	21.3	650	● 2209	20.7	630	1601	11.5	350	Sa	1531	12.5	380
15 Tu	0439	6.9	210	30	0500	7.5	230	● 2209	20.7	630	● 2138	20.0	610		
1023	20.0	610	W	1057	18.0	550	2243	18.7	570	15 0509	6.6	200			
1606	8.2	250	1557	11.2	340				Sa	1145	18.7	570			
2228	22.0	670	● 2222	19.7	600				1701	13.5	410				
16 Sa	0538	8.2	250	31	0538	8.2	250		2214	17.4	530	31 0556	10.2	310	
1150	17.1	520	Th	1150	17.1	520				M	1243	16.7	510		
1636	13.1	400	1636	13.1	400				1941	14.4	440	2107	14.4	440	
2244	18.0	550													

Time meridian 142° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Darwin, Australia, 2008

Times and Heights of High and Low Waters

April				May				June							
	Time	Height			Time	Height			Time	Height					
	h m	ft cm		h m	ft cm			h m	ft cm						
<b>1</b> Tu	0736	10.8	330	<b>16</b> W	0327	17.4	530	<b>1</b> Th	0213	15.7	480	<b>16</b> Su	0353	18.7	570
	1531	17.4	530		0945	9.2	280		0817	10.2	310		0943	10.2	310
	2223	12.8	390		1601	19.7	600		1450	18.4	560		1542	19.0	580
					2239	8.9	270		2139	9.8	300		2231	6.6	200
<b>2</b> W	0316	15.4	470	<b>17</b> Th	0426	19.0	580	<b>2</b> F	0329	17.7	540	<b>17</b> Sa	0445	20.0	610
	0933	9.8	300		1043	8.5	260		0936	9.5	290		1046	9.8	300
	1620	19.0	580		1645	20.7	630		1545	19.7	600		1623	19.4	590
	2245	10.8	330		2317	6.9	210		2224	7.5	230		2308	5.6	170
<b>3</b> Th	0412	17.7	540	<b>18</b> F	0514	20.7	630	<b>3</b> Sa	0426	20.0	610	<b>18</b> Su	0530	21.3	650
	1035	8.2	250		1126	7.9	240		1032	8.5	260		1128	9.5	290
	1656	20.7	630		1720	21.3	650		1627	21.0	640		1656	19.7	600
	2315	8.9	270		2350	5.6	170		2305	5.2	160		2340	4.9	150
<b>4</b> F	0458	20.0	610	<b>19</b> Sa	0555	22.0	670	<b>4</b> Su	0516	22.3	680	<b>19</b> M	0611	22.0	670
	1119	6.9	210		1200	7.5	230		1119	7.5	230		1202	9.2	280
	1728	22.3	680		1747	22.0	670		1703	22.0	670		1726	20.0	610
	2348	6.6	200						2345	3.3	100				
<b>5</b> Sa	0542	22.0	670	<b>20</b> Su	0018	4.6	140	<b>5</b> M	0605	24.0	730	<b>20</b> Tu	0009	4.3	130
	1157	5.9	180		0631	23.0	700		1200	7.2	220		0646	22.6	690
	1759	23.3	710		1230	7.2	220		1737	22.6	690		1231	8.9	270
					1811	22.3	680					1756	20.3	620	
<b>6</b> Su	0023	4.6	140	<b>21</b> M	0045	3.9	120	<b>6</b> Tu	0024	1.6	50	<b>21</b> W	0039	3.9	120
	0625	24.0	730		0705	23.6	720		0651	24.9	760		0718	23.0	700
	1231	5.2	160		1256	7.2	220		1238	7.2	220		1259	8.9	270
	1826	24.3	740		1832	22.3	680		1811	23.3	710		1826	20.3	620
<b>7</b> M	0057	2.6	80	<b>22</b> Tu	0111	3.3	100	<b>7</b> W	0103	0.7	20	<b>22</b> Th	0109	3.6	110
	0707	25.3	770		0736	23.6	720		0734	25.6	780		0748	22.6	690
	1303	5.2	160		1320	7.5	230		1315	7.2	220		1326	8.9	270
	1851	24.6	750		1856	22.0	670		1846	23.3	710		1857	20.3	620
<b>8</b> Tu	0131	1.3	40	<b>23</b> W	0137	3.3	100	<b>8</b> Th	0144	0.7	20	<b>23</b> F	0142	3.9	120
	0746	25.6	780		0804	23.3	710		0816	25.3	770		0818	22.3	680
	1334	5.9	180		1345	8.2	250		1355	7.9	240		1354	9.2	280
	1917	24.6	750		1920	21.7	660		1925	22.6	690		1929	20.0	610
<b>9</b> W	0206	1.0	30	<b>24</b> Th	0205	3.6	110	<b>9</b> F	0226	1.3	40	<b>24</b> Sa	0215	4.6	140
	0825	25.6	780		0831	23.0	700		0900	24.3	740		0848	22.0	670
	1407	6.9	210		1409	8.9	270		1437	8.9	270		1427	9.5	290
	1946	24.0	730		1946	21.0	640		2006	21.3	650		2001	19.4	590
<b>10</b> Th	0243	1.3	40	<b>25</b> F	0236	4.6	140	<b>10</b> Sa	0311	3.0	90	<b>25</b> W	0250	5.2	160
	0905	24.6	750		0900	22.0	670		0945	23.0	700		0921	21.3	650
	1442	8.2	250		1436	9.5	290		1527	9.8	300		1503	9.8	300
	2018	22.6	690		2013	20.0	610		2052	20.0	610		2037	18.7	570
<b>11</b> F	0323	2.6	80	<b>26</b> Sa	0308	5.6	170	<b>11</b> Su	0400	4.9	150	<b>26</b> W	0327	6.6	200
	0947	23.0	700		0932	21.0	640		1032	21.3	650		1144	19.7	600
	1521	9.8	300		1506	10.8	330		1631	10.8	330		1840	8.5	260
	2052	20.7	630		2039	18.7	570		2152	18.0	550				
<b>12</b> Sa	0407	4.9	150	<b>27</b> Su	0345	6.9	210	<b>12</b> M	0457	7.2	220	<b>27</b> Tu	0408	7.5	230
	1036	21.0	640		1010	20.0	610		1128	20.0	610		1038	19.7	600
	1610	11.5	350		1544	11.8	360		1800	11.2	340		1650	10.8	330
	2132	18.7	570		2110	17.4	530		2326	16.4	500		2219	16.7	510
<b>13</b> Su	0500	7.2	220	<b>28</b> M	0428	8.5	260	<b>13</b> Tu	0605	8.9	270	<b>28</b> F	0457	8.5	260
	1139	19.0	580		1057	18.7	570		1230	19.0	580		1126	19.0	580
	1743	13.1	400		1649	12.8	390		1930	10.5	320		1807	10.8	330
	2241	16.4	500		2200	16.1	490					<b>23</b> O	2342	16.4	500
<b>14</b> M	0619	9.2	280	<b>29</b> Tu	0526	9.5	290	<b>14</b> W	0122	16.4	500	<b>29</b> Th	0559	9.5	290
	1309	18.0	550		1202	17.7	540		0724	10.2	310		1222	18.7	570
	2010	12.5	380		1849	13.1	400		1342	18.4	560		1925	9.8	300
					2355	15.1	460		2048	9.2	280				
<b>15</b> Tu	0150	15.7	480	<b>30</b> W	0644	10.2	310	<b>15</b> Th	0247	17.4	530	<b>30</b> Sa	0113	16.7	510
	0809	9.8	300		1329	17.7	540		0845	10.5	320		0713	10.2	310
	1454	18.4	560		2040	11.8	360		1448	18.7	570		1325	18.7	570
	2148	10.8	330						2147	7.9	240		2032	8.2	250
<b>31</b> Sa	0237	18.0	550					<b>31</b> Sa	0237	18.0	550				
									0831	10.5	320				
									1428	18.7	570				
									2130	6.6	200				

Time meridian 142° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

## Darwin, Australia, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0437 20.7 630	16 W 0539 19.7 600	1 F 0628 23.0 700	16 Sa 0630 21.7 660	1 M 0100 3.0 90	16 Tu 0038 4.3 130						
1019 10.8 330	1147 10.8 330	1224 8.2 250	1233 8.5 260	0715 24.3 740	0646 23.6 720						
1543 18.4 560	1642 17.1 520	1744 20.3 620	1756 19.7 600	1327 3.9 120	1304 3.9 120						
2249 3.6 110	2328 5.9 180	●		1920 23.3 710	1900 23.6 720						
2 W 0539 22.0 670	17 Th 0618 20.7 630	2 Sa 0035 2.3 70	17 Su 0031 4.3 130	2 Tu 0131 3.6 110	17 W 0106 4.3 130						
1122 10.2 310	1218 10.2 310	0711 24.0 730	0700 22.6 690	0742 24.3 740	0710 24.0 730						
1643 19.4 590	1722 18.0 550	1307 6.9 210	1300 7.2 220	1359 3.0 90	1334 2.6 80						
2345 2.3 70		1836 21.7 660	1833 21.0 640	1957 23.3 710	1937 24.3 740						
3 Th 0634 23.3 710	18 F 0008 4.9 150	3 Su 0118 2.0 60	18 M 0102 3.6 110	3 W 0200 4.6 140	18 Th 0134 4.6 140						
1215 8.9 270	0653 21.7 660	0747 24.6 750	0728 23.3 710	0802 24.0 730	0731 24.0 730						
1736 20.3 620	1245 9.2 280	1347 5.6 170	1330 5.9 180	1429 3.0 90	1406 1.6 50						
●	○ 1759 19.0 580	1925 22.3 680	1911 22.0 670	2031 23.0 700	2014 24.3 740						
4 F 0037 1.6 50	19 Sa 0045 4.3 130	4 M 0156 2.3 70	19 Tu 0131 3.6 110	4 Th 0225 5.9 180	19 W 0202 5.6 170						
0722 24.0 730	0725 22.3 680	0819 24.6 750	0752 24.0 730	0821 23.0 700	0754 23.6 720						
1306 7.9 240	1313 8.5 260	1426 4.6 140	1401 4.6 140	1457 3.3 100	1439 1.6 50						
1828 21.0 640	1836 20.0 610	2010 22.3 680	1947 22.6 690	2104 22.0 670	2052 24.0 730						
5 Sa 0126 1.6 50	20 Su 0118 3.9 120	5 Tu 0230 3.3 100	20 W 0158 3.9 120	5 F 0245 7.2 220	20 Th 0234 6.9 210						
0806 24.3 740	0756 22.6 690	0847 24.3 740	0814 24.0 730	0839 22.0 670	0818 22.6 690						
1354 7.2 220	1345 7.5 230	1502 4.3 130	1433 3.9 120	1524 4.3 130	1515 2.3 70						
1919 21.7 660	1914 20.7 630	2051 22.0 670	2025 22.6 690	2136 21.0 640	2132 22.6 690						
6 Su 0211 2.0 60	21 M 0149 3.6 110	6 W 0301 4.9 150	21 Th 0225 4.6 140	6 Sa 0303 8.9 270	21 Su 0310 8.5 260						
0845 24.3 740	0823 23.0 700	0911 23.3 710	0833 23.6 720	0856 20.3 620	0845 21.3 650						
1441 6.6 200	1418 6.9 210	1537 4.6 140	1507 3.6 110	1552 5.2 160	1554 3.9 120						
2012 21.3 650	1952 21.0 640	2130 21.0 640	2104 22.3 680	2211 19.4 590	2220 21.0 640						
7 M 0253 3.0 90	22 Tu 0218 3.9 120	7 Th 0327 6.9 210	22 F 0254 5.9 180	7 Su 0323 10.5 320	22 M 0350 10.5 320						
0919 24.0 730	0848 23.0 700	0930 22.0 670	0855 22.6 690	0914 18.7 570	0915 19.4 590						
1527 6.2 190	1454 6.2 190	1610 5.2 160	1542 3.6 110	1626 6.9 210	1642 5.9 180						
2103 20.7 630	2032 21.0 640	2209 20.0 610	2146 21.7 660	2252 18.0 550	2318 19.0 580						
8 Tu 0332 4.6 140	23 W 0248 4.6 140	8 F 0346 8.5 260	23 Sa 0327 7.5 230	8 M 0353 12.1 370	23 Tu 0453 12.5 380						
0952 23.0 700	0912 22.6 690	0947 20.7 630	0918 21.7 660	0926 16.7 510	0953 17.1 520						
1613 6.2 190	1531 5.9 180	1643 6.2 190	1620 4.3 130	1715 8.5 260	1751 7.9 240						
2154 20.0 610	2115 20.7 630	2250 18.4 560	2234 20.3 620	2350 16.7 510	1945 8.9 270						
9 W 0409 6.6 200	24 Th 0318 5.9 180	9 Sa 0409 10.5 320	24 Su 0404 9.8 300	9 Tu 0534 13.8 420	24 W 0046 17.7 540						
1020 21.7 660	0935 22.0 670	1006 18.7 570	0944 20.0 610	0919 15.1 460	0709 13.5 410						
1657 6.6 200	1611 5.9 180	1720 7.2 220	1704 5.6 170	1830 9.8 300	1134 14.8 450						
2245 18.7 570	2202 20.3 620	● 2339 17.1 520	● 2331 19.0 580		1945 8.9 270						
10 Th 0444 8.5 260	25 F 0353 7.2 220	10 Su 0458 12.1 370	25 M 0458 11.8 360	10 W 0139 15.7 480	25 Th 0251 18.0 550						
1047 20.3 620	1000 21.3 650	1029 17.1 520	1016 18.0 550	1138 13.1 400	0943 11.8 360						
1742 7.2 220	1653 5.9 180	1811 8.2 250	1804 6.9 210	1336 13.5 410	1511 15.7 480						
● 2338 17.7 540	2255 19.4 590			2023 9.8 300	2133 7.9 240						
11 F 0522 10.5 320	26 Sa 0435 9.2 280	11 M 0048 16.1 490	26 Tu 0054 17.7 540	11 W 0419 17.4 530	26 Th 0406 19.7 600						
1115 18.7 570	1029 20.0 610	0636 13.5 410	0639 13.5 410	1110 11.8 360	1040 9.2 280						
F 1830 7.5 230	1739 6.2 190	1057 15.1 460	1112 16.1 490	1556 15.1 460	1615 18.4 560						
●	2356 18.7 570	1925 8.9 270	1945 7.5 230	2201 8.9 270	2238 6.9 210						
12 Sa 0042 16.7 510	27 Su 0530 10.8 330	12 Tu 0325 16.4 500	27 W 0307 18.0 550	12 F 0452 18.7 570	27 Sa 0455 21.3 650						
0620 12.1 370	1105 18.7 570	1100 13.5 410	0915 13.1 400	1120 10.5 320	1120 7.2 220						
1152 17.1 520	1202 17.1 520	1404 14.1 430	1433 15.1 460	1634 17.1 520	1706 20.3 620						
1927 7.9 240		2104 8.9 270	2136 6.9 210	2253 7.2 220	2325 5.9 180						
13 Su 0208 16.7 510	28 M 0115 18.0 550	13 W 0445 17.7 540	28 Th 0431 19.7 600	13 F 0522 20.3 620	28 Su 0533 22.3 680						
0743 12.8 390	0655 12.5 380	1127 12.1 370	1050 10.8 330	1140 8.9 270	1156 5.2 160						
1259 15.7 480	1202 17.1 520	1553 15.1 460	1607 17.1 520	1709 19.0 580	1750 22.0 670						
2033 7.9 240	2000 6.6 200	2226 7.9 240	2249 5.6 170	2332 5.9 180							
14 M 0348 17.4 530	29 Tu 0305 18.4 560	14 Th 0525 19.0 580	29 F 0525 21.3 650	14 W 0551 21.7 660	29 Th 0002 5.2 160						
0933 12.8 390	0846 12.8 390	1148 10.8 330	1139 8.9 270	1205 7.2 220	0606 23.3 710						
1442 15.4 470	1355 16.4 500	1641 16.7 510	1705 19.4 590	1745 20.7 630	1228 3.9 120						
2143 7.5 230	2132 5.9 180	2316 6.6 200	2342 4.3 130		● 1830 23.3 710						
15 Tu 0453 18.7 570	30 W 0434 19.7 600	15 F 0558 20.3 620	30 Sa 0608 23.0 700	15 M 0006 4.9 150	30 Tu 0034 5.2 160						
1105 11.8 360	1024 11.8 360	1210 9.5 290	1218 6.9 210	0620 22.6 690	0632 23.6 720						
1554 16.1 490	1543 17.1 520	1719 18.4 560	1755 21.3 650	1233 5.2 160	1257 3.0 90						
2240 6.6 200	2246 4.6 140	2357 5.2 160		● 1823 22.3 680	1906 24.0 730						
●	31 Th 0536 21.7 660		31 Su 0024 3.3 100								
1132 10.2 310			0645 24.0 730								
1649 18.7 570	1649 18.7 570		1254 4.9 150								
2345 3.3 100			● 1839 22.6 690								

Time meridian 142° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Darwin, Australia, 2008

Times and Heights of High and Low Waters

October				November				December							
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height				
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm				
1 W	0103	5.6	170	16 Th	0040	5.9	180	1 Sa	0131	8.5	260				
W	0654	23.3	710	Th	0624	23.6	720	Sa	0702	21.3	650				
1325	2.3	70	1304	1.0	30	1 M	1345	3.0	90	M	0134	8.2	250		
1939	24.0	730	1925	25.3	770	Su	2020	23.0	700	Su	0701	22.3	680		
2 Th	0130	6.2	190	2 F	0112	6.2	190	16 M	1359	1.0	30	1 M	0715	20.0	610
Th	0715	23.0	700	F	0651	23.6	720	Su	2039	24.9	760	Su	1356	4.3	130
1351	2.3	70	1339	0.7	20	20 M	2050	22.3	680	M	2039	22.6	690		
2010	23.6	720	2002	25.3	770	2123	23.6	720	Tu	0218	9.8	300			
3 F	0154	7.2	210	3 Sa	0145	6.9	210	17 M	0744	21.7	660	2 Tu	0749	19.7	600
F	0736	22.3	680	Sa	0721	23.3	710	1414	3.9	120	M	1442	2.3	70	
1417	3.0	90	1415	1.0	30	2050	22.3	680	2123	23.6	720	Tu	1428	4.9	150
2040	22.6	690	2043	24.6	750	2109	22.0	670	2109	22.0	670	2157	24.0	730	
4 Sa	0216	8.2	250	4 Su	0222	8.2	250	3 M	0227	9.8	300	2 M	0218	9.8	300
Sa	0758	21.3	650	Su	0754	22.3	680	W	0759	19.7	600	17 W	0315	8.2	250
1444	3.9	120	1453	2.3	70	Tu	1445	5.2	160	W	0830	20.3	620		
2109	21.7	660	2125	23.3	710	2121	21.0	640	Tu	1529	4.3	130			
5 Su	0240	9.5	290	5 M	0340	11.5	350	18 M	0308	9.5	290	3 W	0256	10.2	310
Su	0819	20.0	610	W	0830	20.7	630	W	0900	17.1	520	W	0824	19.0	580
1513	5.2	160	M	1537	4.3	130	W	1600	8.2	250	Th	1459	6.2	190	
2141	20.3	620	2214	21.3	650	W	2243	19.0	580	W	2142	21.3	650		
6 M	0305	10.8	330	6 Tu	0354	10.8	330	5 Th	0528	10.5	320	19 O	0410	8.2	250
M	0841	18.4	560	Tu	0911	18.7	570	W	1045	17.1	520	O	1041	18.4	560
1546	6.9	210	1630	6.6	200	W	1622	6.6	200	W	1651	8.5	260		
2219	19.0	580	O	2314	19.7	600	W	2301	21.0	640	O	2314	21.3	650	
7 Tu	0339	12.1	370	7 W	0516	12.1	370	6 Th	0447	12.5	380	20 O	0606	8.2	250
Tu	0858	16.7	510	W	1013	16.4	500	W	0947	15.4	470	Sa	1151	17.4	530
1633	8.5	260	1745	8.5	260	W	1659	9.8	300	W	1727	8.5	260		
O	2311	17.7	540	O	2341	18.0	550	W	2359	20.0	610	W	2257	20.0	610
8 W	0458	13.5	410	8 Th	0030	18.7	570	21 F	0652	10.2	310	21 O	0708	8.2	250
W	0909	15.1	460	Th	0723	11.8	360	W	1237	16.1	490	Su	1312	17.1	520
1745	10.2	310	1300	15.1	460	W	1845	10.2	310	W	1851	12.5	380		
9 Th	0029	16.7	510	9 Sa	0210	18.7	570	22 M	0100	19.4	590	22 M	0041	18.7	570
Th	1029	13.5	410	F	0906	10.2	310	W	0812	8.9	270	M	0815	7.9	240
1212	13.5	410	1458	16.7	510	W	1819	10.8	330	W	1446	17.4	530		
1927	10.8	330	2102	9.5	290	W	2007	11.2	340	W	2015	13.1	400		
10 F	0242	17.1	520	10 M	0315	19.4	590	23 M	0205	19.0	580	23 O	0145	17.7	540
F	1008	11.8	360	Sa	1005	7.9	240	W	0821	11.5	350	Tu	0919	7.2	220
1529	15.1	460	Sa	1601	19.0	580	W	1404	15.1	460	W	1608	18.7	570	
2111	9.8	300	Sa	2208	8.9	270	W	1952	10.8	330	W	2146	13.1	400	
11 Sa	0349	18.4	560	11 W	0406	20.3	620	24 M	0303	19.0	580	24 W	0257	17.4	530
Sa	1030	9.8	300	W	1048	6.2	190	W	0921	9.5	290	W	1015	6.6	200
1609	17.4	530	W	1651	20.7	630	W	1523	17.1	520	W	1704	20.0	610	
2212	8.5	260	W	2256	8.2	250	W	2110	10.5	320	W	2258	12.5	380	
12 Su	0426	19.7	600	10 M	0311	19.0	580	25 O	0352	19.4	590	25 O	0356	17.7	540
Su	1057	8.2	250	W	1004	7.5	230	W	1050	5.2	160	W	1100	5.9	180
1646	19.4	590	W	1615	19.4	590	W	1717	21.3	650	W	1638	21.0	640	
2255	7.5	230	W	2208	9.5	290	W	2309	10.5	320	W	2219	11.2	340	
13 M	0459	21.0	640	11 W	0356	20.0	610	26 W	0431	19.7	600	26 F	0443	18.4	560
M	1127	5.9	180	W	1045	5.2	160	W	1125	4.3	130	F	1139	5.2	160
1726	21.7	660	W	1701	21.7	660	W	1759	22.3	680	W	1827	22.3	680	
2333	6.6	200	W	2256	8.9	270	W	2348	9.8	300	W	2314	10.5	320	
14 Tu	0530	22.3	680	12 W	0445	21.0	640	27 M	0505	20.0	610	27 O	0021	10.8	330
Tu	1159	3.9	120	W	1125	4.6	140	W	1123	3.3	100	O	0522	19.0	580
1806	23.3	710	W	1734	22.3	680	W	1746	23.6	720	W	1138	2.0	60	
O	● 1849	24.0	730	W	2335	7.9	240	W	2338	8.2	250	O	1901	22.6	690
15 W	0007	5.9	180	28 F	0517	21.7	660	28 M	0511	22.0	670	28 O	0050	10.2	310
W	0558	23.0	700	W	1156	3.6	110	W	1200	1.6	50	Su	0558	19.7	600
1231	2.3	70	W	1814	23.3	710	W	1830	24.9	760	W	1245	4.3	130	
O	1845	24.6	750	O	● 1849	24.0	730	O	● 1909	23.3	710	O	1909	25.3	770
16 W	0037	7.5	230	29 F	0008	7.5	230	29 M	0016	7.9	240	29 W	0117	9.8	300
W	0610	22.0	670	W	0545	22.3	680	W	0622	22.6	690	W	0633	20.0	610
1317	2.6	80	W	1224	3.0	90	W	1239	0.7	20	W	1316	3.9	120	
O	1922	24.0	730	O	● 1849	24.0	730	O	1914	25.6	780	O	1954	25.6	780
17 W	0555	7.9	240	30 F	0055	7.9	240	30 M	0117	9.5	290	30 W	0145	9.2	280
W	0643	20.3	620	W	0622	22.6	690	W	0643	20.3	620	W	0709	20.3	620
1321	2.3	70	W	1317	0.3	10	W	1325	3.6	110	W	1346	4.3	130	
O	1956	25.6	780	O	1956	25.6	780	O	1909	23.0	700	O	2030	23.3	710
18 W	0635	21.7	660	31 F	0105	7.9	240	31 M	0105	7.9	240	31 W	0218	8.9	270
W	1317	2.6	80	W	0635	21.7	660	W	1317	2.6	80	W	0745	20.3	620
1952	23.6	720	O	1952	23.6	720	O	1952	23.6	720	O	1415	4.6	140	
O	● 1845	24.6	750	O	● 1849	24.0	730	O	● 1909	23.0	700	O	2056	23.3	710

Time meridian 142° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Townsville, Australia, 2008

Times and Heights of High and Low Waters

January				February				March															
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height												
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm												
<b>1</b> Tu	0604 1153 1658	8.2 5.6 7.9	250 170 240	<b>16</b> W F O	0430 1030 1546 2308	8.2 5.9 8.2 3.3	250 180 250 100	<b>1</b> Sa	0013 0700 1328 1824	4.3 9.5 4.9 7.5	130 290 150 230	<b>16</b> Sa	0632 1312 1830	11.2 4.3 8.2	340 130 250	<b>1</b> Sa	0636 1307 1817	9.5 4.9 7.2	290 150 220	<b>16</b> Su	0616 1259 1830	11.5 3.6 8.5	350 110 260
<b>2</b> W	0006 0642 1249 1745	3.6 8.9 5.2 7.9	110 270 160 240	<b>17</b> Th Sa	0541 1203 1705 2359	9.2 5.2 8.2 2.6	280 160 250 80	<b>2</b> Su	0038 0720 1352 1848	3.6 9.8 4.9 7.9	110 300 150 240	<b>2</b> Su	0014 0652 1325 1835	4.3 10.2 4.6 7.9	130 310 140 240	<b>17</b> M	0035 0650 1332 1901	2.6 11.8 3.0 9.2	80 360 90 280				
<b>3</b> Th	0034 0710 1331 1821	3.3 9.5 5.2 7.9	100 290 160 240	<b>18</b> F Sa	0631 1303 1805	10.5 4.6 8.2	320 140 250	<b>3</b> M	0100 0742 1423 1940	3.3 12.5 3.3 9.5	100 380 100 290	<b>3</b> M	0038 0711 1345 1853	3.6 10.5 4.3 8.5	110 320 130 260	<b>18</b> Tu	0114 0720 1402 1930	2.3 12.1 3.0 9.8	70 370 90 300				
<b>4</b> F	0055 0735 1404 1848	3.3 9.8 4.9 7.9	100 300 150 240	<b>19</b> Sa	0044 0714 1350 1853	2.0 11.5 3.9 8.9	60 350 120 270	<b>4</b> M	0121 0802 1435 1930	3.0 10.8 4.3 8.5	90 330 120 260	<b>4</b> Tu	0100 0731 1404 1914	3.0 11.2 3.9 9.2	90 340 120 280	<b>19</b> W	0145 0748 1428 2000	2.3 12.1 3.0 10.2	70 370 90 310				
<b>5</b> Sa	0113 0759 1431 1912	3.0 10.2 4.9 7.9	90 310 150 240	<b>20</b> Su	0124 0752 1432 1937	1.3 12.1 3.6 9.2	40 370 110 280	<b>5</b> Tu	0143 0826 1458 1955	2.3 11.2 4.3 8.9	70 340 130 270	<b>5</b> W	0123 0753 1521 2045	2.6 11.5 3.0 10.2	80 350 110 310	<b>20</b> Th	0212 0815 1448 2030	2.3 11.8 3.0 10.2	70 360 90 310				
<b>6</b> Su	0130 0823 1457 1936	2.6 10.5 4.6 7.9	80 320 140 240	<b>21</b> M	0202 0830 1512 2018	1.0 12.8 3.3 9.2	30 390 100 280	<b>6</b> W	0207 0851 1522 2025	2.0 11.5 3.9 9.2	60 350 120 280	<b>6</b> Th	0147 0815 1447 2010	2.0 12.1 3.3 10.5	60 370 100 320	<b>21</b> F	0236 0842 1503 2100	2.6 11.5 3.3 10.2	80 350 100 310				
<b>7</b> M	0152 0848 1523 2002	2.3 10.8 4.6 8.2	70 330 140 250	<b>22</b> Tu	0239 0909 1549 2059	1.0 12.8 3.3 9.5	30 390 100 290	<b>7</b> Th	0234 0918 1548 2100	1.6 11.8 3.9 9.5	50 360 120 290	<b>7</b> F	0228 0845 1521 2045	1.3 12.8 3.0 10.2	40 390 110 310	<b>22</b> Sa	0259 0906 1514 2129	3.3 10.8 3.3 10.2	100 330 100 310				
<b>8</b> Tu	0217 0916 1551 ● 2034	2.0 10.8 4.6 8.2	60 330 140 250	<b>23</b> W	0315 0946 1627 2139	1.0 12.8 3.6 9.2	30 390 110 280	<b>8</b> F	0303 0948 1617 2140	1.6 11.8 3.9 9.5	50 360 120 290	<b>8</b> Sa	0245 0911 1625 2222	2.0 12.1 3.3 9.2	60 370 100 330	<b>23</b> Su	0319 0928 1523 2159	3.9 10.2 3.6 9.8	120 310 110 300				
<b>9</b> W	0246 0946 1625 2110	2.0 11.2 4.6 8.2	60 340 140 250	<b>24</b> Th	0347 1023 1705 2217	1.6 12.1 3.9 8.9	50 370 130 270	<b>9</b> Sa	0334 1020 1651 2224	2.0 11.5 3.9 9.5	60 350 140 260	<b>9</b> Su	0318 0942 1601 2211	2.3 11.5 3.0 10.8	70 350 100 330	<b>24</b> M	0337 0945 1536 2230	4.9 9.2 3.6 9.2	150 280 110 280				
<b>10</b> Th	0317 1020 1702 2151	2.0 10.8 4.9 8.2	60 330 150 250	<b>25</b> F	0416 1059 1744 2258	2.6 11.5 4.6 8.2	80 350 140 250	<b>10</b> M	0408 1054 1732 2315	3.0 10.8 4.3 8.9	90 330 130 270	<b>10</b> M	0357 1015 1647 2340	3.3 10.8 4.9 7.9	100 330 150 310	<b>25</b> Tu	0351 0956 1552 2307	5.9 8.2 4.3 8.9	180 250 130 270				
<b>11</b> F	0351 1056 1748 2240	2.3 10.8 4.9 7.9	70 330 150 240	<b>26</b> W	0443 1134 1829 2343	3.6 10.5 4.9 7.5	110 320 150 230	<b>11</b> M	0448 1131 1830	3.9 10.2 4.3	120 310 130	<b>11</b> Tu	0446 1053 1701	4.6 9.5 5.2	140 290 160	<b>26</b> W	0400 0955 1609 2359	6.6 7.5 4.6 8.2	200 230 140 250				
<b>12</b> Sa	0427 1134 1842 2338	3.0 10.5 4.9 7.5	90 320 150 230	<b>27</b> Su	0505 1209 1930	4.9 9.2 5.2	150 280 160	<b>12</b> Tu	0016 0551 1215 1946	8.5 5.2 8.9 4.6	260 220 130 140	<b>12</b> W	0053 0341 0619 1835*	7.2 7.2 8.9 5.9	220 220 270 180	<b>27</b> Th	0357 0526 1621	7.2 7.5 5.2	220 230 160				
<b>13</b> Su	0510 1217 1945	3.9 9.8 4.9	120 300 150	<b>28</b> M	0048 0516 1250 2104	6.9 5.9 8.2 5.2	210 280 250 160	<b>13</b> W	0151 0827 1323 2125	8.2 6.2 7.9 4.6	250 190 140 140	<b>13</b> Th	0139 0925 1743 2252	8.9 6.2 6.2 5.6	270 190 190 170	<b>28</b> F	0531 1457 1830 1927	8.2 5.9 5.9 180	250 180 180 180				
<b>14</b> M	0048 0614 1308 2057	7.2 4.9 9.2 4.6	220 150 280 140	<b>29</b> Tu	0619 1010 1400 2243	7.2 6.6 7.2 4.9	220 200 220 150	<b>14</b> Th	0431 1114 1606 2255	8.9 5.9 7.2 3.9	270 180 210 120	<b>14</b> F	0623 1250 1800 2343	8.9 5.6 6.9 4.9	270 170 210 130	<b>29</b> Sa	0423 1129 1650 2243	9.5 5.2 6.9 4.3	290 160 210 130	<b>30</b> Su	0533 1220 1753 2348	10.5 4.3 7.9 3.3	320 130 240 100
<b>15</b> Tu	0233 0817 1415 2206	7.5 5.6 8.5 3.9	230 170 260 120	<b>30</b> W	0629 1210 1631 2339	8.2 6.2 6.9 4.6	250 190 210 140	<b>15</b> F	0547 1226 1742 2357	9.8 4.9 7.5 3.0	300 150 230 90	<b>15</b> O	0533 1220 1753 2348	10.5 4.3 7.9 3.3	320 130 240 100	<b>31</b> M	0554 1230 1747 2330	9.2 4.9 7.2 4.9	280 150 220 150				
				<b>31</b> Th	0644 1257 1748	8.9 5.6 7.2	270 220 220					<b>31</b> M	0611 1247 1804	9.8 4.3 7.9	300 130 240								

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.

Heights are referred to the chart datum of soundings.

\* See Page 384 for the remaining tides on this day.

# Townsville, Australia, 2008

Times and Heights of High and Low Waters

April				May				June							
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height				
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm				
<b>1</b> Tu	0001	4.3	130	<b>16</b> W	0058	3.3	100	<b>1</b> Th	0558	10.5	320	<b>16</b> Su	0126	4.3	130
0629	10.5	320	0650	11.2	340	1246	3.0	90	0646	9.5	290	0108	3.9	120	
1307	3.9	120	1335	3.0	90	1825	9.5	290	1330	3.0	90	0622	9.8	300	
1825	8.5	260	1917	9.8	300	1942	9.8	300	1942	9.8	300	1310	1.3	40	
<b>2</b> W	0030	3.6	110	<b>17</b> Th	0132	3.3	100	<b>2</b> F	0030	3.6	110	<b>17</b> Sa	0202	4.6	140
0648	10.8	330	0717	10.8	330	0624	10.8	330	0712	9.2	280	0704	9.5	290	
1328	3.3	100	1359	3.0	90	1311	2.3	70	1344	3.0	90	1345	1.0	30	
1849	9.5	290	1947	10.2	310	1900	10.5	320	2012	10.2	310	2019	12.1	370	
<b>3</b> Th	0057	3.0	90	<b>18</b> F	0201	3.6	110	<b>3</b> Sa	0109	3.3	100	<b>18</b> Su	0235	4.6	140
0710	11.5	350	0742	10.5	320	0653	11.2	340	0734	8.9	270	0751	9.2	280	
1348	3.0	90	1415	3.0	90	1335	1.6	50	1353	3.0	90	1427	1.0	30	
1919	10.2	310	2017	10.2	310	1940	11.2	340	2041	10.2	310	2107	12.5	380	
<b>4</b> F	0125	2.6	80	<b>19</b> Sa	0229	3.9	120	<b>4</b> Su	0149	3.0	90	<b>19</b> M	0305	4.9	150
0734	11.8	360	0805	10.2	310	0726	10.8	330	0755	8.2	250	0755	8.2	250	
1410	2.3	70	1423	3.0	90	1403	1.3	40	1405	3.0	90	1514	1.0	30	
1953	10.8	330	2047	10.2	310	2023	11.8	360	2109	10.2	310	2157	12.5	380	
<b>5</b> Sa	0157	2.3	70	<b>20</b> Su	0255	4.3	130	<b>5</b> M	0237	3.3	100	<b>20</b> Tu	0337	5.2	160
0801	11.8	360	0826	9.5	290	0804	10.5	320	0817	7.9	240	0940	8.2	250	
1433	2.0	60	1432	3.0	90	1436	1.0	30	1426	3.0	90	1606	1.3	40	
2032	11.5	350	2116	10.2	310	● 2109	12.1	370	2138	10.2	310	2247	12.1	370	
<b>6</b> Su	0232	2.6	80	<b>21</b> M	0321	4.9	150	<b>6</b> Tu	0332	3.6	110	<b>21</b> W	0413	5.2	160
0833	11.5	350	0844	8.9	270	0847	9.8	300	0843	7.5	230	0954	7.9	220	
1500	1.6	50	1445	3.0	90	1515	1.3	40	1453	3.0	90	1558	3.0	90	
● 2115	11.8	360	2145	9.8	300	2200	12.1	370	2210	9.8	300	2307	9.8	300	
<b>7</b> M	0314	3.0	90	<b>22</b> Tu	0354	5.2	160	<b>7</b> W	0438	4.3	130	<b>22</b> Th	0457	5.6	170
0908	10.8	330	0901	8.2	250	0936	8.9	270	0913	7.2	220	1151	7.2	220	
1530	2.0	60	1505	3.3	100	1603	2.0	60	1524	3.3	100	1802	3.0	90	
2202	11.5	350	2217	9.8	300	2253	11.8	360	2245	9.8	300	2345	9.5	290	
<b>8</b> Tu	0409	3.9	120	<b>23</b> W	0444	5.9	180	<b>8</b> Th	0552	4.6	140	<b>23</b> Su	0552	5.9	180
0947	9.8	300	0919	7.5	230	1036	7.9	240	0949	6.9	210	0810	3.9	120	
1607	2.3	70	1528	3.6	110	1705	2.6	80	1600	3.6	110	1315	6.9	210	
2255	11.2	340	2254	9.2	280	2355	11.2	340	2328	9.2	280	1915	3.6	110	
<b>9</b> W	0532	4.9	150	<b>24</b> Th	0600	6.2	190	<b>9</b> F	0722	4.9	150	<b>24</b> Sa	0709	5.9	180
1032	8.5	260	0936	6.9	210	1156	6.9	210	1156	6.9	210	0921	3.9	120	
1700	3.3	100	1553	4.3	130	1821	3.3	100	1643	3.9	120	1451	7.2	220	
2358	10.5	320	2340	8.9	270							2045	4.6	140	
<b>10</b> Th	0716	5.6	170	<b>25</b> F	1625	4.6	140	<b>10</b> Sa	0114	10.5	320	<b>25</b> Su	0016	9.2	280
1137	7.2	220			0856	4.6	140	0846	5.6	170	0846	5.6	170		
1829	3.9	120			1401	6.6	200	1215	6.2	190	1215	6.2	190		
					1959	3.9	120	1745	4.6	140	1745	4.6	140		
<b>11</b> F	0134	9.8	300	<b>26</b> Sa	0047	8.2	250	<b>26</b> M	0252	10.2	310	<b>26</b> W	0411	9.2	280
0932	5.2	160	1127	5.9	180	1014	3.9	120	0949	5.2	160	1122	3.3	100	
1415	6.6	200	1228	5.9	180	1544	7.2	220	1400	6.2	190	1730	8.2	250	
2030	4.6	140	1748	5.2	160	2135	4.3	130	1910	4.9	150	● 2337	4.9	150	
<b>12</b> Sa	0346	10.2	310	<b>27</b> Su	0335	8.5	260	<b>27</b> M	0409	10.2	310	<b>27</b> Tu	0240	8.9	270
1100	4.6	140	1118	5.2	160	1113	3.6	110	1031	4.6	140	1206	3.3	100	
1630	7.2	220	1556	6.2	190	1655	7.9	240	1534	6.6	200	1825	8.9	270	
2215	4.3	130	2024	5.6	170	● 2252	4.3	130	2045	5.2	160	2215	4.9	150	
<b>13</b> Su	0500	10.5	320	<b>28</b> M	0439	8.9	270	<b>28</b> Tu	0504	10.2	310	<b>28</b> W	0345	9.2	280
1152	3.6	110	1138	4.6	140	1159	3.0	90	1105	3.9	120	1634	7.5	230	
1730	7.9	240	1646	6.9	210	1748	8.5	260	2212	4.9	150	● 2212	4.9	150	
● 2325	3.6	110	2212	5.2	160	2354	4.3	130	1906	9.2	280				
<b>14</b> M	0545	11.2	340	<b>29</b> Tu	0508	9.5	290	<b>29</b> W	0545	10.2	310	<b>29</b> Sa	0430	9.2	280
1232	3.3	100	1200	4.3	130	1237	3.0	90	1137	3.3	100	1305	3.0	90	
1813	8.9	270	1720	7.5	230	1831	9.2	280	1722	8.2	250	1939	9.5	290	
			● 2310	4.6	140				2319	4.6	140				
<b>15</b> Tu	0016	3.3	100	<b>30</b> W	0533	10.2	310	<b>30</b> Th	0045	4.3	130	<b>30</b> F	0508	9.5	290
0621	11.2	340	1223	3.6	110	0618	9.8	300	1307	3.0	90	0653	7.9	240	
1307	3.0	90	1752	8.5	260	1908	9.5	290	1908	9.5	290	1806	9.2	280	
1846	9.2	280	2352	3.9	120							31	0015	4.3	130
												Sa	0544	9.8	300
												1238	2.0	60	
												1849	10.5	320	

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Townsville, Australia, 2008

## Times and Heights of High and Low Waters

July					August					September									
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time					
<b>1</b> Tu 0212 0702 1341 2018	3.6 8.5 1.0 12.1	ft 260 30 370	cm 110 30 370	<b>16</b> W 0300 0738 1346 2045	4.3 7.5 2.6 10.5	ft 230 80 320	cm 130 80 320	<b>1</b> F 0328 0839 1458 ● 2126	2.6 9.2 0.7 12.8	ft 280 280 20 390	cm 80 280 20 390	<b>16</b> Sa 0311 0813 1418 2104	3.6 8.5 1.6 10.8	ft 260 260 50 330	cm 110 260 50 330	<b>1</b> M 0354 0939 1539 2158	2.6 9.2 2.6 10.5	ft 280 280 80 320	cm 80 280 80 320
	0258 0754 1426 2102	ft 270 20 390	cm 100 20 390		4.3 7.5 2.3 10.5	ft 230 70 320	cm 130 70 320		0404 0922 1535 2202	2.6 9.2 1.0 12.1	ft 280 280 60 370	cm 80 280 60 370	0415 1017 1607 2225	3.0 8.9 3.6 9.5	ft 270 270 110 290	cm 70 270 110 290			
	0345 0845 1511 ● 2146	ft 270 20 390	cm 90 20 390		4.3 7.9 2.0 10.5	ft 240 240 60 320	cm 130 240 60 320		0443 1005 1612 2239	3.0 8.9 2.0 11.5	ft 270 270 60 350	cm 90 270 60 350	0431 1100 1634 2249	3.6 8.2 4.9 8.2	ft 250 250 150 250	cm 110 250 150 250			
	0431 0938 1557 2230	ft 260 30 380	cm 90 20 320		4.3 7.9 2.0 10.5	ft 240 240 60 320	cm 130 240 60 320		0522 1050 1647 2314	3.3 8.2 3.0 10.5	ft 250 250 90 320	cm 100 250 90 320	0444 1004 1547 2225	3.9 8.5 3.0 10.2	ft 120 260 90 310	cm 90 260 90 310			
<b>5</b> Sa 0521 1030 1643 2314	3.3 8.2 1.6 11.8	ft 250 250 50 360	cm 100 240 70 320	<b>20</b> Su 0444 0941 1539 2236	4.3 7.9 2.3 10.5	ft 240 240 70 320	cm 130 240 70 320	<b>5</b> Tu 0606 1140 1726 2348	3.9 7.5 4.3 9.2	ft 230 230 130 280	cm 120 230 130 290	<b>20</b> W 0457 1054 1625 2257	3.3 8.5 3.6 9.5	ft 100 260 110 290	cm 100 260 110 290	<b>5</b> F 0457 1345 1602 1719	4.6 7.2 6.9 6.9	ft 140 220 210 210	cm 110 220 210 210
	0615 1124 1729 2359	ft 240 80 80 330	cm 110 70 80 330		4.3 7.5 3.0 10.2	ft 230 230 90 310	cm 130 230 90 310		0701 1245 1837	4.3 7.2 5.6	ft 220 220 170	cm 130 220 170	0746 1153 1719 2334	4.9 8.2 4.9 250	ft 240 230 210 250	cm 150 230 210 250			
	0716 1226 1822	ft 220 110	cm 120 110		4.3 7.5 3.6	ft 230 230 110	cm 130 230 110		0025 0822 1514 2136	7.9 4.6 6.9 6.2	ft 240 240 210 190	cm 120 240 210 190	0024 0523 1028 1800	5.2 5.6 4.6 8.5	ft 160 170 140 260	cm 160 170 140 260			
	0045 0824 1351 1943	ft 120 210 210 150	cm 300 120 210 150		4.3 7.2 3.6 4.6	ft 220 220 110 140	cm 130 220 110 140		0121 0955 1758	6.9 4.6 7.9	ft 210 210 240	cm 120 210 240	0036 0546 1122 ● 1819	4.6 6.2 4.3 9.2	ft 140 190 130 280	cm 140 190 130 280			
<b>9</b> W 0140 0934 1543 2143	8.5 3.9 7.2 5.6	ft 260 120 220 170	cm 120 120 220 170	<b>24</b> Th 0021 0805 1336 1911	8.9 4.3 7.2 5.2	ft 270 130 220 160	cm 130 130 220 160	<b>9</b> Sa 0002 0418 1107 ● 1828	5.6 6.2 4.3 8.5	ft 170 190 130 260	cm 170 190 130 260	<b>24</b> W 0250 1009 1713 ● 1828	6.2 3.6 9.2 260	ft 190 110 280 260	cm 190 110 280 260	<b>9</b> Tu 0056 0607 1157 1839	3.9 6.6 3.6 9.5	ft 120 200 110 290	cm 120 200 110 290
	0258 1043 1729 ● 2338	ft 240 120 240 170	cm 110 120 240 170		8.2 3.9 7.5 5.9	ft 250 120 230 180	cm 150 120 230 180		0052 0543 1153 1850	4.9 6.6 3.6 9.2	ft 150 200 110 280	cm 150 200 110 280	0115 0626 1223 1900	3.6 220 3.3 300	ft 110 220 100 300	cm 110 220 100 300			
	0429 1136 1830	ft 220 110 260	cm 120 110 260		7.5 3.3 8.5	ft 230 100 260	cm 130 100 260		0124 0619 1226 1912	4.3 6.9 3.3 9.5	ft 130 210 100 290	cm 130 210 100 290	0135 0644 1245 1919	3.3 230 2.6 100	ft 100 230 80 310	cm 100 230 80 310			
	0048 0534 1216 1905	ft 220 220 100 280	cm 160 120 100 280		7.5 3.3 8.5 5.9	ft 230 100 260 180	cm 130 100 260 180		0149 0645 1250 1933	3.9 7.2 3.0 9.8	ft 120 220 90 300	cm 120 220 90 300	0154 0641 1253 1918	3.3 250 40 360	ft 100 250 40 360	cm 100 250 40 360			
<b>11</b> F 0429 1136 1830	7.2 3.6 8.5	ft 220 110 260	cm 120 110 260	<b>26</b> Sa 0237 1022 1706 ● 2341	7.5 3.3 8.5 5.2	ft 230 100 260 160	cm 130 100 260 160	<b>11</b> M 0124 0619 1226 1912	4.3 6.9 3.3 9.5	ft 130 210 100 290	cm 130 210 100 290	<b>26</b> W 0048 0604 1210 1844	3.6 7.5 2.0 11.2	ft 110 230 60 340	cm 110 230 60 340	<b>11</b> Th 0135 0644 1245 1919	3.3 230 2.6 100	ft 100 230 80 310	cm 100 230 80 310
	0427 1136 1830	ft 220 110 260	cm 120 110 260		7.5 3.3 8.5 5.9	ft 230 100 260 180	cm 130 100 260 180		0048 0619 1226 1912	3.6 6.9 3.3 9.5	ft 130 210 100 290	cm 130 210 100 290	0135 0644 1245 1919	3.3 230 2.6 100	ft 100 230 80 310	cm 100 230 80 310			
	0048 0534 1216 1905	ft 220 220 100 280	cm 160 120 100 280		7.5 3.3 8.5 5.9	ft 230 100 260 180	cm 130 100 260 180		0149 0645 1250 1933	3.9 7.2 3.0 9.8	ft 120 220 90 300	cm 120 220 90 300	0154 0641 1253 1918	3.3 250 40 360	ft 100 250 40 360	cm 100 250 40 360			
	0133 0617 1245 1932	ft 220 220 100 290	cm 150 120 100 290		4.6 7.5 2.0 10.8	ft 140 230 60 330	cm 140 230 60 330		0211 0706 1311 1956	3.9 7.5 2.6 10.2	ft 120 230 80 310	cm 120 230 80 310	0200 0715 1330 1951	2.6 8.9 1.0 12.1	ft 80 270 30 370	cm 80 270 30 370			
<b>14</b> M 0208 0650 1307 1957	4.6 7.2 3.0 9.8	ft 220 220 90 300	cm 140 220 90 300	<b>29</b> Tu 0131 0630 1257 1931	3.6 7.9 1.3 11.5	ft 110 240 40 350	cm 130 240 40 350	<b>14</b> W 0230 0725 1330 2017	3.6 7.9 2.3 10.5	ft 110 240 80 320	cm 130 240 80 320	<b>29</b> F 0230 0749 1405 2024	2.3 9.2 1.0 12.5	ft 70 280 30 380	cm 70 280 30 380	<b>14</b> M 0232 0753 1355 2022	2.6 9.2 2.0 11.2	ft 80 280 60 340	cm 80 280 60 340
	0236 0715 1326 2021	ft 220 220 80 310	cm 130 220 80 310		3.0 8.2 1.0 10.8	ft 90 250 30 380	cm 90 250 30 380		0250 0746 1353 2041	3.6 8.2 2.0 10.8	ft 110 250 60 330	cm 110 250 60 330	0300 0824 1437 2056	2.3 9.5 1.0 12.1	ft 70 290 30 370	cm 70 290 30 370			
	0250 0757 1418 2048	ft 220 270 20 390	cm 130 270 20 390		2.6 8.9 0.7 12.8	ft 80 270 20 390	cm 80 270 20 390		0259 0900 1509 ● 2128	2.6 9.5 1.6 11.5	ft 70 290 50 350	cm 70 290 50 350	0329 0900 1509 ● 2128	2.3 9.5 1.6 11.5	ft 70 290 50 350	cm 70 290 50 350			
	0250 0757 1418 2048	ft 220 270 20 390	cm 130 270 20 390		2.6 8.9 0.7 12.8	ft 80 270 20 390	cm 80 270 20 390		0259 0900 1509 ● 2128	2.6 9.5 1.6 11.5	ft 70 290 50 350	cm 70 290 50 350	0329 0900 1509 ● 2128	2.3 9.5 1.6 11.5	ft 70 290 50 350	cm 70 290 50 350			

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

# Townsville, Australia, 2008

Times and Heights of High and Low Waters

October					November					December									
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height					
<b>1</b> W	0312	2.6	80	<b>16</b> Th	0300	1.3	40	<b>1</b> Sa	0315	3.0	90	<b>16</b> Su	0427	2.0	60	<b>1</b> M	0343	3.3	100
	0953	9.2	280		0938	10.8	330		1054	8.9	270		1128	10.8	330		1117	9.2	280
	1550	4.6	140		1545	3.6	110		1815	5.9	180		1843	4.6	140		1848	5.6	170
	2132	8.5	260		2116	9.2	280		2133	6.6	200		2315	6.9	210		2220	6.2	190
<b>2</b> Th	0323	3.0	90	<b>17</b> F	0334	2.0	60	<b>2</b> Su	0341	3.6	110	<b>17</b> M	0544	3.0	90	<b>2</b> Tu	0418	3.9	120
	1030	8.5	260		1031	10.5	320		1144	8.2	250		1239	10.5	320		1205	8.9	270
	1643	5.6	170		1709	4.6	140		2056	5.9	180		2013	4.3	130		2023	5.6	170
	2147	7.5	230		2200	7.9	240		2135	5.9	180						2335	5.9	180
<b>3</b> F	0339	3.6	110	<b>18</b> Sa	0420	2.6	80	<b>3</b> M	0412	4.3	130	<b>18</b> Tu	0057	6.2	190	<b>3</b> W	0504	4.3	130
	1115	8.2	250		1134	9.8	300		1259	7.9	240		0718	3.6	110		1303	8.5	260
	1824	6.2	190		1844	4.9	150		2308	5.2	160		1407	10.2	310		2137	5.2	160
	2151	6.6	200		2300	6.9	210						2134	3.9	120				
<b>4</b> Sa	0356	3.9	120	<b>19</b> Su	0552	3.3	100	<b>4</b> Tu	0029	5.2	160	<b>19</b> W	0305	6.6	200	<b>4</b> Th	0128	5.9	180
	1219	7.5	230		1259	9.5	290		0553	4.9	150		0857	3.6	110		0636	4.9	150
					2047	4.9	150		1526	8.2	250		1529	10.2	310		1417	8.5	260
									2310	4.6	140		2241	3.3	100		2225	4.6	140
<b>5</b> Su	0408	4.6	140	<b>20</b> M	0057	5.9	180	<b>5</b> W	0413	5.6	170	<b>20</b> Th	0426	7.5	230	<b>5</b> F	0333	6.2	190
	1654	7.9	240		0751	3.9	120		0830	4.9	150		1015	3.9	120		0827	5.2	160
					1501	9.5	290		1625	8.5	260		1631	10.2	310		1525	8.9	270
					2224	3.9	120		2330	4.3	130		2332	2.6	80		2300	3.9	120
<b>6</b> M	0008	4.9	150	<b>21</b> Tu	0354	6.2	190	<b>6</b> Th	0452	6.6	200	<b>21</b> F	0525	8.2	250	<b>6</b> Sa	0437	6.9	210
	0538	5.2	160		0936	3.6	110		1009	4.9	150		1122	3.6	110		0959	5.2	160
	0813	5.2	160		1622	10.2	310		1656	9.2	280		1718	9.8	300		1613	8.9	270
	1715	8.2	250		2322	3.3	100		2351	3.6	110						2330	3.3	100
<b>7</b> Tu	0001	4.6	140	<b>22</b> W	0500	7.2	220	<b>7</b> F	0521	7.2	220	<b>22</b> Sa	0014	2.3	70	<b>7</b> Su	0521	7.9	240
	0523	5.9	180		1047	3.0	90		1100	4.3	130		0612	8.9	270		1106	4.9	150
	1032	4.6	140		1714	10.5	320		1720	9.5	290		1218	3.9	120		1650	9.2	280
	1736	8.9	270									1757	9.8	300		2358	3.0	90	
<b>8</b> W	0017	3.9	120	<b>23</b> Th	0004	2.6	80	<b>8</b> Sa	0014	3.3	100	<b>23</b> Su	0048	2.3	70	<b>8</b> M	0600	8.9	270
	0538	6.6	200		0545	8.2	250		0548	7.9	240		0651	9.5	290		1201	4.6	140
	1115	4.3	130		1143	2.6	80		1139	3.9	120		1306	3.9	120		1726	9.2	280
	1757	9.2	280		1753	10.8	330		1743	9.8	300		1829	9.5	290				
<b>9</b> Th	0036	3.6	110	<b>24</b> F	0041	2.3	70	<b>9</b> Su	0035	2.6	80	<b>24</b> M	0115	2.3	70	<b>9</b> Tu	0026	2.0	60
	0557	7.2	220		0622	8.9	270		0616	8.9	270		0725	9.8	300		0637	9.8	300
	1146	3.6	110		1228	2.6	80		1215	3.6	110		1347	4.3	130		1251	4.3	130
	1815	9.8	300		1826	10.8	330		1806	9.8	300		1858	8.9	270		1802	9.2	280
<b>10</b> F	0056	3.3	100	<b>25</b> Sa	0112	2.0	60	<b>10</b> M	0057	2.0	60	<b>25</b> Tu	0135	2.3	70	<b>10</b> W	0056	1.6	50
	0616	7.9	240		0656	9.5	290		0647	9.8	300		0758	10.2	310		0716	10.8	330
	1214	3.3	100		1308	2.6	80		1251	3.3	100		1425	4.3	130		1340	3.9	120
	1834	10.2	310		1855	10.5	320		1831	10.2	310		1924	8.5	260		1843	9.2	280
<b>11</b> Sa	0115	3.0	90	<b>26</b> Su	0138	2.0	60	<b>11</b> Tu	0119	1.6	50	<b>26</b> W	0148	2.3	70	<b>11</b> Th	0128	1.0	30
	0639	8.5	260		0728	9.8	300		0722	10.5	320		0828	10.2	310		0759	11.8	360
	1240	3.0	90		1343	3.0	90		1330	3.3	100		1500	4.6	140		1430	3.6	110
	1854	10.5	320		1922	10.2	310		1901	10.2	310		1948	8.2	250		1927	9.2	280
<b>12</b> Su	0134	2.3	70	<b>27</b> M	0158	2.0	60	<b>12</b> W	0143	1.0	30	<b>27</b> Th	0200	2.3	70	<b>12</b> F	0205	0.7	20
	0704	9.2	280		0800	9.8	300		0801	11.2	340		0858	10.2	310		0844	12.5	380
	1307	2.6	80		1416	3.3	100		1415	3.3	100		1534	4.9	150		1521	3.6	110
	1915	10.8	330		1948	9.8	300		1938	9.8	300						2015	9.2	280
<b>13</b> M	0153	2.0	60	<b>28</b> Tu	0212	2.0	60	<b>13</b> F	0212	1.0	30	<b>28</b> F	0218	2.3	70	<b>13</b> Sa	0246	0.7	20
	0735	9.8	300		0832	9.8	300		0845	11.5	350		0929	10.2	310		0930	12.5	380
	1336	2.6	80		1449	3.9	120		1509	3.6	110		1609	4.9	150		1615	3.6	110
	1938	10.8	330		2012	9.2	280		2019	9.2	280		2037	7.5	230		2109	8.9	270
<b>14</b> Tu	0212	1.6	50	<b>29</b> W	0905	9.8	300	<b>14</b> F	0247	1.0	30	<b>29</b> Sa	0243	2.6	80	<b>14</b> Su	0333	1.0	30
	0810	10.5	320		1525	4.6	140		0934	11.8	360		1000	9.8	300		1020	12.5	380
	1410	2.6	80		2032	8.5	260		1613	3.9	120		1650	5.2	160		1712	3.6	110
	2006	10.5	320		●				2106	8.5	260		2106	7.2	220		2206	8.2	250
<b>15</b> W	0234	1.3	40	<b>30</b> Th	0234	2.3	70	<b>15</b> Sa	0330	1.3	40	<b>30</b> Su	0311	3.0	90	<b>15</b> M	0424	1.3	40
	0851	10.8	330		0938	9.5	290		1029	11.5	350		1037	9.5	290		1112	12.1	370
	1450	3.0	90		1606	4.9	150		1722	4.3	130		1740	5.6	170		1815	3.9	120
	2039	9.8	300		2052	7.5	230		2202	7.5	230		2139	6.9	210		2308	7.9	240
				<b>31</b> F	0253	2.6	80									<b>31</b> W	0406	3.3	100
					1014	9.2	280										1123	9.8	300
					1700	5.6	170									1832	5.2	160	
					2113	7.2	220									2300	6.9	210	

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

## Brisbane Bar, Australia, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm		h m	ft	cm		h m	ft	cm	
1 Tu 0350	5.9	180		16 0308	6.2	190		1 0511	6.2	190	
0941	3.0	90	W	0909	2.6	80	F	1142	3.3	100	Sa
1529	5.9	180		1501	6.2	190		1649	4.9	150	
2213	2.0	60	O	2143	1.6	50		2308	2.3	70	
2 W 0459	5.9	180		17 0423	6.6	200	2	0616	6.6	200	Sa
1100	3.3	100	Th	1034	2.6	80		1255	3.0	90	
1629	5.6	170		1614	5.9	180		1806	4.9	150	
2305	2.0	60		2247	1.6	50					
3 Th 0600	6.6	210		18 0538	6.9	210	3 Su	0013	2.0	60	
1214	3.0	90	F	1206	2.6	80		0710	6.9	210	
1733	5.2	160		1732	5.6	170		1349	2.6	80	
2359	2.0	60		2356	1.3	40		1907	5.2	160	
4 F 0651	6.9	210		19 0647	7.5	230	4 M	0109	2.0	60	
1316	2.6	80	Sa	1329	2.3	70		0755	7.2	220	
1833	5.2	160		1850	5.2	160		1434	2.3	70	
								1955	5.6	170	
5 Sa 0048	1.6	50		20 0101	1.3	40	5 Tu	0157	1.6	50	
0737	7.2	220		0747	7.9	240		0836	7.5	230	
1409	2.3	70	Su	1435	2.0	60		1515	2.0	60	
1927	5.2	160		1959	5.6	170		2038	5.9	180	
6 Su 0134	1.3	40		21 0201	1.0	30	6 W	0241	1.3	40	
0819	7.5	230	M	0841	8.2	250		0915	7.9	240	
1455	2.3	70		1530	1.6	50		1553	2.0	60	
2013	5.6	170		2055	5.9	180		2118	6.2	190	
7 M 0215	1.3	40		22 0255	1.0	30	7 Th	0322	1.0	30	
0859	7.5	230		0929	8.5	260		0951	8.2	250	
1537	2.0	60	Tu	1617	1.3	40		1630	1.6	50	
2054	5.6	170	O	2144	5.9	180		2159	6.2	190	
8 Tu 0256	1.3	40		23 0343	1.0	30	8 F	0403	1.0	30	
0936	7.9	240	W	1012	8.5	260		1027	8.2	250	
1616	2.0	60		1700	1.3	40		1705	1.3	40	
● 2134	5.6	170		2228	6.2	190		2240	6.6	200	
9 W 0334	1.0	30		24 0426	1.0	30	9 Sa	0444	1.0	30	
1013	7.9	240	Th	1051	8.5	260		1101	8.2	250	
1654	2.0	60		1736	1.6	50		1740	1.3	40	
2214	5.9	180		2308	6.2	190		2321	6.6	200	
10 Th 0412	1.0	30		25 0506	1.0	30	10 M	0524	1.3	40	
1049	8.2	250	F	1128	8.2	250		1136	7.9	240	
1731	2.0	60		1809	1.6	50		1813	1.3	40	
2254	5.9	180		2346	6.2	190					
11 F 0451	1.0	30		26 0544	1.3	40	11 M	0003	6.9	210	
1125	8.2	250		1201	7.5	230		0607	1.3	40	
1808	1.6	50	Sa	1838	1.6	50		1212	7.5	230	
2336	5.9	180						1845	1.3	40	
12 Sa 0531	1.3	40		27 0025	6.2	190	12 Tu	0048	6.9	210	
1200	7.9	240		0621	2.0	60		0654	2.0	60	
1844	1.6	50		1233	7.2	220		1251	6.9	210	
				1907	1.6	50		1921	1.3	40	
13 Su 0020	6.2	190		28 0104	6.2	190	13 W	0139	6.9	210	
0615	1.6	50	M	0701	2.3	70		0748	2.3	70	
1237	7.5	230		1305	6.6	200		1336	6.2	190	
1920	1.6	50		1937	2.0	60		2004	1.6	50	
14 M 0109	6.2	190		29 0147	6.2	190	14 Th	0240	6.9	210	
0702	2.0	60		0747	3.0	90		0900	2.6	80	
1317	7.2	220	Tu	1342	6.2	190		1437	5.6	170	
2000	1.6	50		2012	2.0	60		● 2102	2.0	60	
15 Tu 0203	6.2	190		30 0242	5.9	180	15 F	0359	6.9	210	
0800	2.3	70		0847	3.3	100		1036	3.0	90	
1404	6.9	210		1426	5.6	170		1603	5.2	160	
2047	1.6	50		● 2058	2.3	70		2218	2.0	60	
16 Th 0351	5.9	180		31 0109	3.3	100					
				1009	3.3	100					
				1529	4.9	150					
				2158	2.3	70					

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Brisbane Bar, Australia, 2008

Times and Heights of High and Low Waters

April				May				June						
	Time	Height		Time	Height		Time	Height		Time	Height			
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm			
<b>1</b> Tu	0539	6.6 200	<b>16</b> W	0029	2.0 60	<b>1</b> Th	0539	6.9 210	<b>16</b> F	0056	2.3 70	<b>1</b> Su	0103	2.0 60
	1229	2.6 80		0642	7.2 220		1224	1.6 50		0643	6.6 200		0644	6.6 200
	1809	5.6 170		1322	1.6 50		1826	6.6 200		1311	1.6 50		1314	1.0 30
<b>2</b> W	1920	6.6 200	<b>2</b> F	0026	2.0 60	<b>17</b> Sa	0147	2.3 70	<b>2</b> M	0209	1.6 50	<b>17</b> Tu	0259	2.0 60
	0001	2.3 70		0727	7.2 220		0631	7.2 220		0726	6.2 190		0817	5.6 170
	0634	7.2 220		1400	1.6 50		1312	1.3 40		1346	1.3 40		1419	1.3 40
	1316	2.0 60		2002	6.9 210		1916	6.9 210		2012	7.5 230		2101	7.5 230
<b>3</b> Th	1900	5.9 180	<b>3</b> Sa	0127	2.0 60	<b>18</b> Su	0233	2.0 60	<b>3</b> Tu	0309	1.6 50	<b>18</b> W	0339	2.0 60
	0101	2.0 60		0807	7.2 220		0805	6.2 190		0835	6.2 190		0857	5.6 170
	0720	7.5 230		1434	1.3 40		1419	1.3 40		1449	0.7 20		1456	1.3 40
	1400	1.6 50		2040	7.2 220		2047	7.5 230		2123	8.9 270		2138	7.9 240
<b>4</b> F	1947	6.6 200	<b>4</b> Su	0224	1.6 50	<b>19</b> M	0315	2.0 60	<b>4</b> W	0407	1.3 40	<b>19</b> Th	0417	2.0 60
	0155	1.6 50		0842	6.9 210		0843	5.9 180		0931	5.9 180		0935	5.6 170
	0803	7.5 230		1503	1.3 40		1450	1.3 40		1536	0.7 20		1531	1.3 40
	1440	1.3 40		2115	7.5 230		2122	7.9 240		2214	8.9 270		2213	7.9 240
<b>5</b> Sa	2031	7.2 220	<b>5</b> M	0319	1.3 40	<b>20</b> Tu	0354	2.0 60	<b>5</b> Th	0503	1.3 40	<b>20</b> F	0454	2.0 60
	0245	1.3 40		0915	6.6 200		0917	5.9 180		1027	5.9 180		1012	5.6 170
	0845	7.5 230		1530	1.3 40		1521	1.3 40		1624	1.0 30		1607	1.3 40
	1518	1.0 30		2147	7.5 230		2157	7.9 240		2303	8.9 270		2247	7.9 240
<b>6</b> Su	2115	7.5 230	<b>6</b> Tu	0413	1.3 40	<b>21</b> W	0431	2.0 60	<b>6</b> F	0557	1.3 40	<b>21</b> Sa	0530	2.0 60
	0333	1.3 40		0946	6.6 200		0952	5.9 180		1122	5.9 180		1050	5.6 170
	0926	7.5 230		1557	1.3 40		1552	1.3 40		1713	1.0 30		1645	1.3 40
	1555	1.0 30		2219	7.5 230		2230	7.9 240		2352	8.5 260		2323	7.5 230
<b>7</b> M	2159	7.9 240	<b>7</b> Tu	0445	2.0 60	<b>22</b> W	0506	1.3 40	<b>7</b> Sa	0649	1.6 50	<b>22</b> Su	0605	2.0 60
	0421	1.3 40		1017	6.2 190		1035	6.2 190		1216	5.6 170		1131	5.6 170
	1007	7.2 220		1623	1.3 40		1640	1.0 30		1802	1.3 40		1723	1.6 50
	1630	1.0 30		2251	7.5 230		2315	8.5 260		2304	7.5 230		2359	7.5 230
<b>8</b> Tu	2243	8.2 250	<b>8</b> W	0520	2.0 60	<b>23</b> Th	0601	1.6 50	<b>8</b> Su	0041	8.2 250	<b>23</b> M	0643	2.0 60
	0510	1.3 40		1049	5.9 180		1128	5.9 180		0739	1.6 50		1215	5.6 170
	1049	6.9 210		1651	1.6 50		1723	1.3 40		1312	5.6 170		1805	2.0 60
	1705	1.0 30		2324	7.5 230		2339	7.5 230		1855	2.0 60		1852	2.0 60
<b>9</b> W	2329	8.2 250	<b>9</b> Th	0555	2.3 70	<b>24</b> F	0005	8.5 260	<b>9</b> Su	0129	7.9 240	<b>24</b> Tu	0035	7.5 230
	0600	1.6 50		1122	5.6 170		0700	1.6 50		0828	2.0 60		0723	2.0 60
	1135	6.2 190		1722	1.6 50		1224	5.6 170		1410	5.6 170		1304	5.6 170
	1743	1.3 40		2359	7.2 220		1811	1.6 50		1953	2.3 70		1852	2.0 60
<b>10</b> Th	0016	8.2 250	<b>10</b> F	0632	2.6 80	<b>25</b> Sa	0058	8.2 250	<b>10</b> Tu	0218	7.2 220	<b>25</b> W	0116	7.2 220
	0656	2.0 60		1200	5.2 160		0800	2.0 60		0915	2.0 60		0805	2.0 60
	1225	5.6 170		1756	2.0 60		1328	5.2 160		1513	5.9 180		1400	5.9 180
	1824	1.6 50		1907	2.0 60		1907	2.0 60		2058	2.6 80		1947	2.3 70
<b>11</b> F	0109	7.9 240	<b>11</b> Sa	0037	7.2 220	<b>26</b> M	0155	7.5 230	<b>11</b> W	0310	6.6 200	<b>26</b> Th	0203	6.9 210
	0801	2.3 70		0717	2.6 80		0901	2.0 60		1001	2.0 60		0853	1.6 50
	1327	5.2 160		1244	4.9 150		1439	5.2 160		1617	5.9 180		1502	5.9 180
	1915	2.0 60		1836	2.3 70		2015	2.3 70		2209	3.0 90		2054	2.6 80
<b>12</b> Sa	0211	7.5 230	<b>12</b> Tu	0123	6.9 210	<b>27</b> W	0256	7.2 220	<b>12</b> F	0405	6.2 190	<b>27</b> F	0259	6.6 200
	0918	2.6 80		0815	3.0 90		1000	2.0 60		0845	2.3 70		0946	1.6 50
	1448	4.9 150		1341	4.9 150		1553	5.6 170		1428	5.2 160		1612	6.2 190
	2026	2.3 70		1929	2.6 80		2133	2.6 80		2012	2.6 80		2211	2.6 80
<b>13</b> Su	0323	7.2 220	<b>13</b> Tu	0221	6.6 200	<b>28</b> W	0400	6.9 210	<b>13</b> F	0501	5.9 180	<b>28</b> Sa	0403	6.2 190
	1034	2.3 70		0925	3.0 90		1056	2.0 60		0941	2.3 70		1044	1.3 40
	1617	5.2 160		1500	4.9 150		1700	5.9 180		1540	5.6 170		1720	6.9 210
	2156	2.6 80		2040	2.6 80		2249	2.6 80		2124	2.6 80		2332	2.6 80
<b>14</b> M	0439	7.2 220	<b>14</b> Tu	0330	6.6 200	<b>29</b> W	0500	6.9 210	<b>14</b> Sa	0345	6.9 210	<b>29</b> Su	0512	5.9 180
	1141	2.3 70		1034	2.6 80		1146	2.0 60		1037	2.0 60		1143	1.3 40
	1732	5.6 170		1622	5.2 160		1759	6.2 190		1648	6.2 190		1824	7.5 230
	2320	2.3 70		2203	2.6 80		2358	2.6 80		2240	2.6 80		1901	7.2 220
<b>15</b> Tu	0546	7.2 220	<b>15</b> Th	0439	6.9 210	<b>30</b> W	0555	6.6 200	<b>15</b> F	0446	6.9 210	<b>30</b> M	0051	2.3 70
	1236	2.0 60		1132	2.3 70		1231	1.6 50		1131	1.6 50		0620	5.9 180
	1832	6.2 190		1729	5.9 180		1849	6.6 200		1751	6.6 200		1241	1.0 30
	2318	2.6 80		2318	2.6 80		2354	2.3 70		1944	7.5 230		1924	7.9 240
<b>31</b> 0546 6.6 200 Sa 1223 1.3 40 1847 7.2 220														

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

## Brisbane Bar, Australia, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
1 Tu	0203 2.0 60	16 W	0242 2.0 60	1 F	0350 1.0 30	16 Sa	0332 1.6 50	1 M	0436 1.0 30	16 Tu	0405 0.7 20
0726 5.6 170	0800 5.2 160	0919 5.9 180	0900 5.9 180	1519 0.7 20	1503 1.0 30	1025 6.6 200	0958 6.9 210	1633 1.0 30	1610 1.0 30	1610 1.0 30	0958 6.9 210
1338 1.0 30	1358 1.3 40	2146 8.5 260	2130 7.9 240	2130 7.9 240	2234 7.5 230	2234 7.5 230	2207 7.5 230	2207 7.5 230	2207 7.5 230	2207 7.5 230	2207 7.5 230
2020 8.5 260	2043 7.5 230										
2 W	0306 1.6 50	17 Th	0321 2.0 60	2 Sa	0434 1.0 30	17 Su	0407 1.3 40	2 Tu	0505 1.0 30	17 W	0438 0.7 20
0829 5.6 170	0841 5.6 170	1006 6.2 190	0939 6.2 190	1607 0.7 20	1544 1.0 30	1101 6.9 210	1038 7.2 220	1711 1.3 40	1653 1.0 30	1653 1.0 30	1038 7.2 220
1433 0.7 20	1439 1.3 40	2229 8.5 260	2203 7.9 240	2229 8.5 260	2306 7.9 240	2306 7.2 220	2243 6.9 210	2306 7.2 220	2243 6.9 210	2243 6.9 210	2243 6.9 210
2113 8.9 270	2119 7.5 230										
3 Th	0402 1.3 40	18 F	0359 2.0 60	3 Su	0513 1.0 30	18 M	0440 1.3 40	3 W	0531 1.0 30	18 Th	0510 0.7 20
0926 5.9 180	0919 5.6 170	1049 6.2 190	1018 6.2 190	1650 1.0 30	1623 1.0 30	1137 6.9 210	1120 7.2 220	1747 1.6 50	2336 6.6 200	1738 1.3 40	1738 1.3 40
1526 0.7 20	1517 1.3 40	2306 8.2 250	2236 7.9 240	2306 8.2 250	2306 7.9 240	2336 7.9 240	2320 6.6 200	2336 7.9 240	2320 6.6 200	2320 6.6 200	2320 6.6 200
● 2202 8.9 270	○ 2155 7.9 240										
4 F	0454 1.3 40	19 Sa	0434 1.6 50	4 M	0548 1.0 30	19 Tu	0513 1.0 30	4 Th	0557 1.0 30	19 F	0543 1.0 30
1019 5.9 180	0958 5.9 180	1130 6.2 190	1059 6.6 200	1731 1.3 40	1703 1.0 30	1214 6.6 200	1205 7.2 220	1826 2.0 60	1826 1.6 50	1826 1.6 50	1205 7.2 220
1615 0.7 20	1556 1.0 30	2342 7.5 230	2309 7.5 230	2342 7.5 230	2309 7.5 230	2309 7.5 230	2309 7.5 230	2309 7.5 230	2309 7.5 230	2309 7.5 230	2309 7.5 230
2248 8.9 270	2229 7.9 240										
5 Sa	0541 1.3 40	20 Su	0509 1.6 50	5 Tu	0619 1.3 40	20 W	0545 1.0 30	5 F	0006 5.9 180	20 Sa	0001 5.9 180
1109 5.9 180	1036 5.9 180	1211 6.2 190	1140 6.6 200	1812 1.6 50	1745 1.3 40	0623 1.3 40	1252 6.6 200	1252 6.6 200	1907 2.6 80	1254 7.2 220	1922 2.0 60
1703 1.0 30	1634 1.3 40	2302 7.9 240	2343 7.2 220	2302 7.9 240	2343 7.2 220	2343 7.2 220	2343 7.2 220	2343 7.2 220	2343 7.2 220	2343 7.2 220	2343 7.2 220
2333 8.5 260											
6 Su	0624 1.3 40	21 M	0543 1.6 50	6 W	0015 7.2 220	21 Th	0615 1.0 30	6 Sa	0039 5.2 160	21 Su	0051 5.2 160
1157 5.9 180	1116 5.9 180	1223 6.6 200	1223 6.6 200	1252 6.2 190	1853 2.0 60	1223 6.6 200	1959 3.0 90	1336 6.2 190	1336 6.2 190	0702 1.3 40	1353 6.9 210
1749 1.3 40	1713 1.3 40	1853 2.0 60	1853 2.0 60	1853 2.0 60		1829 1.6 50		1959 3.0 90		2037 2.3 70	
2335 7.5 230											
7 M	0015 8.2 250	22 Tu	0616 1.6 50	7 Th	0048 6.6 200	22 F	0019 6.6 200	7 Su	0120 4.9 150	22 M	0159 4.9 150
0703 1.3 40	1159 6.2 190	1754 1.6 50	0718 1.3 40	1336 6.2 190	1939 2.6 80	0649 1.3 40	0735 2.0 60	1433 6.2 190	1506 6.9 210	0803 1.6 50	1506 6.9 210
1244 5.9 180				1939 2.6 80		1920 2.3 70		2116 3.0 90		2210 2.3 70	
1835 1.6 50											
8 Tu	0055 7.5 230	23 W	0009 7.5 230	8 F	0123 5.9 180	23 Sa	0102 5.9 180	8 M	0222 4.3 130	23 Tu	0337 4.6 140
0741 1.6 50	0650 1.3 40	1244 6.2 190	1427 6.2 190	1427 6.2 190	2038 3.0 90	1407 6.6 200	1550 5.9 180	1550 5.9 180	2300 3.0 90	1628 6.9 210	0927 2.0 60
1332 5.9 180	1244 6.2 190	1838 2.0 60	2038 3.0 90	2038 3.0 90		2027 2.6 80		2334 2.0 60			
1924 2.0 60											
9 W	0134 6.9 210	24 Th	0045 7.2 220	9 Sa	0207 5.2 160	24 Su	0159 5.2 160	9 Tu	0401 4.3 130	24 W	0512 4.9 150
0818 1.6 50	0727 1.3 40	1332 6.2 190	0835 2.0 60	1532 6.2 190	1519 6.6 200	0825 1.6 50	0953 2.3 70	1712 6.2 190	1057 2.0 60	1742 7.2 220	1057 2.0 60
1425 5.9 180				○ 2200 3.3 100		○ 2158 2.6 80					
2017 2.6 80	1930 2.3 70										
10 Th	0215 6.2 190	25 F	0128 6.6 200	10 Su	0310 4.6 140	25 M	0323 4.9 150	10 W	0012 2.6 80	25 Th	0040 1.6 50
0858 1.6 50	0809 1.3 40	1430 6.2 190	0932 2.0 60	1648 6.2 190	2335 3.0 90	0939 1.6 50	0533 4.6 140	1115 2.3 70	1814 6.6 200	0622 5.2 160	1213 1.6 50
1525 5.9 180				2335 3.0 90		2337 2.3 70		1814 6.6 200		1843 7.5 230	
● 2123 3.0 90	2033 2.6 80										
11 F	0304 5.9 180	26 Sa	0221 5.9 180	11 M	0437 4.6 140	26 Tu	0501 4.9 150	11 Th	0101 2.3 70	26 F	0131 1.3 40
0944 2.0 60	0900 1.3 40	1541 6.6 200	1044 2.0 60	1757 6.6 200	1800 7.2 220	1101 1.6 50	0631 4.9 150	1220 2.0 60	1902 6.9 210	0716 5.9 180	1315 1.3 40
1630 6.2 190				1800 7.2 220		1800 7.2 220		1902 6.9 210		1933 7.5 230	
2241 3.0 90	○ 2155 2.6 80										
12 Sa	0405 5.2 160	27 Su	0332 5.6 170	12 Tu	0045 2.6 80	27 W	0056 2.0 60	12 F	0143 2.0 60	27 Sa	0215 1.0 30
1035 2.0 60	1004 1.6 50	1657 6.9 210	0559 4.6 140	1151 2.0 60	1219 1.3 40	0625 4.9 150	0716 5.2 160	1313 1.6 50	1408 1.0 30	0803 6.2 190	1408 1.0 30
1735 6.6 200		2327 2.6 80		1852 6.9 210		1904 7.5 230		1944 7.2 220		2016 7.5 230	
13 Su	0000 3.0 90	28 M	0455 5.2 160	13 W	0135 2.3 70	28 Th	0156 1.6 50	13 Sa	0221 1.3 40	28 Su	0252 1.0 30
0514 4.9 150	1115 1.3 40	1810 7.2 220	0657 4.9 150	1249 1.6 50	1937 7.2 220	0729 5.6 170	0758 5.9 180	1400 1.3 40	1454 1.0 30	0845 6.6 200	1454 1.0 30
1130 2.0 60				1249 1.6 50		1326 1.0 30		2021 7.5 230		2054 7.5 230	
1830 6.9 210				1937 7.2 220		1958 7.9 240					
14 M	0105 2.6 80	29 Tu	0054 2.3 70	14 Th	0218 2.0 60	29 F	0245 1.0 30	14 Su	0257 1.3 40	29 M	0325 1.0 30
0618 4.9 150	0615 5.2 160	1224 1.3 40	0743 5.2 160	1338 1.3 40	2018 7.5 230	0820 5.9 180	0837 6.2 190	1444 1.0 30	2057 7.5 230	0922 6.9 210	1535 1.0 30
1224 1.6 50				2018 7.5 230		2044 8.2 250					
1919 7.2 220	1915 7.9 240										
15 Tu	0157 2.3 70	30 W	0204 1.6 50	15 F	0256 1.6 50	30 Sa	0327 1.0 30	15 M	0331 1.0 30	30 Tu	0354 0.7 20
0715 5.2 160	0727 5.2 160	1329 1.0 30	0822 5.6 170	1422 1.3 40	2055 7.5 230	0905 6.2 190	0917 6.6 200	1510 0.7 20	2124 8.2 250	1615 1.3 40	0958 7.2 220
1314 1.6 50				1422 1.3 40		2124 8.2 250		2124 8.2 250		2200 6.9 210	
2002 7.5 230	2011 8.2 250										
31 Th	0301 1.3 40			31 Su	0403 1.0 30	31 F	0403 1.0 30	31 M	0403 1.0 30	30 Tu	0354 0.7 20
0827 5.6 170				0946 6.6 200		0827 5.6 170		0946 6.6 200		0958 7.2 220	
1428 0.7 20	1428 0.7 20			1553 0.7 20		1428 0.7 20		1553 0.7 20		2200 6.9 210	
2101 8.5 260	2200 7.9 240			● 2200 7.9 240							

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Brisbane Bar, Australia, 2008

Times and Heights of High and Low Waters

October				November				December								
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height					
1 W 0420 1032 1651 2231	h m 1.0 7.2 1.6 6.6	ft 30 220 50 200	cm 30 240 40 200	16 Th 0403 1018 1645 2221	h m 0.3 7.9 1.3 6.6	ft 10 240 40 200	cm 10 240 40 200	1 M 0435 1114 1746 2308	h m 1.0 7.2 2.0 5.2	ft 30 220 60 160	cm 30 250 40 160					
	0445 1106 1728 2301	1.0 7.2 2.0 5.9	30 220 60 180		0506 1149 1824 2345	1.3 7.2 2.3 4.9	40 220 70 150		0500 1142 1833 2356	0.7 8.2 1.3 5.2	20 250 40 160					
	0511 1140 1803 2332	1.0 7.2 2.0 5.6	30 220 60 170		0515 1151 1830 2356	0.7 7.9 1.6 5.6	20 240 50 170		0547 1233 1932	1.0 8.2 1.6	30 250 50					
	0539 1216 1842	1.3 6.9 2.3	40 210 70		0558 1244 1933	1.0 7.5 2.0	30 230 60		0012 0641 1328 2031	5.2 1.3 7.9 1.6	160 40 220 50					
4 Sa 0007 0611 1257 1930	0028 0620 1312 2001	4.9 2.0 6.6 2.6	150 60 200 80	4 Tu 0028 0620 1312 2001	0203 0745 1426 2130	5.2 2.0 7.5 1.6	160 60 230 50	4 Th 0100 0647 1327 2018	5.2 2.0 6.9 2.3	160 60 210 70	19 F 0238 0828 1442 2131	5.9 2.3 6.9 1.6	180 70 210 50			
	0054 0647 1343 2046	4.9 1.3 7.5 2.0	150 40 230 60		0122 0711 1405 2107	4.6 2.3 6.6 2.6	140 70 200 80		0316 0858 1526 2225	5.2 2.0 7.2 1.6	160 60 220 50	0345 0936 1534 2220	5.9 2.6 6.2 1.6	180 80 190 50		
	0048 0650 1346 2035	4.6 2.0 6.2 3.0	140 60 190 90		0235 0817 1507 2213	4.6 2.6 6.6 2.3	140 80 200 70		0428 1015 1627 2318	5.6 2.3 6.9 1.6	170 80 210 50	0451 1050 1632 2311	6.2 3.0 5.9 1.6	190 90 180 50		
	0147 0744 1452 2205	4.3 2.3 6.2 3.0	130 70 190 90		0340 0918 1603 2308	4.9 2.0 6.9 2.0	150 60 210 60		0531 1126 1725	5.9 2.3 6.6	180 70 200	0553 1203 1732	6.6 2.6 5.6	200 80 170		
8 W 0319 0900 1610 2318	0459 1043 1711	4.3 2.6 6.2 2.6	130 80 190 80	8 Sa 0459 1043 1711	0509 1053 1711	5.2 2.3 6.6	160 70 200	8 M 0006 0627 1230 1817	1.3 6.6 2.3 6.2	40 200 70 190	8 Tu 0525 1122 1715 2357	6.2 2.6 6.2 1.3	190 80 190 40	23 Tu 0000 0646 1308 1830	1.6 6.9 2.6 5.6	50 210 80 170
	0005 0602 1155 1809	1.6 5.9 2.0 6.9	40 50 60 210		0001 0606 1200 1804	1.6 5.9 2.0 6.6	50 180 60 200		0050 0714 1328 1905	1.3 6.9 2.0 6.2	40 210 60 190	0048 0732 1402 1924	1.3 7.2 2.3 5.2	40 220 70 160		
	0012 0555 1140 1812	2.0 5.2 2.0 6.6	60 160 60 200		0054 0655 1256 1859	1.3 6.2 1.6 6.9	40 190 50 210		0047 0656 1301 1854	1.3 6.6 2.0 6.6	40 200 60 200	0048 0718 1343 1913	1.0 7.5 2.0 6.2	30 230 60 190		
	0057 0644 1239 1858	1.6 5.6 1.6 6.9	50 170 50 210		0135 0740 1348 1942	1.0 6.6 1.6 6.9	30 200 50 210		0130 0743 1400 1942	1.0 7.2 1.6 6.6	30 220 50 200	0138 0811 1445 2011	0.7 8.2 1.6 5.9	20 250 50 180		
12 Su 0137 0728 1331 1939	0212 0820 1435 2020	1.3 6.2 1.3 7.2	40 190 40 220	12 M 0213 0830 1455 2030	0213 0830 1455 2030	0.7 7.9 1.3 6.6	20 240 40 200	27 Th 0237 0912 1545 2106	1.0 7.5 2.0 5.6	30 230 60 170	12 F 0227 0901 1544 2107	0.7 8.5 1.3 5.9	20 260 40 180			
	0244 0858 1518 2056	1.0 7.2 1.6 6.2	30 220 50 190		0253 0915 1548 2118	0.7 8.2 1.3 6.2	20 250 40 190		0237 0912 1545 2106	1.0 7.5 2.0 5.6	30 230 60 170	0249 0930 1610 2129	1.3 7.5 2.0 5.6	40 230 60 170		
	0215 0811 1421 2019	1.0 6.9 1.3 7.2	30 210 40 220		0255 0915 1548 2118	0.7 8.2 1.3 6.2	20 250 40 190		0308 0946 1623 2142	1.0 7.5 2.0 5.6	30 230 60 180	0324 1005 1645 2203	0.7 7.9 2.0 5.6	40 240 60 170		
	0252 0853 1510 2059	0.7 7.2 1.0 7.2	20 220 30 220		0334 1003 1642 2208	0.3 8.5 1.3 5.9	10 260 40 180		0340 1020 1700 2216	1.0 7.5 2.0 5.6	30 230 60 170	0359 1039 1718 2239	0.7 7.9 2.0 5.6	40 240 60 170		
15 W 0328 0935 1558 2140	0340 1006 1635 2202	0.7 7.5 1.6 6.9	30 230 50 210	15 Th 0415 1051 1737 2300	0415 1051 1737 2300	0.7 8.5 1.3 5.6	20 260 40 170	29 Tu 0412 1055 1734 2252	1.3 7.5 2.0 5.2	40 230 60 160	15 M 0451 1130 1824 2349	0.7 8.9 1.3 5.9	20 270 40 180			
	0407 1040 1711 2234	1.0 7.5 2.0 5.6	30 230 60 170		0415 1051 1737 2300	0.7 8.5 1.3 5.6	20 260 40 170		0403 1042 1733 2252	0.7 8.9 1.3 5.9	20 270 40 180	0433 1112 1751 2315	1.3 7.5 2.0 5.9	40 230 60 180		
	0510 1145 1825 2356	1.3 7.5 2.0 5.9	40 230 60 180		0510 1145 1825 2356	1.3 7.5 2.0 5.9	40 230 60 180		0510 1145 1825 2356	1.3 7.5 2.0 5.9	40 230 60 180	0510 1145 1825 2356	1.3 7.5 2.0 5.9	40 230 60 180		
	0510 1145 1825 2356	1.3 7.5 2.0 5.9	40 230 60 180		0407 1040 1711 2234	1.0 7.5 2.0 5.6	30 230 60 170		0407 1040 1711 2234	1.0 7.5 2.0 5.6	30 230 60 170	0510 1145 1825 2356	1.3 7.5 2.0 5.9	40 230 60 180		

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Sydney, Australia, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm		h m	ft	cm		h m	ft	cm	
1 Tu	0236	4.3	130	16	0152	4.9	150	1 Sa	0330	4.6	140
	0843	2.3	70	W	0800	2.0	60		1029	2.3	70
	1428	3.9	120		1359	4.3	130		1604	3.3	100
	2045	2.0	60	●	2013	1.3	40		2138	2.3	70
2 W	0329	4.6	140	17	0252	4.9	150	2 Su	0432	4.9	150
	0956	2.3	70	Th	0922	2.0	60		1136	2.0	60
	1532	3.6	110		1515	3.9	120		1719	3.6	110
	2132	2.0	60		2114	1.6	50		2242	2.3	70
3 Th	0421	4.9	150	18	0357	5.2	160	3 M	0529	4.9	150
	1105	2.3	70	F	1045	1.6	40		1228	1.6	30
	1639	3.6	110		1637	3.9	120		1815	3.6	110
	2223	2.0	60		2218	1.6	50		2337	2.0	60
4 F	0511	4.9	150	19	0501	5.6	170	4 Tu	0617	5.2	160
	1203	2.0	60	Sa	1159	1.3	40		1309	1.3	40
	1741	3.6	110		1751	3.9	120		1859	3.9	120
	2313	2.0	60		2322	1.6	50		1934	4.6	140
5 Sa	0558	5.2	160	20	0603	5.9	180	5 W	0024	2.0	60
	1250	1.6	50	Su	1300	1.0	30		0700	5.6	170
	1833	3.9	120		1854	4.3	130		1346	1.3	40
	2359	2.0	60						1936	4.3	130
6 Su	0641	5.2	160	21	0022	1.6	50	6 Th	0159	1.3	40
	1330	1.3	40	M	0700	6.2	190		0822	5.9	180
	1917	3.9	120		1352	0.7	20		1421	1.0	30
					1947	4.3	130		2013	4.3	130
7 M	0042	2.0	60	22	0116	1.3	40	7 F	0147	1.3	40
	0721	5.6	170	Tu	0752	6.2	190		0818	5.9	180
	1409	1.3	40		1439	0.7	20		1455	1.0	30
	1958	3.9	120	○	2035	4.6	140		2050	4.6	140
8 Tu	0122	1.6	50	23	0208	1.3	40	8 Sa	0229	1.3	40
	0800	5.9	180	W	0840	6.2	190		0857	5.9	180
	1445	1.0	30		1522	0.7	20		1530	0.7	20
	● 2035	4.3	130		2119	4.6	140		2128	4.6	140
9 W	0202	1.6	50	24	0257	1.3	40	9 Su	0313	1.3	40
	0839	5.9	180	Th	0925	6.2	190		0936	5.9	180
	1521	1.0	30		1602	0.7	20		1604	0.7	20
	2114	4.3	130		2202	4.6	140		2208	4.9	150
10 Th	0243	1.6	50	25	0344	1.3	40	10 M	0359	1.0	30
	0917	5.9	180	F	1007	5.9	180		1016	5.6	170
	1558	1.0	30		1640	1.0	30		1641	0.7	20
	2153	4.3	130		2244	4.6	140		2251	4.9	150
11 F	0326	1.6	50	26	0430	1.3	40	11 M	0448	1.6	50
	0956	5.9	180	Sa	1045	5.6	170		1100	5.2	160
	1635	1.0	30		1715	1.0	30		1718	1.0	30
	2234	4.3	130		2325	4.6	140		2336	5.2	160
12 Sa	0410	1.6	50	27	0515	1.6	50	12 Tu	0531	1.6	50
	1035	5.9	180	Su	1123	4.9	150		1126	4.3	130
	1714	1.0	30		1746	1.3	40		1759	1.3	40
	2318	4.6	140						1147	4.9	150
13 Su	0459	1.6	50	28	0005	4.6	140	13 W	0026	5.2	160
	1117	5.6	170	M	0602	2.0	60		0643	1.6	50
	1753	1.0	30		1200	4.6	140		1242	4.3	130
					1818	1.6	50		1845	1.6	50
14 M	0006	4.6	140	29	0047	4.6	140	14 Th	0026	5.2	160
	0552	1.6	50	Tu	0654	2.0	60		0756	1.6	50
	1203	5.2	160		1242	4.3	130		1348	3.9	120
	1835	1.0	30		1852	2.0	60	●	1941	2.0	60
15 Tu	0057	4.6	140	30	0134	4.6	140	15 F	0228	5.2	160
	0651	2.0	60	W	0755	2.3	70		0921	1.6	50
	1256	4.6	140		1333	3.6	110		1514	3.6	110
	1921	1.3	40	●	1935	2.0	60		2053	2.0	60
				31	0229	4.6	140				
				Th	0909	2.3	70				
					1442	3.6	110				
					2031	2.3	70				

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Sydney, Australia, 2008

Times and Heights of High and Low Waters

April				May				June			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
1 Tu	0407 4.9 150	16 W	0519 5.2 160 1151 1.3 40 1804 4.9 150	1 Th	0415 4.9 150 1050 1.3 40 1706 4.6 140 2300 2.0 60	16 F	0532 4.6 140 1139 1.6 50 1809 5.2 160	1 Su	0530 4.9 150 1130 1.3 40 1803 5.9 180	16 M	0056 2.0 60 0634 3.9 120 1207 2.0 60 1851 5.6 170
2 W	0503 4.9 150	17 Th	0000 2.0 60 0607 5.2 160	2 F	0509 5.2 160 1131 1.3 40 1750 5.2 160 2356 1.6 50	17 Sa	0030 2.0 60 0617 4.6 140 1213 1.6 50 1845 5.6 170	2 M	0036 1.3 40 0630 4.9 150 1219 1.3 40 1854 6.6 200	17 Tu	0135 1.6 50 0719 4.3 130 1246 2.0 60 1929 5.6 170
3 Th	0550 5.2 160	18 F	0048 1.6 50 0649 4.9 150 1301 1.3 40 1920 5.2 160	3 Sa	0600 5.2 160 1213 1.0 30 1834 5.6 170	18 Su	0114 1.6 50 0700 4.6 140 1245 2.0 60 1920 5.6 170	3 Tu	0133 1.0 30 0729 4.9 150 1310 1.3 40 1945 6.6 200	18 W	0213 1.6 50 0800 4.3 130 1325 2.0 60 2005 5.9 180
4 F	0020 1.6 50	19 Sa	0131 1.6 50 0729 4.9 150	4 Su	0049 1.3 40 0651 5.2 160	19 M	0153 1.6 50 0740 4.3 130 1317 2.0 60 1953 5.9 180	4 W	0230 0.7 20 0828 4.6 140	19 Th	0250 1.3 40 0840 4.3 130 1403 2.0 60
5 Sa	0109 1.3 40	20 Su	0211 1.6 50 0806 4.9 150	5 M	0144 1.0 30 0744 5.2 160	20 Tu	0230 1.6 50 0819 4.3 130	5 Th	0326 0.7 20 0926 4.6 140	20 F	0327 1.3 40 0918 4.3 130
1337 1.0 30	1949 5.6 170	1337 1.0 30	1400 1.6 50	1338 1.0 30	1338 1.0 30	1350 2.0 60	1350 2.0 60	1456 1.6 50	1456 1.6 50	1443 2.0 60	2119 5.9 180
● 2025 5.6 170	● 2031 5.9 180	● 2025 5.6 170	● 2056 5.6 170	● 2005 6.6 200	● 2005 6.6 200	● 2027 5.9 180	● 2027 5.9 180	● 2131 6.9 210	● 2131 6.9 210	● 2157 5.9 180	
6 Su	0157 1.0 30	21 M	0248 1.3 40 0843 4.6 140	6 Tu	0237 0.7 20 0839 4.9 150	21 W	0307 1.6 50 0859 4.3 130	6 F	0422 0.7 20 1023 4.6 140	21 Sa	0405 1.3 40 0958 4.3 130
1415 1.0 30	● 2031 5.9 180	1415 1.0 30	1428 1.6 50	1424 1.3 40	1424 1.3 40	1425 2.0 60	1425 2.0 60	1551 1.6 50	1551 1.6 50	1523 2.0 60	2157 5.9 180
● 2056 5.6 170		● 2056 5.6 170		● 2054 6.6 200	● 2054 6.6 200	● 2101 5.9 180	● 2101 5.9 180	● 2225 6.6 200	● 2225 6.6 200	● 2157 5.9 180	
7 M	0247 0.7 20	22 Tu	0326 1.3 40 0920 4.6 140	7 W	0333 0.7 20 0935 4.9 150	22 Th	0345 1.6 50 0939 4.3 130	7 Sa	0518 1.0 30 1119 4.6 140	22 Su	0444 1.3 40 1039 4.3 130
1455 1.0 30	2115 6.2 190	1455 1.0 30	1458 2.0 60	1513 1.3 40	1513 1.3 40	1502 2.0 60	1502 2.0 60	1648 2.0 60	1648 2.0 60	1604 2.0 60	2235 5.6 170
2128 5.6 170		2128 5.6 170		2145 6.6 200	2145 6.6 200	2138 5.9 180	2138 5.9 180	2318 6.2 190	2318 6.2 190		
8 Tu	0341 0.7 20	23 W	0404 1.6 50 0959 4.3 130	8 Th	0431 0.7 20 1034 4.6 140	23 F	0426 1.6 50 1019 4.3 130	8 Su	0614 1.0 30 1216 4.3 130	23 M	0523 1.3 40 1123 4.3 130
1537 1.3 40	2201 6.2 190	1537 1.3 40	1529 2.0 60	1604 1.6 50	1604 1.6 50	1541 2.3 70	1541 2.3 70	2216 5.6 170	2216 5.6 170	2316 5.6 170	
2201 6.2 190		2201 5.6 170		2238 6.6 200	2238 6.6 200	2238 6.6 200	2238 6.6 200	2316 5.6 170	2316 5.6 170		
9 W	0436 1.0 30	24 Th	0445 1.6 50 1039 4.3 130	9 F	0532 1.0 30 1134 4.3 130	24 Sa	0508 1.6 50 1102 3.9 120	9 M	0013 5.9 180 0706 1.3 40	24 Tu	0604 1.3 40 1210 4.3 130
1622 1.3 40	2239 6.2 190	1622 1.3 40	1603 2.0 60	1700 2.0 60	1700 2.0 60	1700 2.0 60	1700 2.0 60	1314 4.3 130	1314 4.3 130	1740 2.3 70	
2239 5.6 170		2239 5.6 170		2334 6.2 190	2334 6.2 190	2334 6.2 190	2334 6.2 190	1849 2.3 70	1849 2.3 70		
10 Th	0537 1.0 30	25 F	0529 2.0 60 1122 3.9 120	10 Sa	0635 1.3 40 1238 4.3 130	25 Su	0553 1.6 50 1149 3.9 120	10 Tu	0108 5.2 160 0756 1.6 50	25 W	0000 5.2 160 0646 1.3 40
1139 4.3 130	2320 5.9 180	1139 4.3 130	1643 2.3 70	1802 2.3 70	1802 2.3 70	1708 2.3 70	1708 2.3 70	1411 4.6 140	1411 4.6 140	1300 4.3 130	
2320 5.2 160		2320 5.2 160		2341 5.2 160	2341 5.2 160	2341 5.2 160	2341 5.2 160	1954 2.3 70	1954 2.3 70	1837 2.3 70	
11 F	0644 1.3 40	26 Sa	0618 2.0 60 1211 3.9 120	11 Su	0034 5.9 180 0739 1.3 40	26 M	0641 2.0 60 1241 3.9 120	11 W	0204 4.9 150 0842 1.6 50	26 Th	0050 4.9 150 0731 1.3 40
1244 3.9 120	1811 2.0 60	1244 3.9 120	1728 2.6 80	1345 4.3 130	1345 4.3 130	1800 2.6 80	1800 2.6 80	1506 4.6 140	1506 4.6 140	1354 4.6 140	
1811 2.0 60		1811 2.0 60		1911 2.3 70	1911 2.3 70	1911 2.3 70	1911 2.3 70	2103 2.3 70	2103 2.3 70	1942 2.3 70	
12 Sa	0048 5.6 170	27 Su	0008 4.9 150 0715 2.0 60	12 M	0139 5.6 170 0839 1.6 50	27 Tu	0030 5.2 160 0731 1.6 50	12 Th	0302 4.6 140 0925 2.0 60	27 F	0148 4.9 150 0818 1.6 50
1359 3.9 120	1824 2.6 80	1359 3.9 120	1451 4.3 130	1451 4.3 130	1451 4.3 130	1337 4.3 130	1337 4.3 130	1558 4.9 150	1558 4.9 150	1449 4.9 150	
1921 2.3 70		1921 2.3 70		● 2023 2.3 70	● 2023 2.3 70	1901 2.6 80	1901 2.6 80	2214 2.3 70	2214 2.3 70	2055 2.3 70	
13 Su	0200 5.2 160	28 M	0104 4.9 150 0815 2.0 60	13 Tu	0245 5.2 160 0933 1.6 50	28 W	0126 4.9 150 0821 1.6 50	13 F	0400 4.3 130 1006 2.0 60	28 Sa	0254 4.6 140 0910 1.6 50
0909 1.6 50	1932 2.6 80	1519 3.9 120	1415 3.6 110	1550 4.6 140	1550 4.6 140	1435 4.3 130	1435 4.3 130	1646 4.9 150	1646 4.9 150	1545 5.2 160	
● 2042 2.3 70		● 2042 2.3 70		2135 2.3 70	2135 2.3 70	● 2010 2.6 80	● 2010 2.6 80	2317 2.3 70	2317 2.3 70	2212 2.0 60	
14 M	0315 5.2 160	29 Tu	0209 4.9 150 0914 2.0 60	14 W	0348 4.9 150 1020 1.6 50	29 Th	0227 4.9 150 0909 1.6 50	14 Sa	0455 4.3 130 1047 2.0 60	29 Su	0405 4.3 130 1004 1.6 50
1014 1.6 50	1522 3.9 120	1626 4.3 130	1522 3.9 120	1643 4.6 140	1643 4.6 140	1530 4.6 140	1530 4.6 140	2121 2.3 70	2121 2.3 70	1644 5.6 170	
2159 2.3 70		● 2048 2.6 80		2243 2.3 70	2243 2.3 70	2243 2.3 70	2243 2.3 70	1730 5.2 160	1730 5.2 160	2325 1.6 50	
15 Tu	0424 5.2 160	30 W	0315 4.9 150 1005 1.6 50	15 Th	0444 4.9 150 1102 1.6 50	30 F	0330 4.9 150 0957 1.3 40	15 Su	0011 2.0 60 0547 3.9 120	30 M	0515 4.3 130 1100 1.6 50
1107 1.6 50	1618 4.3 130	1719 4.6 140	1618 4.3 130	1729 4.9 150	1729 4.9 150	1623 4.9 150	1623 4.9 150	2230 2.0 60	2230 2.0 60	1813 5.2 160	
2304 2.0 60		2158 2.3 70		2341 2.0 60	2341 2.0 60	2341 2.0 60	2341 2.0 60	1813 5.2 160	1813 5.2 160		
15 F	0431 4.9 150	31 Sa	1044 1.3 40	15 Th	0431 4.9 150	31 F	0431 4.9 150 1044 1.3 40	15 Su	1044 1.3 40	31 M	0515 4.3 130 1741 5.9 180
1713 2.0 60	1718 5.6 170	1719 4.6 140	1719 4.6 140	1729 4.9 150	1729 4.9 150	1729 4.9 150	1729 4.9 150	1813 5.2 160	1813 5.2 160		
2304 2.0 60		2158 2.3 70		2341 2.0 60	2341 2.0 60	2341 2.0 60	2341 2.0 60	1813 5.2 160	1813 5.2 160		

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Sydney, Australia, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
1 Tu	0029 1.3 40	16 W	0117 1.6 50	1 F	0210 0.7 20	16 Sa	0201 1.0 30	1 M	0302 0.7 20	16 Tu	0226 0.7 20
0620 4.3 130	0701 3.9 120	0721 4.6 140	0805 4.6 140	1341 1.0 30	0754 4.3 130	0909 4.9 150	0909 4.9 150	0909 4.9 150	0834 5.2 160	0834 5.2 160	
1158 1.6 50	1225 2.0 60	1254 1.3 40	1342 1.0 30	1329 1.3 40	1959 5.9 180	1505 1.0 30	1505 1.0 30	1435 1.0 30	1435 1.0 30		
1838 6.6 200	1908 5.6 170	1933 6.6 200	2014 6.6 200	2118 5.6 170		2118 5.6 170		2047 5.2 160			
2 W	0128 1.0 30	17 Th	0154 1.3 40	2 Sa	0255 0.7 20	17 Su	0233 1.0 30	2 Tu	0336 1.0 30	17 W	0300 0.7 20
0721 4.6 140	0742 3.9 120	1306 2.0 60	0853 4.6 140	1432 1.0 30	0829 4.6 140	1409 1.3 40	1550 1.0 30	0947 4.9 150	0914 5.2 160	1522 1.0 30	
1254 1.3 40	1946 5.6 170	2100 6.2 190	2034 5.9 180			2157 4.9 150			2130 5.2 160		
1933 6.6 200											
3 Th	0222 0.7 20	18 F	0230 1.3 40	3 Su	0337 0.7 20	18 M	0305 0.7 20	3 W	0407 1.0 30	18 Th	0337 0.7 20
0818 4.6 140	0819 4.3 130	1346 1.6 50	0939 4.6 140	1522 1.0 30	0905 4.6 140	1450 1.3 40	1635 1.3 40	1026 4.9 150	0956 5.6 170	1613 1.0 30	
1349 1.3 40	2023 5.9 180		2145 6.2 190	2111 5.6 170		2235 4.6 140		2217 4.9 150			
● 2027 6.9 210											
4 F	0315 0.7 20	19 Sa	0304 1.3 40	4 M	0417 0.7 20	19 Tu	0338 0.7 20	4 Th	0437 1.3 40	19 F	0416 1.0 30
0912 4.6 140	0856 4.3 130	1426 1.6 50	1023 4.9 150	1611 1.3 40	0944 4.9 150	1534 1.3 40	2150 5.6 170	1103 4.9 150	1042 5.6 170	1707 1.0 30	
1444 1.3 40	2059 5.9 180		2228 5.6 170	2150 5.6 170		2314 4.3 130		2309 4.6 140			
2117 6.6 200											
5 Sa	0404 0.7 20	20 Su	0339 1.0 30	5 Tu	0455 1.0 30	20 W	0413 0.7 20	5 F	0507 1.6 50	20 Sa	0500 1.3 40
1004 4.6 140	0933 4.3 130	1506 1.6 50	1106 4.9 150	1700 1.6 50	1024 4.9 150	1622 1.3 40	1142 4.9 150	1810 2.0 60	1131 5.6 170	1809 1.3 40	
1538 1.3 40	2135 5.9 180		2308 4.9 150	2231 5.2 160		2356 3.9 120					
2207 6.6 200											
6 Su	0452 0.7 20	21 M	0414 1.0 30	6 W	0530 1.3 40	21 Th	0448 1.0 30	6 Sa	0541 2.0 60	21 Su	0008 3.9 120
1055 4.6 140	1013 4.3 130	1548 1.6 50	1149 4.9 150	1750 1.6 50	1750 4.6 150	1714 1.3 40	1225 4.6 140	1906 2.0 60	0551 1.6 50	1229 5.2 160	
1631 1.6 50	2213 5.6 170		2348 4.6 140	2317 4.9 150		2317 4.9 150		1920 1.3 40			
2256 6.2 190											
7 M	0538 1.0 30	22 Tu	0449 1.0 30	7 Th	0603 1.6 50	22 F	0528 1.0 30	7 Su	0046 3.6 110	22 M	0117 3.6 110
1145 4.6 140	1054 4.6 140	1634 1.6 50	1232 4.6 140	1844 2.0 60	1155 5.2 160	1811 1.6 50	1316 4.6 140	0625 2.0 60	0653 2.0 60	1335 5.2 160	
1726 1.6 50	2252 5.6 160					2015 2.0 60		2042 1.3 40			
2342 5.6 170											
8 Tu	0621 1.3 40	23 W	0526 1.0 30	8 F	0032 3.9 120	23 Sa	0010 4.3 130	8 M	0153 3.3 100	23 Tu	0242 3.6 110
1233 4.6 140	1138 4.6 140	1724 1.6 50	0638 1.6 50	1319 4.6 140	0613 1.3 40	1248 5.2 160	1420 4.6 140	0724 2.3 70	0810 2.0 60	1453 5.2 160	
1821 2.0 60	2335 5.2 160		1945 2.3 70		1919 1.6 50	2132 2.0 60		2159 1.3 40			
9 W	0029 4.9 150	24 Th	0604 1.3 40	9 Sa	0123 3.6 110	24 Su	0114 3.9 120	9 Tu	0316 3.3 100	24 W	0404 3.6 110
0701 1.6 50	1226 4.9 150	1820 2.0 60	0720 2.0 60	1412 4.6 140	0707 1.6 50	1351 5.2 160	1532 4.6 140	0841 2.3 70	0930 2.0 60	1608 5.2 160	
1323 4.6 140				2059 2.3 70	2042 1.6 50	2241 2.0 60	2333 1.6 50	2241 2.0 60	2302 1.0 30		
1920 2.3 70											
10 Th	0117 4.6 140	25 F	0024 4.6 140	10 Su	0230 3.6 110	25 M	0232 3.6 110	10 W	0433 3.3 100	25 Th	0507 3.9 120
0742 1.6 50	0647 1.3 40	1317 4.9 150	0815 2.0 60	1513 4.6 140	0815 2.0 60	1503 5.2 160	2207 1.6 50	0954 2.3 70	1041 1.6 50	1711 5.2 160	
1415 4.6 140	1925 2.0 60		2215 2.3 70		2207 1.6 50	2333 1.6 50		2334 1.0 30	2354 1.0 30		
● 2026 2.3 70											
11 F	0211 3.9 120	26 Sa	0122 4.3 130	11 M	0349 3.3 100	26 Tu	0401 3.6 110	11 Th	0528 3.6 110	26 F	0558 4.3 130
0823 2.0 60	0736 1.6 50	1415 4.9 150	0919 2.3 70	1615 4.9 150	0932 2.0 60	1617 5.2 160	1730 4.9 150	1054 2.0 60	1142 1.3 40	1803 5.6 170	
1507 4.6 140	2042 2.0 60		2320 2.0 60	2320 2.0 60	2318 1.3 40						
2139 2.3 70											
12 Sa	0314 3.9 120	27 Su	0234 3.9 120	12 Tu	0502 3.6 110	27 W	0516 3.9 120	12 F	0015 1.3 40	27 Sa	0037 1.0 30
0910 2.0 60	0834 1.6 50	1519 5.2 160	1024 2.0 60	1714 4.9 150	1044 1.6 50	1724 5.6 170	1144 1.6 50	0610 3.9 120	0642 4.6 140	1234 1.0 30	
1601 4.9 150	2206 1.6 50						1812 5.2 160			1850 5.6 170	
2250 2.3 70											
13 Su	0420 3.6 110	28 M	0355 3.9 120	13 W	0011 1.6 50	28 Th	0016 1.0 30	13 Sa	0049 1.0 30	28 Su	0115 0.7 20
1000 2.0 60	0940 1.6 50	1626 5.6 170	0557 3.6 110	1119 2.0 60	0614 4.3 130	1146 1.3 40	1228 1.3 40	0646 4.3 130	0722 4.9 150	1322 1.0 30	
1654 4.9 150	2322 1.3 40		1802 5.2 160		1820 5.9 180	1851 5.2 160		1851 5.2 160	1932 5.2 160		
2348 2.0 60											
14 M	0523 3.6 110	29 Tu	0513 3.9 120	14 Th	0052 1.3 40	29 F	0104 0.7 20	14 Su	0122 1.0 30	29 M	0149 0.7 20
1052 2.0 60	1046 1.6 50	1730 5.9 180	0641 3.9 120	1207 2.0 60	0702 4.3 130	1242 1.0 30	1309 1.3 40	0721 4.6 140	0800 5.2 160	1407 1.0 30	
1743 5.2 160				1845 5.2 160		1910 5.9 180	1929 5.6 170	1929 5.6 170	● 2013 5.2 160		
15 Tu	0036 2.0 60	30 W	0026 1.0 30	15 F	0128 1.3 40	30 Sa	0147 0.7 20	15 M	0154 0.7 20	30 Tu	0221 1.0 30
0616 3.9 120	0619 4.3 130	1149 1.6 50	0718 3.9 120	1248 1.6 50	0746 4.6 140	1331 1.0 30	0758 4.9 150	0758 4.9 150	0837 5.2 160	1449 1.0 30	
1141 2.0 60	1419 1.6 50	1830 6.2 190	1922 5.6 170	1922 5.6 170	1955 5.9 180	1955 5.9 180	2007 5.6 170	2007 5.6 170	2051 4.9 150		
1827 5.2 160											
31 Th	0120 0.7 20										
0715 4.3 130											
1246 1.3 40											
1923 6.6 200											
31 Th	0829 4.9 150										
1419 1.0 30											
2038 5.9 180											

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Sydney, Australia, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
1 W 0251 1.0 30	16 0224 1.0 30	1 Sa 0314 1.6 50	16 Su 0335 1.3 40	1 M 0328 2.0 60	16 Tu 0422 1.3 40						
0912 5.2 160	0846 5.9 180	0948 5.6 170	1009 6.6 200	1003 5.6 170	1050 6.2 190						
1530 1.0 30	1513 0.7 20	1630 1.3 40	1658 0.7 20	1649 1.3 40	1738 0.7 20						
2129 4.6 140	2115 4.9 150	2225 3.9 120	2301 4.3 130	2245 3.9 120	2343 4.6 140						
2 Th 0320 1.3 40	17 0306 1.0 30	2 Su 0349 2.0 60	17 M 0431 1.6 50	2 Tu 0409 2.0 60	17 W 0520 1.6 50						
0946 5.2 160	F 0932 6.2 190	1025 5.2 160	1103 6.2 190	1042 5.2 160	1143 5.9 180						
1612 1.3 40	1606 0.7 20	1713 1.3 40	1758 0.7 20	1730 1.3 40	1830 1.0 30						
2207 4.3 130	2209 4.6 140	2307 3.9 120		2330 3.9 120							
3 F 0349 1.6 50	18 0351 1.3 40	3 M 0430 2.0 60	18 Tu 0002 4.3 130	3 W 0453 2.0 60	18 Th 0039 4.3 130						
1021 5.2 160	Sa 1022 5.9 180	1106 5.2 160	0532 1.6 50	1122 5.2 160	0620 1.6 50						
1653 1.3 40	1703 0.7 20	1800 1.6 50	1201 5.9 180	1236 5.2 160							
2246 3.9 120	2306 4.3 130	2355 3.6 110	1900 1.0 30	1919 1.0 30							
4 Sa 0422 1.6 50	19 0442 1.6 50	4 Tu 0516 2.3 70	19 W 0107 4.3 130	4 Th 0017 3.9 120	19 O 0135 4.6 140						
1058 4.9 150	Su 1115 5.9 180	1151 4.9 150	0638 2.0 60	0543 2.3 70	0724 2.0 60						
1739 1.6 50	1807 1.0 30	1852 1.6 50	1303 5.6 170	1207 4.9 150	1332 4.9 150						
2330 3.6 110			2000 1.0 30	1900 1.6 50	O 2007 1.3 40						
5 Su 0459 2.0 60	20 0009 3.9 120	5 M 0050 3.6 110	20 Th 0212 4.3 130	5 F 0111 3.9 120	20 O 0232 4.6 140						
1139 4.9 150	0540 1.6 50	0611 2.3 70	0749 2.0 60	0639 2.3 70	0833 2.0 60						
1830 1.6 50	M 1215 5.6 170	1245 4.6 140	1409 4.9 150	1257 4.9 150	1431 4.3 130						
	1916 1.0 30	1950 1.6 50	O 2057 1.3 40	1948 1.6 50	2055 1.6 50						
6 M 0019 3.6 110	21 0120 3.9 120	6 Tu 0154 3.6 110	21 F 0315 4.3 130	6 Sa 0207 4.3 130	21 Su 0329 4.6 140						
0545 2.3 70	0648 2.0 60	0716 2.3 70	0901 2.0 60	0744 2.3 70	0946 2.0 60						
1229 4.6 140	1322 5.2 160	1345 4.6 140	1514 4.9 150	1355 4.6 140	1534 3.9 120						
1932 2.0 60	O 2029 1.3 40	2048 1.6 50	2147 1.3 40	O 2037 1.3 40	2141 1.6 50						
7 Tu 0122 3.3 100	22 0237 3.9 120	7 W 0300 3.9 120	22 M 0410 4.6 140	7 Su 0302 4.3 130	22 O 422 4.9 150						
0645 2.3 70	0805 2.0 60	0829 2.3 70	1013 2.0 60	0854 2.3 70	1058 2.0 60						
1330 4.6 140	1436 5.2 160	1450 4.6 140	1615 4.6 140	1458 4.6 140	1638 3.9 120						
O 2043 2.0 60	2135 1.3 40	2140 1.6 50	2233 1.3 40	2126 1.3 40	2228 2.0 60						
8 W 0238 3.3 100	23 0346 3.9 120	8 Th 0355 4.3 130	23 Su 0500 4.9 150	8 M 0356 4.9 150	23 O 512 4.9 150						
0759 2.3 70	0921 2.0 60	0937 2.3 70	1117 1.6 50	1005 2.0 60	1159 2.0 60						
1440 4.6 140	1547 4.9 150	1551 4.6 140	1711 4.3 130	1602 4.3 130	1737 3.6 110						
2148 2.0 60	2230 1.3 40	2225 1.3 40	2315 1.3 40	2215 1.3 40	2313 2.0 60						
9 Th 0350 3.6 110	24 0444 4.3 130	9 Su 0443 4.6 140	24 M 0545 5.2 160	9 Tu 0446 5.2 160	24 W 0558 5.2 160						
0915 2.3 70	1030 1.6 50	1040 2.0 60	1213 1.6 50	1112 1.6 50	1247 1.6 50						
1549 4.6 140	1647 4.9 150	1646 4.6 140	1800 4.3 130	1706 4.3 130	1829 3.9 120						
2241 1.6 50	2318 1.0 30	2306 1.3 40	2352 1.6 50	2303 1.3 40	2356 2.0 60						
10 F 0445 3.9 120	25 0531 4.6 140	10 M 0527 4.9 150	25 Tu 0625 5.2 160	10 W 0536 5.6 170	25 O 639 5.2 160						
1020 2.0 60	Sa 1131 1.6 50	1136 1.6 50	1300 1.3 40	1213 1.3 40	1328 1.3 40						
1645 4.9 150	1740 4.9 150	1737 4.9 150	1846 4.3 130	1806 4.6 140	1914 3.9 120						
2323 1.3 40	2359 1.0 30	2346 1.0 30	2353 1.3 40	2353 1.3 40							
11 Sa 0530 4.3 130	26 0615 4.9 150	11 Tu 0609 5.2 160	26 W 0027 1.6 50	11 Th 0628 6.2 190	26 F 0037 2.0 60						
1114 1.6 50	Su 1225 1.3 40	1229 1.0 30	0702 5.6 170	1310 1.0 30	0718 5.6 170						
1731 4.9 150	1826 4.9 150	1828 4.9 150	1342 1.3 40	1905 4.6 140	1405 1.3 40						
			1929 4.3 130		1954 3.9 120						
12 Su 0000 1.0 30	27 0034 1.0 30	12 W 0027 1.0 30	27 Th 0101 1.6 50	12 F 0044 1.3 40	27 O 116 1.6 50						
0608 4.6 140	M 0654 5.2 160	0652 5.9 180	0739 5.6 170	0719 5.6 200	0757 5.6 170						
1202 1.3 40	1312 1.3 40	1320 1.0 30	1419 1.3 40	1405 0.7 140	1441 1.3 40						
1815 5.2 160	1909 4.6 140	1919 4.9 150	2009 4.3 130	2002 4.6 140	O 2031 3.9 120						
13 M 0035 1.0 30	28 0107 1.3 40	13 Th 0110 1.0 30	28 F 0136 1.6 50	13 Sa 0136 1.3 40	28 O 155 1.6 50						
0645 4.9 150	Tu 0730 5.2 160	0738 6.2 190	0814 5.6 170	0812 6.6 200	0832 5.6 170						
1248 1.0 30	1354 1.0 30	1413 0.7 20	1456 1.3 40	1459 0.3 10	1515 1.3 40						
1857 5.2 160	1948 4.6 140	O 2012 4.6 140	● 2047 4.3 130	O 2058 4.6 140	2107 4.3 130						
14 Tu 0110 0.7 20	29 0138 1.3 40	14 F 0155 1.0 30	29 Sa 0213 1.6 50	14 M 0230 1.3 40	29 W 0233 1.6 50						
0724 5.2 160	W 0805 5.6 170	0826 6.6 200	0849 5.6 170	0905 6.6 200	0909 5.6 170						
1334 1.0 30	1433 1.0 30	1505 0.3 10	1532 1.3 40	1552 0.3 10	1550 1.0 30						
1941 5.2 160	● 2028 4.3 130	2106 4.6 140	2126 3.9 120	2153 4.6 140	2144 4.3 130						
15 W 0145 0.7 20	30 0209 1.3 40	15 Sa 0244 1.3 40	30 Su 0249 2.0 60	15 M 0325 1.3 40	30 Tu 0312 1.6 50						
0804 5.9 180	0839 5.6 170	0916 6.6 200	0926 5.6 170	0958 6.6 200	0945 5.6 170						
1422 0.7 20	Th 1512 1.0 30	1600 0.3 10	1610 1.3 40	1645 0.3 10	1625 1.0 30						
O 2027 4.9 150	2106 4.3 130	2202 4.6 140	2205 3.9 120	2247 4.6 140	2221 4.3 130						
	31 0240 1.6 50	F 0913 5.6 170									
	1550 1.3 40	1550 1.3 40									
	2145 4.3 130	2145 4.3 130									

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Port Phillip, Point Lonsdale, Australia, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0535	4.6	140	16 W 0456	4.6	140	1 Sa 0553	4.3	130	16 Sa 0516	4.3	130
1135	1.0	30	W 1055	0.7	20	F 1211	0.7	20	1131	0.7	20
1816	3.9	120	1732	4.3	130	1911	3.9	120	1819	4.3	130
2331	1.6	50	● 2302	1.3	40				2345	2.0	60
2 W 0608	4.3	130	17 Th 0531	4.6	140	2 Sa 0018	2.0	60	2 Su 0549	3.9	120
1214	1.0	30	1135	0.3	10	0626	3.9	120	1206	0.7	20
1914	3.9	120	1829	4.3	130	1247	0.7	20	1905	3.9	120
			2348	1.6	50	2000	3.9	120			
3 Th 0013	2.0	60	18 F 0609	4.3	130	3 Su 0100	2.3	70	3 M 0022	2.0	60
0640	4.3	130	1220	0.3	10	0705	3.6	110	0627	3.9	120
1253	1.0	30	1931	4.3	130	1330	1.0	30	1244	1.0	30
2009	3.9	120				2059	3.6	110	2000	3.6	110
4 F 0057	2.0	60	19 Sa 0038	2.0	60	4 M 0151	2.6	80	4 Tu 0105	2.3	70
0716	3.9	120	0654	4.3	130	0755	3.6	110	0714	3.6	110
1336	1.0	30	1310	0.3	10	1423	1.0	30	1329	1.0	30
2105	3.9	120	2041	4.3	130	2203	3.6	110	2106	3.6	110
5 Sa 0148	2.3	70	20 Su 0133	2.3	70	5 Tu 0257	2.6	80	5 W 0201	2.6	80
0800	3.6	110	0747	3.9	120	0859	3.3	100	0818	3.3	100
1427	1.0	30	1408	0.3	10	1530	1.0	30	1428	1.0	30
2203	3.9	120	2153	4.3	130	2308	3.9	120	2215	3.6	110
6 Su 0251	2.6	80	21 M 0241	2.6	80	6 W 0420	2.6	80	6 Th 0317	2.6	80
0853	3.6	110	0855	3.9	120	1015	3.3	100	0940	3.3	100
1528	1.0	30	1521	0.3	10	1645	1.0	30	1541	1.3	40
2300	3.9	120	2303	4.3	130				2317	3.9	120
7 M 0407	2.6	80	22 Tu 0403	2.6	80	7 Th 0005	3.9	120	7 F 0449	2.3	70
0955	3.6	110	1016	3.9	120	0542	2.3	70	1106	3.6	110
1632	1.0	30	1641	0.3	10	1130	3.3	100	1703	1.3	40
2354	4.3	130	● O			● 1748	1.0	30			
8 Tu 0519	2.6	80	23 W 0010	4.6	140	8 F 0054	4.3	130	8 Sa 0011	3.9	120
1100	3.6	110	0526	2.3	70	0640	2.0	60	0600	1.6	50
1730	0.7	20	1135	3.9	120	1232	3.6	110	1216	3.9	120
●			1752	0.3	10	1839	0.7	20	● 1811	1.0	30
9 W 0042	4.3	130	24 Th 0108	4.6	140	9 Sa 0135	4.6	140	9 Su 0057	4.3	130
0617	2.3	70	0637	2.0	60	0724	1.6	50	0646	1.3	40
1159	3.6	110	1243	3.9	120	1328	3.9	120	1433	4.6	140
1819	0.7	20	1853	0.3	10	1923	0.7	20	2017	1.0	30
10 Th 0124	4.6	140	25 F 0200	4.9	150	10 Su 0214	4.6	140	10 M 0249	4.6	140
0704	2.0	60	0737	1.6	50	0802	1.3	40	0847	0.7	20
1251	3.6	110	1344	4.3	130	1417	4.3	130	1517	4.6	140
1901	0.7	20	1945	0.3	10	2004	0.7	20	2055	1.0	30
11 F 0203	4.6	140	26 Sa 0244	4.9	150	11 M 0249	4.6	140	11 Tu 0320	4.6	140
0745	2.0	60	0830	1.0	30	0840	1.0	30	0922	0.7	20
1340	3.9	120	1439	4.3	130	1504	4.6	140	1557	4.6	140
1940	0.7	20	2032	0.7	20	2045	0.7	20	2130	1.0	30
12 Sa 0240	4.9	150	27 Su 0322	4.9	150	12 Tu 0324	4.9	150	12 W 0348	4.6	140
0824	1.6	50	0914	1.0	30	0918	0.7	20	0954	0.3	10
1427	3.9	120	1530	4.3	130	1549	4.6	140	1632	4.6	140
2017	0.7	20	2115	0.7	20	2128	1.0	30	2202	1.3	40
13 Su 0315	4.9	150	28 M 0357	4.9	150	13 W 0357	4.6	140	13 Th 0416	4.6	140
0901	1.3	40	0954	0.7	20	0957	0.3	10	0926	0.3	10
1511	4.3	130	1616	4.3	130	1635	4.6	140	1706	4.6	140
2055	0.7	20	2153	1.0	30	2210	1.0	30	2236	1.3	40
14 M 0350	4.9	150	29 Tu 0427	4.6	140	14 Th 0431	4.6	140	14 F 0445	4.6	140
0938	1.0	30	1030	0.7	20	1037	0.0	0	1059	0.3	10
1556	4.3	130	1700	4.3	130	1723	4.6	140	1741	4.3	130
2135	0.7	20	2229	1.3	40	● 2252	1.3	40	● 2310	1.6	50
15 Tu 0423	4.9	150	30 W 0455	4.6	140	15 F 0507	4.6	140	15 Sa 0445	4.6	140
1015	0.7	20	1103	0.7	20	1118	0.0	0	1100	0.0	0
1643	4.3	130	1743	4.3	130	1814	4.6	140	1800	4.6	140
2217	1.0	30	● 2304	1.3	40	2334	1.6	50	2317	1.6	50
31 Th 0523	4.3	130									
1136	0.7	20									
1826	3.9	120									
2340	1.6	50									

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Port Phillip, Point Lonsdale, Australia, 2008

Times and Heights of High and Low Waters

April				May				June			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0600	3.6	110	16 W 0049	2.0	60	1 Th 0003	2.0	60	1 Su 0152	1.6	50
1201	1.0	30	W 0729	3.9	120	0634	3.6	110	0856	3.9	120
1915	3.9	120	1315	1.3	40	1209	1.3	40	1354	2.3	70
			2041	3.9	120	1929	4.3	130	2056	4.3	130
2 W 0030	2.3	70	17 Th 0204	2.0	60	2 0051	2.0	60	17 Sa 0257	1.6	50
0649	3.6	110	0859	3.6	110	0742	3.6	110	1004	4.3	130
1244	1.0	30	1424	1.6	50	1304	1.6	50	1502	2.6	80
2014	3.9	120	2140	3.9	120	2024	3.9	120	2146	3.9	120
3 Th 0120	2.3	70	18 F 0329	2.0	60	3 Sa 0152	2.0	60	18 Su 0358	1.3	40
0755	3.6	110	1018	3.9	120	0905	3.9	120	1106	4.3	130
1339	1.3	40	1544	2.0	60	1413	2.0	60	1618	2.6	80
2118	3.6	110	2236	3.9	120	2122	3.9	120	2236	3.9	120
4 F 0229	2.3	70	19 Sa 0440	1.6	50	4 Su 0300	1.6	50	19 M 0450	1.3	40
0919	3.6	110	1128	4.3	130	1027	4.3	130	1201	4.6	140
1449	1.6	50	1702	2.0	60	1532	2.3	70	1726	2.6	80
2222	3.9	120	2329	3.9	120	2222	4.3	130	2324	3.9	120
5 Sa 0348	2.0	60	20 Su 0535	1.3	40	5 M 0409	1.0	30	20 Tu 0536	1.0	30
1047	3.6	110	1228	4.6	140	1136	4.6	140	1248	4.9	150
1614	1.6	50	1806	2.0	60	1655	2.3	70	1817	2.6	80
2319	3.9	120	○			2319	4.3	130	○		
6 Su 0502	1.3	40	21 M 0015	4.3	130	6 Tu 0513	0.7	20	21 W 0007	3.9	120
1200	4.3	130	0618	1.0	30	1236	4.9	150	0617	1.0	30
1735	1.6	50	1316	4.6	140	1803	2.3	70	1328	4.9	150
●			1853	2.0	60				1858	2.3	70
7 M 0010	4.3	130	22 Tu 0053	4.3	130	7 W 0014	4.3	130	22 Th 0047	4.3	130
0559	1.0	30	0657	0.7	20	0609	0.3	10	0658	1.0	30
1258	4.6	140	1356	4.9	150	1330	5.2	160	1402	4.9	150
1836	1.6	50	1930	2.0	60	1857	2.3	70	1934	2.3	70
8 Tu 0057	4.3	130	23 W 0129	4.3	130	8 Th 0105	4.6	140	23 F 0127	4.3	130
0646	0.7	20	0732	0.7	20	0703	0.3	10	0735	1.0	30
1350	5.2	160	1430	4.9	150	1422	5.6	170	1435	4.9	150
1925	1.6	50	2003	2.0	60	1945	2.0	60	2010	2.3	70
9 W 0140	4.6	140	24 Th 0201	4.3	130	9 F 0154	4.6	140	24 Sa 0204	4.3	130
0734	0.3	10	0807	0.7	20	0756	0.0	0	0812	1.0	30
1439	5.2	160	1501	4.9	150	1511	5.6	170	1508	4.9	150
2010	1.6	50	2036	2.0	60	2032	2.0	60	2045	2.0	60
10 Th 0222	4.6	140	25 F 0235	4.3	130	10 Sa 0242	4.6	140	25 M 0243	4.3	130
0821	0.0	0	0843	0.7	20	0847	0.3	10	0846	1.0	30
1526	5.2	160	1532	4.9	150	1559	5.2	160	1543	4.9	150
2053	1.6	50	2110	2.0	60	2119	2.0	60	2121	2.0	60
11 F 0303	4.6	140	26 Sa 0309	4.3	130	11 Su 0330	4.6	140	26 M 0321	4.3	130
0908	0.0	0	0916	0.7	20	0938	0.3	10	0918	1.0	30
1611	5.2	160	1604	4.9	150	1647	5.2	160	1617	4.9	150
2136	1.6	50	2143	2.0	60	2207	1.6	50	2155	2.0	60
12 Sa 0345	4.6	140	27 Su 0345	4.3	130	12 M 0420	4.6	140	27 Tu 0400	4.3	130
0955	0.0	0	0949	0.7	20	1028	0.7	20	0948	1.0	30
1658	4.9	150	1639	4.9	150	1735	4.9	150	1653	4.9	150
2219	1.6	50	2216	2.0	60	○ 2258	1.6	50	2229	2.0	60
13 Su 0430	4.6	140	28 M 0420	4.3	130	13 Tu 0515	4.3	130	28 W 0442	3.9	120
1042	0.3	10	1020	1.0	30	1116	1.0	30	1021	1.3	40
1747	4.9	150	1716	4.6	140	1825	4.6	140	1730	4.6	140
○ 2304	1.6	50	2249	2.0	60	2351	1.6	50	○ 2304	2.0	60
14 M 0518	4.3	130	29 Tu 0458	3.9	120	14 W 0621	4.3	130	29 Th 0528	3.9	120
1130	0.7	20	1051	1.0	30	1205	1.3	40	1100	1.3	40
1842	4.6	140	1757	4.6	140	1915	4.6	140	1808	4.6	140
2352	2.0	60	○ 2324	2.0	60				2344	2.0	60
15 Tu 0615	3.9	120	30 W 0541	3.9	120	15 Th 0049	1.6	50	15 F 0624	3.9	120
1219	1.0	30	1126	1.3	40	0741	3.9	120	1146	2.0	60
1941	4.3	130	1840	4.3	130	1257	2.0	60	1849	4.6	140
						2005	4.3	130			
									31 Sa 0030	1.6	50
									0730	3.9	120
									1242	2.0	60
									1936	4.3	130

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Port Phillip, Point Lonsdale, Australia, 2008

Times and Heights of High and Low Waters

July				August				September							
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height				
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm				
1 Tu	0155	1.0	30	16 W	0305	1.3	40	1 F	0358	0.7	20				
0936	4.6	140	1037	4.3	130	1133	4.6	140	16 Sa	0427	1.3	40			
1427	3.0	90	1530	3.0	90	1640	2.6	80	1144	4.3	130				
2044	4.3	130	2130	3.9	120	2259	4.3	130	1716	2.6	80				
2 Tu	0300	0.7	20	17 Th	0408	1.3	40	2259	4.3	130	2308	3.6	110		
1045	4.9	150	1132	4.3	130	1234	4.6	140	1231	4.3	130				
1542	3.0	90	1644	3.0	90	1757	2.3	70	1818	2.3	70				
2151	4.3	130	2234	3.9	120	O			O						
3 Th	0412	0.7	20	18 F	0508	1.3	40	3 Su	0013	4.3	130				
1152	4.9	150	1223	4.6	140	0620	0.7	20	18 M	0012	3.9	120			
1658	3.0	90	1749	3.0	90	1329	4.9	150	0621	1.0	30				
2308	4.3	130	O 2335	3.9	120	1901	2.0	60	1312	4.6	140				
4 F	0523	0.7	20	19 Sa	0600	1.0	30	1902	2.0	60	1902	2.0	60		
1253	4.9	150	1307	4.6	140	0716	0.7	20	0115	4.6	140				
1807	2.6	80	1843	2.6	80	1416	4.9	150	0705	1.0	30				
5 Sa	0019	4.6	140	20 Su	0030	3.9	120	1940	1.6	50	1345	4.6	140		
0627	0.7	20	0645	1.0	30	1958	1.3	40	2018	0.7	20	1936	1.0	30	
1349	5.2	160	1346	4.9	150	Tu			1348	4.6	140				
1909	2.3	70	1928	2.3	70	2046	1.0	30	1939	0.7	20	1901	1.0	30	
6 Su	0122	4.6	140	21 M	0120	4.3	130	5 W	0215	4.6	140				
0726	0.7	20	0724	1.0	30	0852	1.0	30	20 O	0155	4.3	130			
1440	5.2	160	1422	4.9	150	1535	4.9	150	0742	1.0	30				
2008	2.0	60	2007	2.0	60	2130	1.0	30	1425	4.9	150				
7 M	0219	4.6	140	22 Tu	0207	4.3	130	2015	1.3	40	2015	1.3	40		
0820	0.7	20	0800	1.0	30	Th			0907	1.3	40				
1527	5.2	160	1457	4.9	150	0821	1.3	40	1528	4.6	140				
2102	1.6	50	2044	1.6	50	1459	4.9	150	2131	0.7	20	2100	0.3	10	
8 Tu	0315	4.6	140	23 W	0252	4.3	130	6 W	0241	4.6	140				
0910	1.0	30	0835	1.0	30	0310	4.6	140	21 O	0416	4.9	150			
1608	5.2	160	1530	4.9	150	0852	1.0	30	0926	4.9	150				
2154	1.3	40	2119	1.3	40	1535	4.9	150	1539	4.6	140				
9 W	0412	4.6	140	24 Th	0335	4.6	140	2130	1.0	30	2144	0.0	0		
0957	1.3	40	0914	1.3	40	0447	4.6	140	2051	1.0	30	2144	0.0	0	
1646	5.2	160	1602	4.9	150	0944	1.3	40	2041	4.6	140				
2240	1.3	40	2154	1.3	40	1640	4.9	150	0943	1.3	40				
10 Th	0509	4.6	140	25 F	0420	4.6	140	2206	0.7	20	1558	4.6	140		
1039	1.3	40	0955	1.3	40	0616	4.3	130	2052	4.6	140				
1722	4.9	150	1634	4.9	150	1125	2.0	60	1052	1.6	50				
2322	1.0	30	2230	1.0	30	1224	4.6	140	1700	4.3	130				
11 F	0606	4.6	140	26 Sa	0507	4.6	140	2321	1.0	30	2314	0.3	10		
1119	2.0	60	1038	1.6	50	0702	4.3	130	0606	4.3	130				
1756	4.9	150	1707	4.9	150	1202	2.3	70	0944	1.3	40				
O	2310	1.0	30	M	1815	4.3	130	1710	4.6	140	1129	2.0	60		
12 Sa	0001	1.0	30	27 Su	0600	4.6	140	2357	0.3	10	1735	4.3	130		
0701	4.3	130	1123	2.0	60	0035	1.0	30	2249	0.3	10	2352	1.0	30	
1159	2.0	60	1744	4.6	140	0751	3.9	120	Th			0620	4.3	130	
1829	4.6	140	2351	0.7	20	1244	2.3	70	0948	3.6	120				
13 Su	0040	1.0	30	28 M	0658	4.6	140	1853	3.9	120	1457	2.6	80		
0755	4.3	130	1209	2.3	70	0845	3.9	120	2125	3.3	100	1629	1.6	50	
1240	2.3	70	1824	4.6	140	0118	1.0	30	2004	3.9	120	2304	3.9	120	
1904	4.3	130	1914	4.3	130	0855	3.9	120	1855	4.3	130	2146	3.6	110	
14 M	0121	1.3	40	29 Tu	0038	0.7	20	1238	2.3	70	2117	1.3	40		
0847	4.3	130	0802	4.6	140	0210	1.3	40	0742	4.3	130	0940	3.9	120	
1327	2.6	80	1300	2.6	80	0945	3.9	120	1244	2.3	70	1500	2.0	60	
1945	4.3	130	1914	4.3	130	1432	3.0	90	1718	4.6	140	2146	3.6	110	
15 Tu	0209	1.3	40	30 W	0132	0.7	20	2042	3.6	110	0651	3.9	120		
0943	4.3	130	0914	4.3	130	0315	1.3	40	1206	2.3	70	0724	4.3	130	
1422	3.0	90	1359	2.6	80	1047	3.9	120	1814	3.9	120	1224	2.0	60	
2033	3.9	120	2015	4.3	130	1552	3.0	90	0029	1.0	30	1849	3.9	120	
31 Th	0239	0.7	20	1941	3.9	120	2155	3.6	110	1210	4.3	130	0100	1.0	30
1515	3.0	90	1026	4.6	140	0509	1.0	30	1751	2.0	60	0834	3.9	120	
2132	4.3	130	1515	3.0	90	O			O			F	1329	2.0	60
			2132	4.3	130								2013	3.6	110

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Port Phillip, Point Lonsdale, Australia, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 W 0107	4.6	140	16 Th 0032	4.6	140	1 Sa 0211	4.9	150	1 M 0153	5.2	160
0649	1.3	40	0614	1.6	50	0743	1.6	50	0720	2.0	60
1308	4.3	130	1228	4.3	130	1343	4.3	130	1328	4.3	130
1905	0.7	20	1819	0.7	20	1945	0.3	10	1926	-0.3	-10
2 Th 0155	4.9	150	17 F 0123	4.9	150	2 Su 0244	4.9	150	17 M 0241	5.2	160
0730	1.3	40	0700	1.6	50	0816	1.6	50	0806	1.6	50
1345	4.6	140	1312	4.3	130	1417	4.3	130	1417	4.6	140
1943	0.3	10	1904	0.3	10	2022	0.3	10	2016	0.0	0
3 F 0235	4.9	150	18 Sa 0210	5.2	160	3 M 0315	4.9	150	18 Tu 0329	5.2	160
0807	1.3	40	0743	1.6	50	0850	1.6	50	0853	1.6	50
1418	4.6	140	1355	4.6	140	1452	4.3	130	1505	4.6	140
2018	0.3	10	1949	0.0	0	2057	0.3	10	2107	0.0	0
4 Sa 0311	4.9	150	19 M 0255	5.2	160	4 Tu 0345	4.9	150	19 W 0415	4.9	150
0841	1.3	40	0825	1.6	50	0925	1.6	50	0940	1.3	40
1450	4.3	130	1436	4.6	140	1528	4.3	130	1555	4.3	130
2054	0.3	10	2035	0.0	0	2130	0.7	20	2157	0.3	10
5 Su 0343	4.9	150	20 M 0340	5.2	160	5 W 0419	4.6	140	20 Th 0501	4.9	150
0915	1.3	40	0907	1.6	50	1000	1.6	50	1030	1.3	40
1522	4.3	130	1518	4.6	140	1604	3.9	120	1648	4.3	130
2129	0.3	10	2122	0.0	0	2203	0.7	20	2246	0.7	20
6 M 0415	4.6	140	21 Tu 0426	4.9	150	6 Th 0455	4.6	140	21 F 0549	4.6	140
0948	1.6	50	0951	1.6	50	1033	1.6	50	1123	1.3	40
1555	4.3	130	1602	4.3	130	1643	3.9	120	1750	3.9	120
2203	0.7	20	2210	0.3	10	2234	1.0	30	2337	1.0	30
7 Tu 0447	4.6	140	22 W 0513	4.6	140	7 F 0533	4.3	130	22 Sa 0639	4.3	130
1023	1.6	50	1035	1.6	50	1109	1.6	50	1219	1.3	40
1629	4.3	130	1650	4.3	130	1726	3.6	110	1909	3.9	120
2238	0.7	20	2259	0.7	20	2309	1.0	30			
8 W 0525	4.3	130	23 Th 0605	4.6	140	8 Sa 0615	4.3	130	23 M 0029	1.3	40
1058	2.0	60	1124	1.6	50	1147	1.6	50	0730	4.3	130
1705	3.9	120	1746	3.9	120	1817	3.6	110	1319	1.3	40
2312	1.0	30	2349	1.0	30	2350	1.3	40	2028	3.9	120
9 Th 0607	3.9	120	24 F 0704	4.3	130	9 Su 0701	3.9	120	24 M 0126	2.0	60
1134	2.0	60	1220	1.6	50	1232	1.6	50	0822	3.9	120
1745	3.6	110	1857	3.9	120	1923	3.6	110	1422	1.0	30
2347	1.0	30							2136	3.9	120
10 F 0655	3.9	120	25 Sa 0046	1.3	40	10 M 0043	1.6	50	25 Tu 0232	2.3	70
1214	2.0	60	0806	3.9	120	0754	3.9	120	0915	3.9	120
1836	3.6	110	1330	1.6	50	1328	1.6	50	1524	1.0	30
			2030	3.6	110	2043	3.6	110	2239	4.3	130
11 Sa 0030	1.3	40	26 Su 0154	1.6	50	11 W 0149	2.0	60	11 Th 0346	2.3	70
0752	3.6	110	0905	3.9	120	0850	3.6	110	0850	3.9	120
1303	2.0	60	1451	1.6	50	1432	1.3	40	1008	3.9	120
1942	3.3	100	2150	3.9	120	2202	3.9	120	1621	1.0	30
12 Su 0123	1.6	50	27 M 0312	2.0	60	12 W 0307	2.3	70	12 Th 0459	2.3	70
0853	3.6	110	1002	3.9	120	0949	3.9	120	0955	3.9	120
1408	2.0	60	1604	1.3	40	1540	1.0	30	1603	0.3	10
2104	3.3	100	2300	4.3	130	2310	4.3	130	2345	4.6	140
13 M 0232	1.6	50	28 Tu 0431	2.0	60	13 Th 0430	2.3	70	13 W 0026	2.6	80
0954	3.6	110	1056	3.9	120	1047	3.9	120	0851	3.9	120
1527	2.0	60	1703	1.0	30	1644	0.7	20	1454	0.7	20
2229	3.6	110							2240	4.6	140
14 Tu 0357	2.0	60	29 F 0000	4.6	140	14 M 0009	4.9	150	11 F 0249	2.6	80
1050	3.9	120	0538	2.0	60	0539	2.3	70	0911	3.6	110
1641	1.3	40	1145	3.9	120	1144	3.9	120	1531	1.0	30
2336	4.3	130	● 1750	0.7	20	1741	0.3	10	2301	4.3	130
15 W 0516	2.0	60	30 Th 0051	4.9	150	15 M 0102	5.2	160	10 M 0137	5.2	160
1141	3.9	120	0628	2.0	60	0632	2.0	60	0700	2.0	60
1733	1.0	30	1229	3.9	120	1237	4.3	130	1312	3.9	120
○			1831	0.7	20	1834	0.0	0	1919	0.3	10
31 F 0133	4.9	150									
0707	1.6	50									
1307	4.3	130									
1909	0.3	10									

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Port Adelaide, Australia, 2008

Times and Heights of High and Low Waters

January				February				March				
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm	
<b>1</b> Tu	0231	2.6	80	<b>16</b> W	0240	2.3	70	<b>1</b> F	0328	3.0	90	
0817	5.9	180	0818	5.9	180	0824	4.6	140	16 Sa	0259	3.3	100
1430	1.6	50	1420	1.6	50	1414	2.3	70	0709	4.3	130	
2123	6.6	200	● 2107	6.9	210	2137	6.6	200	1306	1.6	50	
									2036	6.2	190	
<b>2</b> W	0335	3.0	90	<b>17</b> Th	0334	3.0	90	<b>2</b> Sa	0500	3.6	110	
0901	5.2	160	0845	4.9	150	0712	3.9	120	17 Su	0304	4.6	140
1506	2.3	70	1430	2.0	60	1319	3.0	90	0437	4.6	140	
2227	6.2	190	2153	6.6	200	2309	5.6	170	1207	2.0	60	
									1917	5.6	170	
<b>3</b> Th	0521	3.3	100	<b>18</b> F	0526	3.6	110	<b>3</b> Su	1059	2.3	70	
1015	4.3	130	0833	3.6	110	1816	4.6	140	18 M	0412	5.9	180
1550	3.0	90	1358	2.6	80	2125	4.6	140	1129	2.3	70	
			2314	6.2	190				1822	5.2	160	
<b>4</b> F	0007	6.2	190	<b>19</b> Sa	1104	2.3	70	<b>4</b> M	0334	6.2	190	
0850	3.0	90				1059	1.6	50	19 Tu	0436	6.9	210
1500	3.9	120				1732	5.2	160	1129	0.7	20	
1819	3.6	110				2215	3.6	110	1752	5.9	180	
								2259	3.0	90		
<b>5</b> Sa	0210	6.6	200	<b>20</b> Su	0300	6.2	190	<b>5</b> Tu	0418	7.2	220	
0956	2.0	60	1107	1.3	40	1116	1.0	30	20 W	0459	7.5	230
1618	4.6	140	1809	4.9	150	1735	5.6	170	1138	0.7	20	
2047	3.6	110	2150	4.3	130	2241	3.0	90	1748	5.9	180	
								2311	2.3	70		
<b>6</b> Su	0319	7.2	220	<b>21</b> M	0407	7.2	220	<b>6</b> W	0448	7.5	230	
1035	1.3	40	1130	0.7	20	1134	0.7	20	21 Th	0515	7.5	230
1652	5.2	160	1803	5.2	160	1745	5.9	180	1146	0.7	20	
2144	3.3	100	2233	3.3	100	2301	2.3	70	1747	6.2	190	
								● 2324	1.6	50		
<b>7</b> M	0404	7.5	230	<b>22</b> Tu	0445	7.5	230	<b>7</b> Th	0512	7.9	240	
1106	1.0	30	1152	0.7	20	1149	0.3	10	22 F	0529	7.5	230
1717	5.6	170	1806	5.2	160	1755	6.2	190	1151	0.7	20	
2219	3.0	90	○ 2258	3.0	90	● 2322	1.6	50	1749	6.6	200	
								2338	1.3	40		
<b>8</b> Tu	0438	7.9	240	<b>23</b> W	0513	7.9	240	<b>8</b> F	0532	8.2	250	
1132	0.7	20	1208	0.7	20	1204	0.3	10	23 Sa	0541	7.5	230
1738	5.6	170	1807	5.6	170	1807	6.6	200	1156	0.7	20	
● 2247	2.3	70	2318	2.3	70	2346	1.3	40	1800	7.2	220	
								2359	1.0	30		
<b>9</b> W	0507	8.2	250	<b>24</b> Th	0534	7.9	240	<b>9</b> Sa	0555	8.2	250	
1155	0.7	20	1218	0.7	20	1221	0.3	10	24 Su	0558	7.5	230
1757	5.9	180	1811	5.9	180	1825	6.9	210	1147	0.7	20	
2314	2.0	60	2339	1.6	50				1755	7.9	240	
<b>10</b> Th	0533	8.2	250	<b>25</b> F	0554	7.9	240	<b>10</b> Su	0015	1.0	30	
1217	0.7	20	1228	0.7	20	0618	7.9	240	25 M	0022	1.0	30
1816	5.9	180	1822	6.2	190	1239	0.3	10	0617	7.2	220	
2343	2.0	60				1845	7.2	220	1220	0.7	20	
								1839	7.9	240		
<b>11</b> F	0600	8.2	250	<b>26</b> Sa	0004	1.3	40	<b>11</b> Tu	0048	1.0	30	
1240	0.7	20	0615	7.9	240	0641	7.5	230	0638	6.9	210	
1840	6.2	190	1239	0.7	20	1254	0.7	20	1235	0.7	20	
			1842	6.9	210	1906	7.5	230	1901	8.2	250	
<b>12</b> Sa	0014	1.6	50	<b>27</b> Su	0032	1.3	40	<b>12</b> Tu	0113	1.3	40	
0628	8.2	250	0636	7.5	230	0701	6.9	210	0658	6.6	200	
1303	0.7	20	1253	0.7	20	1304	0.7	20	1250	0.7	20	
1905	6.6	200	1906	7.2	220	1926	7.9	240	1921	8.2	250	
								1921	8.2	250		
<b>13</b> Su	0046	1.6	50	<b>28</b> M	0102	1.3	40	<b>13</b> Th	0139	1.3	40	
0655	7.9	240	0700	7.2	220	0718	6.2	190	0137	1.3	40	
1325	0.7	20	1310	0.7	20	1312	1.0	30	0715	6.2	190	
1931	6.6	200	1932	7.5	230	1945	7.9	240	1942	7.9	240	
								1942	7.9	240		
<b>14</b> M	0121	2.0	60	<b>29</b> Tu	0134	1.6	50	<b>14</b> F	0204	2.0	60	
0722	7.2	220	0723	6.9	210	0732	5.9	180	0730	5.9	180	
1345	1.0	30	1329	0.7	20	1319	1.0	30	1319	1.3	40	
2000	6.9	210	2000	7.5	230	● 2007	7.9	240	● 2001	7.5	230	
<b>15</b> Tu	0158	2.0	60	<b>30</b> W	0207	2.0	60	<b>15</b> F	0231	2.6	80	
0749	6.6	200	0747	6.2	190	0739	4.9	150	0730	4.9	150	
1403	1.0	30	1347	1.0	30	1323	1.3	40	1238	1.3	40	
2030	6.9	210	● 2029	7.5	230	2029	7.2	220	1935	7.5	230	
	<b>31</b> Th	0243	2.3	70								
	0810	5.6	170									
	1406	1.3	40									
	2100	7.2	220									

Time meridian 142° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

## **Port Adelaide, Australia, 2008**

## Times and Heights of High and Low Waters

Time meridian 142° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

# Port Adelaide, Australia, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0420	4.9	150	16 W 0430	5.2	160	1 F 0552	5.6	170	1 M 0520	6.2	190
0833	3.9	120	0918	3.6	110	1043	3.3	100	1042	2.6	80
1519	8.2	250	1551	7.9	240	1702	8.5	260	1656	8.2	250
2248	1.6	50	2256	1.6	50	● 2356	1.0	30	2330	1.0	30
2 W 0510	5.2	160	17 Th 0500	5.9	180	2 0555	5.9	180	17 Sa 0530	6.6	200
0931	3.9	120	1003	3.3	100	1104	2.6	80	1101	2.0	60
1609	8.5	260	1629	8.2	250	1724	8.5	260	1715	8.5	260
2329	1.3	40	2322	1.3	40	○ 2344	1.0	30	2344	1.0	30
3 Th 0539	5.2	160	18 F 0523	5.9	180	3 Su 0008	1.3	40	18 M 0542	6.9	210
1012	3.6	110	1034	3.0	90	0558	6.2	190	1123	1.6	50
1646	8.9	270	1658	8.5	260	1125	2.3	70	1733	8.5	260
● ○ 2345	1.3	40	○ 2345	1.3	40	1742	8.2	250	2358	1.0	30
4 F 0000	1.3	40	19 Sa 0542	6.2	190	4 M 0015	1.3	40	19 Tu 0558	7.2	220
0556	5.2	160	1100	2.6	80	0606	6.6	200	1149	1.6	50
1044	3.0	90	1723	8.9	270	1148	2.0	60	1755	8.2	250
1718	8.9	270				1800	8.2	250			
5 Sa 0025	1.3	40	20 Su 0004	1.3	40	5 Tu 0025	1.3	40	20 W 0015	1.0	30
0608	5.2	160	0600	6.2	190	0623	6.9	210	0618	7.5	230
1114	2.6	80	1127	2.3	70	1215	2.0	60	1218	1.3	40
1746	8.9	270	1747	8.9	270	1819	7.9	240	1818	7.9	240
6 Su 0043	1.6	50	21 M 0025	1.0	30	6 W 0036	1.3	40	21 Th 0031	1.0	30
0623	5.9	180	0622	6.6	200	0646	7.5	230	0642	7.5	230
1145	2.6	80	1158	2.0	60	1245	2.0	60	1248	1.6	50
1813	8.5	260	1814	8.5	260	1842	7.5	230	1840	7.2	220
7 M 0058	1.6	50	22 Tu 0047	1.0	30	7 Th 0051	1.3	40	22 F 0045	1.3	40
0645	6.2	190	0648	6.9	210	0714	7.9	240	0704	7.9	240
1218	2.3	70	1230	2.0	60	1315	2.0	60	1316	2.0	60
1838	8.2	250	1840	8.2	250	1904	7.2	220	1900	6.9	210
8 Tu 0112	1.6	50	23 W 0110	1.3	40	8 F 0109	1.3	40	23 Sa 0055	1.3	40
0711	6.6	200	0715	7.2	220	0742	7.9	240	0726	7.9	240
1253	2.3	70	1304	2.0	60	1347	2.3	70	1337	2.3	70
1903	7.9	240	1907	7.9	240	1928	6.6	200	1910	5.9	180
9 W 0128	1.6	50	24 Th 0130	1.3	40	9 Sa 0130	1.3	40	24 Su 0104	1.6	50
0743	7.2	220	0744	7.2	220	0812	7.9	240	0748	7.9	240
1331	2.6	80	1340	2.3	70	1421	2.6	80	1410	2.6	80
1931	7.2	220	1933	7.5	230	● 1952	6.2	190	● 1927	5.6	170
10 Th 0149	1.6	50	25 F 0149	1.3	40	10 Su 0152	1.6	50	10 M 0112	2.0	60
0819	7.2	220	0814	7.5	230	0844	7.5	230	0814	7.5	230
1415	3.0	90	1418	2.6	80	1501	3.3	100	1439	3.6	110
● 2003	6.9	210	2002	6.6	200	2010	5.2	160	1912	4.9	150
11 F 0216	1.6	50	26 Sa 0209	1.6	50	11 M 0209	2.3	70	26 W 0102	2.3	70
0902	7.5	230	0847	7.5	230	0923	6.9	210	0833	6.6	200
1507	3.3	100	Sa 1505	3.0	90	M 1607	4.3	130	Tu 1510	4.6	140
2041	6.2	190	● 2031	5.9	180	1947	4.6	140	1639	4.9	150
12 Sa 0250	2.3	70	27 Su 0227	2.3	70	12 Tu 0153	3.3	100	27 W 0001	2.3	70
0954	7.2	220	0928	7.2	220	1042	5.9	180	0726	5.6	170
1618	3.6	110	1613	3.6	110	2255	3.3	100	1117	5.2	160
2130	5.2	160	2053	4.6	140				1544	5.9	180
13 Su 0329	3.0	90	28 M 0229	3.0	90	13 W 0615	4.9	150	2308	2.0	60
1105	6.9	210	1027	6.9	210	0828	4.6	140	1557	6.9	210
1902	3.9	120				1515	6.6	200	2233	1.3	40
2326	4.3	130				2240	2.3	70			
14 M 0426	3.6	110	29 Tu 0006	3.3	100	14 Th 0505	5.2	160	28 Th 0546	5.6	170
1315	6.9	210	1409	6.6	200	0948	3.9	120	1015	4.3	130
2134	3.0	90	2250	2.3	70	1602	7.5	230	1614	7.2	220
15 Tu 0339	4.6	140	30 W 0602	4.9	150	2258	1.6	50	2305	1.3	40
0754	4.3	130	0909	4.6	140	2317	1.0	30	2247	1.0	30
1456	7.2	220	1545	7.5	230	2315	1.3	40	2309	1.0	30
2221	2.3	70	2314	1.3	40						
31 Th 0547	5.2	160				31 Th 1012	3.9	120	31 Su 1104	2.0	60
						1631	8.2	250	1713	7.9	240
						2337	1.0	30	● 2332	1.3	40

Time meridian 142° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Port Adelaide, Australia, 2008

Times and Heights of High and Low Waters

October				November				December				
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm	
1 W 0500	8.2	250	16 Th 0452	8.5	260	1 Sa 0521	8.5	260	1 M 0545	8.2	250	
1119 1.0	30	Th 1125 0.7	20	Sa 1157 1.0	30	Su 1229 1.0	30	M 1226 1.0	30	Tu 1302 1.3	40	
1713 6.9	210	1717 6.6	200	1746 6.2	190	1802 4.9	150	1818 5.9	180	1841 5.2	160	
2302 1.0	30	2257 1.3	40	2318 1.6	50	2310 2.0	60	2345 2.0	60			
2 Th 0518	8.2	250	17 F 0514	8.5	260	2 Su 0547	8.5	260	2 Tu 0612	8.2	250	
1142 1.0	30	1154 0.7	20	1222 1.0	30	17 M 0556	8.2	250	17 W 0000	2.3	70	
1731 6.9	210	1739 6.2	190	1809 5.9	180	1254 1.6	50	1251 1.0	30	0632 7.5	230	
2318 1.0	30	2310 1.6	50	2340 1.6	50	1819 4.9	150	1844 5.9	180	1317 1.6	50	
3 F 0542	8.5	260	18 Sa 0538	8.5	260	3 M 0612	8.2	250	3 W 0012	2.0	60	
1206 1.0	30	1222 1.0	30	1245 1.3	40	1820 7.9	240	0638 7.9	240	18 0030	2.3	70
1753 6.6	200	1757 5.6	170	1830 5.6	170	1836 4.9	150	1316 1.3	40	0657 7.2	220	
2336 1.3	40	2319 1.6	50			2348 2.3	70	1911 5.6	170	1329 1.6	50	
4 Sa 0605	8.2	250	19 Su 0600	8.5	260	4 Tu 0000	2.0	60	4 Th 0041	2.3	70	
1230 1.3	40	1244 1.6	50	0634 7.9	240	1900 4.9	150	0705 7.5	230	19 0107	2.3	70
1814 6.2	190	1809 5.2	160	1308 1.6	50			1345 1.6	50	F 0722 6.6	200	
2353 1.3	40	2327 1.6	50	1851 5.6	170			1945 5.6	170	1345 1.6	50	
5 Su 0627	8.2	250	20 M 0619	8.2	250	5 W 0022	2.3	70	5 F 0118	2.6	80	
1250 1.6	50	1257 2.3	70	0658 7.2	220	0019 2.6	80	0738 6.9	210	20 0155	2.6	80
1830 5.9	180	1816 4.9	150	1334 2.3	70	0710 6.6	200	1419 2.0	60	Sa 0754 6.2	190	
		2339 1.6	50	1917 5.2	160	1343 2.6	80	2033 5.6	170	1411 1.6	50	
6 M 0010	1.6	50	21 Tu 0637	7.5	230	6 Th 0046	2.6	80	6 Sa 0211	3.0	90	
0646 7.9	240	1305 2.6	80	0728 6.6	200	0100 3.0	90	0823 6.2	190	21 Su 0300 3.3	100	
1310 2.0	60	1822 4.9	150	1414 2.6	80	0742 5.9	180	1509 2.3	70	0833 5.2	160	
1846 5.6	170	2354 2.0	60	1959 4.6	140	1418 3.0	90	2149 5.6	170	1446 2.0	60	
7 Tu 0027	2.0	60	22 W 0654	6.9	210	7 F 0115	3.3	100	7 Su 0347	3.6	110	
0707 7.5	230	1316 3.3	100	0808 5.9	180	0213 3.9	120	0939 5.2	160	22 M 0446 3.6	110	
1331 2.6	80	1817 4.6	140	1549 3.3	100	0833 4.6	140	1625 3.0	90	0941 4.3	130	
● 1900 5.2	160					1615 3.6	110	2339 5.6	170	1536 2.6	80	
8 W 0042	2.3	70	23 Th 0000	2.6	80	8 Sa 0042	4.3	130	8 M 0636	3.3	100	
0728 6.9	210	0659 5.9	180	0121 4.3	130	0826 3.6	110	1209 4.6	140	23 Tu 0815 3.3	100	
1359 3.3	100	1317 3.9	120	1139 4.9	150	1336 4.3	130	1823 3.0	90	1300 3.9	120	
1902 4.6	140	1708 4.3	130	1932 3.0	90	1926 3.3	100			1739 3.3	100	
9 Th 0034	3.0	90	24 F 0532	4.9	150	9 Su 0224	5.6	170	9 Tu 0120	6.2	190	
0739 5.9	180	1050 4.3	130	0830 3.3	100	0907 2.6	80	0832 2.6	80	24 W 0143 6.6	200	
1437 4.3	130	1528 4.9	150	1422 5.6	170	1457 4.9	150	1435 4.9	150	0931 2.3	70	
1557 4.3	130	2130 3.0	90	2030 2.6	80	2023 3.0	90	1955 3.0	90	1534 4.6	140	
2232 3.3	100									2014 3.3	100	
10 F 0521	4.9	150	25 Sa 0352	5.2	160	10 M 0253	6.6	200	10 Tu 0248	7.2	220	
0936 4.6	140	0931 3.3	100	0914 2.0	60	0941 1.6	50	0934 1.6	50	25 Th 0256 7.2	220	
1453 5.2	160	1526 5.6	170	1515 6.2	190	1537 5.6	170	1548 5.2	160	1013 1.6	50	
2135 2.6	80	2125 2.3	70	2106 2.0	60	2100 2.3	70	2052 3.0	90	1620 4.9	150	
11 Sa 0400	5.6	170	26 Su 0335	6.2	190	11 Tu 0320	7.2	220	11 Th 0315	7.9	240	
0928 3.3	100	0945 2.0	60	0949 1.3	40	1011 1.0	30	1022 1.0	30	26 F 0344 7.5	230	
1525 6.6	200	1545 6.2	190	1554 6.6	200	1609 5.9	180	1636 5.2	160	1046 1.0	30	
2145 1.6	50	2138 2.0	60	2132 2.0	60	2130 2.3	70	2132 3.0	90	1653 5.6	170	
12 Su 0359	6.6	200	27 M 0345	7.2	220	12 W 0345	7.9	240	12 Th 0355	8.2	250	
0949 2.3	70	1006 1.3	40	1021 0.7	20	1038 0.7	20	1102 0.7	20	27 Sa 0421 7.9	240	
1553 7.2	220	1606 6.6	200	1625 6.2	190	1636 5.9	180	1712 5.2	160	1115 0.7	20	
2202 1.3	40	2152 1.6	50	2154 2.0	60	2158 2.0	60	2205 3.0	90	2231 2.3	70	
13 M 0411	7.2	220	28 Tu 0400	7.9	240	13 Th 0407	8.5	260	13 Su 0430	8.5	260	
1013 1.3	40	1026 1.0	30	1053 0.3	10	1105 0.7	20	1139 0.3	10	28 W 0452 8.2	250	
1617 7.2	220	1624 6.6	200	1652 6.2	190	1701 5.9	180	1740 5.2	160	1141 0.7	20	
2217 1.3	40	2203 1.6	50	2214 2.0	60	● 2223 2.0	60	2234 2.6	80	1740 5.9	180	
14 Tu 0423	7.5	230	29 F 0415	8.2	250	14 F 0431	8.9	270	14 M 0503	8.5	260	
1035 1.0	30	1045 0.7	20	1125 0.3	10	1131 0.7	20	1213 0.7	20	29 W 0520 8.2	250	
1638 7.2	220	1640 6.6	200	1716 5.6	170	1727 5.9	180	1802 4.9	150	1203 0.7	20	
2230 1.3	40	● 2217 1.3	40	2232 2.0	60	2250 2.0	60	2302 2.3	70	1801 5.9	180	
15 W 0435	8.2	250	30 Th 0433	8.5	260	15 Sa 0459	8.9	270	15 M 0536	8.5	260	
1059 0.7	20	1107 0.7	20	1157 0.7	20	1159 0.7	20	1241 1.0	30	30 Tu 0547 8.2	250	
1657 6.9	210	1700 6.6	200	1741 5.2	160	1752 5.9	180	1822 4.9	150	1226 0.7	20	
○ 2243 1.3	40	2234 1.3	40	2252 2.0	60	2317 2.0	60	2330 2.3	70	1824 6.2	190	
		31 F 0456	8.5	260						2355 1.6	50	
		1130 0.7	20							W 1248 0.7	20	
		1722 6.2	190							1848 6.2	190	
		2256 1.3	40									

Time meridian 142° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Port Lincoln, Australia, 2008

Times and Heights of High and Low Waters

January				February				March									
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height						
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm						
<b>1</b> Tu 1141 1913	0449 1.3 3.6	3.3 40 110	<b>16</b> W 1116 1827	0456 1.3 3.9	3.3 40 120	<b>1</b> F 1030 2159	0053 1.3 3.9	3.0 40 90	<b>16</b> Sa 1841 2315	0945 3.6 3.9	0.7 20 90						
●						Sa	1919 2315	3.6 3.9	110 120	Sa	0002 1.0 30	3.0 90					
<b>2</b> W 0254 1154 2154	0054 3.0 1.6 3.9	90 50 120	<b>17</b> Th 0230 1057 2119	0101 3.0 1.3	90 40 120	<b>2</b> Sa 2330	0959 4.3	1.3 130	<b>17</b> Su 0920	0920 0.7	20	<b>2</b> Su 1808 1935 2315	0931 3.6 3.9	1.3 110 120			
<b>3</b> Th 2300	1106 1.6 4.3	50 130	<b>18</b> F 1009 2300	1009 4.3	1.3 130	<b>3</b> Su 0906	0906	1.3 40	<b>18</b> M 0853 1521 1652 1814*	0051 2.6 2.6 2.6	4.6 80 80 80	<b>3</b> M 0834	0834	1.3 40	<b>18</b> Tu 0803 1424 1915	0048 3.0 2.3	4.3 90 70
<b>4</b> F 2345	0936 1.6 4.6	50 140	<b>19</b> Sa 0930	0930	1.0 30	<b>4</b> M 0030 0840 1454 1732	0030 1.0 2.6 2.3	4.6 30 80 70	<b>19</b> Tu 0129 0848 1451 1935	0129 0.7 2.6 2.0	4.9 20 80 60	<b>4</b> Tu 0031 0813 1437 1900	0031 1.0 30 2.6	4.3 30 80	<b>19</b> W 0113 0800 1407 1932	0113 1.0 3.3 2.0	4.6 30 100 60
<b>5</b> Sa 1424 1629	0826 2.3 2.3	1.3 70	<b>20</b> Su 0013 0912	0013 0.7	4.9 20	<b>5</b> Tu 0113 0841 1448 1912	0113 1.0 2.6 2.0	4.9 30 80 60	<b>20</b> W 0158 0852 1450 2003	0158 0.7 3.0 1.3	5.2 20 90 40	<b>5</b> W 0109 0814 1427 1930	0109 1.0 3.3 2.0	4.9 30 100 60	<b>20</b> Th 0136 0805 1410 1955	0136 1.0 3.6 1.3	4.6 30 110 40
<b>6</b> Su 1426 1737	0025 1.3 2.3	4.9 70	<b>21</b> M 0109 0916 1518 1747	0109 0.7 2.3	5.2 70	<b>6</b> W 0148 0854 1458 1958	0148 0.7 3.0 1.6	5.2 20 90 50	<b>21</b> Th 0221 0900 1458 O 2030	0221 0.7 3.3 1.0	5.2 20 100 30	<b>6</b> Th 0140 0826 1432 2000	0140 0.7 3.6 1.3	4.9 150 110 40	<b>21</b> F 0157 0815 1420 2019	0157 1.0 4.3 1.0	4.6 30 130 30
<b>7</b> M 1442 1832	0103 0.839 2.6 2.0	5.2 30 80 60	<b>22</b> Tu 0151 0927 1518 O 1925	0151 0.7 2.3	5.6 70	<b>7</b> Th 0220 0913 1514 ● 2032	0220 0.3 3.3 1.6	5.6 10 100 40	<b>22</b> F 0241 0910 1509 2057	0241 0.7 3.9 1.0	5.2 20 120 30	<b>7</b> F 0210 0844 1445 2030	0210 0.7 3.9 1.0	5.2 20 120 30	<b>22</b> Sa 0216 0828 1433 O 2044	0216 1.0 4.6 1.0	4.6 30 140 30
<b>8</b> Tu 1501 ● 1922	0140 0.900 2.6 1.6	5.6 30 80 50	<b>23</b> W 0225 0935 1528 2016	0225 0.7 2.6	5.6 20	<b>8</b> F 0249 0932 1530 2104	0249 0.3 3.6	5.6 10 110 30	<b>23</b> Sa 0259 0922 1522 2122	0259 0.7 4.3 1.0	4.9 20 130 30	<b>8</b> Sa 0237 0900 1500 ● 2100	0237 0.3 4.3 0.7	5.2 10 130 20	<b>23</b> Su 0236 0842 1449 2109	0236 0.7 4.9 1.0	4.6 20 150 30
<b>9</b> W 1523 2005	0215 0.925 3.0 1.3	5.6 20 90 40	<b>24</b> Th 0250 0945 1538 2052	0250 1.0 3.0	5.6 30	<b>9</b> Sa 0315 0951 1547 2133	0315 0.3 3.9	5.6 10 120 30	<b>24</b> Su 0315 0933 1538 2146	0315 0.7 4.6 1.0	4.9 20 140 30	<b>9</b> Su 0302 0915 1516 2129	0302 0.7 4.6 0.7	4.9 10 140 20	<b>24</b> M 0256 0854 1507 2132	0256 0.7 5.2 1.0	4.3 20 160 30
<b>10</b> Th 1545 2042	0246 0.950 5.6 0.7	170 20	<b>25</b> F 0311 0957 1548 2122	0311 1.0 3.3	5.2 30	<b>10</b> Su 0339 1005 1604 2201	0339 0.7 4.3	5.2 20 130 30	<b>25</b> M 0333 0944 1558 2211	0333 0.3 4.9	4.6 10 150 30	<b>10</b> M 0323 0926 1532 2156	0323 0.7 4.9	4.6 20 150 30	<b>25</b> Tu 0315 0905 1528 2157	0315 0.7 5.6 1.0	3.9 20 170 30
<b>11</b> F 1606 2116	0316 1.014 5.6 3.0	170 20	<b>26</b> Sa 0329 1008 1602 2150	0329 0.7 3.6	4.9 110	<b>11</b> M 0358 1016 1622 2230	0358 0.7 4.3	4.6 20 140 30	<b>26</b> Tu 0353 0955 1619 2236	0353 0.3 4.9	4.3 10 130 40	<b>11</b> Tu 0338 0930 1549 2222	0338 0.7 5.2	3.9 20 120 40	<b>26</b> W 0334 0916 1549 2221	0334 0.7 5.6	3.9 20 170 40
<b>12</b> Sa 1628 2151	0344 1.034 5.2 0.7	160 20	<b>27</b> Su 0348 1018 1624 2219	0348 0.7 3.9	4.6 110	<b>12</b> Tu 0413 1021 1641 2300	0413 0.7 4.6	4.3 20 130 50	<b>27</b> W 0409 1005 1642 2303	0409 0.7 4.9	3.6 20 110 60	<b>12</b> W 0347 0927 1609 2247	0347 0.7 5.2	3.3 20 100 50	<b>27</b> Th 0351 0926 1610 2246	0351 1.0 5.2	3.6 30 110 50
<b>13</b> Su 1651 2226	0409 1.053 4.9 0.7	150 30	<b>28</b> M 0409 1030 1650 2250	0409 0.7 4.3	4.3 110	<b>13</b> W 0422 1018 1703 2330	0422 0.7 4.6	3.6 20 110 70	<b>28</b> Th 0420 1010 1703 2331	0420 0.7 4.6	3.3 20 100 70	<b>13</b> Th 0347 0924 1630 2312	0347 0.7 5.2	3.0 20 90 70	<b>28</b> F 0401 0930 1631 2313	0401 1.0 4.9	3.3 30 100 70
<b>14</b> M 1716 2304	0431 1.108 4.6 3.6	140 30	<b>29</b> Tu 0427 1044 1718 2323	0427 0.7 4.3	3.9 120	<b>14</b> Th 0406 1014 1730 ● O	0406 0.7 4.6	3.0 20 90	<b>29</b> F 0309 1006 1725 ● O	0309 1.0 4.3	3.0 30 90	<b>14</b> F 0209 0925 1655 ● O	0209 0.7 4.9	3.0 20 90	<b>29</b> Sa 0333 0930 1651 2345	0333 1.3 4.6	3.0 40 90
<b>15</b> Tu 1746 2350	0449 1.117 3.9 2.0	120 30	<b>30</b> W 0438 1053 1748 ● O	0438 1.0 4.3	3.6 110	<b>15</b> F 0005 0215 1003 1800	0005 3.0 0.7 4.3	3.0 90 20 130	<b>15</b> Sa 0142 0920 1717	0142 0.7 4.3	3.0 20 90	<b>15</b> Sa 0200 0924 1712 ● O	0200 1.3 4.3	3.0 40 90	<b>30</b> Su 0200 0924 1712 ● O	0200 1.3 4.3	3.0 40 90
			<b>31</b> Th 0000 1049 1821	0000 1.0 3.9	2.6 90 120							<b>31</b> M 0846 1941 2200	0846 3.6 3.6	1.6 110 110			

Time meridian 142° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.

Heights are referred to the chart datum of soundings.

\* See Page 384 for the remaining tides on this day.

# Port Lincoln, Australia, 2008

Times and Heights of High and Low Waters

April				May				June			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu	0736	1.6	50	16 W	0002	3.9	120	1 Th	0614	2.0	60
	1735	3.3	100		0700	2.0	60		1256	3.6	110
	1849	3.3	100		1324	3.6	110		1822	3.0	90
	2353	4.3	130		1858	2.6	80		2353	3.9	120
2 W	0724	1.3	40	17 Th	0033	3.9	120	2 F	0630	1.6	50
	1355	3.3	100		0700	1.6	50		1252	4.3	130
	1850	2.6	80		1315	3.9	120		1858	2.3	70
					1915	2.0	60				
3 Th	0039	4.6	140	18 F	0100	3.9	120	3 Sa	0045	3.9	120
	0730	1.0	30		0708	1.6	50		0648	1.6	50
	1346	3.6	110		1324	4.6	140		1304	4.9	150
	1917	2.0	60		1937	1.6	50		1933	1.6	50
4 F	0115	4.6	140	19 Sa	0124	3.9	120	4 Su	0126	3.9	120
	0745	1.0	30		0722	1.3	40		0705	1.6	50
	1353	4.3	130		1337	4.9	150		1324	5.2	160
	1947	1.3	40		2002	1.3	40		2008	1.3	40
5 Sa	0148	4.6	140	20 Su	0149	3.9	120	5 M	0202	3.6	110
	0802	1.0	30		0739	1.3	40		0717	1.6	50
	1407	4.6	140		1355	5.2	160		1345	5.9	180
	2019	1.0	30		2028	1.0	30	●	2043	1.0	30
6 Su	0218	4.6	140	21 M	0214	3.9	120	6 Tu	0232	3.3	100
	0818	1.0	30		0756	1.3	40		0725	1.6	50
	1424	5.2	160		1415	5.9	180		1409	6.2	190
●	2049	0.7	20		2054	1.0	30		2116	1.3	40
7 M	0244	4.3	130	22 Tu	0237	3.6	110	7 W	0254	3.0	90
	0829	1.0	30		0811	1.0	30		0730	1.3	40
	1442	5.6	170		1438	5.9	180		1433	6.2	190
	2119	1.0	30		2119	1.0	30		2148	1.3	40
8 Tu	0304	3.6	110	23 W	0300	3.6	110	8 Th	0301	2.6	80
	0833	1.0	30		0826	1.0	30		0738	1.3	40
	1500	5.9	180		1500	5.9	180		1459	6.2	190
	2148	1.0	30		2145	1.3	40		2219	2.0	60
9 W	0315	3.3	100	24 Th	0320	3.3	100	9 F	0259	2.3	70
	0832	1.0	30		0839	1.3	40		0752	1.3	40
	1519	5.9	180		1523	5.9	180		1525	5.9	180
	2215	1.6	50		2210	1.6	50		2248	2.3	70
10 Th	0319	3.0	90	25 F	0337	3.3	100	10 Sa	0045	2.6	80
	0832	1.0	30		0851	1.3	40		0811	1.3	40
	1542	5.9	180		1546	5.6	170		1552	5.6	170
	2241	2.0	60		2237	2.0	60		2315	2.6	80
11 F	0154	2.6	80	26 Sa	0350	3.0	90	11 Su	0047	2.6	80
	0207	2.6	80		0900	1.3	40		0827	1.6	50
	0304	2.6	80		1609	5.2	160		1620	4.9	150
	0839	1.0	30		2308	2.3	70		2346	3.0	90
	1606*	5.6	170								
12 Sa	0117	3.0	90	27 Su	0353	3.0	90	12 M	0052	3.0	90
	0845	1.0	30		0907	1.6	50		0832	2.0	60
	1631	4.9	150		1633	4.9	150		1645	4.3	130
	2330	3.0	90		2352	2.6	80	●	1703	4.9	150
13 Su	0106	3.0	90	28 M	0156	2.6	80	13 Tu	0105	2.3	70
	0843	1.3	40		0904	2.0	60		0721	3.0	90
	1653	4.3	130		1659	4.6	140		0917	3.0	90
●				○				○	1745	4.3	130
14 M	0826	1.6	50	29 Tu	0723	2.3	70	14 W	0518	2.6	80
	1702	3.6	110		1729	3.9	120		1314	3.6	110
	1938	3.6	110						1844	3.3	100
	2250	3.6	110						2050	3.3	100
15 Tu	0719	1.6	50	30 W	0615	2.0	60	15 Th	0506	2.3	70
	1424	3.3	100		1413	3.3	100		1214	3.9	120
	1851	3.0	90		1510	3.3	100		1843	3.0	90
					2226	3.9	120		2327	3.3	100

Time meridian 142° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.

Heights are referred to the chart datum of soundings.

\* See Page 384 for the remaining tides on this day.

# Port Lincoln, Australia, 2008

Times and Heights of High and Low Waters

July				August				September									
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height						
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm						
1 Tu	0249	2.6	80	16 W	0225	3.0	90	1 Sa	0308	3.0	90						
0349	2.6	80	0505	2.6	80	F	0720	2.3	70	16 M	0235	3.3	100				
1231	5.9	180	1255	5.6	170	1417	5.9	180	Sa	0745	2.0	60					
2055	1.3	40	2035	1.6	50	● 2124	1.3	40	1406	5.6	170						
									2052	1.0	30						
2 W	0302	2.6	80	17 Th	0233	3.0	90	2 Sa	0315	3.0	90						
0501	2.6	80	0611	2.3	70	1445	5.9	180	17 Su	0250	3.6	110					
1318	6.2	190	1333	5.6	170	2134	1.3	40	O 2112	1.0	30						
2127	1.3	40	2052	1.6	50												
3 Th	0321	2.6	80	18 F	0250	3.3	100	3 Su	0327	3.3	100						
0559	2.3	70	0715	2.3	70	1408	5.9	180	M 0847	1.6	50						
1401	6.2	190	1408	5.9	180	2145	1.3	40	18 M	0307	3.9	120					
● 2153	1.3	40	○ 2114	1.3	40	Su 1505	5.6	170	3 W	0315	4.9	150					
						1500	5.6	170	1500	4.6	140						
4 F	0338	2.6	80	19 Sa	0309	3.3	100	2130	1.0	30	17 Tu	0300	4.6	140			
0654	2.0	60	0804	2.0	60	4 M	0336	3.6	110	2112	1.0	30	W 0909	1.0	30		
1438	6.2	190	1440	5.9	180	0916	1.6	50	1516	4.6	140						
2211	1.6	50	2137	1.3	40	1521	5.2	160	2119	1.0	30						
5 Sa	0352	2.6	80	20 Su	0330	3.6	110	2145	1.0	30	18 Th	0307	5.2	160			
0750	2.0	60	0842	1.6	50	5 Tu	0347	4.3	130	2129	1.0	30	19 F	0326	5.2	160	
1507	5.9	180	1509	5.9	180	0943	1.6	50	2100	1.0	30	1003	1.3	40			
2223	2.0	60	2159	1.3	40	2202	1.3	40				1533	3.6	110			
6 Su	0401	3.0	90	21 M	0350	3.6	110	20 W	0342	4.6	140	2103	1.0	30			
0839	2.0	60	0915	1.6	50	6 W	0406	4.6	140	5 F	0357	5.2	160				
1530	5.6	170	1535	5.9	180	1009	1.6	50	1020	1.6	50	20 Sa	0346	5.2	160		
2234	2.0	60	2219	1.3	40	1555	4.6	140	1551	3.9	120	1030	1.6	50			
7 M	0409	3.3	100	22 Tu	0411	3.9	120	2211	1.3	40	2139	1.0	30	1535	3.0	90	
0921	2.0	60	0945	1.6	50	7 Th	0430	4.6	140				2100	1.0	30		
1550	5.2	160	1559	5.6	170	1037	2.0	60	21 W	0421	4.9	150					
2243	2.0	60	2236	1.3	40	1613	4.3	130	1014	1.3	40	21 Sa	0408	5.2	160		
8 Tu	0429	3.6	110	23 W	0433	3.9	120	1555	4.6	140	1046	2.0	60	1056	2.3	70	
1000	2.3	70	1017	2.0	60	8 F	0458	4.6	140	1600	4.3	130	1356	3.0	90		
1612	4.9	150	1621	4.9	150	1107	2.3	70	2202	1.0	30	2059	1.0	30			
2252	2.0	60	2251	1.3	40	1625	3.9	120	1100	4.6	140						
9 W	0500	3.9	120	24 Th	0456	4.3	130	2234	1.3	40	1160	4.3	130	21 W	0432	4.9	150
1041	2.6	80	1051	2.3	70	1112	2.3	70	1114	2.3	70	1122	2.6	80			
1632	4.6	140	1640	4.6	140	1605	3.3	100	1430	3.3	100	1328	3.0	90			
2306	1.6	50	2302	1.6	50	● 2236	1.3	40	2144	1.3	40	2049	1.0	30			
10 Th	0538	4.3	130	25 F	0522	4.3	130	23 M	0557	4.3	130	2021	1.0	30			
1125	3.0	90	1129	2.6	80	1224	3.3	100	25 W	0536	4.6	140	2051	4.3	130		
1648	3.9	120	1653	3.9	120	1416	3.3	100	1025	3.6	110	0733	3.6	110			
● 2324	1.6	50	2306	1.6	50	2223	1.6	50	1116	3.9	120	1132	3.9	120			
11 F	0624	4.3	130	26 Sa	0554	4.6	140	2122	1.3	40	1950	1.6	50	1950	1.3	40	
1217	3.3	100	1217	3.0	90	1080	3.9	120	2045	1.3	40	1931	1.3	40			
1618	3.6	110	1515	3.3	100	0921	3.9	120	1219*	4.3	130						
2341	2.0	60	● 2259	1.6	50	2157	2.0	60	1060	3.0	90	2124	4.3	130			
12 Sa	0754	4.3	130	27 Su	0638	4.6	140	2049	2.0	60	1116	3.9	120	1224	4.3	130	
2337	2.0	60	2228	1.6	50	1115	4.3	130	27 W	0647	2.6	80	0651	3.0	90		
13 Su	1018	4.6	140	28 M	1014	4.6	140	2049	2.0	60	1252	4.6	140	0651	3.0	90	
2248	2.3	70	2132	1.6	50	1220	4.6	140	2045	1.3	40	1933	1.3	40			
14 M	1122	4.9	150	29 Tu	1145	4.9	150	1309	4.9	150	1219*	4.3	130	2124	4.3	130	
2105	2.3	70	2100	1.3	40	1024	3.0	90	2024	1.0	30	1941	1.3	40			
15 Tu	1211	5.2	160	30 W	1255	5.6	170	0749	1.6	50	1947	1.3	40	0138	3.3	100	
2030	2.0	60	2100	1.3	40	1522	3.0	90	1427	5.2	160	1941	1.3	40			
16 ● 31	0311	2.6	80	14 Th	0519	2.6	80	1406	5.2	160	1947	1.3	40	0715	2.0	60	
				1342	5.9	180	2034	1.3	40	2040	1.0	30	1317	4.6	140		
				2112	1.3	40				2034	1.0	30					

Time meridian 142° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.

Heights are referred to the chart datum of soundings.

\* See Page 384 for the remaining tides on this day.

# Port Lincoln, Australia, 2008

Times and Heights of High and Low Waters

October				November				December																						
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height																			
1 W 0222 0853 1437 2025	5.2 0.7 3.9 1.0	ft ft ft ft	160 20 120 30	16 Th 0214 0900 1448 2006	5.6 0.7 3.6 1.0	ft ft ft ft	170 20 110 30	1 Sa 0238 0930 1505 2015	5.9 1.0 3.0 1.0	ft ft ft ft	180 30 90 30	16 M 0240 1005 1509 1938	5.9 1.3 2.0 1.0	ft ft ft ft	170 40 60 30	1 M 0254 0957 1537 2025	5.6 1.0 3.0 1.3	ft ft ft ft	170 40 90 40	16 Tu 0314 1043 1601 2022	5.6 1.3 2.3 1.3	ft ft ft ft	170 40 70 40							
2 Th 0242 0916 1456 2035	5.6 1.0 3.6 1.0	ft ft ft ft	170 30 110 30	17 F 0234 0929 1503 2008	5.9 0.7 3.0 1.0	ft ft ft ft	180 20 90 30	2 Su 0303 0955 1525 2030	5.6 1.3 3.0 1.0	ft ft ft ft	170 40 60 30	17 M 0308 1036 1507 1954	5.6 1.6 2.0 1.0	ft ft ft ft	170 50 60 30	2 Tu 0321 1024 1602 2046	5.2 1.3 2.6 1.6	ft ft ft ft	160 40 80 50	17 W 0340 1057 1616 2100	4.9 1.6 2.6 1.6	ft ft ft ft	150 50 80 50							
3 F 0303 0940 1515 2047	5.6 1.0 3.6 1.0	ft ft ft ft	170 30 110 30	18 Sa 0257 0958 1510 2009	5.9 1.0 2.6 1.0	ft ft ft ft	180 30 80 30	3 M 0327 1021 1542 2042	5.2 1.3 2.6 1.3	ft ft ft ft	160 40 80 40	18 Tu 0335 1103 1301 2010	5.2 2.0 2.3 1.3	ft ft ft ft	150 40 80 50	3 W 0348 1053 1632 2107	4.9 1.3 2.6 1.6	ft ft ft ft	140 50 80 50	18 Th 0404 1106 1650 2145	4.6 1.6 3.0 2.0	ft ft ft ft	140 50 90 60							
4 Sa 0326 1004 1532 2059	5.6 1.3 3.3 1.0	ft ft ft ft	170 40 100 30	19 Su 0320 1025 1501 2014	5.6 1.6 2.3 1.0	ft ft ft ft	170 50 70 30	4 Tu 0351 1050 1554 2048	4.9 2.0 2.6 1.6	ft ft ft ft	140 60 80 50	4 W 0401 1127 1309 2013	4.6 2.3 2.3 1.6	ft ft ft ft	140 50 80 50	4 Th 0415 1124 1713 2125	4.6 1.6 2.6 2.0	ft ft ft ft	140 50 80 60	19 F 0425 1115 1739 2247	3.9 1.6 3.0 2.6	ft ft ft ft	120 50 90 80							
5 Su 1029 1544 2105	5.2 1.6 3.0	ft ft ft	160 50 90	20 M 0345 1051 1309 2016	5.2 2.3 2.6 1.0	ft ft ft ft	160 70 80 30	5 W 0415 1127 1417 2045	4.6 2.0 2.3 2.0	ft ft ft ft	140 60 70 60	20 Th 0425 1157 1320 1936	3.9 2.3 2.3 2.0	ft ft ft ft	120 50 80 80	5 F 0441 1200 1818 2137	4.3 1.6 2.6 2.6	ft ft ft ft	130 50 80 80	20 Sa 0436 1131 1854	3.6 1.6 3.3	ft ft ft	110 50 100							
6 M 1055 1415 2105	4.9 3.0 1.3	ft ft ft	150 90 40	21 M 0409 1118 1255 2005	4.9 2.6 2.6 1.3	ft ft ft ft	150 50 80 40	6 Th 0437 1849 1849 O	4.3 2.0 2.0	ft ft ft ft	130 60 60 40	21 F 0429 1635 1635 O	3.3 2.3 2.3	ft ft ft ft	100 70 70 40	6 Sa 0508 1248 2303 O	3.6 2.0 3.0	ft ft ft ft	110 60 90 40	21 Su 0021 0315 1151 2201	3.0 3.3 1.6 3.6	ft ft ft ft	90 100 50 110							
7 Tu 1126 1349 O 2056	4.6 2.6 3.0 1.6	ft ft ft ft	140 80 90 50	22 W 0431 1934 1934	4.3 1.3 40	ft ft ft	130 40 40	7 F 0456 1730 1730	3.6 2.0 2.0	ft ft ft	110 60 60	22 Sa 0053 1621 2348	3.3 2.3 3.6	ft ft ft	100 70 110	7 Su 0039 0534 1400 2256	3.0 3.3 2.0 3.6	ft ft ft ft	90 100 60 110	22 M 1159 2257	1.6 4.3	ft ft	50 130							
8 W 1952	3.9 1.6	ft ft	120 50	23 Th 0437 0741 1034 1847	3.6 3.3 3.3 1.6	ft ft ft ft	120 100 100 50	8 Sa 0126 0628 1001 1735	3.3 3.0 3.3 2.0	ft ft ft ft	100 90 100 60	8 M 0655 1140 1629 2356	2.3 2.6 2.0 4.3	ft ft ft ft	70 80 60 130	8 W 0614 0822 1530 2321	2.6 2.6 2.0 4.3	ft ft ft ft	80 80 60 130	23 Tu 1031 2335	1.6 4.6	ft ft	50 140							
9 Th 0735 1007 1900	3.6 3.6 1.6	ft ft ft	110 100 50	24 F 0143 0644 1149 1830	3.3 2.6 3.3 1.6	ft ft ft ft	110 80 100 50	9 Su 0022 0617 1140 1752	3.6 2.3 3.3 1.6	ft ft ft ft	100 70 100 50	9 M 0705 1222 1658 1752	2.0 2.6 2.0 4.9	ft ft ft ft	60 80 60 150	9 Tu 0647 1225 1622 2352	2.0 2.6 2.0 4.9	ft ft ft ft	60 80 60 150	24 W 0813 1338 1611	1.6 2.0 2.0	ft ft ft	50 60 60							
10 F 0643 1143 1852	3.3 3.9 1.3	ft ft ft	100 120 50	25 Sa 0053 0646 1221 1832	3.3 2.3 3.6 1.6	ft ft ft ft	100 70 110 50	10 M 0020 0645 1230 1812	3.9 2.0 3.3 1.6	ft ft ft ft	120 60 100 50	10 Tu 0012 0723 1255 1731	4.6 1.6 2.6 1.6	ft ft ft ft	140 50 80 50	10 W 0725 1325 1702 1731	1.3 2.6 2.0 1.6	ft ft ft ft	40 80 60 50	25 Th 0012 0808 1357 1720	4.9 1.3 2.3 2.0	ft ft ft ft	150 40 70 60							
11 Sa 1222 1859	3.3 4.3	ft ft	100 130 40	26 Su 0046 0704 1247 1838	3.9 1.6 3.6 1.6	ft ft ft ft	120 50 110 50	11 Tu 0034 0717 1311 1830	4.6 1.3 3.3 1.6	ft ft ft ft	100 40 100 50	11 W 0034 0744 1326 1806	5.2 1.3 2.6 1.6	ft ft ft ft	160 40 80 50	11 Th 0026 0803 1410 1738	5.2 1.0 2.3 2.0	ft ft ft ft	160 30 70 60	26 F 0047 0823 1419 1815	5.2 1.0 2.6 1.6	ft ft ft ft	160 30 80 50							
12 Su 1255 1914	3.6 4.3	ft ft	110 130 30	27 M 0056 0725 1311 1850	4.6 1.3 3.6 1.3	ft ft ft ft	110 40 110 40	12 W 0056 0751 1347 1845	5.2 1.0 3.3 1.3	ft ft ft ft	160 30 100 40	12 Th 0100 0808 1355 1838	5.6 1.0 3.0 1.3	ft ft ft ft	170 30 90 40	27 Sa 0101 0843 1447 1813	5.9 0.7 2.3 1.6	ft ft ft ft	180 20 70 50	27 F 0123 0844 1442 1902	5.6 1.0 2.6 1.6	ft ft ft ft	170 30 80 50							
13 M 0728 1327 1931	4.3 4.3 1.0	ft ft ft	130 130 30	28 Tu 0110 0748 1335 1906	4.9 1.0 3.6 1.3	ft ft ft ft	130 30 110 40	13 Th 0120 0826 1421 1859	5.6 0.7 3.0 1.3	ft ft ft ft	170 20 90 40	13 F 0129 0835 1422 1908	5.6 1.0 3.0 1.3	ft ft ft ft	180 30 90 40	13 Sa 0137 0920 1519 1845	5.9 0.7 2.3 1.6	ft ft ft ft	180 20 70 50	28 Su 0157 0908 1504 1945	5.6 1.0 3.0 1.3	ft ft ft ft	170 30 90 50							
14 Tu 1358 1948	4.6 4.3 1.0	ft ft ft	140 130 30	29 W 0128 0814 1359 ● 1923	5.2 1.0 3.3 1.0	ft ft ft ft	140 30 100 30	14 F 0146 0900 1448 1912	5.9 0.7 2.6 1.3	ft ft ft ft	180 20 80 40	14 Sa 0157 0901 1448 1936	5.9 1.0 3.0 1.3	ft ft ft ft	180 20 60 40	14 Tu 0213 0955 1544 1917	5.9 0.7 2.0 1.3	ft ft ft ft	180 20 60 40	29 M 0229 0932 1527 2020	5.6 1.0 3.0 1.3	ft ft ft ft	170 30 90 40							
15 W 0830 1425 O 2000	5.2 3.9 1.0	ft ft ft	160 120 30	30 Th 0150 0839 1421 ● 1940	5.6 0.7 3.3 1.0	ft ft ft ft	160 20 100 30	15 Sa 0213 0933 1505 1940	6.2 1.0 2.3 1.0	ft ft ft ft	190 30 70 30	30 Su 0226 0929 1513 2001	5.9 1.0 3.0 1.3	ft ft ft ft	180 30 60 40	15 M 0245 1023 1559 1948	5.9 1.0 2.0 1.3	ft ft ft ft	180 30 60 40	30 Tu 0259 0958 1549 2053	5.6 1.0 3.0 1.3	ft ft ft ft	170 30 90 40							
				31 F 0214 0904 1444 1957	5.9 1.0 3.3 1.0	ft ft ft ft										31 W 0327 1020 1613 2124	5.2 1.0 3.3 1.3	ft ft ft ft												

Time meridian 142° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Port Hedland, Australia, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0341	17.1	520	16 W 0316	18.7	570	1 F 0357	15.1	460	1 Sa 0411	15.4	470
0945	8.2	250	0919	6.6	200	0938	10.5	320	0952	10.2	310
1608	18.0	550	1539	19.7	600	1616	16.7	510	1635	17.4	530
2234	9.5	290	● 2200	7.5	230	2330	10.8	330	1512	17.4	530
2 W 0426	15.7	480	17 Th 0401	17.1	520	2 Sa 0459	13.5	410	17 Su 0013	10.5	320
1026	9.8	300	0959	8.2	250	1001	12.1	370	0632	13.5	410
1700	17.1	520	1627	18.7	570	1815	15.4	470	1222	12.5	380
2358	10.2	310	2307	8.9	270				1920	16.1	490
3 Th 0545	14.4	440	18 F 0507	15.4	470	3 Su 0205	10.8	330	18 M 0257	9.8	300
1142	11.2	340	1057	10.2	310	1003	13.8	420	1000	15.1	460
1830	16.4	500	1743	17.7	540	1428	12.5	380	1523	11.2	340
						2045	15.7	480	2131	17.4	530
4 F 0132	10.2	310	19 Sa 0051	9.2	280	4 M 0358	9.5	290	19 M 0408	7.5	230
0800	14.1	430	0707	14.4	440	1033	15.4	470	1039	17.4	530
1335	11.5	350	1259	11.2	340	1604	11.2	340	1619	8.9	270
2001	16.7	510	1931	17.4	530	2154	17.4	530	2228	19.4	590
5 Sa 0255	9.2	280	20 Su 0230	8.5	260	5 Tu 0433	7.9	240	20 W 0445	5.6	170
0932	15.1	460	0923	15.4	470	1058	17.1	520	1110	19.4	590
1503	10.8	330	1448	10.8	330	1639	9.5	290	1657	6.6	200
2108	17.4	530	2107	18.4	560	2236	19.0	580	2309	21.0	640
6 Su 0353	7.9	240	21 M 0354	6.9	210	6 W 0502	6.2	190	21 Th 0518	3.9	120
1022	16.4	500	1030	17.1	520	1123	18.7	570	1141	21.0	640
1600	9.8	300	1609	9.2	280	1708	7.9	240	1731	4.9	150
2159	18.4	560	2217	19.7	600	2312	20.3	620	● 2345	22.3	680
7 M 0434	6.9	210	22 Th 0447	5.2	160	7 Th 0530	4.6	140	22 F 0549	3.0	90
1058	17.4	530	1115	18.7	570	1150	20.0	610	1210	22.3	680
1640	8.9	270	1700	7.2	220	1738	6.2	190	1803	3.6	110
2240	19.4	590	● 2310	21.0	640	● 2345	21.3	650			
8 Tu 0509	5.6	170	23 W 0529	3.9	120	8 F 0557	3.6	110	23 M 0018	22.6	690
1130	18.4	560	1153	20.0	610	1218	21.0	640	0618	2.3	70
1715	7.9	240	1741	5.6	170	1808	4.9	150	1238	23.0	700
● 2316	20.3	620	2353	22.0	670				1833	3.0	90
9 W 0541	4.6	140	24 Th 0606	3.0	90	9 Sa 0019	22.3	680	24 M 0048	22.6	690
1200	19.4	590	1229	21.3	650	0626	2.6	80	0646	2.6	80
1747	6.9	210	1819	4.6	140	1246	22.0	670	1303	23.0	700
2352	21.0	640				1839	3.9	120	1901	3.0	90
10 Th 0612	3.9	120	25 F 0031	22.3	680	10 M 0051	22.6	690	25 W 0115	22.3	680
1231	20.0	610	0640	2.3	70	0654	2.3	70	0712	3.0	90
1819	6.2	190	1300	22.0	670	1315	22.6	690	1327	23.0	700
			1854	4.3	130	1910	3.3	100	1928	3.6	110
11 F 0027	21.3	650	26 Sa 0107	22.3	680	11 M 0123	22.6	690	10 Th 0139	21.3	650
0642	3.6	110	0711	2.6	80	0723	2.6	80	0734	3.9	120
1301	20.7	630	Sa 1330	22.0	670	M 1342	23.0	700	Tu 1348	22.3	680
1852	5.9	180	1927	4.3	130	1941	3.3	100	1952	4.3	130
12 Sa 0100	21.7	660	27 W 0138	21.7	660	12 Tu 0152	22.0	670	26 Tu 0103	23.0	700
0712	3.3	100	0741	3.3	100	0751	3.3	100	0658	2.3	70
1332	21.0	640	1358	22.0	670	1407	22.6	690	1314	24.0	730
1925	5.6	170	1957	4.9	150	2012	3.9	120	1917	2.0	60
13 Su 0133	21.3	650	28 M 0206	21.0	640	13 M 0220	21.0	640	11 W 0131	22.3	680
0743	3.6	110	0807	4.3	130	0819	4.3	130	0726	3.0	90
1401	21.0	640	1423	21.3	650	1433	22.3	680	1340	23.6	720
1959	5.6	170	2027	5.6	170	2045	4.9	150	1948	3.0	90
14 M 0206	20.7	630	29 Tu 0233	19.7	600	14 Th 0250	19.4	590	27 W 0131	20.3	620
0813	4.3	130	0832	5.6	170	0848	5.9	180	0723	5.2	160
1430	21.0	640	Tu 1447	20.7	630	1503	21.0	640	1335	21.7	660
2033	5.9	180	2056	6.9	210	● 2122	6.6	200	1943	4.9	150
15 Tu 0240	20.0	610	30 W 0259	18.4	560	15 F 0325	17.4	530	28 Th 0131	20.3	620
0845	5.2	160	0855	6.9	210	0917	8.2	250	0754	4.6	140
1502	20.7	630	1513	19.4	590	1539	19.4	590	1406	22.6	690
2113	6.6	200	● 2126	8.2	250	2212	8.5	260	2020	4.6	140
16 W 0325	16.7	510	31 Th 0917	8.5	260				2100	9.8	300
0917			1540	18.0	550				31 M 0302	14.8	450
			2203	9.5	290				0845	11.5	350

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Port Hedland, Australia, 2008

## Times and Heights of High and Low Waters

April				May				June															
	Time	Height			Time	Height			Time	Height													
	h m	ft	cm		h m	ft	cm		h m	ft	cm												
<b>1</b> Tu	1117 1243 1923	13.5 13.5 14.4	410 410 440	<b>16</b> W	0224 0903 1458 2112	9.8 16.7 9.8 17.4	300 510 300 530	<b>1</b> Th	0057 0747 1345 1958	10.8 15.4 11.2 16.1	330 470 340 490	<b>16</b> F	0222 0842 1459 2115	9.2 17.7 8.2 17.4	280 540 250 530	<b>1</b> Su	0202 0817 1445 2105	8.9 18.7 6.9 17.7	270 570 210 540	<b>16</b> M	0313 0917 1548 2210	9.2 18.0 7.2 17.1	280 550 220 520
<b>2</b> W	0247 0933 1511 2111	10.8 15.4 11.5 16.4	330 470 350 500	<b>17</b> Th	0316 0940 1539 2104	8.2 18.4 7.9 17.4	250 560 240 530	<b>2</b> F	0217 0845 1450 2104	9.5 17.4 8.9 17.4	290 530 270 560	<b>2</b> M	0259 0910 1536 2200	7.9 20.0 5.2 18.7	240 610 160 570	<b>17</b> Tu	0358 1001 1629 2247	8.5 18.7 6.2 17.7	260 570 190 540				
<b>3</b> Th	0330 0955 1545 2153	8.9 17.4 9.2 18.4	270 530 280 560	<b>18</b> F	0352 1010 1613 2228	6.9 20.0 5.9 20.0	210 610 180 610	<b>3</b> Sa	0306 0924 1533 2149	7.9 19.0 6.6 19.0	240 580 200 580	<b>3</b> Tu	0348 1000 1615 2231	6.6 21.0 5.6 19.0	200 640 110 590	<b>18</b> W	0436 1040 1704 2322	7.9 19.4 5.2 18.4	240 590 160 560				
<b>4</b> F	0400 1019 1615 2228	7.2 19.4 6.9 20.0	220 590 210 610	<b>19</b> Sa	0424 1039 1644 2300	5.6 21.0 4.6 20.7	170 640 140 630	<b>4</b> Su	0345 1000 1611 2230	6.6 20.7 4.6 20.3	200 630 140 620	<b>4</b> W	0434 1046 1709 2331	5.9 22.0 3.0 20.0	180 670 90 610	<b>19</b> Th	0511 1115 1737 2354	7.2 20.0 4.9 19.0	220 610 150 580				
<b>5</b> Sa	0429 1046 1646 2301	5.2 21.0 4.6 21.7	160 640 140 660	<b>20</b> Su	0453 1107 1713 2329	4.9 22.0 3.6 21.0	150 670 110 640	<b>5</b> M	0422 1035 1648 2308	5.2 22.3 3.0 21.3	160 680 90 650	<b>5</b> Th	0519 1133 1716 2334	5.2 22.3 4.3 19.7	160 680 130 600	<b>20</b> F	0543 1150 1808 2354	6.9 20.3 4.6 140	210 620 140 580				
<b>6</b> Su	0458 1116 1717 2335	3.9 22.6 2.6 22.3	120 690 80 680	<b>21</b> M	0521 1133 1740 2357	4.6 22.3 3.3 21.0	140 680 100 640	<b>6</b> Tu	0459 1112 1725 2345	4.3 23.3 2.0 21.7	130 710 60 660	<b>21</b> W	0523 1131 1745 2345	6.2 21.0 4.3 130	190 600 130 600	<b>21</b> Sa	0025 0615 1223 1839	19.0 6.6 20.3 4.6	580 200 620 140				
<b>7</b> M	0529 1146 1750	3.0 23.6 1.6	90 720 50	<b>22</b> Tu	0546 1159 1806	4.6 22.3 3.3	140 680 100	<b>7</b> W	0534 1148 1802	3.9 23.6 1.6	120 720 50	<b>22</b> Th	0003 0550 1200 1814	19.7 6.2 21.0 4.3	600 190 640 130	<b>22</b> Sa	0055 0645 1255 1909	19.0 6.6 20.3 4.6	580 200 620 140				
<b>8</b> Tu	0009 0600 1216 1823	22.6 2.6 24.3 1.3	690 80 740 40	<b>23</b> W	0022 0611 1223 1830	21.0 4.9 22.3 3.6	640 150 680 110	<b>8</b> Th	0022 0612 1226 1840	21.3 4.3 23.3 2.3	650 130 710 70	<b>23</b> F	0031 0617 1229 1842	19.7 6.2 190 4.6	600 190 640 140	<b>23</b> M	0125 0717 1328 1940	19.0 6.6 20.3 4.9	580 200 620 150				
<b>9</b> W	0041 0631 1246 1856	22.3 3.0 24.3 1.6	680 90 740 50	<b>24</b> Th	0046 0634 1246 1855	20.7 5.6 22.0 4.3	630 170 670 130	<b>9</b> F	0059 0648 1302 1919	20.7 4.9 22.6 3.3	630 150 690 100	<b>9</b> M	0058 0645 1257 1911	19.4 6.9 20.7 5.2	590 200 630 160	<b>24</b> Tu	0156 0752 1430 2044	19.0 6.6 20.0 5.9	580 200 600 160				
<b>10</b> Th	0112 0702 1315 1929	21.7 3.9 23.6 3.0	660 120 720 90	<b>25</b> F	0109 0658 1310 1919	20.0 6.2 21.0 5.2	610 190 640 160	<b>10</b> Sa	0135 0728 1342 2000	19.7 6.2 21.3 4.9	600 190 650 150	<b>25</b> Tu	0126 0715 1327 1941	18.7 7.2 20.0 5.9	570 220 610 180	<b>25</b> W	0229 0829 1436 2046	19.0 7.2 19.0 6.2	580 220 580 190				
<b>11</b> F	0142 0734 1347 2003	20.3 5.2 22.3 4.9	620 160 680 150	<b>26</b> Sa	0132 0722 1334 1945	19.0 7.2 20.3 6.2	580 220 620 190	<b>11</b> Su	0215 0713 1426 2048	18.7 7.5 19.7 6.9	570 230 600 180	<b>11</b> W	0156 0747 1400 2015	18.0 8.2 19.0 6.9	550 250 580 220	<b>26</b> Th	0304 0911 1517 2126	18.7 7.5 18.0 7.2	570 230 550 220				
<b>12</b> Sa	0215 0808 1423 2044	18.7 7.2 20.3 7.2	570 220 620 220	<b>27</b> Su	0158 0747 1400 2015	18.0 8.2 19.0 7.5	550 250 680 230	<b>12</b> M	0302 0909 1518 2149	17.4 9.2 18.0 8.5	530 280 550 260	<b>27</b> Th	0445 0828 1438 2058	17.4 9.2 18.0 7.9	530 280 520 240	<b>27</b> F	0347 1001 1608 2329	18.0 8.2 17.1 9.5	550 250 520 250				
<b>13</b> Su	0254 0847 1507 2142	17.1 9.5 18.0 9.5	520 290 550 290	<b>28</b> M	0227 0817 1432 2054	16.7 9.8 17.7 9.2	510 300 540 280	<b>13</b> Tu	0407 1029 1630 2316	16.1 10.5 16.4 9.8	490 320 500 300	<b>13</b> W	0318 0922 1529 2153	16.7 9.8 17.1 8.9	510 290 520 270	<b>28</b> Sa	0442 1112 1718 2323	17.7 8.5 16.1 9.2	540 260 490 280				
<b>14</b> M	0356 1002 1623	15.1 11.5 15.7	460 350 480	<b>29</b> Tu	0310 0901 1521 2208	15.4 11.2 16.1 10.8	470 340 490 330	<b>14</b> W	0604 1221 1837	15.7 10.5 15.7	480 320 480	<b>29</b> Th	0424 1039 1645 2312	16.4 10.5 16.1 9.8	500 320 490 300	<b>29</b> F	0558 1243 1856 2028	17.4 8.2 15.4 15.7	530 250 470 480				
<b>15</b> Tu	0007 0733 1315 1949	10.8 14.8 11.8 15.7	330 450 360 480	<b>30</b> W	0502 1119 1733	14.4 12.1 15.1	440 370 460	<b>15</b> Th	0104 0744 1400 2016	9.8 16.7 9.5 16.4	300 510 290 500	<b>30</b> F	0556 1224 1830 0050	16.4 9.8 480 9.5	500 300 480 290	<b>30</b> M	0100 0721 1400 2124	9.5 17.7 7.5 16.1	290 540 230 480				
								<b>16</b> Sa	0716 1344 1958			<b>31</b> Sa	0050 1344 1958			<b>31</b> Su	0716 1344 1958						

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Port Hedland, Australia, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0218 9.2 280	16 W 0350 9.8 300	1 F 0437 6.9 210	16 Sa 0456 6.9 210	1 M 0542 2.3 70	16 Tu 0526 3.0 90						
0834 18.7 570	W 0947 17.4 530	F 1047 20.3 620	Sa 1100 19.4 590	M 1159 22.3 680	Tu 1141 21.7 660						
1512 6.2 190	1624 7.2 220	1707 3.6 110	1715 4.6 140	M 1757 1.6 50	Tu 1739 2.6 80						
2145 17.1 520	2244 16.7 510	● 2329 19.4 590	2330 19.4 590			2355 22.3 680					
2 W 0329 8.2 250	17 Th 0432 8.5 260	2 Sa 0520 4.9 150	17 Su 0523 5.2 160	2 Tu 0015 22.6 690	17 W 0555 1.6 50						
0941 19.7 600	1031 18.4 560	1133 21.3 650	1131 20.7 630	0614 1.6 50	1212 22.3 680						
1615 4.9 150	1700 5.9 180	1745 2.6 80	1741 3.3 100	1230 22.3 680	1806 2.0 60						
2243 18.0 550	2315 17.7 540	○ 2357 20.3 620	1826 1.6 50								
3 Th 0429 6.9 210	18 F 0507 7.5 230	3 Su 0005 20.7 630	18 M 0551 4.3 130	3 W 0043 22.6 690	18 Th 0022 23.0 700						
1041 20.7 630	1109 19.4 590	0559 3.6 110	1203 21.3 650	0643 1.6 50	0625 1.0 30						
1706 3.6 110	1731 4.9 150	1215 22.3 680	1807 2.6 80	1259 22.0 670	1241 22.0 670						
● 2330 19.0 580	○ 2346 18.7 570	1820 2.0 60	1853 2.3 70	1853 2.3 70	1835 2.0 60						
4 F 0520 5.6 170	19 Sa 0538 6.2 190	4 M 0040 21.7 660	19 Tu 0025 21.3 650	4 Th 0107 22.6 690	19 W 0048 23.3 710						
1132 21.7 660	1145 20.3 620	0635 3.0 90	0620 3.0 90	0711 2.3 70	0654 1.0 30						
1752 3.0 90	1800 4.3 130	1251 22.3 680	1234 21.7 660	1324 21.0 640	1310 21.7 660						
5 Sa 0014 20.0 610	20 Su 0016 19.4 590	5 Tu 0111 22.0 670	20 W 0052 22.0 670	5 F 0130 22.0 670	20 Th 0114 22.6 690						
0605 4.9 150	0609 5.6 170	0709 2.6 80	0649 2.6 80	0736 3.3 100	0724 2.0 60						
1219 22.0 670	1217 20.7 630	1324 22.0 670	1303 21.7 660	1347 20.0 610	1336 20.3 620						
1833 2.6 80	1829 3.6 110	1923 2.3 70	1901 2.3 70	1941 4.6 140	1930 3.9 120						
6 Su 0053 20.7 630	21 M 0045 20.0 610	6 W 0140 22.0 670	21 Th 0117 22.3 680	6 Sa 0151 21.0 640	21 Su 0140 22.0 670						
0647 4.3 130	0639 4.9 150	0740 3.0 90	0718 2.3 70	0800 4.6 140	0755 3.3 100						
1302 22.0 670	1249 21.0 640	1354 21.0 640	1332 21.3 650	1409 18.7 570	1404 19.0 580						
1912 2.6 80	1858 3.3 100	1951 3.3 100	1929 3.0 90	2002 5.9 180	1959 5.9 180						
7 M 0130 20.7 630	22 Tu 0115 20.3 620	7 Th 0206 21.3 650	22 F 0143 22.0 670	7 Su 0213 19.7 600	22 M 0209 20.3 620						
0728 4.3 130	0709 4.6 140	0811 3.9 120	0748 3.0 90	0824 5.9 180	0829 5.6 170						
1342 21.3 650	1320 21.0 640	1421 19.7 600	1400 20.3 620	1430 17.1 520	1436 17.1 520						
1947 3.3 100	1926 3.3 100	2018 4.6 140	1957 3.9 120	● 2021 7.5 230	● 2029 7.9 240						
8 Tu 0205 20.7 630	23 W 0143 20.7 630	8 F 0231 20.3 620	23 Sa 0207 21.3 650	8 M 0234 18.0 550	23 Tu 0244 18.4 560						
0805 4.9 150	0740 4.6 140	0840 5.2 160	0819 3.9 120	0847 7.9 240	0911 7.9 240						
1418 20.3 620	1351 20.7 630	1447 18.4 560	1428 19.0 580	1453 15.4 470	1520 15.1 460						
2022 4.3 130	1954 3.6 110	2043 6.2 190	2024 5.2 160	2038 9.5 290	2106 10.2 310						
9 W 0239 20.0 610	24 Th 0210 20.7 630	9 Sa 0257 19.0 580	24 Su 0235 20.3 620	9 Tu 0256 16.4 500	24 W 0337 16.1 490						
0844 5.6 170	0812 4.6 140	0909 6.9 210	0853 5.2 160	0916 9.8 300	1052 10.2 310						
1453 19.4 590	1421 20.0 610	1515 16.7 510	1459 17.4 530	1519 13.8 420	1809 13.1 400						
2056 5.6 170	2024 4.6 140	● 2106 7.9 240	● 2053 7.2 220	2046 11.2 340							
10 Th 0313 19.4 590	25 F 0238 20.3 620	10 Su 0323 17.7 540	25 M 0308 18.7 570	10 W 0324 14.4 440	25 Th 0023 12.1 370						
0922 6.9 210	0846 5.2 160	0943 8.5 260	0935 7.5 230	1255 11.5 350	0707 14.8 450						
1529 17.7 540	1454 19.0 580	1545 15.1 460	1540 15.4 470	2241 13.5 410	1418 9.8 300						
● 2130 7.2 220	2055 5.9 180	2129 9.8 300	2128 9.2 280	2202 15.1 460	2113 15.4 470						
11 F 0348 18.4 560	26 Sa 0310 19.7 600	11 M 0357 16.1 490	26 Tu 0357 16.7 510	11 W 0301 12.5 380	26 F 0258 10.2 310						
1006 8.2 250	0926 6.2 190	1042 10.2 310	1059 9.5 290	0831 14.1 430	0908 16.4 500						
1608 16.4 500	1532 17.4 530	1637 13.5 410	1713 13.5 410	1531 9.8 300	1523 7.5 230						
2207 8.9 270	● 2130 7.2 220	2156 11.5 350	2300 11.5 350	2202 15.1 460	2148 17.4 530						
12 Sa 0430 17.1 520	27 Su 0349 18.7 570	12 Tu 0527 14.4 440	27 W 0622 15.1 460	12 F 0343 10.5 320	27 M 0342 7.5 230						
1107 9.2 280	1017 7.5 230	1337 10.5 320	1353 9.5 290	0937 16.1 490	0955 18.7 570						
1703 14.8 450	1622 15.7 480	2138 13.5 410	2118 14.1 430	1558 7.9 240	1559 5.6 170						
2301 10.2 310	2215 8.9 270			2216 16.7 510	2218 19.7 600						
13 Su 0538 16.1 490	28 M 0447 17.4 530	13 W 0835 14.8 450	28 Th 0244 10.8 330	13 F 0407 8.5 260	28 W 0416 5.2 160						
1242 9.8 300	1146 8.5 260	1543 9.2 280	0858 16.4 500	1010 17.7 540	1030 20.3 620						
1902 14.1 430	1758 14.4 440	2215 15.1 460	1538 7.5 230	1621 6.2 190	1630 4.3 130						
	2358 10.5 320		2208 16.4 560	2237 18.4 560	2247 21.0 640						
14 M 0057 11.2 340	29 Tu 0637 16.4 500	14 Th 0947 16.4 500	29 F 0354 8.2 250	14 W 0431 6.6 200	29 M 0448 3.3 100						
0723 15.7 480	1336 8.5 260	1620 7.5 230	1002 18.4 560	1040 19.4 590	1104 21.3 650						
1418 9.5 290	2023 14.4 440	2239 16.4 500	1619 5.6 170	1645 4.6 140	1700 3.0 90						
2101 14.4 440			2242 18.7 570	2301 20.0 610	● 2316 22.3 680						
15 Tu 0242 10.8 330	30 W 0202 10.5 320	15 F 1027 18.0 550	30 Sa 0433 5.9 180	15 W 0458 4.6 140	30 Tu 0518 2.3 70						
0846 16.1 490	0827 17.1 520	1648 5.9 180	1045 20.3 620	1110 20.7 630	1135 22.0 670						
1537 8.2 250	1518 7.5 230	2304 18.0 550	1654 3.6 110	1712 3.3 100	1730 2.6 80						
2206 15.7 480	2200 16.1 490		2314 20.7 630	2328 21.3 650	2344 22.6 690						
	31 Th 0340 8.9 270		31 F 0509 3.9 120								
	0950 18.7 570		31 Su 1123 21.7 660								
	1623 5.6 170		1726 2.3 70								
	2248 17.7 540		● 2345 22.0 670								

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Port Hedland, Australia, 2008

Times and Heights of High and Low Waters

October				November				December						
	Time	Height			Time	Height			Time	Height				
	h m	ft cm		h m	ft cm			h m	ft cm		h m	ft cm		
<b>1</b> W	0548	1.6 50		<b>16</b> Th	0528	1.3 40		<b>1</b> Sa	0005	22.0 670		<b>16</b> M	0018	21.0 640
	1205	21.7 660			1147	22.0 670			0617	3.0 90			0635	4.3 130
	1758	3.0 90			1738	3.0 90			1234	20.0 610			1253	19.4 590
					2350	23.6 720			1822	5.2 160			1841	6.9 210
<b>2</b> Th	0010	22.6 690		<b>17</b> F	0600	0.7 20		<b>2</b> Su	0030	21.3 650		<b>2</b> Tu	0047	20.7 630
	0615	1.6 50			1219	21.7 660			0644	3.6 110			0704	4.6 140
	1231	21.3 650			1809	3.0 90			1259	19.7 600			1318	20.0 610
	1823	3.3 100							1846	6.2 190			1910	5.9 180
<b>3</b> F	0033	22.3 680		<b>18</b> Sa	0020	23.6 720		<b>3</b> M	0055	20.7 630		<b>3</b> W	0116	20.0 610
	0641	2.3 70			0633	1.0 30			0709	4.6 140			0732	5.2 160
	1256	20.7 630			1250	21.0 640			1323	18.7 570			1350	18.7 570
	1846	4.3 130			1841	3.6 110			1912	7.2 220			1941	7.9 240
<b>4</b> Sa	0056	22.0 670		<b>19</b> Su	0050	23.0 700		<b>4</b> Tu	0120	19.7 600		<b>4</b> Th	0146	19.0 580
	0705	3.0 90			0706	2.0 60			0734	5.9 180			0803	6.2 190
	1317	20.0 610			1321	20.0 610			1349	17.7 540			1422	18.0 550
	1909	5.2 160			1913	4.9 150			1938	8.2 250			2017	8.5 260
<b>5</b> Su	0117	21.0 640		<b>20</b> M	0122	21.7 660		<b>5</b> W	0147	18.7 570		<b>5</b> Th	0222	18.0 550
	0729	4.3 130			0741	3.6 110			0803	7.2 220			0839	7.2 220
	1339	18.7 570			1354	18.7 570			1419	16.7 510			1500	17.4 530
	1930	6.6 200			1947	6.6 200			2008	9.5 290			2102	9.5 290
<b>6</b> M	0139	19.7 600		<b>21</b> Tu	0158	20.0 610		<b>6</b> Th	0218	17.1 520		<b>6</b> Sa	0304	17.1 520
	0751	5.9 180			0820	5.9 180			0839	8.5 260			0921	8.2 250
	1401	17.4 530			1433	17.1 520			1501	15.4 470			1550	17.1 520
	1951	7.9 240			2028	8.9 270			2052	10.8 330			2203	10.2 310
<b>7</b> Tu	0201	18.4 560		<b>22</b> W	0242	17.7 540		<b>7</b> F	0304	15.7 480		<b>7</b> Su	0403	16.1 490
	0815	7.5 230			0913	8.2 250			0936	10.2 310			1017	9.5 290
	1426	16.1 490			1530	15.4 470			1628	14.4 440			1701	16.7 510
	2012	9.5 290			2138	10.8 330			2259	12.1 370			2339	10.2 310
<b>8</b> W	0226	16.7 510		<b>23</b> Th	0353	15.7 480		<b>8</b> Sa	0452	14.4 440		<b>8</b> M	0123	9.5 290
	0844	9.2 280			1100	9.8 300			1214	10.8 330			1148	10.2 310
	1456	14.4 440			1825	14.4 440			1918	15.1 460			1835	17.1 520
	2034	11.2 340							2006	17.7 540				
<b>9</b> Th	0257	14.8 450		<b>24</b> F	0031	11.2 340		<b>9</b> Su	0129	10.8 330		<b>9</b> Tu	0115	9.2 280
	0939	11.2 340			0656	15.1 460			0737	15.1 460			0725	15.4 470
	1944	13.1 400			1331	9.8 300			1348	9.8 300			1324	9.8 300
					2023	16.1 490			2020	16.7 510			1947	18.0 550
<b>10</b> F	0110	12.5 380		<b>25</b> Sa	0225	9.5 290		<b>10</b> M	0231	8.9 270		<b>10</b> W	0219	7.9 240
	0726	13.8 420			0842	16.4 500			0847	16.4 500			0845	16.4 500
	1421	10.5 320			1445	8.2 250			1442	8.5 260			1528	7.9 240
	2108	15.1 460			2109	18.0 550			2100	18.4 560			2137	19.7 600
<b>11</b> Sa	0258	10.8 330		<b>26</b> Su	0315	7.2 220		<b>11</b> Tu	0314	6.9 210		<b>11</b> W	0358	5.6 170
	0900	15.4 470			0930	18.0 550			0933	18.0 550			1019	18.4 560
	1511	8.9 270			1526	6.9 210			1522	7.2 220			1606	7.2 220
	2132	17.1 520			2143	19.7 600			2136	20.0 610			2213	20.3 620
<b>12</b> Su	0330	8.5 260		<b>27</b> M	0350	5.6 170		<b>12</b> W	0351	4.9 150		<b>12</b> Tu	0433	4.6 140
	0938	17.4 530			1007	19.4 590			1012	19.4 590			1054	19.0 580
	1541	7.2 220			1600	5.6 170			1600	5.9 180			1641	6.6 200
	2157	18.7 570			2214	21.0 640			2211	21.7 660			2246	20.7 630
<b>13</b> M	0358	6.2 190		<b>28</b> Tu	0423	3.9 120		<b>13</b> F	0427	3.0 90		<b>13</b> Sa	0506	3.9 120
	1011	19.0 580			1041	20.3 620			1049	20.3 620			1126	19.4 590
	1608	5.6 170			1632	4.9 150			1636	4.9 150			1713	6.6 200
	2223	20.3 620			2244	21.7 660			2247	22.6 690			2318	21.0 640
<b>14</b> Tu	0427	4.3 130		<b>29</b> W	0454	3.0 90		<b>14</b> F	0504	2.0 60		<b>14</b> Sa	0537	3.9 120
	1043	20.3 620			1112	20.7 630			1127	21.0 640			1156	19.7 600
	1637	4.3 130			1702	4.6 140			1714	4.6 140			1743	6.2 190
	2251	22.0 670			2312	22.0 670			2325	23.0 700			2349	21.0 640
<b>15</b> W	0457	2.6 80		<b>30</b> Th	0523	2.6 80		<b>15</b> Sa	0542	1.3 40		<b>15</b> M	0607	3.9 120
	1115	21.3 650			1142	20.7 630			1204	21.0 640			1225	19.7 600
	1707	3.3 100			1730	4.6 140			1751	4.3 130			1812	6.6 200
	2320	23.0 700			2339	22.0 670							1831	5.2 160
<b>31</b> W	0551	2.6 80		<b>31</b> F	1209	20.7 630							1910	6.2 190
					1758	4.9 150								

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Mergui, Burma, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0315 11.6 354	16 0300 13.3 406	1 Sa 0339 9.6 292	16 0502 10.0 304	1 Sa 0230 10.0 305	16 0526 9.6 292						
0941 5.3 163	W 0915 3.2 99	F 0956 6.6 200	Sa 1109 6.2 190	0839 6.1 187	Su 1134 7.1 217						
1621 11.6 355	1534 13.4 408	1819 10.6 322	1835 11.4 348	1517 10.2 310	1842 11.2 340						
2240 6.6 201	● 2200 4.9 150			2333 7.3 221							
2 W 0427 10.6 323	17 0359 12.1 368	2 Sa 0050 6.6 200	17 0135 5.5 169	2 0608 8.7 265	17 0148 5.6 170						
1059 6.0 184	Th 1013 4.4 133	Sa 0703 9.4 286	Su 0740 10.5 320	1227 7.3 224	0754 10.9 332						
1803 11.6 354	1654 12.7 387	1316 6.4 196	1359 5.5 167	Su 1913 10.6 323	M 1411 5.6 171						
	2347 5.4 165	1945 11.5 351	2020 12.9 392		2020 12.9 394						
3 Th 0028 6.4 194	18 0542 11.2 342	3 Su 0212 5.4 166	18 0303 3.6 111	3 M 0152 6.1 187	18 0254 3.5 106						
0627 10.4 317	F 1201 5.1 155	Su 0826 10.5 321	M 0904 12.4 377	0809 10.0 305	Tu 0857 13.1 398						
1246 5.9 181	1849 12.9 392	1430 5.2 158	1517 3.5 107	1415 5.9 180	1508 3.5 107						
1917 12.3 374		2046 12.9 392	2124 14.8 450	2023 12.3 374	2111 14.8 451						
4 F 0140 5.5 168	19 0135 4.7 144	4 M 0311 4.0 123	19 0356 1.6 50	4 Tu 0254 4.4 134	19 0336 1.6 50						
0744 11.0 335	Sa 0733 11.5 352	0919 11.9 364	Tu 0955 14.3 437	0903 11.9 362	W 0936 15.0 457						
1354 5.2 159	1352 4.5 138	1524 3.7 114	1607 1.6 49	1508 4.1 124	1549 1.7 53						
2012 13.2 402	2013 13.9 424	2132 14.3 437	2210 16.4 501	2111 14.1 430	2149 16.2 494						
5 Sa 0233 4.5 136	20 0253 3.4 103	5 Tu 0357 2.6 78	20 0438 0.0 0	5 W 0336 2.5 77	20 0413 0.3 9						
0840 11.9 362	Su 0853 12.7 388	1002 13.4 408	W 1035 15.9 485	0941 13.8 420	Th 1012 16.4 500						
1446 4.3 131	1508 3.2 99	1607 2.3 69	1648 0.2 6	1549 2.3 69	1626 0.6 17						
2058 14.2 432	2119 15.3 465	2213 15.7 480	2248 17.5 534	2150 15.8 483	2223 17.1 520						
6 Su 0321 3.4 105	21 0356 1.8 55	6 W 0437 1.1 34	21 0513 -1.0 -32	6 Th 0414 0.8 23	21 0445 -0.5 -15						
0927 12.8 390	M 0956 14.1 431	1038 14.8 450	Th 1111 16.9 516	1016 15.6 475	F 1042 17.3 527						
1532 3.3 101	1609 1.8 55	1647 1.0 29	1723 -0.6 -17	1627 0.6 18	1657 -0.1 -2						
2142 15.1 460	2216 16.6 506	2249 17.0 517	○ 2322 17.9 547	2227 17.3 527	2254 17.3 528						
7 M 0404 2.5 75	22 0448 0.4 11	7 Th 0512 -0.2 -5	22 0546 -1.5 -45	7 F 0449 -0.8 -24	22 0513 -0.8 -23						
1010 13.7 417	Tu 1047 15.5 471	1112 16.0 487	F 1142 17.4 530	1049 17.1 521	Sa 1111 17.7 539						
1616 2.4 72	1658 0.6 18	1723 -0.1 -3	1754 -0.7 -22	1704 -0.7 -21	1726 -0.2 -6						
2223 16.0 487	○ 2302 17.6 535	● 2325 17.8 543	2350 17.8 542	● 2302 18.2 556	○ 2320 17.2 524						
8 Tu 0445 1.6 48	23 0532 -0.7 -20	8 F 0546 -1.1 -35	23 0612 -1.3 -40	8 Sa 0522 -1.9 -57	23 0539 -0.6 -19						
1048 14.5 442	W 1129 16.3 498	1146 16.9 514	Sa 1207 17.4 529	1123 18.1 553	Su 1136 17.7 538						
1655 1.5 47	1739 -0.1 -4	1757 -0.7 -22	1819 -0.4 -12	1739 -1.5 -45	1751 0.0 -1						
● 2301 16.7 509	2342 18.0 549	2357 18.2 555		2336 18.7 569	2344 16.8 511						
9 W 0523 0.8 24	24 0608 -1.1 -33	9 Sa 0617 -1.6 -50	24 0014 17.2 525	9 Su 0554 -2.4 -72	24 M 0601 -0.2 -7						
1125 15.2 462	Th 1205 16.7 510	1215 17.3 527	Su 0634 -0.8 -23	1153 18.6 568	1157 17.4 529						
1732 1.0 29	1815 -0.3 -8	1829 -0.8 -25	1229 16.9 516	1811 -1.6 -50	1814 0.4 12						
2336 17.2 523			1842 0.3 8								
10 Th 0558 0.2 7	25 0015 17.8 543	10 Tu 0027 18.0 550	25 0035 16.4 500	10 M 0007 18.4 562	25 0005 16.2 493						
1158 15.6 475	F 0639 -0.9 -28	Su 0646 -1.6 -48	M 0652 0.0 1	0624 -2.2 -66	0621 0.3 10						
1807 0.7 21	1236 16.6 506	1243 17.3 527	1249 16.3 497	1222 18.5 563	1218 16.8 512						
	1845 0.2 6	1900 -0.4 -12	1903 1.0 32	1842 -1.1 -35	1835 1.0 30						
11 F 0010 17.3 527	26 0043 17.2 523	11 M 0055 17.4 530	26 0053 15.4 470	11 Tu 0035 17.7 538	26 0025 15.4 470						
0632 0.0 0	Sa 0706 -0.3 -8	M 0714 -1.0 -30	Tu 0709 0.9 28	0652 -1.3 -41	0639 1.0 32						
1231 15.8 481	Sa 1303 16.1 490	1310 16.9 514	1306 15.5 472	1248 17.8 543	1236 16.0 489						
1841 0.8 25	1912 1.0 31	1930 0.5 14	1921 2.0 61	1910 -0.1 -4	1855 1.8 55						
12 Sa 0041 17.1 520	27 0106 16.1 492	12 Tu 0123 16.3 498	27 0110 14.3 437	12 W 0103 16.4 500	27 0045 14.5 441						
0703 0.1 3	Su 0728 0.7 20	Tu 0740 0.0 0	W 0724 1.9 59	0717 -0.1 -2	0657 2.0 61						
1302 15.7 478	1326 15.3 467	1337 16.1 490	1324 14.5 441	1313 16.7 508	1256 15.1 460						
1913 1.3 40	1934 2.0 62	1958 1.6 49	1942 3.1 95	1938 1.3 40	1917 2.9 87						
13 Su 0112 16.5 502	28 0126 15.0 457	13 M 0151 15.0 457	28 0131 13.1 398	13 Th 0130 14.9 453	28 0106 13.4 407						
0734 0.6 17	M 0745 1.7 52	W 0805 1.3 40	Th 0742 3.1 96	0741 1.5 47	0717 3.1 95						
1331 15.4 468	1345 14.4 440	1406 15.0 456	1347 13.2 402	1340 15.2 463	1319 13.9 423						
1947 2.1 63	1957 3.1 95	2030 3.0 91	2008 4.5 136	2008 3.0 92	1942 4.2 127						
14 M 0142 15.6 476	29 0147 13.8 420	14 Tu 0223 13.4 409	29 0157 11.6 354	14 F 0201 13.0 397	29 0131 12.0 367						
0804 1.2 38	Tu 0804 2.8 85	0834 2.9 87	F 0806 4.6 139	0808 3.4 104	0740 4.5 137						
1404 14.9 453	1408 13.5 410	1443 13.5 413	1418 11.7 357	1413 13.4 408	1348 12.5 380						
2020 3.0 91	2020 4.2 129	● 2112 4.6 140	● 2046 6.0 182	● 2049 5.0 152	2018 5.6 172						
15 Tu 0218 14.6 444	30 0209 12.4 379	15 F 0308 11.6 354	15 0246 11.0 336	15 Sa 0246 11.0 336	30 0206 10.6 322						
0836 2.2 67	W 0825 4.0 121	0917 4.6 141	0847 5.5 167	0847 5.5 167	0812 6.1 185						
1443 14.2 432	1437 12.3 375	1548 11.9 364	1521 11.4 347	1521 11.4 347	1443 11.0 334						
2103 4.0 121	● 2056 5.4 166	2251 6.0 184	2258 6.6 202	2258 6.6 202	● 2142 7.1 215						
16 Th 0243 11.0 335	31 0243 11.0 335										
0856 5.2 160	Th 0856 5.2 160										
1527 11.1 337	1527 11.1 337										
2204 6.6 202	2204 6.6 202										

Time meridian 97° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Mergui, Burma, 2008

Times and Heights of High and Low Waters

April				May				June						
	Time	Height			Time	Height			Time	Height				
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm			
1 Tu	0102	6.5 197		16 W	0220	3.8 116		1 Th	0113	5.0 152		16 Su	0213	3.1 95
	0724	10.3 314			0826	13.7 417			0731	13.0 397			0825	16.4 499
	1335	6.5 197			1439	4.1 124			1348	5.1 156			1453	3.0 91
	1940	12.2 373			2039	14.5 441			1942	14.0 426			2046	15.5 472
2 W	0215	4.7 143		17 Th	0301	2.5 75		2 F	0211	3.3 102		17 Sa	0254	3.3 100
	0826	12.3 376			0904	15.3 465			0822	15.0 456			0900	15.7 480
	1436	4.6 139			1518	2.7 83			1442	3.3 102			1517	3.3 102
	2034	14.1 429			2117	15.5 472			2034	15.4 469			2115	14.7 449
3 Th	0300	2.8 84		18 F	0338	1.5 46		3 Sa	0258	1.8 55		18 Su	0331	2.8 86
	0907	14.5 441			0938	16.4 500			0905	16.7 510			0935	16.4 499
	1519	2.6 80			1553	1.8 54			1527	1.7 53			1553	2.8 85
	2117	15.8 481			2150	16.0 489			2121	16.6 505			2150	15.0 458
4 F	0341	1.0 29		19 Sa	0410	1.0 29		4 Su	0342	0.6 18		19 M	0406	2.5 75
	0945	16.4 500			1009	17.1 521			0946	18.1 551			1007	16.7 510
	1600	0.9 27			1626	1.2 38			1610	0.5 174			1627	2.4 74
	2156	17.2 524			2221	16.3 496			2204	17.3 528			2226	15.2 464
5 Sa	0417	-0.6 -17		20 Su	0440	0.8 23		5 M	0424	-0.2 -7		20 Tu	0438	2.3 69
	1020	17.9 547			1038	17.4 531			1027	18.9 576			1040	16.9 515
	1638	-0.5 -14			1657	1.0 31			1651	-0.2 -6			1701	2.2 67
	2234	18.1 552			2251	16.2 495			2247	17.6 537			2258	15.3 465
6 Su	0454	-1.5 -47		21 M	0506	0.8 23		6 Tu	0504	-0.5 -16		21 W	0509	2.2 66
	1055	18.9 577			1105	17.5 532			1105	19.1 583			1112	16.9 516
	1715	-1.2 -38			1723	1.0 31			1732	-0.3 -10			1732	2.2 66
	2311	18.4 562			2318	16.0 488			2327	17.4 531			2329	15.2 463
7 M	0527	-1.9 -58		22 Tu	0532	0.9 28		7 W	0542	-0.3 -9		22 Th	0537	2.2 67
	1129	19.3 588			1130	17.3 526			1143	18.8 573			1142	16.8 512
	1750	-1.4 -42			1750	1.2 37			1811	0.1 3			1801	2.3 70
	2346	18.2 554			2343	15.6 477							2358	15.0 456
8 Tu	0601	-1.6 -48		23 W	0556	1.3 39		8 Th	0007	16.8 511		23 F	0605	2.4 74
	1200	19.0 578			1154	16.9 514			0618	0.5 15			1211	16.5 503
	1824	-0.8 -25			1814	1.6 49			1221	18.0 548			1831	2.7 81
									1850	1.0 32				
9 W	0018	17.3 528		24 Th	0008	15.1 461		9 F	0048	15.7 480		24 Sa	0028	14.6 444
	0631	-0.7 -20			0618	1.8 55			0655	1.7 52			0634	1.9 58
	1229	18.1 551			1218	16.2 495			1300	16.8 511			1304	17.4 531
	1856	0.3 9			1838	2.3 69			1931	2.4 72			1902	3.2 97
10 Th	0049	16.0 489		25 F	0031	14.4 439		10 Sa	0130	14.5 441		25 Tu	0057	14.0 428
	0700	0.8 23			0639	2.6 78			0734	3.2 99			0703	3.7 112
	1259	16.7 510			1242	15.5 471			1342	15.4 468			1312	15.3 467
	1928	1.9 57			1904	3.1 96			2018	3.8 116			1937	3.9 116
11 F	0121	14.4 440		26 Sa	0056	13.5 412		11 Su	0220	13.1 400		26 M	0133	13.5 410
	0730	2.5 76			0703	3.5 108			0819	4.9 148			0738	4.6 140
	1331	15.1 459			1309	14.5 441			1437	13.9 423			1351	14.5 443
	2005	3.7 112			1934	4.2 128			2119	5.1 154			2149	5.1 154
12 Sa	0202	12.7 386		27 Su	0126	12.5 381		12 M	0332	12.1 369		12 Tu	0219	12.8 391
	0804	4.5 136			0733	4.7 144			0928	6.3 191			0825	5.6 171
	1415	13.2 402			1345	13.3 406			1556	12.8 389			1443	13.7 418
	2103	5.5 168			2015	5.4 164			2242	5.7 175			2112	5.2 158
13 Su	0314	10.9 333		28 M	0212	11.4 347		13 Tu	0504	11.8 361		28 W	0325	12.4 379
	0903	6.4 196			0815	6.1 186			1109	6.9 209			0934	6.4 195
	1602	11.6 353			1449	12.2 372			1729	12.4 379			1553	13.2 401
	2315	6.4 196			2131	6.4 194							2224	5.4 165
14 M	0537	10.5 320		29 Tu	0352	10.6 323		14 W	0015	5.5 169		29 Th	0451	12.6 385
	1149	7.2 218			0953	7.3 221			0635	12.5 382			1113	6.5 198
	1824	11.7 358			1649	11.7 358			1249	6.2 190			1718	13.2 401
					2339	6.3 191			1852	12.9 393			2351	5.1 155
15 Tu	0119	5.4 165		30 W	0611	11.3 343		15 Th	0124	4.8 145		30 F	0622	13.6 415
	0730	11.9 362			1231	6.8 206			0737	13.7 418			1250	5.6 171
	1345	5.7 175			1834	12.6 384			1352	5.2 157			1841	13.7 418
	1949	13.1 400							1951	13.6 415				
16 M	0256	4.5 137		31 Sa	0112	4.2 127		16 M	0213	3.1 95		29 Su	0001	5.1 154
	0904	15.3 467			0731	15.0 457			0825	16.4 499			0638	14.4 440
	1525	4.2 127							1453	3.0 91			1352	5.3 161
	2127	13.9 424							2046	15.5 472			1906	13.5 412
17 Tu	0338	3.9 119		17 W	0307	2.2 66		17 W	0915	17.5 532		30 M	0130	4.6 139
	0945	15.9 485			1094	15.9 485			1543	1.9 58			0751	15.4 469
	1606	3.6 109							2139	16.1 492			1425	4.3 130
	2207	14.4 439										2020	14.2 433	

Time meridian 97° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

## Mergui, Burma, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0240 3.7 113	16 W 0319 4.7 144	1 F 0433 1.7 53	16 Sa 0426 2.4 72	1 M 0532 0.1 2	16 Tu 0513 -0.1 -2						
0853 16.4 501	0929 15.4 468	1038 18.6 566	1028 17.7 541	1129 19.3 587	1111 19.3 587						
1527 3.1 96	1552 4.1 126	1708 0.6 17	1651 1.5 46	1751 -0.3 -10	1729 -0.7 -21						
2125 15.1 460	2156 14.1 430	● 2305 17.5 533	2249 16.8 512	2347 18.8 573	2327 19.3 589						
2 W 0342 2.8 84	17 Th 0403 3.7 114	2 Sa 0518 0.7 22	17 Su 0502 1.3 41	2 Tu 0603 0.4 12	17 W 0547 -0.2 -7						
0952 17.5 532	1010 16.3 498	1120 19.3 588	1102 18.6 567	1157 18.6 567	1142 19.1 582						
1626 2.0 62	1634 3.2 98	1747 -0.2 -6	1725 0.6 17	1818 0.3 9	1800 -0.6 -17						
2223 16.0 488	2234 15.0 456	2344 18.1 553	● 2322 17.7 539		2356 19.2 584						
3 Th 0438 1.8 55	18 F 0442 2.9 87	3 Su 0556 0.3 10	18 M 0536 0.7 21	3 W 0012 18.3 557	18 Th 0618 0.2 5						
1045 18.3 558	1048 17.2 524	1157 19.4 591	1134 19.0 579	0628 1.2 36	1211 18.4 560						
1716 1.1 33	1711 2.3 71	1822 -0.3 -8	1756 0.0 0	1221 17.6 537	1829 0.1 4						
● 2315 16.8 511	○ 2309 15.7 480		2353 18.2 554	1839 1.2 38							
4 F 0527 1.1 35	19 Sa 0519 2.1 65	4 M 0018 18.2 555	19 Tu 0608 0.5 16	4 Th 0034 17.5 532	19 F 0024 18.5 564						
1133 18.8 573	1123 17.8 543	0629 0.6 19	1205 18.9 576	0650 2.2 66	0648 1.1 33						
1803 0.5 15	1744 1.6 50	1228 18.8 574	1825 0.0 -1	1241 16.5 502	1239 17.3 526						
	2343 16.3 498	1852 0.3 9		1857 2.3 71	1856 1.3 39						
5 Sa 0001 17.2 524	20 Su 0553 1.7 51	5 Tu 0048 17.7 540	20 W 0021 18.2 555	5 F 0052 16.4 501	20 Sa 0049 17.5 532						
0611 1.0 29	1156 18.1 553	0659 1.4 44	0639 0.9 26	0710 3.3 100	0716 2.4 74						
1215 18.8 574	1817 1.2 36	1255 17.8 543	1234 18.3 559	1257 15.2 464	1307 15.8 482						
1843 0.5 14		1917 1.3 39	1853 0.4 13	1913 3.5 106	1921 2.8 84						
6 Su 0041 17.2 523	21 M 0014 16.7 509	6 W 0113 16.9 515	21 Th 0048 17.8 543	6 Sa 0110 15.3 465	21 Su 0116 16.0 489						
0649 1.3 39	0625 1.6 49	0724 2.6 78	0709 1.6 49	0728 4.5 138	0745 4.0 123						
1253 18.3 559	1225 18.1 552	1317 16.5 504	1300 17.4 530	1317 13.9 423	1338 14.1 431						
1920 1.0 29	1848 1.1 34	1938 2.5 76	1919 1.3 40	1930 4.8 145	1949 4.5 137						
7 M 0117 16.7 509	22 Tu 0043 16.8 511	7 Th 0135 15.8 483	22 F 0113 17.1 521	7 Su 0130 13.9 424	22 M 0148 14.4 438						
0726 2.1 65	0657 1.9 59	0748 3.8 116	0737 2.7 82	0752 5.9 180	0825 5.8 178						
1326 17.4 529	1255 17.7 538	1338 15.2 462	1328 16.2 493	1340 12.4 378	1423 12.3 375						
1951 1.9 58	1916 1.4 43	1955 3.8 115	1945 2.5 76	● 1951 6.1 187	2030 6.4 195						
8 Tu 0151 15.9 484	23 W 0113 16.5 504	8 F 0157 14.7 448	23 Sa 0141 16.1 490	8 M 0158 12.4 377	23 Tu 0251 12.5 381						
0758 3.3 100	0728 2.6 79	0811 5.1 155	0806 4.0 121	0827 7.4 226	1009 7.4 227						
1357 16.1 491	1324 16.9 516	1401 13.7 418	1359 14.7 449	1412 10.8 330	1647 10.9 332						
2020 3.1 94	1945 2.0 61	2015 5.1 154	2013 3.9 119	2023 7.7 234	2251 7.9 241						
9 W 0222 14.9 455	24 Th 0142 16.1 491	9 Sa 0223 13.4 409	24 Su 0215 14.8 450	9 Tu 0305 10.8 330	24 W 0604 12.1 370						
0829 4.6 139	0759 3.4 105	0842 6.4 196	0843 5.5 167	1151 8.5 258	1302 6.7 203						
1426 14.7 448	1355 15.9 486	1429 12.2 372	1440 13.1 399	1819 10.0 304	1910 12.0 367						
2050 4.3 132	2015 2.9 87	● 2042 6.4 196	● 2051 5.5 168								
10 Th 0258 13.9 424	25 F 0215 15.5 471	10 Su 0307 12.1 368	25 M 0311 13.2 403	10 W 0039 8.4 255	25 Th 0130 6.6 200						
0905 5.8 177	0834 4.4 135	0939 7.7 235	0957 7.0 213	0706 11.8 359	0742 13.8 422						
1501 13.3 406	1432 14.8 452	1522 10.7 327	1609 11.5 350	1342 7.2 218	1416 4.6 140						
● 2122 5.5 169	2049 3.9 118	2138 7.8 237	2219 7.1 217	1954 11.4 347	2019 14.2 432						
11 F 0346 13.0 395	26 Sa 0257 14.6 446	11 M 0604 11.5 349	26 Tu 0549 12.4 378	11 Th 0201 6.8 207	26 F 0233 4.4 134						
0959 6.9 209	0921 5.5 167	1231 7.9 240	1248 7.0 212	0808 13.4 409	0837 15.8 482						
1552 12.1 368	1521 13.6 414	1846 10.5 321	1853 11.7 356	1433 5.5 168	1503 2.7 82						
2217 6.6 200	● 2135 5.0 152			2040 13.2 401	2103 16.2 494						
12 Sa 0516 12.4 377	27 Su 0400 13.8 420	12 Tu 0103 7.6 233	27 W 0114 6.7 205	12 F 0246 5.1 154	27 Th 0317 2.5 77						
1139 7.3 223	1038 6.4 195	0731 12.4 378	0742 13.7 419	0850 15.2 462	0918 17.4 529						
1739 11.3 345	1640 12.5 381	1358 6.8 208	1423 5.2 158	1512 3.8 116	1542 1.2 37						
	2255 6.0 183	2009 11.6 354	2025 13.4 409	2115 14.9 454	2141 17.7 541						
13 Su 0007 7.0 213	28 M 0554 13.4 409	13 W 0216 6.4 196	28 Th 0240 4.8 147	13 F 0325 3.4 103	28 W 0356 1.2 37						
0648 12.6 385	1245 6.3 193	0830 13.8 420	0850 15.7 479	0927 16.7 510	0955 18.3 557						
1309 6.9 210	1843 12.3 376	1456 5.5 167	1522 3.1 95	1548 2.2 68	1617 0.3 10						
1914 11.5 352		2101 13.0 395	2121 15.5 471	2149 16.5 504	2214 18.7 569						
14 M 0130 6.5 199	29 Tu 0104 5.9 180	14 Th 0307 5.0 152	29 F 0335 2.8 86	14 Tu 0402 1.9 57	29 W 0431 0.5 15						
0752 13.4 408	0735 14.3 435	0915 15.2 464	0939 17.6 535	1002 18.0 549	1028 18.5 565						
1412 6.0 184	1415 5.2 158	1539 4.1 125	1607 1.3 40	1623 0.8 25	1649 0.1 2						
2020 12.3 374	2015 13.3 406	2141 14.3 437	2204 17.2 524	2223 17.9 546	● 2245 19.0 579						
15 Tu 0230 5.7 174	30 W 0233 4.7 144	15 F 0348 3.6 110	30 Sa 0419 1.3 39	15 M 0438 0.7 21	30 Tu 0504 0.4 11						
0844 14.4 438	0849 15.7 479	0953 16.6 506	1021 18.8 573	1037 18.9 576	1059 18.3 558						
1505 5.1 155	1525 3.6 109	1616 2.8 84	1647 0.1 3	1657 -0.2 -5	1718 0.3 9						
2112 13.2 402	2125 14.8 452	2216 15.6 477	2242 18.3 559	2255 18.9 575	2313 18.8 573						
	31 Th 0341 3.2 97	0949 17.3 527	● 2316 18.9 575								
	1621 1.9 58	1621 1.9 58									
	2219 16.3 498	2219 16.3 498									

Time meridian 97° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Mergui, Burma, 2008

Times and Heights of High and Low Waters

October				November				December							
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height				
h m	ft	cm		h m	ft	cm		h m	ft	cm					
1 W	0533	0.7	21	16 Th	0525	-0.4	-13	1 Sa	0558	2.2	66	1 M	0628	0.8	24
1126	17.7	540		1119	18.5	564		1225	16.1	491		1215	14.5	442	
1743	0.9	26		1736	-0.4	-12		1835	1.7	52		1821	2.9	87	
2339	18.3	557		2333	19.4	590						16 Tu	0041	17.6	537
2 Th	0557	1.3	40	17 F	0600	0.0	1	2 Su	0001	16.4	499	17 W	0710	0.4	12
1150	16.9	515		1154	17.8	542		0622	2.9	87		1312	15.8	482	
1805	1.6	49		1808	0.4	12		1217	14.5	443		1919	1.7	51	
								1825	3.4	104					
3 F	0000	17.5	533	18 Sa	0004	18.5	565	3 M	0025	15.5	473	3 W	0053	15.2	463
0619	2.1	64		0632	1.0	30		0648	3.7	112		0719	3.2	98	
1211	16.0	487		1227	16.6	507		1241	13.7	418		1316	13.5	412	
1824	2.5	76		1839	1.6	50		1848	4.3	132		1921	4.3	130	
4 Sa	0019	16.6	505	19 Su	0035	17.3	527	4 Tu	0050	14.5	443	4 Th	0127	14.4	438
0641	3.1	93		0706	2.4	73		0717	4.6	141		0754	3.9	118	
1229	14.9	455		1300	15.2	463		1312	12.7	388		1357	12.9	393	
1842	3.5	106		1910	3.2	98		1916	5.4	165		2004	5.2	159	
5 Su	0038	15.5	471	20 M	0107	15.7	479	5 W	0124	13.4	408	5 F	0212	13.5	410
0700	4.1	126		0744	4.1	124		0755	5.7	174		0840	4.6	139	
1250	13.8	420		1341	13.5	412		1355	11.7	356		1451	12.4	377	
1900	4.6	140		1947	5.0	152		1958	6.7	204		2103	6.1	186	
6 M	0100	14.2	433	21 Tu	0151	13.9	425	6 Th	0223	12.2	372	6 Sa	0314	12.6	384
0724	5.4	165		0837	5.8	176		0904	6.7	203		0941	5.1	166	
1313	12.5	381		1449	11.9	364		1531	10.9	333		1609	12.2	372	
1923	5.9	180		2046	6.8	208		2136	7.7	236		2231	6.5	197	
7 Tu	0128	12.8	390	22 W	0322	12.3	376	7 F	0426	11.6	354	7 Su	0435	12.2	371
0759	6.8	208		1030	6.8	207		1111	6.7	204		1104	5.2	157	
1349	11.1	338		1701	11.4	348		1753	11.5	352		1746	12.8	390	
1957	7.4	226		2309	7.6	231									
8 W	0225	11.3	344	23 Th	0546	12.3	376	8 Sa	0015	7.2	218	8 M	0022	5.8	176
0939	8.1	248		1235	6.0	182		0614	12.3	376		0610	12.5	380	
1713	10.0	305		1850	12.7	386		1246	5.5	169		1236	4.6	139	
2330	8.6	262						1909	13.2	403		1903	14.0	428	
9 Th	0611	11.4	348	24 F	0107	6.2	189	9 Su	0128	5.5	167	9 Tu	0133	4.4	135
1252	7.2	220		0714	13.6	415		0721	13.7	417		0724	13.3	406	
1912	11.4	348		1342	4.4	134		1344	4.0	122		1344	3.5	108	
				1951	14.5	442		1958	15.1	459		1959	15.4	469	
10 F	0124	7.1	215	25 Sa	0206	4.4	134	10 M	0218	3.7	114	10 W	0229	3.1	93
0724	13.0	395		0808	15.1	459		0812	15.1	459		0823	14.3	436	
1351	5.5	168		1429	3.0	91		1430	2.6	78		1440	2.5	76	
2004	13.4	407		2033	16.2	493		2039	16.7	510		2050	16.6	505	
11 Sa	0213	5.2	158	26 Su	0250	2.9	88	11 Tu	0301	2.2	66	11 Th	0319	1.8	55
0812	14.7	447		0849	16.1	492		0857	16.2	495		0917	15.2	463	
1433	3.7	114		1508	1.9	59		1514	1.3	41		1532	1.6	48	
2040	15.3	467		2110	17.4	530		2119	18.0	549		2139	17.5	533	
12 Su	0254	3.3	102	27 M	0328	1.8	56	12 W	0343	0.9	28	12 F	0410	0.8	25
0853	16.3	496		0925	16.7	510		0939	17.0	519		1007	15.9	484	
1512	2.1	64		1543	1.4	42		1556	0.5	15		1621	0.9	26	
2117	17.1	520		2143	18.0	550		2159	18.8	574		2227	18.1	551	
13 M	0334	1.7	53	28 Tu	0403	1.3	39	13 Th	0426	0.1	4	13 Sa	0458	0.1	4
0931	17.6	535		0959	16.9	516		1021	17.4	531		1057	16.3	498	
1549	0.7	22		1616	1.2	36		1637	0.1	3		1709	0.5	14	
2152	18.5	563		2214	18.3	557		2238	19.1	582		2313	18.3	559	
14 Tu	0412	0.5	15	29 W	0435	1.1	34	14 F	0506	-0.1	-4	14 Sa	0544	-0.2	-6
1007	18.4	561		1031	16.8	511		1104	17.4	530		1118	15.0	486	
1626	-0.2	-6		1647	1.3	40		1718	0.2	5		1725	2.3	70	
2227	19.4	590		2244	18.1	552		2318	18.9	576		2326	16.6	506	
15 W	0448	-0.3	-8	30 Th	0506	1.3	39	15 Sa	0547	0.1	3	15 M	0629	-0.1	-4
1044	18.7	570		1101	16.4	500		1144	16.9	516		1229	16.3	498	
1702	-0.6	-18		1715	1.6	50		1757	0.7	22		1753	2.5	75	
2301	19.7	599		2312	17.7	539		2357	18.2	555		2356	16.3	497	
31 F	0533	1.6	50	31 F	1127	15.9	484					31 W	0021	16.6	505
				1739	2.1	64						0643	1.0	31	
				2337	17.1	521						1241	15.1	459	
												1850	1.9	58	

Time meridian 97° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

## Rangoon, Burma, 2008

Times and Heights of High and Low Waters

January				February				March				
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm	
1 Tu	0619	3.9	118	16	0625	3.9	120	1 Sa	0004	15.8	483	
	1123	14.2	434	W	1126	14.8	452	F	0724	2.6	79	
	1819	3.4	104		1825	3.2	97		1242	15.1	459	
	2344	15.6	476	O	2350	16.9	514		1913	3.7	112	
2 W	0700	3.1	95	17	0720	1.6	50	2 Sa	0039	16.9	514	
	1213	14.4	440	Th	1228	16.1	490		0759	1.5	46	
	1853	3.2	98		1914	1.6	50	Sa	1319	15.9	485	
3 Th	0021	16.2	494	F	0810	-0.1	-4		1953	2.6	80	
	0742	2.3	71		1317	17.2	525	3 Su	0115	17.9	545	
	1258	14.9	454		2003	0.5	16	M	0937	0.2	6	
	1930	2.8	85						1436	19.7	600	
4 F	0056	16.9	515	18	0038	18.3	558		2140	0.1	2	
	0826	1.6	48					3 M	0153	20.8	634	
	1338	15.5	471	Sa	0903	-1.2	-36		0937	-1.5	-47	
	2014	2.2	67		1402	18.1	552					
5 Sa	0133	17.6	536		2056	-0.1	-2		2042	1.7	51	
	0913	1.0	29	20	0159	20.2	616	4 M	0155	18.8	573	
	1419	16.0	487		0957	-1.4	-43		0937	0.2	6	
	2103	1.6	48	Su	1445	18.6	566		1028	-0.9	-26	
6 Su	0213	18.1	553		2152	-0.1	-4		1439	17.5	533	
	1001	0.6	18	21	0239	20.5	625		2136	1.0	32	
	1458	16.4	499	M	1051	-0.9	-27	5 Tu	0232	19.4	590	
	2154	1.1	35		1526	18.6	568		1029	0.3	8	
7 M	0254	18.4	561		2244	0.4	11		1514	17.8	543	
	1049	0.7	21	21	0305	19.4	592	5 W	0301	20.9	638	
	1537	16.4	500						1116	0.4	13	
	2241	1.2	38	W	1607	18.3	557		1542	19.4	592	
8 Tu	0332	18.3	557	O	2333	1.3	41		2314	1.8	54	
	1133	1.3	40	22	0319	20.3	618	6 Th	0205	19.9	606	
	1614	16.0	489						1000	0.6	18	
	2325	2.0	62	7 Th	0325	18.9	575	5 W	0242	20.6	628	
9 W	0405	17.7	539		7	1200	2.4	74		1116	0.4	13
	1216	2.5	75	23	0402	19.6	598	21	0333	20.2	615	
	1654	15.4	468		1224	1.5	45		1154	2.0	61	
10 Th	0007	3.4	103	W	1649	17.6	536	6 W	0333	20.2	615	
	0440	16.6	507	24	0018	2.6	80		1610	18.7	569	
	1259	3.9	118		0449	18.5	565	O	2354	3.3	100	
	1741	14.5	442		1304	2.9	89	21	0305	19.4	592	
11 F	0051	5.0	153		1732	16.7	508		1116	0.4	13	
	0542	15.5	471	26	0145	5.5	168	7 Th	0249	19.4	592	
	1343	5.2	159		0634	16.3	498	22	0408	19.0	578	
	1832	13.8	421	Sa	1421	5.3	163		1225	3.6	111	
12 Sa	0141	6.5	198		1907	14.9	454		1641	17.6	537	
	0641	14.4	440	27	0232	6.7	203	O	2348	4.2	128	
	1430	6.1	187		0729	14.7	448	7 M	0235	20.0	609	
	1925	13.5	412		1502	6.2	188		1116	0.4	13	
13 Su	0237	7.4	225		2000	14.3	436	21	0310	19.9	606	
	0739	13.8	421	28	0337	7.3	221		1144	2.8	86	
	1522	6.4	196		0828	13.7	419	6 Th	1136	2.9	87	
	2023	13.7	417		1604	6.6	201		1513	18.3	558	
14 M	0345	7.3	223		2101	14.0	427	O	2348	4.2	128	
	0844	13.6	415	29	0532	6.7	203	22	0340	18.7	571	
	1621	6.0	182		0947	13.3	404		1144	4.3	130	
	2128	14.3	436		1731	6.2	190	Sa	1555	18.4	560	
15 Tu	0509	6.1	187		2218	14.2	433		O	2348	4.2	128
	1002	13.9	423	30	0623	5.2	159	23	0001	5.5	167	
	1727	4.8	146		1113	13.5	412		0424	17.2	524	
	2244	15.4	470		1813	5.4	166	Su	1208	5.6	170	
				O	2323	14.9	455		1635	17.2	523	
16 Sa	0653	3.8	117	31	0653	3.8	117	24	0034	6.7	205	
	1203	14.2	433		1203	4.6	141		0521	15.6	475	
	1840	4.6	141					M	1234	6.7	204	

Time meridian 97° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Rangoon, Burma, 2008

Times and Heights of High and Low Waters

April				May				June			
	Time	Height			Time	Height			Time	Height	
	h m	ft	cm		h m	ft	cm		h m	ft	cm
<b>1</b>	0017	17.9	546	<b>16</b>	0120	19.8	602	<b>1</b>	0020	18.1	553
Tu	0730	1.7	51	W	0825	0.5	14	Th	0739	2.0	60
	1256	18.1	553		1351	20.1	612		1254	19.2	585
	1951	2.8	85		2054	1.9	59		2020	2.7	81
<b>2</b>	0057	19.0	578	<b>17</b>	0153	19.7	601	<b>2</b>	0107	18.8	572
W	0823	1.2	36	Th	0913	1.3	41	F	0836	1.8	55
	1334	19.1	582		1417	20.1	613		1333	19.8	605
	2048	2.1	65		2144	2.6	78		2121	2.5	75
<b>3</b>	0135	19.6	598	<b>18</b>	0224	19.5	593	<b>3</b>	0155	18.9	577
Th	0920	1.2	38	F	0956	2.4	72	Sa	0934	2.2	66
	1408	19.7	599		1438	19.9	607		1412	20.0	611
	2146	2.2	67		2226	3.4	104		2220	2.9	88
<b>4</b>	0209	19.7	601	<b>19</b>	0254	18.9	576	<b>4</b>	0245	18.6	566
F	1015	1.9	58	Sa	1032	3.4	104	M	1028	3.0	90
	1435	19.7	601		1500	19.5	594		1454	19.8	602
	2241	3.0	91		2302	4.4	133		2315	3.8	115
<b>5</b>	0238	19.2	584	<b>20</b>	0328	18.0	548	<b>5</b>	0339	17.9	545
Sa	1104	3.1	95	Su	1100	4.4	133	M	1117	4.1	125
	1452	19.2	585		1527	18.8	572		1544	19.1	582
	2332	4.4	134	O	2335	5.3	161	●	●	●	●
<b>6</b>	0331	18.0	548	<b>21</b>	0412	16.8	513	<b>6</b>	0006	4.9	149
Su	1148	4.7	144	M	1127	5.2	159	Tu	0434	17.0	519
	1543	18.2	556		1610	17.8	542		1204	5.3	162
●	●	●	●						1642	18.3	559
<b>7</b>	0022	6.0	183	<b>22</b>	0008	6.1	186	<b>7</b>	0100	5.9	179
M	0442	16.6	506	Tu	0505	15.6	475	W	0536	16.3	497
	1230	6.3	193		1157	6.1	186		1253	6.4	196
	1654	17.2	523		1704	16.7	509		1747	17.7	540
<b>8</b>	0114	7.4	225	<b>23</b>	0048	6.8	206	<b>8</b>	0158	6.4	195
Tu	0547	15.5	472	W	0602	14.5	441	Th	0647	16.0	489
	1314	7.7	234		1233	7.0	212		1347	7.1	216
	1802	16.4	499		1803	15.7	479		1858	17.4	531
<b>9</b>	0213	8.1	247	<b>24</b>	0130	7.3	221	<b>9</b>	0309	6.1	187
W	0659	14.9	454	Th	0704	13.7	418	F	0810	16.3	498
	1407	8.5	258		1311	7.8	238		1457	7.1	215
	1917	16.0	489		1902	15.0	458		2018	17.6	535
<b>10</b>	0326	7.9	240	<b>25</b>	0505	8.3	253	<b>10</b>	0428	4.9	148
Th	0831	15.1	460	F	0817	13.5	412	Sa	0928	17.1	521
	1522	8.3	254		1359	8.5	260		1615	6.0	182
	2047	16.3	498		2001	14.7	448		2132	17.9	546
<b>11</b>	0513	5.9	180	<b>26</b>	0533	6.8	207	<b>11</b>	0521	3.1	95
F	1011	16.3	496	Sa	0947	14.0	428	Su	1031	17.9	545
	1701	6.6	201		1656	8.4	256		1711	4.6	139
	2219	17.3	528		2108	14.9	454		2231	18.2	556
<b>12</b>	0603	3.2	97	<b>27</b>	0543	5.5	168	<b>12</b>	0557	1.8	56
Sa	1115	17.6	537	Su	1028	14.9	454	M	1122	18.5	563
	1750	4.4	134		1720	7.2	219		1754	3.5	108
	2320	18.3	559		2206	15.5	473	●	2322	18.3	559
<b>13</b>	0632	1.2	36	<b>28</b>	0553	4.4	134	<b>13</b>	0628	1.3	41
Su	1202	18.7	569	M	1101	15.9	484	Tu	1206	18.8	574
	1829	2.8	86		1748	5.9	180		1839	3.0	92
●	●	●	●	O	2250	16.4	499		2250	16.4	500
<b>14</b>	0005	19.1	582	<b>29</b>	0614	3.4	104	<b>14</b>	0008	18.3	557
M	0703	0.1	4	Tu	1136	17.0	518	F	0703	1.5	45
	1243	19.4	590		1827	4.6	140		1242	19.1	582
	1913	1.9	59		2334	17.3	527		1929	2.9	88
<b>15</b>	0044	19.5	595	<b>30</b>	0651	2.6	78	<b>15</b>	0050	18.2	554
Tu	0741	0.0	-1	W	1214	18.2	554	Th	0742	2.0	61
	1319	19.8	604		1919	3.4	105		1314	19.3	588
	2002	1.7	52						2020	3.0	92
									<b>31</b>	0051	17.7
									Sa	0800	2.3
									1307	19.8	603
									2059	2.3	69

Time meridian 97° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

## Rangoon, Burma, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0225 18.6 568	16 W 0238 17.3 526	1 F 0337 19.5 594	16 Sa 0314 18.0 548	1 M 0010 4.2 128	16 Tu 0230 16.9 516						
0934 1.8 56	0932 3.1 96	1108 2.3 71	1048 3.3 102	0411 18.0 549	1207 6.4 194						
1421 21.0 639	1427 19.5 594	1525 21.0 641	1452 19.3 588	1213 5.6 170	1427 16.3 498						
2239 1.1 35	2230 2.4 72	●	2337 3.5 108	1619 17.8 543							
2 W 0313 18.9 575	17 Th 0317 17.5 534	2 Sa 0002 2.3 70	17 Su 0340 17.4 531	2 Tu 0044 5.8 176	17 W 0033 6.7 203						
1030 2.1 64	1018 3.0 90	0418 19.0 579	1131 4.7 142	0452 16.8 513	0249 15.7 480						
1508 21.0 640	1504 19.6 597	1154 3.6 110	1455 18.3 558	1253 7.2 218	1256 8.0 244						
2333 1.7 53	2315 2.7 83	1612 20.0 611	○	1713 16.2 494	1452 14.5 442						
3 Th 0403 18.8 572	18 F 0354 17.4 530	3 Su 0045 3.7 114	18 M 0016 5.1 155	3 W 0115 7.1 215	18 Th 0115 8.1 248						
1125 2.8 85	1101 3.4 104	0501 18.2 501	0418 16.4 501	0542 15.7 479	0541 14.7 447						
1557 20.6 628	1538 19.2 584	1238 5.1 156	1216 6.4 196	1334 8.3 254	1350 9.1 278						
●	○ 2357 3.6 110	1701 18.8 573	1459 16.9 516	1812 14.8 451	1819 13.6 414						
4 F 0025 2.7 81	19 Sa 0432 16.9 514	4 M 0124 5.2 157	19 Tu 0057 6.8 206	4 Th 0150 8.0 244	19 W 0203 9.0 275						
0453 18.4 561	1142 4.5 138	0545 17.3 526	0325 15.3 465	0637 14.8 452	0650 14.3 436						
1214 3.7 114	1612 18.2 556	1323 6.6 201	1302 8.2 250	1422 9.0 274	1452 9.3 284						
1651 19.9 608		1753 17.4 531	1519 15.3 466	1915 13.7 419	1938 13.4 408						
5 Sa 0114 3.6 111	20 Su 0036 4.9 149	5 Tu 0203 6.4 194	20 W 0138 8.2 250	5 F 0228 8.6 263	20 Th 0303 9.2 279						
0545 17.9 547	0513 16.0 489	0634 16.4 499	0607 14.6 445	0738 14.3 436	0811 14.6 445						
1302 4.9 148	1224 6.1 185	1409 7.8 238	1354 9.5 289	1725 8.6 262	1634 8.0 245						
1747 19.1 583	1701 17.0 518	1848 16.1 492	1830 14.1 431	2038 13.3 406	2125 14.3 435						
6 Su 0202 4.5 138	21 M 0118 6.3 191	6 W 0245 7.3 221	21 Th 0224 9.1 276	6 Sa 0511 8.7 266	21 W 0442 7.9 241						
0639 17.5 533	0557 15.2 464	0727 15.7 478	0707 14.3 436	0857 14.2 433	0949 15.7 478						
1352 5.9 180	1308 7.7 234	1505 8.5 259	1453 9.9 301	1805 6.5 199	1801 5.0 151						
1841 18.2 556	1758 15.8 481	1947 15.1 459	1937 13.6 416	2225 13.8 422	2243 15.8 483						
7 M 0250 5.2 158	22 Tu 0200 7.4 227	7 Th 0334 7.7 236	22 F 0316 9.2 280	7 Su 0555 7.3 223	22 M 0552 5.4 165						
0732 17.0 519	0646 14.7 447	0825 15.3 465	0817 14.5 443	1030 14.8 452	1058 17.2 524						
1446 6.7 204	1357 8.9 271	1650 8.2 251	1614 9.1 277	1822 4.9 148	1833 2.1 65						
1937 17.3 528	1852 14.9 453	2058 14.4 438	2105 13.9 423	2307 14.6 446	2334 17.3 527						
8 Tu 0340 5.5 169	23 W 0244 8.1 247	8 F 0501 7.6 233	23 M 0435 8.4 255	8 M 0615 6.2 189	23 Th 0631 3.2 97						
0827 16.7 509	0738 14.5 443	0938 15.2 464	0945 15.4 470	1108 15.7 478	1143 18.5 565						
1549 7.0 214	1454 9.3 284	1800 6.7 205	1804 6.4 196	1838 3.7 112	1903 0.2 6						
2035 16.4 501	1949 14.3 437	2230 14.4 438	2244 15.1 461	2340 15.4 469	1942 -0.8 -23						
9 W 0432 5.7 173	24 Th 0333 8.1 247	9 Sa 0557 6.9 209	24 Su 0558 6.3 191	9 Tu 0637 5.2 159	24 W 0017 18.4 562						
0925 16.5 502	0834 14.9 453	1050 15.6 477	1105 17.0 517	1139 16.6 505	0712 1.6 50						
1657 6.7 204	1607 8.8 267	1834 5.3 161	1846 3.5 107	1902 2.8 85	1220 19.5 595						
2138 15.7 479	2056 14.3 436	○ 2328 14.8 452	○ 2342 16.7 508		1942 -0.8 -23						
10 Th 0523 5.6 170	25 F 0435 7.4 227	10 Sa 0628 6.1 185	25 M 0643 4.0 123	10 W 0011 16.2 493	25 Th 0057 19.2 586						
1024 16.5 502	0943 15.6 477	1134 16.4 499	1153 18.5 565	0708 4.3 130	0800 0.9 27						
1755 5.9 181	1744 6.9 211	1903 4.1 125	1923 1.2 38	1211 17.5 533	1255 20.1 614						
● 2247 15.4 468	2226 14.9 453		2008 -0.1 -4	1939 2.2 66	2031 -0.8 -23						
11 F 0603 5.4 164	26 Su 0547 6.0 183	11 M 0009 15.5 471	26 Tu 0028 18.0 549	11 Th 0049 17.0 518	26 W 0133 19.7 600						
1119 16.7 510	1059 16.9 516	0657 5.3 161	0725 2.3 71	0752 3.3 102	0851 0.9 26						
1841 5.1 154	1845 4.5 136	1209 17.2 523	1233 19.9 606	1247 18.4 560	1329 20.3 620						
2348 15.4 469	○ 2341 16.1 490	1937 3.2 97	2008 -0.1 -4	2029 1.8 54	2123 0.0 -1						
12 Sa 0638 5.2 157	27 Su 0641 4.3 130	12 Tu 0047 16.1 492	27 W 0112 19.1 581	12 Th 0129 17.7 541	27 M 0207 19.8 603						
1201 17.2 524	1156 18.4 562	0733 4.5 136	0814 1.3 40	0844 2.7 83	0943 1.4 44						
1923 4.2 129	1935 2.3 69	1241 18.0 550	1308 20.8 635	1324 19.0 580	1401 20.1 612						
		2019 2.5 75	2100 -0.6 -17	2126 1.7 53	2212 1.2 36						
13 Su 0036 15.7 479	28 M 0731 2.8 84	13 W 0125 16.9 515	28 Th 0154 19.8 602	13 Th 0049 17.0 518	26 F 0851 0.9 26						
0716 4.8 147	0820 3.6 110	1318 18.9 576	0908 1.0 30	0752 3.3 102	0851 0.9 26						
1236 17.7 541	2110 2.0 61	2156 -0.1 -3	1345 21.3 649	1355 19.2 585	1430 19.3 589						
2009 3.5 107			2248 1.0 30	2220 2.3 70	2256 2.7 81						
14 M 0117 16.2 494	29 Tu 0125 18.5 564	14 Th 0205 17.6 536	29 F 0231 20.0 609	14 Th 0231 18.3 557	29 M 0258 18.8 573						
0758 4.3 132	0825 1.7 53	0909 2.9 89	1002 1.4 43	1030 3.3 100	1111 4.0 121						
1311 18.4 561	1322 20.9 636	1355 19.5 595	1420 21.2 647	1409 18.8 572	1502 18.1 553						
2056 2.9 88	2123 0.1 3	2202 1.9 59	2248 1.0 30	2309 3.4 104	● 2329 4.2 127						
15 Tu 0158 16.8 511	30 W 0210 19.3 587	15 F 0243 18.0 548	30 Sa 0306 19.8 602	15 M 0234 17.8 542	30 Th 0324 17.8 542						
0844 3.7 113	0920 1.3 41	1000 2.8 84	1051 2.5 75	1119 4.6 141	1146 5.4 166						
1347 19.0 580	1402 21.5 654	1429 19.7 600	1454 20.6 627	1412 17.8 542	1547 16.7 508						
2144 2.5 75	2220 0.2 7	2252 2.5 75	2333 2.5 77	○ 2352 5.0 151	2359 5.5 168						
	31 Th 1016 1.5 47	1016 1.5 47	31 Su 0338 19.1 581								
	1444 21.5 655	1444 21.5 655	1134 3.9 120								
	2314 1.0 31	2314 1.0 31	1531 19.4 591								

Time meridian 97° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Rangoon, Burma, 2008

Times and Heights of High and Low Waters

October				November				December																
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height													
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm													
1 W	0406	16.6	506	16	0007	5.5	168	1 Sa	0024	5.8	176	1 M	0126	5.5	167	1 Tu	0038	4.8	146	16	0204	4.3	132	
	1223	6.7	204		0417	16.0	487		0538	14.6	446		0624	15.9	486		0609	14.6	445		0703	16.8	512	
	1645	15.1	460		1246	6.6	200		1314	6.2	189		1433	5.0	152		1335	4.9	149		1505	3.5	106	
					1704	14.3	436		1832	12.7	388		1921	14.7	449		1903	12.8	391		1954	15.7	479	
2 Th	0029	6.6	201	17	0054	6.8	208	2 Su	0104	6.5	198	17 M	0230	5.7	174	2 Tu	0122	5.8	177	17 W	0304	4.6	141	
	0502	15.4	469		0527	15.2	463		0641	13.9	424		0740	16.0	489		0706	13.9	424		0807	16.4	501	
	1302	7.6	232		1342	7.4	226		1405	6.4	196		1546	4.2	128		1429	5.3	163		1603	3.2	97	
	1747	13.8	420		1814	13.7	418		1947	12.5	381		2038	15.4	469		2000	12.7	388		2057	15.9	484	
3 F	0101	7.4	226	18	0145	7.7	234	3 M	0152	7.1	217	18 Tu	0344	5.1	154	3 W	0219	6.5	199	18 Th	0409	4.3	132	
	0603	14.4	439	Sa	0640	14.9	453		0744	13.6	414		0852	16.4	501		0758	13.5	413		0910	16.1	491	
	1344	8.1	246		1449	7.4	226		1711	5.7	175		1650	2.6	80		1537	5.4	164		1657	2.6	79	
	1853	12.9	393		1938	13.8	422		2110	12.9	393		2146	16.2	495		2050	13.0	396		2159	16.1	490	
4 Sa	0140	8.1	246	19	0250	7.7	236	4 Tu	0442	7.1	216	19 W	0448	3.7	113	4 Th	0338	6.6	201	19 F	0510	3.6	111	
	0706	13.8	420	Su	0803	15.2	463		0851	13.7	418		0957	16.9	514		0847	13.5	411		1013	15.8	482	
	1723	7.9	240		1623	6.0	183		1727	4.6	141		1735	1.1	35		1638	4.8	147		1741	2.0	62	
	2024	12.7	386		2114	14.9	454		2156	13.5	413		2244	17.0	517		2137	13.6	415	O	2257	16.4	499	
5 Su	0504	8.6	261	20	0423	6.4	196	5 W	0510	6.1	185	20 Th	0537	2.4	74	5 F	0451	5.8	177	20 Sa	0604	2.8	86	
	0820	13.6	416	M	0930	16.1	492		0942	14.1	431		1051	17.1	520		0938	13.7	418		1115	15.6	476	
	1751	5.9	179		1732	3.4	103		1738	3.7	113		1809	0.2	7		1716	4.0	121		1819	1.8	54	
	2204	13.4	409		2224	16.3	496		2227	14.3	437	O	2333	17.5	533		2221	14.5	442		2347	16.7	509	
6 M	0536	7.1	217	21	0525	4.3	130	6 Th	0534	5.1	154	21 F	0625	1.6	48	6 Sa	0541	4.5	138	21 Su	0653	2.1	65	
	0952	14.2	432	Tu	1035	17.2	525		1022	14.7	449		1140	17.1	521		1032	14.2	434		1210	15.6	474	
	1802	4.4	134		1807	1.1	34		1754	2.9	88	O	2300	15.3	465		1753	3.0	91		1856	1.7	53	
	2239	14.2	434	O	2316	17.4	531					O	2308	15.6	477									
7 Tu	0551	6.0	182	22	0607	2.4	73	7 F	0607	3.9	120	22 Sa	0013	17.8	544	7 Su	0634	3.1	93	22 M	0028	17.0	519	
	1033	14.9	455	W	1122	18.0	550		1102	15.5	471		0713	1.1	35		1130	15.0	457		0741	1.6	49	
	1810	3.4	103		1838	-0.3	-9		1823	2.2	66		1225	17.0	519		1838	2.0	61		1256	15.6	476	
	2306	15.0	458		2359	18.2	556		2337	16.3	496		1923	0.3	9		2355	16.8	513		1935	1.8	56	
8 W	0608	5.0	151	23	0648	1.2	37	8 Sa	0654	2.8	86	23 Su	0049	18.1	551	8 M	0730	1.7	51	23 Tu	0101	17.4	530	
	1104	15.7	480	Th	1203	18.5	565		1148	16.2	493		0804	1.1	34		1228	15.8	482		0829	1.3	39	
	1827	2.6	79		1913	-0.8	-24		1907	1.5	46		1306	16.9	515		1931	1.1	35		1336	15.8	481	
	2337	15.9	484								2005	0.9	26					2029	0.7	20		2017	1.9	57
9 Th	0638	4.0	121	24	0039	18.8	573	9 Su	0018	17.3	526	24 M	0119	18.2	554	9 Tu	0043	17.8	544	24 W	0131	17.7	540	
	1137	16.6	506	F	0736	0.7	22		0749	1.9	59		1343	16.7	510		0831	0.7	20		0915	1.1	34	
	1859	2.0	61		1242	18.7	571		2001	1.1	35		2049	1.4	44		1321	16.5	502		1412	16.0	488	
					1956	-0.5	-16										2029	0.7	20		2101	1.8	55	
10 F	0012	16.8	512	25	0112	19.1	581	10 M	0058	18.0	548	25 Tu	0147	18.1	553	10 W	0130	18.6	566	25 Th	0203	18.0	548	
	0722	3.0	92	Sa	0829	0.9	26		0850	1.5	45		0941	1.7	52		0932	0.2	5		0958	1.0	32	
	1215	17.4	531		1317	18.7	569		1322	17.1	520		1418	16.5	502		1412	16.2	493		1447	16.2	493	
	1946	1.5	47		2044	0.3	8		2100	1.2	36		2131	2.0	60		2129	0.5	16		2144	1.6	50	
11 Sa	0050	17.6	537	26	0141	19.1	582	11 Tu	0138	18.3	558	26 W	0214	18.0	549	11 Th	0217	18.9	576	26 F	0239	18.2	554	
	0816	2.4	72	Su	0920	1.4	43		0950	1.6	48		1021	2.2	66		1030	0.3	9		1039	1.2	36	
	1254	18.0	549		1350	18.4	560		1411	16.9	516		1453	16.1	491		1501	17.0	517		1522	16.2	493	
	2043	1.5	45		2131	1.3	40		2158	1.6	50		2209	2.4	73		2227	0.9	27		2225	1.6	48	
12 Su	0127	18.2	554	27	0207	18.9	575	12 M	0219	18.2	555	27 Th	0248	17.7	540	12 F	0304	18.8	574	27 Sa	0318	18.1	551	
	0914	2.2	67	M	1006	2.3	70		1046	2.2	67		1058	2.7	81		1125	0.9	27		1116	1.5	46	
	1329	18.2	554		1420	17.7	541		1503	16.4	499		1531	15.6	475		1552	16.7	509		1600	15.9	485	
	2140	1.8	56		2212	2.4	73		2252	2.5	76	O	2245	2.8	84		2322	1.6	49		2302	1.9	57	
13 M	0155	18.3	559	28	0230	18.4	560	13 Th	0308	17.7	539	28 F	0329	17.2	524	13 Sa	0357	18.4	561	28 Tu	0356	17.6	537	
	1011	2.7	82	Tu	1045	3.3	101		1140	3.1	96		1133	3.1	96		1219	1.8	54		1153	2.2	66	
	1356	17.7	541		1454	16.9	514		1557	15.6	477		1616	14.9	453		1646	16.3	497		1640	15.3	467	
	2234	2.8	84		2247	3.4	104	O	2343	3.6	109		2320	3.2	97		2340	2.7	81					
14 Tu	0209	17.9	547	29	0258	17.6	537	14 F	0409	16.9	516	29 M	0417	16.4	501	14 Sa	0014	2.6	78	29 Tu	0437	16.8	511	
	1103	3.8	116	W	1121	4.3	132		1234	4.2	127		1210	3.7	112		0455	17.8	543		1231	3.1	96	
	1409	16.8	511		1536	15.7	480		1658	14.9	455		1708	14.1	429		1312	2.7	82		1727	14.5	441	
	2322	4.1	124	●	2317	4.3	131					2357	3.9	118		1745	15.9	485						
15 W	0223	17.1	522	30	0340	16.7	508	15 Sa	0032	4.7	142	30 M	0107	3.6	109	15 Tu	0019	3.9	119	30 Tu	0526	15.6	475	
	1154	5.2	159	Th	1155	5.2	157		0514	16.3	497		1250	4.3	130		1311	4.3	130		1311	4.3	130	
	1558	15.4	470		1629	14.6	444	</td																

# Sagar, Hooghly River, India, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0303	12.9	392	16 W 0241	14.2	434	1 F 0340	10.7	326	1 Sa 0455	11.2	340
0927	6.1	186	W 0916	4.1	124	F 1024	6.7	204	Sa 1123	5.8	177
1547	12.7	386	W 1515	14.0	426	F 1725	11.3	345	Sa 1805	12.4	378
2159	7.5	228	● 2151	5.8	177	F 2357	7.8	237	Sa 1550	11.0	334
									2225	7.8	238
2 W 0402	12.0	367	17 Th 0342	13.2	403	2 Sa 0544	10.1	308	2 Su 0403	9.7	296
1030	6.6	200	Th 1018	4.8	145	Sa 1230	6.7	203	Su 0653	11.3	344
1702	12.4	377	1638	13.4	409	1914	11.9	362	Su 1322	5.4	166
2333	7.8	237	2316	6.3	193				1938	13.4	408
3 Th 0520	11.5	350	18 F 0513	12.4	379	3 Su 0148	7.1	215	18 M 0245	5.1	154
1157	6.7	344	F 1142	5.2	160	Su 0743	10.6	324	M 0816	12.3	376
1831	12.6	384	F 1812	13.5	411	1358	5.9	179	M 1448	4.4	133
						2014	12.9	394	M 2039	14.6	445
4 F 0104	7.4	226	19 Sa 0100	6.2	188	4 M 0256	6.0	183	19 Tu 0341	3.7	114
0649	11.5	349	Sa 0645	12.4	377	M 0836	11.6	353	Tu 0909	13.5	412
1318	6.3	192	M 1318	5.1	155	M 1500	4.9	150	M 1546	3.3	102
1941	13.3	404	M 1932	14.2	432	M 2056	13.9	425	M 2127	15.6	474
5 Sa 0214	6.7	205	20 Su 0236	5.3	162	5 Tu 0342	5.0	151	20 W 0424	2.8	84
0759	11.9	362	Su 0803	12.9	393	Tu 0913	12.6	383	W 0949	14.5	442
1424	5.6	172	Su 1441	4.4	134	Tu 1545	4.0	123	W 1629	2.6	79
2031	14.0	426	Su 2037	15.1	460	Tu 2131	14.9	453	W 2206	16.1	492
6 Su 0308	6.0	183	21 M 0341	4.3	131	6 W 0419	4.0	122	21 Th 0457	2.2	67
0846	12.4	379	M 0905	13.7	418	W 0944	13.5	413	Th 1024	15.2	462
1515	5.0	151	M 1545	3.6	109	W 1623	3.2	98	Th 1704	2.3	69
2111	14.6	446	M 2130	15.9	484	W 2202	15.7	478	○ 2238	16.3	497
7 M 0351	5.4	164	22 Tu 0431	3.4	104	7 Th 0451	3.1	95	22 F 0526	2.0	61
0923	13.0	396	Tu 0955	14.5	441	Th 1015	14.5	443	F 1054	15.5	472
1557	4.4	133	Tu 1635	3.0	90	Th 1656	2.6	78	F 1733	2.3	70
2146	15.2	462	○ 2216	16.4	500	○ 2233	16.3	497	F 2306	16.2	493
8 Tu 0427	4.8	147	23 W 0512	2.8	86	8 F 0522	2.3	71	23 Sa 0550	2.1	64
0956	13.5	413	W 1037	15.0	456	F 1048	15.4	468	Sa 1121	15.6	475
1630	3.8	117	W 1716	2.6	80	F 1729	2.1	64	Sa 1756	2.5	77
● 2217	15.6	475	W 2257	16.6	505	F 2304	16.7	509	Sa 2332	15.8	482
9 W 0500	4.3	131	24 Th 0549	2.6	80	9 Sa 0555	1.8	54	24 Su 0610	2.3	70
1029	14.1	429	Th 1115	15.2	463	Sa 1124	15.9	486	Su 1146	15.6	474
1703	3.4	105	Th 1752	2.7	82	Sa 1802	2.0	60	Su 1817	2.9	87
2248	15.9	485	Th 2331	16.3	498	Sa 2338	16.7	510	Su 2354	15.4	469
10 Th 0535	3.8	117	25 F 0621	2.8	84	10 Su 0628	1.6	48	25 M 0631	2.5	76
1104	14.5	443	F 1151	15.2	462	Su 1200	16.2	493	M 1212	15.4	468
1738	3.2	99	F 1822	3.1	93	Su 1835	2.2	66	M 1839	3.2	99
2323	16.0	489									
11 F 0610	3.5	106	26 Sa 0003	15.9	484	11 M 0013	16.4	501	26 Tu 0018	14.8	452
1142	14.8	452	Sa 0648	3.1	93	M 0700	1.7	51	Tu 0653	2.8	86
1811	3.3	100	Sa 1222	15.0	457	M 1236	16.1	490	Tu 1238	14.9	455
2359	16.0	489	Sa 1847	3.5	107	M 1907	2.7	81	Tu 1903	3.8	117
12 Sa 0647	3.3	100	27 Su 0032	15.3	467	12 Tu 0050	15.8	483	27 W 0045	14.1	430
1219	15.0	458	Su 0712	3.4	103	Tu 0732	2.1	63	W 0716	3.4	104
1845	3.5	108	Su 1250	14.8	450	Tu 1312	15.6	476	W 1306	14.2	433
13 Su 0036	15.9	484	28 M 0733	3.7	113	12 Tu 1942	3.4	104	28 Th 0742	4.3	131
0721	3.2	99	M 0804	2.8	85	Tu 1942	4.7	143	Th 1336	13.2	401
1258	15.1	459	M 1350	14.8	438	Tu 1959	5.8	177	Th 1959	5.8	177
1921	3.9	119	M 1937	4.6	141						
14 M 0114	15.6	474	29 Tu 0127	14.0	426	14 F 0210	13.8	420	29 F 0139	12.0	367
0755	3.3	101	Tu 0757	4.2	128	F 0844	3.8	115	F 0810	5.3	163
1338	15.0	456	Tu 1352	13.7	418	F 1436	13.7	417	F 1417	12.0	365
2002	4.4	135	Tu 2008	5.4	166	○ 2118	5.5	169	○ 2045	7.0	213
15 Tu 0155	15.0	458	30 Th 0158	13.0	397	15 F 0307	12.3	376	15 O 0251	11.6	353
0832	3.5	108	W 0827	4.9	150	F 0942	5.0	151	Sa 0922	5.7	174
1421	14.6	445	W 1431	12.8	390	F 1603	12.5	381	W 1600	12.1	369
2049	5.1	154	○ 2048	6.5	197	F 2248	6.5	199	F 2257	6.8	207
16 Th 0237	11.9	362	31 Th 0908	5.9	179						
0908			Th 1531	11.8	359						
			Th 2152	7.4	227						

Time meridian 82° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Sagar, Hooghly River, India, 2008

Times and Heights of High and Low Waters

April				May				June															
	Time	Height			Time	Height			Time	Height													
	h m	ft	cm		h m	ft	cm		h m	ft	cm												
<b>1</b> Tu	0555 1220 1838	10.6 6.7 12.8	324 203 389	<b>16</b> W	0145 0742 1405 1949	5.3 13.2 5.4 14.3	161 402 166 436	<b>1</b> Th	0006 0618 1239 1834	6.0 13.2 6.2 14.4	182 402 188 440	<b>16</b> F	0132 0737 1406 1945	5.7 14.5 6.1 14.3	174 442 187 435	<b>1</b> Su	0118 0720 1358 1937	4.6 16.5 5.1 15.8	140 502 156 483	<b>16</b> M	0219 0820 1450 2034	5.9 15.6 6.2 14.3	180 477 190 437
<b>2</b> W	0128 0722 1344 1933	5.9 12.1 5.5 14.0	181 368 169 427	<b>17</b> Th	0237 0823 1455 2029	4.5 14.3 4.7 14.9	137 437 143 453	<b>2</b> F	0117 0718 1349 1928	4.9 14.7 5.2 15.4	149 447 157 468	<b>17</b> Sa	0221 0816 1448 2024	5.3 15.3 5.6 14.6	161 466 171 444	<b>2</b> M	0220 0808 1454 2027	3.9 17.5 4.4 16.4	119 532 134 499	<b>17</b> Tu	0304 0856 1527 2110	5.4 16.1 5.8 14.7	164 492 178 447
<b>3</b> Th	0228 0809 1442 2018	4.6 13.7 4.4 15.2	139 417 133 463	<b>18</b> F	0317 0856 1531 2102	3.9 15.2 4.2 15.2	120 464 128 463	<b>3</b> Sa	0217 0803 1443 2014	3.8 16.1 4.2 16.2	117 490 127 493	<b>18</b> Su	0301 0848 1523 2058	4.9 15.9 5.2 14.8	148 485 159 452	<b>3</b> Tu	0312 0853 1543 2118	3.3 18.1 3.9 16.8	101 553 119 511	<b>18</b> W	0340 0929 1600 2142	5.0 16.5 5.5 14.9	151 502 169 455
<b>4</b> F	0314 0846 1527 2056	3.3 15.2 3.3 16.2	100 464 100 494	<b>19</b> Sa	0348 0924 1602 2133	3.5 15.8 3.9 15.4	108 483 119 468	<b>4</b> Su	0305 0841 1527 2057	2.9 17.3 3.3 16.8	89 526 102 513	<b>19</b> M	0335 0917 1551 2129	4.5 16.3 5.0 15.0	136 496 152 456	<b>4</b> W	0358 0938 1631 2206	3.0 18.4 3.7 16.8	90 562 112 513	<b>19</b> Th	0412 0958 1630 2212	4.7 16.6 5.4 15.1	143 507 164 461
<b>5</b> Sa	0351 0919 1605 2131	2.2 16.5 2.5 17.0	67 504 75 517	<b>20</b> Su	0413 0947 1626 2158	3.2 16.2 3.8 15.4	99 494 116 469	<b>5</b> M	0347 0918 1609 2138	2.2 18.1 2.9 17.2	67 551 87 524	<b>20</b> Tu	0403 0945 1618 2157	4.2 16.4 4.9 15.0	127 501 149 458	<b>5</b> Th	0443 1024 1719 2256	3.0 18.3 3.8 16.6	91 557 116 505	<b>20</b> F	0439 1028 1702 2245	4.5 16.7 5.2 15.2	138 508 160 464
<b>6</b> Su	0425 0952 1640 2208	1.4 17.5 1.9 17.4	42 534 58 530	<b>21</b> M	0435 1012 1649 2222	3.1 16.3 3.8 15.3	94 498 116 466	<b>6</b> Tu	0424 0956 1649 2221	1.9 18.4 2.8 17.1	57 562 84 522	<b>21</b> W	0428 1011 1645 2225	4.0 16.4 4.9 15.0	122 500 457	<b>6</b> F	0527 1114 1808 2346	3.4 17.7 4.3 16.0	103 540 130 488	<b>21</b> Sa	0509 1100 1737 2319	4.6 16.6 5.2 15.2	139 506 159 464
<b>7</b> M	0457 1025 1715 2245	0.9 18.0 1.7 17.4	28 549 53 529	<b>22</b> Tu	0457 1035 1712 2247	3.0 16.3 3.9 15.1	92 496 120 460	<b>7</b> W	0502 1038 1733 2305	2.0 18.2 3.1 16.6	60 554 94 505	<b>22</b> Th	0455 1042 1714 2256	4.0 16.2 5.1 14.8	123 494 154 451	<b>7</b> Sa	0611 1206 1858 2357	4.2 16.9 4.9 15.2	127 516 148 463	<b>22</b> Su	0540 1136 1815 2357	4.8 16.5 5.3 15.2	146 502 161 463
<b>8</b> Tu	0530 1103 1753 2323	1.0 17.9 2.1 16.7	30 546 64 510	<b>23</b> W	0520 1104 1738 2315	3.1 16.0 4.2 14.8	96 487 128 450	<b>8</b> Th	0540 1123 1818 2353	2.6 17.4 3.8 15.6	78 531 116 476	<b>23</b> F	0522 1114 1748 2329	4.3 15.9 5.3 14.5	130 485 162 441	<b>8</b> Su	0038 0655 1257 1945	15.3 5.1 16.0 5.5	467 155 489 167	<b>23</b> M	0613 1213 1851 1928	5.2 16.3 5.3 5.4	157 496 163 464
<b>9</b> W	0604 1143 1831	1.5 17.2 2.9	47 525 88	<b>24</b> Th	0545 1133 1807 2343	3.5 15.5 4.7 14.2	107 473 142 433	<b>9</b> F	0621 1213 1905 2343	3.6 16.3 4.8 14.2	109 498 145 433	<b>24</b> Sa	0552 1150 1824 2033	4.7 15.5 5.7 6.0	144 473 173 183	<b>9</b> M	0130 0741 1350 2033	14.7 6.0 15.3 6.0	447 184 466 183	<b>24</b> Tu	0036 0648 1250 1928	15.2 5.6 16.1 5.4	462 170 490 164
<b>10</b> Th	0006 0641 1226 1912	15.7 2.6 16.1 4.0	478 78 491 123	<b>25</b> F	0612 1206 1836	4.1 14.9 5.3	125 455 162	<b>10</b> Sa	0045 0705 1308 1958	14.5 4.8 15.2 5.7	442 463 463 173	<b>25</b> Tu	0221 0831 1443 2122	14.1 6.9 14.6 6.4	431 209 445 196	<b>25</b> W	0116 0730 1333 2009	15.2 6.0 15.8 5.4	462 183 483 165				
<b>11</b> F	0051 0719 1313 2000	14.3 3.9 14.8 5.3	436 118 450 161	<b>26</b> Sa	0015 0639 1240 1908	13.5 4.9 14.3 6.0	413 149 436 183	<b>11</b> Su	0145 0756 1416 2104	13.4 6.0 14.2 6.4	409 182 433 194	<b>26</b> M	0046 0658 1308 1943	13.8 5.9 14.9 6.2	420 180 454 190	<b>11</b> W	0318 0933 1540 2216	13.7 7.5 14.0 6.8	419 228 427 206	<b>26</b> Th	0203 0820 1422 2057	15.1 6.5 15.5 5.5	461 197 471 168
<b>12</b> Sa	0143 0805 1414 2103	12.9 5.3 13.4 6.4	392 161 409 195	<b>27</b> Su	0051 0708 1320 1951	12.8 5.7 13.7 6.6	391 174 417 202	<b>12</b> M	0257 0905 1532 2224	12.7 6.9 13.6 6.6	388 211 415 201	<b>27</b> Tu	0133 0745 1400 2038	13.5 6.5 14.7 6.3	413 198 447 192	<b>12</b> Th	0422 1048 1644 2318	13.6 7.8 13.5 6.9	415 238 413 210	<b>27</b> F	0301 0924 1526 2159	15.0 6.8 15.0 5.7	457 208 456 173
<b>13</b> Su	0303 0915 1601 2301	11.6 6.5 12.6 6.8	354 199 384 206	<b>28</b> M	0141 0755 1423 2103	12.2 6.5 13.2 7.0	371 198 401 214	<b>13</b> Tu	0413 1039 1646 2331	12.5 7.3 13.4 6.4	381 223 409 196	<b>28</b> W	0235 0852 1506 2144	13.5 6.9 14.5 6.2	410 211 441 188	<b>13</b> F	0536 1200 1753 2314	13.8 7.7 13.4 5.7	420 236 409 174	<b>28</b> Sa	0417 1041 1646 2314	15.0 7.0 14.6 5.7	458 212 446 174
<b>14</b> M	0452 1118 1740	11.3 6.9 12.8	343 211 389	<b>29</b> Tu	0259 0922 1557 2239	11.7 7.2 13.0 6.8	357 218 397 207	<b>14</b> W	0537 1159 1800 1859	12.8 7.2 13.6 13.9	391 218 414 424	<b>29</b> Th	0352 1014 1622 2257	13.7 7.0 14.5 5.8	417 214 441 177	<b>14</b> Sa	0021 0645 1308 1901	6.8 14.3 7.3 13.6	207 437 224 414	<b>29</b> Su	0539 1208 1805 1914	15.5 6.6 14.8 15.2	471 202 450 464
<b>15</b> Tu	0033 0639 1253 1858	6.1 12.0 6.3 13.5	187 365 192 413	<b>30</b> W	0449 1112 1727	12.0 7.0 13.5	366 213 413	<b>15</b> Th	0034 0649 1308 1859	6.1 13.6 6.7 13.9	187 415 204 424	<b>30</b> F	0515 1135 1736 1859	14.3 6.6 14.8 5.2	437 202 450 160	<b>15</b> Sa	0123 0737 1405 1252	6.4 15.0 6.8 5.9	196 457 207 181	<b>30</b> M	0036 0649 1330 1840	5.4 16.2 5.9 15.3	165 495 181 464
								<b>31</b> Sa	0009 0624 1252 1840		5.2 15.4 5.9 15.3		<b>31</b>	0009 0624 1252 1840		160 469 181 465							

Time meridian 82° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Sagar, Hooghly River, India, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0150	4.8	147	16 W 0244	5.9	179	1 F 0349	3.7	113	1 M 0455	3.3	102
0750	17.1	522	0843	16.0	488	0931	18.5	565	1028	18.4	562
1438	5.1	156	1514	6.1	185	1620	3.4	105	1705	3.1	95
2016	15.9	484	2101	14.6	446	2157	17.4	530	2246	18.1	553
2 W 0254	4.2	127	17 Th 0326	5.2	160	2 Sa 0434	3.3	101	2 Tu 0521	3.7	113
0844	17.9	546	0917	16.6	507	1013	18.8	573	1054	17.9	546
1534	4.4	134	1550	5.5	168	1659	3.2	97	1730	3.5	107
2111	16.5	502	2131	15.2	463	2237	17.7	539	2212	17.3	528
3 Th 0349	3.6	111	18 F 0401	4.8	145	3 Su 0511	3.3	102	3 W 0448	3.6	110
0933	18.4	561	0946	17.1	521	1049	18.6	567	1023	18.3	559
1624	3.9	119	1620	5.1	154	1733	3.3	101	1704	3.3	100
● 2202	16.9	515	2200	15.7	479	2313	17.7	538	2243	17.8	544
4 F 0437	3.4	104	19 Sa 0430	4.4	134	4 M 0544	3.8	115	4 Th 0606	4.8	145
1020	18.5	565	1015	17.4	531	1123	18.0	550	1053	18.3	559
1711	3.7	114	1651	4.7	142	1805	3.8	115	1736	3.1	95
2249	17.0	518	2231	16.1	492	2346	17.3	528	2317	18.1	551
5 Sa 0521	3.6	109	20 Su 0500	4.2	128	5 Tu 0613	4.4	134	20 W 0549	3.6	111
1106	18.2	556	1044	17.6	535	1154	17.3	528	1126	18.0	550
1756	3.9	119	1723	4.4	133	1831	4.3	131	1807	3.2	99
2334	16.8	512	2305	16.5	502	1852	18.0	548	1838	5.2	158
6 Su 0601	4.1	124	21 M 0530	4.2	128	6 W 0016	16.9	515	6 Th 0633	16.0	487
1149	17.7	538	1116	17.5	534	0639	5.1	155	0653	17.5	508
1837	4.3	132	1758	4.2	129	1222	16.5	504	1201	17.5	513
			2340	16.6	507	1855	4.9	148	1838	6.1	186
7 M 0016	16.4	500	22 Tu 0602	4.4	135	7 Th 0047	16.3	498	22 F 0025	17.6	535
0639	4.8	147	1151	17.3	528	0701	5.8	177	0652	4.8	146
1229	16.9	515	1832	4.3	130	1251	15.7	479	1239	16.7	509
1913	4.9	149				1919	5.5	167	1911	4.3	131
8 Tu 0056	15.9	485	23 W 0016	16.7	509	8 F 0116	15.6	475	23 Sa 0103	16.8	512
0712	5.6	171	0634	4.8	147	0730	6.7	203	0730	5.7	174
1307	16.1	491	1226	17.0	518	1324	14.7	449	1319	15.6	477
1945	5.4	166	1903	4.4	134	1948	6.3	192	1951	5.2	159
9 W 0134	15.4	469	24 Th 0052	16.6	506	9 Sa 0153	14.6	445	24 M 0145	15.7	479
0745	6.4	195	0710	5.3	162	0807	7.7	234	0821	6.8	281
1345	15.3	466	1304	16.5	504	1403	13.5	413	1412	14.3	437
2014	6.0	183	1938	4.7	142	● 2029	7.3	223	● 2047	6.4	194
10 Th 0214	14.8	452	25 F 0129	16.3	496	10 Su 0250	13.5	411	25 M 0256	14.5	441
0823	7.2	220	0752	5.9	181	0910	8.7	264	0944	7.7	236
1426	14.4	439	1346	15.8	483	1509	12.4	377	1557	13.2	401
● 2049	6.6	250	2018	5.1	156	2149	8.2	250	2223	7.2	220
11 F 0304	14.2	433	26 Sa 0217	15.7	479	11 M 0459	13.0	395	26 Tu 0511	14.2	433
0914	8.0	243	0845	6.7	203	1127	9.0	273	1203	7.5	230
1521	13.5	412	Sa 1440	14.9	455	M 1744	12.0	365	1804	13.4	407
2144	7.3	222	● 2114	5.8	177						
12 Sa 0417	13.7	417	27 Su 0328	15.0	457	12 Tu 0005	8.0	245	27 W 0028	6.8	207
1041	8.5	258	1002	7.3	222	0650	13.7	418	0649	15.3	465
1640	12.8	391	1609	14.0	428	1314	8.0	245	1341	6.2	189
2312	7.6	232	2237	6.4	194	1929	12.9	392	1933	14.6	446
13 Su 0553	13.7	419	28 M 0513	14.9	454	13 W 0130	7.1	216	13 Th 0156	5.6	171
1217	8.3	252	1150	7.3	221	0745	14.9	453	0753	16.6	507
1821	12.8	389	1751	13.9	425	1417	6.9	210	1444	4.8	146
						2015	13.9	424	2028	16.0	488
14 M 0039	7.3	223	29 Tu 0018	6.2	189	14 Th 0228	6.1	185	29 F 0259	4.5	136
0711	14.4	439	0639	15.6	477	0826	15.9	486	0842	17.7	541
1334	7.6	231	1329	6.4	194	1500	5.8	178	1531	3.7	113
1937	13.3	406	1915	14.7	447	2048	14.9	454	2110	17.2	523
15 Tu 0150	6.6	202	30 W 0146	5.4	165	15 F 0313	5.2	158	30 Sa 0346	3.6	111
0803	15.3	465	0750	16.8	511	0859	16.8	513	0923	18.4	562
1431	6.8	207	1443	5.2	159	1536	5.0	152	1608	3.1	94
2025	14.0	427	2022	15.7	479	2116	15.8	481	2145	17.9	545
31 Th 0255	4.5	136							31 Su 0424	3.3	100
0845	17.8	543							0957	18.6	568
1536	4.2	127							1639	2.9	89
2113	16.7	509							● 2217	18.2	554

Time meridian 82° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Sagar, Hooghly River, India, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 W	0457	4.1	125	16 Th	0445	3.2	97	1 Sa	0525	5.2	157
	1028	17.2	524		1013	18.2	554		1100	15.4	469
	1658	3.7	112		1653	2.4	73		1725	4.6	140
	2243	17.9	545		2233	19.2	586		2320	16.4	499
2 Th	0519	4.4	135	17 F	0521	3.3	102	2 Su	0552	5.5	169
	1053	16.7	510		1051	17.8	542		1130	14.8	452
	1720	4.0	122		1728	2.8	85		1754	5.2	157
	2309	17.5	532		2311	18.6	568		2352	15.7	479
3 F	0541	4.8	147	18 Sa	0600	4.0	121	3 M	0624	6.1	186
	1117	16.2	493		1134	16.9	516		1204	14.2	432
	1744	4.5	136		1805	3.7	112		1823	5.9	180
	2337	16.8	513		2354	17.6	535				
4 Sa	0605	5.4	165	19 Su	0642	4.9	150	4 Tu	0028	15.0	456
	1144	15.4	470		1220	15.7	478		0657	6.8	206
	1809	5.2	157		1847	4.9	149		1241	13.5	410
									1856	6.7	205
5 Su	0005	16.0	488	20 M	0041	16.2	495	5 W	0108	14.2	434
	0631	6.2	189		0730	6.0	184		0740	7.3	224
	1212	14.5	443		1313	14.3	436		1329	12.8	390
	1834	6.0	184		1935	6.3	191		1942	7.6	231
6 M	0036	15.0	457	21 Tu	0140	14.8	452	6 Th	0203	13.6	415
	0700	7.2	218		0831	7.1	215		0844	7.7	235
	1245	13.5	412		1430	13.1	400		1442	12.4	377
	1902	7.1	216		2044	7.5	228		2106	8.2	250
7 Tu	0114	13.9	425	22 W	0316	13.8	421	7 F	0330	13.3	405
	0743	8.1	248		1016	7.4	227		1009	7.6	231
	1332	12.5	380		1616	12.7	388		1627	12.6	384
	1949	8.1	248		2243	8.0	243		2251	8.1	248
8 W	0223	12.9	394	23 Th	0459	13.8	422	8 Sa	0501	13.6	415
	0911	8.8	268		1148	6.8	208		1134	6.9	210
	1510	11.6	354		1759	13.4	409		1755	13.6	415
	2154	8.8	269								
9 Th	0455	12.9	393	24 F	0018	7.3	223	9 Su	0020	7.3	224
	1136	8.3	254		0622	14.5	443		0610	14.3	436
	1753	12.2	373		1258	6.0	183		1244	5.9	180
					1909	14.6	446		1856	15.0	456
10 F	0011	8.1	248	25 Sa	0132	6.4	195	10 M	0130	6.3	192
	0618	13.9	424		0718	15.3	466		0705	15.1	460
	1255	7.1	216		1357	5.2	160		1344	5.0	151
	1905	13.7	418		1956	15.7	480		1944	16.2	495
11 Sa	0125	6.9	210	26 Su	0229	5.6	171	11 Tu	0224	5.3	162
	0711	15.1	460		0802	15.8	482		0751	15.8	483
	1351	5.8	176		1443	4.8	145		1435	4.0	123
	1947	15.2	464		2033	16.6	506		2025	17.4	530
12 Su	0219	5.7	174	27 M	0311	5.1	154	12 W	0311	4.5	136
	0752	16.1	491		0839	16.1	491		0836	16.5	503
	1435	4.7	142		1519	4.4	135		1520	3.3	101
	2022	16.6	506		2103	17.2	523		2102	18.2	555
13 M	0301	4.7	144	28 Tu	0345	4.8	145	13 Th	0351	3.9	118
	0829	17.0	517		0910	16.2	493		0917	17.0	518
	1514	3.7	114		1548	4.2	129		1601	2.8	85
	2054	17.8	542		2131	17.5	532		2140	18.7	569
14 Tu	0338	4.0	121	29 W	0412	4.7	142	14 F	0433	3.5	108
	0902	17.7	538		0941	16.2	493		0959	17.2	524
	1548	3.0	91		1613	4.1	126		1640	2.7	81
	2125	18.7	570		2157	17.5	533		2221	18.6	568
15 W	0411	3.4	104	30 Th	0436	4.7	144	15 Sa	0515	3.6	110
	0936	18.1	552		1007	16.0	488		1045	16.9	516
	1620	2.5	76		1636	4.1	126		1721	3.0	92
	2157	19.2	586		2222	17.3	528		2305	18.1	551
16 F	0459	4.9	148	31 F	0459	4.9	148				
	1033	15.7	480		1700	4.3	130				
	2249	16.9	516		2249	16.9	516				

Time meridian 82° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

## Madras, India, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0157	3.1	93	16 W 0113	3.2	99	1 F 0141	2.0	62	1 Sa 0318	2.1	63
0833	1.5	47	W 0757	0.8	24	0929	1.1	34	Sa 0957	0.7	21
1522	3.1	93	1436	3.1	93	1657	2.4	74	Sa 1711	2.7	81
2122	2.1	64	● 2030	1.6	50	2322	1.6	50	2343	1.1	34
2 W 0254	2.9	87	17 Th 0219	3.0	91	2 Sa 0407	1.9	57	2 Su 0526	2.1	63
0935	1.5	47	0905	0.9	26	1052	1.0	32	17 Su 1122	0.6	18
1637	3.1	94	1557	3.1	93	1807	2.6	79	1824	2.9	89
2244	2.1	63	2204	1.6	50						
3 Th 0404	2.7	82	18 F 0339	2.8	84	3 Su 0043	1.4	43	18 M 0100	0.8	23
1037	1.5	45	1019	0.8	25	0600	1.9	59	0642	2.3	70
1740	3.2	97	1720	3.2	97	1156	0.9	26	1234	0.4	13
2356	1.9	59	2332	1.5	45	1853	2.8	86	1916	3.2	97
4 F 0523	2.6	80	19 Sa 0516	2.7	81	4 M 0126	1.1	35	19 Tu 0148	0.5	14
1134	1.3	40	1127	0.7	21	0650	2.1	65	0733	2.6	78
1831	3.3	102	1827	3.4	104	1243	0.6	19	1327	0.3	8
						1927	3.1	94	1955	3.4	104
5 Sa 0050	1.7	53	20 Su 0048	1.2	36	5 Tu 0157	0.9	27	20 W 0226	0.3	8
0621	2.7	81	0632	2.8	84	0730	2.4	72	0812	2.8	85
1222	1.1	34	1228	0.6	17	1323	0.4	13	1409	0.2	5
1910	3.5	107	1919	3.6	111	1957	3.3	102	2029	3.5	107
6 Su 0133	1.5	47	21 M 0147	0.9	27	6 W 0226	0.7	20	21 Th 0257	0.1	4
0704	2.8	84	0728	2.9	89	0805	2.6	80	0846	3.0	91
1302	0.9	28	1321	0.4	12	1359	0.3	8	1444	0.2	5
1944	3.6	111	2002	3.8	117	2027	3.5	108	● 2058	3.5	107
7 M 0208	1.3	41	22 Tu 0233	0.6	19	21 Th 0257	0.1	4	6 Th 0201	0.4	11
0741	2.9	87	0815	3.1	93	0846	3.0	91	0749	2.7	82
1337	0.8	23	1408	0.3	10	1444	0.2	5	1345	0.3	8
2016	3.8	116	● 2040	3.9	120	● 2058	3.5	107	2001	3.3	102
8 Tu 0240	1.2	36	23 W 0312	0.5	15	8 F 0327	0.2	7	21 F 0233	0.2	6
0815	3.0	90	0856	3.1	95	0915	3.1	94	0832	3.1	96
1411	0.6	19	1450	0.3	10	1511	0.2	6	1434	0.4	12
● 2047	3.9	119	2117	3.9	120	2129	3.7	114	2036	3.3	100
9 W 0312	1.0	31	24 Th 0349	0.4	13	8 Sa 0352	0.1	2	22 M 0229	0.1	3
0850	3.1	93	0935	3.1	96	0948	3.1	95	0823	3.1	93
1444	0.6	18	1529	0.4	13	1549	0.3	9	1504	0.4	12
2119	4.0	122	2152	3.8	117	2153	3.3	101	● 2101	3.2	99
10 Th 0348	0.9	28	25 F 0423	0.5	14	10 Su 0431	0.0	0	23 W 0257	0.1	4
0928	3.1	96	1012	3.1	96	1031	3.2	99	0900	3.3	100
1521	0.6	19	1606	0.6	18	1626	0.4	11	1504	0.4	12
2152	4.0	122	2224	3.7	112	2235	3.6	110	● 2127	3.1	96
11 F 0423	0.8	25	26 Sa 0454	0.5	16	11 M 0505	0.0	0	24 W 0321	0.1	3
1007	3.2	98	1049	3.1	95	1111	3.2	97	0927	3.3	101
1559	0.8	23	1644	0.8	23	1706	0.5	16	1534	0.4	13
2227	4.0	121	2257	3.5	106	2311	3.4	104	2127	3.1	96
12 Sa 0459	0.8	23	27 Su 0525	0.6	18	12 Tu 0542	0.1	2	24 M 0346	0.1	3
1049	3.2	98	1127	3.0	92	1154	3.1	93	0935	3.4	100
1640	0.9	27	1720	1.0	29	1749	0.8	23	1603	0.5	15
2302	3.9	118	2327	3.2	98	2350	3.1	95	2153	3.0	92
13 Su 0537	0.7	22	28 M 0557	0.7	21	13 W 0621	0.2	6	25 F 0346	0.1	3
1136	3.2	98	1208	2.9	89	1246	2.9	87	0955	3.3	100
1723	1.1	33	1800	1.1	35	1841	1.0	30	1603	0.5	15
2340	3.7	114	2358	3.0	90	2311	3.4	104	2153	3.0	92
14 M 0617	0.7	21	29 Tu 0631	0.8	24	14 Th 0036	2.8	84	26 W 0441	0.2	7
1227	3.2	97	1255	2.8	84	0712	0.4	12	1058	3.1	93
1811	1.3	39	1843	1.4	42	1352	2.7	81	1708	0.8	23
15 Tu 0022	3.5	107	30 W 0028	2.7	81	● 2001	1.2	37	2247	2.6	80
0702	0.7	22	0710	1.0	29	1729	0.7	22	0413	0.1	4
1327	3.1	95	1354	2.6	78	1729	0.7	22	1026	3.2	97
1909	1.5	45	● 1942	1.6	48	2152	1.3	39	1635	0.6	18
16 Sa 0057	2.3	71	31 Th 0804	1.1	33				2220	2.9	87
1811	1.3	39	1514	2.4	74				2220	2.9	87
			2128	1.7	52				2220	2.9	87

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# Madras, India, 2008

## Times and Heights of High and Low Waters

April					May					June					
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height	
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm	
<b>1</b> Tu	0451	1.8 55		<b>16</b> W	0019 0631	0.9 2.7	<b>1</b> Th	0516 1054	2.7 1.5	<b>16</b> F	0008 0635	1.1 3.2	<b>1</b> Su	0627 1224	3.6 1.4
	1023	1.2 36		1219	1.1 35		1706	3.1		1238	1.5		109	109	
	1718	2.6 80		1831	3.1 94		2344	0.9		1828	3.0		100	100	
<b>2</b> W	0012	1.0 31		<b>17</b> Th	0100 0710	0.8 3.0	<b>2</b> F	0612 1201	3.1 1.3	<b>17</b> Sa	0046 0713	1.0 3.4	<b>2</b> M	0032 0716	0.5 3.8
	0604	2.2 68		1307	1.0 31		1800	3.3		1320	1.4		116	116	
	1144	1.0 32		1910	3.1 96					1906	3.1		120	120	
	1808	2.9 88								93			102	102	
<b>3</b> Th	0049	0.7 22		<b>18</b> F	0133 0742	0.7 3.2	<b>3</b> Sa	0029 0657	0.6 3.5	<b>18</b> Su	0119 0745	0.9 3.5	<b>3</b> Tu	0121 0802	0.3 4.0
	0649	2.7 82		1345	1.0 29		1255	1.1		1357	1.3		122	122	
	1241	0.9 26		1941	3.2 97		1848	3.4		1940	3.1		30	30	
	1849	3.1 96								93			103	103	
<b>4</b> F	0121	0.4 13		<b>19</b> Sa	0159 0811	0.6 3.4	<b>4</b> Su	0110 0738	0.4 3.8	<b>19</b> M	0149 0816	0.8 3.6	<b>4</b> W	0209 0847	0.2 4.1
	0727	3.1 95		1419	0.9 27		1341	1.0		1430	1.2		125	125	
	1324	0.7 20		2009	3.2 97		1933	3.5		2011	3.1		204	204	
	1926	3.4 103								93			103	103	
<b>5</b> Sa	0152	0.1 4		<b>20</b> Su	0225 0839	0.5 3.5	<b>5</b> M	0151 0819	0.2 4.0	<b>20</b> Tu	0219 0847	0.7 3.6	<b>5</b> Th	0257 0934	0.2 4.1
	0804	3.5 106		1449	0.9 26		1427	0.8		1503	1.1		126	126	
	1404	0.5 15		2034	3.2 97		2018	3.6		2040	3.0		22	22	
	2002	3.5 108								91			100	100	
<b>6</b> Su	0226	-0.1 -2		<b>21</b> M	0250 0907	0.4 3.5	<b>6</b> Tu	0232 0901	0.1 4.1	<b>21</b> W	0249 0918	0.6 3.6	<b>6</b> F	0346 1021	0.4 4.1
	0839	3.7 113		1518	0.9 26		1515	0.7		1535	1.1		124	124	
	1443	0.4 12		2103	3.1 95		2104	3.5		2111	2.9		22	22	
	2039	3.6 110								89			86	86	
<b>7</b> M	0300	-0.2 -6		<b>22</b> Tu	0317 0936	0.4 3.5	<b>7</b> W	0315 0945	0.1 4.1	<b>22</b> Th	0319 0952	0.6 3.6	<b>7</b> Sa	0435 1109	0.6 3.9
	0917	3.8 117		1548	0.9 26		1604	0.7		1612	1.1		120	120	
	1524	0.4 11		2131	3.0 91		2153	3.4		2145	2.9		24	24	
	2118	3.6 109								87			87	87	
<b>8</b> Tu	0338	-0.2 -7		<b>23</b> W	0345 1007	0.4 3.4	<b>8</b> Th	0400 1033	0.2 4.0	<b>23</b> F	0350 1027	0.7 3.6	<b>8</b> Su	0526 1201	0.9 3.7
	0957	3.8 116		1621	0.9 28		1659	0.8		1649	1.1		114	114	
	1609	0.4 12		2159	2.9 87		2244	3.1		2220	2.8		27	27	
	2200	3.4 104								85			88	88	
<b>9</b> W	0417	-0.1 -4		<b>24</b> Th	0413 1041	0.5 3.3	<b>9</b> F	0448 1123	0.5 3.8	<b>24</b> Sa	0423 1104	0.7 3.6	<b>9</b> M	0032 0619	2.9 1.1
	1041	3.7 112		1657	1.0 31		1758	0.9		1730	1.2		35	35	
	1657	0.5 16		2230	2.7 82		2340	2.9		2259	2.7		108	108	
	2245	3.1 95								83			31	31	
<b>10</b> Th	0459	0.1 3		<b>25</b> F	0442 1116	0.6 3.2	<b>10</b> Sa	0540 1219	0.8 3.6	<b>25</b> Su	0459 1142	0.9 3.5	<b>10</b> Tu	0135 0719	2.8 1.4
	1129	3.4 105		1737	1.1 35		1902	1.0		1814	1.2		43	43	
	1750	0.8 23		2301	2.5 77					2346	2.7		101	101	
	2336	2.8 85								81			35	35	
<b>11</b> F	0546	0.4 13		<b>26</b> Sa	0512 1156	0.7 3.1	<b>11</b> Su	0048 0639	2.7 1.1	<b>26</b> M	0542 1224	1.0 3.5	<b>11</b> W	0239 0825	2.8 1.6
	1224	3.2 97		1822	1.3 39		1323	3.4		1859	1.2		49	49	
	1857	1.0 29		2339	2.4 72		2009	1.1					38	38	
										34			24	24	
<b>12</b> Sa	0036	2.5 75		<b>27</b> Su	0547 1242	0.9 3.0	<b>12</b> M	0206 1430	2.6 3.2	<b>27</b> Tu	0043 1313	2.7 3.4	<b>12</b> Th	0345 1535	2.9 2.9
	0643	0.8 23		1919	1.4 42		2118	1.2		1949	1.2		39	39	
	1333	3.0 91								36			39	39	
	2022	1.1 34								36			23	23	
<b>13</b> Su	0204	2.2 67		<b>28</b> M	0031 0638	2.2 1.2	<b>13</b> Tu	0329 0914	2.6 1.6	<b>28</b> W	0158 0734	2.7 1.5	<b>13</b> F	0451 1049	2.9 1.8
	0805	1.1 33		1344	3.0 90		1538	3.1		1408	3.3		54	54	
	1500	2.9 87		2027	1.4 43		2226	1.2		2046	1.1		84	84	
	2156	1.1 34								34			21	21	
<b>14</b> M	0356	2.2 66		<b>29</b> Tu	0211 0757	2.2 1.4	<b>14</b> W	0447 1035	2.8 1.6	<b>29</b> Th	0314 0850	2.9 1.6	<b>14</b> Sa	0550 1156	3.0 1.7
	0942	1.2 38		1456	3.0 90		1642	3.1		1508	3.2		52	52	
	1627	2.9 87		2143	1.3 40		2322	1.2		2146	1.0		35	35	
	2322	1.0 31								31			18	18	
<b>15</b> Tu	0532	2.4 73		<b>30</b> W	0359 0929	2.4 1.5	<b>15</b> Th	0549 1144	3.0 1.6	<b>30</b> F	0426 1007	3.1 1.6	<b>15</b> Su	0639 1250	3.1 1.6
	1115	1.2 38		1604	3.0 92		1740	3.0		1609	3.2		48	48	
	1739	3.0 90		2251	1.1 34					2245	0.9		82	82	
										26			20	20	
<b>31</b> Sa	0530	3.3 101					<b>31</b> Sa	0530 1120	3.3 1.5						
								1712	3.2						
								1740	0.7						
									20						

Time meridian 82° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

## Madras, India, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
1 Tu 1310 1900	0.5 3.5 1.1 3.0	14 107 34 90	14 005 0738 1402 1933	16 W 0053 0738 1.1 2.4	22 79 94 74	1 F 0149 0822 1453 2037	7 114 12 94	16 Sa 0151 0816 1442 2025	14 104 0.7 20	1 M 0303 0911 1534 2131	13 115 12 108
2 W 1411 1957	0.3 3.7 0.9 3.1	9 114 26 94	17 Th 0133 0811 1.0 2.6	17 Sa 0236 0901 0.8 2.7	17 Su 0225 0844 0.5 97	2 O 0236 0901 0.8 2.7	5 117 9 96	2 Tu 0336 0941 1.0 2203	16 111 14 107	17 W 0312 0914 1.0 2146	20 119 10 120
3 Th 1504 ● 2047	0.2 3.9 0.6 3.1	7 119 19 96	18 F 0208 0842 0.8 2.7	3 Su 0318 0938 0.8 2.7	18 M 0257 0912 0.3 98	3 O 0318 0938 0.8 2.7	7 116 9 98	3 W 0410 1010 0.6 2235	16 106 17 104	18 Th 0350 0949 0.3 2224	22 116 10 118
4 F 1552 2135	0.2 4.0 0.5 3.1	6 122 15 96	19 Sa 0242 0912 0.7 2.9	4 M 0357 1013 0.4 2234	19 Tu 0332 0943 0.2 2209	4 M 0357 1013 0.4 2234	11 112 7 97	4 Th 0444 1041 0.7 2311	25 99 20 99	19 F 0431 1028 1.6 2308	26 111 14 112
5 Sa 1637 2221	0.3 4.0 0.5 3.1	9 121 15 95	20 Su 0315 0943 0.6 2155	5 Tu 0435 1047 0.5 2312	20 W 0407 1016 0.2 2247	5 W 0435 1047 0.5 2312	16 106 11 95	5 F 0520 1111 0.8 2349	31 91 25 93	20 Sa 1112 1730 0.7 2357	32 103 21 105
6 Su 1718 2308	0.5 3.8 0.5 3.1	14 117 16 93	21 M 0350 1014 0.5 2233	6 W 0513 1120 0.6 2351	21 Th 0445 1049 0.3 2326	6 W 0558 1139 0.2 2326	13 112 19 99	6 Sa 0558 1139 0.2 2326	38 83 30 30	21 Su 1203 1821 1.0 29	39 93 29 29
7 M 1758 2356	0.7 3.6 0.7 3.0	21 111 20 91	22 Tu 0428 1047 0.5 2312	7 Th 0551 1154 0.7 93	22 F 0525 1126 0.4 1819	7 F 0032 0643 2.5 1843	24 101 1.5 37	22 Su 0100 0731 2.7 1937	32 99 46 38	22 M 0100 0731 2.7 1937	99 46 83 38
8 Tu 1836	0.9 3.4 0.8	28 104 104 24	23 W 0506 1120 0.4 2356	8 F 0035 0634 1.2 1857	23 Sa 0012 0611 1.0 1841	8 M 0137 0757 1.7 1947	21 78 53 43	23 Tu 0227 0914 1.6 2115	31 48 78 43	23 W 0227 0914 1.6 2115	95 48 78 43
9 W 1249 1917	2.9 1.1 3.1 0.9	88 35 96 28	24 Th 0547 1157 0.4 1829	9 Sa 0127 0724 1.4 1947	24 Su 0110 0714 1.2 1944	9 Tu 0319 1006 1.8 2150	25 75 55 45	24 O 0410 1057 1.4 2249	31 44 83 42	24 W 0410 1057 1.4 2249	96 44 83 42
10 Th 1333 ● 2002	2.8 1.4 2.9 1.0	85 42 88 32	25 F 0045 0632 1.0 1914	10 Su 0236 0847 1.6 2105	25 M 0229 0856 1.4 2114	10 W 0501 1149 1.6 2318	26 79 50 41	10 Th 0530 1208 1.2 1810	34 37 31 93	25 Th 0530 1208 1.2 1810	103 37 31 93
11 F 1420 2057	2.7 1.6 2.6 1.1	82 48 79 35	26 Sa 0144 0731 1.2 2015	11 M 0416 1034 1.6 2231	26 Tu 0413 1040 1.3 2241	11 Th 0601 1238 1.4 1821	28 86 43 74	11 F 0004 0627 3.6 1859	1.2 3.6 10 104	26 F 0004 0627 3.6 1859	38 110 30 104
12 Sa 1517 2202	2.6 1.7 2.4 1.1	80 51 72 35	27 Su 0256 0858 1.4 1439	12 Tu 0544 1214 1.5 1742	27 W 0542 1215 1.1 1803	12 F 0015 0641 3.1 1312	36 36 95 36	12 F 0057 0709 3.8 1935	1.1 116 38 112	27 Sa 0057 0709 3.8 1935	33 116 38 112
13 Su 1638 2308	2.6 2.2 2.2 1.1	80 51 68 33	28 M 0423 1031 1.4 2245	13 W 0641 1309 1.3 0.6	28 Th 0000 0642 0.7 1903	13 Sa 0057 0713 3.4 1931	30 30 103 97	13 Su 0138 0744 3.9 2008	1.0 119 30 119	28 Su 0138 0744 3.9 2008	30 119 24 119
14 M 1800	2.7 1.5 2.2	83 47 68	29 Tu 0547 1201 1.2 2354	14 Th 0036 0717 3.0 1919	29 F 0100 0728 0.8 1948	14 Su 0133 0742 3.6 1406	25 17 109 107	14 F 0213 0815 3.9 ●	1.0 119 24 123	29 M 0213 0815 3.9 ●	29 119 24 123
15 Tu 1321 1853	0.9 2.9 1.3 2.3	28 88 41 70	30 W 0650 1316 0.9 1900	15 F 0116 0747 0.6 2354	30 Sa 0148 0806 0.5 1952	15 M 0205 0811 0.7 2025	22 14 116 103	15 O 0246 0843 3.8 2036	1.0 117 24 123	30 Tu 0246 0843 3.8 2105	29 117 24 123
			31 Th 0057 0740 3.5 1409		31 Su 0227 0839 0.4 1505	31 O 0227 0839 0.4 2058	13 116 11 107				

Time meridian 82° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
 Heights are referred to the chart datum of soundings.

## Madras, India, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
W <b>1</b> 0317 1.0 31 0911 3.7 114 1524 0.8 25 2135 4.0 121	h m ft cm	Th <b>16</b> 0256 1.1 34 0850 4.1 126 1504 0.6 18 2127 4.5 137	h m ft cm	Sa <b>1</b> 0403 1.6 50 0943 3.5 107 1549 1.3 41 2219 4.1 124	h m ft cm	Su <b>16</b> 0426 1.4 42 1014 3.8 117 1614 1.1 35 2248 4.5 138	h m ft cm	M <b>1</b> 0426 1.7 51 1003 3.3 102 1559 1.4 43 2235 4.1 126	h m ft cm	Tu <b>16</b> 0513 1.1 33 1102 3.5 108 1652 1.3 39 2323 4.3 131	h m ft cm
	h m ft cm		h m ft cm		h m ft cm		h m ft cm	h m ft cm	h m ft cm		
	h m ft cm		h m ft cm		h m ft cm		h m ft cm	h m ft cm	h m ft cm		
	h m ft cm		h m ft cm		h m ft cm		h m ft cm	h m ft cm	h m ft cm		
Th <b>2</b> 0348 1.1 34 0939 3.6 109 1552 0.9 28 2206 3.8 117	17 0339 1.1 34 0932 4.0 123 1545 0.7 21 2210 4.4 134	Su <b>2</b> 0440 1.7 53 1016 3.3 102 1621 1.5 45 2255 3.9 120	2 0440 1.7 53 1016 3.3 102 1621 1.5 45 2255 3.9 120	M <b>17</b> 0525 1.5 45 1112 3.6 110 1706 1.5 45 2343 4.3 131	17 0525 1.5 45 1112 3.6 110 1706 1.5 45 2343 4.3 131	Tu <b>2</b> 0506 1.7 52 1042 3.3 100 1635 1.6 48 2313 4.0 123	2 0506 1.7 52 1042 3.3 100 1635 1.6 48 2313 4.0 123	W <b>17</b> 0605 1.2 36 1201 3.4 104 1747 1.6 48	17 0605 1.2 36 1201 3.4 104 1747 1.6 48	W <b>17</b> 0605 1.2 36 1201 3.4 104 1747 1.6 48	W <b>17</b> 0605 1.2 36 1201 3.4 104 1747 1.6 48
	h m ft cm		h m ft cm		h m ft cm		h m ft cm	h m ft cm	h m ft cm		
	h m ft cm		h m ft cm		h m ft cm		h m ft cm	h m ft cm	h m ft cm		
	h m ft cm		h m ft cm		h m ft cm		h m ft cm	h m ft cm	h m ft cm		
F <b>3</b> 0421 1.2 38 1009 3.4 103 1621 1.0 31 2240 3.7 112	18 0427 1.2 38 1019 3.8 116 1628 0.9 27 2257 4.2 127	M <b>3</b> 0520 1.9 57 1051 3.2 97 1654 1.6 50 2334 3.8 115	3 0520 1.9 57 1051 3.2 97 1654 1.6 50 2334 3.8 115	Tu <b>18</b> 0629 1.6 48 1219 3.4 104 1808 1.8 55	18 0629 1.6 48 1219 3.4 104 1808 1.8 55	W <b>3</b> 0549 1.7 53 1127 3.2 98 1716 1.8 54 2353 3.9 120	3 0549 1.7 53 1127 3.2 98 1716 1.8 54 2353 3.9 120	Th <b>18</b> 0015 4.0 123 0657 1.3 41 1306 3.3 102 1849 1.8 56	18 0015 4.0 123 0657 1.3 41 1306 3.3 102 1849 1.8 56	Th <b>18</b> 0015 4.0 123 0657 1.3 41 1306 3.3 102 1849 1.8 56	Th <b>18</b> 0015 4.0 123 0657 1.3 41 1306 3.3 102 1849 1.8 56
	h m ft cm		h m ft cm		h m ft cm		h m ft cm	h m ft cm	h m ft cm		
	h m ft cm		h m ft cm		h m ft cm		h m ft cm	h m ft cm	h m ft cm		
	h m ft cm		h m ft cm		h m ft cm		h m ft cm	h m ft cm	h m ft cm		
Sa <b>4</b> 0457 1.4 43 1038 3.1 96 1652 1.2 36 2316 3.5 106	19 0520 1.4 43 1111 3.5 107 1716 1.2 36 2351 3.9 120	Tu <b>4</b> 0608 2.0 60 1133 3.1 93 1732 1.9 57	4 0608 2.0 60 1133 3.1 93 1732 1.9 57	W <b>19</b> 0048 4.1 125 0737 1.7 51 1342 3.3 102 1926 2.1 64	19 0048 4.1 125 0737 1.7 51 1342 3.3 102 1926 2.1 64	Th <b>4</b> 0634 1.7 53 1225 3.2 97 1807 2.0 61	4 0634 1.7 53 1225 3.2 97 1807 2.0 61	O <b>19</b> 0113 3.8 115 0751 1.5 45 1415 3.3 101 2002 2.0 62	19 0113 3.8 115 0751 1.5 45 1415 3.3 101 2002 2.0 62	O <b>19</b> 0113 3.8 115 0751 1.5 45 1415 3.3 101 2002 2.0 62	O <b>19</b> 0113 3.8 115 0751 1.5 45 1415 3.3 101 2002 2.0 62
	h m ft cm		h m ft cm		h m ft cm		h m ft cm	h m ft cm	h m ft cm		
	h m ft cm		h m ft cm		h m ft cm		h m ft cm	h m ft cm	h m ft cm		
	h m ft cm		h m ft cm		h m ft cm		h m ft cm	h m ft cm	h m ft cm		
Su <b>5</b> 0536 1.6 49 1106 3.0 90 1723 1.3 41 2357 3.3 100	20 0628 1.6 49 1214 3.2 98 1817 1.5 47	M <b>5</b> 0022 3.7 112 0704 2.1 63 1235 3.0 90 1827 2.1 64	5 0022 3.7 112 0704 2.1 63 1235 3.0 90 1827 2.1 64	Th <b>20</b> 0159 3.9 120 0847 1.7 53 1507 3.4 104 2053 2.3 69	20 0159 3.9 120 0847 1.7 53 1507 3.4 104 2053 2.3 69	Sa <b>5</b> 0039 3.8 116 0723 1.7 53 1340 3.2 98 1910 2.2 67	5 0039 3.8 116 0723 1.7 53 1340 3.2 98 1910 2.2 67	Su <b>20</b> 0212 3.5 107 0847 1.6 48 1524 3.3 102 2124 2.1 65	20 0212 3.5 107 0847 1.6 48 1524 3.3 102 2124 2.1 65	Su <b>20</b> 0212 3.5 107 0847 1.6 48 1524 3.3 102 2124 2.1 65	Su <b>20</b> 0212 3.5 107 0847 1.6 48 1524 3.3 102 2124 2.1 65
	h m ft cm		h m ft cm		h m ft cm		h m ft cm	h m ft cm	h m ft cm		
	h m ft cm		h m ft cm		h m ft cm		h m ft cm	h m ft cm	h m ft cm		
	h m ft cm		h m ft cm		h m ft cm		h m ft cm	h m ft cm	h m ft cm		
M <b>6</b> 0621 1.8 55 1137 2.7 83 1756 1.6 48	21 0100 3.7 114 0749 1.7 53 1341 3.1 93 1940 1.8 56	Th <b>6</b> 0126 3.6 109 0813 2.1 64 1425 3.0 91 1951 2.3 70	6 0126 3.6 109 0813 2.1 64 1425 3.0 91 1951 2.3 70	F <b>21</b> 0310 3.8 116 0953 1.8 52 1621 3.6 109 2217 2.3 69	21 0310 3.8 116 0953 1.8 52 1621 3.6 109 2217 2.3 69	Sa <b>6</b> 0135 3.7 113 0819 1.7 52 1456 3.3 102 2029 2.3 70	6 0135 3.7 113 0819 1.7 52 1456 3.3 102 2029 2.3 70	Su <b>21</b> 0317 3.2 99 0948 1.6 50 1634 3.4 104 2242 2.1 65	21 0317 3.2 99 0948 1.6 50 1634 3.4 104 2242 2.1 65	Su <b>21</b> 0317 3.2 99 0948 1.6 50 1634 3.4 104 2242 2.1 65	Su <b>21</b> 0317 3.2 99 0948 1.6 50 1634 3.4 104 2242 2.1 65
	h m ft cm		h m ft cm		h m ft cm		h m ft cm	h m ft cm	h m ft cm		
	h m ft cm		h m ft cm		h m ft cm		h m ft cm	h m ft cm	h m ft cm		
	h m ft cm		h m ft cm		h m ft cm		h m ft cm	h m ft cm	h m ft cm		
Tu <b>7</b> 0050 3.1 94 0728 2.0 61 1219 2.5 77 1848 1.8 55	22 0225 3.6 111 0918 1.7 53 1528 3.1 94 2117 2.0 60	F <b>7</b> 0240 3.5 108 0925 2.0 61 1555 3.2 98 2129 2.3 71	7 0240 3.5 108 0925 2.0 61 1555 3.2 98 2129 2.3 71	Sa <b>22</b> 0417 3.7 114 1051 1.7 53 1722 3.8 116 2326 2.2 66	22 0417 3.7 114 1051 1.7 53 1722 3.8 116 2326 2.2 66	M <b>7</b> 0239 3.6 110 0918 1.6 48 1606 3.6 109 2153 2.3 69	7 0239 3.6 110 0918 1.6 48 1606 3.6 109 2153 2.3 69	W <b>22</b> 0424 3.1 94 1044 1.6 49 1736 3.5 107 2350 2.0 61	22 0424 3.1 94 1044 1.6 49 1736 3.5 107 2350 2.0 61	W <b>22</b> 0424 3.1 94 1044 1.6 49 1736 3.5 107 2350 2.0 61	W <b>22</b> 0424 3.1 94 1044 1.6 49 1736 3.5 107 2350 2.0 61
	h m ft cm		h m ft cm		h m ft cm		h m ft cm	h m ft cm	h m ft cm		
	h m ft cm		h m ft cm		h m ft cm		h m ft cm	h m ft cm	h m ft cm		
	h m ft cm		h m ft cm		h m ft cm		h m ft cm	h m ft cm	h m ft cm		
W <b>8</b> 0220 3.0 91 0918 2.0 62 1450 2.4 74 2044 2.0 60	23 0350 3.7 112 1038 1.6 50 1655 3.3 101 2247 1.9 59	Sa <b>8</b> 0346 3.6 110 1027 1.8 56 1702 3.5 108 2249 2.2 68	8 0346 3.6 110 1027 1.8 56 1702 3.5 108 2249 2.2 68	Tu <b>23</b> 0518 3.7 112 1139 1.7 51 1810 4.0 122	23 0518 3.7 112 1139 1.7 51 1810 4.0 122	M <b>8</b> 0342 3.5 108 1017 1.4 43 1708 3.8 117 2304 2.1 65	8 0342 3.5 108 1017 1.4 43 1708 3.8 117 2304 2.1 65	Th <b>23</b> 0530 3.0 92 1136 1.5 46 1825 3.6 111 2304 2.1 61	23 0530 3.0 92 1136 1.5 46 1825 3.6 111 2304 2.1 61	Th <b>23</b> 0530 3.0 92 1136 1.5 46 1825 3.6 111 2304 2.1 61	Th <b>23</b> 0530 3.0 92 1136 1.5 46 1825 3.6 111 2304 2.1 61
	h m ft cm		h m ft cm		h m ft cm		h m ft cm	h m ft cm	h m ft cm		
	h m ft cm		h m ft cm		h m ft cm		h m ft cm	h m ft cm	h m ft cm		
	h m ft cm		h m ft cm		h m ft cm		h m ft cm	h m ft cm	h m ft cm		
Th <b>9</b> 0350 3.1 93 1049 1.9 59 1648 2.7 81 2234 1.9 55	24 0501 3.7 114 1139 1.5 46 1756 3.6 111 2353 1.8 55	M <b>9</b> 0445 3.7 113 1116 1.6 49 1751 3.9 120 2347 2.1 63	9 0445 3.7 113 1116 1.6 49 1751 3.9 120 2347 2.1 63	Tu <b>24</b> 0019 2.0 62 0608 3.7 112 1219 1.6 49 1849 4.2 127	24 0019 2.0 62 0608 3.7 112 1219 1.6 49 1849 4.2 127	W <b>9</b> 0445 3.5 108 1112 1.2 37 1803 4.1 124 1906 3.7 114	9 0445 3.5 108 1112 1.2 37 1803 4.1 124 1906 3.7 114	F <b>24</b> 0043 1.9 57 0622 3.0 91 1221 1.3 41 1906 3.7 114	24 0043 1.9 57 0622 3.0 91 1221 1.3 41 1906 3.7 114	F <b>24</b> 0043 1.9 57 0622 3.0 91 1221 1.3 41 1906 3.7 114	F <b>24</b> 0043 1.9 57 0622 3.0 91 1221 1.3 41 1906 3.7 114
	h m ft cm		h m ft cm		h m ft cm		h m ft cm	h m ft cm	h m ft cm		
	h m ft cm		h m ft cm		h m ft cm		h m ft cm	h m ft cm	h m ft cm		
	h m ft cm		h m ft cm		h m ft cm		h m ft cm	h m ft cm	h m ft cm		
F <b>10</b> 0459 3.2 99 1144 1.7 52 1749 3.1 93 2342 1.8 54	25 0558 3.8 117 1224 1.4 43 1839 3.9 120	Tu <b>10</b> 0537 3.8 117 1158 1.3 41 1834 4.3 130	10 0537 3.8 117 1158 1.3 41 1834 4.3 130	W <b>25</b> 0102 1.9 59 0648 3.6 111 1252 1.5 45 1923 4.3 131	25 0102 1.9 59 0648 3.6 111 1252 1.5 45 1923 4.3 131	M <b>10</b> 0003 1.9 58 0547 3.6 110 1203 1.0 30 1850 4.3 132	10 0003 1.9 58 0547 3.6 110 1203 1.0 30 1850 4.3 132	Th <b>25</b> 0126 1.7 52 0703 3.0 92 1300 1.1 35 1941 3.8 117	25 0126 1.7 52 0703 3.0 92 1300 1.1 35 1941 3.8 117	Th <b>25</b> 0126 1.7 52 0703 3.0 92 1300 1.1 35 1941 3.8 117	Th <b>25</b> 0126 1.7 52 0703 3.0 92 1300 1.1 35 1941 3.8 117
	h m ft cm		h m ft cm		h m ft cm		h m ft cm	h m ft cm	h m ft cm		
	h m ft cm		h m ft cm								

## Colombo, Sri Lanka, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0039	1.4	42	16 W 0037	1.3	39	1 F 0115	1.4	44	16 Sa 1211	1.0	32
0641	1.9	58	0543	1.9	59	0424	1.5	47	Sa	0018	1.2
1301	0.9	26	1241	0.6	19	1256	1.0	29	0424	1.5	47
2030	1.9	59	● 1956	2.1	64	2224	1.8	55	1150	0.9	26
2 W 0200	1.5	46	17 Th 0152	1.5	45	2 Sa 1424	1.1	35	2037	1.7	51
0731	1.7	52	0558	1.7	53	17 Su 0011	2.0	60	16 Su 1018	1.1	34
1354	1.0	30	1333	0.8	24	0850	1.1	35	0424	1.5	47
2158	2.0	60	2156	2.1	63	1328	1.3	41	1150	0.9	26
3 Th 0603	1.4	44	18 F 1505	1.0	29	1746	1.1	34	2037	1.7	51
0905	1.5	47	2358	2.2	68	3 Su 0015	2.0	60	16 Sa 0018	1.2	38
1524	1.0	32				0816	1.0	32	0424	1.5	47
2326	2.1	64				1303	1.4	42	1150	0.9	26
4 F 0709	1.2	38	19 Sa 0748	1.3	39	1350	1.7	51	2037	1.7	51
1115	1.5	45	1209	1.4	42	1824	1.1	33	16 Su 0135	1.5	45
1713	1.0	32	1711	1.0	30	1903	0.9	28	0330	1.5	45
5 Sa 0024	2.3	69	20 Su 0100	2.4	73	18 M 0107	2.2	66	1041	1.1	33
0748	1.1	33	0754	1.0	32	0756	1.0	32	1320	1.4	42
1239	1.6	48	1326	1.6	48	1350	1.7	51	1845	1.1	35
1815	1.0	30	1835	0.9	27	1903	0.9	28	16 Sa 0135	1.5	45
6 Su 0109	2.4	74	21 M 0141	2.6	78	1948	0.7	22	1337	1.8	56
0816	1.0	29	0816	0.9	29	1909	0.9	28	1909	0.9	28
1331	1.7	51	1409	1.8	55				18 M 0052	1.9	59
1858	0.9	27	1933	0.8	23				0718	1.0	34
7 M 0148	2.6	78	21 W 0216	2.7	81				1337	1.8	56
0841	0.8	25	0845	0.7	20	7 Th 0246	2.6	79	1909	0.9	28
1413	1.8	55	1445	2.0	61	0858	0.5	15	1845	1.1	35
1933	0.8	24	○ 2018	0.7	20	1511	2.1	65	1909	0.9	28
8 Tu 0224	2.7	81	W 0913	0.5	16	● 2041	0.5	16	18 M 0128	2.2	68
0900	0.8	23	1516	2.2	66				0758	0.5	14
1448	1.9	57	2058	0.6	19	2113	0.5	15	1416	2.3	71
● 2005	0.7	22				2113	0.5	15	2015	0.6	17
9 W 0258	2.7	82	23 Th 0315	2.7	82	8 F 0252	2.5	75	20 F 0146	2.2	68
0916	0.7	20	0939	0.4	12	0915	0.2	7	0843	0.2	7
1520	2.0	60	1546	2.3	69	0824	0.4	12	1500	2.6	78
2039	0.7	20	2133	0.6	19	1528	2.4	74	○ 2107	0.4	13
10 Th 0328	2.7	81	23 W 0343	2.6	80	2041	0.5	16	22 M 0226	2.5	75
0935	0.6	18	1005	0.3	10	3039	0.2	5	0843	0.2	7
1552	2.0	62	1616	2.3	70	0937	0.2	5	1500	2.6	78
2113	0.7	20	2205	0.7	20	1552	2.5	75	1522	2.6	79
11 F 0356	2.6	80	26 Sa 0409	2.6	78	2148	0.5	15	2128	0.4	13
1000	0.5	16	1030	0.3	10	2113	0.5	15	23 W 0258	2.4	72
1622	2.1	64	1646	2.3	70	2113	0.5	15	0903	0.2	6
2148	0.7	20	2231	0.7	22	2113	0.5	15	1522	2.6	79
12 Sa 0422	2.5	77	27 Su 0435	2.4	74	2113	0.5	15	2146	0.5	14
1026	0.5	14	1052	0.4	11	1001	0.2	6	23 W 0322	2.3	71
1652	2.2	66	1716	2.3	69	1633	2.4	74	0922	0.2	6
2226	0.7	22	2256	0.8	25	1633	2.4	74	1548	2.6	79
13 Su 0443	2.4	73	27 M 0437	2.2	68	2216	0.6	17	2146	0.5	14
1056	0.4	13	1113	0.4	12	2216	0.6	17	0315	2.4	74
1726	2.2	67	1748	2.2	67	2230	0.6	18	0322	2.3	71
2305	0.9	26	2320	0.9	28	2230	0.6	18	0907	0.1	4
14 M 0503	2.3	69	29 Tu 0528	2.1	65	2230	0.6	18	1541	2.6	80
1128	0.5	14	1133	0.5	15	2250	0.7	21	2133	0.4	12
1803	2.2	67	1824	2.1	64	2250	0.7	21	0315	2.4	74
2346	1.0	32	2348	1.1	33	2250	0.7	21	0922	0.2	7
15 Tu 0522	2.1	64	● 1852	2.1	64	2250	0.7	21	1039	0.5	15
1201	0.5	16				2250	0.7	21	1731	2.1	64
1850	2.2	66				2250	0.7	21	2322	0.9	27
16 Sa 0522	2.1	64	31 Th 0022	1.2	38	2250	0.7	21	0443	1.6	50
1201	0.5	16	0558	1.7	52	2250	0.7	21	1101	0.7	20
1850	2.2	66	1224	0.8	24	2015	1.9	58	1800	1.9	58
			2015	1.8	56				0443	1.6	50

Time meridian 82° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Colombo, Sri Lanka, 2008

Times and Heights of High and Low Waters

April					May					June																	
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height													
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm												
<b>1</b> Tu	0726 1237 1828	1.1 1.4 1.2	33 44 37	<b>16</b> W	0000 0618 1301 1852	1.7 0.9 1.9 1.0	52 26 59 30	<b>1</b> Th	0452 1205 1811 2358	1.0 1.8 1.0 1.7	29 56 32 52	<b>16</b> F	0550 1233 1901	0.6 2.0 0.9	19 62 26	<b>1</b> Su	0520 1246 1907	0.4 2.3 0.7	13 69 22	<b>16</b> M	0020 0618 1307 2003	1.2 0.5 2.0 0.5	38 14 61 16				
<b>2</b> W	0011 0709 1258 1854	1.8 1.0 1.8 1.0	56 29 54 30	<b>17</b> Th	0039 0650 1320 1928	1.8 0.7 2.2 0.8	56 20 66 24	<b>2</b> F	0543 1243 1850	0.8 2.1 0.9	23 65 26	<b>17</b> Sa	0016 0628 1303 1937	1.6 0.5 2.2 0.7	49 16 67 21	<b>2</b> M	0041 0615 1330 1950	1.4 0.3 2.4 0.6	44 10 74 18	<b>17</b> Tu	0116 0658 1345 2037	1.3 0.4 2.1 0.4	39 12 64 13				
<b>3</b> Th	0052 0707 1324 1920	2.0 0.8 2.1 0.8	61 23 63 23	<b>18</b> F	0109 0718 1343 1956	2.0 0.5 2.4 0.6	60 15 72 19	<b>3</b> Sa	0043 0620 1318 1924	1.8 0.5 2.4 0.7	55 16 74 21	<b>18</b> Su	0058 0701 1333 2007	1.7 0.5 2.3 0.6	51 14 71 18	<b>3</b> Tu	0130 0703 1409 2030	1.5 0.2 2.5 0.5	46 7 76 15	<b>18</b> W	0201 0733 1422 2103	1.3 0.4 2.2 0.4	41 11 66 11				
<b>4</b> F	0126 0720 1352 1946	2.1 0.6 2.4 0.6	65 17 72 18	<b>19</b> Sa	0137 0743 1405 2024	2.1 0.4 2.5 0.6	63 12 80 17	<b>4</b> Su	0118 0656 1352 2000	1.9 0.4 2.6 0.6	57 11 80 17	<b>19</b> M	0135 0730 1403 2035	1.7 0.4 2.4 0.5	53 12 73 16	<b>4</b> W	0215 0750 1446 2109	1.5 0.2 2.5 0.4	47 6 77 12	<b>19</b> Th	0243 0803 1458 2128	1.4 0.3 2.2 0.3	42 10 66 9				
<b>5</b> Sa	0156 0741 1420 2016	2.2 0.4 2.6 0.5	68 11 79 15	<b>20</b> Su	0203 0807 1430 2046	2.1 0.3 2.6 0.5	64 10 78 15	<b>5</b> M	0152 0731 1426 2033	1.9 0.2 2.7 0.5	58 7 83 15	<b>20</b> Tu	0209 0754 1433 2100	1.7 0.4 2.4 0.5	53 12 74 15	<b>5</b> Th	0258 0835 1524 2146	1.6 0.2 2.5 0.4	49 7 75 11	<b>20</b> F	0320 0835 1531 2148	1.4 0.3 2.2 0.3	43 9 66 8				
<b>6</b> Su	0222 0807 1448 ●	2.2 0.2 2.7 0.4	68 7 83 13	<b>21</b> M	0231 0828 1456 2109	2.1 0.3 2.6 0.5	65 9 79 15	<b>6</b> Tu	0224 0809 1458 2109	1.9 0.2 2.8 0.5	59 5 84 15	<b>21</b> W	0245 0818 1505 2122	1.7 0.4 2.4 0.5	53 11 74 14	<b>6</b> F	0339 0920 1600 2226	1.6 0.3 2.4 0.3	50 9 72 10	<b>21</b> Sa	0354 0909 1603 2211	1.4 0.3 2.1 0.2	43 9 64 6				
<b>7</b> M	0248 0837 1518 2118	2.2 0.1 2.8 0.4	68 4 85 13	<b>22</b> Tu	0258 0846 1522 2130	2.1 0.3 2.6 0.5	63 9 79 15	<b>7</b> W	0256 0845 1531 2146	1.9 0.2 2.7 0.5	58 6 83 15	<b>22</b> Th	0316 0845 1537 2146	1.7 0.4 2.4 0.5	51 12 74 14	<b>7</b> Sa	0422 1003 1633 2303	1.6 0.4 2.2 0.3	50 50 68 10	<b>22</b> Su	0428 0943 1633 2237	1.4 0.3 2.0 0.2	44 9 61 5				
<b>8</b> Tu	0311 0907 1546 2152	2.2 0.1 2.8 0.5	66 3 85 15	<b>23</b> W	0326 0907 1550 2150	2.0 0.3 2.5 0.5	61 10 77 16	<b>8</b> Th	0328 0920 1603 2222	1.9 0.3 2.6 0.6	57 8 79 17	<b>23</b> F	0350 0911 1609 2213	1.6 0.4 2.3 0.5	49 12 70 15	<b>8</b> Su	0505 1046 1707 2341	1.6 0.6 2.1 0.3	50 17 63 10	<b>23</b> M	0501 1020 1700 2307	1.5 0.3 1.9 0.1	45 10 58 4				
<b>9</b> W	0335 0937 1616 2226	2.1 0.2 2.7 0.6	64 5 82 19	<b>24</b> Th	0352 0930 1618 2215	1.9 0.4 2.4 0.6	58 12 73 18	<b>9</b> F	0403 0958 1637 2301	1.8 0.4 2.4 0.6	55 13 74 19	<b>24</b> Sa	0422 0943 1639 2243	1.6 0.5 2.2 0.5	48 14 66 15	<b>9</b> M	0552 1131 1743	1.6 0.7 1.9	49 22 57	<b>24</b> Tu	0537 1101 1726 2339	1.5 0.4 1.8 0.1	46 12 54 4				
<b>10</b> Th	0400 1007 1646 2300	2.0 0.3 2.5 0.8	60 9 77 24	<b>25</b> F	0416 0952 1646 2243	1.8 0.5 2.3 0.7	54 14 69 21	<b>10</b> Sa	0443 1035 1713 2343	1.7 0.6 2.2 0.7	52 19 67 <br;>22</br;>	<b>25</b> Tu	0456 1018 1711 2316	1.5 0.5 2.0 0.5	46 16 62 16	<b>10</b> W	0018 0645 1222 1820	0.4 1.6 0.9 1.7	11 48 26 52	<b>25</b> W	0616 1146 1750	1.5 0.5 1.6	47 16 50				
<b>11</b> F	0426 1035 1718 2335	1.9 0.5 2.3 1.0	57 15 70 29	<b>26</b> Sa	0439 1020 1715 2316	1.7 0.6 2.1 0.8	51 17 65 24	<b>11</b> Su	0531 1115 1750	1.6 0.9 2.0	49 26 61	<b>26</b> M	0533 1058 1741 2358	1.5 0.7 1.9 0.6	45 20 58 17	<b>11</b> W	0101 0746 1331 1907	0.4 1.5 1.0 1.5	13 47 31 46	<b>26</b> Th	0016 0705 1239 1816	0.1 1.5 0.7 1.5	4	<b>26</b> O	0016 0705 1239 1816	0.1 1.5 0.7 1.5	4
<b>12</b> Sa	0454 1101 1754	1.7 0.8 2.0	52 23 62	<b>27</b> Su	0500 1052 1746	1.5 0.7 1.9	47 22 59	<b>12</b> M	0031 0637 1207 1839	0.8 1.5 1.1 1.8	25 46 34 54	<b>27</b> Tu	0624 1148 1816 1839	1.5 0.8 1.7 1.6	45 25 53 48	<b>12</b> W	0154 0901 1541 2007	0.5 1.6 1.0 1.3	15 48 32 41	<b>27</b> F	0100 0809 1350 1848	0.2 1.6 0.9 1.3	5 48 26 39				
<b>13</b> Su	0022 0530 1120 ●	1.1 1.5 1.0 1.8	34 46 32 54	<b>28</b> M	0000 0526 1131 1831	0.9 1.4 0.9 1.7	28 44 28 53	<b>13</b> Tu	0145 0837 1443 1954	0.9 1.5 1.3 1.6	27 46 39 48	<b>28</b> W	0045 0741 1148 1905	0.6 1.5 0.8 1.6	19 45 25 37	<b>13</b> F	0303 1026 1258 2131	0.5 1.6 1.0 1.2	16 50 30 37	<b>28</b> Sa	0154 0939 1539 1941	0.2 1.6 1.0 1.1	7 50 29 34				
<b>14</b> M	0226 0720 0916 2148	1.2 1.3 1.3 1.6	38 41 40 49	<b>29</b> Tu	0101 0746 1246 2037	1.0 1.3 1.2 1.6	32 41 36 48	<b>14</b> W	0337 1107 1718 2150	0.9 1.6 1.2 1.5	26 50 36 45	<b>29</b> Th	0146 0926 1443 2028	0.7 1.6 1.1 1.4	20 48 34 43	<b>14</b> Sa	0422 1133 1839 2305	0.5 1.7 0.8 1.2	16 53 25 36	<b>29</b> Su	0305 1115 1758 2152	0.3 1.7 0.9 1.0	9 53 26 30				
<b>15</b> Tu	0541 1243 1807	1.1 1.7 1.2	33 51 36	<b>30</b> W	0254 1109 1628 2252	1.1 1.5 1.2 1.6	33 47 38 49	<b>15</b> Th	0458 1200 1820 2322	0.8 1.9 1.0 1.5	23 57 32 47	<b>30</b> F	0301 1056 1658 2218	0.6 1.8 1.0 1.3	19 55 32 41	<b>15</b> Sa	0416 1158 1818 2341	0.6 2.0 0.9 1.4	17 62 27 42	<b>30</b> M	0430 1226 1911	0.3 1.9 0.7	10 59 21				

Time meridian 82° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

## Colombo, Sri Lanka, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
1 Tu 1318 1956	0020 1.0 31 0548 0.3 9 1318 2.1 63 1956 0.5 15	16 W 0648 0.4 11 1335 1.8 54 2041 0.3 8	0116 1.0 29 0801 0.1 3 1433 2.0 60 2054 -0.1 -2	1 F 0231 1.3 40 0801 0.1 3 1433 2.0 60 2054 -0.1 -2	0226 1.3 40 0801 0.1 3 1430 1.9 57 2046 -0.1 -2	16 Sa 0309 1.9 58 0907 0.0 -1 1503 1.9 58 2116 -0.3 -10	0309 1.9 58 0907 0.0 -1 1503 1.9 58 2116 -0.3 -10	16 Tu 0252 2.0 62 0839 0.0 1 1454 1.9 58 2043 -0.2 -6			
2 W 1403 2033	0133 1.1 35 0654 0.2 7 1413 2.2 66 2101 0.3 10	17 Th 0203 1.1 33 0730 0.3 8 1413 1.9 58 2101 0.2 5	0305 1.5 46 0845 0.0 0 1503 2.0 60 2124 -0.2 -6	2 Sa 0337 1.6 50 0924 0.0 0 1531 1.9 59 2152 -0.3 -9	0256 1.5 45 0830 0.0 0 1500 1.9 57 2100 -0.2 -5	2 Tu 0335 2.0 60 0935 0.0 0 1530 1.9 57 2139 -0.3 -10	0320 2.2 66 0911 0.0 1 1516 1.8 56 2109 -0.3 -8				
3 Th 1443 ● 2109	0224 1.3 40 0750 0.2 5 1448 2.2 67 O 2118 0.1 2	18 F 0241 1.2 37 0803 0.2 6 1448 2.0 60 O 2118 0.1 2	0337 1.6 50 0924 0.0 0 1531 1.9 59 2152 -0.3 -9	3 Su 0324 1.6 50 0858 -0.1 5 1526 1.9 57 2120 -0.3 -8	0324 1.6 50 0858 -0.1 5 1526 1.9 57 2120 -0.3 -8	3 W 0401 2.0 60 1001 0.0 1 1554 1.8 55 2201 -0.3 -9	0348 2.2 67 0943 0.1 3 1537 1.7 53 2137 -0.3 -8				
4 F 1518 2143	0309 1.4 44 0841 0.1 4 1520 2.2 67 2133 0.0 1	19 Sa 0315 1.3 40 0835 0.1 4 1520 2.0 60 2133 0.0 0	0407 1.7 52 0958 0.0 0 1600 1.9 57 2218 -0.3 -10	4 M 0350 1.7 53 0928 -0.1 3 1600 1.8 54 2143 -0.3 -10	0350 1.7 53 0928 -0.1 3 1600 1.8 54 2143 -0.3 -10	4 Th 0430 1.9 59 1024 0.1 4 1620 1.7 51 2222 -0.2 -7	0416 2.2 66 1015 0.2 7 1556 1.6 50 2205 -0.2 -5				
5 Sa 1550 2216	0348 1.5 47 0926 0.2 5 1550 2.1 65 2216 0.0 -1	20 Su 0346 1.4 43 0907 0.1 2 1550 1.9 59 2152 -0.1 -3	0435 1.7 53 1028 0.1 2 1626 1.8 54 2243 -0.3 -10	5 Tu 0418 1.8 55 1000 0.0 -1 1609 1.7 52 2209 -0.4 -12	0418 1.8 55 1000 0.0 -1 1609 1.7 52 2209 -0.4 -12	5 F 0458 1.8 56 1045 0.2 7 1645 1.5 47 2241 -0.1 -3	0446 2.1 64 1050 0.4 12 1615 1.5 47 2235 0.0 -1				
6 Su 1622 2248	0426 1.6 49 1007 0.2 6 1622 2.0 62 2248 -0.1 -3	21 M 0416 1.5 45 0941 0.0 1 1616 1.9 57 2215 -0.2 -5	0507 1.7 53 1056 0.2 2 1652 1.7 51 2305 -0.3 -9	6 W 0446 1.8 56 1033 0.1 2 1626 1.6 48 2237 -0.4 -11	0446 1.8 56 1033 0.1 2 1626 1.6 48 2237 -0.4 -11	6 Sa 0530 1.7 52 1109 0.4 11 1707 1.4 42 2301 0.0 1	0518 1.9 59 1128 0.6 18 1635 1.4 43 2305 0.2 6				
7 M 1652 2318	0501 1.6 50 1046 0.3 9 1652 1.9 58 2318 -0.1 -3	22 Tu 0446 1.6 48 1015 0.1 2 1639 1.8 54 2241 -0.2 -7	0537 1.7 51 1120 0.3 8 1718 1.5 46 2328 -0.2 -6	7 Th 0516 1.8 55 1109 0.2 7 1643 1.5 45 2307 -0.3 -9	0516 1.8 55 1109 0.2 7 1643 1.5 45 2307 -0.3 -9	7 Su 0603 1.6 48 1137 0.5 16 1722 1.2 36 O 2324 0.2 6	0558 1.7 53 1213 0.8 24 1656 1.2 38 O 2331 0.5 15				
8 Tu 1722 2346	0539 1.6 50 1122 0.4 12 1722 1.7 53 2346 -0.1 -2	23 W 0516 1.6 49 1052 0.1 4 1658 1.6 50 2311 -0.3 -8	0613 1.6 48 1146 0.4 12 1745 1.3 41 2350 -0.1 -2	8 F 0548 1.7 53 1146 0.4 13 1700 1.3 40 2337 -0.1 -4	0548 1.7 53 1146 0.4 13 1700 1.3 40 2337 -0.1 -4	8 M 0648 1.4 42 1215 0.7 21 1648 1.0 30 2348 0.4 12	0654 1.5 46 1348 1.0 30 1700 1.0 32 2326 0.8 25				
9 W 1752	0616 1.6 49 1158 0.5 16 1752 1.6 48	24 Th 0548 1.6 50 1130 0.3 8 1716 1.5 46 2343 -0.2 -7	0652 1.4 44 1218 0.5 16 1807 1.1 35 O	9 Sa 0631 1.6 48 1233 0.7 20 1715 1.2 36 O	0631 1.6 48 1233 0.7 20 1715 1.2 36 O	9 Tu 0815 1.2 37 1333 0.9 27 1524 0.9 28	0815 1.2 37 1333 0.9 27 1524 0.9 28	24 W 1020 1.4 42 1816 0.8 25			
10 Th 1235 ● 1824	0015 0.0 0 0700 1.5 47 1235 0.7 20 ● 1824 1.4 43	25 F 0626 1.6 49 1213 0.5 14 1733 1.3 41	0015 0.1 3 0746 1.3 39 1303 0.7 22 1813 0.9 28	10 Su 0015 0.1 3 0746 1.3 39 1303 0.7 22 1813 0.9 28	0011 0.1 3 0733 1.4 43 1358 0.9 27 1711 1.0 30	10 W 0016 0.7 20 1056 1.2 38 1930 0.6 18	0035 1.1 35 0530 0.9 26 1203 1.5 47 1831 0.6 18				
11 F 1322 1901	0045 0.1 3 0750 1.4 44 1322 0.8 24 1901 1.2 37	26 Sa 0018 -0.1 4 0715 1.5 47 1307 0.7 21 O 1754 1.2 36	0045 0.3 8 0916 1.2 36	11 M 0045 0.3 8 0916 1.2 36	0056 0.4 12 1035 1.3 40 2135 0.7 20	11 Th 0035 0.9 28 0615 0.7 21 1215 1.4 44 1933 0.4 13	0100 1.5 45 0635 0.7 20 1245 1.7 52 1856 0.4 11				
12 Sa 1516 1954	0120 0.2 7 0856 1.4 43 1516 0.9 27 1954 1.0 31	27 Su 0100 0.0 1 0828 1.5 45 1437 0.9 26 1809 1.0 30	0141 0.5 14 1124 1.3 39 1952 0.5 15	12 Tu 0141 0.5 14 1124 1.3 39 1952 0.5 15	0033 0.7 22 0424 0.6 18 1224 1.5 45 1920 0.5 15	12 W 0103 1.2 36 0654 0.5 15 1258 1.6 50 1939 0.3 9	0124 1.8 54 0715 0.5 14 1316 1.8 55 1924 0.2 5				
13 Su 1841 2139	0213 0.4 11 1024 1.4 43 1841 0.8 23 2139 0.9 26	28 M 0200 0.2 6 1041 1.5 45	0026 0.7 22 0556 0.5 16 1237 1.4 44 2007 0.3 10	13 W 0118 1.0 32 0626 0.4 13 1311 1.6 50 1935 0.3 8	0118 1.0 32 0626 0.4 13 1311 1.6 50 1946 0.2 5	13 Sa 0130 1.4 44 0720 0.3 10 1331 1.8 55 1950 0.0 1	0148 2.0 61 0748 0.3 9 1343 1.9 58 1950 0.0 1				
14 M 1937	0348 0.5 14 1150 1.5 46 1937 0.6 17	29 Tu 0354 0.4 11 1222 1.6 49 1939 0.6 17	0122 0.9 28 0658 0.4 11 1322 1.6 50 2022 0.2 5	14 Th 0122 0.9 28 0658 0.4 11 1322 1.6 50 2000 0.0 1	0148 1.3 41 0720 0.3 8 1343 1.8 55 2000 0.0 1	14 F 0158 1.7 51 0745 0.2 6 1401 1.9 58 2000 0.0 1	0213 2.2 66 0818 0.2 7 1407 2.0 60 ● 2015 0.0 -1				
15 Tu 1250 2013	0001 0.9 26 0545 0.5 14 1250 1.6 50 2013 0.4 12	30 W 0058 0.8 25 0554 0.3 10 1318 1.8 54 2000 0.3 10	0156 1.1 34 0731 0.2 7 1358 1.8 54 2035 0.1 2	30 F 0216 1.6 49 0801 0.1 3 1413 1.9 57 2026 -0.1 -4	0226 1.9 58 0811 0.1 2 1430 1.9 58 2018 -0.1 -3	15 M 0226 1.9 58 0811 0.1 2 1430 1.9 58 2039 -0.1 -2	0237 2.3 70 0846 0.2 6 1433 2.0 60 2039 -0.1 -2				
		31 Th 1358 2026	0152 1.1 33 0707 0.2 6 1358 1.9 58 2026 0.1 3	31 Su 0243 1.8 54 0837 0.0 0 1439 1.9 58 2052 -0.3 -8	0243 1.8 54 0837 0.0 0 1439 1.9 58 2052 -0.3 -8						

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# Colombo, Sri Lanka, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm		h m	ft	cm		h m	ft	cm	
1 W 0301	2.3	71		16 Th 0252	2.6	79		1 M 0331	2.5	77	
0911	0.2	6		0854	0.3	10		0937	0.6	18	
1500	2.0	60		1448	1.9	59		1535	1.9	59	
2100	-0.1	-2		2039	0.0	1		2111	0.5	14	
								2133	0.6	18	
2 Th 0328	2.3	70		17 F 0322	2.6	79		2 Su 0401	2.4	74	
0933	0.2	7		0928	0.4	12		1001	0.6	19	
1526	1.9	57		1513	1.9	57		1603	1.8	54	
2120	0.0	0		2109	0.1	2		2135	0.6	17	
								2215	0.8	24	
3 F 0356	2.2	68		18 Sa 0354	2.5	77		3 M 0431	2.3	70	
0954	0.3	9		1001	0.5	15		1030	0.7	22	
1552	1.8	54		1539	1.8	54		1633	1.6	50	
2141	0.1	3		2143	0.2	6		2203	0.7	20	
								2258	1.0	31	
4 Sa 0424	2.1	65		19 Su 0426	2.4	73		4 Tu 0503	2.1	65	
1016	0.4	12		1039	0.6	19		1103	0.8	25	
1616	1.6	50		1607	1.7	51		1707	1.5	47	
2201	0.2	6		2215	0.4	13		2235	0.8	25	
								2354	1.3	39	
5 Su 0454	2.0	61		20 M 0500	2.2	67		5 W 0539	2.0	60	
1043	0.5	16		1120	0.8	24		1146	1.0	29	
1641	1.5	45		1641	1.6	48		1758	1.4	44	
2224	0.3	10		2248	0.7	20		2316	1.0	31	
								○			
6 M 0526	1.8	56		21 Tu 0537	2.0	60		6 Th 0631	1.8	55	
1113	0.7	20		1211	1.0	29		1245	1.0	32	
1658	1.3	41		1730	1.4	43		2011	1.4	43	
2248	0.5	16		○ 2328	1.0	30		○			
								21 0631	1.5	47	
7 Tu 0603	1.6	50		22 W 0633	1.7	53		21 F 0722	1.8	55	
1154	0.9	26		1348	1.1	33		1448	1.0	31	
1641	1.2	36		2018	1.3	40		2230	1.9	57	
○ 2316	0.7	22						○			
8 W 0716	1.5	45		23 Th 0150	1.3	39		8 Sa 0348	1.3	41	
1305	1.0	31		0841	1.6	48		1013	1.6	50	
1543	1.1	33		1633	1.0	30		1616	1.0	31	
				2352	1.6	49		2333	1.6	49	
9 Th 0005	1.0	30		24 F 0526	1.1	35		9 Su 0550	1.2	36	
0956	1.4	43		1107	1.6	49		1124	1.7	53	
1828	0.9	27		1731	0.8	24		1711	0.9	26	
2350	1.3	39						2333	1.9	58	
								○			
10 F 0558	1.0	31		25 Sa 0024	1.9	58		10 M 0016	2.2	67	
1131	1.6	48		0620	1.0	29		0628	1.0	30	
1830	0.8	23		1201	1.7	53		1213	1.8	56	
				1811	0.6	18		1750	0.7	20	
11 Sa 0024	1.6	48		26 Su 0052	2.2	66		11 Tu 0052	2.5	75	
0630	0.8	25		0658	0.8	24		0701	0.9	26	
1220	1.7	53		1237	1.9	57		1252	1.9	58	
1835	0.6	18		1843	0.5	14		1828	0.5	16	
								1909	0.6	19	
12 Su 0054	1.9	57		27 M 0116	2.4	72		12 W 0126	2.7	82	
0656	0.6	19		0731	0.7	20		0735	0.7	22	
1256	1.9	57		1309	2.0	60		1328	2.0	60	
1850	0.4	13		1913	0.4	11		1903	0.4	12	
								● 1939	0.6	19	
13 M 0124	2.1	65		28 Tu 0141	2.5	76		13 Th 0200	2.8	86	
0722	0.5	15		0800	0.6	17		0809	0.7	20	
1328	1.9	59		1337	2.0	61		1400	2.0	61	
1911	0.3	8		1939	0.3	9		1941	0.3	10	
								○			
14 Tu 0154	2.4	72		29 W 0207	2.6	79		14 F 0233	2.9	87	
0750	0.4	11		0828	0.5	16		0845	0.6	19	
1356	2.0	60		1405	2.0	62		1433	2.0	60	
1937	0.1	4		● 2003	0.3	9		2018	0.4	11	
15 W 0224	2.5	77		30 Th 0233	2.6	79		15 Sa 0307	2.9	87	
0828	0.3	10		0852	0.5	15		0922	0.7	20	
1424	2.0	60		1435	2.0	62		1507	2.0	60	
○ 2007	0.0	1		2026	0.3	10		2056	0.4	13	
				31 F 0301	2.6	79					
				0915	0.5	16					
				1505	2.0	60					
				2048	0.4	11					

Time meridian 82° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

## Bombay, India, 2008

Times and Heights of High and Low Waters

January				February				March									
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height						
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm						
1 Tu 0538 1233 1937	11.9 5.2 10.2	364 157 311	16 W 0451 1143 1847	13.4 3.3 11.8	407 102 360	1 F 0041 0541 1311 2148	9.1 9.8 5.1 10.7	277 300 156 326	16 Sa 0132 0553 1331 2123	8.4 10.4 3.9 12.0	255 318 119 367	1 Sa 0433 1209 2009	9.4 5.5 10.1	288 168 308	16 Su 0159 0628 1326 2103	7.9 9.4 4.8 11.7	242 288 147 358
●																	
2 W 0036 0617 1327 2123	8.6 11.1 5.0 10.8	263 339 151 328	17 Th 0002 0533 1246 2015	7.4 12.4 3.3 12.0	225 379 100 367	2 Sa 0435 0723 1421 2237	8.7 9.3 4.8 11.5	264 282 147 351	17 Su 0331 0811 1459 2227	7.8 10.0 3.5 13.0	239 306 108 395	2 Su 0428 0626 1336 2158	8.6 8.7 5.4 10.9	261 265 166 333	17 M 0329 0847 1455 2205	7.0 9.8 4.4 12.6	214 298 135 384
3 Th 0230 0711 1420 2217	8.8 10.4 4.6 11.5	269 317 140 352	18 F 0131 0634 1357 2136	8.1 11.5 3.1 12.7	247 352 93 388	3 Su 0515 0909 1525 2308	7.9 9.4 4.2 12.3	240 286 129 376	18 M 0436 0955 1610 2313	6.7 10.9 2.8 14.0	204 332 85 427	3 M 0447 0844 1450 2231	7.7 9.0 4.9 11.8	236 274 148 361	18 Tu 0422 1006 1600 2249	5.7 11.1 3.7 13.5	175 337 114 412
4 F 0422 0820 1510 2256	8.5 10.0 4.1 12.3	258 304 126 375	19 Sa 0312 0806 1508 2238	8.0 11.0 2.6 13.7	245 336 79 417	4 M 0536 1018 1618 2335	7.2 10.1 3.5 13.1	220 307 106 399	19 Tu 0520 1100 1707 2351	5.4 12.1 2.0 14.9	165 370 62 455	4 Tu 0453 0953 1551 2258	6.9 10.0 4.0 12.8	210 304 121 391	19 W 0501 1056 1649 2325	4.5 12.3 3.1 14.2	136 376 96 434
5 Sa 0516 0941 1559 2328	7.9 10.0 3.6 12.9	240 305 110 394	20 Su 0436 0942 1615 2326	7.3 11.3 2.0 14.6	222 344 60 446	5 Tu 0552 1101 1701	6.6 10.9 2.7	201 333 83	20 W 0600 1150 1753	4.3 13.2 1.6	131 403 50	5 W 0508 1038 1637 2325	5.9 11.1 3.1 13.7	181 339 96 419	20 Th 0534 1139 1731 2359	3.4 13.3 3.0 14.6	103 405 91 444
6 Su 0552 1041 1642 2358	7.3 10.4 3.1 13.5	224 317 93 411	21 M 0533 1058 1715	6.3 12.1 1.3	191 370 41 41	6 W 0002 0612 1140 1737	13.8 5.9 11.8 2.1	421 181 361 64	21 Th 0026 0637 1236 1832	15.5 3.4 13.8 1.7	471 105 422 52	6 Th 0533 1121 1716 2353	4.9 12.3 2.5 14.5	149 375 76 443	21 F 0604 1219 1807	2.7 13.8 3.2	81 422 97
7 M 0619 1124 1720	6.9 11.0 2.6	210 335 78	22 Tu 0010 0620 1156 1807	15.5 5.3 13.1	471 161 29	7 Th 0027 0640 1219 1812	14.5 5.2 12.7 1.7	442 89 388 51	22 F 0059 0711 1316 1904	15.6 2.9 14.0 2.2	474 89 427 68	7 F 0602 1201 1754 1837	3.7 13.5 2.1	113 410 65	22 M 0027 0633 1255 1837	14.5 2.2 14.0 3.7	442 67 428 112
8 Tu 0026 0647 1200 ● 1755	14.0 6.5 11.6 2.2	426 197 354 66	23 W 0049 0703 1247 1850	16.0 4.4 13.6 1.0	487 135 29	8 F 0056 0709 1257 1849	15.1 4.2 13.5 1.6	460 129 411 48	23 Sa 0130 0742 1352 1931	15.3 2.6 13.8 3.1	465 80 421 94	8 Sa 0023 0636 1243 1834	15.1 2.5 14.4 2.1	460 76 439 64	23 W 0054 0658 1328 1904	14.1 1.9 14.0 4.2	431 59 427 129
9 W 0057 0713 1235 1828	14.4 6.0 12.2 1.9	439 184 372 58	24 Th 0127 0744 1332 1928	16.1 3.9 13.8	491 118 421 44	9 Sa 0126 0745 1338 1927	15.5 3.3 14.0	473 100 427 56	24 Su 0159 0808 1427 1955	14.7 2.6 13.4 4.0	448 78 408 123	9 Su 0053 0710 1326 1915	15.4 1.4 15.1 2.4	470 43 459 74	24 M 0118 0721 1359 1930	13.6 1.8 13.8 4.8	416 55 422 146
10 Th 0125 0743 1312 1903	14.8 5.5 12.6 1.9	450 169 385 73	25 F 0204 0822 1415 2003	15.9 3.6 13.5	486 109 73	10 Su 0159 0820 1421 2009	15.7 2.4 14.2	478 74 433 77	25 M 0225 0830 1457 2017	13.9 2.6 12.8 5.1	425 80 391 154	10 M 0126 0746 1409 1956	15.4 0.7 15.3 3.1	470 21 467 95	25 Tu 0140 0744 1425 1955	13.1 1.9 13.5 5.3	400 57 413 163
11 F 0157 0815 1351 1942	15.1 5.0 12.9 2.1	459 153 393 65	26 Sa 0239 0855 1456 2033	15.4 3.5 12.9	470 107 110	11 M 0233 0855 1509 2054	15.5 1.9 14.0	472 58 428 111	26 Tu 0245 0850 1524 2043	13.2 2.9 12.2 6.0	401 88 373 183	11 Tu 0200 0821 1455 2041	15.0 0.5 15.1 4.1	458 14 459 126	26 W 0202 0806 1452 2027	12.6 2.2 13.1 6.0	383 68 399 183
12 Sa 0229 0851 1434 2023	15.2 4.5 12.9 2.8	463 136 393 84	27 Su 0312 0925 1536 2058	14.6 3.7 12.1	446 112 152	12 Tu 0308 0932 1600 2142	14.9 1.8 13.5	454 56 412 153	27 W 0302 0914 1553 2117	12.3 3.4 11.6 7.0	376 103 354 212	12 W 0235 0857 1546 2129	14.3 0.9 14.3 5.4	435 27 436 165	27 Th 0230 0834 1523 2106	11.8 3.0 12.4 6.8	361 90 378 207
13 Su 0305 0929 1522 2107	15.1 4.0 12.7 3.7	461 121 387 113	28 M 0340 0951 1615 2123	13.7 4.0 11.4	417 121 347 191	13 W 0341 1011 1703 2233	13.9 2.2 12.7 6.5	425 68 387 198	28 Th 0326 0949 1634 2205	11.5 4.1 10.9 7.9	349 125 332 241	13 Th 0310 0935 1644 2224	13.2 1.9 13.2 6.8	402 57 401 206	28 F 0259 0908 1604 2159	11.0 3.9 11.6 7.6	335 120 353 233
14 M 0339 1009 1617 2157	14.8 3.6 12.4 4.9	450 110 377 150	29 Tu 0401 1018 1658 2153	12.7 4.3 10.7	388 132 327 226	14 Th 0412 1058 1821 2341	12.8 2.9 11.9	390 89 363 236	29 F 0354 1043 1745 2343	10.5 5.0 10.2	319 151 312 265	14 F 0345 1023 1759 2343	11.9 3.1 12.0	362 96 367 238	29 M 0331 0955 1659 2327	10.1 5.0 10.7	308 152 327 254
15 Tu 0415 1052 1725 2254	14.2 3.4 12.0 6.2	432 104 365 190	30 W 0419 1056 1754 2245	11.8 4.7 10.2	359 143 312 257	15 F 0450 1202 1952	11.5 3.6	352 111 354	31 Th 0447 1156 1924	10.8 5.0	329 153 308	15 O 0428 1138 1928	10.5 4.4	320 133 349	30 Su 0408 1117 1842	9.3 5.7	282 175 315
31 Th 0447 1156 1924	10.8 5.0	329 153 308										31 M 0126 0524 1250	8.4 8.6	255 263 328	31 W 0126 0524 1250	8.4 5.9	255 180 328

Time meridian 82° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Bombay, India, 2008

Times and Heights of High and Low Waters

April				May				June						
	Time	Height			Time	Height			Time	Height				
	h m	ft cm		h m	ft cm			h m	ft cm					
<b>1</b> Tu	0321	7.6 231		<b>16</b> W	0353	5.0 151		<b>1</b> Th	0256	5.8 177		<b>16</b> Su	0348	3.9 118
	0810	9.0 273			1001	11.4 347			0851	10.6 322			1029	12.3 374
	1411	5.4 166			1538	5.0 151			1431	5.7 173			1603	6.4 194
	2125	11.7 356			2212	12.9 394			2104	12.5 382			2207	12.0 367
<b>2</b> W	0354	6.4 196		<b>17</b> Th	0431	3.9 118		<b>2</b> F	0338	4.3 132		<b>17</b> Sa	0422	3.2 99
	0924	10.1 308			1045	12.4 379			0950	12.0 366			1107	12.9 394
	1514	4.8 145			1626	4.7 144			1532	5.3 163			1652	6.4 195
	2205	12.7 386			2252	13.3 404			2151	13.1 400			2248	11.9 363
<b>3</b> Th	0423	5.1 156		<b>18</b> F	0503	3.0 92		<b>3</b> Sa	0415	2.9 87		<b>18</b> Su	0451	2.8 85
	1014	11.5 351			1124	13.2 403			1041	13.5 411			1142	13.4 407
	1606	4.1 124			1710	4.8 145			1625	5.1 155			1736	6.5 197
	2242	13.5 413			2325	13.3 405			2235	13.5 413			2324	11.8 360
<b>4</b> F	0454	3.7 113		<b>19</b> Sa	0530	2.4 74		<b>4</b> Su	0453	1.6 48		<b>19</b> M	0519	2.4 74
	1100	12.9 394			1200	13.7 417			1127	14.7 448			1214	13.6 415
	1652	3.6 110			1747	5.0 152			1718	5.0 152			1814	6.5 197
	2316	14.2 434			2354	13.1 400			2316	13.8 420			2355	11.8 360
<b>5</b> Sa	0528	2.3 71		<b>20</b> Su	0554	2.0 62		<b>5</b> M	0530	0.6 18		<b>20</b> Tu	0547	2.2 67
	1145	14.2 433			1233	13.9 425			1214	15.6 474			1247	13.8 421
	1736	3.4 103			1819	5.3 161			1808	4.9 150			1850	6.4 194
	2349	14.6 446			○				2355	13.9 423			○	
<b>6</b> Su	0602	1.1 34		<b>21</b> M	0021	12.9 393		<b>6</b> Tu	0609	0.0 1		<b>21</b> W	0027	11.9 363
	1229	15.2 463			0618	1.8 55			1301	16.0 488			0616	2.1 63
	1820	3.4 104			1305	14.0 428			1857	5.0 151			1321	13.9 425
	●				1850	5.5 167							1924	6.2 190
<b>7</b> M	0023	14.8 450		<b>22</b> Tu	0045	12.7 386		<b>7</b> W	0036	13.8 422		<b>22</b> Th	0057	12.0 365
	0637	0.3 8			0642	1.7 51			0649	-0.1 -2			0647	2.2 67
	1313	15.8 482			1337	14.1 429			1350	16.1 490			1356	13.9 423
	1904	3.7 112			1921	5.6 171			1948	5.1 154			2000	6.2 189
<b>8</b> Tu	0057	14.6 446		<b>23</b> W	0112	12.4 379		<b>8</b> Th	0120	13.6 415		<b>23</b> Su	0129	11.9 363
	0714	-0.2 -5			0710	1.8 55			0734	0.3 10			0721	2.6 78
	1359	15.9 486			1407	13.9 425			1439	15.7 480			1431	13.7 417
	1948	4.2 127			1952	5.8 177			2041	5.3 161			2038	6.4 194
<b>9</b> W	0133	14.2 434		<b>24</b> Th	0142	12.1 368		<b>9</b> F	0207	13.1 400		<b>24</b> Sa	0203	11.6 354
	0751	0.0 1			0739	2.3 70			0821	1.2 38			0756	3.1 96
	1446	15.6 475			1440	13.5 413			1529	15.1 460			1507	13.3 406
	2035	4.9 148			2029	6.2 190			2137	5.6 172			2119	6.7 203
<b>10</b> Th	0213	13.5 411		<b>25</b> F	0214	11.5 351		<b>10</b> Sa	0300	12.3 375		<b>25</b> Su	0238	11.2 341
	0831	0.9 26			0811	3.1 94			0914	2.5 77			0833	3.8 117
	1536	14.7 449			1514	12.9 393			1623	14.2 434			1544	12.9 393
	2126	5.8 176			2112	6.8 208			2240	6.1 185			2203	6.9 214
<b>11</b> F	0255	12.5 380		<b>26</b> Sa	0249	10.8 330		<b>11</b> Su	0402	11.3 345		<b>26</b> W	0317	10.7 325
	0915	2.2 66			0846	4.0 122			1014	3.9 120			0911	4.6 139
	1633	13.6 415			1553	12.2 371			1718	13.4 409			1625	12.5 382
	2232	6.7 204			2206	7.5 228			2355	6.2 190			2254	7.0 214
<b>12</b> Sa	0344	11.2 341		<b>27</b> Su	0324	10.1 309		<b>12</b> M	0520	10.5 319		<b>27</b> W	0403	10.2 312
	1012	3.7 112			0926	4.9 150			1125	5.2 157			1001	5.2 159
	1740	12.6 383			1643	11.5 351			1817	12.8 389			1713	12.3 376
	●				2317	7.9 241			○				2353	6.8 206
<b>13</b> Su	0008	7.3 221		<b>28</b> M	0404	9.5 290		<b>13</b> Tu	0109	6.0 183		<b>28</b> F	0508	10.0 304
	0502	10.0 305			1027	5.6 172			0648	10.1 309			1106	5.8 177
	1135	4.9 150			1754	11.2 341			1247	5.9 180			1806	12.3 374
	○	1856	11.9 364		○				1919	12.4 377			○	
<b>14</b> M	0146	7.0 213		<b>29</b> Tu	0043	7.8 238		<b>14</b> W	0215	5.4 165		<b>29</b> Th	0057	6.0 184
	0656	9.5 290			0509	9.1 277			0841	10.6 322			0650	10.2 312
	1317	5.4 165			1152	6.0 183			1403	6.2 190			1222	6.3 191
	2019	12.0 365			1909	11.4 346			2021	12.2 372			1901	12.3 376
<b>15</b> Tu	0302	6.1 186		<b>30</b> W	0202	7.1 215		<b>15</b> Th	0307	4.7 142		<b>30</b> F	0155	5.0 152
	0900	10.2 311			0728	9.4 286			0945	11.5 349			0816	11.2 340
	1436	5.3 161			1318	6.0 182			1506	6.3 193			1343	6.5 198
	2125	12.4 379			2011	11.9 363			2118	12.1 369			1956	12.5 380
<b>16</b> M	0246	3.7 113		<b>31</b> Sa	0404	9.5 290		<b>16</b> Su	0246	3.7 113		<b>28</b> Sa	0207	4.7 144
	0923	12.4 378			1027	5.6 172			0923	12.4 378			0915	11.1 339
	1456	6.5 199			1754	11.2 341			1456	6.5 199			1432	7.6 231
	2052	12.6 383			○				2052	12.6 383			2005	11.2 342

Time meridian 82° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Bombay, India, 2008

Times and Heights of High and Low Waters

July				August				September									
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height						
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm						
1 Tu	0346	1.8	55	16 W	0421	3.5	106	1 F	0532	1.0	32	16 M	0518	2.6	78		
1101	14.2	433	W 1142	12.7	386	F 1220	15.4	468	Sa 1209	13.6	415	M 1307	15.0	458			
1651	6.7	204	1802	6.8	208	1830	4.3	132	1817	5.1	155	1920	2.2	67			
2228	12.2	373	2316	10.7	327	●						16 Tu	0057	14.1	429		
2 W	0443	1.2	36	17 Th	0503	3.0	90	2 Sa	0025	13.6	415	17 W	0136	13.9	425		
1152	15.0	457	1212	13.1	399	Sa 0619	0.9	26	17 Su	0549	2.2	67	17 W	0709	3.0	92	
1754	6.0	183	1830	6.5	197	1302	15.7	480	O 1848	4.3	131	Tu 1340	14.4	440			
2333	12.9	392	2353	11.4	346	1915	3.6	109				1950	2.2	66			
3 Th	0539	0.7	22	18 F	0540	2.5	77	3 Su	0112	14.0	426	3 W	0211	13.5	411		
1238	15.6	474	1243	13.5	411	Su 0701	1.2	37	18 M	0040	12.9	392	18 Th	0143	14.7	448	
1848	5.3	161	1856	6.1	185	1341	15.7	479	M 0621	2.1	64	W 0738	4.0	123			
●			O			1957	3.1	95	1306	14.5	442	1412	13.6	415			
4 F	0029	13.5	410	19 Sa	0026	11.9	363	1919	3.4	105	2017	2.4	72	18 0724	3.4	105	
0631	0.6	18	Sa 0611	2.3	69	4 M	0155	13.8	422	4 Th	0245	12.9	392				
1325	15.8	483	1312	13.8	422	Tu 0738	2.1	63	19 W	0116	13.4	408	19 F	0226	14.6	445	
1940	4.6	141	1924	5.6	171	2034	3.0	91	Tu 0657	2.3	70	W 0803	5.1	156			
5 Sa	0120	13.7	419	20 Su	0059	12.3	376	1954	2.7	81	1439	12.7	387	F 1415	13.7	417	
0720	0.9	27	Su 0642	2.2	67	5 Tu	0237	13.3	405	2039	2.8	86	2031	1.1	34		
1410	15.9	484	1343	14.2	432	Tu 0812	3.3	100	20 W	0156	13.7	417	19 0143	14.7	448		
2026	4.2	127	1955	5.1	154	Tu 1458	14.5	442	Sa 0830	6.1	187	W 0808	4.2	129			
6 Su	0208	13.6	416	21 M	0132	12.6	385	2108	3.1	96	1502	11.7	358	1415	12.8	391	
0804	1.6	49	Tu 0717	2.4	72	6 W	0319	12.5	381	2103	3.4	105	2109	1.9	58		
1454	15.6	475	1414	14.4	438	W 0842	4.7	143	21 M	0239	13.6	416	20 0312	14.0	428		
2110	4.0	121	2028	4.5	137	1532	13.5	411	Sa 0903	7.1	216	Sa 0855	5.2	160			
7 M	0256	13.1	400	21 Th	0211	12.7	387	2137	3.6	109	1526	10.8	330	Sa 1454	12.8	391	
0846	2.8	85	Tu 0754	2.8	86	7 Th	0402	11.6	354	2135	4.3	131	2109	1.9	58		
1537	15.0	457	1450	14.4	439	Th 0913	6.1	185	21 W	0327	13.3	405	21 0407	13.1	399		
2152	4.1	124	2104	4.0	121	Sa 1601	12.4	377	21 Th	0908	4.8	147	Su 0951	6.4	195		
8 Tu	0347	12.3	375	22 W	0254	12.6	384	2205	4.1	125	1526	10.8	330	Su 1534	11.7	358	
0927	4.2	129	W 0838	3.6	109	8 F	0446	10.8	330	2105	2.0	60	2156	3.1	93		
1619	14.1	431	1525	14.2	432	Th 0946	7.3	222	21 M	0425	10.6	322	21 0517	12.0	367		
2235	4.4	133	2142	3.6	110	Sa 1624	11.3	344	22 F	0327	13.3	405	Su 1105	7.4	225		
9 W	0440	11.5	349	2222	3.5	106	2241	4.6	141	Su 1525	13.4	408	M 1621	10.6	323		
1009	5.8	176	23 F	0345	12.3	376	9 Sa	0542	10.2	311	O 2232	5.2	158	O 2306	4.2	128	
1657	13.1	399	Th 0927	4.6	141	9 M	0446	10.8	330	23 W	0425	10.6	322	22 0517	12.0	367	
2318	4.7	143	1601	13.7	417	Sa 1041	8.3	252	23 M	0327	13.3	405	Su 1105	7.4	225		
10 Th	0539	10.7	327	2222	3.5	106	Sa 1651	10.3	314	23 F	0425	10.6	322	M 1621	10.6	323	
1059	7.1	217	23 F	0443	11.9	364	O 2335	5.1	155	23 M	0327	13.3	405	O 2306	4.2	128	
1735	12.0	366	Tu 1020	5.8	176	11 W	0701	9.9	303	23 W	0425	10.6	322	22 0517	12.0	367	
●			Su 1637	13.0	395	11 M	0735	8.8	268	23 Th	0908	8.0	243	Su 1105	7.4	225	
11 F	0005	4.9	150	2307	3.5	106	Sa 1747	9.4	288	23 F	0908	8.0	243	M 1621	10.6	323	
0651	10.4	316	26 W	0557	11.6	354	11 W	0046	5.2	160	23 W	0908	8.0	243	O 2306	4.2	128
1215	8.1	246	Sa 1125	6.9	210	11 M	0908	10.2	312	23 Th	0830	11.5	350	22 0517	12.0	367	
1813	11.1	337	Sa 1716	12.1	370	M 1556	8.4	256	23 F	1436	7.7	235	22 0517	12.0	367		
12 Sa	0557	11.6	354	O			1936	9.9	301	23 W	0049	4.0	122	22 0517	12.0	367	
0651	10.4	316	1125	6.9	210	11 M	0908	10.2	312	11 W	0232	5.1	156	22 0517	12.0	367	
1215	8.1	246	Sa 1716	12.1	370	M 1556	8.4	256	11 M	0905	11.3	345	22 0517	12.0	367		
1813	11.1	337	O			1923	9.0	273	11 W	0830	11.5	350	22 0517	12.0	367		
12 Sa	0557	11.6	354	1125	6.9	210	11 M	0908	10.2	312	11 W	0232	5.1	156	22 0517	12.0	367
0651	10.4	316	Sa 1716	12.1	370	M 1556	8.4	256	11 M	0905	11.3	345	22 0517	12.0	367		
1215	8.1	246	O			1923	9.0	273	11 W	0830	11.5	350	22 0517	12.0	367		
1813	11.1	337	1125	6.9	210	11 M	0908	10.2	312	11 W	0232	5.1	156	22 0517	12.0	367	
12 Sa	0557	11.6	354	Sa 1716	12.1	370	M 1556	8.4	256	11 W	0830	11.5	350	22 0517	12.0	367	
0651	10.4	316	O			1923	9.0	273	11 W	0830	11.5	350	22 0517	12.0	367		
1215	8.1	246	1125	6.9	210	11 M	0908	10.2	312	11 W	0232	5.1	156	22 0517	12.0	367	
1813	11.1	337	Sa 1716	12.1	370	M 1556	8.4	256	11 W	0830	11.5	350	22 0517	12.0	367		
12 Sa	0557	11.6	354	O			1923	9.0	273	11 W	0830	11.5	350	22 0517	12.0	367	
0651	10.4	316	1125	6.9	210	11 M	0908	10.2	312	11 W	0232	5.1	156	22 0517	12.0	367	
1215	8.1	246	Sa 1716	12.1	370	M 1556	8.4	256	11 W	0830	11.5	350	22 0517	12.0	367		
1813	11.1	337	O			1923	9.0	273	11 W	0830	11.5	350	22 0517	12.0	367		
12 Sa	0557	11.6	354	1125	6.9	210	11 M	0908	10.2	312	11 W	0232	5.1	156	22 0517	12.0	367
0651	10.4	316	Sa 1716	12.1	370	M 1556	8.4	256	11 W	0830	11.5	350	22 0517	12.0	367		
1215	8.1	246	O			1923	9.0	273	11 W	0830	11.5	350	22 0517	12.0	367		
1813	11.1	337	1125	6.9	210	11 M	0908	10.2	312	11 W	0232	5.1	156	22 0517	12.0	367	
12 Sa	0557	11.6	354	Sa 1716	12.1	370	M 1556	8.4	256	11 W	0830	11.5	350	22 0517	12.0	367	
0651	10.4	316	O			1923	9.0	273	11 W	0830	11.5	350	22 0517	12.0	367		
1215	8.1	246	1125	6.9	210	11 M	0908	10.2	312	11 W	0232	5.1	156	22 0517	12.0	367	
1813	11.1	337	Sa 1716	12.1	370	M 1556	8.4	256	11 W	0830	11.5	350	22 0517	12.0	367		
12 Sa	0557	11.6	354	O			1923	9.0	273	11 W	0830	11.5	350	22 0517	12.0	367	
0651	10.4	316	1125	6.9	210	11 M	0908	10.2	312	11 W	0232	5.1	156	22 0517	12.0	367	
1215	8.1	246	Sa 1716	12.1	370	M 1556	8.4	256	11 W	0830	11.5	350	22 0517	12.0	367		
1813	11.1	337	O			1923	9.0	273	11 W	0830	11.5	350	22 0517	12.0	367		
12 Sa	0557	11.6	354	1125	6.9	210	11 M	0908	10.2	312	11 W	0232	5.1	156	22 0517	12.0	367
0651	10.4	316	Sa 1716	12.1	370	M 1556	8.4	256	11 W	0830	11.5	350	22 0517	12.0	367		
1215	8.1	246	O			1923	9.0	273	11 W	0830	11.5	350	22 0517	12.0	367		

# Bombay, India, 2008

Times and Heights of High and Low Waters

October				November				December			
	Time	Height			Time	Height			Time	Height	
<b>1</b> W	0114	14.1	430	<b>16</b>	0049	15.3	466	<b>1</b>	0156	13.9	425
	0647	4.4	133	Th	0636	4.1	126	Sa	0746	5.9	180
	1302	13.4	407		1233	13.9	423		1337	11.8	360
	1906	1.7	52		1849	0.4	11		1930	2.5	76
<b>2</b> Th	0144	13.8	421	<b>17</b>	0132	15.5	473	<b>2</b>	0227	13.5	412
	0716	5.0	151	F	0719	4.4	134	Su	0824	6.2	188
	1330	12.8	389		1312	13.6	416		1412	11.4	346
	1930	1.9	59		1927	0.4	12		2003	3.3	101
<b>3</b> F	0215	13.4	409	<b>18</b>	0217	15.3	467	<b>3</b>	0300	12.9	394
	0743	5.5	168	Sa	0806	4.9	149	M	0907	6.7	203
	1358	12.1	370		1353	13.2	402		1449	10.7	327
	1955	2.4	74		2007	1.0	31		2040	4.3	131
<b>4</b> Sa	0243	12.9	392	<b>19</b>	0305	14.7	449	<b>4</b>	0336	12.2	372
	0815	6.1	187	Su	0857	5.5	169	Tu	0958	7.2	219
	1427	11.4	347		1439	12.4	379		1526	10.0	306
	2024	3.2	98		2053	2.1	64		2120	5.3	161
<b>5</b> Su	0313	12.1	370	<b>20</b>	0358	13.8	420	<b>5</b>	0418	11.5	352
	0855	6.9	210	M	1000	6.3	192	W	1059	7.6	231
	1501	10.6	322		1532	11.5	349		1610	9.4	286
	2100	4.3	130		2149	3.4	105		2217	6.1	186
<b>6</b> M	0349	11.3	343	<b>21</b>	0459	12.8	391	<b>6</b>	0518	11.1	339
	0952	7.6	233	Tu	1122	6.8	208	Th	1215	7.5	230
	1537	9.7	296		1643	10.4	318		1717	9.0	273
	2151	5.3	163	O	2304	4.7	144		2334	6.6	202
<b>7</b> Tu	0445	10.5	319	<b>22</b>	0607	12.2	371	<b>7</b>	0629	11.1	339
	1118	8.2	250	W	1257	6.7	204	F	1335	7.0	212
	1624	9.0	273		1824	9.9	301	Sa	1923	9.3	282
O	2311	6.1	186								
<b>8</b> W	0620	10.1	307	<b>23</b>	0042	5.4	165	<b>8</b>	0059	6.8	206
	1315	8.2	250	Th	0721	12.0	365	Sa	0731	11.4	348
	1757	8.4	257		1413	5.9	181		1432	5.9	179
					2020	10.3	314		2042	10.3	315
<b>9</b> Th	0038	6.3	192	<b>24</b>	0206	5.5	167	<b>9</b>	0217	6.5	199
	0753	10.4	317	F	0833	12.2	373	Su	0826	11.9	362
	1502	7.4	226		1513	4.9	148		1516	4.6	139
	2011	8.9	270		2140	11.4	348		2140	11.7	357
<b>10</b> F	0158	5.9	181	<b>25</b>	0310	5.2	159	<b>10</b>	0317	6.2	188
	0851	11.2	340	Sa	0931	12.7	386	M	0915	12.3	376
	1533	6.4	194		1558	3.7	113		1555	3.2	99
	2119	9.9	303		2229	12.6	384		2227	13.1	400
<b>11</b> Sa	0300	5.3	162	<b>26</b>	0403	5.0	153	<b>11</b>	0408	5.8	178
	0935	12.0	366	Su	1018	13.0	395	Tu	1002	12.7	388
	1603	5.1	156		1637	2.8	85		1631	2.0	62
	2206	11.2	342		2311	13.5	411		2312	14.3	437
<b>12</b> Su	0349	4.7	144	<b>27</b>	0450	5.0	152	<b>12</b>	0456	5.6	171
	1013	12.8	390	M	1058	13.0	397	W	1046	13.0	396
	1634	3.8	117		1709	2.2	67		1707	1.1	33
	2248	12.5	381		2347	14.0	428		2355	15.3	466
<b>13</b> M	0432	4.3	130	<b>28</b>	0532	5.2	158	<b>13</b>	0544	5.4	165
	1050	13.4	408	Tu	1133	12.9	392	Th	1130	13.2	403
	1707	2.6	80		1739	1.9	58	O	1745	0.5	14
	2328	13.7	417								
<b>14</b> Tu	0512	4.1	124	<b>29</b>	0021	14.2	434	<b>14</b>	0038	15.8	483
	1124	13.7	419	W	0609	5.4	166	Sa	0634	5.2	160
	1740	1.6	48		1205	12.6	384		1214	13.4	407
				O	1804	1.8	54		1826	0.2	7
<b>15</b> W	0009	14.6	446	<b>30</b>	0053	14.2	434	<b>15</b>	0124	16.1	490
	0554	4.0	122	Th	0641	5.6	172	Sa	0723	5.2	157
	1158	13.9	424		1233	12.3	376		1259	13.4	407
	O	1813	0.8		1830	1.8	55		1911	0.5	14
				<b>31</b>	0124	14.1	431				
				F	0714	5.8	176				
					1303	12.1	370				
					1857	2.0	61				

Time meridian 82° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

## Karachi, Pakistan, 2008

Times and Heights of High and Low Waters

January				February				March								
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height					
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm					
1 Tu	0410	8.2	250	16 W	0326	9.2	280	1 F	0414	7.2	220					
1104	3.0	90	W 1030	1.6	50	F 1159	2.3	70	Sa 2049	6.9	210					
1811	6.2	190	1703	6.9	210	Sa 2219	4.6	140								
2241	5.2	160														
2 W	0454	7.9	240	17 Th	0409	8.9	270	2 Sa	0128	6.2	190					
1159	3.0	90	1136	1.3	40	Sa 0525	6.9	210	17 Su	0113	5.2	160				
1943	6.6	200	1859	7.2	220	1303	2.0	60	Su 1222	0.7	20					
			2338	5.2	160	2123	7.5	230	Sa 2008	7.9	240					
3 Th	0014	5.9	180	18 F	0505	8.5	260	3 Su	0246	5.9	180					
0546	7.5	230	1245	0.7	20	Su 0655	6.9	210	18 M	0232	4.6	140				
1253	2.6	80	2017	7.9	240	1400	1.6	50	M 0736	7.2	220					
2043	7.2	220				2154	8.2	250	1435	0.0	0					
4 F	0143	5.9	180	19 Sa	0115	5.6	170	18 Tu	0232	3.9	120					
0644	7.2	220	0619	8.2	250	M 0807	6.9	210	Tu 0855	7.5	230					
1340	2.0	60	1350	0.0	0	1451	1.3	40	19 M	0252	4.9	150				
2128	7.9	240	2116	8.5	260	2226	8.9	270	Tu 0744	6.9	210					
5 Sa	0255	5.9	180	20 Su	0239	5.2	160	19 Tu	0332	3.9	120					
0739	7.2	220	0736	7.9	240	M 0910	7.2	220	4 Sa	0252	4.9	150				
1424	1.6	50	1449	-0.3	-10	Tu 1538	0.7	20	W 0853	7.5	230					
2208	8.2	250	2204	9.2	280	2256	9.2	280	1503	1.3	40					
6 Su	0352	5.6	170	21 M	0348	4.6	140	20 W	0421	3.0	90					
0831	7.2	220	0849	7.9	240	W 1003	7.9	240	5 W	0324	4.3	130				
1510	1.0	30	1544	-0.7	-20	1621	0.3	10	W 0956	7.9	240					
2245	8.9	270	2247	9.8	300	2325	9.5	290	1616	0.0	0					
7 M	0434	5.2	160	21 F	0442	3.9	120	20 O	0504	2.3	70					
0923	7.5	230	0955	7.9	240	W 1046	7.9	240	6 Th	0357	3.3	100				
1555	0.7	20	Tu 1634	-0.7	-20	Th 1621	0.3	10	W 0945	8.2	250					
2320	9.2	280	O 2325	10.2	310	O 2330	10.2	310	1551	1.0	30					
8 Tu	0508	4.6	140	23 W	0528	3.0	90	2237	9.5	290	O 2248	9.5	290			
1011	7.9	240	1050	8.2	250	8 F	0543	2.6	80							
1639	0.3	10	1718	-0.7	-20	1130	8.5	260	21 M	0429	1.6	50				
● 2354	9.5	290				1736	0.3	10	Th 1032	8.9	270					
9 W	0538	4.3	130	24 Th	0001	10.5	320	7 F	0543	1.6	50					
1055	7.9	240	0609	2.3	70	Sa 0017	10.2	310	1112	0505	1.3	40				
1719	0.3	10	1136	8.2	250	Sa 0615	2.3	70	Sa 1112	0505	1.3	40				
			1757	0.0	0	Sa 1209	8.9	270	1704	1112	8.9	270				
10 Th	0024	9.8	300	25 F	0035	10.5	320	2332	9.8	300	2317	9.5	290			
0608	3.6	110	0649	2.0	60	10 Su	0044	10.2	310	● 2304	9.8	300				
1135	8.2	250	1218	8.2	250	M 0650	1.6	50								
1755	0.3	10	1834	0.7	40	Su 1247	8.9	270	8 Sa	0505	1.6	50				
11 F	0052	9.8	300	26 W	0108	10.2	310	1233	9.5	290	23 M	0537	1.0	30		
0640	3.3	100	0727	2.0	60	M 0723	1.3	40	1220	1114	9.2	280				
1214	8.2	250	Sa 1258	7.9	240	1316	8.2	250	Su 1734	3.0	90					
1831	0.7	20	1909	1.6	50	1844	1.3	40	2344	1114	8.9	270				
12 Sa	0119	9.8	300	27 W	0140	9.8	300	1842	3.3	100	23 N	0607	1.0	30		
0716	3.0	90	0806	2.0	60	10 Tu	0124	9.2	280	1220	0617	10.2	310			
1253	8.2	250	1338	7.5	230	0725	1.6	50	1801	0634	1.0	30				
1907	1.3	40	1941	2.6	80	1328	8.5	260	1827	0634	1.0	30				
13 Su	0146	9.8	300	28 M	0211	9.5	290	1922	2.3	70	1252	0009	9.2	280		
0756	2.6	80	0844	2.0	60	11 Tu	0124	9.2	280	1827	0634	1.0	30			
1335	7.9	240	1422	7.2	220	0729	1.3	40	1827	0634	1.0	30				
1946	2.0	60	2013	3.6	110	1328	8.5	260	1827	0634	1.0	30				
14 M	0217	9.8	300	29 F	0242	8.9	270	1922	2.3	70	1827	0634	1.0	30		
0840	2.3	70	0924	2.3	70	14 Tu	0141	9.8	300	1827	0634	1.0	30			
1426	7.5	230	1513	6.6	200	0812	1.0	30	1827	0634	1.0	30				
2030	3.0	90	2048	4.6	140	1415	7.9	240	1827	0634	1.0	30				
15 Tu	0249	9.5	290	20 O	2155	4.9	150	2004	3.3	100	1827	0634	1.0	30		
0931	2.0	60	2131	5.6	170	1516	7.5	230	2004	4.9	150	1827	0634	1.0	30	
1531	7.2	220				2054	3.9	120	2004	7.2	220	1827	0634	1.0	30	
2119	3.9	120				2054	3.9	120	2004	9.8	300	1827	0634	1.0	30	
16 O	0339	7.9	240	21 M	1057	2.6	80	2054	3.9	120	1827	0634	1.0	30		
			Th 1057	2.6	80											
			1947	6.6	200											
			2239	6.2	190											
17 F	0311	8.2	250	22 M	1006	2.6	80									
			W 1006	2.6	80											
			1628	6.2	190											
			2131	5.6	170											
18 O	0339	7.9	240	23 M	1057	2.6	80									
			Th 1057	2.6	80											
			1947	6.6	200											
			2239	6.2	190											

Time meridian 75° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Karachi, Pakistan, 2008

Times and Heights of High and Low Waters

April					May					June				
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm
1 Tu	0124	5.2 160	W	16 0147	3.3 100	1 Th	0111	3.9 120	16 F	0203	2.3 70	1 Su	0205	1.3 40
	0601	6.6 200		0743	7.2 220		0705	7.2 220		0829	7.9 240		0850	8.9 270
	1247	3.0 90		1342	2.6 80		1307	3.6 110		1406	4.6 140		1424	4.9 150
	2003	8.2 250		2014	8.9 270		1913	8.9 270		2001	8.9 270		1948	9.5 290
2 W	0200	4.6 140	Th	17 0233	2.6 80	2 F	0151	3.0 90	17 Sa	0240	1.6 50	2 M	0252	0.3 10
	0724	6.9 210		0842	7.9 240		0807	7.9 240		0919	8.5 260		0946	9.2 280
	1346	2.6 80		1434	3.0 90		1358	3.6 110		1455	4.6 140		1520	4.9 150
	2028	8.5 260		2052	8.9 270		1953	9.2 280		2038	8.5 260		2037	9.5 290
3 Th	0233	3.6 110	F	18 0313	2.0 60	3 Sa	0231	1.6 50	18 Su	0316	1.3 40	3 Tu	0340	-0.3 -10
	0827	7.9 260		0933	8.5 260		0903	8.9 270		1005	8.9 270		1037	9.8 300
	1433	2.3 70		1519	3.3 100		1445	3.6 110		1543	4.9 150		1615	4.9 150
	2059	8.9 270		2127	9.2 280		2033	9.5 290		2112	8.5 260		2128	9.2 280
4 F	0309	2.6 80	Sa	19 0350	1.3 40	4 Su	0313	1.0 30	19 M	0350	1.0 30	4 W	0429	-0.7 -20
	0922	8.5 260		1017	8.9 270		0955	9.5 290		1047	9.2 280		1125	10.2 310
	1516	2.3 70		1601	3.6 110		1531	3.9 120		1627	4.9 150		1707	4.6 140
	2133	9.2 280		2200	9.2 280		2114	9.8 300		2145	8.5 260		2219	9.2 280
5 Sa	0347	1.6 50	Su	20 0424	1.0 30	5 M	0356	0.0 0	20 Tu	0424	1.0 30	5 Th	0516	-0.7 -20
	1012	9.2 280		1056	9.2 280		1043	9.8 300		1127	9.2 280		1210	10.5 320
	1557	2.3 70		1638	3.9 120		1617	3.9 120		1707	5.2 160		1756	4.3 130
	2208	9.5 290		2229	8.9 270		2156	9.8 300		2218	8.5 260		2308	8.9 270
6 Su	0426	1.0 30	M	21 0455	1.0 30	6 Tu	0441	-0.3 -10	21 W	0459	1.0 30	6 F	0603	-0.7 -20
	1056	9.5 290		1132	9.2 280		1128	10.2 310		1204	9.5 290		1254	10.5 320
	1637	2.6 80		1711	4.3 130		1703	3.9 120		1742	5.2 160		1845	4.3 130
	2242	9.8 300		2256	8.9 270		2237	9.8 300		2250	8.2 250		2356	8.5 260
7 M	0506	0.3 10	Tu	22 0526	1.0 30	7 W	0525	-0.7 -20	22 Th	0534	1.0 30	7 Sa	0649	0.0 0
	1138	9.8 300		1206	9.2 280		1212	10.2 310		1240	9.5 290		1341	10.2 310
	1716	3.0 90		1740	4.6 140		1748	4.3 130		1815	5.2 160		1937	4.3 130
	2315	9.8 300		2321	8.5 260		2316	9.5 290		2324	8.2 250		1926	4.6 140
8 Tu	0546	-0.3 -10	W	23 0556	1.0 30	8 Th	0609	-0.7 -20	23 F	0610	1.0 30	8 Su	0044	7.9 240
	1219	9.8 300		1238	9.2 280		1257	9.8 300		1315	9.2 280		0737	0.7 20
	1755	3.3 100		1810	4.9 150		1834	4.6 140		1851	5.2 160		1430	9.8 300
	2346	9.8 300		2347	8.5 260		2355	9.2 280		2358	7.9 240		2036	3.9 120
9 W	0627	-0.3 -10	Th	24 0627	1.3 40	9 F	0655	0.0 0	24 Sa	0645	1.3 40	9 M	0141	7.5 230
	1300	9.5 290		1309	8.9 270		1347	9.5 290		1351	9.2 280		0829	1.6 50
	1836	3.9 120		1844	5.2 160		1927	4.6 140		1932	5.2 160		1519	9.5 290
	2240	9.8 300		2347	8.5 260		2355	9.2 280		2358	7.9 240		2140	3.9 120
10 Th	0017	9.5 290	F	25 0014	8.2 250	10 Sa	0034	8.5 260	25 Su	0034	7.9 240	10 W	0303	6.9 210
	0710	0.0 0		0700	1.6 50		0745	0.7 20		0722	2.0 60		0925	3.0 90
	1349	9.2 280		1344	8.5 260		1445	9.2 280		1428	8.9 270		1607	9.2 280
	1923	4.3 130		1926	5.6 170		2032	4.9 150		2022	5.2 160		2245	3.6 110
11 F	0050	8.9 270	Sa	26 0043	7.9 240	11 Su	0119	7.5 230	26 M	0118	7.2 220	11 W	0444	6.6 200
	0800	0.3 10		0735	2.0 60		0843	1.3 40		0805	2.6 80		1026	3.9 120
	1449	8.5 260		1430	8.2 250		1546	8.9 270		1509	8.9 270		1655	8.9 270
	2023	4.9 150		2022	5.9 180		2151	4.9 150		2122	5.2 160		2349	3.3 100
12 Sa	0126	8.2 250	Su	27 0116	7.2 220	12 M	0228	6.9 210	27 Tu	0218	6.9 210	12 W	0608	6.9 210
	0900	1.0 30		0819	2.6 80		0947	2.3 70		0856	3.3 100		1133	4.6 140
	1605	8.2 250		1537	7.9 240		1645	8.9 270		1553	8.9 270		1744	8.5 260
	2145	5.2 160		2140	5.9 180		2312	4.3 130		2227	4.9 150		2350	2.6 80
13 Su	0217	7.2 220	M	28 0208	6.9 210	13 Tu	0452	6.6 200	28 W	0349	6.9 210	13 F	0047	2.6 80
	1010	1.6 50		0920	3.0 90		1056	3.3 100		0959	3.9 120		0717	7.2 220
	1723	8.2 250		1647	7.9 240		1743	8.9 270		1638	8.9 270		1242	5.2 160
	2325	4.9 150		2311	5.6 170		2331	4.3 130		1832	8.5 260		1832	8.5 260
14 M	0414	6.6 200	Tu	29 0348	6.6 200	14 W	0023	3.6 110	29 Th	0528	6.9 210	14 Sa	0134	2.3 70
	1127	2.3 70		1040	3.6 110		0623	6.9 210		1114	4.3 130		0816	7.9 240
	1836	8.2 250		1745	8.2 250		1207	3.9 120		1726	8.9 270		1345	5.6 170
	2240	8.2 250		1832	8.5 260		1835	8.9 270		1814	9.2 280		1916	8.2 250
15 Tu	0048	4.3 130	W	30 0023	4.9 150	15 Th	0119	3.0 90	30 F	0029	3.3 100	15 Sa	0214	2.0 60
	0626	6.6 200		0545	6.6 200		0732	7.2 220		0647	7.5 230		0909	8.2 250
	1241	2.6 80		1202	3.6 110		1311	4.3 130		1227	4.6 140		1443	5.6 170
	1931	8.5 260		1832	8.5 260		1921	8.9 270		1814	9.2 280		1957	8.2 250
31 Sa	0119	2.3 70		0752	8.2 250		0119	2.3 70		0752	8.2 250		0148	0.7 20
	0800	0.3 10		1329	4.9 150		0800	0.0 0		1329	4.9 150		0844	8.5 260
	1449	8.5 260		1329	4.9 150		1449	5.6 170		1449	5.6 170		1417	5.6 170
	2023	4.9 150		1901	9.2 260		1901	9.2 260		1901	9.2 260		1919	8.9 270

Time meridian 75° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.

Heights are referred to the chart datum of soundings.

## Karachi, Pakistan, 2008

Times and Heights of High and Low Waters

July				August				September				
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm	
1 Tu	0241	0.0	0	16 W	0315	1.3	40	1 F	0417	-0.7	-20	
0941	9.2	280	W	1027	8.9	270	Sa	1054	9.8	300		
1522	5.2	160		1620	4.9	150	M	1701	3.0	90		
2018	8.9	270		2110	7.5	230	●	2228	8.5	260		
2 W	0334	-0.3	-10	17 Th	0356	1.0	30	2 Sa	0502	-0.3	-10	
1031	9.5	290		1104	9.2	280	Su	1132	10.2	310		
1621	4.6	140		1657	4.6	140	M	1744	2.3	70		
2121	8.5	260		2200	7.9	240	○	2317	8.5	260		
3 Th	0425	-0.7	-20	18 F	0436	1.0	30	3 Su	0543	0.0	0	
1117	10.2	310		1138	9.5	290	M	1207	10.2	310		
1712	4.3	130		1729	4.3	130	Su	1825	2.0	60		
●	2222	8.5	260	○	2244	8.2	250	●	18 M	0524	1.0	30
4 F	0512	-0.7	-20	19 Sa	0514	0.7	20	4 M	0002	8.5	260	
1158	10.5	320		1209	9.5	290	Tu	0622	0.7	20		
1759	3.6	110		1759	3.9	120	●	1242	10.2	310		
2316	8.5	260		2325	8.2	250	Su	1905	2.0	60		
5 Sa	0557	-0.3	-10	20 Su	0550	1.0	30	5 Tu	0045	8.5	260	
1238	10.5	320		1237	9.5	290	W	0700	1.6	50		
1844	3.3	100		1829	3.6	110	●	1316	9.8	300		
6 Su	0005	8.5	260	●	1945	2.0	60	●	1945	1.6	50	
0640	0.3	10		21 M	0003	8.5	260	6 W	0027	8.9	270	
1319	10.5	320		0624	1.3	40	Th	0737	2.6	80		
1930	3.0	90		1302	9.5	290	●	1349	9.2	280		
●	1901	3.3	100		2027	2.0	60	●	2027	2.0	60	
7 M	0054	8.2	250	21 Tu	0042	8.5	260	7 Th	0127	8.2	250	
0724	1.0	30		0658	1.6	50	●	0737	2.6	80		
1359	10.2	310		1327	9.5	290	●	1349	9.2	280		
2019	3.0	90		1937	3.0	90	●	1308	9.5	290		
8 Tu	0146	7.5	230	23 W	0124	8.2	250	8 Sa	0106	8.9	270	
0810	2.3	70		0734	2.3	70	●	0701	2.6	80		
1439	9.5	290		1355	9.5	290	●	1337	9.2	280		
2111	3.0	90		2017	2.6	80	●	2110	2.3	70		
9 W	0249	7.2	220	24 Th	0213	7.9	240	9 Sa	0451	6.6	200	
0858	3.3	100		0814	3.3	100	●	0948	5.6	170		
1520	9.2	280		1427	9.2	280	●	1535	7.5	230		
2204	3.0	90		2105	2.6	80	●	2255	3.0	90		
10 Th	0409	6.9	210	25 F	0316	7.5	230	10 Su	0658	6.9	220	
0952	4.3	130		0900	3.9	120	●	1205	5.9	180		
1602	8.5	260		1504	9.2	280	●	1627	6.9	210		
●	2302	3.0	90	●	2201	2.3	70	●	2353	1.3	40	
11 F	0542	6.9	210	26 Sa	0439	7.2	220	11 M	0009	3.0	90	
1058	5.2	160		0955	4.9	150	Tu	0807	7.2	220		
1647	8.2	250		1547	8.9	270	●	1343	5.9	180		
●	2308	2.0	60		1746	6.6	200	●	1735	7.2	220	
12 Sa	0003	2.6	80	27 Su	0617	7.2	220	12 Tu	0120	2.6	80	
0704	7.2	220		1109	5.2	160	●	0849	7.5	230		
1220	5.6	170		1642	8.5	260	●	1442	5.6	170		
1737	7.9	240			1902	6.6	200	●	1914	7.2	220	
13 Su	0102	2.6	80	28 M	0024	1.3	40	13 W	0213	2.3	70	
0809	7.5	230		0737	7.9	240	●	0925	8.2	250		
1337	5.9	180		1257	5.6	170	●	1522	4.9	150		
1833	7.5	230		1752	8.2	250	●	2004	6.9	210		
14 M	0151	2.3	70	29 Tu	0134	0.7	20	14 F	0256	1.6	50	
0902	7.9	240		0837	8.5	260	●	0958	8.5	260		
1442	5.6	170		1417	5.2	160	●	1555	4.6	140		
1926	7.5	230		1907	7.9	240	●	2059	7.5	230		
15 Tu	0234	1.6	50	30 W	0234	0.0	0	15 F	0337	1.3	40	
0947	8.2	250		0928	8.9	270	●	1029	8.9	270		
1536	5.6	170		1521	4.6	140	●	1626	3.9	120		
2018	7.5	230		2020	8.2	250	●	2149	7.9	240		
●	31 Th	0328	-0.3	-10	31 Th	1014	9.5	290	●	2044	0.3	10
		1615	3.6	110		1615	3.6	110	●	1055	9.8	300
		2129	8.2	250		2129	8.2	250	●	2307	8.9	270

Time meridian 75° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Karachi, Pakistan, 2008

Times and Heights of High and Low Waters

October				November				December											
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height								
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm								
1 W	0523	3.0	90	16 Th	0453	3.0	90	1 Sa	0022	8.9	270	1 M	0058	9.2	280	16 Tu	0110	10.2	310
1113	9.2	280	1044	9.8	300	0558	4.6	140	0608	3.9	120	0638	4.6	140	0705	3.3	100		
1746	0.7	20	1715	0.0	0	1131	8.5	260	1135	9.2	280	1152	7.9	240	1226	8.5	260		
			2354	9.8	300	1807	1.0	30	1825	-0.3	-10	1826	1.0	30	1906	0.0	0		
2 Th	0002	8.9	270	17 F	0531	3.3	100	2 Su	0052	8.5	260	17 M	0115	9.5	290	17 W	0151	9.8	300
0549	3.6	110	1116	9.8	300	0627	4.9	150	0655	3.9	120	1214	8.9	270	0755	3.0	90		
1139	8.9	270	1755	-0.3	-10	1159	8.2	250	1912	0.3	10	1901	1.6	50	1314	7.9	240		
1812	1.0	30				1838	1.3	40							1953	1.0	30		
3 F	0034	8.5	260	18 Sa	0032	9.5	290	3 M	0121	8.2	250	18 Tu	0203	9.2	280	18 Th	0235	9.5	290
0613	4.3	130	0609	3.6	110	0701	5.2	160	0748	3.9	120	1254	7.9	240	0849	3.0	90		
1203	8.5	260	1149	9.5	290	1227	7.9	240	2004	1.0	30	1939	2.3	70	1410	7.2	220		
1839	1.3	40	1836	0.0	0	1909	2.0	60							2044	2.3	70		
4 Sa	0105	8.2	250	19 Su	0114	8.9	270	4 Tu	0155	7.9	240	19 W	0259	8.9	270	19 F	0320	9.2	280
0639	4.6	140	0651	3.9	120	0745	5.6	170	0852	4.3	130	1343	7.2	220	0947	3.0	90		
1226	8.2	250	1220	9.2	280	1255	7.2	220	2104	2.0	60	2104	3.0	90	1528	6.6	200		
1908	1.6	50	1921	0.3	10	1946	2.3	70							2140	3.3	100		
5 Su	0136	7.5	230	20 M	0205	8.2	250	5 W	0244	7.5	230	20 Th	0400	8.5	260	20 Sa	0407	8.9	270
0708	5.2	160	0741	4.6	140	0846	5.6	170	1007	3.9	120	0933	4.3	130	1049	2.6	80		
1248	7.5	230	1254	8.5	260	1328	6.9	210	1509	6.6	200	1452	6.6	200	1723	6.6	200		
1940	2.3	70	2015	1.0	30	2035	3.0	90	2211	3.0	90	2115	3.6	110	2243	4.3	130		
6 M	0216	7.2	220	21 Tu	0319	7.9	240	6 Th	0401	7.5	230	21 F	0502	8.2	250	21 Su	0458	8.2	250
0748	5.6	170	0849	4.9	150	1004	5.6	170	1126	3.6	110	1126	3.9	120	1154	2.6	80		
1308	7.2	220	1334	7.5	230	1435	6.2	190	1750	6.2	190	1628	6.6	200	1900	6.9	210		
2020	2.6	80	2124	1.6	50	2150	3.6	110	2324	3.6	110	2220	4.3	130	2358	4.9	150		
7 Tu	0351	6.6	200	22 W	0443	7.5	230	7 F	0516	7.5	230	22 Sa	0601	8.2	250	22 M	0444	8.2	250
0900	6.2	190	1020	4.9	150	1126	4.9	150	1237	3.0	90	1914	6.9	210	1255	2.3	70		
1312	6.6	200	1438	6.6	200	1708	6.2	190	2319	3.9	120				2010	7.2	220		
2121	3.3	100	2243	2.3	70														
8 W	0652	6.9	210	23 Th	0558	7.9	240	8 Sa	0611	7.9	240	23 Su	0039	4.3	130	23 M	0116	5.2	160
2250	3.6	110	1202	4.6	140	1232	4.3	130	0654	8.2	250	1334	2.3	70	0652	7.5	230		
			1758	6.2	190	1851	6.9	210	2014	7.5	230	1937	7.2	220	1348	1.6	50		
9 Th	0729	7.2	220	24 F	0007	2.6	80	9 Su	0036	3.9	120	24 M	0145	4.3	130	24 W	0053	4.9	150
1333	5.2	160	0657	8.2	250	0654	8.2	250	1320	3.3	100	0741	8.2	250	0745	7.5	230		
1759	5.9	180	1316	3.6	110	1954	7.5	230	1954	7.5	230	1420	1.6	50	1432	1.3	40		
			1923	6.9	210							2106	8.2	250	2153	8.2	250		
10 F	0026	3.6	110	25 Sa	0120	3.0	90	10 M	0135	3.9	120	25 Tu	0242	4.6	140	10 W	0157	4.9	150
0745	7.5	230	0743	8.5	260	0734	8.5	260	1042	2.3	70	0822	8.2	250	0728	8.5	260		
1354	4.6	140	1409	2.6	80	1402	2.3	70	2047	8.2	250	1459	1.3	40	1419	0.7	20		
1919	6.6	200	2023	7.5	230	2047	8.2	250				2153	8.5	260	2132	8.9	270		
11 Sa	0133	3.3	100	26 Su	0217	3.0	90	11 Tu	0224	3.9	120	26 W	0335	4.6	140	11 Th	0256	4.9	150
0806	8.2	250	0822	8.5	260	0813	8.9	270	1443	1.3	40	0900	8.2	250	0728	8.5	260		
1417	3.6	110	1452	1.6	50	1443	1.3	40	2137	8.9	270	1536	1.0	30	1513	1.0	30		
2015	7.5	230	2113	8.2	250							2235	8.9	270	2234	8.9	270		
12 Su	0220	3.0	90	27 M	0305	3.0	90	12 W	0310	3.9	120	27 Th	0424	4.6	140	12 F	0354	4.6	140
0833	8.5	260	0859	8.9	270	0854	9.2	280	1527	0.3	10	1611	0.7	20	1002	7.5	230		
1445	2.6	80	1531	1.3	40				2224	9.5	290	2314	9.2	280	1631	0.7	20		
2105	8.2	250	2158	8.9	270							2306	9.8	300	2346	9.5	290		
13 M	0300	2.6	80	28 Tu	0350	3.3	100	13 Th	0356	3.9	120	28 F	0506	4.6	140	28 Su	0541	4.3	130
0905	8.9	270	0934	8.9	270	0935	9.5	290	1612	-0.3	-10	1011	8.2	250	1042	7.9	240		
1519	2.0	60	1607	0.7	20	O	2308	9.8	300	2351	9.2	280	1645	0.7	20	1708	0.7	20	
2151	8.9	270	2239	9.2	280							2348	10.2	310					
14 Tu	0338	2.6	80	29 W	0430	3.6	110	14 F	0441	3.9	120	29 Sa	0541	4.6	140	29 M	0019	9.5	290
0938	9.2	280	1005	8.9	270	1016	9.5	290	1657	-0.7	-20	1045	8.2	250	0610	4.3	130		
1556	1.0	30	1639	0.7	20	1657	0.7	20	2350	9.8	300	1719	0.7	20	1120	7.9	240		
2234	9.5	290	● 2316	9.2	280							1753	1.0	30	1743	0.7	20		
15 W	0416	2.6	80	30 Th	0504	3.9	120	15 M	0525	3.9	120	30 Su	0025	9.2	280	30 Tu	0049	9.5	290
1011	9.5	290	1035	8.9	270	1056	9.5	290	1741	-0.7	-20	0610	4.6	140	0638	3.9	120		
1636	0.3	10	1708	0.7	20							1119	8.2	250	1157	7.9	240		
○ 2315	9.8	300	2351	9.2	280							1753	1.0	30	1818	1.0	30		
			31 F	0533	4.3	130									31 W	0116	9.5	290	
			1102	8.5	260										0707	3.6	110		
			1738	0.7	20										1233	7.9	240		
															1852	1.3	40		

Time meridian 75° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Shatt Al Arab (Outer Bar), Iraq, 2008

Times and Heights of High and Low Waters

January				February				March															
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height												
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm												
<b>1</b> Tu	0348 1023 1653 2345	6.9 2.3 8.9 3.3	210 70 270 100	<b>16</b> W	0320 0945 1554 2305	7.5 2.3 9.5 2.3	230 70 290 70	<b>1</b> F	0009 0634 1028 1655	3.0 5.2 4.6 8.5	90 160 140 260	<b>16</b> Sa	0013 0723 1046 1655	1.3 5.6 4.9 9.2	40 170 150 280	<b>1</b> Sa	0603 0924 1537	5.2 4.9 8.9	160 150 270	<b>16</b> Su	0000 0736 1042 1621	1.3 5.9 5.6 8.5	40 180 170 260
<b>2</b> W	0513 1059 1742	5.9 3.3 8.9	180 100 270	<b>17</b> Th	0441 1030 1643	6.2 3.3 9.5	190 100 290	<b>2</b> Sa	0139 0839 1118 1802	2.6 5.6 5.2 8.5	80 170 160 260	<b>17</b> Su	0151 0901 1214 1833	1.0 6.2 5.6 8.9	30 190 170 270	<b>2</b> Su	0044 0840 1027 1626	2.3 5.6 5.6 8.2	70 170 170 250	<b>17</b> M	0129 0843 1231 1828	1.0 6.9 5.6 8.2	30 210 170 250
<b>3</b> Th	0058 0711 1140 1836	3.0 5.6 3.9 8.9	90 170 120 270	<b>18</b> F	0027 0701 1125 1744	2.0 5.6 4.3 9.5	60 170 130 290	<b>3</b> Su	0300 0945 1226 1925	2.0 6.2 5.9 8.5	60 190 180 260	<b>18</b> M	0310 0952 1357 2010	0.3 7.2 5.6 9.2	10 220 170 280	<b>3</b> M	0208 0928 1204 1818	2.0 6.6 6.2 8.2	60 200 190 250	<b>18</b> Tu	0241 0922 1416 2014	0.7 7.5 5.2 8.5	20 230 160 260
<b>4</b> F	0219 0840 1226 1929	2.3 5.9 4.6 8.9	70 180 140 270	<b>19</b> Sa	0159 0850 1231 1900	1.0 6.2 4.9 9.5	30 190 150 290	<b>4</b> M	0354 1027 1341 2028	1.3 6.9 6.2 8.9	40 210 150 270	<b>19</b> Tu	0407 1030 1528 2118	-0.3 7.9 4.9 9.5	-10 240 150 290	<b>4</b> Tu	0307 0955 1338 2005	1.3 7.2 5.9 8.2	40 220 180 250	<b>19</b> W	0335 0954 1530 2117	0.3 8.2 4.3 8.9	10 250 130 270
<b>5</b> Sa	0327 0944 1316 2015	1.6 6.6 5.2 9.2	50 200 160 280	<b>20</b> Su	0320 0957 1348 2014	0.3 6.9 5.2 9.8	10 210 160 300	<b>5</b> Tu	0434 1059 1455 2117	0.7 7.2 5.9 9.2	20 220 180 280	<b>20</b> W	0453 1103 1634 2211	-0.7 8.5 4.3 9.8	-20 260 130 300	<b>5</b> W	0348 1019 1454 2104	1.0 7.5 5.6 8.9	30 230 170 270	<b>20</b> Th	0419 1023 1624 2206	0.3 8.9 3.3 9.2	10 270 100 280
<b>6</b> Su	0419 1034 1408 2056	1.0 6.9 5.6 9.5	30 210 170 290	<b>21</b> M	0423 1048 1512 2116	-0.7 7.5 5.6 10.2	-20 230 170 310	<b>6</b> W	0508 1126 1559 2201	0.3 7.9 5.6 9.5	10 240 170 290	<b>21</b> O	0533 1133 1725 2258	-0.7 8.9 3.6 9.8	-20 270 110 300	<b>21</b> Th	0423 1042 1552 2152	0.7 8.2 4.9 9.2	20 250 150 280	<b>21</b> O	0456 1052 1708 2249	0.7 9.5 2.6 9.5	20 290 80 290
<b>7</b> M	0501 1117 1502 2134	0.7 7.2 5.9 9.5	20 220 180 290	<b>22</b> Tu	0514 1130 1630 O	-1.0 7.9 5.2 10.2	-30 240 310 310	<b>7</b> Th	0538 1151 1651 2242	0.0 8.2 5.2 9.8	0 250 160 300	<b>22</b> F	0608 1203 1810 2341	-0.3 9.2 3.0 9.8	-10 280 90 300	<b>7</b> F	0455 1105 1640 2235	0.7 8.5 3.9 9.5	20 260 120 280	<b>22</b> Sa	0528 1120 1749 2330	1.0 9.8 2.0 9.2	30 300 60 280
<b>8</b> Tu	0537 1154 1556 ●	0.3 7.5 6.2 9.8	10 230 190 300	<b>23</b> W	0558 1208 1733 2301	-1.3 8.5 4.6 10.2	-40 260 140 310	<b>8</b> F	0607 1214 1738 2324	0.0 8.5 4.6 10.2	0 260 140 310	<b>23</b> Sa	0640 1231 1851	0.0 9.5 2.6	0 290 80	<b>8</b> Sa	0525 1128 1725 2318	0.7 9.2 3.0 9.8	20 280 90 300	<b>23</b> Su	0557 1147 1828	1.6 9.8 1.6	50 300 50
<b>9</b> W	0610 1226 1650 2248	0.0 7.9 5.9 10.2	0 240 180 310	<b>24</b> Th	0638 1242 1825 2347	-1.3 8.9 4.3 10.2	-40 270 130 310	<b>9</b> Sa	0635 1237 1822	0.0 8.9 3.6	0 270 110 310	<b>24</b> Su	0021 0707 1259 1929	9.5 0.7 9.8 2.3	290 20 300 70	<b>9</b> Su	0555 1153 1809	1.0 9.5 2.3	30 290 70	<b>24</b> M	0008 0622 1213 1905	8.9 2.3 10.2 1.3	270 310 310 40
<b>10</b> Th	0640 1253 1742 2328	-0.3 8.2 5.6 10.2	-10 250 170 310	<b>25</b> F	0714 1314 1912	-1.0 9.2 3.6	-30 280 110	<b>10</b> Su	0005 0702 1302 1905	9.8 0.3 9.5 3.0	300 10 290 90	<b>25</b> M	0100 0730 1324 2006	8.9 1.3 9.8 2.0	270 40 300 60	<b>25</b> Tu	0047 0625 1221 1853	8.5 1.3 10.2 5.6	260 80 310 40	<b>25</b> O	0047 0644 1238 1941	8.5 2.6 10.2 1.3	260 80 310 40
<b>11</b> F	0708 1318 1830	-0.3 8.2 4.9	-10 250 150	<b>26</b> Sa	0031 0745 1344 1953	9.8 -0.3 9.2 3.3	300 -10 280 100	<b>11</b> M	0048 0730 1329 1950	9.5 0.7 9.8 2.3	290 20 300 70	<b>26</b> Tu	0137 0751 1349 2044	8.2 2.0 9.8 2.0	250 60 300 60	<b>11</b> Tu	0045 0655 1249 1939	9.2 2.0 10.5 1.0	280 60 320 30	<b>26</b> W	0124 0704 1302 2017	7.9 3.3 10.2 1.3	240 100 310 40
<b>12</b> Sa	0009 0735 1343 1916	10.2 -0.3 8.5 4.3	310 -10 260 130	<b>27</b> Su	0112 0812 1412 2034	9.2 0.3 9.5 3.0	280 10 290 90	<b>12</b> Tu	0132 0758 1358 2039	8.9 1.3 10.2 2.0	270 40 310 60	<b>27</b> W	0215 0810 1413 2126	7.5 2.6 9.5 2.3	230 80 290 70	<b>27</b> Th	0202 0723 1325 2056	7.5 3.6 9.8 1.6	230 110 300 50				
<b>13</b> Su	0051 0803 1410 2004	9.8 0.0 9.2 3.6	300 0 280 110	<b>28</b> M	0152 0837 1440 2116	8.5 1.0 9.5 3.0	260 30 290 90	<b>13</b> W	0219 0829 1431 2136	8.2 2.0 10.2 1.6	250 60 310 50	<b>28</b> Th	0256 0830 1437 2216	6.6 3.3 9.5 2.3	230 100 290 70	<b>28</b> F	0244 0744 1349 2141	6.9 4.3 9.8 2.0	210 130 300 60				
<b>14</b> M	0136 0834 1440 2056	9.5 0.7 9.2 3.3	290 20 280 100	<b>29</b> Tu	0233 0900 1508 2203	7.9 2.0 9.2 3.0	240 60 280 90	<b>14</b> Th	0315 0903 1508 O	6.9 3.0 10.2 1.6	210 90 310 50	<b>29</b> F	0351 0853 1504 2321	5.9 4.3 9.2 2.6	180 130 280 80	<b>14</b> O	0320 0831 1432 2236	6.6 3.9 10.2 1.0	200 120 310 30	<b>29</b> Sa	0339 0809 1417 2237	6.2 4.9 9.5 2.0	190 150 290 60
<b>15</b> Tu	0223 0907 1514 ●	8.5 1.3 9.5 2.6	260 40 290 80	<b>30</b> W	0319 0924 1538 O	6.9 2.6 9.2 3.0	180 80 280 90	<b>15</b> F	0439 0944 1553	5.9 3.9 9.8	180 120 300	<b>30</b> Sa	0458 0920 1517	5.9 4.9 9.5	180 150 290	<b>30</b> Su	0528 0848 1451 O	5.9 5.6 8.9 2.3	180 170 270 70				
	0215 0907 1514 ●	8.5 1.3 9.5 2.6	259 40 290 80	<b>31</b> Th	0422 0952 1612	5.9 3.6 8.9	180 110 270					<b>31</b> M	0753 1015 1539	6.2 5.9 8.2	190 180 250								

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

## **Shatt Al Arab (Outer Bar), Iraq, 2008**

## Times and Heights of High and Low Waters

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

# Shatt Al Arab (Outer Bar), Iraq, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0134 5.2 160	16 W 0159 6.2 190	1 F 0402 5.6 170	16 Sa 0355 6.2 190	1 M 0546 3.0 90	16 Tu 0504 3.6 110						
0805 10.8 330	W 0851 9.8 300	F 0954 10.8 330	Sa 0958 9.8 300	M 1127 10.5 320	Tu 1105 9.8 300						
1601 0.7 20	1651 1.3 40	F 1736 -0.3 -10	Sa 1725 1.3 40	Sa 1819 1.0 30	Tu 1731 2.0 60						
2224 7.9 240	2301 7.9 240	● 2342 9.2 280	2331 8.9 270	M 2327 10.2 310							
2 W 0240 5.6 170	17 Th 0259 6.6 200	2 Sa 0507 4.9 150	17 Su 0441 5.6 170	2 Tu 0005 10.2 310	17 W 0544 2.6 80						
0902 11.2 340	Th 0932 10.2 310	Sa 1046 11.2 340	Su 1036 10.2 310	W 0628 2.6 80	W 1146 9.8 300						
1700 0.0 0	1728 1.0 30	1817 -0.3 -10	1751 1.3 40	1209 10.2 310	1800 2.3 70						
2316 8.2 250	2338 8.2 250	○ 2353 9.2 280	1849 1.6 50	2353 10.5 320	2353 10.5 320						
3 Th 0351 5.9 180	18 F 0356 6.6 200	3 Su 0016 9.5 290	18 M 0521 4.9 150	3 W 0034 10.5 320	18 Th 0626 2.0 60						
0955 11.2 340	F 1009 10.5 320	0601 4.6 140	M 1114 10.5 320	0709 2.3 70	Th 1228 9.5 290						
1751 -0.7 -20	1801 1.0 30	1134 11.2 340	1817 1.3 40	1249 9.8 300	1829 3.0 90						
● ○	1853 0.0 0	1853 0.0 0	1915 2.3 70	1915 2.3 70	1915 2.3 70						
4 F 0003 8.5 260	19 Sa 0009 8.5 260	4 M 0048 9.8 300	19 Tu 0014 9.5 290	4 Th 0101 10.5 320	19 W 0022 10.8 330						
0501 5.6 170	0446 6.2 190	0648 3.9 120	0600 4.3 130	0747 2.0 60	0710 1.3 40						
1046 11.5 350	1046 10.5 320	1218 10.8 330	1152 10.5 320	1327 9.2 280	1312 9.2 280						
1837 -0.7 -20	1829 0.7 20	1927 0.3 10	1841 1.3 40	1938 3.0 90	1859 3.3 100						
5 Sa 0046 8.9 270	20 Su 0036 8.5 260	5 Tu 0118 9.8 300	20 W 0037 9.8 300	5 F 0128 10.5 320	20 Th 0053 11.2 340						
0604 5.6 170	0531 5.9 180	0731 3.3 100	0639 3.6 110	0826 2.0 60	0758 1.3 40						
1135 11.2 340	1122 10.8 330	1300 10.5 320	1232 10.2 310	1406 8.5 260	1359 8.5 260						
1919 -0.7 -20	1855 0.7 20	1956 1.0 30	1907 1.6 50	2000 3.6 110	1932 3.9 120						
6 Su 0124 9.2 280	21 M 0100 8.9 270	6 W 0147 10.2 310	21 Th 0102 10.5 320	6 Sa 0154 10.2 310	21 W 0127 11.2 340						
0700 4.9 150	0613 5.6 170	0813 3.0 90	0721 3.0 90	0907 2.3 70	0852 1.3 40						
1222 10.8 330	1159 10.8 330	1341 9.8 300	1313 9.8 300	1449 7.9 240	1453 7.5 230						
1957 -0.3 -10	1919 1.0 30	2022 2.0 60	1933 2.3 70	2023 4.3 130	2009 4.6 140						
7 M 0200 9.5 290	22 Tu 0122 9.2 280	7 Th 0215 10.2 310	22 F 0130 10.8 330	7 Su 0220 10.2 310	22 W 0205 10.8 330						
0749 4.6 140	0654 4.9 150	0854 3.0 90	0806 2.3 70	0955 2.6 80	0956 1.3 40						
1307 10.5 320	1237 10.5 320	1422 8.9 270	1356 9.2 280	1542 6.9 210	1609 6.9 210						
2031 0.3 10	1944 1.0 30	2046 2.6 80	2003 3.0 90	2050 4.9 150	2100 5.2 160						
8 Tu 0233 9.5 290	23 W 0145 9.5 290	8 F 0244 10.2 310	23 Sa 0201 10.8 330	8 M 0248 9.5 290	23 Th 0249 10.2 310						
0836 4.3 130	0736 4.3 130	0939 3.0 90	0858 2.3 70	1056 3.0 90	1113 1.6 50						
1352 9.8 300	1318 10.2 310	1506 7.9 240	1446 8.2 250	1719 6.2 190	1824 6.6 200						
2103 1.0 30	2010 1.3 40	● 2110 3.3 100	2035 3.6 110	2127 5.6 170	2218 5.9 180						
9 W 0306 9.5 290	24 Th 0212 9.8 300	9 Sa 0314 9.8 300	24 Su 0237 10.8 330	9 Tu 0321 9.2 280	24 W 0348 9.2 280						
0923 3.9 120	0823 3.9 120	1032 3.3 100	1002 2.3 70	1213 3.0 90	1239 1.6 50						
1438 8.9 270	1401 9.5 290	1603 6.9 210	1553 6.9 210	1952 6.6 200	2000 7.2 220						
2133 2.0 60	2040 2.0 60	2138 4.3 130	● 2115 4.6 140	2231 6.2 190	2231 6.2 190						
10 Th 0340 9.5 290	25 F 0243 10.2 310	10 Su 0347 9.5 290	25 M 0319 10.5 320	10 W 0408 8.5 260	25 Th 0000 5.9 180						
1014 3.9 120	0916 3.3 100	1139 3.3 100	1124 2.3 70	1336 3.0 90	0536 8.5 260						
1529 7.9 240	1450 8.5 260	1748 6.2 190	1806 6.2 190	2056 7.2 220	1358 1.3 40						
● 2203 3.0 90	● 2114 2.6 80	2214 4.9 150	2214 5.2 160	2047 7.9 240	2047 7.9 240						
11 F 0418 9.5 290	26 Sa 0319 10.5 320	11 M 0430 9.2 280	26 Tu 0415 9.8 300	11 W 0002 6.6 200	26 F 0141 5.2 160						
1113 3.6 110	1020 3.3 100	1306 3.3 100	1301 2.0 60	0609 8.2 250	0745 8.5 260						
1638 6.9 210	1553 7.5 230	2007 6.2 190	2022 6.9 210	1443 2.3 70	1459 1.3 40						
2236 3.6 110	2155 3.6 110	2306 5.9 180	2342 5.9 180	2130 7.9 240	2122 8.5 260						
12 Sa 0505 9.5 290	27 Su 0403 10.5 320	12 Tu 0538 8.9 270	27 W 0545 9.5 290	12 F 0135 6.2 190	27 W 0300 4.3 130						
1224 3.6 110	1139 3.0 90	1436 2.6 80	1431 1.3 40	0803 8.5 260	0857 9.2 280						
1829 6.6 200	1747 6.6 200	2121 6.9 210	2121 7.5 230	1528 2.0 60	1548 1.3 40						
2316 4.6 140	2246 4.6 140	● 2114 2.6 80	2214 5.2 160	2156 8.2 250	2154 9.2 280						
13 Su 0602 9.5 290	28 M 0459 10.2 310	13 W 0018 6.2 190	28 Th 0125 5.9 180	13 F 0248 5.9 180	28 W 0357 3.3 100						
1348 3.3 100	1313 2.3 70	0719 8.9 270	0741 9.5 290	0900 8.9 270	0949 9.5 290						
2013 6.6 200	2012 6.6 200	1538 2.3 70	1536 0.7 20	1603 2.0 60	1629 1.3 40						
	2353 5.6 170	2205 7.5 230	2200 8.2 250	2220 8.9 270	2224 9.8 300						
14 M 0004 5.2 160	29 Tu 0617 10.2 310	14 Th 0140 6.6 200	29 F 0258 5.6 170	14 W 0341 5.2 160	29 W 0444 2.3 70						
0705 9.5 290	1445 1.6 50	0828 9.2 280	0858 9.8 300	0944 9.5 290	1035 9.8 300						
1507 2.6 80	2130 7.2 220	1621 1.6 50	1626 0.3 10	1634 1.6 50	1704 2.0 60						
2124 6.9 210		2239 8.2 250	2234 8.9 270	2242 9.2 280	● 2253 10.2 310						
15 Tu 0059 5.9 180	30 Th 0114 5.9 180	15 F 0256 6.6 200	30 Sa 0407 4.6 140	15 M 0423 4.3 130	30 Tu 0528 1.6 50						
0803 9.5 290	0743 10.2 310	0917 9.5 290	0955 10.2 310	1025 9.8 300	1117 9.8 300						
1606 2.0 60	1556 0.7 20	1655 1.3 40	1708 0.3 10	1703 2.0 60	1737 2.3 70						
2217 7.5 230	2222 7.9 240	2306 8.5 260	● 2306 9.5 290	○ 2304 9.5 290	2322 10.5 320						
	31 Th 0855 10.5 320		31 Su 0500 3.6 110								
	1650 0.0 0		1043 10.5 320								
	2304 8.5 260		1745 0.7 20								
			2336 9.8 300								

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Shatt Al Arab (Outer Bar), Iraq, 2008

Times and Heights of High and Low Waters

October				November				December											
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height								
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm								
1 W	0609	1.3	40	16 Th	0533	1.3	40	1 Sa	0712	0.7	20	1 M	0734	0.3	10	16 Tu	0002	10.5	320
	1157	9.5	290		1143	9.2	280		1310	8.2	250		1344	7.9	240		0752	-1.3	-40
	1805	3.0	90		1719	3.6	110		1817	4.9	150		1832	5.9	180		1405	8.5	260
	2350	10.5	320		2314	10.8	330									1937	4.9	150	
2 Th	0648	1.3	40	17 F	0621	0.7	20	2 Su	0007	10.2	310	17 M	0007	10.8	330	2 Tu	0011	9.8	300
	1237	9.2	280		1229	8.9	270		0748	0.7	20		0801	-0.7	-20		0804	0.3	10
	1831	3.6	110		1756	3.9	120		1352	7.9	240		1417	8.2	250		1419	7.9	240
					2348	11.2	340		1847	5.2	160		1927	5.2	160		1913	5.6	170
3 F	0017	10.5	320	18 Sa	0710	0.3	10	3 M	0036	10.2	310	18 Tu	0052	10.5	320	3 W	0045	9.8	300
	0726	1.3	40		1317	8.5	260		0824	1.0	50		0849	-0.3	-10		0833	0.7	20
	1316	8.5	260		1835	4.6	140		1434	7.5	230		1508	7.9	240		1452	7.9	240
	1855	3.9	120						1922	5.6	170		2027	5.2	160		1958	5.6	170
4 Sa	0044	10.5	320	19 Su	0024	11.2	340	4 Tu	0105	9.8	300	19 W	0139	9.8	300	4 Th	0120	9.5	290
	0804	1.3	40		0800	0.0	0		0900	1.3	40		0937	0.0	0		0903	1.0	30
	1356	8.2	250		1409	7.9	240		1519	7.2	220		1602	7.9	240		1524	7.9	240
	1919	4.3	130		1918	4.9	150		2004	5.6	170		2132	4.9	150		2048	5.2	160
5 Su	0110	10.2	310	20 M	0103	10.8	330	5 W	0136	9.5	290	20 Th	0231	8.9	270	5 F	0200	8.9	270
	0843	1.6	50		0853	0.3	10		0939	1.3	40		1025	0.7	20		0936	1.3	40
	1439	7.5	230		1507	7.5	230		1612	7.2	220		1701	7.9	240		1600	8.2	250
	1945	4.9	150		2010	5.2	160		2059	5.9	180		2241	4.6	140		2146	4.9	150
6 M	0137	9.8	300	21 Tu	0145	10.2	310	6 Th	0213	8.9	270	21 F	0337	7.9	240	6 Sa	0247	8.2	250
	0926	2.0	60		0951	0.7	20		1024	2.0	60		1116	1.3	50		1015	1.6	50
	1532	6.9	210		1621	7.2	220		1717	7.2	220		1800	8.2	250		1642	8.2	250
	2017	5.2	160		2117	5.6	170		2209	5.9	180		2354	4.3	130		2252	4.6	140
7 Tu	0205	9.5	290	22 W	0234	9.5	290	7 F	0300	8.2	250	22 Sa	0517	6.9	210	7 Su	0351	7.2	220
	1016	2.3	70		1055	1.0	30		1114	2.3	70		1208	2.3	70		1100	2.3	70
	1652	6.6	200		1755	7.2	220		1821	7.5	230		1854	8.5	260		1731	8.5	260
	2104	5.9	180		2239	5.6	170		2326	5.6	170								
8 W	0237	8.9	270	23 Th	0339	8.5	260	8 Sa	0415	7.5	230	23 Su	0110	3.3	100	8 M	0004	3.9	120
	1116	2.6	80		1202	1.3	40		1206	2.6	80		0711	6.9	210		0536	6.6	200
	1855	6.9	210		1908	7.5	230		1909	7.9	240		1300	3.0	90		1150	3.3	100
	2220	6.2	190						1939	9.2	280		1923	9.2	280		1927	9.2	280
9 Th	0322	8.2	250	24 F	0009	5.2	160	9 Su	0042	4.9	150	24 M	0220	2.6	80	9 Tu	0118	3.0	90
	1222	2.6	80		0534	7.5	230		0630	7.2	220		0827	7.2	220		0741	6.6	200
	1958	7.2	220		1308	1.6	50		1257	2.6	80		1350	3.3	100		1242	3.6	110
	2351	6.2	190		1956	8.2	250		1947	8.5	260		2020	9.5	290		1915	9.5	290
10 F	0451	7.5	230	25 Sa	0135	4.3	130	10 M	0151	3.9	120	25 Tu	0320	1.6	50	10 W	0230	2.0	60
	1323	2.6	80		0735	7.9	240		0807	7.2	220		0924	7.5	230		0902	6.9	210
	2033	7.9	240		1407	2.0	60		1346	3.0	90		1435	3.9	120		1335	4.3	130
					2034	8.9	270		2021	9.2	280		2057	9.8	300		2005	10.2	310
11 Sa	0115	5.6	170	26 Su	0245	3.3	100	11 Tu	0251	2.6	80	26 W	0412	1.0	30	11 M	0336	1.0	30
	0725	7.9	240		0845	8.2	250		0910	7.9	240		1014	7.9	240		1003	7.2	220
	1414	2.3	70		1456	2.3	70		1431	3.3	100		1516	4.3	130		1430	4.6	140
	2059	8.5	260		2108	9.5	290		2055	9.8	300		2132	10.2	310		2052	10.5	320
12 Su	0224	4.9	150	27 M	0339	2.3	70	12 W	0345	1.6	50	27 Th	0458	0.7	20	12 F	0436	0.0	0
	0836	8.2	250		0937	8.5	260		1004	8.2	250		1100	7.9	240		1140	7.5	230
	1456	2.3	70		1538	2.6	80		1514	3.9	120		1556	4.9	150		1607	5.9	180
	2124	8.9	270		2140	9.8	300		2129	10.5	320		2205	10.2	310		2215	9.8	300
13 M	0316	3.9	120	28 Tu	0427	1.3	40	13 F	0438	0.7	20	28 F	0542	0.3	10	13 Sa	0531	-0.7	-20
	0927	8.9	270		1023	8.9	270		1055	8.2	250		1144	7.9	240		1219	7.9	240
	1533	2.6	80		1614	3.3	100		1558	4.3	130		1634	5.2	160		1658	5.9	180
	2148	9.5	290		2211	10.2	310		2206	10.8	330		2237	10.2	310		2250	9.8	300
14 Tu	0403	3.0	90	29 W	0511	1.0	30	14 F	0531	0.0	0	29 Sa	0623	0.0	0	14 M	0622	-1.3	-40
	1013	8.9	270		1106	8.9	270		1145	8.2	250		1226	7.9	240		1238	8.2	250
	1608	3.0	90		1647	3.6	110		1645	4.6	140		1713	5.6	170		1736	5.2	160
	2215	10.2	310		2241	10.5	320		2244	11.2	340		2309	10.2	310		2315	10.8	330
15 W	0448	2.0	60	30 Th	0553	0.7	20	15 Sa	0622	-0.3	-10	30 Su	0700	0.0	0	15 M	0709	-1.3	-40
	1057	9.2	280		1148	8.5	260		1236	8.2	250		1307	7.9	240		1323	8.5	260
	1643	3.3	100		1718	4.3	130		1735	4.9	150		1752	5.6	170		1839	5.2	160
	2243	10.5	320		2310	10.5	320		2325	11.2	340		2340	10.2	310		2358	9.8	300
				31 F	0633	0.7	20									31 W	0737	0.0	0
					1229	8.5	260										1347	8.2	250
					1748	4.6	140										1905	5.2	160
					2339	10.5	320												

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

**Mina Al Ahmandi, Kuwait, 2008**

## Times and Heights of High and Low Waters

January					February					March					
Time		Height		Time		Height		Time		Height		Time		Height	
<b>1</b> Tu	0507	6.9	210	<b>16</b> W	0433	7.5	230	<b>1</b> F	0106	3.9	120	<b>16</b> Sa	0109	2.6	80
	1114	3.6	110		1021	3.6	110		0810	6.2	190		0839	6.6	200
	1808	8.5	260		1711	9.2	280		1036	5.9	180		1114	6.2	190
					2352	3.6	110		1759	9.2	280		1800	9.8	300
<b>2</b> W	0046	4.6	140	<b>17</b> Th	0600	6.9	210	<b>2</b> Sa	0236	3.6	110	<b>17</b> Su	0246	2.0	60
	0639	6.2	190		1105	4.3	130		1854	9.2	280		1035	6.9	210
	1155	4.3	130		1753	9.5	290						1255	6.9	210
	1847	8.5	260										1919	9.5	290
<b>3</b> Th	0209	3.9	120	<b>18</b> F	0121	3.0	90	<b>3</b> Su	0346	3.0	90	<b>18</b> M	0359	1.3	40
	0831	6.2	190		0759	6.6	200		1212	7.2	220		1129	7.5	230
	1244	5.2	160		1159	5.2	160		1346	7.2	220		1454	6.6	200
	1928	8.9	270		1844	9.8	300		2000	9.2	280		2046	9.5	290
<b>4</b> F	0317	3.3	100	<b>19</b> Sa	0250	2.3	70	<b>4</b> M	0437	2.3	70	<b>19</b> Tu	0453	1.0	30
	1015	6.2	190		1000	6.6	200		1216	7.5	230		1206	7.9	240
	1347	5.9	180		1313	5.9	180		1531	7.2	220		1611	6.2	190
	2011	8.9	270		1945	9.8	300		2103	9.2	280		2201	9.8	300
<b>5</b> Sa	0412	2.6	80	<b>20</b> Su	0404	1.6	50	<b>5</b> Tu	0516	1.6	50	<b>20</b> W	0535	1.0	30
	1131	6.9	210		1125	7.2	220		1235	7.9	240		1236	8.2	250
	1454	6.2	190		1442	6.6	200		1626	6.9	210		1705	5.6	170
	2055	9.2	280		2052	10.2	310		2158	9.5	290		2302	9.8	300
<b>6</b> Su	0458	2.3	70	<b>21</b> M	0504	1.0	30	<b>6</b> W	0549	1.3	40	<b>21</b> Th	0610	1.0	30
	1219	7.2	220		1219	7.5	230		1256	8.2	250		1302	8.5	260
	1553	6.6	200		1600	6.2	190		1707	6.2	190		1750	4.9	150
	2137	9.2	280		2157	10.2	310		2245	9.8	300		2354	9.8	300
<b>7</b> M	0537	1.6	50	<b>22</b> Tu	0553	0.7	20	<b>7</b> Th	0617	1.3	40	<b>22</b> F	0639	1.3	40
	1254	7.5	230		1301	7.9	240		1317	8.2	250		1324	8.5	260
	1640	6.6	200		1702	5.9	180		1744	5.6	170		1830	4.3	130
	2217	9.5	290		2257	10.5	320		2330	9.8	300				
<b>8</b> Tu	0613	1.3	40	<b>23</b> W	0636	0.7	20	<b>8</b> F	0641	1.3	40	<b>23</b> Sa	0040	9.5	290
	1324	7.9	240		1337	8.2	250		1337	8.5	260		0705	1.6	50
	1719	6.2	190		1754	5.6	170		1820	5.2	160		1343	8.9	270
	2256	9.5	290		2352	10.5	320					1907	3.9	120	
<b>9</b> W	0645	1.0	30	<b>24</b> Th	0712	0.7	20	<b>9</b> Sa	0013	10.2	310	<b>24</b> Su	0123	9.2	280
	1352	7.9	240		1407	8.2	250		0704	1.3	40		0730	2.3	70
	1755	6.2	190		1840	4.9	150		1357	8.9	270		1401	9.2	280
	2336	9.8	300						1858	4.6	140		1943	3.6	110
<b>10</b> Th	0714	1.0	30	<b>25</b> F	0042	10.2	310	<b>10</b> Su	0058	9.8	300	<b>25</b> M	0203	8.9	270
	1419	7.9	240		0744	1.0	30		0730	1.6	50		0754	3.0	90
	1832	5.9	180		1435	8.5	260		1418	9.2	280		1420	9.5	290
					1923	4.6	140		1939	3.9	120		2020	3.3	100
<b>11</b> F	0016	9.8	300	<b>26</b> Sa	0129	9.8	300	<b>11</b> M	0145	9.5	290	<b>26</b> Tu	0242	8.2	250
	0740	1.0	30		0814	1.6	50		0759	2.0	60		0817	3.6	110
	1445	7.9	240		1500	8.5	260		1440	9.5	290		1439	9.5	290
	1910	5.6	170		2006	4.6	140		2024	3.6	110		2100	3.3	100
<b>12</b> Sa	0058	9.8	300	<b>27</b> Su	0212	9.2	280	<b>12</b> Tu	0235	8.9	270	<b>27</b> W	0324	7.5	230
	0807	1.0	30		0842	2.0	60		0830	3.0	90		0839	4.3	130
	1511	8.2	250		1523	8.9	270		1506	9.5	290		1501	9.5	290
	1952	5.2	160		2049	4.3	130		2115	3.3	100		2145	3.3	100
<b>13</b> Su	0143	9.5	290	<b>28</b> M	0255	8.5	260	<b>13</b> W	0332	8.2	250	<b>28</b> Th	0415	6.9	210
	0836	1.3	40		0909	3.0	90		0904	3.6	110		0857	4.9	150
	1537	8.5	260		1548	9.2	280		1536	9.8	300		1526	9.5	290
	2040	4.9	150		2136	4.3	130		2216	3.0	90		2243	3.3	100
<b>14</b> M	0232	9.2	280	<b>29</b> Tu	0339	7.9	240	<b>14</b> Th	0442	7.2	220	<b>29</b> F	0530	6.2	190
	0908	2.0	60		0935	3.6	110		0940	4.6	140		0912	5.6	160
	1604	8.5	260		1614	9.2	280		1613	9.8	300		1556	9.2	280
	2133	4.6	140		2231	4.3	130		2333	2.6	80				
<b>15</b> Tu	0327	8.5	260	<b>30</b> W	0432	7.2	220	<b>15</b> F	0618	6.6	200	<b>30</b> Sa	0649	6.6	200
	0943	2.6	80		1000	4.3	130		1021	5.6	170		1000	5.9	180
	1635	8.9	270		1643	9.2	280		1659	9.8	300		1619	9.2	280
	2236	4.3	130		2339	4.3	130								
				<b>31</b> Th	0551	6.6	200								
					1022	5.2	160								
					1717	9.2	280								

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

# Mina Al Ahmandi, Kuwait, 2008

Times and Heights of High and Low Waters

April				May				June											
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height								
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm								
1 Tu	0152	2.3	70	16 W	0245	1.3	40	1 Th	0131	2.0	60	16 M	0203	3.6	110				
0952	6.9	210	0950	7.5	230	0852	7.2	220	F	0915	7.9	240	Su	0838	8.9	270			
1316	6.6	200	1518	4.6	140	1418	4.6	140	1551	3.0	90	1 Su	1535	2.0	60				
1806	7.5	230	2057	7.2	220	1931	6.6	200	2200	6.6	200	2211	6.6	200	16 M	1657	2.0	60	
2 W	0250	2.0	60	17 Th	0332	1.6	50	2 F	0220	2.3	70	17 Sa	0320	3.3	100				
1014	7.2	220	1021	7.9	240	0919	7.9	240	1514	3.6	110	1633	2.3	70	2 M	0257	4.3	130	
1455	5.9	180	1611	3.6	110	2103	6.9	210	2303	6.6	200	2323	6.9	210	Tu	0915	9.2	280	
1955	7.5	230	2207	7.2	220							1625	1.0	30	17 M	0954	8.9	270	
3 Th	0332	2.0	60	18 F	0410	2.3	70	3 Sa	0304	2.6	80	18 Su	0359	3.9	120	17 Tu	0004	6.9	210
1036	7.5	230	1046	8.2	250	0944	8.2	250	1559	2.6	80	1709	1.6	50	18 W	0445	5.9	180	
1546	4.9	150	1652	3.0	90	2213	6.9	210	2359	6.9	210				1027	9.2	280		
2119	7.5	230	2305	7.5	230							●			O	1811	1.3	40	
4 F	0406	2.0	60	19 Sa	0444	2.6	80	4 Su	0345	3.0	90	19 M	0436	4.6	140	18 W	0051	7.2	220
1056	8.2	250	1107	8.5	260	1010	8.5	260	1641	1.3	40	1742	1.3	40	19 Tu	0445	5.9	180	
1627	3.9	120	1727	2.3	70	2316	7.2	220							1101	9.2	280		
2222	7.9	240	2356	7.5	230										1847	1.3	40		
5 Sa	0437	2.0	60	20 Su	0514	3.3	100	5 M	0426	3.3	100	20 Tu	0047	7.2	220	19 F	0129	7.5	230
1115	8.5	260	1126	8.5	260	1038	9.2	280	1723	0.7	20	1059	4.9	150	20 W	0524	5.9	180	
1705	3.0	90	1758	1.6	50							●			1135	9.2	280		
2317	8.2	250	O												1920	1.0	30		
6 Su	0508	2.3	70	21 M	0042	7.5	230	6 Tu	0016	7.5	230	21 W	0129	7.2	220	21 Sa	0233	7.5	230
1136	8.9	270	0542	3.9	120	0507	3.9	120	1111	9.5	290	1124	5.2	160	21 Tu	0633	5.9	180	
1743	2.0	60	1145	8.9	270				1807	0.0	0	1846	1.0	30	21 W	1210	9.2	280	
●			1826	1.3	40										1952	1.0	30		
7 M	0010	8.2	250	22 Tu	0124	7.5	230	7 W	0115	7.5	230	22 Th	0207	7.2	220	22 Sa	0304	7.5	230
0541	3.0	90	0610	4.3	130	0549	4.3	130	1146	9.5	290	1151	8.9	270	22 Tu	0709	5.6	170	
1200	9.2	280	1205	8.9	270	1856	1.0	30	1856	-0.3	-10	1921	0.7	20	22 W	1248	9.2	280	
1822	1.0	30													2022	1.3	40		
8 Tu	0104	8.2	250	23 W	0204	7.2	220	8 Th	0213	7.5	230	23 F	0244	7.2	220	23 M	0334	7.5	230
0616	3.3	100	0635	4.6	140	0635	4.6	140	1226	9.5	290	1220	8.9	270	23 Tu	0750	5.6	170	
1226	9.5	290	1225	8.9	270				1950	-0.3	-10	1958	1.0	30	23 W	1329	9.2	280	
1905	0.3	10	1928	1.0	30										2052	1.3	40		
9 W	0200	8.2	250	24 Th	0243	7.2	220	9 F	0312	7.5	230	24 Sa	0322	6.9	210	24 M	0404	7.5	230
0653	3.9	120	0700	4.9	150	0724	4.9	150	1311	9.5	290	1253	5.6	170	24 Tu	0836	5.2	160	
1257	9.8	300	1249	8.9	270	2004	1.0	30	2049	-0.3	-10	2037	1.0	30	24 W	1415	8.9	270	
1953	0.3	10													2123	1.6	50		
10 Th	0300	7.5	230	25 F	0326	6.9	210	10 Sa	0411	7.2	220	25 Su	0403	6.9	210	25 Tu	0434	7.9	240
0733	4.6	140	0726	5.2	160	0819	5.2	160	1402	8.9	270	1331	8.5	260	25 W	0929	5.2	160	
1332	9.8	300	1315	8.9	270	2150	0.0	0	2150	0.0	0	2117	1.0	30	25 M	1506	8.2	250	
2049	0.3	10	2046	1.0	30							●			2157	2.0	60		
11 F	0405	7.2	220	26 Sa	0415	6.6	200	11 Su	0513	6.9	210	26 M	0446	6.9	210	26 Tu	0505	8.2	250
0817	4.9	150	0757	5.6	170	0923	5.2	160	1500	8.2	250	1414	8.2	250	26 W	1030	4.9	150	
1413	9.5	290	1346	8.5	260	2252	0.7	20	2252	0.7	20	2159	1.3	40	26 M	1607	7.5	230	
2154	0.3	10	2134	1.3	40										●	2235	2.6	80	
12 Sa	0521	6.9	210	27 Su	0515	6.2	190	12 M	0617	6.9	210	27 Tu	0531	6.9	210	27 W	0539	8.5	260
0910	5.6	170	0837	5.6	170	1037	5.2	160	1611	7.5	230	1507	7.9	240	27 M	1141	4.3	130	
1501	8.9	270	1423	8.2	250	2354	1.0	30	2354	1.0	30	2242	1.6	50	27 F	1722	6.9	210	
●	2309	0.7	20												2317	3.3	100		
13 Su	0650	6.6	200	28 M	0628	6.2	190	13 Tu	0716	7.2	220	28 W	0614	7.2	220	28 Sa	0615	8.9	270
1022	5.9	180	0938	5.9	180	1207	4.9	150	1738	6.9	210	1611	7.2	220	28 Tu	1259	3.6	110	
1603	8.2	250	1511	7.9	240							●			28 W	1901	6.6	200	
			2331	1.6	50														
14 M	0028	1.0	30	29 Tu	0735	6.6	200	14 W	0054	1.6	50	29 Th	0654	7.5	230	14 Sa	0134	3.9	120
0814	6.9	210	1106	5.9	180	0803	7.2	220	1344	4.6	140	1731	6.6	200	14 M	0656	9.2	280	
1203	5.9	180	1616	7.2	220	1919	6.6	200				1524	3.0	90	14 W	1416	3.0	90	
1730	7.5	230										2150	6.2	190	14 Su	2049	6.2	190	
15 Tu	0145	1.3	40	30 W	0033	2.0	60	15 F	0149	2.3	70	30 Th	0016	2.6	80	15 M	0225	4.6	140
0910	7.2	220	0819	6.9	210	0842	7.5	230	1458	3.6	110	0729	7.9	240	15 W	0743	9.5	290	
1359	5.6	170	1253	5.6	170	2048	6.6	200	2048	6.6	200	1912	6.2	190	15 Su	1524	2.0	60	
1922	7.2	220	1743	6.9	210							31 Sa	0109	3.0	90	31 M	0225	6.6	200
												0803	8.2	250					
												1440	3.0	90					
												2050	6.2	190					

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Mina Al Ahmandi, Kuwait, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0216 5.6 170	16 W 0009 7.2 220	1 F 0034 7.9 240	16 Sa 0035 8.2 250	1 M 0053 8.5 260	16 Tu 0010 8.9 270						
0835 9.8 300	0335 6.6 200	0432 5.9 180	0455 6.2 190	0608 3.9 120	0545 3.3 100						
1626 1.3 40	0921 9.2 280	1030 10.5 320	1035 9.5 290	1222 9.5 290	1154 8.9 270						
2341 7.2 220	1724 2.0 60	● 1807 0.7 20	1757 1.6 50	1839 2.0 60	1756 2.3 70						
2 W 0326 5.9 180	17 Th 0045 7.5 230	2 Sa 0110 8.2 250	17 Su 0055 8.2 250	2 Tu 0114 8.9 270	17 W 0028 9.2 280						
0931 10.2 310	0428 6.6 200	0528 5.6 170	0530 5.6 170	0648 3.3 100	0620 2.6 80						
1724 0.7 20	1006 9.5 290	1129 10.5 320	1118 9.5 290	1309 9.2 280	1240 8.9 270						
	1801 1.6 50	1845 0.7 20	○ 1821 1.6 50	1907 2.3 70	1823 2.6 80						
3 Th 0040 7.5 230	18 F 0114 7.9 240	3 Su 0142 8.2 250	18 M 0113 8.5 260	3 W 0134 9.2 280	18 Th 0048 9.5 290						
0430 5.9 180	0510 6.6 200	0617 4.9 150	0604 4.9 150	0726 3.0 90	0657 2.0 60						
1028 10.2 310	1048 9.5 290	1223 10.5 320	1159 9.8 300	1353 8.5 260	1329 8.5 260						
● 1815 0.3 10	○ 1833 1.3 40	1919 1.0 30	1843 1.6 50	1933 3.3 100	1853 3.3 100						
4 F 0128 7.9 240	19 Sa 0139 7.9 240	4 M 0209 8.5 260	19 Tu 0131 8.9 270	4 Th 0155 9.5 290	19 W 0111 9.5 290						
0529 5.6 170	0545 6.2 190	0703 4.6 140	0639 4.3 130	0805 2.6 80	0739 1.6 50						
1125 10.5 320	1127 9.8 300	1313 9.8 300	1242 9.5 290	1437 8.2 250	1422 8.2 250						
1903 0.0 0	1901 1.3 40	1951 1.6 50	1906 2.0 60	1959 3.9 120	1926 3.9 120						
5 Sa 0211 7.9 240	20 Su 0203 7.9 240	5 Tu 0235 8.9 270	20 W 0149 8.9 270	5 F 0217 9.5 290	20 Th 0139 9.8 300						
0624 5.2 160	0620 5.9 180	0748 4.3 130	0717 3.9 120	0846 2.6 80	0827 1.3 40						
1221 10.2 310	1206 9.8 300	1401 9.5 290	1326 9.2 280	1523 7.5 230	1523 7.5 230						
1947 0.3 10	1925 1.3 40	2021 2.3 70	1931 2.6 80	2024 4.6 140	2002 4.6 140						
6 Su 0249 7.9 240	21 M 0226 8.2 250	6 W 0300 9.2 280	21 Th 0209 9.2 280	6 Sa 0240 9.5 290	21 Su 0212 9.8 300						
0715 4.9 150	0656 5.6 170	0834 3.9 120	0759 3.3 100	0932 2.6 80	0926 1.3 40						
1316 10.2 310	1246 9.8 300	1447 8.9 270	1414 8.9 270	1617 6.9 210	1636 6.9 210						
2027 0.7 20	1949 1.6 50	2050 3.0 90	2001 3.0 90	2046 5.2 160	2042 5.2 160						
7 M 0325 8.2 250	22 Tu 0248 8.2 250	7 Th 0325 9.2 280	22 F 0233 9.5 290	7 Su 0306 9.2 280	22 M 0252 9.5 290						
0806 4.9 150	0735 4.9 150	0922 3.9 120	0846 3.0 90	1029 3.0 90	1040 1.3 40						
1409 9.5 290	1328 9.5 290	1536 7.9 240	1509 8.2 250	1732 6.6 200	1811 6.6 200						
2105 1.3 40	2014 2.0 60	2118 3.6 110	2033 3.9 120	● 2105 5.6 170	○ 2132 5.9 180						
8 Tu 0358 8.2 250	23 W 0310 8.5 260	8 F 0352 9.5 290	23 Sa 0302 9.8 300	8 M 0337 9.2 280	23 Tu 0343 9.2 280						
0859 4.6 140	0819 4.6 140	1017 3.9 120	0943 2.6 80	1144 3.0 90	1208 1.3 40						
1501 8.9 270	1414 9.2 280	1631 7.2 220	1614 7.2 220	1949 6.2 190	2009 6.6 200						
2141 2.0 60	2042 2.3 70	● 2146 4.6 140	2108 4.6 140	2106 6.2 190	2251 6.2 190						
9 W 0431 8.5 260	24 Th 0334 8.9 270	9 Sa 0421 9.5 290	24 Su 0307 9.8 300	9 Tu 0417 8.9 270	24 W 0454 8.5 260						
0956 4.6 140	0908 4.3 130	1123 3.9 120	1053 2.6 80	1313 3.0 90	1339 1.3 40						
1556 8.2 250	1505 8.5 260	1747 6.6 200	1742 6.6 200	● 2148 5.2 160	2125 6.9 210						
2216 2.6 80	2113 3.0 90	2212 5.2 160	2108 5.2 160								
10 Th 0504 8.9 270	25 F 0401 9.2 280	10 Su 0456 9.2 280	25 M 0421 9.8 300	10 W 0515 8.2 250	25 Th 0054 6.2 190						
1101 4.3 130	1005 3.9 120	1243 3.6 110	1222 2.3 70	1432 2.6 80	0632 8.2 250						
1658 7.2 220	1605 7.9 240	1948 6.2 190	1950 6.6 200	2250 7.2 220	1450 1.0 30						
● 2252 3.6 110	● 2148 3.6 110	2234 5.9 180	2239 6.2 190								
11 F 0539 8.9 270	26 Sa 0434 9.5 290	11 M 0538 9.2 280	26 Tu 0519 9.8 300	11 Th 0135 6.9 210	26 F 0243 5.6 170						
1217 4.3 130	1113 3.6 110	1410 3.3 100	1359 2.0 60	0641 8.2 250	0817 8.2 250						
1818 6.6 200	1722 6.9 210	2228 4.6 140	2151 6.9 210	1529 2.3 70	1543 1.0 30						
2330 4.3 130				2259 7.5 230	2244 7.9 240						
12 Sa 0617 8.9 270	27 Su 0513 9.8 300	12 Tu 0634 8.9 270	27 W 0010 6.6 200	12 F 0311 6.6 200	27 Th 0349 4.6 140						
1338 3.9 120	1236 3.3 100	1521 3.0 90	0637 9.5 290	0817 8.2 250	0937 8.2 250						
2001 6.2 190	1910 6.6 200	2338 7.2 220	1518 1.3 40	1609 2.0 60	1624 1.3 40						
	2315 5.2 160		2251 7.2 220	2317 7.9 240	2311 8.2 250						
13 Su 0659 5.2 160	28 M 0603 9.8 300	13 W 0743 8.9 270	28 Th 0215 6.6 200	13 F 0400 5.9 180	28 Th 0438 3.9 120						
0659 9.2 280	1406 2.6 80	1615 2.3 70	0807 9.5 290	0927 8.2 250	1040 8.5 260						
1452 3.3 100	2119 6.6 200	2354 7.5 230	1616 1.0 30	1641 1.6 50	1658 1.6 50						
2150 6.6 200		2330 7.9 240	2336 8.2 250	2336 8.2 250	2335 8.5 260						
14 M 0115 5.9 180	29 Tu 0021 5.9 180	14 Th 0321 6.9 210	29 F 0340 5.9 180	14 Su 0438 4.9 150	29 M 0519 3.0 90						
0745 9.2 280	0703 9.8 300	0850 9.2 280	0929 9.5 290	0929 8.2 250	1135 8.5 260						
1553 3.0 90	1527 2.0 60	1656 2.0 60	1701 1.0 30	1708 1.6 50	1729 2.3 70						
2317 6.9 210	2253 6.9 210			2354 8.5 260	● 2355 8.9 270						
15 Tu 0228 6.6 200	30 W 0154 6.6 200	15 F 0014 7.9 240	30 Sa 0002 8.2 250	15 M 0512 4.3 130	30 Tu 0556 2.3 70						
0833 9.2 280	0812 10.2 310	0415 6.6 200	0438 5.2 160	1108 8.9 270	1223 8.2 250						
1643 2.3 70	1631 1.3 40	0947 9.2 280	1035 9.8 300	2354 8.5 260							
	2351 7.5 230	1729 1.6 50	● 1737 1.0 30								
31 Th 0324 6.6 200	31 Th 0923 10.2 310			31 Su 0030 8.5 260							
	1723 0.7 20			0525 4.6 140							
				1132 9.8 300							
				1810 1.3 40							

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Mina Al Ahmandi, Kuwait, 2008

Times and Heights of High and Low Waters

October					November					December				
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height
<b>1</b> W 0015 8.9 270 0630 2.0 60 1309 8.2 250 1825 3.3 100	<b>16</b> Th 0600 1.0 30 1244 7.9 240 1749 3.6 110 2355 9.5 290	<b>1</b> Sa 0009 8.9 270 0717 0.7 20 1435 7.2 220 1850 4.9 150	<b>16</b> Su 0000 9.8 300 0723 -0.3 -10 1445 7.5 230 1858 4.9 150	<b>1</b> M 0013 8.9 270 0749 1.0 30 1505 7.2 220 1910 5.6 170	<b>16</b> Tu 0049 9.8 300 0818 0.0 0 1526 7.9 240 1951 4.9 150									
	<b>2</b> Th 0035 9.2 280 0703 1.6 50 1352 7.9 240 1852 3.9 120	<b>17</b> F 0640 0.3 10 1338 7.9 240 1825 3.9 120	<b>2</b> Su 0034 8.9 270 0753 1.0 30 1516 6.9 210 1919 5.2 160	<b>17</b> M 0045 9.5 290 0819 -0.3 -10 1542 7.2 220 1951 5.2 160	<b>2</b> Tu 0045 8.9 270 0824 1.0 30 1541 6.9 210 1947 5.6 170	<b>17</b> W 0145 9.5 290 0905 0.3 10 1609 7.9 240 2048 4.9 150								
	<b>3</b> F 0055 9.2 280 0737 1.3 40 1434 7.5 230 1917 4.6 140	<b>18</b> Sa 0025 9.5 290 0724 0.0 0 1436 7.5 230 1904 4.6 140	<b>3</b> M 0101 8.9 270 0833 1.0 30 1601 6.6 200 1950 5.6 170	<b>18</b> Tu 0136 9.2 280 0918 0.0 0 1640 7.2 220 2052 5.2 160	<b>3</b> W 0121 8.9 270 0900 1.3 40 1619 6.9 210 2030 5.6 170	<b>18</b> Th 0243 9.2 280 0951 1.0 30 1652 7.9 240 2149 4.6 140								
	<b>4</b> Sa 0116 9.2 280 0813 1.3 40 1519 6.9 210 1942 4.9 150	<b>19</b> Su 0101 9.5 290 0817 0.0 0 1539 7.2 220 1949 4.9 150	<b>4</b> Tu 0132 8.5 260 0920 1.3 40 1655 6.6 200 2031 5.6 170	<b>19</b> W 0234 8.5 260 1017 0.3 10 1739 7.2 220 2202 5.2 160	<b>4</b> Th 0201 8.5 260 0936 1.6 50 1658 6.9 210 2123 5.2 160	<b>19</b> F 0344 8.2 250 1035 1.6 50 1734 8.2 250 O 2300 4.6 140								
<b>5</b> Su 0140 9.2 280 0855 1.6 50 1611 6.6 200 2006 5.2 160	<b>20</b> M 0141 9.5 290 0919 0.3 10 1650 6.9 210 2042 5.6 170	<b>5</b> W 0208 8.2 250 1011 1.6 50 1758 6.6 200 2130 5.9 180	<b>20</b> Th 0341 7.9 240 1117 1.0 30 1836 7.2 220 O 2325 4.9 150	<b>5</b> F 0248 7.9 240 1013 2.0 60 1738 7.2 220 2226 5.2 160	<b>20</b> Sa 0454 7.5 230 1120 2.6 80 1816 8.2 250									
	<b>6</b> M 0206 8.9 270 0946 2.0 60 1720 6.2 190 2031 5.9 180	<b>21</b> Tu 0230 8.9 270 1031 0.7 20 1811 6.6 200 O 2152 5.6 170	<b>6</b> Th 0253 7.5 230 1106 1.6 50 1900 6.6 200 O 2251 5.9 180	<b>21</b> F 0503 7.2 220 1216 1.6 50 1926 7.5 230	<b>6</b> Sa 0344 7.2 220 1053 2.3 70 1817 7.5 230 O 2343 4.9 150	<b>21</b> Su 0026 4.3 130 0620 6.6 200 1208 3.3 100 1857 8.5 260								
	<b>7</b> Tu 0238 8.5 260 1051 2.0 60 1903 6.2 190 O 2107 6.2 190	<b>22</b> W 0331 8.2 250 1147 0.7 20 1931 6.9 210 2325 5.6 170	<b>7</b> F 0353 7.2 220 1204 2.0 60 1948 6.9 210	<b>22</b> Sa 0103 4.6 140 0642 6.6 200 1313 2.3 70 2008 7.9 240	<b>7</b> Su 0457 6.6 200 1137 3.0 90 1854 7.9 240	<b>22</b> M 0154 3.6 110 0759 6.2 190 1300 4.3 130 1939 8.9 270								
	<b>8</b> W 0318 8.2 250 1208 2.3 70 2041 6.6 200 2244 6.6 200	<b>23</b> Th 0455 7.5 230 1303 1.0 30 2031 7.2 220	<b>8</b> Sa 0033 5.6 170 0517 6.6 200 1300 2.3 70 2023 7.2 220	<b>23</b> Su 0228 3.6 110 0819 6.6 200 1405 3.0 90 2044 8.2 250	<b>8</b> M 0106 4.3 130 0635 6.2 190 1228 3.6 110 1930 8.2 250	<b>23</b> Tu 0307 3.0 90 0934 6.2 190 1357 4.9 150 2021 8.9 270								
<b>9</b> Th 0417 7.5 230 1325 2.3 70 2119 6.9 210	<b>24</b> F 0118 5.2 160 0644 7.2 220 1407 1.3 40 2113 7.5 230	<b>9</b> Su 0202 4.6 140 0709 6.2 190 1351 2.6 80 2052 7.9 240	<b>24</b> M 0329 3.0 90 0939 6.6 200 1453 3.6 110 2117 8.5 260	<b>9</b> Tu 0219 3.3 100 0825 6.2 190 1324 4.3 130 2007 8.9 270	<b>24</b> W 0404 2.6 80 1055 6.6 200 1456 5.6 170 2103 9.2 280									
	<b>10</b> F 0120 6.2 190 0548 7.2 220 1425 2.0 60 2145 7.2 220	<b>25</b> Sa 0247 4.3 130 0826 6.9 210 1459 1.6 50 2146 7.9 240	<b>10</b> M 0259 3.6 110 0846 6.2 190 1436 3.0 90 2117 8.2 250	<b>25</b> Tu 0418 2.0 60 1048 6.9 210 1537 4.3 130 2148 8.5 260	<b>10</b> W 0317 2.3 70 0954 6.6 200 1424 4.6 140 2047 9.2 280	<b>25</b> Th 0452 2.0 60 1157 7.2 220 1551 5.9 180 2143 9.2 280								
	<b>11</b> Sa 0247 5.6 170 0744 6.9 210 1508 2.0 60 2208 7.5 230	<b>26</b> Su 0345 3.3 100 0942 7.2 220 1540 2.3 70 2214 8.2 250	<b>11</b> Tu 0344 2.6 80 0958 6.6 200 1518 3.3 100 2143 8.5 260	<b>26</b> W 0459 1.6 50 1147 6.9 210 1618 4.6 140 2217 8.9 270	<b>11</b> Th 0409 1.3 40 1107 6.9 210 1522 4.9 150 2130 9.5 290	<b>26</b> F 0532 1.6 50 1242 7.5 230 1640 5.9 180 2221 9.2 280								
	<b>12</b> Su 0335 4.6 140 0907 7.2 220 1543 2.3 70 2228 7.9 240	<b>27</b> M 0430 2.6 80 1045 7.2 220 1617 2.6 80 2238 8.5 260	<b>12</b> W 0424 1.6 50 1059 6.9 210 1559 3.9 120 2212 9.2 280	<b>27</b> Th 0535 1.3 40 1237 7.2 220 1657 4.9 150 ● 2245 8.9 270	<b>12</b> F 0459 0.7 20 1209 7.2 220 1617 5.2 160 O 2216 9.8 300	<b>27</b> Sa 0608 1.3 40 1318 7.5 230 1721 5.9 180 ● 2258 9.2 280								
<b>13</b> M 0413 3.6 110 1008 7.5 230 1613 2.3 70 2247 8.5 260	<b>28</b> Tu 0509 1.6 50 1140 7.2 220 1651 3.3 100 2301 8.9 270	<b>13</b> F 0504 0.7 20 1157 7.2 220 1641 4.3 130 O 2244 9.5 290	<b>28</b> F 0608 1.0 30 1319 7.2 220 1733 5.2 160 2314 8.9 270	<b>13</b> Sa 0549 0.0 0 1304 7.5 230 1711 5.2 160 2304 10.2 310	<b>28</b> Su 0641 1.3 40 1348 7.5 230 1756 5.9 180 2333 9.5 290									
	<b>14</b> Tu 0448 2.6 80 1101 7.5 230 1643 2.6 80 O 2307 8.9 270	<b>29</b> W 0543 1.3 40 1229 7.5 230 1723 3.9 120 ● 2323 8.9 270	<b>14</b> F 0547 0.0 0 1254 7.5 230 1724 4.6 140 2320 9.5 290	<b>29</b> Sa 0641 1.0 30 1356 7.2 220 1806 5.2 160 2342 8.9 270	<b>29</b> M 0639 -0.3 -10 1354 7.5 230 1804 5.2 160 2355 10.2 310									
	<b>15</b> W 0523 1.6 50 1152 7.9 240 1715 3.3 100 2329 9.2 280	<b>30</b> Th 0614 1.0 30 1314 7.2 220 1753 4.3 130 2346 8.9 270	<b>15</b> Sa 0633 -0.3 -10 1349 7.5 230 1809 4.9 150	<b>30</b> Su 0715 1.0 30 1430 7.2 220 1838 5.6 170	<b>30</b> Tu 0007 9.5 290 0740 1.3 40 1443 7.5 230 1901 5.6 170									
		<b>31</b> F 0645 0.7 20 1355 7.2 220 1823 4.9 150			<b>31</b> W 0043 9.5 290 0806 1.3 40 1508 7.9 240 1937 5.2 160									

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Ras At Tannurah, Persian Gulf, Saudi Arabia, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0455	2.0	61	16 W 0350	1.5	46	1 F 0529	2.0	61	1 Sa 0428	2.0	61
1046	5.1	155	1002	5.7	174	1202	4.8	146	1104	4.9	149
1642	2.4	73	1545	2.0	61	1752	3.4	104	1655	3.6	110
2307	5.4	165	2214	5.8	177	2341	4.6	140	2239	4.6	140
2 W 0545	2.0	61	17 Th 0445	1.5	46	2 Sa 0640	2.0	61	2 Su 0545	2.1	64
1152	5.0	152	1109	5.5	168	1343	4.8	146	1248	4.8	146
1744	2.8	85	1649	2.6	79	1959	3.6	110	1412	5.6	171
			2311	5.4	165				2056	3.4	104
3 Th 0000	5.0	152	18 F 0553	1.5	46	3 Su 0113	4.5	137	18 M 0150	5.0	152
0640	1.9	58	1232	5.5	168	0754	1.9	58	0828	1.3	42
1307	5.0	152	1822	3.2	98	1508	5.2	158	1528	6.1	186
1902	3.1	94				2130	3.4	104	2202	2.9	88
4 F 0103	4.8	146	19 Sa 0026	5.2	158	4 M 0233	4.7	143	19 Tu 0305	5.3	162
0737	1.9	58	0710	1.4	43	0859	1.6	49	0935	0.9	27
1423	5.2	158	1404	5.7	174	1601	5.6	171	1620	6.5	198
2029	3.3	101	2025	3.4	104	2221	3.1	94	2248	2.5	76
5 Sa 0208	4.8	146	20 Su 0151	5.2	158	5 Tu 0329	5.0	152	20 W 0402	5.7	174
0833	1.7	52	0826	1.2	37	0950	1.3	40	1027	0.6	18
1526	5.5	168	1523	6.2	189	1640	6.0	183	1702	6.8	207
2142	3.2	98	2156	3.1	94	2258	2.7	82	2325	2.0	61
6 Su 0305	4.9	149	21 M 0306	5.4	165	6 W 0412	5.3	162	21 O 0448	6.1	186
0924	1.5	46	0934	0.9	27	1032	0.9	12	1109	0.4	12
1616	5.8	177	1624	6.6	201	1712	6.3	192	1738	6.9	210
2236	3.1	94	2255	2.8	85	2330	2.4	73	2357	1.7	52
7 M 0353	5.1	155	22 Tu 0407	5.8	177	7 Th 0450	5.7	174	22 F 0530	6.3	192
1009	1.3	40	1031	0.6	18	1108	0.6	18	1145	0.4	12
1656	6.2	189	1714	7.0	213	1742	6.5	198	1811	6.9	210
2317	2.9	88	O 2341	2.4	73	● 2358	2.1	64	● 2320	1.6	49
8 Tu 0434	5.4	165	23 W 0458	6.1	186	8 F 0526	6.0	183	23 Sa 0026	1.4	43
1050	1.1	34	1119	0.3	9	1141	0.4	12	0608	6.4	195
1732	6.4	195	1757	7.2	219	1811	6.7	204	1218	0.5	15
● 2352	2.7	82							1841	6.8	207
9 W 0511	5.6	171	24 Th 0021	2.1	64	9 Sa 0025	1.8	55	24 Su 0053	1.2	37
1126	0.9	27	0545	6.3	192	0602	6.2	189	0643	6.4	195
1804	6.6	201	1202	0.2	6	1212	0.3	9	1248	0.7	21
			1836	7.2	219	1840	6.8	207	1909	6.6	201
10 Th 0024	2.6	79	25 F 0056	1.9	58	10 Sa 0053	1.5	46	25 M 0120	1.1	34
0546	5.8	177	0627	6.4	195	0639	6.4	195	0718	6.3	192
1200	0.7	21	1241	0.3	9	1244	0.4	12	1316	1.1	34
1835	6.7	204	1912	7.1	216	1911	6.8	207	1936	6.3	192
11 F 0053	2.4	73	26 Sa 0130	1.7	52	11 M 0122	1.2	37	26 Tu 0147	1.1	34
0621	5.9	180	0707	6.3	192	0719	6.4	195	0752	6.1	186
1232	0.6	18	1316	0.5	15	M 1317	0.6	18	1346	1.5	46
1907	6.8	207	1946	6.8	207	1944	6.7	204	2003	6.0	183
12 Sa 0122	2.2	67	27 Su 0202	1.6	49	12 Tu 0155	1.1	34	12 W 0217	1.2	37
0657	6.0	183	0746	6.2	189	0801	6.4	195	0828	5.9	180
1304	0.6	18	1350	0.9	27	1353	1.1	34	1417	2.0	61
1939	6.7	204	2018	6.5	198	2019	6.4	195	2031	5.7	174
13 Su 0152	2.0	61	28 M 0234	1.5	46	13 W 0232	1.0	30	12 W 0217	1.2	37
0736	6.0	183	0825	5.9	180	0848	6.2	189	0828	5.9	180
1338	0.7	21	1423	1.3	40	1433	1.7	52	1417	2.0	61
2013	6.6	201	2049	6.1	186	2058	6.1	186	2101	5.3	162
14 M 0226	1.8	55	29 Tu 0308	1.5	46	14 Th 0317	1.1	34	29 F 0332	1.7	52
0819	6.0	183	0906	5.6	171	0943	5.9	180	0956	5.2	158
1415	1.0	30	1458	1.8	55	1521	2.4	73	1536	3.1	94
2049	6.4	195	2120	5.7	174	● 2143	5.6	171	● 2140	5.0	152
15 Tu 0304	1.6	49	30 W 0346	1.6	49	15 F 0414	1.3	40	15 O 0359	1.4	43
0906	5.8	177	0951	5.3	162	1053	5.5	168	1630	3.2	98
1456	1.4	43	1538	2.4	73	2243	5.2	158	2238	5.1	155
● 2129	6.1	186	● 2155	5.3	162						
31 Th 0432	1.8	55									
1047	5.0	152									
1629	2.9	88									
2237	4.9	149									

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Ras At Tannurah, Persian Gulf, Saudi Arabia, 2008

Times and Heights of High and Low Waters

April				May				June			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0622 2.0 61	16 W 0132 5.3 162	1 Th 0014 5.1 155	16 F 0206 5.6 171	1 Su 0150 6.1 186	16 M 0326 6.0 183						
1323 5.1 155	0800 1.7 52	0635 1.9 58	0819 2.2 67	0749 2.5 76	0936 3.3 101						
Tu 1956 3.2 98	1439 6.0 183	1315 5.6 171	1437 5.9 180	1406 6.1 186	1521 5.7 174						
	2103 2.3 70	1944 2.5 76	2057 1.9 58	2028 1.5 46	2135 1.9 58						
2 W 0103 4.7 143	17 Th 0236 5.6 171	2 F 0124 5.4 165	17 Sa 0301 5.9 180	2 M 0255 6.5 198	17 Tu 0414 6.3 192						
0734 1.8 55	0858 1.5 46	0737 1.8 55	0911 2.3 70	0856 2.6 79	1028 3.3 101						
1427 5.4 165	1524 6.1 186	1409 5.8 177	1519 5.9 180	1501 6.2 189	1603 5.8 177						
2048 2.8 85	2143 1.9 58	2030 2.0 61	2135 1.7 52	2120 1.2 37	2216 1.8 55						
3 Th 0211 5.1 155	18 F 0327 5.9 180	3 Sa 0225 5.8 177	18 Su 0348 6.1 186	3 Tu 0355 7.0 213	18 W 0456 6.5 198						
0832 1.5 46	0944 1.5 46	0833 1.7 52	0957 2.4 70	1000 2.8 85	1112 3.3 101						
1511 5.8 177	1601 6.2 189	1456 6.1 186	1556 5.9 180	1555 6.4 195	1642 5.9 180						
2128 2.3 70	2217 1.5 46	2113 1.5 46	2208 1.5 46	2211 0.9 27	2254 1.7 52						
4 F 0304 5.6 171	19 Sa 0411 6.1 186	4 Su 0320 6.3 192	19 M 0429 6.3 192	4 W 0451 7.4 226	19 Th 0534 6.7 204						
0919 1.2 37	1023 1.5 46	0925 1.7 52	1037 2.6 79	1102 2.9 88	1150 3.3 101						
1548 6.1 186	1634 6.2 189	1540 6.3 192	1630 5.9 180	1647 6.6 201	1718 6.0 183						
2203 1.7 52	2246 1.3 40	2154 1.1 34	2240 1.4 43	2303 0.8 24	2331 1.6 49						
5 Sa 0351 6.1 186	20 Su 0449 6.3 192	5 M 0411 6.8 207	20 Tu 0507 6.5 198	5 Th 0545 7.7 235	20 F 0609 6.8 207						
1002 1.0 30	1057 1.7 52	1016 1.8 55	1114 2.7 82	1200 2.9 88	1226 3.3 101						
1624 6.4 195	1704 6.2 189	1623 6.5 198	1703 5.9 180	1738 6.7 204	1752 6.1 186						
2236 1.2 37	2313 1.2 37	2235 0.8 24	2311 1.4 43	2355 0.7 21							
6 Su 0435 6.5 198	21 M 0524 6.5 198	6 Tu 0501 7.2 219	21 W 0543 6.6 201	6 F 0637 7.8 238	21 Sa 0006 1.6 49						
1043 0.9 27	1128 1.9 58	1106 2.0 61	1150 2.9 88	1257 3.0 91	0643 6.9 210						
1659 6.6 201	1732 6.1 186	1707 6.6 201	1735 5.9 180	1829 6.7 204	1259 3.3 101						
● 2310 0.8 24	2339 1.1 34	2318 0.6 18	2344 1.4 43		1827 6.2 189						
7 M 0519 6.9 210	22 Tu 0557 6.6 201	7 W 0551 7.5 229	22 Th 0618 6.7 204	7 Sa 0047 0.8 24	22 Su 0041 1.5 46						
1123 1.1 34	1158 2.1 64	1156 2.3 70	1225 3.0 91	0729 7.7 235	0716 6.9 210						
1736 6.7 204	1800 6.0 183	1751 6.6 201	1807 6.0 183	1353 3.0 91	1332 3.2 98						
2345 0.6 18				1920 6.7 204	1902 6.2 189						
8 Tu 0603 7.2 219	23 W 0006 1.1 34	8 Th 0004 0.5 15	23 F 0017 1.5 46	8 Su 0140 0.9 27	23 M 0114 1.4 43						
1204 1.4 43	0630 6.6 201	0641 7.5 229	0653 6.7 204	0820 7.5 229	0750 6.9 210						
1813 6.7 204	1228 2.4 73	1249 2.6 79	1300 3.1 94	1448 3.0 91	1405 3.1 94						
	1828 6.0 183	1838 6.5 198	1840 5.9 180	2013 6.5 198	1939 6.2 189						
9 W 0023 0.5 15	24 Th 0036 1.2 37	9 F 0053 0.6 18	24 Sa 0052 1.5 46	9 M 0233 1.2 37	24 Tu 0149 1.5 46						
0649 7.2 219	0704 6.5 198	0734 7.4 226	0729 6.6 201	0912 7.1 216	0825 6.8 207						
1248 1.8 55	1300 2.6 79	1347 2.9 88	1337 3.2 98	1543 2.9 88	1439 2.9 88						
1853 6.5 198	1857 5.9 180	1928 6.4 195	1916 5.9 180	2108 6.2 189	2020 6.2 189						
10 Th 0105 0.5 15	25 F 0108 1.4 43	10 Sa 0146 0.9 27	25 Su 0130 1.6 49	10 Tu 0327 1.6 49	25 W 0226 1.6 49						
0738 7.1 216	0740 6.4 195	0829 7.1 216	0807 6.5 198	1004 6.8 207	0901 6.7 204						
1335 2.4 73	1336 2.9 88	1452 3.1 94	1418 3.3 101	1638 2.8 85	1518 2.7 82						
1937 6.3 192	1930 5.7 174	2022 6.1 186	1955 5.8 177	2207 6.0 183	2105 6.1 186						
11 F 0152 0.8 24	26 Sa 0145 1.5 46	11 Su 0245 1.2 37	26 M 0210 1.6 49	11 W 0424 2.0 61	26 Th 0306 1.8 55						
0831 6.8 207	0820 6.1 186	0930 6.8 207	0848 6.4 195	1058 6.4 195	0941 6.6 201						
1433 2.9 88	1417 3.2 98	1605 3.2 98	1504 3.2 98	1733 2.6 79	1602 2.6 79						
2026 5.9 180	2008 5.5 168	2123 5.8 177	2039 5.7 174	2310 5.7 174	2157 6.0 183						
12 Sa 0248 1.1 34	27 Su 0228 1.7 52	12 M 0350 1.5 46	27 Tu 0254 1.7 52	12 W 0523 2.4 73	27 F 0353 2.1 64						
0934 6.4 195	0905 5.9 180	1036 6.4 195	0933 6.2 189	1153 6.1 186	1026 6.4 195						
1552 3.3 101	1509 3.4 104	1718 3.1 94	1555 3.1 94	1826 2.5 76	1652 2.4 73						
● 2126 5.5 168	2053 5.3 162	2232 5.6 171	2129 5.6 171	2257 6.0 183							
13 Su 0357 1.5 46	28 M 0319 1.9 58	13 Tu 0501 1.8 55	28 W 0342 1.8 55	13 F 0018 5.6 171	28 Sa 0449 2.5 76						
1050 6.0 183	1000 5.6 171	1146 6.2 189	1022 6.1 186	0625 2.7 82	1117 6.2 189						
1736 3.5 107	1621 3.4 104	1826 2.9 88	1650 2.9 88	1249 5.8 177	1749 2.2 67						
2242 5.2 158	2150 5.1 155	2347 5.4 165	2227 5.5 168	1918 2.3 70							
14 M 0521 1.8 55	29 Tu 0420 2.0 61	14 W 0612 2.0 61	29 Th 0437 1.9 58	14 Sa 0127 5.6 171	29 Su 0007 6.0 183						
1220 5.8 177	1104 5.5 168	1252 6.0 183	1114 6.0 183	0731 3.0 91	0557 3.0 91						
1907 3.2 98	1741 3.3 101	1925 2.5 76	1747 2.7 82	1343 5.7 174	1218 6.0 183						
	2300 5.0 152		2332 5.5 168	2007 2.1 64	1852 2.0 61						
15 Tu 0011 5.1 155	30 W 0528 2.0 61	15 Th 0101 5.5 168	30 F 0538 2.1 64	15 Su 0231 5.8 177	30 M 0124 6.2 189						
0647 1.8 55	1212 5.5 168	0719 2.1 64	1211 5.9 180	0836 3.2 98	0718 3.3 101						
1340 5.9 180	1850 3.0 91	1349 5.9 180	1842 2.3 70	1434 5.6 171	1218 6.0 183						
2014 2.8 85		2015 2.2 67		2052 2.0 61	1852 2.0 61						
				31 Sa 0042 5.7 174							
				0643 2.3 70							
				1308 6.0 183							
				1936 1.9 58							

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Ras At Tannurah, Persian Gulf, Saudi Arabia, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu	0240	6.6	201	16 W	0403	6.3	192	1 F	0445	7.5	229
	0846	3.5	107		1022	3.7	113		1109	3.3	101
	1435	6.1	186		1541	5.8	177		1630	6.8	207
	2100	1.5	46		2158	2.1	64	●	2254	1.1	34
2 W	0349	7.1	216	17 Th	0447	6.6	201	2 Sa	0531	7.8	238
	1005	3.5	107		1105	3.6	110		1152	2.9	88
	1539	6.4	195		1624	6.0	183		1720	7.1	216
	2201	1.2	37		2240	1.9	58		2340	0.9	27
3 Th	0448	7.5	229	18 F	0523	6.8	207	3 Su	0613	7.9	241
	1110	3.3	101		1140	3.4	104		1231	2.6	79
	1637	6.7	204		1701	6.2	189		1805	7.3	223
●	2257	1.0	30	○	2318	1.6	49				
4 F	0541	7.8	238	19 Sa	0555	7.0	213	4 M	0022	1.0	30
	1204	3.1	94		1211	3.2	98		0651	7.8	238
	1730	6.9	210		1735	6.4	195		1307	2.3	70
	2350	0.8	24		2351	1.5	46		1848	7.3	223
5 Sa	0630	7.9	241	20 Su	0625	7.1	216	5 Tu	0101	1.2	37
	1252	2.9	88		1239	3.0	91		0727	7.6	232
	1819	7.0	213		1809	6.6	201		1341	2.2	67
6 Su	0039	0.8	24	21 M	0022	1.4	43		1929	7.2	219
	0715	7.9	241		0654	7.2	219	6 W	0137	1.5	46
	1337	2.8	85		1307	2.8	85		0802	7.3	223
	1907	7.0	213		1843	6.7	204		1416	2.2	67
7 M	0125	1.0	30	22 Tu	0053	1.3	40	6 Th	0057	1.6	49
	0759	7.7	235		0723	7.2	219		0721	7.3	223
	1420	2.6	79		1335	2.6	79		1328	1.9	58
	1954	6.9	210		1919	6.7	204		2010	6.9	210
8 Tu	0209	1.3	40	23 W	0123	1.4	43	7 F	0213	2.0	61
	0841	7.3	223		0754	7.2	219		0835	6.9	210
	1503	2.5	76		1404	2.4	73		1451	2.2	67
	2042	6.6	201		1958	6.7	204	○	2052	6.6	201
9 W	0253	1.7	52	24 Th	0156	1.6	49	8 F	0250	2.6	79
	0922	6.9	210		0827	7.0	213		0909	6.5	198
	1546	2.5	76		1438	2.3	70		1530	2.4	73
	2131	6.3	192		2041	6.6	201	●	2138	6.2	189
10 Th	0337	2.2	67	25 Sa	0234	2.0	61	9 Sa	0331	3.1	94
	1004	6.5	198		0903	6.8	207		0946	6.1	186
	1632	2.5	76		1518	2.2	67		1615	2.6	79
●	2225	6.0	183	○	2131	6.5	198		2232	5.9	180
11 F	0426	2.8	85	26 Su	0317	2.5	76	10 M	0423	3.7	113
	1049	6.1	186		0945	6.6	201		1031	5.7	174
	1721	2.5	76		1608	2.2	67		1712	2.8	85
	2327	5.7	174		2230	6.3	192		2345	5.7	174
12 Sa	0524	3.3	101	27 Tu	0412	3.1	94	11 M	0547	4.1	125
	1140	5.7	174		1035	6.3	192		0745	4.3	131
	1816	2.5	76		1709	2.2	67		1306	5.3	162
					2344	6.2	189		1940	2.8	85
13 Su	0040	5.6	171	28 M	0527	3.7	113	12 F	0124	5.7	174
	0638	3.7	113		1142	6.0	183		0800	4.3	131
	1242	5.5	168		1823	2.2	67		1307	5.8	177
	1915	2.5	76						1946	2.2	67
14 M	0159	5.7	174	29 Tu	0113	6.3	192	13 Th	0245	6.7	204
	0807	3.9	119		0719	4.1	125		0911	4.1	125
	1349	5.4	165		1305	5.9	180		1423	5.5	168
	2014	2.4	73		1943	2.1	64		2045	2.5	76
15 Tu	0309	6.0	183	30 W	0241	6.6	201	14 F	0346	6.3	192
	0925	3.9	119		0907	4.0	122		1002	3.8	116
	1451	5.5	168		1427	6.1	186		1039	3.5	107
	2109	2.3	70		2057	1.8	55		1601	6.1	186
16	0350	7.1	216	31 Th	017	3.6	110	15 M	0426	6.6	201
					1534	6.4	195		1109	2.8	85
					2200	1.4	43		2219	1.8	55
17								●	2243	1.2	37
18								○	2256	1.4	43
19											
20											
21											
22											
23											
24											
25											
26											
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28											
29											
30											

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Ras At Tannurah, Persian Gulf, Saudi Arabia, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 W 0545	7.0	213	16 Th 0510	6.9	210	1 Sa 0021	2.8	85	1 M 0024	2.7	82
1153	1.5	46	1118	1.1	34	0614	6.2	189	0611	6.6	201
1802	7.3	223	1739	7.6	232	1219	1.5	46	1223	0.7	21
			2341	2.0	61	1853	7.0	213	1906	7.7	235
2 Th 0006	2.1	64	17 F 0546	7.0	213	2 Su 0054	3.0	91	17 M 0119	2.9	88
0614	6.9	210	1154	1.0	30	0645	6.1	186	0700	6.5	198
1219	1.5	46	1823	7.8	238	1252	1.6	49	1314	0.9	27
1837	7.3	223				1928	6.8	207	1959	7.4	226
3 F 0036	2.4	73	18 Sa 0022	2.4	73	3 M 0130	3.2	98	18 Tu 0220	3.1	94
0643	6.7	204	0625	6.9	210	0718	5.9	180	0752	6.3	192
1247	1.6	49	1233	1.0	30	1329	1.8	55	1409	1.1	34
1911	7.1	216	1910	7.7	235	2007	6.5	198	2056	7.1	216
4 Sa 0107	2.8	85	19 Su 0108	2.8	85	4 Tu 0213	3.4	104	19 W 0327	3.2	98
0711	6.4	195	0708	6.7	204	0757	5.7	174	0851	6.0	183
1318	1.8	55	1318	1.2	37	1411	2.0	61	1511	1.5	46
1947	6.9	210	2001	7.4	226	2051	6.3	192	2157	6.7	204
5 Su 0140	3.2	98	20 M 0202	3.3	101	5 W 0306	3.6	110	20 Th 0439	3.1	94
0742	6.2	189	0756	6.4	195	0842	5.5	168	0957	5.7	174
1353	2.1	64	1411	1.5	46	1501	2.2	67	1620	1.8	55
2026	6.5	198	2059	7.0	213	2142	6.0	183	2303	6.4	195
6 M 0220	3.5	107	21 Tu 0314	3.7	113	6 Th 0414	3.6	110	21 F 0549	2.9	88
0817	5.9	180	0853	6.0	183	0937	5.3	162	0957	5.5	165
1436	2.4	73	1516	1.9	58	1600	2.3	70	1733	2.1	64
2113	6.2	189	2209	6.6	201	2242	5.8	177	2242	5.8	177
7 Tu 0314	3.9	119	22 W 0452	3.8	116	7 F 0527	3.4	104	22 Sa 0011	6.1	186
0902	5.6	171	1005	5.7	174	1044	5.2	158	0651	2.5	76
1532	2.6	79	1637	2.2	67	1707	2.4	73	1228	5.5	168
2214	5.8	177	2332	6.4	195	2346	5.7	174	1847	2.3	70
8 W 0444	4.1	125	23 Th 0626	3.6	110	8 Sa 0631	3.1	94	23 Su 0113	6.0	183
1006	5.3	162	1132	5.6	171	1157	5.2	158	0746	2.1	64
1647	2.8	85	1806	2.3	70	1814	2.3	70	1340	5.7	174
2337	5.6	171							1955	2.4	73
9 Th 0628	4.0	122	24 F 0055	6.3	192	9 Su 0048	5.7	174	24 M 0208	5.9	180
1131	5.2	158	0737	3.1	94	0724	2.7	82	0833	1.8	55
1809	2.7	82	1257	5.7	174	1306	5.4	165	1441	5.9	180
			1924	2.2	67	1916	2.3	70	2055	2.5	76
10 F 0105	5.7	174	25 Sa 0201	6.4	195	10 M 0142	5.8	177	25 Tu 0255	5.8	177
0740	3.6	110	0830	2.6	79	0809	2.2	67	0915	1.6	49
1255	5.3	162	1407	6.0	183	1406	5.8	177	1533	6.2	189
1920	2.5	76	2028	2.1	64	2013	2.2	67	2147	2.6	79
11 Sa 0207	5.9	180	26 Su 0251	6.5	198	11 Tu 0230	6.0	183	26 W 0337	5.8	177
0829	3.2	98	0914	2.1	64	0850	1.8	55	0952	1.4	43
1359	5.6	171	1503	6.3	192	1500	6.3	192	1618	6.4	195
2016	2.2	67	2121	2.0	61	2105	2.2	67	2232	2.7	82
12 Su 0251	6.2	189	27 M 0333	6.5	198	12 W 0314	6.2	189	27 Th 0415	5.8	177
0907	2.7	82	0951	1.8	55	0930	1.3	40	1026	1.3	40
1450	6.1	186	1550	6.6	201	1551	6.8	207	1658	6.6	201
2103	1.9	58	2205	2.0	61	2155	2.2	67	2312	2.8	85
13 M 0327	6.4	195	28 Tu 0409	6.5	198	13 Th 0357	6.4	195	28 F 0450	5.8	177
0941	2.2	67	1023	1.5	46	1010	1.0	30	1058	1.3	40
1534	6.5	198	1631	6.8	207	1639	7.3	223	1734	6.7	204
2144	1.8	55	2243	2.1	64	2244	2.3	70	2347	2.9	88
14 Tu 0401	6.6	201	29 W 0443	6.5	198	14 F 0440	6.5	198	29 Sa 0524	5.8	177
1013	1.8	55	1053	1.4	43	1052	0.7	21	1131	1.3	40
1616	7.0	213	1709	7.0	213	1727	7.6	232	1809	6.8	207
O 2223	1.7	52	● 2317	2.3	70	2333	2.5	76			
15 W 0435	6.8	207	30 Th 0514	6.4	195	15 M 0525	6.6	201	30 Su 0022	3.0	91
1045	1.4	43	1121	1.3	40	1136	0.6	18	0557	5.9	180
1657	7.4	226	1744	7.1	216	1816	7.7	235	1204	1.3	40
2302	1.8	55	2349	2.6	79				1843	6.8	207
31 F 0544	6.3	192									
1149	1.4	43									
1819	7.0	213									

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Mina Salman, Bahrain, Persian Gulf, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0527 1112 1733	3.0	90	16 W 0433 1028 1649 2304	2.3	70	1 F 0603 1214 1800	3.0	90	16 Sa 0612 1240 1836	2.3	70
6.2 190			6.9 210			5.2 160			5.6 170		
3.0 90			2.3 70			3.3 100			3.3 100		
1828	3.3	100	2304	6.9	210				5.6 170		
2 W 0000 0622 1217	6.2	190	17 Th 0530 1133 1748	2.3	70	2 Sa 0045 0723 1350	5.9	180	17 Su 0101 0755 1425	6.2	190
3.0 90			6.6 200			3.0 90			2.3 70		
1217	5.6	170	2.6 80			4.9 150			3.6 110		
1828	3.3	100	1940	3.6	110						
3 Th 0101 0725 1332	6.2	190	18 F 0010 0638 1253	6.6	200	3 Su 0205 0856 1519	5.9	180	18 M 0228 0933 1550	6.6	200
3.0 90			2.3 70			3.0 90			2.0 60		
1332	5.6	170	1902	3.0	90	5.2 160			5.9 180		
1936	3.3	100				2125	3.6	110	2.0 90		
4 F 0201 0832 1446	6.2	190	19 Sa 0125 0801 1421	6.6	200	4 M 0314 1003 1621	5.9	180	4 Tu 0341 1036 1648	6.9	210
3.0 90			2.3 70			2.3 70			1.6 50		
1446	5.6	170	2035	3.3	100	5.6 170			6.6 200		
2049	3.3	100				2228	3.3	100	2.6 80		
5 Sa 0258 0933 1551	6.2	190	20 W 0239 0926 1543	6.9	210	5 Tu 0408 1050 1706	6.2	190	5 W 0438 1123 1732	7.2	220
2.6 80			2.0 60			2.0 60			6.9 210		
1551	5.6	170	2201	3.0	90	5.9 180			2.0 60		
2154	3.3	100				2312	3.0	90	2.0 60		
6 Su 0349 1024 1643	6.6	200	21 M 0346 1036 1649	7.2	220	6 W 0453 1129 1742	6.6	200	6 Th 0526 1202 1809	7.5	230
2.3 70			1.6 50			6.6 200			7.0 220		
1643	5.9	180	2305	2.6	80	2.6 80			1.0 30		
2246	3.3	100				2349	2.6	80	1.0 30		
7 M 0434 1107 1727	6.6	200	22 W 0444 1131 1742	7.5	230	7 Th 0531 1203 1813	7.2	220	7 F 0019 0606 1238	1.6	50
2.3 70			1.3 40			1.3 40			7.9 240		
1727	6.2	190	23 O 2356 2356	6.9	210	●			1.0 30		
2330	3.0	90							1.0 30		
8 Tu 0513 1145	6.9	210	23 W 0535 1218 1827	7.9	240	8 F 0023 0605 1237	2.3	70	8 Sa 0053 0642 1310	1.6	50
2.0 60			1.0 30			7.5 230			7.9 240		
1804	6.6	200	7.2 220			1.0 30			1.0 30		
●			1842	7.2	220	7.2 220			1.0 30		
9 W 0009 0548 1220	3.0	90	24 M 0040 0620 1300	2.3	70	9 Sa 0055 0639 1310	2.0	60	9 Su 0027 0617 1247	1.3	40
7.2 220			7.9 240			7.9 240			7.9 240		
1836	1.6 50		1.0 30			1.0 30			0.7 20		
1836	6.9	210	1905	7.2	220	1911	7.5	230	1.0 30		
10 Th 0044 0622 1254	3.0	90	25 F 0120 0702 1337	2.0	60	10 Su 0128 0714 1344	1.6	50	10 M 0156 0748 1408	1.6	50
7.2 220			7.9 240			7.9 240			7.2 220		
1254	1.6 50		1.0 30			1.0 30			1.3 40		
1905	6.9	210	1941	7.5	230	1942	7.5	230	1.0 30		
11 F 0117 0655 1327	2.6	80	26 Sa 0158 0741 1412	2.0	60	11 M 0201 0750 1418	1.6	50	11 Tu 0226 0819 1436	1.6	50
7.5 230			7.9 240			7.9 240			6.9 210		
1327	1.3 40		1.3 40			1.0 30			1.6 50		
1935	7.2	220	2015	7.2	220	2016	7.5	230	2035	6.9 210	
12 Sa 0150 0730 1402	2.6	80	27 W 0233 0818 1445	2.0	60	12 Tu 0238 0830 1455	1.6	50	12 W 0257 0852 1504	1.6	50
7.5 230			7.5 230			1.3 40			2.0 60		
1402	1.3 40		2048	7.2	220	2054	7.5	230	2.0 60		
2007	7.2 220					2054	7.5	230	2.0 60		
13 Su 0225 0807 1438	2.3	70	28 M 0308 0854 1517	2.0	60	13 W 0318 0915 1534	1.6	50	13 Th 0330 0929 1533	2.0	60
7.5 230			7.2 220			7.2 220			2.3 70		
1438	1.3 40		2122	6.9	210	2139	7.2	220	2.0 60		
2043	7.2 220								2.0 60		
14 M 0302 0848 1517	2.3	70	29 Tu 0343 0932 1549	2.3	70	14 Th 0404 1008 1620	1.6	50	14 F 0409 1014 1608	2.3	70
7.5 230			6.6 200			6.6 200			5.6 170		
1517	1.6 50		7.0 220			7.0 220			6.0 180		
2123	7.2 220		2158	6.6	200	● 2232	6.9	210	5.9 180		
15 Tu 0345 0934 1600	2.3	70	30 W 0421 1013 1623	2.6	80	15 F 0459 1113 1716	2.0	60	15 Sa 0445 1111 1707	2.0	60
7.2 220			5.9 180			6.2 190			3.3 100		
1600	1.6 50		2.6 80			6.0 180			6.2 190		
● 2210	7.2 220		● 2241	6.2	190	2338	6.6	200			
16 W 0506 1103 1703	2.6	80	31 Th 0506 1103 1703	5.6	170						
5.9 180			3.0 90								
2334	5.9	180									

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Mina Salman, Bahrain, Persian Gulf, 2008

Times and Heights of High and Low Waters

April				May				June			
	Time	Height		Time	Height		Time	Height		Time	Height
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm
<b>1</b> Tu	0015	5.9 180	<b>16</b> W	0209	6.6 200	<b>1</b> Th	0052	6.6 200	<b>16</b> F	0242	6.9 210
	0719	2.6 80		0858	2.0 60		0743	2.6 80		0906	2.6 80
	1358	5.6 170		1515	6.6 200		1405	6.6 200		1518	7.2 220
	2003	3.6 110		2123	3.0 90		2019	3.3 100		2132	2.6 80
<b>2</b> W	0143	5.9 180	<b>17</b> Th	0313	6.9 210	<b>2</b> F	0204	6.6 200	<b>17</b> Sa	0335	6.9 210
	0840	2.3 70		0948	2.0 60		0845	2.3 70		0951	2.6 80
	1502	5.9 180		1559	6.9 210		1456	6.9 210		1558	7.2 220
	2110	3.3 100		2209	2.3 70		2113	2.6 80		2214	2.3 70
<b>3</b> Th	0252	6.2 190	<b>18</b> F	0404	7.2 220	<b>3</b> Sa	0304	7.2 220	<b>18</b> Su	0421	6.9 210
	0936	2.0 60		1029	1.6 50		0938	2.0 60		1030	2.6 80
	1548	6.6 200		1636	7.2 220		1540	7.2 220		1633	7.5 230
	2159	2.6 80		2247	2.0 60		2201	2.3 70		2251	2.3 70
<b>4</b> F	0345	6.9 210	<b>4</b> Sa	0447	7.2 220	<b>4</b> Su	0357	7.5 230	<b>19</b> M	0501	6.9 210
	1021	1.6 50		1104	1.6 50		1027	2.0 60		1107	2.6 80
	1626	6.9 210		1708	7.2 220		1623	7.9 240		1705	7.5 230
	2240	2.0 60		2321	2.0 60		2247	1.6 50		2325	2.3 70
<b>5</b> Sa	0431	7.2 220	<b>20</b> Su	0523	7.2 220	<b>5</b> M	0446	7.9 240	<b>20</b> Tu	0537	6.9 210
	1102	1.3 40		1136	1.6 50		1113	1.6 50		1141	3.0 90
	1702	7.5 230		1736	7.5 230		1704	8.2 250		1735	7.5 230
	2320	1.6 50		2352	1.6 50		2332	1.3 40		2357	2.3 70
<b>6</b> Su	0513	7.9 240	<b>21</b> M	0556	7.2 220	<b>6</b> Tu	0534	7.9 240	<b>21</b> W	0611	6.9 210
	1142	1.0 30		1207	2.0 60		1158	2.0 60		1215	3.0 90
	1737	7.9 240		1803	7.5 230		1746	8.2 250		1805	7.5 230
	2358	1.3 40									
<b>7</b> M	0554	7.9 240	<b>22</b> Tu	0021	1.6 50	<b>7</b> W	0017	1.3 40	<b>22</b> Th	0029	2.3 70
	1221	1.0 30		0626	7.2 220		0621	7.9 240		0643	6.9 210
	1812	7.9 240		1237	2.0 60		1244	2.0 60		1250	3.3 100
				1829	7.5 230		1829	8.2 250		1836	7.5 230
<b>8</b> Tu	0037	1.0 30	<b>23</b> W	0051	1.6 50	<b>8</b> Th	0104	1.3 40	<b>23</b> F	0103	2.3 70
	0635	7.9 240		0656	6.9 210		0710	7.9 240		0717	6.9 210
	1301	1.3 40		1306	2.3 70		1332	2.3 70		1325	3.3 100
	1849	8.2 250		1857	7.5 230		1914	8.2 250		1908	7.5 230
<b>9</b> W	0118	1.0 30	<b>24</b> Th	0122	1.6 50	<b>9</b> F	0152	1.3 40	<b>24</b> Sa	0137	2.3 70
	0719	7.9 240		0727	6.9 210		0803	7.5 230		0753	6.9 210
	1341	1.6 50		1337	2.6 80		1422	2.6 80		1402	3.6 110
	1930	7.9 240		1927	7.2 220		2003	7.9 240		1944	7.2 220
<b>10</b> Th	0200	1.0 30	<b>25</b> F	0153	2.0 60	<b>10</b> Sa	0244	1.6 50	<b>25</b> Su	0215	2.3 70
	0806	7.5 230		0802	6.6 200		0900	7.2 220		0832	6.9 210
	1424	2.0 60		1409	3.0 90		1517	3.3 100		1443	3.6 110
	2014	7.9 240		2001	7.2 220		2056	7.5 230		2023	7.2 220
<b>11</b> F	0247	1.3 40	<b>26</b> Sa	0229	2.0 60	<b>11</b> Su	0342	2.0 60	<b>26</b> M	0257	2.6 80
	0859	6.9 210		0842	6.2 190		1006	6.9 210		0917	6.9 210
	1511	2.6 80		1446	3.3 100		1620	3.3 100		1529	3.9 120
	2103	7.2 220		2040	6.9 210		2157	7.2 220		2108	7.2 220
<b>12</b> Sa	0341	1.6 50	<b>27</b> Su	0310	2.3 70	<b>12</b> M	0449	2.3 70	<b>27</b> Tu	0345	2.6 80
	1002	6.6 200		0931	6.2 190		1121	6.9 210		1008	6.9 210
	1608	3.3 100		1532	3.6 110		1731	3.6 110		1622	3.9 120
	2202	6.9 210		2126	6.6 200		2307	6.9 210		2200	6.9 210
<b>13</b> Su	0448	2.0 60	<b>28</b> M	0402	2.6 80	<b>13</b> Tu	0602	2.6 80	<b>28</b> F	0439	2.6 80
	1123	6.2 190		1032	5.9 180		1236	6.9 210		1105	6.9 210
	1726	3.6 110		1634	3.9 120		1844	3.6 110		1722	3.6 110
	2315	6.6 200		2224	6.6 200					1307	7.2 220
<b>14</b> M	0620	2.3 70	<b>29</b> Tu	0508	2.6 80	<b>14</b> W	0025	6.9 210	<b>29</b> Th	0541	2.6 80
	1300	6.2 190		1147	5.9 180		0713	2.6 80		1206	6.9 210
	1907	3.6 110		1753	3.9 120		1341	6.9 210		1824	3.6 110
				2335	6.2 190		1949	3.3 100			
<b>15</b> Tu	0045	6.6 200	<b>30</b> W	0628	2.6 80	<b>15</b> Th	0140	6.9 210	<b>30</b> F	0008	6.9 210
	0752	2.3 70		1303	6.2 190		0815	2.6 80		0646	3.0 90
	1419	6.2 190		1914	3.6 110		1434	7.2 220		1307	7.2 220
	2026	3.3 100					2045	3.0 90		1927	3.3 100
<b>31</b> Sa	0118	6.9 210	<b>31</b> Sa	0118	6.9 210	<b>31</b> Su	0751	2.6 80	<b>30</b> M	0154	6.9 210
							1404	7.2 220		0812	3.3 100
							2027	2.6 80		1423	7.5 230
										2057	2.6 80

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Heights are referred to the chart datum of soundings.

# Mina Salman, Bahrain, Persian Gulf, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0307	7.2	220	16 W 0427	6.6	200	1 F 0516	7.5	230	1 M 0018	1.3	40
0926	3.3	100	1029	3.9	120	1129	3.3	100	0622	8.2	250
1524	7.9	240	1617	7.2	220	1710	8.5	260	1235	2.0	60
2204	2.3	70	2257	3.0	90	● 2356	1.6	50	1825	8.5	260
2 W 0415	7.5	230	17 0515	6.6	200	2 0605	7.9	240	2 Tu 0054	1.3	40
1034	3.3	100	1116	3.9	120	1217	3.0	90	0654	8.2	250
1622	8.2	250	1700	7.5	230	1759	8.9	270	1310	2.0	60
2305	2.0	60	2336	2.6	80	○			1902	8.5	260
3 Th 0516	7.5	230	18 0555	6.9	210	3 Su 0040	1.3	40	3 W 0127	1.6	50
1135	3.3	100	1156	3.6	110	0647	8.2	250	0725	8.2	250
1716	8.5	260	1738	7.5	230	1301	2.6	80	1344	2.0	60
● ○						1843	8.9	270	1937	8.2	250
4 F 0001	1.6	50	19 0011	2.3	70	4 M 0121	1.3	40	4 Th 0158	2.0	60
0611	7.9	240	0628	7.2	220	0726	8.2	250	0755	7.9	240
1229	3.0	90	1232	3.6	110	1341	2.6	80	1418	2.3	70
1807	8.5	260	1812	7.9	240	1925	8.9	270	2011	7.5	230
5 Sa 0052	1.6	50	20 0044	2.3	70	5 Tu 0159	1.6	50	5 F 0229	2.3	70
0701	8.2	250	0658	7.5	230	0802	8.2	250	0826	7.9	240
1319	3.0	90	1305	3.6	110	1420	2.6	80	1451	2.3	70
1857	8.9	270	1844	7.9	240	2005	8.5	260	2046	7.2	220
6 Su 0140	1.6	50	21 M 0116	2.3	70	6 W 0235	2.0	60	6 Sa 0259	2.6	80
0749	8.2	250	0726	7.5	230	0838	8.2	250	0900	7.5	230
1407	3.0	90	1338	3.3	100	1458	2.6	80	1526	2.6	80
1944	8.5	260	1917	8.2	250	2045	7.9	240	2125	6.6	200
7 M 0225	1.6	50	22 Tu 0149	2.0	60	7 Th 0310	2.3	70	7 F 0330	3.3	100
0835	8.2	250	0755	7.9	240	0913	7.9	240	0939	7.2	220
1452	3.0	90	1411	3.3	100	1536	3.0	90	1607	3.0	90
2031	8.2	250	1951	8.2	250	2125	7.5	230	● 2214	6.2	190
8 Tu 0309	2.0	60	23 W 0223	2.0	60	8 F 0344	2.6	80	8 M 0407	3.6	110
0919	7.9	240	0827	7.9	240	0952	7.5	230	1027	6.6	200
1537	3.0	90	1446	3.0	90	1616	3.0	90	1701	3.3	100
2118	7.9	240	2029	8.2	250	● 2208	6.9	210	2323	5.6	170
9 W 0351	2.3	70	24 Tu 0259	2.3	70	9 Sa 0419	3.3	100	9 Tu 0501	4.3	130
1004	7.9	240	0904	7.9	240	1005	7.2	220	1133	6.2	190
1623	3.3	100	1525	3.0	90	1702	3.3	100	1826	3.6	110
2206	7.5	230	2111	7.9	240	2300	6.2	190	● 2243	6.9	210
10 Th 0434	3.0	90	25 0338	2.3	70	10 M 0459	3.6	110	10 W 0447	3.3	100
1050	7.5	230	0946	7.9	240	1128	6.9	210	0649	4.3	130
1711	3.3	100	1609	3.0	90	1759	3.6	110	1302	6.2	190
● 2259	6.9	210	● 2201	7.5	230	● 2004	7.2	220	2014	3.3	100
11 F 0519	3.3	100	26 Sa 0422	2.6	80	11 M 0010	5.9	180	10 F 0107	5.6	170
1141	7.2	220	1036	7.5	230	0554	3.9	120	0649	4.3	130
1803	3.3	100	1701	3.0	90	1235	6.6	200	1350	6.2	210
2358	6.6	200	2300	7.2	220	1920	3.6	110	2053	2.3	70
12 Sa 0608	3.6	110	27 M 0514	3.3	100	12 Tu 0143	5.6	170	12 F 0342	6.2	190
1236	7.2	220	1136	7.5	230	0727	4.3	130	0944	3.9	120
1902	3.6	110	1804	3.0	90	1351	6.6	200	1525	6.9	210
● 2051						2051	3.3	100	2208	2.6	80
13 Su 0107	6.2	190	28 M 0013	6.9	210	13 W 0309	5.9	180	13 F 0424	6.9	210
0708	3.9	120	0619	3.6	110	0909	4.3	130	1027	3.3	100
1335	6.9	210	1246	7.5	230	1459	6.9	210	1612	7.2	220
2008	3.6	110	1921	3.0	90	2155	3.0	90	2246	2.0	60
14 M 0221	6.2	190	29 Tu 0139	6.6	200	14 Th 0411	6.2	190	13 F 0458	7.2	220
0819	3.9	120	0744	3.9	120	1013	3.9	120	1104	3.0	90
1434	6.9	210	1401	7.5	230	1555	7.2	220	1652	7.5	230
2114	3.3	100	2048	3.0	90	2241	2.6	80	2321	1.6	50
15 Tu 0329	6.2	190	30 W 0305	6.9	210	15 F 0457	6.6	200	15 M 0528	7.5	230
0930	3.9	120	0918	3.9	120	1058	3.6	110	1116	2.6	80
1528	7.2	220	1512	7.9	240	1640	7.5	230	1702	8.5	260
2211	3.0	90	2205	2.3	70	2318	2.3	70	● 2340	1.3	40
● 31 Th 0418	7.2	220							31 Su 0547	7.9	240
1032	3.6	110							1157	2.3	70
1615	8.2	250							1746	8.5	260
2306	2.0	60									

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# **Mina Salman, Bahrain, Persian Gulf, 2008**

## Times and Heights of High and Low Waters

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

# Musay'id Outer Channel Entrance, Qatar, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm		h m	ft	cm		h m	ft	cm	
1 Tu 0304 3.9 120				16 W 0116 3.6 110				1 Sa F 0257 5.2 160			
0419 3.9 120				W 0434 3.3 100				Sa 1833 1.3 40			
1002 4.9 150				0905 4.9 150							
1823 2.0 60				1743 1.3 40							
2 W 0328 4.6 140				17 Th 0218 4.6 140				17 Su 0316 6.2 190			
0552 4.3 130				W 0557 3.9 120				Sa 1933 1.3 40			
0810 4.6 140				Th 0917 4.3 130							
1855 2.0 60				1824 1.3 40							
3 Th 0349 4.9 150				18 F 0302 5.2 160				18 M 0401 6.6 200			
1926 1.6 50				Su 1910 1.3 40				1157 2.6 80			
								1330 2.6 80			
								2043 1.3 40			
4 F 0411 5.6 170				19 Sa 0342 5.9 180				19 Tu 0441 6.9 210			
1955 1.6 50				Sa 1959 1.0 30				1211 2.3 70			
								1448 2.6 80			
								2148 1.3 40			
5 Sa 0435 5.9 180				20 Su 0422 6.6 200				4 0335 6.2 190			
2021 1.6 50				Su 1211 3.3 100				1234 2.6 80			
				1319 3.3 100				1319 2.6 80			
				2052 1.0 30				1952 2.0 60			
6 Su 0501 6.2 190				21 M 0501 7.2 220				19 Tu 0441 6.2 190			
2046 1.6 50				M 1234 3.0 90				1209 2.3 70			
				1436 3.0 90				1553 3.0 90			
				2146 1.0 30				2212 1.6 50			
7 M 0528 6.6 200				21 W 0523 6.6 200				21 F 0512 5.6 170			
1347 3.0 90				W 1319 2.6 80				1210 1.6 50			
1441 3.0 90				1536 3.0 90				1733 3.6 110			
2119 1.3 40				2209 1.3 40				O 2333 2.0 60			
8 Tu 0554 6.9 210				22 Th 0540 7.5 230				21 F 0512 5.6 170			
1401 3.0 90				Th 1306 2.6 80				1220 1.6 50			
1540 3.0 90				1538 3.0 90				1803 3.3 100			
● 2200 1.3 40				O 2239 1.3 40				● 2309 1.6 50			
9 W 0620 6.9 210				7 Th 0551 6.6 200				22 F 0532 5.2 160			
1421 2.6 80				Th 1329 2.3 70				1228 1.6 50			
1631 3.0 90				1629 3.0 90				1810 3.9 120			
2246 1.3 40				● 2304 1.3 40							
10 Th 0647 6.9 210				8 F 0620 6.6 200				23 F 0017 2.3 70			
1440 2.6 80				F 1344 2.3 70				0548 4.6 140			
1720 3.0 90				1720 3.0 90				Su 1246 1.6 50			
2334 1.3 40				2357 1.3 40				1848 4.6 140			
11 F 0716 6.9 210				23 M 0653 7.2 220				23 M 0101 2.3 70			
1501 2.3 70				Th 1414 2.0 60				0606 4.3 130			
1809 3.0 90				1734 3.0 90				1304 1.6 50			
								1929 4.6 140			
12 Sa 0026 1.6 50				24 Sa 0650 6.2 190				24 M 0101 2.3 70			
0748 6.6 200				Sa 1406 2.0 60				0606 4.3 130			
1528 2.0 60				1814 3.3 100				1304 1.6 50			
1902 3.0 90								2011 4.9 150			
13 Su 0123 2.0 60				9 M 0049 1.6 50				25 Tu 0146 2.6 80			
0819 6.2 190				Su 0719 5.9 180				0619 3.9 120			
1557 2.0 60				1435 1.6 50				1321 1.6 50			
2014 3.0 90				1918 3.3 100				2011 4.9 150			
14 M 0223 2.3 70				10 M 0049 1.6 50				25 F 0234 3.0 90			
0847 5.6 170				Su 0723 6.9 210				0618 3.9 120			
1630 1.6 50				1444 2.0 60				1337 1.6 50			
2210 3.3 100				1841 3.0 90				2058 5.2 160			
15 Tu 0326 3.0 90				25 F 0014 1.6 50				26 W 0234 3.0 90			
0901 5.2 160				Su 0723 6.9 210				0618 3.9 120			
1705 1.6 50				1444 2.0 60				1337 1.6 50			
● 1703 2.0 60				1841 3.0 90				2058 5.2 160			
16 Sa 0059 2.0 60				26 M 0142 2.0 60				26 F 0234 3.0 90			
0748 6.2 190				Sa 0748 6.2 190				0618 3.9 120			
1512 2.0 60				1512 2.0 60				1337 1.6 50			
2007 3.3 100				2007 3.3 100				2058 5.2 160			
17 F 0026 1.6 50				27 M 0143 2.3 70				27 F 0332 3.3 100			
0748 6.6 200				Su 0810 5.9 180				0616 3.6 110			
1539 2.0 60				1539 2.0 60				1350 1.6 50			
2128 3.3 100				2201 3.9 120				2151 5.2 160			
18 Su 0228 3.0 90				27 W 0236 2.3 70				27 F 0332 3.3 100			
0826 5.2 160				Tu 0757 4.9 150				0616 3.6 110			
1607 2.0 60				1541 1.3 40				1350 1.6 50			
2306 3.6 110				2300 4.6 140				2151 5.2 160			
19 M 0223 2.3 70				27 Th 0337 3.0 90				27 F 0332 3.3 100			
0821 4.6 140				W 0756 4.6 140				0616 3.6 110			
1635 2.0 60				1617 1.3 40				1350 1.6 50			
1742 1.3 40				2334 4.6 140				2253 5.6 170			
15 Tu 0053 4.3 130				15 F 0113 4.9 150				2253 5.6 170			
0414 3.9 120				0636 3.9 120							
0747 4.6 140				0807 3.9 120							
● 1703 2.0 60				1742 1.3 40							
16 Sa 0212 4.6 140				31 Th 0553 4.3 130							
0553 4.3 130				0722 4.3 130							
1731 1.6 50				1731 1.6 50							

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Musay'id Outer Channel Entrance, Qatar, 2008

Times and Heights of High and Low Waters

April				May				June																																																																																																																																																																																																																																																																							
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height																																																																																																																																																																																																																																																																				
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm																																																																																																																																																																																																																																																																				
1 Tu	0150	5.9	180	16 W	0237	5.9	180	1 Th	0116	5.6	170																																																																																																																																																																																																																																																																				
1354	2.6	80	W 1012	2.0	60	Th 0905	2.3	70	F 1645	4.9	150																																																																																																																																																																																																																																																																				
1510	2.6	80	1613	3.3	100	1549	3.6	110	2218	3.9	120																																																																																																																																																																																																																																																																				
1731	2.3	70	2051	3.0	90	1909	3.3	100	1630	6.2	190																																																																																																																																																																																																																																																																				
2 W	0234	5.9	180	17 Th	0317	5.6	170	17 Sa	0215	4.6	140																																																																																																																																																																																																																																																																				
1038	2.6	80	1036	2.0	60	0927	2.0	60	1707	5.2	160																																																																																																																																																																																																																																																																				
1532	3.0	90	1638	3.9	120	1608	4.3	130	2321	3.9	120																																																																																																																																																																																																																																																																				
1930	2.6	80	2158	3.0	90	2055	3.6	110	2338	3.9	120																																																																																																																																																																																																																																																																				
3 Th	0313	5.9	180	18 F	0347	5.2	160	3 Sa	0237	5.2	160																																																																																																																																																																																																																																																																				
1041	2.3	70	1055	2.0	60	0955	1.6	50	Su 1012	4.3	140																																																																																																																																																																																																																																																																				
1602	3.3	100	1707	4.3	130	1638	4.9	150	1732	5.9	180																																																																																																																																																																																																																																																																				
2100	2.3	70	2253	3.0	90	2212	3.3	100	●																																																																																																																																																																																																																																																																						
4 F	0350	5.6	170	19 Sa	0406	4.6	140	4 Su	0307	4.9	150																																																																																																																																																																																																																																																																				
1056	2.0	60	1110	1.6	50	1027	1.6	50	M 1715	5.9	180																																																																																																																																																																																																																																																																				
1637	3.9	120	1736	4.6	140	2316	3.3	100	1758	6.2	190																																																																																																																																																																																																																																																																				
2211	2.3	70	2342	3.0	90	●			1830	8.2	250																																																																																																																																																																																																																																																																				
5 Sa	0424	5.6	170	20 M	0423	4.3	130	5 M	0332	4.9	150																																																																																																																																																																																																																																																																				
1121	1.6	50	1127	1.6	50	1101	1.3	40	20 Tu	0104	3.6	110																																																																																																																																																																																																																																																																			
1717	4.3	130	1806	5.2	160	1757	6.6	200	0337	3.9	120																																																																																																																																																																																																																																																																				
2310	2.3	70	●			●			1052	1.6	50																																																																																																																																																																																																																																																																				
6 ●	0455	5.2	160	21 M	0029	3.0	90	1825	6.6	200	○																																																																																																																																																																																																																																																																				
1151	1.6	50	0443	3.9	120	6 Tu	0018	3.3	100	0140	3.6	110																																																																																																																																																																																																																																																																			
1801	4.9	150	1146	1.6	50	0402	4.6	140	0415	4.3	130																																																																																																																																																																																																																																																																				
●			1837	5.6	170	1137	1.3	40	1134	1.6	50																																																																																																																																																																																																																																																																				
7 M	0007	2.3	70	22 Tu	0117	3.0	90	1842	6.9	210	1914	8.5	260																																																																																																																																																																																																																																																																		
0518	4.9	150	0504	3.9	120	21 W	0047	3.6	110	0236	3.3	100																																																																																																																																																																																																																																																																			
1224	1.3	40	1203	1.6	50	0407	3.6	110	0507	3.9	120																																																																																																																																																																																																																																																																				
1848	5.6	170	1910	5.9	180	1104	1.6	50	1213	1.6	50																																																																																																																																																																																																																																																																				
8 Tu	0104	2.6	80	23 W	0206	3.3	100	1853	6.9	210	1959	8.5	260																																																																																																																																																																																																																																																																		
0533	4.6	140	0519	3.6	110	6 Th	0224	3.3	100	●																																																																																																																																																																																																																																																																					
1257	1.3	40	1216	1.6	50	0520	3.9	120	21 M	0241	3.6	110																																																																																																																																																																																																																																																																			
1939	5.9	180	1944	6.2	190	1246	1.6	50	0437	3.6	110																																																																																																																																																																																																																																																																				
9 W	0204	3.0	90	24 Th	0300	3.3	100	2020	7.5	230	7 Sa	0241	3.6	110																																																																																																																																																																																																																																																																	
0553	4.3	130	0529	3.6	110	0332	3.3	100	0601	3.6	110																																																																																																																																																																																																																																																																				
1331	1.3	40	1226	1.6	50	0604	3.6	110	1251	2.0	60																																																																																																																																																																																																																																																																				
2034	6.2	190	2021	6.2	190	1319	1.6	50	2045	8.2	250																																																																																																																																																																																																																																																																				
10 Th	0310	3.3	100	10 Sa	0407	3.3	100	2113	7.5	230	●																																																																																																																																																																																																																																																																				
0622	3.9	120	0528	3.3	100	0449	3.3	100	24 M	0334	3.3	100																																																																																																																																																																																																																																																																			
1405	1.3	40	1229	2.0	60	0652	3.3	100	0656	3.3	100																																																																																																																																																																																																																																																																				
2135	6.6	200	2101	6.2	190	1336	2.0	60	1236	2.3	70																																																																																																																																																																																																																																																																				
11 F	0427	3.3	100	25 Tu	0407	3.3	100	2209	7.2	220	2026	6.9	210																																																																																																																																																																																																																																																																		
0652	3.6	110	0528	3.3	100	0449	3.3	100	24 Tu	0442	3.0	90																																																																																																																																																																																																																																																																			
1437	1.6	50	1229	2.0	60	0652	3.3	100	0740	3.3	100																																																																																																																																																																																																																																																																				
2242	6.6	200	2101	6.2	190	1336	2.0	60	1319	3.0	90																																																																																																																																																																																																																																																																				
12 Sa	1458	2.0	60	26 Sa	1221	2.0	60	2113	7.5	230	2056	6.6	200																																																																																																																																																																																																																																																																		
2349	6.6	200	2234	6.2	190	0618	3.0	90	●																																																																																																																																																																																																																																																																						
●			●			0749	3.0	90	21 M	0629	3.0	90																																																																																																																																																																																																																																																																			
13 Su	1425	2.3	70	11 Su	0749	3.0	90	2305	7.2	220	26 Th	0528	2.6	80																																																																																																																																																																																																																																																																	
				11 M	0749	3.0	90	2305	7.2	220	1414	3.9	120																																																																																																																																																																																																																																																																		
●			●			1253	2.6	80	2136	6.6	200	1558	3.9	120																																																																																																																																																																																																																																																																	
14 M	0051	6.6	200	12 Tu	0723	2.6	80	2305	7.2	220	●																																																																																																																																																																																																																																																																				
0923	2.3	70	0910	2.6	80	0839	3.0	90	2310	5.9	180	2136	5.9	180																																																																																																																																																																																																																																																																	
1007	2.3	70	1034	2.6	80	1141	2.6	80	2334	5.2	160	●																																																																																																																																																																																																																																																																			
1141	2.3	70	2358	6.6	200	1141	2.6	80	1414	3.9	120	15 Tu	0147	6.2	190	27 Su	1220	2.0	60	2213	6.2	190	1558	3.9	120	0944	2.3	70	0857	2.6	80	0630	3.0	90	1825	4.6	140	2136	5.9	180	1636	3.0	90	1618	3.3	100	0839	3.0	90	2334	5.2	160	●			1850	3.0	90	1718	3.3	100	1719	3.9	120	1619	4.3	130	2153	5.6	170	●			●			1828	3.9	120	2310	5.9	180	●			14 W	0046	6.2	190	28 Tu	0810	2.3	70	2327	5.6	170	2153	5.6	170	0846	2.3	70	0914	2.0	60	0648	2.6	80	2338	4.6	140	●			1638	3.9	120	1639	4.3	130	0821	5.9	180	1400	4.9	150	1828	3.9	120	2055	3.9	120	0822	2.0	60	1400	4.9	150	●			●			1601	5.6	170	1632	5.9	180	●			15 Th	0126	5.6	170	30 F	0748	2.3	70	2058	4.3	130	2303	4.9	150	0914	2.0	60	0914	2.0	60	0748	2.3	70	1654	6.2	190	●			1639	4.3	130	1639	4.3	130	0850	2.0	60	1654	6.2	190	2329	4.6	140	2055	3.9	120	2055	3.9	120	1601	5.6	170	●			●			●			●			2058	4.3	130	2058	4.3	130	●			16 M	0005	5.2	160	31 Sa	0822	2.0	60	●			●			0822	2.0	60	1601	5.6	170	1601	5.6	170	●			●			1601	5.6	170	2058	4.3	130	2058	4.3	130	●			●		
15 Tu	0147	6.2	190	27 Su	1220	2.0	60	2213	6.2	190	1558	3.9	120																																																																																																																																																																																																																																																																		
0944	2.3	70	0857	2.6	80	0630	3.0	90	1825	4.6	140	2136	5.9	180																																																																																																																																																																																																																																																																	
1636	3.0	90	1618	3.3	100	0839	3.0	90	2334	5.2	160	●																																																																																																																																																																																																																																																																			
1850	3.0	90	1718	3.3	100	1719	3.9	120	1619	4.3	130	2153	5.6	170																																																																																																																																																																																																																																																																	
●			●			1828	3.9	120	2310	5.9	180	●																																																																																																																																																																																																																																																																			
14 W	0046	6.2	190	28 Tu	0810	2.3	70	2327	5.6	170	2153	5.6	170																																																																																																																																																																																																																																																																		
0846	2.3	70	0914	2.0	60	0648	2.6	80	2338	4.6	140	●																																																																																																																																																																																																																																																																			
1638	3.9	120	1639	4.3	130	0821	5.9	180	1400	4.9	150	1828	3.9	120	2055	3.9	120	0822	2.0	60	1400	4.9	150	●			●			1601	5.6	170	1632	5.9	180	●			15 Th	0126	5.6	170	30 F	0748	2.3	70	2058	4.3	130	2303	4.9	150	0914	2.0	60	0914	2.0	60	0748	2.3	70	1654	6.2	190	●			1639	4.3	130	1639	4.3	130	0850	2.0	60	1654	6.2	190	2329	4.6	140	2055	3.9	120	2055	3.9	120	1601	5.6	170	●			●			●			●			2058	4.3	130	2058	4.3	130	●			16 M	0005	5.2	160	31 Sa	0822	2.0	60	●			●			0822	2.0	60	1601	5.6	170	1601	5.6	170	●			●			1601	5.6	170	2058	4.3	130	2058	4.3	130	●			●																																																																																																																					
1828	3.9	120	2055	3.9	120	0822	2.0	60	1400	4.9	150																																																																																																																																																																																																																																																																				
●			●			1601	5.6	170	1632	5.9	180	●																																																																																																																																																																																																																																																																			
15 Th	0126	5.6	170	30 F	0748	2.3	70	2058	4.3	130	2303	4.9	150																																																																																																																																																																																																																																																																		
0914	2.0	60	0914	2.0	60	0748	2.3	70	1654	6.2	190	●																																																																																																																																																																																																																																																																			
1639	4.3	130	1639	4.3	130	0850	2.0	60	1654	6.2	190	2329	4.6	140																																																																																																																																																																																																																																																																	
2055	3.9	120	2055	3.9	120	1601	5.6	170	●			●																																																																																																																																																																																																																																																																			
●			●			2058	4.3	130	2058	4.3	130	●																																																																																																																																																																																																																																																																			
16 M	0005	5.2	160	31 Sa	0822	2.0	60	●			●																																																																																																																																																																																																																																																																				
0822	2.0	60	1601	5.6	170	1601	5.6	170	●			●																																																																																																																																																																																																																																																																			
1601	5.6	170	2058	4.3	130	2058	4.3	130	●			●																																																																																																																																																																																																																																																																			

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Musay'id Outer Channel Entrance, Qatar, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0025	4.6	140	16 W 0845	2.0	60	1 F 0041	3.3	100	1 M 0059	2.3	100
0852	1.6	50	W 1717	7.5	230	F 0317	3.6	110	Sa 0326	3.3	100
1653	7.9	240	● 1749	8.2	250	1015	1.6	50	0957	2.0	60
						1728	7.2	220	1200	2.3	70
						1816	6.2	190	1816	6.2	190
						1837	5.6	170	1147	2.3	70
						1840	5.2	160	1740	5.6	170
2 W 0013	4.3	130	17 Th 0918	2.0	60	2 Sa 0112	3.0	90	2 Tu 0114	2.3	70
0156	4.3	130	1742	7.5	230	0421	3.6	110	0649	4.6	140
0939	1.6	50	Sa 1108	2.0	60	1051	2.0	60	1248	2.6	80
1732	8.2	250	1825	7.9	240	○ 1756	6.9	210	1837	5.6	170
3 Th 0057	3.6	110	18 F 0201	3.6	110	3 Su 0144	3.0	90	3 W 0137	2.3	70
0309	3.9	120	0323	3.6	110	0526	3.9	120	0739	4.9	150
1026	1.6	50	0958	2.0	60	1158	2.0	60	1337	3.0	90
● 1812	8.5	260	○ 1806	7.5	230	1858	7.5	230	1853	5.2	160
4 F 0140	3.6	110	19 Sa 0214	3.3	100	4 M 0213	2.6	80	4 Th 0200	2.0	60
0410	3.9	120	0417	3.6	110	0636	3.9	120	0832	4.9	150
1113	1.6	50	1042	2.0	60	1246	2.6	80	1430	3.6	110
1853	8.5	260	1830	7.5	230	1927	6.9	210	1855	4.6	140
5 Sa 0222	3.3	100	20 Su 0225	3.3	100	5 Tu 0241	2.6	80	5 F 0222	2.3	70
0507	3.6	110	0506	3.6	110	0749	4.3	130	0931	5.2	160
1200	2.0	60	1129	2.0	60	1335	3.0	90	1533	3.9	120
1932	8.5	260	1857	7.2	220	1950	6.2	190	1831	4.3	130
6 Su 0303	3.0	90	21 M 0237	3.0	90	6 W 0310	2.6	80	6 Sa 0238	2.3	70
0605	3.6	110	0555	3.6	110	0902	4.3	130	1041	5.6	170
1247	2.3	70	1217	2.3	70	1425	3.6	110			
2009	7.9	240	1926	6.9	210	2006	5.9	180			
7 M 0343	3.0	90	22 Tu 0256	3.0	90	7 Th 0339	2.3	70	7 Su 0245	2.3	70
0714	3.6	110	0646	3.6	110	1034	4.6	140	1157	5.9	180
1334	3.0	90	1308	2.6	80	1521	4.3	130			
2041	7.5	230	1954	6.6	200	2006	5.2	160			
8 Tu 0419	2.6	80	23 W 0322	2.6	80	8 F 0409	2.3	70	8 M 0242	2.3	70
0929	3.6	110	0750	3.9	120	1219	5.2	160	1300	6.2	190
1424	3.3	100	1403	3.0	90	1640	4.6	140			
2106	6.6	200	2016	6.2	190	● 1921	4.9	150			
9 W 0453	2.6	80	24 Th 0352	2.3	70	9 Sa 0439	2.3	70	9 Tu 0243	2.3	70
1247	4.3	130	0927	3.9	120	1336	5.6	170	1350	6.2	190
1518	3.9	120	1503	3.6	110						
2125	5.9	180	2017	5.6	170						
10 Th 0527	2.6	80	25 F 0425	2.3	70	10 Su 0503	2.6	80	10 W 0445	2.0	60
1424	4.6	140	1119	4.6	140	1429	6.2	190	1342	6.6	200
1626	4.6	140	1610	4.3	130						
● 2134	5.6	170	○ 2021	5.2	160						
11 F 0602	2.6	80	26 Sa 0502	2.0	60	11 M 0518	2.6	80	11 Tu 0537	2.0	60
1504	5.2	160	1352	5.2	160	1507	6.6	200	1436	6.9	210
1841	5.2	160	1738	4.6	140						
1949	5.2	160	2038	4.9	150						
12 Sa 0638	2.3	70	27 Su 0544	2.0	60	12 Tu 0538	2.3	70	27 W 0642	2.0	60
1533	5.9	180	1436	5.9	180	1538	6.9	210	1522	7.2	220
13 Su 0714	2.3	70	28 M 0631	2.0	60	13 W 0641	2.3	70	2331	3.0	90
1559	6.6	200	1515	6.9	210	1607	7.2	220			
14 M 0747	2.3	70	29 Tu 0723	1.6	50	14 Th 0752	2.3	70	270	3.5	100
1625	6.9	210	1554	7.5	230	1635	7.2	220			
15 Tu 0817	2.3	70	30 W 0820	1.6	50	15 F 0059	3.3	100	30 Sa 0001	2.6	80
1651	7.2	220	1632	7.9	240	0223	3.3	100	0408	3.3	100
						0857	2.3	70	1018	2.0	60
						1702	7.2	220	● 1718	7.2	220
31 Th 0016	3.6	110							31 Su 0027	2.3	70
0203	3.6	110							0509	3.6	110
0919	1.6	50							1111	2.0	60
1711	8.2	250							1749	6.9	210

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Musay'id Outer Channel Entrance, Qatar, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
1 W 0016 0641 1256 1735	h m 1.6 5.2 3.0 4.6	ft 50 160 90 140	cm 180 90 100 50	16 Th 0629 1249 1641	h m 5.9 3.0 4.6	ft 180 90 140	cm 200 100 100 50	1 M 0732 1507 1653 2335	h m 6.6 3.3 3.3 1.6	ft 200 100 100 50	cm 40 230 90 100
2 Th 0037 0720 1348 1744	h m 1.6 5.6 3.3 4.3	ft 50 170 100 130	cm 180 190 100 130	17 F 0020 0714 1349 1708	h m 1.3 6.2 3.3 4.3	ft 40 190 100 130	cm 200 50 100 50	2 Tu 0807 2318	h m 6.6 1.6	ft 200 50	cm 50 230
3 F 0054 0801 1445 1738	h m 2.0 5.9 3.3 3.9	ft 60 180 100 120	cm 180 805 100 120	18 Sa 0049 0805 1454 1740	h m 1.3 6.9 3.3 3.9	ft 40 210 100 120	cm 200 60 60 80	3 W 0843 2324	h m 6.6 2.0	ft 200 60	cm 50 230
4 Sa 0105 0845 1600 1723	h m 2.0 5.9 3.6 3.6	ft 60 180 110 110	cm 180 90 100 110	19 Su 0116 0900 1611 1809	h m 1.6 6.9 3.3 3.6	ft 50 210 100 110	cm 200 60 60 110	4 Th 0922 2334	h m 6.6 2.0	ft 200 60	cm 50 220
5 Su 0104 0933	h m 2.0 6.2	ft 60 190	cm 180 50	20 M 0137 1001	h m 1.6 6.9	ft 50 210	cm 200 70	5 F 1004 2336	h m 6.2 2.3	ft 190 70	cm 180 70
6 M 0023 1027	h m 2.0 6.2	ft 60 190	cm 180 50	21 Tu 0127 1105	h m 2.0 6.9	ft 60 210	cm 180 70	6 Th 1049 2043	h m 6.2 2.3	ft 190 70	cm 180 70
7 Tu 1127 ●	h m 2.0 6.2	ft 60 190	cm 180 50	22 W 0032 1207 2039	h m 2.3 6.9	ft 70 210	cm 180 70	7 F 1135 2040	h m 5.9 2.3	ft 180 70	cm 180 70
8 W 0040 1224	h m 2.3 6.2	ft 70 190	cm 180 50	23 Th 1303 2107	h m 6.6 2.0	ft 200 60	cm 200 60	8 M 1220 2043	h m 5.6 2.3	ft 170 70	cm 180 70
9 Th 1314 2217	h m 2.3 6.2	ft 70 190	cm 180 80	24 F 0415 0540 1354 2138	h m 3.0 3.0 6.2 1.6	ft 90 90 190 50	cm 180 100 160 50	9 M 0356 0633 1301 2059	h m 3.9 3.6 5.2 2.0	ft 120 110 160 60	cm 180 100 160 50
10 F 1359 2212	h m 5.9 2.3	ft 180 70	cm 180 50	25 Sa 0405 0816 1436 2204	h m 3.6 3.3 5.6 1.6	ft 110 100 170 50	cm 180 100 150 50	10 Tu 0405 0828 1336 2125	h m 4.3 3.6 4.9 1.6	ft 130 110 150 50	cm 180 110 150 50
11 Sa 1439 2217	h m 3.3 5.9	ft 100 180	cm 180 50	26 M 0426 0938 1508 2225	h m 3.9 3.3 5.2 1.6	ft 120 100 160 50	cm 180 100 150 50	11 W 0428 0957 1409 2156	h m 4.9 3.6 4.9 1.6	ft 150 110 150 50	cm 180 110 150 50
12 Su 1514 2229	h m 3.6 5.6	ft 110 170	cm 180 60	27 M 0454 1039 1528 2244	h m 4.6 3.0 4.6 1.6	ft 140 90 140 50	cm 180 100 140 50	12 Tu 0500 1103 1443 2229	h m 5.6 3.3 4.6 1.3	ft 170 100 140 50	cm 180 100 140 50
13 M 1545 2251	h m 4.3 3.0	ft 130 90	cm 180 50	28 Tu 0525 1133 1546 2304	h m 4.9 3.0 4.3 1.6	ft 150 90 130 50	cm 180 100 130 50	13 W 0537 1204 1522 2334	h m 6.6 3.3 4.3 1.3	ft 200 100 150 50	cm 180 100 150 50
14 Tu 1610 ●	h m 4.6 5.2	ft 140 160	cm 180 120	29 W 0556 1224 1608 ●	h m 5.6 3.0 3.9 1.6	ft 170 90 120 50	cm 180 100 120 50	14 F 0618 1304 1603 2334	h m 6.9 3.3 3.9 1.3	ft 210 100 120 50	cm 180 100 120 50
15 W 1152 1625 2349	h m 5.2 3.0	ft 160	cm 180	30 Th 0627 1315 1629 2339	h m 5.9 3.0 3.6 1.6	ft 180 90 110 50	cm 180 100 110 50	15 M 0703 1404 1648	h m 7.5 3.0 3.6 1.1	ft 230 90 110 50	cm 180 100 110 50
31 F 1056 1610 ●	h m 4.6 5.2	ft 1408 1608 ●	cm 190 100 50	31 F 0659 1408 1646 2344	h m 6.2 3.3 3.6 1.6	ft 100 90 110 50	cm 180 100 110 50	31 W 0734 1408 1646 2344	h m 190 100 110 50	ft 200 100 110 50	cm 180 100 110 50

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

Mina Jebel Ali, United Arab Emirates, 2008

## Times and Heights of High and Low Waters

January						February						March							
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height	
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm
<b>1</b> Tu	0641	4.9	150	<b>16</b> W	0540	4.9	150	<b>1</b> F	0650	4.6	140	<b>16</b> Sa	0651	4.9	150	<b>1</b> Sa	0540	4.6	140
	1324	3.0	90		1203	2.0	60		1531	2.0	60		1522	1.0	30		1431	1.6	50
	1827	3.6	110		1757	3.9	120		2108	2.6	80		2220	3.0	90		1954	2.6	80
					2353	2.0	60		2337	2.6	80						2105	2.6	80
<b>2</b> W	0016	2.0	60	<b>17</b> Th	0628	5.2	160	<b>2</b> Sa	0755	4.6	140	<b>17</b> Su	0109	3.0	90	<b>2</b> Su	0651	4.6	140
	0725	4.9	150		1348	1.6	50		1635	1.3	40		0820	4.9	150		1545	1.3	40
	1521	2.6	80		1938	3.3	100		2338	3.0	90		1639	0.7	20				
	1952	3.3	100										2329	3.6	110				
<b>3</b> Th	0054	2.3	70	<b>18</b> F	0040	2.3	70	<b>3</b> Su	0055	3.0	90	<b>18</b> M	0302	3.0	90	<b>3</b> M	0820	4.6	140
	0816	4.9	150		0726	5.2	160		0910	4.9	150		0947	5.2	160		1639	1.0	30
	1624	2.0	60		1537	1.3	40		1722	1.0	30		1737	0.3	10		2340	3.3	100
	2146	3.0	90		2143	3.3	100										1711	0.7	20
<b>4</b> F	0141	2.6	80	<b>19</b> Sa	0146	2.6	80	<b>4</b> M	0007	3.3	100	<b>19</b> Tu	0012	3.9	120	<b>4</b> Tu	0237	3.0	90
	0912	4.9	150		0839	5.2	160		0258	3.0	90		0414	2.6	80		0936	4.9	150
	1709	1.6	50		1650	0.7	20		1013	5.2	160		1056	5.6	170		1721	0.7	20
	2314	3.3	100		2317	3.6	110		1800	0.7	20		1822	0.0	0		2359	3.6	110
<b>5</b> Sa	0240	3.0	90	<b>20</b> Su	0301	3.0	90	<b>5</b> Tu	0035	3.6	110	<b>20</b> W	0047	4.3	130	<b>5</b> W	0409	3.0	90
	1003	5.2	160		0953	5.6	170		0413	3.0	90		0512	2.6	80		1035	5.2	160
	1748	1.0	30		1749	0.3	10		1102	5.6	170		1152	5.6	170		1755	0.3	10
									1834	0.3	10		1900	0.0	0				
<b>6</b> Su	0007	3.3	100	<b>21</b> M	0020	3.9	120	<b>6</b> W	0102	3.9	120	<b>21</b> Th	0118	4.6	140	<b>6</b> Th	0022	3.9	120
	0337	3.0	90		0407	3.0	90		0501	2.6	80		0604	2.3	70		0457	2.6	80
	1048	5.6	170		1058	5.9	180		1146	5.9	180		1241	5.9	180		1125	5.6	170
	1824	0.7	20		1838	0.0	0		1905	0.0	0		1932	0.3	10		1826	0.3	10
<b>7</b> M	0047	3.6	110	<b>22</b> Tu	0106	4.3	130	<b>7</b> Th	0129	4.3	130	<b>22</b> F	0146	4.6	140	<b>7</b> F	0045	4.3	130
	0424	3.0	90		0505	2.6	80		0545	2.6	80		0652	2.0	60		0541	2.0	60
	1128	5.6	170		1154	5.9	180		1227	5.9	180		1323	5.9	180		1211	5.9	180
	1858	0.3	10		1922	-0.3	-10		● 1935	0.0	0		1958	0.3	10		1857	0.3	10
<b>8</b> Tu	0122	3.9	120	<b>23</b> W	0145	4.3	130	<b>8</b> F	0153	4.3	130	<b>23</b> Sa	0213	4.9	150	<b>8</b> Sa	0109	4.6	140
	0506	3.0	90		0600	2.6	80		0630	2.3	70		0736	1.6	50		0625	1.6	50
	1205	5.9	180		1245	6.2	190		1308	6.2	190		1400	5.6	170		1255	5.9	180
	● 1932	0.3	10		1959	-0.3	-10		2005	0.0	0		2020	0.7	20		1927	0.7	20
<b>9</b> W	0154	3.9	120	<b>24</b> Th	0220	4.6	140	<b>9</b> Sa	0216	4.6	140	<b>24</b> Su	0240	4.9	150	<b>9</b> Su	0134	4.9	150
	0547	3.0	90		0653	2.3	70		0715	2.0	60		0817	1.3	40		0710	1.3	40
	1242	5.9	180		1331	6.2	190		1347	5.9	180		1435	5.2	160		1337	5.9	180
	2004	0.0	0		2031	0.0	0		2034	0.3	10		2039	1.0	30		1956	0.7	20
<b>10</b> Th	0224	4.3	130	<b>25</b> F	0252	4.9	150	<b>10</b> Su	0241	4.9	150	<b>25</b> M	0307	4.9	150	<b>10</b> M	0202	5.2	160
	0630	2.6	80		0743	2.3	70		0801	1.6	50		0855	1.3	40		0756	1.0	30
	1318	6.2	190		1412	5.9	180		1427	5.9	180		1507	4.9	150		1419	5.6	170
	2036	0.0	0		2100	0.3	10		2102	0.7	20		2054	1.3	40		2020	1.0	30
<b>11</b> F	0253	4.3	130	<b>26</b> Sa	0323	4.9	150	<b>11</b> M	0309	4.9	150	<b>26</b> Tu	0332	4.9	150	<b>11</b> Tu	0232	5.6	170
	0717	2.6	80		0830	2.3	70		0849	1.3	40		0932	1.3	40		0844	0.7	20
	1355	5.9	180		1450	5.6	170		1508	5.6	170		1539	4.3	130		1501	5.2	160
	2107	0.3	10		2125	0.7	20		2127	1.0	30		2111	1.3	40		2041	1.3	40
<b>12</b> Sa	0320	4.6	140	<b>27</b> Su	0354	4.9	150	<b>12</b> Tu	0340	5.2	160	<b>27</b> W	0356	4.9	150	<b>12</b> W	0305	5.6	170
	0805	2.6	80		0915	2.3	70		0939	1.3	40		1010	1.6	50		0935	0.7	20
	1433	5.9	180		1527	5.2	160		1551	4.9	150		1611	3.9	120		1546	4.6	140
	2139	0.3	10		2148	1.0	30		2149	1.3	40		2128	1.6	50		2103	1.6	50
<b>13</b> Su	0349	4.6	140	<b>28</b> M	0425	4.9	150	<b>13</b> W	0416	5.2	160	<b>28</b> Th	0422	4.9	150	<b>13</b> Th	0341	5.6	170
	0855	2.3	70		1001	2.3	70		1037	1.3	40		1058	1.6	50		1036	0.7	20
	1514	5.6	170		1602	4.6	140		1640	4.3	130		1650	3.3	100		1639	3.9	120
	2211	0.7	20		2207	1.3	40		2213	1.6	50		2145	2.0	60		2131	2.0	60
<b>14</b> M	0422	4.9	150	<b>29</b> Tu	0456	4.9	150	<b>14</b> Th	0458	5.2	160	<b>29</b> F	0454	4.9	150	<b>14</b> F	0424	5.6	170
	0949	2.3	70		1051	2.3	70		1153	1.3	40		1247	1.6	50		1157	1.0	30
	1559	5.2	160		1639	3.9	120		1745	3.6	110		1751	3.0	90		1754	3.3	100
	2243	1.0	30		2226	1.6	50		● 2246	2.0	60		● 2155	2.3	70		● 2208	2.6	80
<b>15</b> Tu	0459	4.9	150	<b>30</b> W	0527	4.9	150	<b>15</b> F	0547	5.2	160					<b>15</b> Sa	0517	5.2	160
	1050	2.0	60		1206	2.3	70		1340	1.3	40		1939	3.0	90		1332	1.0	30
	1651	4.6	140		1724	3.3	100		2335	2.6	80					2015	3.0	90	
	● 2316	1.6	50		● 2246	2.0	60									2304	3.0	90	
				<b>31</b> Th	0603	4.9	150									<b>31</b> M	0555	4.6	140
					1402	2.3	70									1437	1.3	40	
					1834	3.0	90									2228	3.3	100	
					2307	2.3	70									2351	3.3	100	

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

# Mina Jebel Ali, United Arab Emirates, 2008

Times and Heights of High and Low Waters

April				May				June									
	Time	Height															
	h m	ft cm															
<b>1</b> Tu	0735	4.6 140	<b>16</b> W	0349	3.0 90	<b>1</b> Th	0147	3.3 100	<b>16</b> F	0450	2.3 70	<b>1</b> Su	0427	2.0 60	<b>16</b> M	0555	1.6 50
	1538	1.0 30		0931	4.9 150		0815	4.6 140		1013	4.6 140		1016	4.3 130		1152	3.9 120
	2241	3.6 110		1632	1.3 40		1513	1.3 40		1603	2.3 70		1534	2.3 70		1557	3.0 90
				2259	4.6 140		2147	4.6 140		2240	5.2 160		2210	5.9 180		2309	5.9 180
<b>2</b> W	0218	3.3 100	<b>17</b> Th	0450	2.3 70	<b>2</b> F	0333	2.6 80	<b>17</b> Sa	0529	2.0 60	<b>2</b> M	0525	1.3 40	<b>17</b> Tu	0631	1.3 40
	0858	4.6 140		1036	4.9 150		0931	4.6 140		1109	4.3 130		1122	4.6 140		1236	3.9 120
	1625	1.0 30		1711	1.3 40		1558	1.6 50		1629	2.3 70		1617	2.3 70		1634	3.0 90
	2302	3.9 120		2330	4.9 150		2224	4.9 150		2314	5.6 170		2259	6.2 190		2345	5.9 180
<b>3</b> Th	0356	2.6 80	<b>18</b> F	0533	2.0 60	<b>3</b> Sa	0436	2.0 60	<b>18</b> Su	0605	1.6 50	<b>3</b> Tu	0619	0.7 20	<b>18</b> W	0706	1.0 30
	1004	4.9 150		1128	4.9 150		1035	4.9 150		1156	4.3 130		1224	4.6 140		1315	4.3 130
	1703	1.0 30		1740	1.6 50		1637	1.6 50		1653	2.6 80		1700	2.6 80		1710	3.3 100
	2327	4.3 130		2358	5.2 160		2300	5.2 160		2346	5.6 170		2347	6.6 200		O	
<b>4</b> F	0448	2.3 70	<b>19</b> Sa	0611	1.6 50	<b>4</b> Su	0527	1.3 40	<b>19</b> M	0641	1.3 40	<b>4</b> W	0711	0.3 10	<b>19</b> Th	0018	6.2 190
	1100	5.2 160		1212	4.9 150		1132	4.9 150		1237	4.3 130		1321	4.6 140		0739	1.0 30
	1738	1.0 30		1803	1.6 50		1712	1.6 50		1718	2.6 80		1745	2.6 80		1350	4.3 130
	2354	4.6 140					2337	5.9 180							1746	3.3 100	
<b>5</b> Sa	0534	1.6 50	<b>20</b> Su	0026	5.2 160	<b>5</b> M	0618	0.7 20	<b>20</b> Tu	0018	5.9 180	<b>5</b> Th	0035	6.9 210	<b>20</b> F	0050	6.2 190
	1151	5.2 160		0647	1.3 40		1227	4.9 150		0716	1.0 30		0800	0.0 0		0812	1.0 30
	1811	1.0 30		1251	4.6 140		1745	2.0 60		1314	4.3 130		1416	4.6 140		1425	4.3 130
				1820	2.0 60		●			1745	2.6 80		1833	3.0 90		1826	3.3 100
<b>6</b> Su	0022	5.2 160	<b>21</b> M	0054	5.2 160	<b>6</b> Tu	0015	6.2 190	<b>21</b> W	0048	5.9 180	<b>6</b> F	0122	6.9 210	<b>21</b> Sa	0120	6.2 190
	0620	1.0 30		0723	1.0 30		0707	0.3 10		0751	1.0 30		0849	0.0 0		0844	1.0 30
	1240	5.6 170		1326	4.6 140		1320	4.9 150		1350	4.3 130		1508	4.6 140		1459	4.6 140
	● 1841	1.3 40		1838	2.0 60		1818	2.3 70		1816	2.6 80		1924	3.0 90		1908	3.3 100
<b>7</b> M	0053	5.6 170	<b>22</b> Tu	0121	5.6 170	<b>7</b> W	0055	6.6 200	<b>22</b> Th	0115	5.9 180	<b>7</b> Sa	0208	6.9 210	<b>22</b> Su	0151	6.2 190
	0707	0.7 20		0758	1.0 30		0758	0.0 0		0826	1.0 30		0937	0.3 10		0916	1.0 30
	1326	5.2 160		1400	4.3 130		1411	4.9 150		1427	4.3 130		1600	4.9 150		1533	4.6 140
	1909	1.3 40		1900	2.0 60		1854	2.3 70		1848	3.0 90		2018	3.3 100		1953	3.3 100
<b>8</b> Tu	0126	5.9 180	<b>23</b> W	0146	5.6 170	<b>8</b> Th	0136	6.6 200	<b>23</b> F	0140	5.9 180	<b>8</b> Su	0256	6.6 200	<b>23</b> M	0224	6.2 190
	0755	0.3 10		0832	1.0 30		0851	0.0 0		0900	1.0 30		1025	0.7 20		0950	1.0 30
	1412	5.2 160		1434	4.3 130		1504	4.6 140		1505	4.3 130		1652	4.9 150		1607	4.6 140
	1934	1.6 50		1925	2.3 70		1933	2.6 80		1923	3.0 90		2117	3.3 100		2041	3.3 100
<b>9</b> W	0200	5.9 180	<b>24</b> Th	0208	5.6 170	<b>9</b> F	0217	6.6 200	<b>24</b> Sa	0205	5.9 180	<b>9</b> M	0346	6.2 190	<b>24</b> Tu	0301	5.9 180
	0845	0.3 10		0905	1.0 30		0945	0.0 0		0935	1.0 30		1112	1.0 30		1025	1.3 40
	1459	4.6 140		1509	3.9 120		1601	4.3 130		1546	3.9 120		1743	4.9 150		1641	4.6 140
	2000	2.0 60		1951	2.3 70		2017	3.0 90		2000	3.0 90		2222	3.3 100		2134	3.0 90
<b>10</b> Th	0236	6.2 190	<b>25</b> F	0229	5.6 170	<b>10</b> Sa	0302	6.2 190	<b>25</b> Su	0233	5.9 180	<b>10</b> Tu	0443	5.6 170	<b>25</b> W	0343	5.6 170
	0941	0.3 10		0941	1.0 30		1043	0.3 10		1014	1.0 30		1156	1.3 40		1102	1.3 40
	1550	4.3 130		1549	3.9 120		1707	4.3 130		1632	3.9 120		1832	4.9 150		1718	4.9 150
	2032	2.3 70		2019	2.6 80		2107	3.3 100		2042	3.3 100		● 2338	3.6 110		2234	3.0 90
<b>11</b> F	0316	5.9 180	<b>26</b> Sa	0252	5.2 160	<b>11</b> Su	0352	5.9 180	<b>26</b> M	0307	5.6 170	<b>11</b> W	0548	4.9 150	<b>26</b> Th	0434	5.2 160
	1045	0.3 10		1025	1.0 30		1143	0.7 20		1057	1.0 30		1238	2.0 60		1139	1.6 50
	1653	3.9 120		1637	3.6 110		1818	4.3 130		1721	4.3 130		1919	5.2 160		1757	5.2 160
	2109	2.6 80		2048	2.6 80		2212	3.3 100		2133	3.3 100		● 2340	3.0 90		O	
<b>12</b> Sa	0402	5.6 170	<b>27</b> Su	0322	5.2 160	<b>12</b> M	0455	5.6 170	<b>27</b> Tu	0350	5.6 170	<b>12</b> Th	0120	3.3 100	<b>27</b> F	0537	4.9 150
	1158	0.7 20		1119	1.3 40		1244	1.0 30		1142	1.3 40		0659	4.6 140		1218	2.0 60
	1819	3.6 110		1739	3.6 110		1927	4.3 130		1810	4.3 130		1319	2.3 70		1840	5.2 160
	● 2158	3.0 90		2125	3.0 90		● 2344	3.6 110		2238	3.3 100		2007	5.2 160			
<b>13</b> Su	0502	5.2 160	<b>28</b> M	0403	4.9 150	<b>13</b> Tu	0613	4.9 150	<b>28</b> W	0450	5.2 160	<b>13</b> F	0333	3.0 90	<b>28</b> Sa	0100	2.6 80
	1315	1.0 30		1220	1.3 40		1345	1.3 40		1228	1.3 40		0820	4.3 130		0656	4.3 130
	2014	3.6 110		1852	3.6 110		2031	4.6 140		1857	4.6 140		1358	2.6 80		1301	2.3 70
	2318	3.3 100		● 2228	3.3 100					● 2354	3.3 100		2057	5.2 160		1930	5.6 170
<b>14</b> M	0626	4.9 150	<b>29</b> Tu	0512	4.9 150	<b>14</b> W	0153	3.3 100	<b>29</b> Th	0606	4.9 150	<b>14</b> Sa	0433	2.6 80	<b>29</b> Su	0253	2.3 70
	1433	1.0 30		1321	1.3 40		0737	4.6 140		1314	1.6 50		0947	3.9 120		0843	3.9 120
	2136	3.9 120		2006	3.6 110		1443	1.6 50		1943	4.6 140		1439	3.0 90		1351	2.6 80
				2359	3.3 100		2122	4.9 150					2145	5.6 170		2029	5.9 180
<b>15</b> Tu	0152	3.3 100	<b>30</b> W	0648	4.6 140	<b>15</b> Th	0358	3.0 90	<b>30</b> F	0120	3.0 90	<b>15</b> Su	0517	2.0 60	<b>30</b> M	0422	1.6 50
	0803	4.6 140		1420	1.3 40		0902	4.6 140		0731	4.6 140		1057	3.9 120		1014	3.9 120
	1541	1.3 40		2105	3.9 120		1530	2.0 60		1402	2.0 60		1519	3.0 90		1448	3.0 90
	2223	4.3 130					2204	4.9 150					2229	5.6 170		2134	6.2 190</

# Mina Jebel Ali, United Arab Emirates, 2008

Times and Heights of High and Low Waters

July				August				September				
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm	
1 Tu	0524	1.0	30	16 W	0614	1.3	40	1 F	0656	0.3	10	
1128	4.3	130	W 1240	3.9	120	F 1316	4.9	150	Sa 1311	4.6	140	
1545	3.0	90	1613	3.3	100	1739	3.0	90	Sa 1739	3.0	90	
2235	6.6	200	2315	6.2	190	●			M 1350	5.6	170	
2 W	0618	0.7	20	17 0647	1.0	30	16 0646	0.7	20	1 M 0103	6.2	190
1231	4.6	140	Th 1311	4.3	130	Sa 0735	0.3	10	0737	0.7	20	
1640	3.0	90	1656	3.3	100	1352	5.2	160	1925	2.0	60	
2332	6.9	210	2353	6.2	190	1833	2.6	80	Tu 1313	5.6	170	
3 Th	0708	0.3	10	18 0718	0.7	20	2 0021	6.9	210	18 0115	5.9	180
1325	4.6	140	F 1341	4.6	140	Sa 0810	0.3	10	W 0730	1.3	40	
1734	3.0	90	1738	3.3	100	1426	5.2	160	1339	5.9	180	
●			○			1926	2.6	80	1941	1.3	40	
4 F	0025	6.9	210	19 0029	6.6	200	3 Su 0111	6.9	210	18 0156	5.6	170
0753	0.0	0	Sa 0748	0.7	20	18 M 0049	6.6	200	W 0751	1.6	50	
1413	4.9	150	1409	4.6	140	0742	0.7	20	1407	5.9	180	
1829	3.0	90	1820	3.3	100	1355	5.2	160	2027	1.0	30	
5 Sa	0116	7.2	220	20 0105	6.6	200	3 W 0222	5.6	170	19 0237	5.2	160
0835	0.0	0	Su 0817	0.7	20	18 0822	1.6	50	F 0809	2.0	60	
1455	5.2	160	1434	4.9	150	1447	5.6	170	1438	6.2	190	
1925	3.0	90	1904	3.0	90	1902	2.3	70	2118	1.0	30	
6 Su	0204	6.9	210	21 0140	6.6	200	4 M 0156	6.6	200	20 0321	4.9	150
0914	0.3	10	W 0846	1.0	30	0841	0.7	20	W 0830	2.3	70	
1536	5.2	160	M 1459	4.9	150	1459	5.6	170	Sa 1513	6.2	190	
2021	3.0	90	1950	3.0	90	2017	2.3	70	2217	1.0	30	
7 M	0249	6.6	200	21 0317	5.9	180	5 Tu 0238	6.2	190	6 F 0332	4.6	140
0951	0.7	20	Tu 0916	1.0	30	0909	1.0	30	W 0847	2.0	60	
1616	5.2	160	1525	5.2	160	1531	5.6	170	Sa 1540	5.6	170	
2116	3.0	90	2038	2.6	80	2105	2.3	70	2221	1.6	50	
8 Tu	0335	6.2	190	22 0216	6.2	190	6 W 0317	5.9	180	21 0414	4.3	130
1026	1.3	40	W 0944	1.3	40	0932	1.6	50	Su 0858	2.6	80	
1655	5.2	160	1554	5.2	160	1604	5.6	170	M 1553	5.9	180	
2213	3.0	90	2128	2.6	80	2155	2.3	70	2332	1.3	40	
9 W	0422	5.6	170	23 0253	5.9	180	7 Th 0356	5.2	160	21 0414	4.3	130
1058	1.6	50	W 0944	1.3	40	0949	2.0	60	Su 0858	2.6	80	
1735	5.2	160	1554	5.2	160	1636	5.6	170	M 1553	5.9	180	
2318	3.0	90	2128	2.6	80	2251	2.3	70	2332	1.3	40	
10 Th	0513	4.9	150	24 0334	5.6	170	8 F 0436	4.6	140	22 0530	3.6	110
1127	2.3	70	Th 1011	1.6	50	1002	2.3	70	W 0933	3.0	90	
1815	5.6	170	1628	5.6	170	1709	5.6	170	M 1645	5.9	180	
●			○			●			○			
11 F	0042	3.0	90	25 0420	5.2	160	10 Su 0141	2.6	80	9 M 0512	3.9	120
0611	4.3	130	W 1037	2.0	60	0635	3.3	100	Su 1005	2.6	80	
1155	2.6	80	M 1707	5.6	170	1030	3.0	90	1714	5.9	180	
1857	5.6	170	○ 2327	2.3	70	1745	5.6	170	●			
12 Sa	0235	3.0	90	26 0517	4.6	140	11 M 0313	2.3	70	9 Tu 0216	2.0	60
0730	3.6	110	Su 1109	2.3	70	1933	5.2	160	W 1834	4.9	150	
1225	3.0	90	Sa 1753	5.6	170	●			●			
1945	5.6	170	1847	5.9	180							
13 Su	0402	2.3	70	27 0052	2.3	70	12 Tu 0423	2.0	60	24 0512	3.9	120
0937	3.6	110	W 0641	3.9	120	2048	5.6	170	Su 1005	2.6	80	
1305	3.3	100	Su 1153	2.6	80	●			●			
2043	5.6	170	1847	5.9	180							
14 M	0457	2.0	60	28 0251	2.0	60	13 W 0511	1.3	40	24 0228	1.3	40
1113	3.6	110	W 1040	3.9	120	1202	3.9	120	W 0957	3.9	120	
1410	3.3	100	Tu 1424	3.3	100	1509	3.6	110	Su 1242	3.6	110	
2142	5.6	170	2115	6.2	190	2155	5.6	170	1938	5.2	160	
15 Tu	0539	1.6	50	30 0519	1.0	30	14 Th 0547	1.0	30	25 0228	1.3	40
1203	3.9	120	W 1148	4.3	130	1223	4.3	130	W 1242	4.3	130	
1520	3.6	110	1540	3.3	100	1613	3.6	110	1613	3.3	100	
2232	5.9	180	2226	6.2	190	2246	5.9	180	2217	5.6	170	
●			●			2324	6.2	190	2318	5.6	170	
16 Th	0610	0.3	10	31 0610	0.3	10	13 Th 0505	0.7	20	27 0525	1.0	30
1236	4.6	140	Th 1236	4.6	140	1145	4.3	130	W 1147	4.9	150	
1642	3.3	100	1642	3.3	100	1556	3.3	100	Sa 1713	2.3	70	
2326	6.6	200	2326	6.6	200	2224	5.9	180	2318	5.6	170	
●			●			2306	5.9	180	●			
17 Th	0707	0.7	20	31 0016	6.2	190	12 F 0536	1.0	30	28 0603	1.0	30
1321	5.2	160	Su 1321	5.2	160	1736	2.6	80	Su 1215	5.2	160	
1838	2.3	70	1838	2.3	70	2350	5.9	180	Su 1759	2.0	60	

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Mina Jebel Ali, United Arab Emirates, 2008

Times and Heights of High and Low Waters

October				November				December					
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height		
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm		
1 W 0130	5.2	160	16 Th 0106	5.2	160	1 Sa 0228	4.3	130	1 M 0245	4.6	140		
0718	1.6	50	0642	1.6	50	0706	2.6	80	0710	2.6	80		
1339	5.6	170	1302	6.2	190	1354	5.9	180	1353	6.6	200		
2000	1.0	30	1940	0.7	20	2102	0.7	20	2122	0.0	0		
2 Th 0206	4.9	150	17 F 0151	5.2	160	2 Su 0304	3.9	120	2 Tu 0340	4.6	140		
0730	2.0	60	0705	2.0	60	0733	2.6	80	0755	3.0	90		
1406	5.9	180	1335	6.2	190	1416	5.6	170	1437	6.6	200		
2039	1.0	30	2029	0.3	10	2138	1.0	30	2216	0.0	0		
3 F 0239	4.6	140	18 Sa 0238	4.9	150	3 M 0344	3.9	120	18 Tu 0440	4.3	130		
0745	2.0	60	0731	2.3	70	0800	3.0	90	0847	3.3	100		
1430	5.6	170	1410	6.6	200	1440	5.6	170	1527	6.2	190		
2116	1.0	30	2122	0.3	10	2219	1.0	30	2312	0.3	10		
4 Sa 0314	4.3	130	19 Su 0328	4.3	130	4 Tu 0432	3.6	110	19 W 0546	4.3	130		
0804	2.3	70	0803	2.6	80	0829	3.0	90	0953	3.3	100		
1452	5.6	170	1449	6.2	190	1507	5.2	160	1627	5.6	170		
2156	1.3	40	2222	0.7	20	2307	1.0	30	2315	1.0	30		
5 Su 0351	3.9	120	20 M 0431	3.9	120	5 W 0533	3.6	110	20 Th 0008	1.0	30		
0824	2.6	80	0842	3.0	90	0905	3.3	100	0650	4.6	140		
1515	5.6	170	1534	5.9	180	1545	4.9	150	1128	3.3	100		
2245	1.3	40	2330	0.7	20	1742	4.9	150	2359	1.3	40		
6 M 0437	3.6	110	21 Tu 0555	3.9	120	6 Th 0000	1.3	40	21 O 0106	1.3	40		
0840	2.6	80	0932	3.3	100	0643	3.6	110	0751	4.6	140		
1543	5.2	160	1632	5.6	170	1004	3.3	100	1336	3.3	100		
2350	1.6	50	O	1645	4.6	140	1908	4.6	140	O 1645	4.6	140	
7 Tu 0546	3.3	100	22 W 0042	1.0	30	7 F 0056	1.3	40	22 Sa 0203	1.6	50		
0838	3.0	90	0741	3.9	120	0754	3.9	120	0846	4.9	150		
1622	4.9	150	1053	3.6	110	1140	3.6	110	1536	2.6	80		
O	1754	5.2	160	1820	4.6	140	2037	4.3	130	1854	3.9	120	
8 W 0104	1.6	50	23 Th 0157	1.0	30	8 Sa 0152	1.3	40	23 Su 0256	2.0	60		
1737	4.9	150	0906	4.3	130	0850	4.3	130	0933	4.9	150		
O	1335	3.6	110	1355	3.3	100	1355	3.3	100	1633	2.3	70	
1931	4.9	150	1952	4.3	130	2158	4.3	130	2158	4.3	130		
9 Th 0217	1.6	50	24 F 0307	1.3	40	9 Su 0245	1.6	50	24 M 0339	2.3	70		
1914	4.6	140	0956	4.6	140	0931	4.6	140	1013	5.2	160		
O	1537	3.0	90	1544	2.6	80	1544	2.6	80	1717	1.6	50	
2101	4.9	150	2112	4.6	140	2302	4.3	130	2302	4.3	130		
10 F 0318	1.3	40	25 Sa 0404	1.3	40	10 M 0333	1.6	50	25 Tu 0412	2.6	80		
1036	3.9	120	1033	4.9	150	1006	4.9	150	1050	5.6	170		
1456	3.6	110	1637	2.6	80	1637	2.0	60	1755	1.3	40		
2038	4.9	150	2213	4.9	150	2218	4.6	140	2355	4.3	130		
11 Sa 0405	1.3	40	26 Su 0447	1.6	50	11 Tu 0413	1.6	50	26 W 0439	2.6	80		
1051	4.3	130	1105	5.2	160	1041	5.2	160	1126	5.6	170		
Sa	1604	3.3	100	1721	2.0	60	1722	1.3	40	1831	1.0	30	
2146	4.9	150	2310	4.9	150	2316	4.6	140	2055	0.3	10		
12 Su 0443	1.3	40	27 M 0521	1.6	50	12 W 0449	2.0	60	27 Th 0039	4.3	130		
1112	4.6	140	1134	5.2	160	1116	5.6	170	0505	2.6	80		
1648	2.6	80	1801	1.6	50	1807	0.7	20	1200	5.6	170		
2242	5.2	160	2358	4.9	150	O 1906	0.7	20	O 1852	0.0	0		
13 M 0516	1.3	40	28 Tu 0548	2.0	60	13 Th 0010	4.6	140	12 O 0010	4.3	130		
1136	5.2	160	1204	5.6	170	0521	2.0	60	0437	2.6	80		
1729	2.0	60	1838	1.3	40	1153	6.2	190	1124	6.2	190		
2331	5.2	160	O 1915	1.0	30	O 1853	0.3	10	O 1852	0.0	0		
14 Tu 0548	1.3	40	29 W 0041	4.9	150	14 F 0103	4.6	140	12 O 0121	3.9	120		
1203	5.6	170	0606	2.3	70	0554	2.3	70	0505	3.0	90		
Tu	1811	1.3	40	1234	5.6	170	1231	6.6	200	1207	5.9	180	
O	●	1915	1.0	30	1941	0.0	0	1941	0.7	20	● 1926	0.3	10
15 W 0019	5.6	170	30 Th 0119	4.6	140	15 Sa 0154	4.6	140	28 Su 0151	3.9	120		
0617	1.6	50	0622	2.3	70	0629	2.6	80	0523	2.6	80		
1231	5.9	180	1303	5.9	180	1311	6.6	200	1211	6.6	200		
1854	1.0	30	1952	0.7	20	2031	0.0	0	1939	-0.3	-10		
O	31 F 0154	4.6	140	31 F 0641	2.3	70	29 O 0220	4.3	130	28 W 0250	4.3	130	
1330	5.9	180	1330	5.9	180	1330	5.9	180	0747	2.6	80		
2027	0.7	20	2027	0.7	20	2047	0.3	10	1414	5.6	170		
O	31 W 0320	4.3	130	31 W 0747	2.3	70	2056	0.3	10	2127	0.3	10	

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

## Aden, Yemen, 2008

Times and Heights of High and Low Waters

January				February				March															
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height												
h m 0120 Tu 0930	ft 6.6 3.0	cm 200 90	<b>16</b> W 0816	h m 0028 7.5 230	ft 2.3 70	cm 70	<b>1</b> F 1017	h m 0021 6.6 200	ft 2.3 70	cm 70	<b>16</b> Sa 1027	h m 0141 6.9 210	ft 1.3 40	cm 40	<b>1</b> Sa 2332	h m 0910 2.3 70	ft 6.2 190	cm 190	<b>16</b> Su 1008	h m 0131 6.2 190	ft 1.6 50	cm 50	
1453 1750	4.6 4.3	140 130	17 W 0931	0118 1.6 50	1029 Sa 1107	6.2 1.6 50	1852 Su 1130	0319 6.9 210	1018 Su 1914	2.0 5.9 60	17 M 1828	0346 1112 6.2 50	1008 1.6 50	1805 6.6 200	2316 5.2 160	0131 6.2 190	1008 1.6 50	1805 6.6 200	2316 5.2 160				
1453 1750	4.6 4.3	140 130	17 W 0931	0118 1.6 50	1029 Sa 1107	6.2 1.6 50	1852 Su 1130	0319 6.9 210	1018 Su 1914	2.0 5.9 60	17 M 1828	0346 1112 6.2 50	1008 1.6 50	1805 6.6 200	2316 5.2 160	0131 6.2 190	1008 1.6 50	1805 6.6 200	2316 5.2 160				
1845	5.2	160	18 F 1040	0219 1.0 30	0329 Su 1147	6.2 1.3 40	1845 M 1219	0445 6.9 210	0300 M 1934	5.9 0.7 20	18 M 1903	0006 1.6 50	1851 7.2 220	0006 1.6 50	1200 2.0 60	0006 1.6 50	1851 7.2 220	0006 1.6 50	1200 2.0 60	1851 7.2 220			
1845	5.2	160	18 F 1040	0219 1.0 30	0329 Su 1147	6.2 1.3 40	1845 M 1219	0445 6.9 210	0300 M 1934	5.9 0.7 20	18 M 1903	0006 1.6 50	1851 7.2 220	0006 1.6 50	1200 2.0 60	0006 1.6 50	1851 7.2 220	0006 1.6 50	1200 2.0 60	1851 7.2 220			
2144	5.6	170	18 F 1040	0219 1.0 30	0329 Su 1147	6.2 1.3 40	2144 M 1222	0438 6.6 200	0426 Tu 1222	6.2 1.0 30	19 Tu 1147	0426 6.2 190	1912 W 0612	0043 6.6 110	1237 2.0 60	0043 6.6 110	1912 7.2 220	0043 6.6 110	1237 2.0 60	1912 7.2 220			
2144	5.6	170	18 F 1040	0219 1.0 30	0329 Su 1147	6.2 1.3 40	2144 M 1222	0438 6.6 200	0426 Tu 1222	6.2 1.0 30	19 Tu 1147	0426 6.2 190	1908 W 0612	0043 6.6 110	1237 2.0 60	0043 6.6 110	1908 7.2 220	0043 6.6 110	1237 2.0 60	1908 7.2 220			
2348	5.6	170	19 Sa 1214	0327 0.3 10	0041 Tu 0533	5.2 6.6 160	2348 Su 1957	0435 0.0 0	0025 W 0646	4.6 6.9 140	20 Tu 1256	0128 3.9 120	0025 W 0526	4.6 6.6 140	20 Th 1336	0115 3.3 100	0658 6.6 200	0115 3.3 100	1309 2.3 70	0115 3.3 100	0658 6.6 200	1309 2.3 70	
2348	5.6	170	19 Sa 1214	0327 0.3 10	0041 Tu 0533	5.2 6.6 160	2348 Su 1957	0435 0.0 0	0025 W 0646	4.6 6.9 140	20 Tu 1256	0128 3.9 120	0025 W 0526	4.6 6.6 140	20 Th 1336	0115 3.3 100	0658 6.6 200	0115 3.3 100	1311 7.5 230	0115 3.3 100	0658 6.6 200	1311 7.5 230	
2031	7.2	220	21 Su 1246	0030 7.5 230	0116 W 0621	4.9 6.9 150	2031 M 1315	0030 7.5 230	0206 Th 0733	3.6 6.9 110	2031 O 2042	0055 Th 1409	3.9 1.3 40	0055 Th 1255	3.9 1.3 40	21 F 0737	0145 2.6 80	1337 2.6 80	0145 2.6 80	1948 7.5 230	0145 2.6 80	1337 2.6 80	1948 7.5 230
2031	7.2	220	21 Su 1246	0030 7.5 230	0116 W 0621	4.9 6.9 150	2031 M 1315	0030 7.5 230	0206 Th 0733	3.6 6.9 110	2031 O 2042	0055 Th 1409	3.9 1.3 40	0055 Th 1255	3.9 1.3 40	21 O 1948	0145 2.6 80	1337 2.6 80	0145 2.6 80	1948 7.5 230	0145 2.6 80	1337 2.6 80	1948 7.5 230
2103	7.2	220	22 M 0540	0128 7.2 220	0149 Th 0707	4.3 6.9 130	2103 O 2041	0128 7.2 220	0242 F 0815	3.3 6.9 100	2103 ● 2041	0126 F 0815	3.3 6.9 100	0126 F 0705	3.3 7.2 100	22 Sa 0813	0215 2.3 70	1401 3.0 90	0215 2.3 70	2007 7.5 230	0215 2.3 70	1401 3.0 90	2007 7.5 230
2103	7.2	220	22 M 0540	0128 7.2 220	0149 Th 0707	4.3 6.9 130	2103 ● 2041	0128 7.2 220	0242 F 0815	3.3 6.9 100	2103 ● 2041	0126 F 0815	3.3 6.9 100	0126 F 0705	3.3 7.2 100	22 Sa 0813	0215 2.3 70	1401 3.0 90	0215 2.3 70	2007 7.5 230	0215 2.3 70	1401 3.0 90	2007 7.5 230
2131	7.5	230	23 Tu 1351	0218 7.2 220	0223 F 0751	4.3 7.2 130	2131 ● 2104	0218 7.2 220	0315 Sa 0854	3.9 6.6 90	2131 ● 2104	0200 Sa 1500	2.6 6.6 80	0200 Sa 1400	2.6 6.6 80	23 Su 0848	0243 2.0 60	1421 3.6 110	0243 2.0 60	2026 7.5 230	0243 2.0 60	1421 3.6 110	2026 7.5 230
2131	7.5	230	23 Tu 1351	0218 7.2 220	0223 F 0751	4.3 7.2 130	2131 ● 2104	0218 7.2 220	0315 Sa 0854	3.9 6.6 90	2131 ● 2104	0200 Sa 1500	2.6 6.6 80	0200 Sa 1400	2.6 6.6 80	23 Su 0848	0243 2.0 60	1421 3.6 110	0243 2.0 60	2026 7.5 230	0243 2.0 60	1421 3.6 110	2026 7.5 230
2156	7.5	230	24 W 0703	0304 6.9 210	0301 Sa 0835	3.9 6.9 100	2156 W 1508	0304 6.9 210	0348 Su 0932	2.6 6.2 80	2156 W 1508	0239 Su 1432	2.0 6.9 70	0239 Su 1432	2.0 6.9 70	24 M 0923	0310 2.0 60	1438 3.9 120	0310 2.0 60	2043 7.5 230	0310 2.0 60	1438 3.9 120	2043 7.5 230
2156	7.5	230	24 W 0703	0304 6.9 210	0301 Sa 0835	3.9 6.9 100	2156 W 1508	0304 6.9 210	0348 Su 0932	2.6 6.2 80	2156 W 1508	0239 Su 1432	2.0 6.9 70	0239 Su 1432	2.0 6.9 70	24 M 0923	0310 2.0 60	1438 3.9 120	0310 2.0 60	2043 7.5 230	0310 2.0 60	1438 3.9 120	2043 7.5 230
2219	7.5	230	25 Th 0745	0348 6.6 200	0343 Su 0900	3.6 6.6 110	2219 Th 1538	0348 6.6 200	0421 M 1010	2.6 5.6 80	2219 Th 1538	0348 6.6 200	0421 M 1010	2.6 5.6 80	25 Tu 0928	0321 1.6 50	1451 4.3 130	0321 1.6 50	2058 7.2 220	0321 1.6 50	1451 4.3 130	2058 7.2 220	
2219	7.5	230	25 Th 0745	0348 6.6 200	0343 Su 0900	3.6 6.6 110	2219 Th 1538	0348 6.6 200	0421 M 1010	2.6 5.6 80	2219 Th 1538	0348 6.6 200	0421 M 1010	2.6 5.6 80	25 Tu 0928	0321 1.6 50	1451 4.3 130	0321 1.6 50	2058 7.2 220	0321 1.6 50	1451 4.3 130	2058 7.2 220	
2242	7.2	220	26 F 0828	0430 5.9 180	0430 Sa 0944	3.6 5.9 110	2242 F 1618	0430 5.9 180	0456 Tu 1013	2.6 6.2 80	2242 F 1618	0456 Tu 1013	2.6 6.2 80	0456 Tu 1052	2.6 5.2 80	26 W 1042	0409 2.0 60	1503 4.3 130	0409 2.0 60	2113 7.2 220	0409 2.0 60	1503 4.3 130	2113 7.2 220
2242	7.2	220	26 F 0828	0430 5.9 180	0430 Sa 0944	3.6 5.9 110	2242 F 1618	0430 5.9 180	0456 Tu 1013	2.6 6.2 80	2242 F 1618	0456 Tu 1013	2.6 6.2 80	0456 Tu 1052	2.6 5.2 80	26 W 1042	0409 2.0 60	1503 4.3 130	0409 2.0 60	2113 7.2 220	0409 2.0 60	1503 4.3 130	2113 7.2 220
2255	7.9	240	27 Sa 1555	0514 5.6 200	0525 Tu 1116	3.3 5.6 70	2255 Sa 1618	0514 5.6 200	0538 W 1150	2.6 4.6 80	2255 Sa 1618	0514 5.6 200	0538 W 1150	2.6 4.6 80	27 W 1137	0446 2.0 60	1510 4.6 140	0446 2.0 60	2131 6.9 210	0446 2.0 60	1510 4.6 140	2131 6.9 210	
2255	7.9	240	27 Sa 1555	0514 5.6 200	0525 Tu 1116	3.3 5.6 70	2255 Sa 1618	0514 5.6 200	0538 W 1150	2.6 4.6 80	2255 Sa 1618	0514 5.6 200	0538 W 1150	2.6 4.6 80	27 W 1137	0446 2.0 60	1510 4.6 140	0446 2.0 60	2131 6.9 210	0446 2.0 60	1510 4.6 140	2131 6.9 210	
2337	6.9	210	28 M 1624	0600 4.9 180	0629 W 1247	3.3 4.9 60	2337 M 1615	0600 4.9 180	0631 Th 2239	2.6 6.6 80	2337 M 1615	0600 4.9 180	0631 Th 2239	2.6 6.6 80	28 F 2150	0531 2.3 70	1623 4.9 150	0531 2.3 70	2254 7.2 220	0531 2.3 70	1623 4.9 150	2254 7.2 220	
2337	6.9	210	28 M 1624	0600 4.9 180	0629 W 1247	3.3 4.9 60	2337 M 1615	0600 4.9 180	0631 Th 2239	2.6 6.6 80	2337 M 1615	0600 4.9 180	0631 Th 2239	2.6 6.6 80	28 F 2150	0531 2.3 70	1623 4.9 150	0531 2.3 70	2254 7.2 220	0531 2.3 70	1623 4.9 150	2254 7.2 220	
2337	6.9	210	29 M 1650	0654 4.9 150	0744 Th 1535	3.0 4.9 60	2337 M 1552	0654 4.9 150	0744 F 2301	2.0 6.6 80	2337 M 1552	0654 4.9 150	0744 F 2301	2.0 6.6 80	29 Sa 2208	0630 2.3 70	1621 4.9 150	0630 2.3 70	2113 6.9 220	0630 2.3 70	1621 4.9 150	2113 6.9 220	
2337	6.9	210	29 M 1650	0654 4.9 150	0744 Th 1535	3.0 4.9 60	2337 M 1552	0654 4.9 150	0744 F 2301	2.0 6.6 80	2337 M 1552	0654 4.9 150	0744 F 2301	2.0 6.6 80	29 Sa 2208	0630 2.3 70	1621 4.9 150	0630 2.3 70	2113 6.9 220	0630 2.3 70	1621 4.9 150	2113 6.9 220	
2337	6.9	210	30 Tu 1237	0759 4.9 150	0025 W 2354	3.0 6.6 90	2337 Tu 1718	0759 4.9 150	0025 F 0908	2.0 6.6 50	2337 Tu 1718	0759 4.9 150	0025 F 0908	2.0 6.6 50	31 O 0912	0844 							

## Aden, Yemen, 2008

Times and Heights of High and Low Waters

April					May					June															
	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height											
1 Tu	0236 1007 1750 2327	5.6 2.3 6.2 4.6	ft 70 190 140	16 W 1124 1755	5.9 3.3 7.2	cm 100 220	1 Th	0357 0952 1636 2317	5.6 3.0 6.9 3.0	ft 90 210 90	16 F 1110 1712	5.6 4.6 140 220	cm 170 140 220	1 Su	0622 1048 1652	5.9 4.3 7.9	ft 130 240	16 M 1142 1714	0028 5.2 160 6.9	cm 40 170 210					
2 W	0413 1055 1755 2354	5.9 2.3 6.9 3.9	ft 70 210 120	17 Th	0023 0624 1201 1815	3.0 6.2 3.3 7.2	cm 90 190 100 220	2 F	0514 1043 1706 2356	5.9 3.3 7.5 2.0	ft 180 100 230 60	17 Sa	0024 0711 1146 1737	2.0 5.9 4.6 7.2	cm 60 180 140 220	2 M	0020 0719 1147 1738	0.3 6.2 4.6 8.2	ft 10 190 140 250	17 Tu	0059 0822 1229 1750	1.3 5.9 5.2 6.9	cm 40 180 160 210		
3 Th	0520 1136 1810	6.2 2.3 7.2	ft 70 220	18 F	0053 0704 1232 1834	2.6 6.2 3.6 7.5	cm 190 190 110 230	3 Sa	0615 1130 1741	6.2 3.6 7.9	ft 190 110 240	18 Su	0054 0743 1218 1802	1.6 5.9 4.9 7.2	cm 50 180 150 220	3 Tu	0108 0813 1246 1825	-0.3 6.6 4.6 8.2	ft -10 200 140 250	18 W	0130 0847 1313 1826	1.0 5.9 5.2 6.9	cm 30 180 160 210		
4 F	0025 0614 1215 1834	3.0 6.6 2.3 7.5	ft 200 120 70 230	19 Sa	0120 0739 1259 1855	2.0 6.6 3.9 7.5	cm 60 200 120 230	4 Su	0037 0709 1215 1816	1.0 6.6 3.6 8.2	ft 30 200 110 250	19 M	0122 0815 1248 1827	1.3 6.2 4.9 7.2	cm 40 190 150 220	4 W	0156 0904 1345 1913	-0.7 6.9 4.9 8.2	ft -20 210 150 250	19 Th	0201 0915 1355 1902	0.7 6.2 4.9 6.9	cm 20 190 150 210		
5 Sa	0100 0705 1252 1902	2.0 6.9 2.6 8.2	ft 210 80 250	20 Su	0147 0813 1323 1915	1.6 6.6 4.3 7.5	cm 50 200 130 230	5 M	0120 0802 1301 1853	0.3 6.9 3.9 8.5	ft 10 210 120 260	20 Tu	0149 0847 1318 1852	1.3 6.2 4.9 7.2	cm 40 190 150 220	5 Th	0243 0954 1445 2003	-0.7 6.9 4.9 7.9	ft -20 210 150 240	20 F	0232 0944 1436 1939	0.7 6.2 4.9 6.6	cm 20 190 150 200		
6 Su	0138 0754 1328 ● 1933	1.3 7.2 3.0 8.5	ft 220 90 260	21 M	0213 0846 1345 1935	1.6 6.2 4.3 7.5	cm 50 190 130 230	6 Tu	0205 0856 1348 1932	-0.3 6.9 4.3 8.5	ft -10 210 130 260	21 W	0217 0923 1349 1917	1.0 6.2 4.9 7.2	cm 30 190 150 220	6 F	0331 1043 1550 2055	-0.3 7.2 4.6 7.2	ft -10 220 140 220	21 Sa	0304 1014 1517 2018	1.0 6.2 4.9 6.6	cm 30 190 150 200		
7 M	0219 0845 1406 2004	0.7 6.9 3.3 8.5	ft 20 210 100 260	22 Tu	0239 0922 1405 1953	1.3 6.2 4.6 7.5	cm 40 190 140 230	7 W	0252 0952 1438 2012	-0.3 6.9 4.6 8.2	ft -10 210 140 250	22 Th	0247 1000 1424 1945	1.0 6.2 5.2 6.9	cm 30 190 160 210	7 Sa	0419 1132 1659 2151	0.3 7.2 4.6 6.6	ft 10 220 140 200	22 Su	0337 1042 1602 2100	1.0 6.6 4.6 6.2	cm 30 200 140 190		
8 Tu	0303 0939 1445 2037	0.3 6.9 3.9 8.5	ft 10 210 120 260	23 W	0307 1000 1427 2012	1.3 5.9 4.6 7.2	cm 40 180 140 220	8 Th	0340 1051 1535 2055	0.0 6.9 4.9 7.5	ft 0 210 150 230	23 F	0320 1040 1503 2016	1.0 6.2 5.2 6.9	cm 30 190 160 210	8 Su	0506 1218 1813 2255	1.0 6.9 4.3 5.9	ft 30 210 130 180	23 M	0411 1109 1651 2148	1.3 6.6 4.6 5.9	cm 40 200 140 180		
9 W	0351 1040 1527 2111	0.3 6.6 4.6 8.2	ft 10 200 140 250	24 Th	0339 1044 1451 2034	1.6 5.9 4.9 6.9	cm 50 180 150 210	9 F	0432 1154 1644 2142	0.3 6.9 5.2 6.9	ft 10 210 160 210	24 Sa	0355 1121 1550 2051	1.3 6.2 5.2 6.6	cm 40 190 160 200	9 M	0553 1303 1931 2244	2.0 6.9 3.9 5.6	ft 60 210 120 170	24 Tu	0443 1137 1748 2244	2.0 6.6 4.3 5.6	cm 60 200 130 170		
10 Th	0444 1152 1617 2149	0.7 6.2 4.9 7.5	ft 20 190 150 230	25 F	0414 1137 1519 2059	1.6 5.6 5.2 6.6	cm 50 170 160 200	10 Sa	0527 1302 1814 2240	1.0 6.6 5.2 6.2	ft 30 200 160 190	25 Su	0433 1201 1651 2134	1.6 6.2 5.2 6.2	cm 50 190 160 190	10 Tu	0017 0639 1345 2043	5.2 3.0 6.9 3.6	ft 160 90 210 110	25 W	0516 1209 1853 2356	2.3 6.6 3.6 5.2	cm 70 200 110 <br;>160</br;>		
11 F	0543 1324 1731 2234	1.0 5.9 5.6 6.9	ft 30 180 170 210	26 Sa	0456 1253 1558 2125	2.0 5.6 5.6 6.2	cm 60 170 170 190	11 Su	0626 1409 2003	1.6 6.6 4.9	ft 50 200 150	26 M	0514 1240 1812 2232	2.0 6.2 4.9 5.6	cm 60 190 150 170	11 W	0159 0726 1423 2146	4.9 3.6 6.6 3.0	ft 150 110 200 90	26 Th	0552 1246 2003 ●	3.0 6.9 3.0 ●	cm 90 210 90 ●		
12 Sa	0652 1516 1938 ● 2341	1.6 6.2 5.6 6.2	ft 50 190 170 190	27 Su	0546 1449 1728 2158	2.3 5.6 5.6 5.9	cm 70 170 170 180	12 M	0011 0730 1506 2131	5.6 2.6 6.9 4.3	ft 170 80 210 130	27 Tu	0559 1319 1940 2238	2.3 6.2 4.6 2.6	cm 70 190 140 80	12 Th	0424 0815 1459 2111	4.9 4.3 6.6 4.6	ft 150 130 200 70	27 F	0133 0636 1330 2111	4.6 3.6 7.2 70	cm 140 110 220 70		
13 Su	0812 1624 2202	2.0 6.6 4.9	ft 60 200 150	28 M	0645 1534 2048 ● 2325	2.3 5.9 5.2 5.6	cm 70 180 160 170	13 Tu	0222 0837 1548 2233	5.2 3.3 6.9 3.6	ft 160 100 210 110	28 W	0000 0649 1358 ● 2052	5.2 3.0 6.6 3.9	cm 160 90 200 120	13 F	0624 0905 1532 2320	4.9 4.9 6.6 2.0	ft 150 150 200 60	28 Sa	0344 0737 1420 2216	4.6 4.3 7.2 1.3	cm 140 130 220 40		
14 M	0208 0932 1703 2308	5.6 2.6 6.9 4.3	ft 170 80 210 130	29 Tu	0752 1552 2200 2239	2.6 6.2 4.6 3.9	cm 80 190 140 120	14 W	0422 0938 1620 2317	5.2 3.9 6.9 3.0	ft 160 120 210 90	29 Th	0150 0745 1439 2151	4.9 3.3 6.9 3.0	cm 150 100 210 90	14 Sa	0723 0959 1605 2355	5.2 5.2 6.6 1.6	ft 160 160 200 50	29 Su	0528 0857 1516 2315	5.2 4.6 7.5 0.7	cm 160 140 230 20		
15 Tu	0415 1036 1732 2349	5.6 3.0 6.9 3.6	ft 170 90 210 110	30 W	0212 0855 1610 2239	5.2 3.0 6.6 3.9	cm 160 90 200 120	15 Th	0543 1029 1647 2353	5.6 4.3 6.9 2.3	ft 170 130 210 70	30 F	0344 0846 1522 2243	5.2 3.6 7.2 2.0	cm 160 110 220 60	15 Sa	0752 1052 1639 2332	5.6 5.2 6.9 1.0	ft 170 160 210 30	30 M	0637 1022 1616 ●	5.6 4.9 7.5 ●	cm 170 150 230 ●		
														31 Sa	0515 0947 1606 2332	5.6 3.9 7.5 1.0	ft 170 120 230 30								

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

## Aden, Yemen, 2008

Times and Heights of High and Low Waters

July				August				September				
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm	
1 Tu 0008	0.0	0	16 W 0038	1.0	30	1 F 0135	-0.3	-10	16 Sa 0115	1.0	30	
0729	6.2	190	0815	5.6	170	0832	6.9	210	0802	6.2	190	
1140	4.9	150	1233	4.9	150	1353	3.6	110	1334	3.6	110	
1715	7.5	230	1734	6.2	190	● 1916	6.9	210	1900	6.6	200	
2 W 0059	-0.7	-20	17 Th 0111	0.7	20	2 Sa 0216	0.0	0	17 Su 0144	1.0	30	
0815	6.6	200	0828	5.9	180	0902	7.2	220	0820	6.6	200	
1249	4.6	140	1316	4.9	150	1440	3.3	100	1405	3.3	100	
1814	7.5	230	1819	6.6	200	2008	6.9	210	○ 1942	6.6	200	
3 Th 0147	-0.7	-20	18 F 0142	0.7	20	3 Su 0253	0.7	20	18 M 0214	1.0	30	
0858	6.9	210	0847	6.2	190	0931	7.2	220	0841	6.9	210	
1352	4.6	140	1352	4.6	140	1525	3.0	90	1438	2.6	80	
● 1910	7.5	230	○ 1902	6.6	200	2057	6.6	200	2024	6.6	200	
4 F 0233	-0.7	-20	19 Sa 0212	0.7	20	4 M 0327	1.3	40	19 Tu 0244	1.3	40	
0937	7.2	220	0908	6.2	190	0957	6.9	210	0903	6.9	210	
1450	4.3	130	1428	4.3	130	1608	2.6	80	1516	2.3	70	
2005	7.2	220	1943	6.6	200	2144	5.9	180	2106	6.2	190	
5 Sa 0316	0.0	0	20 Su 0243	0.7	20	5 Tu 0357	2.0	60	20 W 0312	2.0	60	
1014	7.2	220	0931	6.6	200	1023	6.9	210	0926	7.2	220	
1546	3.9	120	1504	3.9	120	1652	2.6	80	1558	2.0	60	
2059	6.9	210	2023	6.6	200	2232	5.6	170	2153	5.9	180	
6 Su 0357	0.7	20	21 M 0314	1.0	30	6 W 0421	2.6	80	21 Th 0338	2.6	80	
1050	7.2	220	0954	6.6	200	1046	6.6	200	0952	7.2	220	
1642	3.6	110	1542	3.6	110	1737	2.6	80	1646	1.6	50	
2153	6.2	190	2105	6.2	190	2323	4.9	150	2247	5.2	160	
7 M 0435	1.3	40	22 Tu 0343	1.6	50	7 Th 0434	3.3	100	22 F 0400	3.0	90	
1123	6.9	210	1017	6.9	210	1104	6.6	200	1023	7.2	220	
1739	3.3	100	1625	3.3	100	1828	2.6	80	1744	1.6	50	
2250	5.6	170	2151	5.9	180	● 1929	2.6	80	○ 1853	1.3	40	
8 Tu 0510	2.3	70	23 W 0411	2.0	60	8 F 0028	4.3	130	23 Sa 0000	4.9	150	
1155	6.9	210	1043	6.9	210	0403	3.9	120	0417	3.6	110	
1838	3.3	100	1716	3.0	90	1119	6.2	190	1101	6.9	210	
2354	4.9	150	2244	5.6	170	● 1929	2.6	80	1853	1.3	40	
9 W 0540	3.3	100	24 Th 0435	2.6	80	9 Sa 1135	6.2	190	24 Su 0204	4.6	140	
1225	6.6	200	1112	6.9	210	2044	2.3	70	0432	4.3	130	
1942	3.0	90	1815	2.6	80	● 2015	1.3	40	1149	6.6	200	
● 2048	2.6	80	2352	4.9	150	○ 2015	1.3	40	● 2015	1.3	40	
10 Th 0115	4.6	140	25 F 0459	3.3	100	10 Su 1202	5.9	180	25 M 1259	6.2	190	
0559	3.9	120	1149	6.9	210	2158	2.0	60	2143	1.0	30	
1254	6.6	200	1924	2.0	60	● 2015	1.3	40	1203	4.9	150	
● 2048	2.6	80	○ 2048	2.0	60	○ 2015	1.3	40	1453	4.9	150	
11 F 1322	6.2	190	26 Sa 0134	4.6	140	11 M 1308	5.6	170	26 Tu 0610	5.6	170	
2150	2.3	70	0527	3.9	120	2255	1.6	50	0930	4.9	150	
Sa	2244	2.0	1234	6.9	210	● 1437	6.2	190	1437	6.2	190	
			2040	1.6	50	2256	0.7	20	2256	0.7	20	
12 Sa 1357	6.2	190	27 Su 0411	4.6	140	12 Tu 0813	5.2	160	27 W 0631	5.9	180	
	2244	2.0	0610	4.6	140	1057	5.2	160	1119	4.6	140	
			1332	6.9	210	1513	5.6	170	1618	6.2	190	
			2157	1.0	30	2337	1.3	40	2352	0.7	20	
13 Su 1447	6.2	190	28 M 0602	5.2	160	13 W 0737	5.6	170	28 Th 0659	6.6	200	
	2327	1.6	0843	4.9	150	1159	4.9	150	1218	3.9	120	
			1444	6.9	210	1631	5.6	170	1736	6.2	190	
			2304	0.3	10	● 1834	6.6	200	● 1812	6.2	190	
14 M 0856	5.2	160	29 Tu 0648	5.6	170	14 Th 0737	1.0	30	14 F 0037	0.7	20	
	1011	5.2	160	1035	4.9	150	0737	5.9	180	0726	6.9	210
	1547	6.2	190	1603	6.9	210	1235	4.6	140	1303	3.3	100
						1728	5.9	180	1834	6.6	200	
15 Tu 0004	1.3	40	30 W 0725	0.0	0	15 F 0044	1.0	30	30 Sa 0117	0.7	20	
	0820	5.6	170	0725	6.2	190	0747	5.9	180	0753	6.9	210
	1139	5.2	160	1158	4.6	140	1305	3.9	120	1343	2.6	80
	1643	6.2	190	1715	6.9	210	1816	6.2	190	● 1924	6.6	200
						31 Th 0759	-0.3	-10	31 Su 0152	1.0	30	
						1301	6.6	200	0817	7.2	220	
						1819	4.3	130	1420	2.3	70	
							1819	7.2	220	2009	6.6	200

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

## Aden, Yemen, 2008

Times and Heights of High and Low Waters

October				November				December					
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height		
h m	ft	cm		h m	ft	cm		h m	ft	cm			
1 W 0214	3.3	100		16 Th 0144	3.3	100		1 M 0226	4.6	140			
0805	6.9	210		0731	7.9	240		0312	4.6	140			
1456	1.0	30		1435	0.0	0	1 Sa 0753	6.9	210	16 Tu 0826	6.6	200	
2124	5.9	180		2120	6.6	200		1559	-0.3	-10	17 M 1534	1.0	30
								2318	6.9	210	18 2301	6.2	190
											19 2339	7.2	220
2 Th 0234	3.6	110		17 F 0223	3.6	110		20 0358	4.9	150			
0822	6.9	210		0804	7.9	240		0834	6.2	190	21 W 17 0534	4.3	130
1525	1.3	40		1520	-0.3	-10		1606	1.3	40	22 Th 1027	5.9	180
2202	5.6	170		2216	6.2	190		2335	6.2	190	23 W 1717	1.6	50
3 F 0249	3.9	120		18 Sa 0305	4.3	130		24 0455	4.9	150			
0836	6.6	200		0839	7.5	230		0910	5.9	180	25 Th 0022	7.2	220
1554	1.3	40		1609	0.0	0		1638	2.0	60	26 W 0647	3.9	120
2243	5.2	160		2320	5.9	180					27 Th 1143	5.2	160
											28 1801	2.6	80
4 Sa 0258	4.3	130		19 Su 0357	4.6	140		28 0105	7.2	220			
0852	6.6	200		0919	7.2	220		0804	3.3	100			
1627	1.6	50		1705	0.3	10		0957	5.2	160			
2336	4.9	150						1712	2.3	70	29 O 1847	3.6	110
5 Su 0305	4.6	140		20 M 0035	5.9	180		30 0146	6.9	210			
0907	6.2	190		0508	4.9	150		0918	3.0	90			
1707	1.6	50		1007	6.6	200		1644	4.6	140			
				1808	1.0	30		1937	4.6	140			
6 M 0114	4.9	150		21 Tu 0204	5.9	180		31 0226	6.9	210			
0257	4.6	140		0654	4.9	150		1021	2.3	70			
0917	5.9	180		1116	5.6	170		1852	5.2	160			
1800	2.0	60		O 1923	1.6	50		2038	4.9	150			
7 Tu 0912	5.6	170		22 W 0324	6.2	190		32 0304	6.9	210			
1915	2.3	70		0930	4.6	140		1109	2.0	60			
O				1321	5.2	160		1950	5.6	170			
				2045	2.3	70		2148	5.6	170			
8 W 0522	5.2	160		23 Th 0416	6.6	200		33 0341	6.9	210			
2037	2.6	80		1042	3.6	110		1147	1.6	50			
				1547	5.2	160		2020	5.9	180			
				2201	2.6	80		2253	5.6	170			
9 Th 0510	5.6	170		24 F 0453	6.6	200		34 0419	6.9	210			
1143	4.3	130		1126	3.0	90		1220	1.3	40			
1430	4.6	140		1719	5.6	170		2028	5.9	180			
2144	2.6	80		2258	3.0	90		2348	5.6	170			
10 F 0522	5.9	180		25 Sa 0524	6.9	210		35 0458	6.9	210			
1131	3.9	120		1202	2.3	70		1250	1.0	30			
1612	4.9	150		1817	5.9	180		2031	6.2	190			
2235	2.3	70		2342	3.3	100							
11 Sa 0533	6.2	190		26 Su 0551	6.9	210		36 0035	5.6	170			
1146	3.3	100		1234	1.6	50		0536	6.9	210			
1718	5.6	170		1902	6.2	190		1321	0.7	20			
2317	2.6	80						2046	6.2	190			
12 Su 0547	6.6	200		27 M 0017	3.6	110		37 0221	4.9	150			
1211	2.3	70		0613	6.9	210		0554	8.2	250			
1809	5.9	180		1304	1.3	40		1330	-1.0	-30			
2354	2.6	80		1939	6.2	190		O 2043	6.9	210			
								O 2107	6.6	200			
13 M 0608	6.9	210		28 Tu 0048	3.9	120		38 0118	5.2	160			
1241	1.6	50		0634	7.2	220		0615	6.9	210			
1856	6.2	190		1333	1.0	30		1350	0.7	20			
				2014	6.2	190		O 2107	6.6	200			
14 Tu 0030	2.6	80		29 W 0116	4.3	130		39 0227	4.9	150			
0633	7.2	220		0653	7.2	220		0730	6.6	200			
1316	0.7	20		1401	1.0	30		1447	1.0	30			
O 1941	6.6	200		2048	6.2	190		2155	6.9	210			
15 W 0107	3.0	90		30 Th 0142	4.3	130		40 0237	4.9	150			
0701	7.5	230		0713	6.9	210		0736	7.9	240			
1354	0.3	10		1428	0.7	20		1501	-0.7	-20			
2029	6.6	200		2122	5.9	180		2211	7.2	220			
				31 F 0204	4.6	140		41 0221	4.6	140			
				0732	6.9	210		0747	6.6	200			
				1455	1.0	30		1515	1.0	30			
				2159	5.9	180		2219	6.9	210			

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

Suez, Egypt, 2008

## Times and Heights of High and Low Waters

January						February						March							
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height	
<b>1</b> Tu	0637	5.4	166	<b>16</b> W	0450	5.8	177	<b>1</b> F	0050	3.1	94	<b>16</b> Sa	0039	2.1	65	<b>1</b> Sa	0646	5.0	151
	1237	3.1	93		1109	2.5	77		0746	5.1	156		0705	5.7	174		1235	3.3	100
	1846	5.3	161		1705	5.8	176		1341	3.3	102		1333	2.5	75		1903	4.7	144
					2335	2.1	64		2000	4.8	147		1928	5.3	162				
<b>2</b> W	0100	2.8	86	<b>17</b> Th	0601	5.8	176	<b>2</b> Sa	0201	3.0	92	<b>17</b> Su	0203	2.0	61	<b>2</b> Su	0111	3.0	91
	0741	5.4	165		1222	2.6	79		0846	5.2	159		0822	5.8	178		0756	5.1	154
	1345	3.2	97		1815	5.6	171		1443	3.2	97		1450	2.2	67		1352	3.1	95
	1948	5.2	157						2103	4.9	149		2048	5.4	166		2018	4.8	147
<b>3</b> Th	0201	2.9	89	<b>18</b> F	0050	2.1	64	<b>3</b> Su	0258	2.9	87	<b>18</b> M	0313	1.8	54	<b>3</b> M	0220	2.8	85
	0839	5.4	166		0715	5.9	179		0935	5.4	165		0928	6.1	186		0852	5.2	160
	1441	3.2	97		1341	2.5	76		1531	2.9	89		1552	1.9	57		1452	2.9	87
	2046	5.1	156		1930	5.6	170		2152	5.1	154		2156	5.7	174		2115	5.0	153
<b>4</b> F	0250	2.9	89	<b>19</b> Sa	0205	2.0	60	<b>4</b> M	0343	2.6	80	<b>19</b> Tu	0411	1.5	47	<b>4</b> Tu	0311	2.5	76
	0928	5.5	169		0826	6.1	185		1015	5.6	171		1024	6.3	193		0935	5.5	169
	1526	3.1	95		1452	2.2	68		1611	2.7	81		1643	1.6	49		1537	2.5	77
	2137	5.2	158		2045	5.7	173		2231	5.2	160		2252	6.0	183		2156	5.3	161
<b>5</b> Sa	0331	2.9	87	<b>20</b> Su	0313	1.7	53	<b>5</b> Tu	0422	2.4	72	<b>20</b> W	0500	1.4	42	<b>5</b> W	0354	2.2	68
	1009	5.7	173		0931	6.3	193		1048	5.8	178		1113	6.5	199		1011	5.8	177
	1601	3.0	91		1554	1.9	59		1648	2.4	72		1728	1.4	44		1616	2.2	68
	2218	5.2	160		2152	5.9	179		2303	5.4	166		2341	6.2	189		2228	5.6	170
<b>6</b> Su	0407	2.7	83	<b>21</b> M	0411	1.5	46	<b>6</b> W	0500	2.1	65	<b>21</b> Th	0545	1.4	42	<b>6</b> O	0431	2.0	60
	1043	5.8	177		1030	6.6	201		1118	6.1	185		1158	6.6	201		1043	6.1	186
	1635	2.8	86		1648	1.6	49		1722	2.1	64		1809	1.4	44		1652	2.0	60
	2254	5.3	163		2252	6.1	186		2333	5.7	173						2300	5.9	180
<b>7</b> M	0443	2.6	78	<b>22</b> Tu	0505	1.3	40	<b>7</b> Th	0535	1.9	59	<b>22</b> F	0024	6.3	192	<b>7</b> ●	0509	1.8	54
	1113	5.9	181		1122	6.8	207		1146	6.3	192		0626	1.5	45		1115	6.4	195
	1709	2.6	79		1737	1.4	43		1758	1.9	57		1239	6.6	201		1728	1.7	52
	2324	5.5	167		2346	6.3	191						1846	1.5	47		2331	6.2	189
<b>8</b> Tu	0516	2.4	73	<b>23</b> W	0556	1.2	38	<b>8</b> F	0003	5.9	180	<b>23</b> Sa	0105	6.3	192	<b>8</b> Sa	0545	1.6	49
	1143	6.1	185		1211	6.9	209		0611	1.8	54		0703	1.7	51		1148	6.6	202
	1745	2.4	73		1824	1.3	40		1218	6.5	197		1318	6.5	197		1803	1.5	46
	2354	5.6	170						1833	1.7	52		1922	1.7	52				
<b>9</b> W	0554	2.2	68	<b>24</b> Th	0037	6.4	194	<b>9</b> Sa	0035	6.1	186	<b>24</b> Su	0145	6.2	188	<b>9</b> Su	0007	6.5	197
	1211	6.2	189		0643	1.3	40		0648	1.7	51		0739	1.9	59		0624	1.5	46
	1820	2.2	66		1258	6.8	208		1250	6.6	201		1354	6.3	191		1224	6.8	207
					1909	1.3	40		1909	1.5	47		1956	1.9	59		1843	1.4	42
<b>10</b> Th	0024	5.7	174	<b>25</b> F	0126	6.4	194	<b>10</b> Su	0111	6.3	191	<b>25</b> M	0222	6.0	183	<b>10</b> M	0048	6.6	202
	0631	2.1	64		0728	1.5	45		0726	1.7	51		0815	2.2	68		0703	1.5	46
	1241	6.3	192		1343	6.7	204		1326	6.6	202		1430	6.0	183		1303	6.8	207
	1856	2.0	61		1952	1.5	45		1948	1.5	46		2030	2.2	66		1924	1.3	41
<b>11</b> F	0056	5.8	178	<b>26</b> Sa	0213	6.3	191	<b>11</b> M	0150	6.3	193	<b>26</b> Tu	0300	5.8	176	<b>11</b> O	0131	6.7	203
	0709	2.0	61		0813	1.7	53		0807	1.7	53		0848	2.5	76		0746	1.6	48
	1315	6.4	195		1426	6.4	196		1405	6.6	200		1503	5.7	174		1346	6.7	204
	1933	1.9	58		2033	1.7	52		2030	1.5	46		2105	2.4	74		2009	1.4	43
<b>12</b> Sa	0131	5.9	180	<b>27</b> Su	0300	6.0	184	<b>12</b> Tu	0237	6.3	191	<b>27</b> W	0341	5.5	168	<b>12</b> O	0220	6.5	199
	0748	2.0	61		0854	2.1	64		0852	1.9	58		0928	2.8	85		0835	1.7	53
	1350	6.4	195		1509	6.1	186		1450	6.4	194		1541	5.4	164		1435	6.4	195
	2013	1.8	56		2115	2.0	61		2115	1.6	50		2146	2.7	82		2058	1.6	48
<b>13</b> Su	0213	6.0	182	<b>28</b> M	0346	5.8	176	<b>13</b> W	0328	6.1	186	<b>28</b> Th	0428	5.2	160	<b>13</b> Th	0315	6.3	191
	0830	2.0	62		0937	2.5	75		0943	2.1	65		1013	3.1	93		0930	2.0	61
	1430	6.3	193		1554	5.7	175		1543	6.0	184		1628	5.1	154		1531	6.0	183
	2054	1.8	56		2156	2.4	72		2207	1.8	56		2237	2.9	88		2158	1.8	55
<b>14</b> M	0258	5.9	181	<b>29</b> Tu	0437	5.5	168	<b>14</b> Th	0430	5.9	180	<b>29</b> F	0531	5.0	153	<b>14</b> O	0422	6.0	182
	0915	2.2	66		1024	2.8	86		1046	2.4	73		1115	3.2	98		1037	2.3	69
	1515	6.2	189		1643	5.4	164		1645	5.7	173		1737	4.8	147		1643	5.6	171
	2139	1.9	58		2243	2.7	82		2315	2.0	62		2348	3.1	93		2313	2.0	62
<b>15</b> Tu	0350	5.9	179	<b>30</b> W	0535	5.3	161	<b>15</b> F	0545	5.7	174	<b>30</b> O	0539	5.7	174	<b>15</b> Sa	0539	5.7	174
	1007	2.4	72		1116	3.1	96		1205	2.5	77		1801	5.4	164		1200	2.4	73
	1605	6.0	183		1739	5.1	154										1143	3.1	93
	2231	2.0	61		2339	3.0	90										1807	4.9	148
				<b>31</b> Th	0641	5.1	156									<b>31</b> M	0028	2.9	88
					1226	3.3	102										0658	5.1	154
					1848	4.9	148										1300	3.0	90
																	1924	4.9	150

Time meridian 30° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

# Suez, Egypt, 2008

Times and Heights of High and Low Waters

April				May				June					
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height		
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm		
1 Tu 0137	2.7	82	16 W 0258	1.8	54	1 Th 0148	2.3	71	16 Su 0326	1.9	58		
0758	5.2	160	0901	5.9	179	0746	5.5	167	0930	5.5	168		
1403	2.7	83	1522	1.9	58	1403	2.3	69	1541	2.1	63		
2020	5.2	157	2135	5.9	181	2013	5.6	172	2158	5.8	177		
2 W 0231	2.4	74	17 Th 0348	1.8	54	2 F 0237	2.1	64	17 Sa 0409	2.0	62		
0845	5.5	168	0954	6.0	182	0831	5.8	176	1016	5.5	167		
1452	2.5	75	1609	1.9	58	1450	2.0	62	1618	2.3	69		
2105	5.5	167	2224	6.0	184	2058	6.0	182	2239	5.7	175		
3 Th 0316	2.2	66	18 F 0431	1.8	56	3 Sa 0322	1.8	56	18 Su 0443	2.2	67		
0924	5.8	178	1039	6.0	182	0916	6.0	184	1056	5.4	165		
1535	2.2	66	1646	2.0	62	1535	1.8	54	1648	2.4	74		
2143	5.8	177	2305	6.1	185	2141	6.3	192	2313	5.7	173		
4 F 0358	1.9	58	19 Sa 0507	2.0	61	4 Su 0405	1.6	50	19 M 0511	2.3	71		
1000	6.2	188	1118	6.0	182	1001	6.3	192	1130	5.3	163		
1615	1.9	58	1718	2.2	67	1620	1.5	47	1715	2.5	77		
2220	6.2	188	2341	6.0	184	2228	6.6	201	2343	5.6	170		
5 Sa 0437	1.7	52	20 Su 0537	2.2	67	5 M 0450	1.4	44	20 Tu 0537	2.4	73		
1037	6.5	197	1152	5.9	180	1046	6.5	198	1158	5.3	162		
1654	1.6	50	1746	2.4	72	1705	1.3	41	1743	2.6	78		
2258	6.5	198	●	2316	6.8	207	●	2316	6.8	207	○		
6 Su 0516	1.5	47	21 M 0011	5.9	181	6 Tu 0537	1.3	40	21 W 0009	5.5	169		
1116	6.7	204	0605	2.4	72	1137	6.6	201	0605	2.4	72		
1733	1.4	44	1222	5.8	177	1756	1.2	38	1226	5.3	161		
●	2341	6.8	206	1813	2.5	76	1815	2.5	76	1815	2.5	76	
7 M 0558	1.4	44	22 Tu 0039	5.9	179	7 W 0007	6.9	209	22 Th 0037	5.5	168		
1158	6.8	208	0631	2.5	75	0626	1.2	38	0637	2.3	70		
1816	1.3	41	1250	5.7	174	1230	6.6	200	1254	5.2	160		
●	1843	2.5	77	1843	2.5	77	1848	1.2	37	1854	2.4	74	
8 Tu 0026	6.9	209	23 W 0107	5.8	176	8 Th 0101	6.8	207	23 F 0107	5.4	166		
0643	1.4	43	0701	2.5	76	0720	1.2	38	0715	2.2	67		
1243	6.8	207	1316	5.6	172	1326	6.4	196	1328	5.2	160		
1903	1.3	40	1916	2.6	78	1945	1.3	39	1935	2.4	72		
9 W 0115	6.8	208	24 Th 0135	5.7	173	9 F 0200	6.6	201	24 Sa 0145	5.4	165		
0731	1.5	45	0737	2.5	76	0816	1.3	40	0758	2.1	65		
1333	6.6	202	1348	5.5	168	1428	6.2	189	1407	5.2	158		
1954	1.4	42	1956	2.6	79	2046	1.4	43	2024	2.3	71		
10 Th 0207	6.7	203	25 F 0211	5.5	169	10 Sa 0301	6.3	192	25 Su 0228	5.3	162		
0824	1.6	49	0818	2.5	77	0918	1.4	44	0845	2.1	64		
1430	6.4	194	1426	5.4	164	1535	6.0	182	1452	5.2	157		
2050	1.5	47	2043	2.6	80	2154	1.6	48	2115	2.3	70		
11 F 0309	6.4	194	26 Sa 0254	5.4	164	11 Su 0409	6.0	183	26 M 0315	5.2	159		
0924	1.8	56	0907	2.6	79	1026	1.6	49	0933	2.1	65		
1533	6.0	183	1513	5.2	159	1648	5.8	176	1543	5.1	155		
2156	1.8	54	2137	2.7	81	2307	1.7	52	2209	2.3	70		
12 Sa 0416	6.0	184	27 Su 0348	5.2	159	12 M 0520	5.8	176	27 Tu 0407	5.2	157		
1033	2.0	62	1001	2.7	81	1139	1.7	53	1026	2.1	65		
1648	5.7	173	1613	5.1	155	1801	5.7	173	1639	5.1	156		
●	2315	1.9	59	2239	2.7	82	●	2305	2.3	70	1945	5.4	165
13 Su 0533	5.8	177	28 M 0452	5.1	156	13 Tu 0022	1.8	54	28 W 0503	5.1	156		
1154	2.1	65	1103	2.7	82	0630	5.6	171	1120	2.1	65		
1811	5.5	169	1720	5.0	153	1252	1.8	55	1737	5.2	158		
●	2346	2.7	81	1913	5.7	174	●	1833	5.3	163	2041	5.4	164
14 M 0037	2.0	60	29 Tu 0558	5.1	156	14 W 0133	1.8	55	29 Th 0005	2.2	68		
0650	5.7	174	1209	2.6	80	0735	5.5	169	0558	5.2	157		
1316	2.1	63	1826	5.1	156	1358	1.9	57	1218	2.1	63		
1930	5.6	170	1922	5.3	162	2015	5.7	175	1833	5.3	163		
15 Tu 0154	1.9	58	30 W 0050	2.5	77	15 F 0235	1.8	55	14 Sa 0103	2.1	64		
0801	5.8	176	0656	5.2	160	0837	5.5	169	0652	5.3	161		
1426	2.0	60	1311	2.5	76	1454	1.9	59	1315	1.9	59		
2037	5.7	175	1922	5.3	162	2111	5.8	177	1926	5.6	171		
●	31 Sa 0158	1.9	58	●	31 Tu 0746	5.5	167	●	31 Su 0746	5.5	167		
●	1409	1.7	53	●	1409	1.7	53	●	1409	1.7	53		
●	2018	5.9	179	●	2018	5.9	179	●	2018	5.9	179		

Time meridian 30° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Suez, Egypt, 2008

Times and Heights of High and Low Waters

July				August				September															
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height												
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm												
<b>1</b> Tu	0324	1.1	34	<b>16</b> W	0422	1.8	54	<b>1</b> F	0501	0.2	7	<b>16</b> Sa	0500	1.1	33	<b>1</b> M	0003	5.8	177	<b>16</b> Tu	0537	0.8	25
1537	5.2	160		1050	4.4	133	1115	5.3	163	1122	4.7	144	0616	0.3	9	1146	5.7	174					
2150	1.0	30		1628	1.9	58	1724	0.4	12	1715	1.3	39	1239	5.7	175	1800	1.1	34					
	5.9	181		2252	4.9	148	● 2333	5.9	179	○ 2322	5.2	157	1841	0.8	23	2352	5.8	178					
<b>2</b> W	0418	0.8	25	<b>17</b> Th	0452	1.6	49	<b>2</b> Sa	0550	0.1	3	<b>17</b> Su	0533	0.9	28	<b>2</b> Tu	0046	5.7	173	<b>17</b> W	0613	0.8	23
1018	5.4	165		1122	4.5	136	1207	5.5	169	1150	4.9	150	0656	0.5	16	1222	5.9	179					
1635	0.8	23		1701	1.8	54	1815	0.4	11	1750	1.1	35	1322	5.6	172	1837	1.1	34					
2246	6.1	185		2322	4.9	150				2350	5.3	161	1922	1.0	32								
<b>3</b> Th	0511	0.6	17	<b>18</b> F	0524	1.4	44	<b>3</b> Su	0022	5.9	179	<b>18</b> M	0607	0.8	24	<b>3</b> W	0130	5.4	165	<b>18</b> Th	0028	5.8	178
1118	5.6	170		1150	4.6	140	0639	0.1	2	1216	5.2	157	0733	0.8	25	0650	0.8	23	1301	5.9	181		
1731	0.6	19		1737	1.6	49	1300	5.6	172	1826	1.1	33	1405	5.5	167	2003	1.4	42	1920	1.2	36		
● 2343	6.1	187		○ 2350	5.0	153	1903	0.5	14														
<b>4</b> F	0603	0.4	12	<b>19</b> Sa	0558	1.2	38	<b>4</b> M	0111	5.7	175	<b>19</b> Tu	0022	5.4	164	<b>4</b> Th	0211	5.1	155	<b>19</b> F	0109	5.7	175
1216	5.7	174		1218	4.7	144	0724	0.2	6	0641	0.7	22	0811	1.2	36	0731	0.8	25	1346	5.9	179		
1826	0.6	17		1815	1.5	45	1348	5.6	171	1250	5.3	161	1448	5.2	159	2045	1.7	52	2005	1.3	40		
							1954	0.7	21	1905	1.1	33											
<b>5</b> Sa	0037	6.1	187	<b>20</b> Su	0020	5.1	156	<b>5</b> Tu	0200	5.5	168	<b>20</b> W	0056	5.4	165	<b>5</b> F	0254	4.7	144	<b>20</b> Sa	0156	5.5	167
0656	0.3	9		0633	1.1	34	0809	0.5	14	0718	0.7	21	0850	1.5	47	0818	1.0	30	1439	5.7	173		
1313	5.8	176		1246	4.9	149	1439	5.4	166	1326	5.4	164	1535	4.9	150	2128	2.0	61	2100	1.5	46		
1922	0.6	18		1854	1.4	42	2043	1.0	30	1945	1.1	35											
<b>6</b> Su	0133	6.0	183	<b>21</b> M	0052	5.2	158	<b>6</b> W	0248	5.2	158	<b>21</b> Th	0133	5.3	163	<b>6</b> Sa	0341	4.4	133	<b>21</b> Su	0250	5.1	156
0748	0.4	11		0711	1.0	31	0856	0.8	24	0758	0.7	22	0933	1.9	57	0915	1.2	37	1541	5.4	165		
1411	5.7	175		1320	5.0	152	1531	5.2	159	1409	5.4	164	2028	1.2	38	2222	2.3	69	2205	1.7	51		
2018	0.8	23		1933	1.3	41	2133	1.3	41														
<b>7</b> M	0228	5.8	176	<b>22</b> Tu	0126	5.2	158	<b>7</b> Th	0341	4.8	146	<b>22</b> F	0216	5.2	157	<b>7</b> Su	0443	4.0	123	<b>22</b> M	0401	4.8	145
0841	0.5	16		0748	1.0	29	0943	1.2	36	0841	0.9	26	1030	2.2	66	1026	1.5	45	1658	5.2	158		
1507	5.6	171		1356	5.1	155	1626	5.0	151	1458	5.3	161	1733	4.4	135	● 2330	2.4	73	2326	1.7	53		
2116	1.0	29		2015	1.3	41	2226	1.7	51	2118	1.4	42											
<b>8</b> Tu	0324	5.4	166	<b>23</b> W	0205	5.2	157	<b>8</b> F	0437	4.4	134	<b>23</b> Sa	0307	4.9	149	<b>8</b> M	0603	3.9	118	<b>23</b> Tu	0530	4.5	138
0935	0.8	24		0828	1.0	30	1033	1.6	48	1724	4.7	143	0931	1.0	31	1143	2.3	71	1818	5.1	156		
1607	5.4	166		1437	5.1	155	● 2328	2.0	60	○ 2328	1.5	47	1556	5.1	155	2218	1.5	47	1945	4.4	135		
2215	1.2	38		2100	1.4	43																	
<b>9</b> W	0422	5.1	156	<b>24</b> Th	0248	5.0	153	<b>9</b> Sa	0541	4.1	124	<b>24</b> Su	0409	4.6	139	<b>9</b> Tu	0048	2.3	71	<b>24</b> W	0054	1.6	48
1031	1.1	34		0911	1.0	31	1133	1.9	58	1705	5.0	151	1705	1.2	37	0722	3.9	118	1322	1.5	45		
1707	5.2	160		1524	5.1	155	1828	4.5	137	● 2333	1.6	48	● 2333	1.6	48	1945	4.4	135	1933	5.2	160		
2316	1.5	47		2148	1.5	46																	
<b>10</b> Th	0522	4.8	146	<b>25</b> F	0335	4.9	148	<b>10</b> Su	0037	2.1	64	<b>25</b> M	0526	4.3	132	<b>10</b> W	0154	2.1	65	<b>25</b> Th	0207	1.2	38
1130	1.5	45		1000	1.1	34	0652	3.9	119	1245	2.1	63	1154	1.3	40	0826	4.1	124	1431	1.2	38		
1809	5.1	154		1620	5.0	153	1930	4.4	135	2025	4.9	149	1822	4.6	141	2035	4.6	141	2037	5.5	167		
● 2245	1.6	48																					
<b>11</b> F	0022	1.8	54	<b>26</b> Sa	0433	4.7	142	<b>11</b> M	0146	2.1	64	<b>26</b> Tu	0058	1.4	44	<b>11</b> Th	0243	1.9	57	<b>26</b> F	0307	1.0	29
0626	4.5	137		1056	1.2	37	0801	3.9	118	1352	2.1	64	0652	4.3	131	0913	4.3	132	1530	1.0	32		
1233	1.8	54		1722	5.0	152	1720	5.0	153	2026	4.4	135	1320	1.2	38	1456	1.9	57	2116	4.9	148		
1909	4.9	150		2352	1.6	48																	
<b>12</b> Sa	0128	1.9	59	<b>27</b> Su	0539	4.5	137	<b>12</b> Tu	0241	1.9	59	<b>27</b> W	0213	1.1	35	<b>12</b> F	0322	1.6	48	<b>27</b> Sa	0356	0.7	22
0731	4.3	132		1205	1.3	39	0900	4.0	121	1445	2.0	60	0813	4.5	137	1011	5.6	171	1618	1.0	29		
1337	2.0	60		1831	5.0	153	1445	2.0	60	2113	4.5	138	1433	1.0	31	1537	1.6	56	2220	5.9	179		
2007	4.8	147																					
<b>13</b> Su	0228	2.0	60	<b>28</b> M	0105	1.5	45	<b>13</b> W	0320	1.7	53	<b>28</b> Th	0315	0.8	23	<b>13</b> Sa	0358	1.3	40	<b>28</b> Su	0439	0.7	21
0833	4.3	130		0652	4.5	136	0946	4.1	126	1528	1.8	55	0920	4.8	147	1020	4.9	149	1701	1.0	30		
1431	2.1	63		1320	1.2	36	2152	4.7	142	2141	5.5	168	1533	0.8	23	1613	1.4	44	2220	5.3	162		
2100	4.8	146		1941	5.2	157																	
<b>14</b> M	0315	2.0	60	<b>29</b> Tu	0215	1.2	36	<b>14</b> Th	0356	1.5	46	<b>29</b> F	0405	0.4	13	<b>14</b> Su	0430	1.1	34	<b>29</b> M	0516	0.8	23
0928	4.3	130		0807	4.6	139	1024	4.3	131	1605	1.6	49	1016	5.2	158	1048	5.2	158	1139	6.0	182		
1516	2.1	63		1431	1.0	30	2224	4.8	147	2231	5.7	174	1626	0.6	17	1648	1.3	39	1741	1.2	36		
2143	4.8	145		2045	5.3	163																	
<b>15</b> Tu	0352	1.9	58	<b>30</b> W	0316	0.9	26	<b>15</b> F	0428	1.3	39	<b>30</b> Sa	0452	0.2	7	<b>15</b> M	0503	1.0	29	<b>30</b> Tu	0552	1.0	29
1013	4.3	131		0915	4.8	146	1056	4.5	137	1641	1.4	44	1107	5.5	167	1116	5.5	167	1218	6.0	182		
1554	2.0	62		1533	0.8																		

# Suez, Egypt, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
W 0022 h m 5.7 174	ft 1.0 30	16 Th 0546 6.5 199	cm 1.3 41	1 Sa 0101 5.4 165	ft 2.3 69	16 Su 0046 6.4 196	cm 1.2 37	1 M 0111 5.5 167	ft 2.5 76	16 Tu 0143 6.5 199	cm 1.2 38
0624 1.2 37	1324 5.8 178	1158 6.5 199	1816 1.3 41	0656 5.7 175	1330 2.5 75	0707 1.2 37	1324 6.9 213	0713 2.5 76	0756 1.2 38	1411 7.0 213	2030 1.3 39
1254 1.7 51	1850	1.9 59	1850	1.9 51	1926 2.5 75	1943 1.5 45	1333 5.9 180	1941 2.5 76	1409 5.9 179	1509 6.7 205	2128 1.4 44
1850								1333 5.9 180	2022 2.5 75	1509 6.7 205	2128 1.4 44
2 0058 h m 5.5 168	ft 1.0 30	17 F 0007 6.3 191	cm 1.4 42	2 Su 0131 5.2 160	ft 2.4 72	17 M 0145 6.2 190	cm 1.4 42	2 Tu 0145 5.4 166	ft 2.5 76	17 W 0245 6.4 194	cm 1.5 45
0656 1.5 45	1330 5.7 173	0628 1.0 30	1243 6.6 200	0733 5.6 170	1401 2.5 77	0803 1.4 42	1422 6.7 204	0754 2.5 76	0854 1.5 45	1509 6.7 205	2128 1.4 44
1330 1.9 59	1901	1.4 42	1901	1.4 42	2003 2.5 77	2043 1.5 47	2043 1.5 47	1409 5.9 179	2128 1.4 44	1509 6.7 205	2128 1.4 44
1901											
3 0131 h m 5.2 160	ft 1.1 33	18 F 0054 6.1 187	cm 1.5 45	3 M 0205 5.1 155	ft 2.5 76	18 Tu 0250 6.0 182	cm 1.6 49	3 W 0224 5.4 164	ft 2.6 78	18 Th 0348 6.2 189	cm 1.8 54
0730 1.7 53	1405 5.4 166	0715 1.1 33	1331 6.4 196	0815 5.4 165	1441 2.6 79	0905 1.6 49	1524 6.4 195	0839 2.6 78	0958 1.8 54	1611 6.4 195	2231 1.7 51
2000 2.1 65	1952	1.5 45	1952	1.5 45	2050 2.6 79	2146 1.7 51	2146 1.7 51	1450 5.8 176	2109 2.5 76	2231 1.7 51	2231 1.7 51
1952											
4 0207 h m 5.0 151	ft 1.2 38	19 Sa 0146 5.9 179	cm 1.6 49	4 Tu 0252 4.9 150	ft 2.6 80	19 W 0401 5.8 176	cm 1.8 56	4 Th 0311 5.3 162	ft 2.7 81	19 F 0456 6.0 184	cm 2.1 64
0805 2.0 61	1443 5.2 158	0807 1.2 38	1428 6.2 189	0905 5.3 161	1530 2.7 81	1016 1.8 56	1633 6.1 187	0930 2.7 81	1105 2.1 64	1716 6.1 185	2339 1.9 59
1443 2.3 71	2050	1.6 49	2050	1.6 49	2143 2.7 81	2258 1.8 55	2258 1.8 55	2200 2.5 77	2256 2.6 79	2339 1.9 59	2339 1.9 59
2050											
5 0245 h m 4.7 142	ft 1.5 46	20 M 0248 5.5 168	cm 1.8 54	5 W 0354 4.8 145	ft 2.8 84	20 Th 0520 5.7 173	cm 2.0 62	5 F 0407 5.2 160	ft 2.8 85	20 Sa 0607 5.9 180	cm 2.4 72
0846 2.2 68	1530 4.9 150	0909 1.5 46	1533 5.9 180	1005 5.2 157	1631 2.7 82	1133 5.9 181	1746 5.9 181	1026 5.6 170	1628 5.6 170	1824 5.8 177	1824 5.8 177
1530 2.5 76	2158	1.8 54	2158	1.8 54	2246 2.7 82	2354 2.7 81	2354 2.7 81	2356 2.6 79	2356 2.6 79	1933 5.6 172	1933 5.6 172
2158											
6 0337 h m 4.4 134	ft 1.7 53	21 Tu 0403 5.2 159	cm 1.8 56	6 Th 0513 4.7 144	ft 2.8 86	21 F 0015 1.8 56	cm 2.1 65	6 Sa 0509 5.3 161	ft 2.9 88	21 Su 0050 2.1 65	cm 2.5 77
0939 2.5 75	1630 4.7 144	1024 1.7 53	1648 5.7 173	1116 2.8 86	1737 5.2 157	0637 5.7 174	1252 2.1 65	1128 5.5 168	1726 5.5 168	0718 5.9 179	1333 2.5 77
1630 2.6 79	2228	2.6 79	2316	1.8 56	2354 2.7 81	1856 5.9 179	1856 5.9 179	2356 2.6 79	2356 2.6 79	1933 5.6 172	1933 5.6 172
2228											
7 0458 h m 4.2 128	ft 1.9 57	22 W 0531 5.1 155	cm 1.6 49	7 F 0626 4.9 148	ft 2.8 84	22 Sa 0126 1.9 57	cm 2.1 65	7 Su 0613 5.4 164	ft 2.9 87	22 M 0200 2.3 70	cm 2.6 80
1048 2.6 79	1741 4.7 142	1150 1.9 57	1807 5.6 170	1226 2.8 84	1839 5.2 160	0748 5.9 179	1403 2.1 65	1233 2.9 87	1824 5.6 170	0824 5.9 180	1441 2.6 80
1741 2.6 79	2343	2.6 79	2316	1.8 56	2354 2.7 81	2001 5.8 178	2001 5.8 178	1920 5.7 173	2135 2.7 82	2039 5.5 169	2135 5.5 168
2343											
8 0628 h m 4.2 129	ft 1.7 53	23 Th 0041 1.7 53	cm 1.8 55	8 Sa 0058 2.5 76	ft 2.6 80	23 Su 0230 1.9 57	cm 2.1 65	8 M 0056 2.5 76	ft 2.8 84	23 Tu 0300 2.4 73	cm 2.7 82
1211 2.6 79	1848	2.6 79	0656 5.2 158	1313 1.8 55	0726 5.1 156	1330 2.6 80	0848 6.0 184	1503 2.1 65	1335 2.8 84	0922 5.9 181	1537 2.7 82
1848 4.7 144	1920	5.6 172	1920	5.6 172	1931 5.4 166	2101 5.9 179	2101 5.9 179	1920 5.7 173	2135 2.7 82	2135 2.7 82	2135 2.7 82
1920											
9 0058 h m 2.4 74	ft 1.7 51	24 F 0152 1.5 47	cm 1.7 51	9 Su 0152 2.3 70	ft 2.4 74	24 M 0322 1.9 58	cm 2.2 68	9 Tu 0152 2.3 70	ft 2.5 77	24 W 0348 2.5 76	cm 2.7 83
0737 4.4 135	1322 2.5 75	0807 5.5 167	1422 1.7 51	0813 5.4 166	1420 2.4 74	0943 6.2 188	1552 2.2 68	1430 2.5 77	1620 2.7 83	1011 6.0 182	1620 2.7 83
1322 4.9 150	2024	5.8 176	2024	5.8 176	2015 5.7 173	2152 5.9 179	2152 5.9 179	2015 5.9 179	2224 5.5 167	1101 6.0 182	1101 6.0 182
2024											
10 0156 h m 2.2 67	ft 1.8 41	25 Sa 0252 1.3 41	cm 1.6 48	10 M 0239 2.1 63	ft 2.2 68	25 Tu 0405 2.0 62	cm 2.2 68	10 W 0246 2.1 63	ft 2.3 69	25 Th 0426 2.6 78	cm 2.8 84
0828 4.7 144	1518	4.7 144	0907 5.8 177	1518 1.6 48	0854 5.8 177	1505 2.2 68	1028 6.2 189	1633 2.4 72	1522 2.3 69	1052 6.0 182	1654 2.8 84
1518 2.2 68	2118	5.2 157	2118	5.9 180	2056 5.9 181	2235 5.8 177	2235 5.8 177	2107 6.1 185	2303 5.4 166	2303 5.4 166	2303 5.4 166
2118											
11 0241 h m 1.9 58	ft 1.3 40	26 Su 0341 1.3 40	cm 1.6 48	11 Tu 0320 1.8 55	ft 2.0 61	26 W 0441 2.2 67	cm 2.1 65	11 Th 0335 1.8 54	ft 2.2 64	26 F 0456 2.6 80	cm 2.8 84
0907 5.1 154	1605	6.0 184	0958 1.6 48	1605 1.6 48	0931 6.2 188	1548 2.0 61	1107 6.2 189	1707 2.5 76	1611 2.0 60	1124 5.9 181	1720 2.8 84
1605 2.0 60	2207	6.0 182	1605 1.6 48	2137	6.2 189	2137 6.2 189	2315 5.7 175	2315 5.7 175	2200 6.3 192	2337 5.4 166	2337 5.4 166
2207											
12 0320 h m 1.6 50	ft 1.4 42	27 M 0422 1.4 42	cm 1.7 52	12 W 0401 1.6 48	ft 1.8 55	27 Th 0511 2.4 72	cm 1.8 51	12 F 0424 1.5 46	ft 1.9 51	27 Sa 0522 2.6 79	cm 2.7 81
0939 5.4 165	1541	1.8 54	1043 6.2 188	1646 1.7 52	1013 6.5 199	1630 1.8 55	1141 6.1 187	1735 2.6 80	1700 1.7 51	1154 6.0 182	1745 2.7 81
1541 1.8 54	2250	6.0 182	1043 6.2 188	2250	6.4 195	2220 6.4 195	2346 5.6 172	2254 6.5 197	2254 6.5 197	●	●
2250											
13 0356 h m 1.4 43	ft 1.5 47	28 Tu 0458 1.5 47	cm 1.6 49	13 F 0443 1.4 42	ft 1.8 52	28 F 0537 2.5 75	cm 1.9 51	13 M 0515 1.3 40	ft 1.9 51	28 Su 0005 5.5 167	cm 2.5 77
1011 5.8 176	1618	1.6 49	1122 6.2 189	1722 1.9 58	1056 6.8 207	1715 1.6 50	1209 6.0 184	1801 2.7 81	1130 7.1 216	0550 2.5 77	1218 6.0 183
1618 1.6 49	2328	5.9 179	1122 6.2 189	2328	6.5 198	2305 6.5 198	2348 6.6 200	2348 6.6 200	1750 1.4 44	1813 2.5 77	1813 2.5 77
2328											
14 0431 h m 1.2 38	ft 1.8 54	29 W 0530 1.8 54	cm 2.1 65	14 F 0528 1.2 38	ft 1.5 46	29 Sa 0016 5.6 170	cm 1.8 51	14 M 0607 1.2 36	ft 1.3 39	29 Tu 0030 5.5 169	cm 2.4 74
1043 6.1 186	1656	1.5 45	1158 6.1 187	1754 2.1 65	1141 7.0 212	1800 1.5 46	1237 6.0 183	1830 2.6 80	1841 1.3 39	0622 2.4 74	1245 6.1 185
1656 1.5 45	2246	6.2 188	1158 6.1 187	2246	●	2354 6.5 199	2354 6.5 199	2354 6.5 199	1845 2.4 72	1845 2.4 72	●
2246											
15 0507 h m 1.1 33	ft 1.2 36	30 Th 0001 5.7 175	cm 1.4 44	15 M 0615 1.2 36	ft 1.4 44	30 Su 0043 5.5 168	cm 1.6 44	15 W 0045 6.6 200	ft 1.1 35	30 Tu 0056 5.6 171	cm 2.3 71
1118 6.4 194	1733	1.4 42	0558 2.0 60	1230 6.0 183	1231 7.0 213	1850 1.4 44	1303 6.0 182	1903 2.6 78	1316 7.2 218	0656 2.3 71	1311 6.1 187
1733 1.4 42	1822	2.3 70	0558 2.0 60	1822	2.3 70	1822 2.3 70	1852 2.4 73	1852 2.4 73	1935 1.2 37	1920 2.2 68	1920 2.2 68
1822											
31 0031 h m 1.2 38	ft 1.3 36	31 F 0626 2.1 65	cm 1.5 44	31 W 0626 2.1 65	ft 1.3 36	31 Sa 0016 5.6 170	cm 1.6 44	31 M 0126 5.7 173	ft 2.3 70	31 W 0735 2.3 70	cm 2.5 70
1300 5.9 179	1800	5.9 179	1754 2.1 65	1800	1.5 44	1800 1.5 44	1830 2.6 80	1830 2.6 80	1841 1.3 39	1343 6.1 187	1343 6.1 187
1800											

Time meridian 30° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Dar Es Salaam, Tanzania, 2008

Times and Heights of High and Low Waters

January				February				March															
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height												
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm												
<b>1</b> Tu	0357 0957 1559 2248	4.9 8.2 4.3 9.2	150 250 130 280	<b>16</b> W	0310 0908 1510 2159	3.6 8.9 3.3 10.2	110 270 100 310	<b>1</b> F	0530 1117 1650	5.2 6.6 5.2	160 200 160	<b>16</b> Sa	0549 1149 1718	4.9 6.9 4.9	150 210 150	<b>1</b> Sa	0400 1515 2300	5.6 5.6 8.2	170 170 250	<b>16</b> Su	0545 1209 1747	5.2 7.2 5.6	160 220 170
<b>2</b> W	0521 1118 1706	4.9 7.5 4.6	150 230 140	<b>17</b> Th	0426 1019 1614 2319	4.3 7.9 3.9 9.8	130 240 120 300	<b>2</b> Sa	0020 0741 1346 1905	8.5 4.9 6.9 5.2	260 150 210 160	<b>17</b> Su	0046 0804 1412 1950	9.5 4.3 7.5 4.6	290 130 230 140	<b>2</b> Su	0717 1332 1835	5.6 6.9 5.9	170 210 180	<b>17</b> M	0050 0757 1411 2000	9.2 4.3 8.2 4.9	280 130 250 150
<b>3</b> Th	0006 0645 1246 1826	9.2 4.9 7.5 4.9	280 150 230 150	<b>18</b> F	0610 1205 1747	4.3 7.5 4.3	130 230 130	<b>3</b> Su	0148 0847 1453 2023	9.2 4.3 7.5 4.6	280 130 230 140	<b>18</b> M	0219 0905 1515 2059	10.2 3.3 8.9 3.6	310 100 270 110	<b>3</b> M	0120 0828 1437 2010	8.9 4.6 7.9 4.9	270 140 240 150	<b>18</b> Tu	0218 0850 1504 2058	9.8 3.6 9.5 3.6	300 110 290 110
<b>4</b> F	0116 0757 1402 1938	9.2 4.3 7.5 4.6	280 130 230 140	<b>19</b> Sa	0051 0745 1349 1930	10.2 3.6 7.9 3.9	310 110 240 120	<b>4</b> M	0243 0924 1531 2108	9.8 3.3 8.5 3.9	300 100 260 120	<b>19</b> Tu	0318 0946 1556 2145	11.2 2.3 10.2 2.6	340 70 310 80	<b>4</b> Tu	0223 0901 1509 2053	9.5 3.6 8.9 3.9	290 110 270 120	<b>19</b> W	0311 0927 1541 2139	10.8 2.6 10.8 2.6	330 80 330 80
<b>5</b> Sa	0210 0849 1456 2032	9.8 3.6 8.2 3.9	300 110 250 120	<b>20</b> Su	0209 0855 1502 2044	10.8 3.0 8.5 3.3	330 90 260 100	<b>5</b> Tu	0322 0953 1601 2144	10.8 2.3 9.5 3.0	330 70 290 90	<b>20</b> W	0400 1019 1630 2223	11.8 1.6 11.2 2.0	360 50 340 60	<b>20</b> Th	0349 0959 1612 2212	11.5 2.0 11.8 2.0	350 60 360 60				
<b>6</b> Su	0254 0928 1537 2114	10.5 3.0 8.9 3.6	320 90 270 110	<b>21</b> M	0309 0944 1553 2137	11.5 2.0 9.5 2.6	350 60 290 80	<b>6</b> W	0356 1021 1629 2216	11.5 1.6 10.5 2.3	350 350 320 70	<b>21</b> Th	0436 1049 1700 2256	12.5 1.0 11.8 1.3	380 30 360 40	<b>21</b> F	0422 1027 1639 2242	12.1 1.6 12.5 1.3	370 50 380 40				
<b>7</b> M	0332 1002 1611 2151	10.8 2.3 9.2 3.0	330 70 280 90	<b>22</b> Tu	0357 1024 1634 2221	12.1 1.3 10.5 2.0	370 40 320 60	<b>7</b> Th	0428 1047 1656 2247	12.1 1.3 11.2 1.6	370 40 340 50	<b>22</b> F	0508 1117 1729 2327	12.5 1.0 12.1 1.3	380 30 370 40	<b>22</b> Sa	0450 1052 1705 2310	12.1 1.3 12.8 1.3	370 40 390 40				
<b>8</b> Tu	0406 1034 1642 ● 2224	11.5 2.0 9.8 2.6	350 60 300 80	<b>23</b> W	0439 1059 1711 2301	12.5 1.0 11.2 1.6	380 30 340 50	<b>8</b> F	0459 1113 1725 2319	12.5 1.0 11.8 1.3	380 30 360 40	<b>8</b> Sa	0538 1143 1757 2357	12.1 1.0 12.5 1.3	370 30 380 40	<b>23</b> Su	0517 1116 1731 2337	11.8 1.3 12.8 1.3	360 40 390 40				
<b>9</b> W	0439 1103 1712 2256	11.8 1.6 10.2 2.3	360 50 310 70	<b>24</b> Th	0517 1133 1746 2338	12.5 1.0 11.5 1.6	380 30 350 50	<b>9</b> Sa	0530 1140 1755 2352	12.5 0.7 12.1 1.3	380 40 370 50	<b>24</b> M	0606 1209 1825 2334	11.8 1.3 12.1 0.7	360 40 400 20	<b>24</b> Su	0543 1140 1756 2337	11.5 1.6 12.5 1.3	350 50 380 40				
<b>10</b> Th	0511 1133 1742 2329	12.1 1.3 10.5 2.3	370 40 320 70	<b>25</b> F	0553 1205 1820	12.1 1.0 11.5	370 30 350	<b>10</b> Su	0603 1210 1827	12.1 0.7 12.1	370 20 370	<b>10</b> M	0627 1210 1827	1.6 11.2 12.1	50 340 350	<b>25</b> Tu	0004 0607 1205 1820	1.6 11.2 2.0 11.8	50 340 60 360				
<b>11</b> F	0544 1202 1814	12.1 1.3 10.8	370 40 330	<b>26</b> Sa	0014 0627 1237 1852	2.0 11.8 1.3 11.5	60 360 40 350	<b>11</b> M	0028 0636 1241 1901	1.3 11.8 1.0 12.1	40 360 30 370	<b>11</b> Tu	0010 0615 1301 1918	1.0 11.8 2.3 10.8	30 360 70 330	<b>26</b> W	0032 0631 1215 1837	2.3 10.2 1.0 12.8	70 310 80 390				
<b>12</b> Sa	0004 0618 1234 1848	2.3 11.8 1.3 11.2	70 360 40 340	<b>27</b> Su	0051 0700 1308 1926	2.3 10.8 2.0 10.8	70 330 60 330	<b>12</b> Tu	0107 0711 1315 1939	2.0 10.8 1.3 11.8	60 290 40 360	<b>27</b> W	0049 0722 1327 1945	1.6 9.5 3.0 10.2	50 50 70 310	<b>27</b> Th	0101 0654 1253 1915	3.0 9.5 3.3 12.1	90 290 100 330				
<b>13</b> Su	0043 0655 1307 1926	2.3 11.2 1.6 11.2	70 340 50 340	<b>28</b> M	0128 0732 1339 2000	3.0 10.2 2.3 10.5	90 310 70 320	<b>13</b> W	0150 0749 1351 2023	2.6 9.8 2.3 11.2	80 260 70 340	<b>13</b> Th	0132 0729 1327 1959	2.3 9.8 2.6 11.2	70 300 80 340	<b>28</b> F	0133 0718 1319 1940	3.9 8.9 3.9 9.8	120 270 120 300				
<b>14</b> M	0126 0734 1343 2008	2.6 10.5 2.0 10.8	80 320 60 330	<b>29</b> Tu	0206 0803 1411 2036	3.6 9.2 3.3 9.8	110 280 100 300	<b>14</b> Th	0240 0832 1432 ● 2119	3.3 8.9 3.0 10.2	100 270 90 310	<b>14</b> F	0245 0815 1423 ● 2109	4.9 7.5 4.6 8.9	150 230 140 270	<b>29</b> Sa	0221 0815 1410 ● 2056	3.6 8.5 3.6 10.2	110 260 110 310	<b>29</b> Tu	0213 0751 1351 2026	4.6 7.9 4.9 9.2	140 240 150 280
<b>15</b> Tu	0214 0817 1423 ● 2057	3.3 9.8 2.6 10.5	100 300 80 320	<b>30</b> W	0250 0837 1445 ● 2122	4.3 8.2 3.9 9.2	130 250 120 280	<b>15</b> F	0347 0936 1528 2243	4.3 7.5 4.3 9.5	130 230 130 290	<b>15</b> Sa	0330 0931 1512 2228	4.6 7.5 4.9 9.2	140 220 150 280	<b>30</b> Su	0316 0856 1449 ● 2159	5.2 7.2 5.6 8.5	160 220 170 260				
				<b>31</b> Th	0348 0923 1528 2230	4.9 7.2 4.6 8.5	150 220 140 260					<b>31</b> M	0537 1210 1528 1736	5.6 7.2 5.6 6.2	170 220 170 190								

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Dar Es Salaam, Tanzania, 2008

Times and Heights of High and Low Waters

April				May				June			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0025	8.5	260	16 W 0150	9.8	300	1 Th 0038	9.2	280	16 Su 0202	9.5	290
0732	4.9	150	W 0811	3.9	120	Th 0701	4.3	130	F 0805	3.9	120
1346	8.2	250	1430	10.2	310	1325	9.8	300	1429	10.8	330
1934	5.2	160	2036	3.9	120	1936	4.3	130	2047	3.6	110
2 W 0141	9.5	290	17 Th 0244	10.5	320	2 F 0139	9.8	300	2 M 0241	9.8	300
0814	3.9	120	0853	3.3	100	0748	3.6	110	17 Sa 0251	9.8	300
1425	9.5	290	1510	11.2	340	1410	11.2	340	2 M 0846	3.6	110
2022	3.9	120	2118	3.0	90	2022	3.3	100	1508	11.2	340
3 Th 0227	10.5	320	18 F 0325	10.8	330	3 Sa 0227	10.5	320	18 Su 0330	10.2	310
0845	3.0	90	0927	2.6	80	0827	2.6	80	18 Tu 0921	3.3	100
1457	10.8	330	1543	11.8	360	1449	12.1	370	1542	11.8	360
2058	3.0	90	2152	2.3	70	2102	2.3	70	2200	2.6	80
4 F 0305	11.2	340	19 Sa 0358	11.2	340	4 Su 0309	11.2	340	4 M 0404	10.2	310
0913	2.3	70	0956	2.3	70	0903	2.0	60	19 M 0953	3.0	90
1528	11.8	360	1612	12.1	370	1527	13.1	400	1612	11.8	360
2131	2.0	60	2222	2.0	60	2141	1.3	40	2232	2.3	70
5 Sa 0339	11.8	360	20 W 0427	11.2	340	5 M 0348	11.5	350	20 Tu 0435	10.2	310
0941	1.6	50	Su 1023	2.0	60	0940	1.6	50	20 Th 1023	3.0	90
1558	12.8	390	1638	12.5	380	1604	13.5	410	1641	12.1	370
2205	1.0	30	O 2250	2.0	60	● 2219	1.0	30	2302	2.3	70
6 Su 0413	12.5	380	21 M 0455	11.2	340	6 Tu 0427	11.5	350	21 W 0505	10.2	310
1011	1.0	30	1048	2.0	60	1017	1.3	40	1051	3.0	90
1630	13.5	410	1704	12.5	380	1643	13.8	420	1710	11.8	360
● 2239	0.7	20	2317	2.0	60	2259	1.0	30	2332	2.3	70
7 M 0447	12.5	380	22 Tu 0521	10.8	330	7 W 0507	11.5	350	22 Th 0534	10.2	310
1043	0.7	20	1113	2.3	70	1056	1.3	40	1120	3.0	90
1704	13.8	420	1730	12.5	380	1722	13.5	410	1739	11.8	360
2315	0.7	20	2345	2.0	60	2341	1.3	40	2346	12.1	370
8 Tu 0522	12.1	370	23 W 0548	10.5	320	8 Th 0548	10.8	330	23 M 0003	2.6	80
1116	1.0	30	1138	2.6	80	1137	2.0	60	0604	9.8	300
1739	13.8	420	1756	11.8	360	1805	13.1	400	1150	3.3	100
2353	1.0	30	2354	2.0	60	1808	11.5	350	1808	11.5	350
9 W 0558	11.5	350	24 Th 0014	2.6	80	9 F 0027	2.0	60	24 Sa 0035	3.0	90
1152	1.3	40	0614	10.2	310	0634	10.5	320	0637	9.5	290
1817	13.1	400	1204	3.0	90	1223	2.6	80	1222	3.6	110
1822	11.5	350	1822	11.5	350	1851	12.1	370	1841	11.2	340
10 Th 0035	1.6	50	25 F 0045	3.0	90	10 Sa 0117	2.6	80	25 M 0110	3.3	100
0637	10.5	320	0641	9.5	290	0726	9.8	300	0712	9.2	280
1231	2.3	70	1232	3.6	110	1316	3.6	110	1259	3.9	120
1859	12.5	380	1850	10.8	330	1944	11.2	340	1919	10.8	330
11 F 0121	2.6	80	26 Sa 0119	3.6	110	11 Su 0214	3.3	100	26 M 0148	3.6	110
0723	9.5	290	0712	8.9	270	0829	9.2	280	0755	9.2	280
1315	3.3	100	1303	4.3	130	1418	4.3	130	1345	4.6	140
1948	11.2	340	1925	10.2	310	2048	10.2	310	2003	10.2	310
12 Sa 0216	3.6	110	27 Su 0201	4.3	130	12 M 0319	3.9	120	27 Tu 0233	3.9	120
0821	8.9	270	0754	8.5	260	0944	8.9	270	0848	9.2	280
1409	4.3	130	1346	4.9	150	1538	4.9	150	1443	4.9	150
● 2050	10.2	310	2014	9.5	290	● 2210	9.5	290	2058	9.8	300
13 Su 0329	4.6	140	28 W 0256	4.9	150	13 Tu 0438	4.6	140	28 F 0326	4.3	130
0949	8.2	250	0904	7.9	240	1117	9.2	280	0953	9.2	280
1530	5.2	160	1453	5.6	170	1725	5.2	160	1556	4.9	150
2228	9.2	280	O 2126	9.2	280	2341	9.2	280	O 2206	9.2	280
14 M 0524	4.9	150	29 Tu 0418	5.2	160	14 W 0605	4.6	140	29 Th 0431	4.3	130
1203	8.2	250	1049	8.2	250	1241	9.5	290	1106	9.5	290
1800	5.6	170	1640	5.9	180	1855	4.9	150	1722	4.9	150
2309	8.9	270	2309	8.9	270	2327	9.2	280	2327	9.2	280
15 Tu 0028	9.2	280	30 W 0553	4.9	150	15 Th 0100	9.2	280	30 F 0540	4.3	130
0713	4.6	140	1224	8.9	270	0714	4.3	130	1218	10.2	310
1336	9.2	280	1833	5.2	160	1342	10.2	310	1842	4.3	130
1939	4.6	140	1939	4.6	140	1958	4.3	130	31 Sa 0043	9.2	280

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Dar Es Salaam, Tanzania, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0223 8.9 270	16 W 0328 8.5 260	1 F 0406 10.5 320	16 Sa 0407 10.2 310	1 M 0458 12.5 380	16 Tu 0427 12.8 390						
0808 3.3 100	0909 3.9 120	0957 2.0 60	0958 2.3 70	1058 1.0 30	1030 0.7 20						
1444 11.8 360	1530 10.5 320	1617 12.5 380	1611 11.8 360	1712 12.1 370	1640 12.5 380						
2114 2.3 70	2201 3.0 90	● 2236 1.3 40	2226 1.6 50	2313 1.0 30	2240 0.7 20						
2 W 0321 9.5 290	17 Th 0404 9.2 280	2 Sa 0445 11.2 340	17 Su 0434 11.2 340	2 Tu 0529 12.5 380	17 W 0457 13.1 400						
0906 2.6 80	0947 3.3 100	1038 1.6 50	1027 2.0 60	1130 1.0 30	1102 0.7 20						
1536 12.1 370	1604 11.2 340	1657 12.5 380	1640 12.1 370	1742 11.8 360	1710 12.1 370						
2202 1.6 50	2231 2.3 70	2310 1.0 30	● 2250 1.3 40	2341 1.3 40	2309 0.7 20						
3 Th 0410 10.2 310	18 F 0435 9.8 300	3 Su 0522 11.8 360	18 M 0501 11.5 350	3 W 0559 12.1 370	18 Th 0528 13.1 400						
0957 2.0 60	1020 3.0 90	1117 1.3 40	1057 1.3 40	1202 1.6 50	1136 0.7 20						
1623 12.8 390	1636 11.5 350	1734 12.5 380	1709 12.1 370	1742 11.5 350	1742 11.5 350						
● 2246 1.3 40	○ 2259 2.0 60	2344 1.0 30	2316 1.0 30	2339 1.0 30							
4 F 0455 10.8 330	19 Sa 0503 10.2 310	4 M 0557 11.8 360	19 Tu 0530 12.1 370	4 Th 0009 1.6 50	19 F 0602 12.8 390						
1043 2.0 60	1051 2.6 80	1155 1.3 40	1128 1.3 40	0627 11.8 360	1212 1.3 40						
1707 12.8 390	1706 11.8 360	1810 12.1 370	1739 12.1 370	1234 2.3 70	1816 10.8 330						
2327 1.3 40	2325 1.6 50		2344 1.0 30	1836 10.5 320							
5 Sa 0538 11.2 340	20 Su 0532 10.5 320	5 Tu 0016 1.3 40	20 W 0600 12.1 370	5 F 0038 2.3 70	20 Sa 0012 1.6 50						
1128 2.0 60	1122 2.3 70	0632 11.8 360	1201 1.3 40	0655 11.2 340	0638 12.1 370						
1750 12.5 380	1736 11.8 360	1233 2.0 60	1810 11.5 350	1307 3.0 90	1253 2.3 70						
	2352 1.6 50	1844 11.2 340		1902 9.5 290	1853 9.8 300						
6 Su 0007 1.3 40	21 M 0602 10.8 330	6 W 0050 1.6 50	21 Th 0013 1.3 40	6 Sa 0106 3.0 90	21 Su 0049 2.3 70						
0620 11.2 340	1154 2.3 70	0707 11.5 350	0632 12.1 370	0724 10.2 310	0720 11.2 340						
1214 2.0 60	1807 11.8 360	1311 2.3 70	1238 1.6 50	1342 3.9 120	1341 3.3 100						
1832 12.1 370		1917 10.5 320	1843 10.8 330	1929 8.5 260	1938 8.9 270						
7 M 0048 1.6 50	22 Tu 0020 1.6 50	7 Th 0123 2.3 70	22 F 0045 1.6 50	7 Su 0134 3.9 120	22 M 0132 3.3 100						
0702 11.2 340	0632 11.2 340	0742 10.8 330	0707 11.8 360	0758 9.5 290	0814 10.2 310						
1259 2.6 80	1228 2.3 70	1350 3.3 100	1318 2.3 70	1426 4.6 140	1444 4.3 130						
1915 11.2 340	1839 11.5 350	1950 9.5 290	1918 10.2 310	● 2003 7.9 240	● 2043 7.9 240						
8 Tu 0128 2.0 60	23 W 0051 1.6 50	8 F 0157 3.0 90	23 Sa 0120 2.3 70	8 M 0207 4.6 140	23 Tu 0233 4.6 140						
0745 10.8 330	0705 11.2 340	0819 10.2 310	0747 11.2 340	0849 8.5 260	0937 9.2 280						
1346 3.0 90	1306 2.3 70	1434 3.9 120	1404 3.0 90	1542 5.6 170	1636 4.9 150						
1958 10.5 320	1913 10.8 330	● 2025 8.5 260	2000 9.2 280	2111 6.9 210	2252 7.5 230						
9 W 0209 2.6 80	24 Th 0123 2.0 60	9 Sa 0233 3.6 110	24 Su 0200 3.0 90	9 Tu 0311 5.6 170	24 W 0437 5.2 160						
0830 10.2 310	0742 11.2 340	0903 9.2 280	0838 10.5 320	1037 8.2 250	1152 8.9 270						
1436 3.6 110	1348 3.0 90	1529 4.6 140	1504 3.9 120	1820 5.6 170	1855 4.6 140						
2043 9.5 290	1951 10.2 310	2109 7.5 230	● 2054 7.9 240								
10 Th 0251 3.3 100	25 F 0159 2.3 70	10 Su 0317 4.6 140	25 M 0251 3.9 120	10 W 0036 6.9 210	25 Th 0109 8.2 250						
0918 9.8 300	0824 10.8 330	1006 8.5 260	0952 9.5 290	0605 5.9 180	0707 4.9 150						
1532 4.3 130	1437 3.3 100	1656 5.2 160	1642 4.6 140	1255 8.5 260	1329 9.5 290						
● 2133 8.9 270	● 2034 9.2 280	2242 6.9 210	2239 7.2 220	1952 4.6 140	2002 3.6 110						
11 F 0338 3.9 120	26 Sa 0240 3.0 90	11 M 0433 5.2 160	26 Tu 0424 4.9 150	11 Th 0158 7.9 240	26 F 0213 9.5 290						
1016 9.5 290	0916 10.2 310	1154 8.5 260	1148 9.2 280	0740 4.9 150	0814 3.6 110						
1640 4.6 140	1539 3.9 120	1901 5.2 160	1858 4.6 140	1357 9.5 290	1428 10.5 320						
2238 7.9 240	2130 8.2 250		2239 7.2 220	2029 3.9 120	2044 3.0 90						
12 Sa 0434 4.6 140	27 Su 0333 3.6 110	12 Tu 0104 6.9 210	27 W 0103 7.5 230	12 F 0235 8.9 270	27 Sa 0256 10.5 320						
1130 9.2 280	1027 9.8 300	0636 5.2 160	0653 4.9 150	0825 3.9 120	0859 2.6 80						
1804 4.9 150	1707 4.3 130	1329 8.9 270	1334 9.8 300	1437 10.5 320	1511 11.2 340						
	2259 7.5 230	2023 4.3 130	2021 3.6 110	2057 3.0 90	2119 2.0 60						
13 Su 0003 7.5 230	28 M 0453 4.3 130	13 W 0226 7.5 230	28 Th 0227 8.5 260	13 F 0304 10.2 310	28 M 0331 11.5 350						
0548 4.9 150	1200 9.8 300	0803 4.6 140	0819 3.9 120	0859 3.0 90	0935 1.6 50						
1251 9.2 280	1853 4.3 130	1427 9.5 290	1439 10.8 330	1510 11.2 340	1547 11.8 360						
1932 4.6 140		2104 3.6 110	2108 2.6 80	2122 2.3 70	2149 1.6 50						
14 M 0133 7.5 230	29 Tu 0053 7.5 230	14 Th 0308 8.5 260	29 F 0315 9.8 300	14 Su 0332 11.2 340	29 M 0402 12.5 380						
0714 4.9 150	0637 4.3 130	0850 3.9 120	0910 2.6 80	0929 2.0 60	1007 1.3 40						
1358 9.5 290	1332 10.2 310	1508 10.5 320	1527 11.5 350	1541 11.8 360	1618 11.8 360						
2041 4.3 130	2018 3.6 110	2135 3.0 90	2144 1.6 50	2147 1.6 50	● 2216 1.3 40						
15 Tu 0242 7.9 240	30 W 0223 8.2 250	15 F 0339 9.5 290	30 Sa 0353 11.2 340	15 M 0359 12.1 370	30 Tu 0431 12.8 390						
0821 4.3 130	0809 3.6 110	0926 3.3 100	0950 1.6 50	0959 1.3 40	1036 1.0 30						
1449 9.8 300	1441 11.2 340	1541 11.2 340	1606 12.1 370	1610 12.1 370	1647 11.8 360						
2126 3.6 110	2116 2.6 80	2201 2.3 70	● 2216 1.3 40	● 2213 1.0 30	2242 1.3 40						
31 Th 0321 9.5 290	31 W 0910 3.0 90		31 Su 1026 1.3 40	31 M 0427 11.8 360							
1533 11.8 360	1533 11.8 360		1640 12.5 380	1640 12.5 380							
2159 1.6 50	2159 1.6 50		2245 1.0 30								

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Dar Es Salaam, Tanzania, 2008

Times and Heights of High and Low Waters

October				November				December							
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height				
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm				
1 W	0459	12.8	390	16 Th	0428	13.8	420	1 Sa	0527	11.8	360				
1105	1.3	40	1039	0.3	10	1143	2.3	70	16 M	0527	13.1	400			
1714	11.5	350	1646	11.8	360	1746	9.8	300	Su	1147	1.3	40			
2308	1.6	50	2239	1.0	30	2334	3.0	90	1205	2.3	70				
2 Th	0526	12.5	380	17 F	0502	13.5	410	17 M	1755	10.5	320				
1134	1.6	50	1115	0.7	20	1213	2.6	80	Tu	2343	2.3	70			
1740	10.8	330	1721	11.5	350	1812	9.5	290	1811	9.8	300				
2334	2.0	60	2313	1.3	40	1845	9.8	300	2355	3.3	100				
3 F	0552	11.8	360	18 Sa	0538	13.1	400	1 Sa	0543	11.5	350				
1203	2.0	60	1155	1.3	40	0001 M	0621	10.8	330	16 Tu	0611	12.1	370		
1804	10.2	310	1759	10.5	320	1246	3.3	100	1205	12.3	40				
2359	2.6	80	2350	2.0	60	1843	8.9	270	1811	9.8	300				
4 Sa	0618	11.2	340	19 Su	0619	12.1	370	18 M	0033	3.0	90				
1232	3.0	90	1238	2.3	70	0034 Tu	0655	10.2	310	19 W	0612	12.1	370		
1828	9.5	290	1842	9.8	300	1325	3.9	120	W	0803	10.2	310			
5 Su	0024	3.3	100	19 M	0032	3.0	90	1944	9.5	290	1844	9.5	290		
0643	10.5	320	0706 M	0706	11.2	340	1925	8.5	260	1923	9.2	280			
1305	3.6	110	1330	3.3	100	0034	3.9	120	2032	10.2	310				
1854	8.9	270	1936	8.9	270	0655	10.2	310	1923	9.2	280				
6 M	0052	3.9	120	21 Tu	0125	3.9	120	1429	3.6	110	2032	10.2	310		
0714	9.8	300	0807 W	10.2	310	1925	8.5	260	2055	9.2	280	0848	9.5	290	
1344	4.6	140	1438	4.3	130	0113 Sa	0222	8.2	250	1730	9.8	300			
1930	7.9	240	2057 O	8.2	250	0251 Th	0742	9.5	290	1353	3.6	110			
7 Tu	0126	4.9	150	21 F	0125	3.9	120	1544	4.3	130	2111	9.2	280		
0801	8.9	270	0807 Tu	10.2	310	0434 M	0742	9.5	290	0206 Sa	0346	4.3	130		
1447	5.2	160	1438	4.3	130	0222 W	1417	4.6	140	0820 F	0956	8.9	270		
O 2039	7.2	220	2253	8.2	250	0251 O	1936	8.9	270	1441 Sa	1558	3.9	120		
8 W	0230	5.6	170	23 Th	0459	5.2	160	2206 M	0742	9.5	290	2245	9.5	290	
0933	8.2	250	1137 Th	8.9	270	0558 Sa	1205	8.9	270	0206 F	0820	9.5	290		
1659	5.6	170	1815	4.6	140	0058 Su	1822	4.3	130	0920 Sa	0956	8.9	270		
2324	7.2	220	1815	4.6	140	0445 M	0703	3.9	120	1541 F	1558	3.9	120		
9 Th	0514	5.9	180	24 F	0041	8.9	270	0434 W	1307	9.5	290	2221 O	2245	9.5	290
1158	8.5	260	0652 F	0441	8.9	270	0045 Su	1307	9.5	290	0116 M	1558	3.9	120	
1850	4.9	150	1304	9.5	290	0445 O	1924	3.9	120	1709	4.3	130			
10 F	0104	8.2	250	25 Sa	0142	9.8	300	0151 M	0721	3.9	120	0512 Su	1709	4.3	130
0701	5.2	160	0754 Sa	0142	9.8	300	0058 Su	1327	9.2	280	0003 M	1709	4.3	130	
1311	9.2	280	1403	10.2	310	0606 M	1205	8.5	260	0636 F	1709	4.3	130		
1937	3.9	120	2010	3.3	100	0133 Tu	0749	3.0	90	1239 M	1709	4.3	130		
11 Sa	0147	9.5	290	26 Su	0226	10.8	330	0234 M	0749	3.0	90	0003 Su	1709	4.3	130
0749	3.9	120	0838 Su	0226	10.8	330	0133 M	1355	10.2	310	0748 Tu	1709	4.3	130	
1357	10.2	310	1447 Tu	10.5	320	0133 O	1952	2.6	80	1352 M	1709	4.3	130		
2009	3.3	100	2047 O	2.6	80	0234 Tu	0749	3.0	90	1935 Tu	1709	4.3	130		
12 Su	0221	10.5	320	27 M	0303	11.8	360	0133 W	0806	2.6	80	0112 M	1709	4.3	130
0825	3.0	90	0914 M	2.0	60	0234 O	1524	11.2	340	0748 Tu	1709	4.3	130		
1435	10.8	330	1524	10.8	330	0252 W	1098	1.3	40	1352 M	1709	4.3	130		
2038	2.3	70	2119	2.3	70	0252 O	1516	11.2	340	1935 O	2253	2.6	80		
13 M	0252	11.8	360	27 F	0329	12.1	370	0329 M	0946	0.7	20	0208 W	1450	3.6	110
0858	2.0	60	0947 Tu	1.6	50	0329 O	1554	11.2	340	0843 M	1450	3.6	110		
1508	11.5	350	1556	11.2	340	0415 M	1035	2.0	60	2029 W	1450	3.6	110		
2107	1.6	50	2148	2.0	60	0415 O	2143	1.3	40	0208 F	1450	3.6	110		
14 Tu	0323	12.8	390	29 W	0405	12.5	380	0444 M	1104	0.7	20	0437 M	1709	4.3	130
0931	1.0	30	1016 W	1.6	50	0405 F	1024	0.7	20	0415 Su	1019	0.7	20		
1541	11.8	360	1626 W	11.2	340	0405 O	1632	11.2	340	0357 M	1631	10.8	330		
O 2137	1.0	30	2215 O	2.0	60	0407 M	2220	1.3	40	0228 O	2216	1.6	50		
15 W	0355	13.5	410	31 F	0500	12.1	370	0444 M	1105	2.0	60	0254 M	1534	3.6	110
1005	0.7	20	1114 F	1.6	50	0407 F	1024	0.7	20	0441 M	1102	0.7	20		
1613	12.1	370	1720 F	10.5	320	0407 O	1632	11.2	340	0441 Su	1714	10.8	330		
2207	0.7	20	2308 F	2.3	70	0444 O	2220	1.3	40	0441 M	2300	1.6	50		

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

## Beira, Mozambique, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 0308	8.2	250	16 0305	6.2	190	1 0318	9.8	300	16 0609	9.8	300
Tu 1016	15.1	460	W 0936	17.1	520	F 1148	13.5	410	Sa 1208	14.1	430
1611	8.9	270	1508	7.5	230	1839	10.8	330	1955	10.5	320
2233	15.1	460	2210	16.1	490				1433	10.5	320
2 0436	9.2	280	17 0417	7.9	240	2 0016	13.8	420	17 0132	14.8	450
W 1139	14.4	440	Th 1056	15.7	480	Sa 0821	10.2	310	Su 0827	8.5	260
1810	9.2	280	1630	9.2	280	1352	14.1	430	1412	15.1	460
2356	14.8	450	2352	15.4	470	2030	9.5	290	2115	8.5	260
3 0708	8.9	270	18 0634	8.2	250	3 0202	14.8	450	18 0254	16.7	510
Th 1306	15.1	460	F 1238	15.4	470	Su 0921	8.5	260	M 0928	6.6	200
1938	8.5	260	1929	9.2	280	1457	15.7	480	1514	17.4	530
						2125	7.9	240	2201	6.6	200
4 0119	15.4	470	19 0135	15.7	480	4 0302	16.4	500	19 0341	19.0	580
F 0822	7.9	240	Sa 0814	7.5	230	M 1002	6.9	210	Tu 1013	4.9	150
1415	15.7	480	1409	16.1	490	1538	17.4	530	1055	19.0	580
2040	7.5	230	2059	7.9	240	2208	6.2	190	2240	4.9	150
5 0224	16.4	500	20 0249	17.4	530	5 0343	18.4	560	20 0419	20.3	620
Sa 0917	6.9	210	Su 0924	5.9	180	Tu 1037	5.6	170	W 1052	3.6	110
1505	17.1	520	1512	17.7	540	1613	19.0	580	1629	20.7	630
2132	6.6	200	2201	6.6	200	2245	4.9	150	2315	3.6	110
6 0313	17.4	530	21 0343	18.7	570	6 0419	20.0	610	21 0453	21.7	660
Su 1005	5.9	180	M 1020	4.9	150	W 1109	4.6	140	Th 1127	3.0	90
1547	18.0	550	1600	19.0	580	1645	20.3	620	1702	21.7	660
2219	5.6	170	2250	4.9	150	2319	3.9	120	O 2347	3.0	90
7 0354	18.4	560	22 0428	20.0	610	7 0453	21.3	650	22 0525	22.3	680
M 1048	5.2	160	Tu 1107	3.9	120	Th 1139	3.6	110	F 1159	2.6	80
1624	18.7	570	1641	20.0	610	1717	21.3	650	1732	22.3	680
2300	4.9	150	O 2331	4.3	130	● 2350	3.0	90	● 2324	2.3	70
8 0432	19.4	590	23 0507	20.7	630	8 0525	22.3	680	8 0503	23.3	710
Tu 1124	4.6	140	W 1147	3.3	100	F 1205	3.0	90	Sa 1139	2.6	80
1659	19.4	590	1719	20.7	630	1747	22.3	680	1724	23.6	720
● 2337	4.3	130							2355	1.6	50
9 0506	20.0	610	24 0007	3.6	110	9 0018	2.3	70	24 0039	3.0	90
W 1155	4.3	130	Th 0544	21.3	650	Sa 0556	23.0	700	Su 0622	22.0	670
1731	20.0	610	1221	3.0	90	1229	2.6	80	1250	3.0	90
			1753	21.0	640	1816	22.6	690	1828	22.3	680
10 0008	3.6	110	25 0037	3.3	100	10 0044	2.0	60	25 0058	3.6	110
Th 0539	20.7	630	M 0618	21.3	650	Su 0627	23.0	700	M 0647	21.3	650
1221	3.9	120	1251	3.0	90	1251	2.6	80	1310	3.6	110
1802	20.3	620	1825	21.3	650	1845	22.3	680	1852	21.3	650
11 0035	3.3	100	26 0103	3.6	110	11 0109	2.3	70	26 0112	4.3	130
F 0611	21.0	640	Sa 0648	21.0	640	M 0658	22.3	680	Tu 0709	20.3	620
1244	3.6	110	Sa 1316	3.6	110	M 1312	3.3	100	Tu 1325	4.6	140
1832	20.7	630	1854	21.0	640	1915	21.7	660	1915	20.3	620
12 0059	3.3	100	27 0124	3.9	120	12 0133	3.0	90	26 0150	2.0	60
Sa 0643	21.0	640	Su 0717	20.0	610	Tu 0731	21.3	650	Tu 0637	23.0	700
1304	3.6	110	1338	4.3	130	1333	3.9	120	Tu 1254	3.0	90
1902	20.7	630	1923	20.3	620	1945	20.3	620	1853	22.3	680
13 0124	3.3	100	28 0140	4.9	150	13 0159	4.3	130	11 0050	2.0	60
Su 0716	20.7	630	M 0745	19.0	580	W 0806	19.7	600	W 0639	20.3	620
1326	3.9	120	1357	5.2	160	1356	5.6	170	W 1258	4.9	150
1935	20.0	610	1952	19.0	580	2021	18.7	570	1845	20.3	620
14 0150	3.9	120	29 0155	5.9	180	14 0229	5.9	180	27 0054	5.2	160
M 0753	20.0	610	Tu 0813	17.7	540	F 0850	17.4	530	Th 0656	19.0	580
1352	4.6	140	1415	6.6	200	Th 1425	7.5	230	1308	5.9	180
2013	19.0	580	2024	17.7	540	● 2110	16.4	500	1922	20.7	630
15 0222	4.9	150	30 0212	6.9	210	15 0313	8.2	250	13 0140	4.6	140
Tu 0838	18.7	570	W 0848	16.1	490	F 0959	15.1	460	28 0103	5.9	180
1424	5.9	180	1436	8.2	250	F 1505	9.5	290	F 0710	17.4	530
● 2101	17.7	540	● 2105	16.1	490	2303	14.4	440	1318	6.9	210
31 0236	8.2	250							1927	17.4	530
Th 0945	14.4	440							29 0120	7.2	220
1511	9.5	290							0723	15.7	480
2215	14.4	440							Sa 1335	8.2	250

Time meridian 30° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Beira, Mozambique, 2008

Times and Heights of High and Low Waters

April				May				June			
	Time	Height			Time	Height			Time	Height	
	h m	ft cm		h m	ft cm			h m	ft cm		
<b>1</b> Tu	0037	13.8 420		<b>16</b> W	0214 16.7 510		<b>1</b> Th	0101 16.1 490		<b>16</b> Su	0209 17.4 530
	0833	9.8 300		0837	6.9 210		0750	7.9 240		0829	5.6 170
	1357	14.8 450		1425	17.1 520		1348	16.7 510		1419	18.0 550
	2022	8.9 270		2105	6.2 190		2007	6.6 200		2058	5.2 160
<b>2</b> W	0201	16.1 490		<b>17</b> Th	0253 18.7 570		<b>2</b> F	0201 18.0 550		<b>17</b> Sa	0250 18.7 570
	0857	7.9 240		0913	5.2 160		0834	5.9 180		0909	4.6 140
	1441	17.1 520		1501	19.0 580		1435	19.0 580		1459	19.0 580
	2101	6.6 200		2139	4.9 150		2052	4.9 150		2137	4.6 140
<b>3</b> Th	0247	18.4 560		<b>18</b> F	0326 20.0 610		<b>3</b> Sa	0248 20.0 610		<b>18</b> Su	0327 19.7 600
	0927	5.9 180		0949	3.9 120		0916	4.6 140		0950	3.9 120
	1517	19.4 590		1534	20.7 630		1516	20.7 630		1536	20.0 610
	2138	4.9 150		2213	3.9 120		2136	3.3 100		2216	4.3 130
<b>4</b> F	0325	20.7 630		<b>19</b> Sa	0358 21.3 650		<b>4</b> Su	0330 21.3 650		<b>19</b> M	0402 20.0 610
	1001	4.3 130		1024	3.3 100		0959	3.6 110		1031	3.6 110
	1551	21.3 650		1606	21.7 660		1556	21.7 660		1611	20.3 620
	2215	3.3 100		2247	3.3 100		2222	2.6 80		2256	4.3 130
<b>5</b> Sa	0401	22.3 680		<b>20</b> Su	0430 21.7 660		<b>5</b> M	0411 22.0 670		<b>20</b> Tu	0437 20.0 610
	1035	3.3 100		1059	3.0 90		1042	3.3 100		1110	3.9 120
	1625	22.6 690		1637	22.0 670		1634	22.3 680		1645	20.3 620
	2252	2.3 70		2319	3.3 100		2306	2.3 70		2332	4.3 130
<b>6</b> Su	0437	23.3 710		<b>21</b> M	0500 21.7 660		<b>6</b> Tu	0449 22.0 670		<b>21</b> W	0509 19.4 590
	1110	2.6 80		1132	3.3 100		1124	3.3 100		1146	4.3 130
	1658	23.6 720		1707	22.0 670		1712	22.0 670		1717	19.7 600
	2329	1.6 50		2348	3.6 110		2349	2.3 70		1826	19.4 590
<b>7</b> M	0511	23.6 720		<b>22</b> Tu	0529 21.0 640		<b>7</b> W	0527 21.7 660		<b>22</b> Th	0004 4.6 140
	1143	2.6 80		1201	3.6 110		1202	3.6 110		0540	18.7 570
	1732	23.6 720		1735	21.3 650		1750	21.3 650		1217	4.6 140
										1748	19.4 590
<b>8</b> Tu	0003	1.6 50		<b>23</b> W	0013 4.3 130		<b>8</b> Th	0028 3.0 90		<b>23</b> Su	0029 5.2 160
	0545	23.3 710		0555	20.3 620		0605	20.7 630		0608	18.0 550
	1213	3.0 90		1225	4.3 130		1237	4.3 130		1241	4.9 150
	1804	23.0 700		1801	20.7 630		1827	20.3 620		1816	18.7 570
<b>9</b> W	0035	2.3 70		<b>24</b> Th	0030 4.9 150		<b>9</b> F	0104 3.9 120		<b>24</b> Sa	0046 5.6 170
	0618	22.3 680		0618	19.4 590		0642	19.0 580		0635	17.4 530
	1240	3.6 110		1243	4.9 150		1307	5.2 160		1300	5.6 170
	1836	21.7 660		1825	19.7 600		1905	19.0 580		1846	18.0 550
<b>10</b> Th	0105	3.3 100		<b>25</b> F	0040 5.6 170		<b>10</b> Sa	0139 5.2 160		<b>25</b> Su	0101 5.9 180
	0651	20.7 630		0638	18.0 550		0721	17.7 540		0702	16.7 510
	1303	4.9 150		1255	5.9 180		1335	6.6 200		1320	6.6 200
	1907	20.0 610		1849	18.7 570		1950	17.1 520		1919	17.4 530
<b>11</b> F	0132	4.9 150		<b>26</b> Sa	0051 6.2 190		<b>11</b> M	0216 6.9 210		<b>26</b> W	0122 6.2 190
	0724	18.7 570		0657	17.1 520		0809	16.1 490		0737	16.1 490
	1323	6.2 190		1308	6.6 200		1406	7.9 240		1348	6.6 200
	1941	17.7 540		1916	17.4 530		2054	15.7 480		2004	16.7 510
<b>12</b> Sa	0201	7.2 220		<b>27</b> Su	0111 6.9 210		<b>12</b> M	0308 8.5 260		<b>27</b> Tu	0156 6.9 210
	0804	16.4 500		0720	15.7 480		0920	14.8 450		0833	15.1 460
	1344	8.2 250		1332	7.5 230		1459	9.2 280		1432	7.2 220
	2033	15.7 480		1955	15.7 480		2227	14.4 440		2110	15.7 480
<b>13</b> Su	0241	9.2 280		<b>28</b> M	0144 8.2 250		<b>13</b> Tu	0459 9.2 280		<b>28</b> W	0249 7.5 230
	0916	14.1 430		0805	14.1 430		1055	14.1 430		1000	14.8 450
	1414	10.2 310		1414	8.9 270		1810	9.5 290		1551	7.9 240
	2247	14.1 430		2120	14.4 440					2234	15.4 470
<b>14</b> M	0606	10.5 320		<b>29</b> Tu	0240 9.5 290		<b>14</b> W	0002 14.8 450		<b>29</b> Sa	0425 8.2 250
	1135	13.5 410		1052	13.5 410		0647	8.5 260		1131	15.1 460
	1940	10.2 310		1652	10.2 310		1224	15.1 460		1749	7.5 230
				2330	14.4 440		1933	8.2 250		2358	16.1 490
<b>15</b> Tu	0104	14.8 450		<b>30</b> W	0643 9.8 300		<b>15</b> Th	0117 16.1 490		<b>30</b> F	0627 7.5 230
	0752	8.9 270		1244	14.8 450		0746	6.9 210		1248	16.1 490
	1332	15.1 460		1913	8.5 260		1331	16.4 500		1908	6.2 190
	2030	8.2 250					2018	6.6 200			2007	4.9 150
<b>31</b> Sa	0110	17.1 520					<b>31</b> Sa	0110 17.1 520			
	0737	6.2 190					0737	6.2 190			
	1351	17.7 540					1351	17.7 540			
	2007	4.9 150					2007	4.9 150			

Time meridian 30° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

## Beira, Mozambique, 2008

Times and Heights of High and Low Waters

July				August				September						
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height			
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm			
1 Tu	0241	17.4	530	16 W	0328	16.4	500	1 F	0419	18.4	560			
0914	5.6	170		0959	5.2	160	1109	3.6	110	1103	3.3	100		
1517	18.4	560		1539	17.4	530	1648	19.7	600	1637	19.7	600		
2149	4.3	130		2237	5.2	160	● 2329	3.0	90	○ 2327	3.6	110		
2 W	0336	18.0	550	17 Th	0410	17.4	530	2 Sa	0500	19.4	590			
1019	4.9	150		1046	4.6	140	1149	3.0	90	1135	2.6	80		
1608	19.0	580		1619	18.0	550	1728	20.3	620	1709	20.7	630		
2249	3.6	110		2318	4.6	140	2354	3.0	90	1807	21.0	640		
3 Th	0425	18.7	570	18 F	0447	17.7	540	3 Su	0007	2.3	70			
1115	4.3	130		1126	3.9	120	0537	20.0	610	18 M	0531	20.3	60	
1655	19.4	590		1656	18.7	570	1224	2.6	80	1203	2.0	60		
● 2341	3.0	90		○ 2352	3.9	120	1804	20.3	620	1740	21.3	650		
4 F	0510	19.0	580	19 Sa	0521	18.4	560	4 M	0040	2.3	70			
1201	3.6	110		1200	3.3	100	0612	20.0	610	0600	21.0	640		
1739	19.7	600		1729	19.4	590	1253	2.6	80	1229	1.6	50		
5 Sa	0024	3.0	90	20 Su	0019	3.6	110	1837	20.3	620	1810	21.7	660	
0552	19.0	580		0553	19.0	580	● 0108	2.6	80	● 0017	2.6	80		
1240	3.3	100		1228	3.0	90	Tu	0643	20.0	610	Th	0639	20.3	620
1821	19.7	600		1801	20.0	610	1317	3.0	90	0633	21.0	650		
6 Su	0100	3.0	90	21 M	0042	3.3	100	1840	21.7	660	1305	3.6	110	
0631	19.0	580		0622	19.0	580	● 0133	3.3	100	1859	19.4	590		
1312	3.6	110		1252	3.0	90	W	0713	19.4	590	● 0102	3.0	90	
1900	19.0	580		1832	20.0	610	1337	3.6	110	Th	0637	2.6	80	
7 M	0132	3.3	100	22 Tu	0101	3.3	100	● 0136	4.9	150	F	0633	21.3	650
0709	18.7	570		0651	19.4	590	7 Th	0154	4.3	130	1327	3.3	100	
1340	4.3	130		1315	2.6	80	0743	18.4	560	● 0121	3.9	120		
1937	18.4	560		1903	20.0	610	1353	4.6	140	W	0059	3.3	100	
8 Tu	0201	4.3	130	23 W	0120	3.3	100	1946	19.4	590	● 0121	4.6	140	
0745	18.0	550		0722	19.0	580	● 0059	2.3	70	Su	0735	18.0	550	
1406	4.9	150		1338	3.0	90	Th	0657	20.7	630	1350	5.2	160	
2015	17.4	530		1937	19.7	600	1317	2.0	60	● 0136	4.9	150		
9 W	0229	4.9	150	24 Th	0142	3.6	110	1912	20.7	630	Th	0121	4.6	140
0824	17.1	520		0756	18.7	570	7 F	0154	4.3	130	0735	18.0	550	
1430	5.9	180		1406	3.6	110	0727	19.7	600	● 0121	4.6	140		
2057	16.4	500		2016	18.7	570	1342	3.0	90	7 Su	0146	6.2	190	
10 Th	0301	6.2	190	25 O	0211	4.3	130	1946	19.4	590	1425	7.2	220	
0910	16.1	490		0838	17.4	530	● 0213	5.6	170	● 0205	14.8	450		
1501	6.9	210		1441	4.6	140	8 F	0215	5.2	160	2255	13.1	400	
● 2149	15.4	470		2105	17.4	530	0816	17.1	520	● 0239	9.5	290		
11 F	0347	7.2	220	26 Sa	0248	5.6	170	1410	5.9	180	● 0238	9.5	290	
1006	15.1	460		0934	16.1	490	● 0204	16.1	490	● 0205	14.8	450		
1553	7.9	240		1533	5.9	180	23 M	0238	6.6	200	● 0238	9.5	290	
2256	14.4	440		2210	15.7	480	0802	18.4	560	● 0238	12.5	380		
12 Sa	0510	7.9	240	26 Su	0313	8.2	250	1411	4.6	140	● 0238	10.5	320	
1117	14.4	440		1000	14.1	430	2027	17.4	530	● 0204	12.8	390		
1756	8.5	260		1510	8.9	270	● 0204	13.1	400	● 0238	10.8	330		
13 Su	0016	14.1	430	2305	13.1	400	2036	13.8	420	● 0238	10.8	330		
0650	7.9	240		11 F	0528	9.2	280	1308	13.1	400	● 0238	10.8	330	
1238	14.4	440		1141	13.1	400	2055	8.9	270	● 0238	10.8	330		
1941	7.9	240		1929	9.5	290	● 0252	7.5	230	● 0238	10.8	330		
14 M	0136	14.8	450	10 Th	0313	8.2	250	1013	14.4	440	● 0238	10.8	330	
0804	7.2	220		0838	17.4	530	1616	8.5	260	● 0238	10.8	330		
1353	15.1	460		1441	4.6	140	1616	8.5	260	● 0238	10.8	330		
2051	6.9	210		2105	17.4	530	2305	13.8	420	● 0238	10.8	330		
15 Tu	0239	15.4	470	26 O	0248	5.6	170	1931	8.2	250	● 0238	10.8	330	
0905	6.2	190		0921	6.2	190	● 0252	13.1	400	● 0238	10.8	330		
1452	16.1	490		1514	17.4	530	0752	8.5	260	● 0238	10.8	330		
2148	5.9	180		2150	4.9	150	1331	13.8	420	● 0238	10.8	330		
16 Su	0016	14.1	430	2337	14.8	450	2056	8.2	250	● 0238	10.8	330		
0650	7.9	240		1056	15.1	460	● 0238	13.1	400	● 0238	10.8	330		
1238	14.4	440		1710	7.2	220	1331	13.8	420	● 0238	10.8	330		
1941	7.9	240		2337	14.8	450	2056	8.2	250	● 0238	10.8	330		
17 F	0510	7.9	240	27 O	0344	6.9	210	● 0238	13.1	400	● 0238	10.8	330	
1117	14.4	440		0921	6.2	190	10 F	0106	13.1	400	● 0238	10.8	330	
1756	8.5	260		1514	17.4	530	0825	8.5	260	● 0238	10.8	330		
13 Su	0016	14.1	430	2150	4.9	150	1415	15.4	470	● 0238	10.8	330		
0650	7.9	240		2043	6.2	190	2222	5.2	160	● 0238	10.8	330		
1238	14.4	440		2043	6.2	190	2051	6.6	200	● 0238	10.8	330		
1941	7.9	240		2043	6.2	190	● 0238	13.1	400	● 0238	10.8	330		
17 F	0510	7.9	240	26 O	0345	8.2	250	1931	8.2	250	● 0238	10.8	330	
1117	14.4	440		1239	14.8	450	● 0238	13.1	400	● 0238	10.8	330		
1756	8.5	260		1916	7.2	220	0925	6.2	190	● 0238	10.8	330		
13 Su	0016	14.1	430	1514	17.4	530	1513	17.4	530	● 0238	10.8	330		
0650	7.9	240		2150	4.9	150	2143	4.9	150	● 0238	10.8	330		
1238	14.4	440		2150	4.9	150	2143	4.9	150	● 0238	10.8	330		
1941	7.9	240		2150	4.9	150	2143	4.9	150	● 0238	10.8	330		
17 F	0510	7.9	240	31 Th	0332	17.4	530	● 0238	13.1	400	● 0238	10.8	330	
1117	14.4	440		1020	4.9	150	0405	19.0	580	● 0238	10.8	330		
1756	8.5	260		1604	18.7	570	1028	3.0	90	● 0238	10.8	330		
13 Su	0016	14.1	430	2244	3.6	110	1611	20.7	630	● 0238	10.8	330		
0650	7.9	240		2244	3.6	110	2251	3.3	100	● 0238	10.8	330		
1238	14.4	440		2244	3.6	110	2306	2.6	80	● 0238	10.8	330		
1941	7.9	240		2244	3.6	110	2306	2.6	80	● 0238	10.8	330		
17 F	0510	7.9	240	31 Th	0332	17.4	530	● 0238	13.1	400	● 0238	10.8	330	
1117	14.4	440		1020	4.9	150	0440	20.3	620	● 0238	10.8	330		
1756	8.5	260		1604	18.7	570	1125	2.6	80	● 0238	10.8	330		
13 Su	0016	14.1	430	2244	3.6	110	1706	21.3	650	● 0238	10.8	330		
0650	7.9	240		2244	3.6	110	2341	2.0	60	● 0238	10.8	330		

Time meridian 30° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.

Heights are referred to the chart datum of soundings.

## Beira, Mozambique, 2008

Times and Heights of High and Low Waters

October				November				December															
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height												
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm												
1 W	0515	21.7	660	16 Th	0509	22.3	680	1 Sa	0016	3.9	120	1 M	0019	3.6	110	16 Tu	0037	4.9	150	16 0100	4.3	130	
	1155	2.6	80		1139	1.3	40		0549	20.0	610		0607	20.7	630		0608	19.0	580		0648	19.7	600
	1737	21.3	650		1723	22.6	690		1222	4.6	140		1244	3.3	100		1243	5.2	160		1322	3.9	120
					2352	2.6	80		1808	19.0	580		1823	20.0	610		1828	18.0	550		1900	19.4	590
2 Th	0010	2.6	80	17 F	0542	22.0	670	2 Su	0039	4.6	140	17 M	0053	4.6	140	2 Tu	0059	5.2	160	17 W	0132	4.9	150
	0543	21.3	650		1213	2.0	60		0615	19.0	580		0647	19.4	590		0636	18.4	560		0729	18.7	570
	1219	3.0	90		1757	22.0	670		1237	5.2	160		1320	4.6	140		1257	5.9	180		1355	4.9	150
	1804	20.7	630						1831	18.0	550		1902	18.4	560		1853	17.4	530		1940	18.4	560
3 F	0034	3.3	100	18 Sa	0022	3.0	90	3 M	0056	5.6	170	18 Tu	0124	5.6	170	3 W	0117	5.9	180	18 Th	0201	5.9	180
	0610	20.3	620		0615	21.0	640		0641	18.0	550		0730	17.7	540		0707	17.7	540		0814	17.4	530
	1237	3.9	120		1245	2.6	80		1248	6.2	190		1357	5.9	180		1312	6.2	190		1428	6.2	190
	1828	19.7	600		1831	20.7	630		1852	16.7	510		1946	17.1	520		1921	16.7	510		2025	17.4	530
4 Sa	0054	4.3	130	19 Su	0049	3.9	120	4 Tu	0110	6.6	200	19 W	0156	6.9	210	4 Th	0137	6.2	190	19 F	0233	6.9	210
	0634	19.4	590		0649	19.7	600		0708	16.7	510		0825	16.1	490		0743	17.1	520		0907	16.4	500
	1249	4.9	150		1315	4.3	130		1302	6.9	210		1440	7.5	230		1335	6.9	210		1508	7.5	230
	1848	18.4	560		1905	18.7	570		1913	15.4	470		2045	15.4	470		2000	15.7	480		2119	16.1	490
5 Su	0107	5.2	160	20 M	0113	5.2	160	5 W	0128	7.5	230	20 Th	0239	8.2	250	5 F	0209	6.9	210	20 Sa	0316	8.2	250
	0658	18.0	550		0725	17.7	540		0744	15.4	470		0947	14.8	450		0835	16.1	490		1013	15.4	470
	1258	5.9	180		1347	5.9	180		1329	7.9	240		1556	8.9	270		1413	7.5	230		1615	8.9	270
	1906	16.7	510		1945	16.7	510		1949	14.1	430		2209	14.4	440		2105	15.1	460		2228	15.4	470
6 M	0118	6.6	200	21 Tu	0139	6.9	210	6 Th	0203	8.5	260	21 F	0445	9.5	290	6 Sa	0302	7.9	240	21 Su	0457	8.9	270
	0722	16.4	500		0815	15.7	480		0856	14.1	430		1123	14.4	440		0950	15.4	470		1132	14.8	450
	1311	6.9	210		1427	8.2	250		1414	9.2	280		1802	9.2	280		1515	8.5	260		1801	8.9	270
	1920	15.1	460		2048	14.8	450		2208	13.1	400		2340	14.8	450		2239	14.8	450		2347	15.1	460
7 Tu	0133	7.5	230	22 W	0214	8.9	270	7 F	0339	9.8	300	22 Sa	0700	8.5	260	7 Su	0446	8.2	250	22 M	0657	8.5	260
	0754	14.8	450		1006	14.1	430		1100	13.8	420		1247	15.4	470		1117	15.4	470		1252	15.4	470
	1334	8.2	250		1633	9.8	300		1758	10.2	310		1920	7.9	240		1721	8.9	270		1923	8.2	250
	1933	13.5	410		2244	13.5	410																
8 W	0201	9.2	280	23 Th	0633	9.8	300	8 Sa	0010	13.8	420	23 Su	0058	15.7	480	8 M	0008	15.4	470	23 Tu	0105	15.7	480
	0924	13.1	400		1217	14.1	430		0647	8.5	260		0757	6.9	210		0634	7.5	230		0805	7.5	230
	1414	10.2	310		1913	8.9	270		1234	15.1	460		1348	16.7	510		1239	16.4	500		1359	16.4	500
	2013	11.5	350						1931	8.5	260		2009	6.6	200		1907	7.9	240		2022	6.9	210
9 Th	0656	10.2	310	24 F	0042	14.1	430	9 Su	0122	15.7	480	24 M	0155	17.1	520	9 Tu	0122	16.7	510	24 W	0209	16.7	510
	1216	13.1	400		0757	7.9	240		0744	6.9	210		0839	5.6	170		0742	5.9	180		0858	6.6	200
	2018	9.5	290		1343	15.7	480		1338	17.1	520		1433	18.0	550		1346	17.7	540		1450	17.4	530
10 F	0131	13.8	420	25 Sa	0153	16.1	490	10 M	0211	17.7	540	25 Tu	0240	18.7	570	10 W	0220	18.0	550	25 Th	0259	17.7	540
	0801	8.2	250		0838	6.2	190		0828	4.9	150		0918	4.6	140		0839	4.9	150		0947	5.6	170
	1341	15.1	460		1430	17.7	540		1427	19.0	580		1512	19.4	590		1442	19.0	580		1534	18.4	560
	2040	7.5	230		2049	5.2	160		2053	5.2	160		2133	4.6	140		2107	5.6	170		2203	5.2	160
11 Sa	0219	15.7	480	26 Su	0236	18.0	550	11 Tu	0254	19.4	590	26 W	0319	19.4	590	11 Th	0311	19.4	590	26 F	0343	18.7	570
	0838	6.2	190		0914	4.6	140		0911	3.6	110		0958	4.3	130		0934	3.9	120		1033	4.9	150
	1428	17.4	530		1506	19.4	590		1509	20.3	620		1548	20.0	610		1530	20.0	610		1613	19.0	580
	2107	5.9	180		2125	4.3	130		2134	4.3	130		2215	3.9	120		2202	4.6	140		2248	4.6	140
12 Su	0255	18.0	550	27 M	0312	19.7	600	12 W	0333	20.7	630	27 Th	0356	20.0	610	12 F	0357	20.3	620	27 Sa	0422	19.4	590
	0913	4.6	140		0948	3.6	110		0955	2.6	80		1039	3.9	120		1029	3.3	100		1116	4.6	140
	1505	19.4	590		1539	20.7	630		1549	21.3	650		1624	20.0	610		1616	20.7	630		1650	19.4	590
	2138	4.6	140		2202	3.3	100		2217	3.6	110		2256	3.9	120		2255	4.3	130		2329	4.3	130
13 M	0329	20.0	610	28 Tu	0345	20.7	630	13 Th	0412	21.7	660	28 F	0432	20.0	610	13 Sa	0442	20.7	630	28 Su	0458	19.7	600
	0949	3.0	90		1023	3.0	90		1040	2.3	70		1118	3.9	120		1120	3.0	90		1152	4.6	140
	1540	21.0	640		1611	21.0	640		1628	22.0	670		1658	20.0	610		1659	20.7	630		1725	19.4	590
	2211	3.3	100		2238	3.0	90		2301	3.3	100		2335	3.9	120		2343	3.9	120				
14 Tu	0402	21.3	650	29 W	0418	21.3	650	14 F	0451	21.7	660	29 Sa	0506	20.0	610	14 Su	0525	21.0	640	29 M	0004	4.3	130
	1026	2.0	60		1058	3.0	90		1124	2.3	70		1153	4.3	130		1206	3.0	90		0532	19.7	600
	1615	22.3	680		1643	21.3	650		1707	21.7	660		1730	19.4	590		1741	20.7	630		1221	4.6	140
	2246	2.6	80		2314	3.0	90		2342	3.3	100						1821	20.0	610		1756	19.4	590
15 W	0436	22.3	680	30 Th	0450	21.3	650	15 Sa	0529	21.3	650	30 Su	0009	4.3	130	15 M	0024	3.9	120	30 Tu	0033	4.3	130
	1103	1.6	50		1131	3.3	100		1206	2.6	80		0538	19.4	590		0607	20.7	630		0603	19.7	600
	1649	22.6	690		1713	21.0	640		1745	21.0	640		1780	18.7	570		1246	3.3	100		1244		

## Durban, South Africa, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0252 2.5 75	16 W 0229 2.0 62	1 F 0438 3.1 94	16 Sa 0530 2.8 86	1 Sa 0256 3.1 95	16 Su 0537 2.9 89						
0938 4.7 143	0914 5.3 161	1133 4.4 135	1214 4.9 148	0945 4.3 130	1206 4.6 141						
1600 2.9 88	1530 2.5 77	1821 3.0 91	1842 2.6 79	1639 3.2 99	1828 2.7 81						
2205 4.2 128	2138 4.7 142			2344 4.1 125							
2 W 0419 2.8 84	17 Th 0347 2.4 74	2 Sa 0047 4.2 129	17 Su 0105 4.9 148	2 M 0605 3.1 96	17 M 0056 4.9 149						
1116 4.6 141	1047 5.1 155	0647 2.9 88	0716 2.4 73	1227 4.4 135	0713 2.5 75						
1748 2.9 87	1713 2.6 79	1306 4.8 145	1333 5.3 161	1903 2.9 88	1323 5.1 155						
	2331 4.6 140	1935 2.6 78	1951 2.0 62		1936 2.1 64						
3 Th 0004 4.2 129	18 F 0541 2.5 76	3 Su 0150 4.7 144	18 M 0207 5.5 167	3 M 0121 4.6 140	18 Tu 0153 5.5 167						
0606 2.7 83	1223 5.2 160	0746 2.5 75	0813 1.9 57	0723 2.7 82	0803 1.9 58						
1238 4.8 147	1849 2.3 69	1357 5.2 158	1425 5.8 177	1332 5.0 151	1411 5.6 170						
1905 2.5 77		2018 2.1 64	2037 1.4 44	1952 2.3 71	2019 1.6 48						
4 F 0120 4.6 139	19 Sa 0106 5.0 151	4 M 0229 5.2 160	19 Tu 0251 6.0 184	4 Tu 0203 5.2 158	19 W 0233 6.0 183						
0715 2.4 74	0711 2.1 65	0826 2.0 61	0856 1.4 42	0805 2.1 65	0840 1.4 44						
1332 5.2 157	1334 5.6 171	1434 5.6 172	1506 6.2 190	1412 5.5 168	1449 6.0 183						
1955 2.1 65	1954 1.8 54	2051 1.6 50	2115 1.0 30	2027 1.8 54	2054 1.1 34						
5 Sa 0207 5.0 151	20 Su 0209 5.5 167	5 Tu 0301 5.7 175	20 W 0328 6.5 198	5 W 0236 5.8 176	20 Th 0307 6.4 195						
0802 2.1 64	0813 1.7 51	0901 1.6 48	0932 1.0 31	0840 1.6 49	0913 1.1 33						
1413 5.5 167	1428 6.0 184	1508 6.1 185	1542 6.5 199	1446 6.0 184	1522 6.3 193						
2032 1.7 53	2044 1.3 39	2122 1.2 37	2149 0.6 19	2058 1.2 38	2125 0.8 24						
6 Su 0244 5.3 163	21 M 0258 6.0 183	6 W 0332 6.2 188	21 Th 0402 6.8 206	6 Th 0308 6.3 193	21 F 0338 6.7 203						
0840 1.8 54	0901 1.2 38	0933 1.2 37	1005 0.8 24	0913 1.1 34	0943 0.8 25						
1448 5.8 177	1514 6.4 194	1540 6.4 195	1615 6.7 203	1519 6.5 197	1553 6.5 198						
2106 1.4 43	2126 0.9 26	2152 0.9 26	O 2220 0.5 14	2129 0.8 24	2155 0.6 19						
7 M 0316 5.7 174	22 Tu 0341 6.4 196	7 Th 0403 6.6 200	22 F 0433 6.9 210	7 F 0340 6.8 207	22 M 0407 6.8 206						
0914 1.5 45	0943 1.0 29	1006 1.0 29	1036 0.8 23	0946 0.7 22	1012 0.7 22						
1521 6.1 185	1555 6.6 201	1612 6.7 203	1645 6.7 203	1553 6.8 207	1621 6.5 199						
2137 1.1 34	O 2205 0.6 17	● 2223 0.6 18	2249 0.4 13	● 2201 0.4 13	2223 0.6 17						
8 Tu 0348 6.0 183	23 W 0420 6.7 204	8 F 0435 6.8 208	23 Sa 0502 6.8 208	8 Sa 0413 7.1 217	23 Su 0434 6.7 205						
0946 1.2 38	1021 0.8 25	1039 0.8 24	1105 0.8 25	1019 0.5 15	1039 0.8 23						
1553 6.3 191	1633 6.7 203	1645 6.8 207	1713 6.5 199	1627 7.0 212	1648 6.5 197						
● 2207 0.9 27	2240 0.4 13	2254 0.4 13	2317 0.6 17	2233 0.2 7	2250 0.7 20						
9 W 0419 6.3 191	24 Th 0455 6.8 206	9 Sa 0508 6.9 211	24 Su 0530 6.7 203	9 Su 0446 7.3 221	24 M 0459 6.6 201						
1019 1.1 34	1057 0.8 25	1112 0.8 23	1133 1.0 30	1053 0.4 13	1106 0.9 26						
1626 6.4 195	1707 6.6 200	1719 6.8 206	1740 6.3 192	1701 7.0 212	1714 6.3 192						
2239 0.8 23	2313 0.5 14	2326 0.5 14	2344 0.8 25	2306 0.3 8	2317 0.9 26						
10 Th 0451 6.4 195	25 F 0529 6.7 204	10 Su 0542 6.9 210	25 M 0556 6.4 194	10 M 0521 7.2 219	25 Tu 0525 6.4 194						
1052 1.0 32	1130 1.0 30	1147 0.9 26	1201 1.2 38	1128 0.6 17	1132 1.1 33						
1659 6.5 197	1739 6.4 194	1754 6.6 200	1806 6.0 183	1736 6.8 206	1740 6.1 185						
2310 0.7 22	2344 0.6 19	2359 0.6 19		2340 0.5 15	2343 1.1 35						
11 F 0525 6.5 197	26 Sa 0559 6.5 197	11 M 0618 6.7 204	26 Tu 0011 1.1 35	11 Tu 0557 6.9 209	26 W 0551 6.1 185						
1126 1.1 34	1201 1.2 37	1223 1.1 34	Tu 0622 6.0 183	1204 0.9 26	1159 1.3 41						
1733 6.4 194	1808 6.1 186	M 1829 6.2 190	1228 1.6 49	1812 6.4 195	1806 5.8 176						
2343 0.8 23			1832 5.6 172								
12 Sa 0559 6.4 195	27 Su 0014 0.9 28	12 Tu 0034 1.0 29	27 W 0038 1.6 48	12 W 0015 0.9 27	27 Th 0011 1.5 46						
1203 1.2 38	0630 6.2 188	0655 6.3 192	0649 5.6 171	0634 6.4 195	0618 5.7 173						
1809 6.2 188	1232 1.5 47	1302 1.5 46	1258 2.0 61	1242 1.3 40	1227 1.7 53						
	1836 5.7 175	1907 5.8 177	1900 5.2 159	1851 5.9 180	1834 5.4 164						
13 Su 0017 1.0 29	28 M 0043 1.3 39	13 W 0738 5.8 177	28 Th 0108 2.1 63	13 Th 0054 1.4 44	28 F 0040 2.0 60						
0637 6.2 190	0659 5.8 176	1347 2.0 61	0721 5.2 157	0716 5.8 176	0649 5.2 160						
1241 1.5 46	1304 1.9 59	1905 5.3 162	1332 2.5 75	1324 1.9 57	1259 2.2 66						
1847 5.9 179		1952 5.2 160	1935 4.7 144	1935 5.3 162	1908 5.0 151						
14 M 0054 1.2 37	29 Tu 0114 1.7 53	14 Th 0158 2.0 61	29 F 0145 2.6 79	14 F 0140 2.1 64	29 G 0116 2.5 75						
0718 5.9 181	0732 5.3 163	0833 5.2 160	0807 4.7 142	0809 5.1 156	0729 4.8 146						
1325 1.8 56	1340 2.3 71	1447 2.5 77	1423 2.9 89	1420 2.5 75	1342 2.6 80						
1929 5.5 167	1939 4.9 149	● 2058 4.7 144	● 2032 4.3 130	● 2041 4.7 144	● 1958 4.5 137						
15 Tu 0136 1.6 49	30 W 0150 2.2 68	15 F 0308 2.6 79									
0808 5.6 171	0814 4.9 150	1008 4.8 147									
1418 2.2 67	1427 2.8 84	1633 2.8 86									
● 2022 5.1 154	● 2025 4.4 135	2309 4.5 136									
16 Th 0241 2.8 84	31 Th 0922 4.5 138										
1553 3.1 94	1553 3.1 94										
2208 4.1 124	2208 4.1 124										

Time meridian 30° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Durban, South Africa, 2008

Times and Heights of High and Low Waters

April				May				June			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
<b>1</b> Tu	0028 0642 1249 1909	4.5 2.8 4.7 2.5	138 84 144 75	<b>16</b> W	0124 0738 1345 1949	5.4 2.0 5.3 1.7	164 60 161 53	<b>1</b> Th	0031 0647 1254 1904	5.1 2.2 5.1 2.0	156 66 155 60
<b>2</b> W	0123 0732 1338 1951	5.2 2.2 5.3 1.9	157 66 162 57	<b>17</b> Th	0205 0815 1424 2026	5.8 1.5 5.7 1.3	177 47 173 41	<b>2</b> F	0121 0734 1342 1949	5.7 1.6 5.6 1.4	174 48 171 43
<b>3</b> Th	0202 0810 1417 2026	5.8 1.6 5.9 1.3	176 48 179 40	<b>18</b> F	0239 0848 1458 2058	6.1 1.2 6.0 1.0	187 37 182 32	<b>3</b> Sa	0203 0816 1424 2030	6.3 1.0 6.1 0.9	191 32 186 28
<b>4</b> F	0237 0846 1453 2100	6.4 1.0 6.4 0.8	195 31 194 24	<b>19</b> Sa	0310 0918 1528 2129	6.3 1.0 6.2 0.9	193 29 188 27	<b>4</b> Su	0243 0855 1505 2109	6.7 0.6 6.5 0.6	205 19 197 17
<b>5</b> Sa	0312 0921 1529 2135	6.9 0.6 6.7 0.4	209 18 205 13	<b>20</b> Su	0338 0946 1557 2157	6.5 0.8 6.2 0.8	197 25 190 25	<b>5</b> M	0323 0935 1546 2149	7.0 0.4 6.7 0.4	213 11 204 11
<b>6</b> Su	0347 0957 1605 ● 2210	7.2 0.3 6.9 0.2	219 9 211 7	<b>21</b> M	0406 1014 1625 2226	6.5 0.8 6.2 0.9	197 24 188 26	<b>6</b> Tu	0403 1015 1627 2230	7.0 0.3 6.7 0.4	214 8 205 12
<b>7</b> M	0423 1033 1642 2246	7.3 0.2 6.9 0.2	222 7 211 7	<b>22</b> Tu	0432 1042 1652 2253	6.4 0.9 6.2 1.0	194 26 188 30	<b>7</b> W	0445 1055 1709 2311	6.9 0.4 6.6 0.6	210 12 183 19
<b>8</b> Tu	0501 1110 1720 2323	7.1 0.4 6.7 0.5	217 12 205 15	<b>23</b> W	0459 1109 1719 2322	6.2 1.0 6.0 1.2	189 30 183 36	<b>8</b> Th	0527 1136 1752 2354	6.5 0.7 6.3 1.0	199 20 193 31
<b>9</b> W	0539 1147 1759	6.8 0.7 6.4	206 22 194	<b>24</b> Th	0527 1137 1747 2351	6.0 1.2 5.8 1.5	182 37 176 45	<b>9</b> F	0611 1218 1838	6.0 1.0 5.9	184 32 181
<b>10</b> Th	0002 0619 1227 1842	1.0 6.2 1.2 5.9	29 29 29 29	<b>25</b> F	0556 1207 1818	5.6 1.5 5.5	172 46 167	<b>10</b> Sa	0041 0658 1303 1928	1.5 5.5 1.5 5.5	46 46 47 167
<b>11</b> F	0044 0704 1311 1930	1.5 5.6 1.7 5.3	46 170 53 163	<b>26</b> Sa	0023 0630 1241 1855	1.8 5.3 1.9 5.2	56 162 162 157	<b>11</b> M	0134 0753 1357 2032	2.0 5.0 2.0 5.1	62 151 61 154
<b>12</b> Sa	0135 0759 1408 ● 2041	2.2 5.0 2.3 4.8	66 151 70 147	<b>27</b> Su	0102 0711 1323 1944	2.3 4.9 2.3 4.8	69 150 70 145	<b>12</b> M	0245 0906 1509 2201	2.5 4.6 2.4 4.8	76 139 72 146
<b>13</b> Su	0255 0933 1542 2244	2.7 4.5 2.7 4.6	83 136 82 141	<b>28</b> M	0158 0813 1427 2110	2.7 4.5 2.7 4.5	81 138 81 137	<b>13</b> Tu	0427 1043 1648 2335	2.7 4.4 2.5 4.9	81 134 76 148
<b>14</b> M	0519 1137 1750	2.8 4.5 2.6	86 136 79	<b>14</b> Tu	0341 1000 1622 2315	2.9 4.4 2.8 4.6	89 133 85 141	<b>29</b> W	0559 1210 1813 1911	2.5 4.6 2.3 2.0	76 139 66 62
<b>15</b> Tu	0026 0648 1255 1903	4.9 2.4 4.8 2.2	150 74 147 67	<b>15</b> W	0540 1149 1805	2.7 4.6 2.5	82 140 76	<b>30</b> Th	0042 0659 1310 1911	5.1 2.2 4.9 2.0	156 66 149 62
<b>31</b> Sa	0037 0656 1307 1912	5.5 1.7 5.3 1.6	169 53 161 50	<b>31</b> Sa	0037 0656 1307 1912	5.5 1.7 5.3 1.6	169 53 161 50	<b>15</b> Su	0138 0755 1411 2008	5.2 1.8 5.1 1.9	160 56 156 57

Time meridian 30° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

## Durban, South Africa, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0204	6.0	183	16 W 0238	5.5	167	1 F 0333	6.5	197	1 M 0325	6.2	188
0821	1.2	36	W 0853	1.5	47	F 0942	0.6	18	Sa 0935	1.0	29
1436	5.9	181	M 1507	5.6	171	1558	6.8	206	Sa 1547	6.5	197
2040	1.2	36	2106	1.6	49	● 2203	0.7	22	O 2151	1.0	31
2 W 0255	6.3	192	17 Th 0311	5.8	176	2 Sa 0413	6.6	201	2 Tu 0356	6.4	196
0908	0.8	25	0924	1.2	38	1019	0.4	12	Su 1005	0.7	21
1524	6.3	193	1538	5.9	181	1636	6.9	211	1616	6.7	205
2128	0.9	26	2138	1.3	41	2241	0.7	20	2222	0.8	25
3 Th 0342	6.5	198	18 F 0343	6.0	183	3 Su 0450	6.6	201	18 M 0427	6.6	199
0953	0.6	17	0955	1.0	31	1054	0.4	11	1034	0.6	17
1609	6.6	202	F 1607	6.2	189	1711	6.9	210	1647	6.9	210
● 2213	0.7	22	O 2210	1.1	35	2316	0.8	23	2254	0.8	23
4 F 0426	6.5	199	19 Sa 0414	6.2	188	4 M 0525	6.4	196	19 Tu 0459	6.6	201
1034	0.4	13	1025	0.9	26	1127	0.5	15	1105	0.5	16
1652	6.7	205	1638	6.4	194	1745	6.7	204	1719	6.9	210
2256	0.7	22	2241	1.0	32	2349	1.0	30	2327	0.8	24
5 Sa 0508	6.4	196	20 Su 0446	6.3	191	5 Tu 0557	6.2	188	20 W 0532	6.5	198
1114	0.5	14	1055	0.8	24	1159	0.8	24	1136	0.7	20
1733	6.7	203	1709	6.5	197	1816	6.4	194	1753	6.7	205
2337	0.9	27	2313	1.0	32	1846	5.9	181	1828	6.4	195
6 Su 0548	6.2	190	21 M 0519	6.3	191	6 W 0021	1.3	40	21 Th 0001	1.0	30
1152	0.7	20	1126	0.8	24	0627	5.8	177	0607	6.2	190
1812	6.4	196	1741	6.4	196	1230	1.2	36	1209	1.0	29
2347	1.1	35	2347	1.1	35	1846	5.9	181	1828	6.4	195
7 M 0016	1.2	36	22 Tu 0552	6.1	187	7 Th 0053	1.7	52	22 F 0038	1.3	40
0626	5.9	180	1158	0.9	28	0658	5.4	164	0644	5.8	178
1228	1.0	29	1816	6.3	192	1301	1.7	51	1245	1.3	41
1850	6.1	186	1918	5.5	167	1918	5.5	167	1907	6.0	182
8 Tu 0054	1.5	47	23 W 0023	1.3	40	8 F 0128	2.1	64	23 Sa 0119	1.7	53
0702	5.5	168	0628	5.9	180	0732	4.9	150	0727	5.4	164
1304	1.3	41	1233	1.1	35	1336	2.2	66	1328	1.9	58
1928	5.7	173	1853	6.1	185	● 1955	5.0	152	1956	5.4	165
9 W 0134	1.9	59	24 Th 0102	1.6	48	9 Sa 0212	2.5	77	24 M 0212	2.2	68
0741	5.1	155	0707	5.6	171	0817	4.5	136	0825	4.9	148
1343	1.8	55	1310	1.5	46	1423	2.7	83	1428	2.5	76
2010	5.2	160	1935	5.8	176	2053	4.5	138	● 2112	4.9	149
10 Th 0220	2.3	71	25 F 0148	1.9	58	10 Su 0323	2.9	89	25 M 0336	2.7	81
0826	4.7	142	0754	5.2	159	0949	4.1	125	1012	4.5	137
1429	2.3	69	1356	1.9	58	1606	3.1	95	1627	2.9	87
● 2104	4.9	148	○ 2029	5.4	164	2255	4.3	131	2319	4.7	144
11 F 0322	2.6	80	26 Sa 0247	2.3	69	11 M 0545	3.0	90	26 W 0549	2.6	80
0934	4.3	132	0856	4.8	147	1230	4.2	129	1225	4.8	145
1539	2.7	82	Sa 1459	2.3	71	M 1832	3.0	91	Tu 1840	2.6	78
2225	4.6	140	2147	5.1	155	1832	3.0	91	1913	2.7	83
12 Sa 0457	2.8	84	27 Su 0412	2.5	76	12 Tu 0047	4.5	138	10 W 0010	4.3	131
1125	4.2	128	1033	4.6	140	0714	2.6	79	0642	2.8	86
1729	2.8	86	1642	2.6	79	1338	4.7	143	1311	4.6	141
2330	5.0	153	1936	2.6	78	1936	2.6	78	1913	2.7	83
13 Su 0002	4.6	140	28 M 0558	2.4	72	13 W 0143	5.0	151	10 Th 0117	4.8	146
0632	2.6	79	1223	4.8	146	0801	2.1	65	0734	2.3	71
1259	4.5	136	1833	2.4	72	1417	5.2	159	1350	5.2	158
1856	2.6	79	1945	1.9	57	2016	2.1	64	1954	2.2	66
14 M 0112	4.9	148	29 Tu 0056	5.3	162	14 Th 0221	5.4	165	12 F 0157	5.3	162
0734	2.2	68	0718	1.9	59	0835	1.7	52	0809	1.8	55
1354	4.9	148	1338	5.3	162	1449	5.7	173	1422	5.7	175
1951	2.3	69	1945	1.9	57	2050	1.7	51	2026	1.7	51
15 Tu 0159	5.2	158	30 W 0159	5.7	175	15 F 0254	5.8	177	14 Th 0301	6.2	190
0817	1.9	57	0815	1.4	44	0906	1.3	39	0807	1.5	47
1434	5.2	160	1432	5.9	180	1518	6.1	186	1424	6.0	183
2031	1.9	58	2038	1.4	42	2121	1.3	40	2032	1.4	43
16 Th 0249	6.1	187	31 Th 0901	1.0	29	14 F 0240	6.1	185	13 W 0155	6.6	200
1517	6.4	196	1517	6.4	196	0848	1.0	31	0909	0.9	27
2123	1.0	30	2123	1.0	30	1504	6.5	199	1520	6.7	204
17						2111	1.0	30	2127	0.8	25
18						2146	0.7	22	● 2154	0.6	19
19						31 O 0249	6.1	187	2159	0.6	17
20						31 Th 0958	0.4	12	2218	0.6	19
21						1613	7.0	214			
22						2218	0.6	19			

Time meridian 30° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Durban, South Africa, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
W 1 1032 1642 2251	h m 0431 0.6 196	ft 6.4 0.6 204	cm 196	Th 16 1020 1634 2245	h m 0418 0.3 7.2 218	ft 6.8 0.3 207	cm 207	Sa 1 1106 1711 2324	h m 0506 1.2 6.0 183	ft 5.9 1.2 37	cm 181
	0459 1059 1708 2318	6.2 0.8 6.4 1.0	190 25 195 30		0535 1135 1740 2354	5.7 1.5 5.7 1.4	174 46 174 44		0528 1129 1744 2355	6.4 0.9 6.3 0.9	196 28 192 26
	0526 1127 1734 2346	6.0 1.1 6.1 1.3	183 35 185 39		0606 1207 1812	5.4 1.9 5.3	166 183 163		0039 0703 1305 1921	1.3 5.7 1.9 5.2	39 173 58 160
	0553 1155 1801	5.7 1.5 5.7	173 47 173		0027 0642 1244 1850	1.8 5.1 2.3 5.0	55 156 70 151		0130 0803 1410 O 2026	1.7 5.2 2.4 4.8	53 160 73 145
Su 5 0622 1225 1831	0014 0705 1306 1927	1.6 5.3 2.0 5.2	50 161 61 159	M 20 0729 1336 1944	0046 0729 1306 1927	1.5 5.5 2.0 5.2	46 167 62 157		0107 0729 1336 1944	2.2 4.8 2.7 4.6	67 145 83 139
	0046 0657 1300 1909	2.1 4.9 2.5 4.8	63 149 77 145		0204 0849 1511 O 2120	2.6 4.5 3.0 4.3	78 136 92 130		0402 1100 1727 2332	2.4 4.9 2.6 4.5	73 150 80 137
	0128 0748 1358 O 2015	2.5 4.4 3.0 4.3	77 135 92 131		0259 1000 1630 2249	2.5 4.7 2.9 4.4	76 143 87 135		0346 1054 1720 2320	2.8 4.6 2.9 4.4	85 139 88 134
	0246 0958 1642 2253	3.0 4.2 3.2 4.2	90 127 99 127		0503 1151 1817	2.6 5.0 2.5	78 151 77		0537 1216 1839	2.3 5.2 2.3	71 157 70
W 8 Th 1832	0535 1219 1832	3.0 4.5 2.8	90 138 86	Th 24 0629 1256 1914	0021 0629 1256 1914	4.7 2.2 5.4 2.0	144 67 165 62		0043 0645 1310 1928	4.8 2.1 5.4 1.9	145 63 166 59
	10033 0650 1310 1919	4.6 2.5 5.1 2.3	139 75 156 69		0118 0722 1341 1955	5.2 1.7 5.8 1.6	157 53 178 48		0121 0727 1343 1958	5.3 1.6 6.1 1.3	162 49 186 39
	0121 0732 1346 1955	5.1 1.9 5.7 1.7	155 59 174 52		0201 0802 1418 2029	5.5 1.3 6.2 1.2	169 41 189 37		0203 0807 1421 2036	5.8 1.1 6.6 0.8	177 34 201 25
	0158 0806 1418 2028	5.6 1.4 6.3 1.1	172 43 191 35		0237 0837 1451 2101	5.9 1.0 6.5 1.0	179 32 197 29		0243 0846 1459 2114	6.2 0.7 6.9 0.5	190 22 189 14
M 13 M 2101	0233 0838 1450 2101	6.1 0.9 6.8 0.7	186 28 206 22	Tu 28 0909 1521 2131	0310 0925 1539 O 2152	6.1 0.5 7.1 0.3	186 15 215 9		0323 0925 1539 O 2152	6.5 0.5 7.1 0.3	199 15 215 9
	0307 0911 1523 O 2135	6.5 0.6 7.1 0.4	198 17 216 13		0341 0939 1549 ● 2159	6.2 0.8 6.6 0.7	189 24 200 22		0403 1005 1619 2232	6.7 0.5 7.0 0.3	203 14 213 9
	0342 0945 1558 2210	6.7 0.4 7.3 0.3	205 11 221 8		0410 1008 1617 2228	6.2 0.9 6.4 0.8	189 26 196 24		0445 1046 1701 2313	6.6 0.6 6.7 0.5	202 18 205 15
	31	0438 1037 1644 2256	6.1 1.0 6.3 0.9	186 30 191 28	0438 1037 1644 2256	6.1 1.0 6.3 0.9	186 30 191 28		0425 1022 1628 2242	6.0 1.1 6.1 0.9	183 35 183 28
W 15 W 1558	0523 1114 1718 2330	6.6 1.2 6.1 1.0	202 39 186 29	Tu 30 1114 1718 2330	0523 1053 1658 2348	6.6 1.2 6.0 0.6	202 38 195 19		0439 1041 1655 2306	6.7 0.7 6.7 0.4	203 20 204 12
	0513 1114 1718 2330	6.1 1.3 6.1 1.0	187 39 186 29		0523 1053 1658 2348	6.6 1.2 6.0 0.6	202 38 195 19		0444 1043 1648 2301	6.1 1.2 6.2 0.9	186 37 188 27
	0544 1145 1750	6.1 1.4 6.0	185 44 182		0544 1145 1750	6.1 1.4 6.0	185 44 182		0444 1043 1648 2301	6.1 1.2 6.2 0.9	186 37 188 27
	31	0544 1145 1750	6.1 1.4 6.0	185 44 182	0544 1145 1750	6.1 1.4 6.0	185 44 182		0444 1043 1648 2301	6.1 1.2 6.2 0.9	186 37 188 27

Time meridian 30° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Diego Garcia Island, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0211 0831 1504 2125	1.8 3.7 1.8 3.3	55 113 55 101	16 W 0144 0800 1432 2055	1.5 4.1 1.4 3.6	46 125 43 110	1 F 0247 0932 1712	2.4 3.2 2.1	73 98 64	1 Sa 0428 1107 1815	2.4 3.5 1.7	73 107 52
2 W 0328 0952 1640 2311	2.1 3.5 1.9 3.3	64 107 58 101	17 Th 0257 0921 1613 2251	1.9 3.8 1.6 3.4	58 116 49 104	2 Sa 0017 0605 1214 1902	3.1 2.4 3.4	94 73 104	2 Su 0054 0651 1259 1930	3.5 2.0 3.9	107 61 119
3 Th 0509 1125 1807	2.2 3.6 1.7	67 110 52	18 F 0452 1114 1804	2.0 3.8 1.4	61 116 43	3 Su 0133 0724 1323 1949	3.5 2.0 3.8	107 61 116	18 M 0150 0748 1354 2014	4.0 1.4 4.4	122 43 134
4 F 0035 0631 1236 1908	3.5 2.0 3.8 1.4	107 61 116 43	19 Sa 0037 0635 1245 1920	3.7 1.8 4.1	113 55 125 30	4 M 0209 0804 1404 2023	3.9 1.6 4.2	119 49 128	4 Tu 0227 0827 1433 2048	4.5 0.9	137 27 9
5 Sa 0130 0725 1327 1952	3.8 1.7 4.1 1.1	116 52 125 34	20 Su 0143 0741 1347 2012	4.1 1.4 4.5	125 43 137 18	5 Tu 0238 0835 1437 2053	4.3 1.2	131 37	20 W 0258 0900 1507 2118	4.9 0.5 5.2	149 15 158
6 Su 0210 0806 1407 2028	4.1 1.5 4.4 0.8	125 46 134 24	21 M 0229 0828 1434 2054	4.5 1.0 4.9	137 30 149	6 W 0304 0903 1507 2121	4.7 0.8 5.0	143 24 6	21 F 0326 0930 1536 2146	5.2 0.2	146 15 6
7 M 0244 0840 1442 2101	4.4 1.2 4.6 0.5	134 37 140 15	22 Tu 0308 0908 1514 2131	4.8 0.6	146 18	7 Th 0330 0931 1537 2148	5.0 0.4	152 12	22 F 0352 0957 1604 2211	5.3 0.0	162 0 0
8 Tu 0314 0912 1515 2132	4.6 0.9 4.9 0.3	140 27 149 9	23 W 0342 0943 1550 2204	5.1 0.4	155 12	8 F 0356 0959 1606 2216	5.2 0.1	158 3	23 Sa 0417 1023 1630 2235	5.4 0.0	165 0 3
9 W 0343 0942 1546 2202	4.8 0.7 5.0 0.2	146 27 152 6	24 Th 0413 1016 1623 2234	5.2 0.3	158 9	9 Sa 0423 1029 1637 2245	5.4 0.0	165 0	24 Su 0441 1048 1655 2259	5.4 0.0	165 9
10 Th 0412 1012 1618 2232	4.9 0.6 5.1 0.2	149 18 155 6	25 F 0443 1047 1654 2303	5.2 0.2	158 6	10 Su 0452 1100 1709 2315	5.4 -0.1	165 -3	25 M 0504 1114 1720 2322	5.2 0.2	158 6
11 F 0442 1044 1651 2303	5.0 0.5 5.1 0.3	152 15 155 9	26 W 0511 1117 1724 2331	5.1 0.3	155 9	11 M 0522 1133 1742 2347	5.3 0.1	162 3	26 Tu 0528 1139 1745 2345	5.0 0.5	152 15
12 Sa 0512 1117 1726 2337	5.0 0.5 5.0 0.4	152 15 152 12	27 Su 0539 1147 1754 2358	4.9 0.5	149 15	12 Tu 0554 1209 1819	5.1 0.4	155 12	27 W 0552 1206 1811	4.6 0.9	140 27
13 Su 0546 1154 1804	4.9 0.5 4.8	149 15 146	28 M 0607 1218 1824	4.7 0.8	143 24	13 W 0621 0630 1250 1901	0.9 4.7	27 24	28 Th 0008 0617 1236 1841	1.3 4.2	143 40
14 M 0013 0622 1235 1847	0.7 4.7 0.8 4.5	21 143 24 137	29 Tu 0026 0636 1251 1857	1.1 4.4	34 134 37 119	14 Th 0100 0714 1345 2002	1.4 4.2	43 43	29 F 0033 0645 1315 1923	1.8 3.8	55 55
15 Tu 0053 0705 1325 1939	1.1 4.4 1.1 4.0	34 134 34 122	30 W 0056 0709 1331 1939	1.5 4.0	46 122 49 107	15 F 0157 0824 1531 2226	2.0 3.7	61 113 55 94	30 Sa 0128 0758 1520 2238	2.1 3.5	64 107
			31 Th 0133 0753 1437 2100	2.0 3.6	61 110 61 94				31 M 0356 1048 1414 1753	2.6 3.1	79 94

Time meridian 90° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Diego Garcia Island, 2008

Times and Heights of High and Low Waters

April				May				June			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu 0026 2.1 64	16 W 0058 1.2 37	1 Th 0609 4.1 125	16 F 0046 4.2 128	1 Su 0039 4.6 140	16 M 0124 4.3 131						
1230 3.6 110	1316 4.3 131	1224 4.1 125	0701 1.0 30	0701 0.6 18	0746 0.9 27						
1851 1.5 46	1925 1.0 30	1834 1.2 37	1315 4.3 131	1319 4.6 140	1403 4.2 128						
2 W 0104 3.8 116	17 Th 0132 4.4 134	2 F 0042 4.3 131	17 Sa 0121 4.5 137	2 M 0127 4.9 149	17 Tu 0202 4.4 134						
0706 1.5 46	0740 0.8 24	0654 0.9 27	0737 0.7 21	0749 0.3 9	0823 0.7 21						
1313 4.2 128	1350 4.7 143	1308 4.6 140	1350 4.5 137	1405 4.8 146	1438 4.4 134						
1926 1.1 34	1956 0.8 24	1915 0.9 27	1950 1.0 30	2006 0.7 21	2034 1.2 37						
3 Th 0134 4.4 134	18 F 0201 4.8 146	3 Sa 0120 4.8 146	18 Su 0153 4.7 143	3 Tu 0212 5.1 155	18 W 0237 4.6 140						
0738 0.9 17	0810 0.5 15	0734 0.4 12	0808 0.5 15	0833 0.0 0	0856 0.6 18						
1347 4.7 143	1420 4.9 149	1347 5.0 152	1421 4.6 140	1449 5.0 152	1511 4.5 137						
1956 0.6 18	2023 0.6 18	1952 0.5 15	2020 0.9 27	2049 0.6 18	2107 1.1 34						
4 F 0202 4.8 146	19 Sa 0227 5.0 152	4 Su 0156 5.1 155	19 M 0222 4.8 146	4 W 0256 5.3 162	19 Th 0310 4.7 143						
0809 0.3 9	0837 0.2 6	0811 0.0 0	0838 0.4 12	0917 0.0 0	0929 0.5 15						
1419 5.2 158	1447 5.0 152	1425 5.2 158	1450 4.7 143	1532 5.0 152	1542 4.5 137						
2026 0.3 9	2049 0.5 15	2028 0.3 9	2048 0.9 27	2132 0.5 15	2139 1.0 30						
5 Sa 0231 5.3 162	20 Su 0252 5.1 155	5 M 0232 5.4 165	20 Tu 0251 4.9 149	5 Th 0339 5.3 162	20 F 0342 4.8 146						
0840 -0.1 -3	0903 0.1 3	0848 -0.3 -9	0907 0.4 12	0959 0.0 0	1000 0.5 15						
1451 5.5 168	1512 5.1 155	1502 5.4 165	1518 4.7 143	1614 5.0 152	1613 4.6 140						
2056 0.0 0	2113 0.4 12	2104 0.2 6	2116 0.8 24	2214 0.6 18	2211 1.0 30						
6 Su 0301 5.5 168	21 M 0316 5.2 158	6 Tu 0309 5.5 168	21 W 0319 4.9 149	6 F 0422 5.2 158	21 Th 0415 4.8 146						
0912 -0.4 -12	0928 0.1 3	0926 -0.3 -9	0936 0.4 12	1042 0.2 6	1032 0.5 15						
1523 5.6 171	1537 5.1 155	1539 5.3 162	1547 4.7 143	1656 4.8 146	1644 4.6 140						
● 2127 -0.1 -3	2136 0.5 15	2140 0.3 9	2144 0.9 27	2258 0.7 21	2244 0.9 27						
7 M 0331 5.7 174	22 Tu 0340 5.2 158	7 W 0346 5.5 168	22 Th 0348 4.8 146	7 Sa 0506 4.9 149	22 Su 0449 4.7 143						
0944 -0.5 -15	0953 0.1 3	1004 -0.2 -6	1005 0.4 12	1126 0.5 15	1106 0.6 18						
1556 5.6 171	1602 5.0 152	1618 5.1 155	1617 4.6 140	1740 4.6 140	1717 4.5 137						
2158 0.0 0	2201 0.6 18	2218 0.5 15	2214 1.0 30	2343 1.0 30	2319 0.9 27						
8 Tu 0403 5.7 174	23 W 0404 5.1 155	8 Th 0425 5.3 162	23 F 0418 4.7 143	8 Su 0553 4.6 140	23 M 0526 4.6 140						
1018 -0.4 -12	1019 0.3 9	1044 0.1 3	1036 0.6 18	1212 0.8 24	1141 0.7 21						
1629 5.4 165	1628 4.8 146	1658 4.8 146	1648 4.4 134	1826 4.3 131	1753 4.5 137						
2231 0.2 6	2226 0.8 24	2258 0.8 24	2246 1.1 34	2358 1.0 30	2358 1.0 30						
9 W 0437 5.5 168	24 Th 0430 4.9 149	9 F 0506 4.9 149	24 Sa 0451 4.6 140	9 M 0033 1.2 37	24 Tu 0607 4.5 137						
1053 -0.1 -3	1046 0.5 15	1127 0.5 15	1111 0.8 24	0644 4.3 131	1221 0.9 27						
1705 5.0 152	1655 4.5 137	1741 4.4 134	1723 4.3 131	1302 1.2 37	1833 4.3 131						
2305 0.6 18	2252 1.0 30	2342 1.1 34	2322 1.3 40	1918 4.0 122							
10 Th 0512 5.1 155	25 F 0458 4.6 140	10 Sa 0552 4.5 137	25 Su 0529 4.4 134	10 Tu 0130 1.5 46	25 W 0043 1.1 34						
1132 0.4 12	1116 0.8 24	1216 1.0 30	1149 1.0 30	0743 3.9 119	0654 4.3 131						
1743 4.5 137	1726 4.2 128	1833 4.0 122	1803 4.1 125	1400 1.5 46	1306 1.2 37						
2342 1.1 34	2322 1.3 40			2019 3.8 116	1920 4.2 128						
11 F 0551 4.6 140	26 Sa 0529 4.3 131	11 Su 0036 1.5 46	26 M 0005 1.5 46	11 W 0239 1.6 49	26 Th 0136 1.2 37						
1215 1.0 30	1151 1.2 37	0650 4.0 122	0615 4.1 125	0857 3.7 113	0751 4.0 122						
1829 3.9 119	1803 3.8 116	1319 1.5 46	1237 1.3 40	1511 1.8 55	1401 1.4 43						
2359 1.7 52	2359 1.7 52	1942 3.6 110	1854 3.9 119	2131 3.7 113	2018 4.1 125						
12 Sa 0026 1.6 49	27 Su 0610 3.9 119	12 M 0153 1.9 58	27 Tu 0101 1.6 49	12 W 0359 1.7 52	27 F 0244 1.4 43						
0641 4.0 122	1238 1.6 49	0815 3.6 110	0715 3.9 119	1021 3.6 110	0904 3.8 116						
1316 1.6 49	1856 3.5 107	1450 1.8 55	1338 1.6 49	1629 1.9 58	1512 1.7 52						
1939 3.4 104		● 2122 3.5 107	1959 3.7 113	2245 3.7 113	2130 4.0 122						
13 Su 0142 2.1 64	28 M 0057 2.0 61	13 Tu 0344 1.9 58	28 W 0216 1.7 52	13 W 0516 1.6 49	28 B 0405 1.4 43						
0813 3.4 104	0717 3.5 107	1009 3.5 107	0836 3.7 113	1137 3.7 113	1031 3.8 116						
1522 2.0 61	1401 1.9 58	1635 1.8 55	1459 1.7 52	1739 1.8 55	1636 1.7 52						
● 2219 3.2 98	● 2039 3.2 98	2258 3.6 110	● 2121 3.7 113	2349 3.9 119	2252 4.0 122						
14 M 0439 2.2 67	29 Tu 0258 2.2 67	14 W 0519 1.7 52	29 Th 0346 1.6 49	14 Sa 0617 1.4 43	29 Su 0529 1.2 37						
1106 3.4 104	0931 3.3 101	1137 3.7 113	1009 3.7 113	1237 3.8 116	1155 3.9 119						
1744 1.8 55	1617 2.0 61	1749 1.6 49	1624 1.7 52	1835 1.7 52	1756 1.6 49						
2248 3.4 104	2248 3.4 104		2240 3.9 119								
15 Tu 0009 3.6 110	30 W 0505 1.9 58	15 Th 0001 3.9 119	30 F 0506 1.4 43	15 Su 0041 4.1 125	30 M 0008 4.2 128						
0618 1.7 52	1123 3.6 110	0618 1.3 40	1127 4.0 122	0706 1.1 34	0641 0.9 27						
1230 3.9 119	1743 1.7 52	1233 4.0 122	1735 1.5 46	1323 4.0 122	1304 4.2 128						
1846 1.4 43	2356 3.8 116	1839 1.4 43	2345 4.2 128	1920 1.5 46	1903 1.4 43						
			31 Sa 0609 1.0 30								
			1228 4.3 131								
			1832 1.2 37								

Time meridian 90° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Diego Garcia Island, 2008

Times and Heights of High and Low Waters

July				August				September				
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm	
1 Tu	0112	4.5	137	16 W	0155	4.2	128	1 F	0253	5.1	155	
0740	0.6	18	W 0817	1.0	30	0911	0.1	3	16 Sa	0253	4.9	149
1359	4.5	137	1434	4.2	128	1522	5.0	152	1 M	0346	5.5	168
1958	1.1	34	2031	1.3	40	2124	0.4	12	16 M	0953	0.0	0
2 W	0206	4.8	146	17 Th	0232	4.5	137	2 Sa	0321	5.2	158	
0830	0.3	9	0851	0.7	21	0946	0.0	0	17 Su	0932	0.2	6
1447	4.7	143	1506	4.4	134	1556	5.2	158	17 O	1539	5.1	155
2046	0.8	24	2103	1.1	34	2159	0.2	6	2 Tu	2142	0.2	6
3 Th	0254	5.1	155	18 F	0306	4.7	143	3 Su	0407	5.4	165	
0915	0.1	3	0922	0.5	15	1019	0.0	0	18 M	0349	5.4	165
1529	4.9	149	1534	4.6	140	1627	5.2	158	3 W	1043	0.3	9
● 2130	0.6	18	O 2133	0.8	24	2232	0.2	6	18 Th	1648	5.2	158
4 F	0338	5.2	158	19 Sa	0337	4.9	149	4 M	0440	5.3	162	
0957	0.1	3	0952	0.4	12	1049	0.1	3	19 Tu	0418	5.4	165
1609	5.0	152	1602	4.8	146	1657	5.2	158	4 Th	1026	0.0	0
2211	0.5	15	2202	0.7	21	2304	0.2	6	19 F	1107	0.6	18
5 Sa	0419	5.2	158	20 Su	0408	5.0	152	5 Tu	0512	5.1	155	
1036	0.1	3	1021	0.3	9	1119	0.4	12	20 W	0448	5.3	162
1648	5.0	152	1630	4.9	149	1726	5.0	152	5 F	1131	4.6	140
2251	0.5	15	2232	0.5	15	2335	0.4	12	20 Sa	1739	4.8	146
6 Su	0459	5.1	155	21 M	0439	5.1	155	6 W	0542	4.8	146	
1114	0.3	9	1050	0.3	9	1147	0.7	21	21 Th	0520	5.1	155
1725	4.9	149	1659	5.0	152	1755	4.8	146	6 Sa	1124	5.1	155
2330	0.6	18	2303	0.5	15	2345	0.3	9	21 Su	1803	4.2	128
7 M	0538	4.9	149	22 Tu	0511	5.0	152	7 Th	0006	0.7	21	
1151	0.6	18	1121	0.4	12	0613	4.4	134	22 F	0555	4.8	146
1801	4.7	143	1729	4.9	149	1215	1.0	30	7 Su	1157	0.8	24
			2337	0.5	15	1824	4.5	137	7 M	1806	4.8	146
8 Tu	0009	0.8	24	23 W	0546	4.9	149	8 F	0039	1.1	34	
0618	4.6	140	1154	0.6	18	0646	4.0	122	23 Sa	0635	4.3	131
1228	0.9	27	1803	4.8	146	1245	1.4	43	8 M	1234	1.3	40
1839	4.5	137				1856	4.1	125	23 Tu	1847	4.4	134
9 W	0050	1.0	30	24 Th	0014	0.6	18	9 Sa	0118	1.5	46	
0659	4.2	128	0625	4.6	140	0727	3.6	110	24 Su	0114	1.2	37
1306	1.3	40	1230	0.9	27	1321	1.9	58	9 M	0728	3.7	113
1919	4.2	128	1841	4.6	140	● 1938	3.7	113	24 O	1324	1.8	55
10 Th	0136	1.3	40	25 F	0058	0.9	27	10 Sa	0217	1.9	58	
0747	3.8	116	0710	4.2	128	0836	3.1	94	25 Su	0224	1.8	55
1351	1.6	49	1314	1.3	40	1425	2.3	70	25 M	0714	3.1	94
● 2006	3.9	119	1927	4.3	131	2102	3.3	101	25 Tu	1255	2.3	70
11 F	0233	1.6	49	26 Sa	0153	1.2	37	11 M	0432	2.1	64	
0849	3.5	107	0810	3.8	116	1140	3.0	91	26 W	0516	1.8	55
1450	2.0	61	Sa 1411	1.7	52	1731	2.5	76	11 Th	0716	1.5	46
2111	3.6	110	2031	4.0	122	2347	3.3	101	11 F	1331	3.9	119
12 Sa	0353	1.8	55	27 Su	0314	1.5	46	12 Tu	1203	3.4	104	
1020	3.3	101	0943	3.5	107	1314	3.4	104	12 M	0912	3.2	98
1617	2.2	67	1543	2.0	61	1907	2.1	64	12 W	0237	1.7	52
2239	3.5	107	2210	3.8	116	1425	2.3	70	12 Th	1302	3.4	104
13 Su	0529	1.8	55	28 M	0507	1.5	46	12 F	0631	2.0	61	
1201	3.4	104	1144	3.5	107	0836	3.1	94	28 Th	0646	1.3	40
1756	2.1	64	1743	2.0	61	1425	2.3	70	28 F	1306	4.0	122
						2102	3.3	101	28 Sa	1856	2.1	64
14 M	0006	3.6	110	29 Tu	0000	3.9	119	12 W	0131	4.2	128	
0645	1.5	46	0641	1.2	37	0809	1.0	30	29 Su	0152	4.8	146
1311	3.6	110	1308	3.9	119	1423	4.2	128	29 M	0803	0.5	15
1905	1.9	58	1906	1.6	49	2021	1.2	37	29 O	1409	4.9	149
15 Tu	0109	3.9	119	30 W	0115	4.3	131	13 Th	0016	3.8	116	
0737	1.2	37	0744	0.8	24	0839	0.6	18	13 F	0653	1.3	40
1358	3.9	119	1403	4.3	131	1449	4.6	140	13 M	1316	3.9	119
1953	1.6	49	2002	1.1	34	2049	0.8	24	13 W	1915	1.5	46
			31 Th	0209	4.8	146			13 Th	1957	1.1	34
			0831	0.4	12				13 F	0131	4.2	128
			1445	4.7	143				13 M	0746	1.0	30
			2046	0.7	21				13 W	1356	4.3	131
									13 O	1957	1.1	34
									14 Th	0229	5.0	152
									14 F	0838	0.3	9
									14 M	1444	5.1	155
									14 W	2049	0.2	6
									14 O	2111	-0.1	-3
									15 Th	0257	5.4	165
									15 F	0904	0.1	3
									15 M	1509	5.4	165
									15 O	2116	-0.1	-3
									16 Th	0316	5.4	165
									16 F	0925	0.0	0
									16 M	1532	5.4	165
									16 O	2137	0.0	0
									17 Th	0316	5.4	165
									17 F	0925	0.0	0
									17 M	1532	5.4	165
									17 O	2137	-0.1	-3

Time meridian 90° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

# Diego Garcia Island, 2008

Times and Heights of High and Low Waters

October				November				December						
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height			
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm			
1 W	0345	5.3	162	16	0332	5.5	168	1 Sa	0413	4.8	146			
0947	0.2	6	Th	0934	0.1	3	1011	0.8	24	16 M	0434	5.0	152	
1551	5.4	165		1539	5.6	171	1615	4.9	149	1034	1.0	30		
2202	0.0	0		2153	-0.4	-12	2231	0.5	15	1642	5.1	155		
2 Th	0410	5.2	158	17 F	0405	5.4	165	2303	0.3	9	2303	0.7	21	
1010	0.4	12		1006	0.2	6	2301	0.8	24	1639	4.7	143		
1614	5.2	158		1612	5.5	168	2350	0.8	24	2257	0.7	21		
2226	0.2	6		2228	-0.1	-3	2332	0.9	27	1729	4.9	149		
3 F	0434	4.9	149	18 Sa	0440	5.1	155	18 M	0517	4.6	140			
1033	0.6	18		1040	0.5	15	1038	1.0	30	1117	0.9	27		
1638	5.0	152		1647	5.2	158	1643	4.6	140	1727	4.7	143		
2252	0.4	12		2306	0.3	9	2301	0.8	24	2350	0.8	24		
4 Sa	0459	4.6	140	19 Su	0518	4.6	140	19 Th	0545	4.2	128			
1057	0.9	27		1116	0.9	27	1144	1.7	52	18 W	0605	4.2	128	
1702	4.7	143		1726	4.7	143	1753	3.9	119	1146	1.4	43		
2318	0.8	24		2349	0.8	24	1714	4.3	131	1754	4.2	128		
5 Su	0526	4.2	128	20 M	0602	4.1	125	2335	1.2	37	1255	1.2	37	
1121	1.3	40		1200	1.5	46	5 W	0019	1.6	49	1907	4.1	125	
1729	4.3	131		1814	4.1	125	0637	3.5	107	1233	1.5	46		
2348	1.3	40					1237	2.0	61	1844	3.9	119		
6 M	0556	3.7	113	21 Tu	0045	1.4	43	1315	3.8	116	1920	3.8	116	
1149	1.8	55		0705	3.5	107	1144	1.7	52	0013	1.2	37		
1759	3.8	116		1308	2.0	61	1753	3.9	119	0627	4.0	122		
○	1933	3.6	110				1933	3.8	116	0122	1.3	40		
7 Tu	0028	1.8	55	22 W	0229	1.9	58	20 F	0046	1.3	40	0738	4.0	122
0641	3.2	98		0917	3.2	98	1015	3.6	110	1356	1.5	46		
1229	2.2	67		1539	2.2	67	1426	2.2	67	2012	3.8	116		
○	1850	3.3	101	2214	3.4	104	1426	3.6	110	0224	1.7	52		
8 W	0201	2.2	67	23 Th	0459	1.8	55	21 O	0204	1.7	52	0844	3.7	113
0930	2.9	88		1128	3.5	107	0832	3.6	110	1514	1.7	52		
1559	2.6	79		1741	1.8	55	1454	1.9	58	2136	3.5	107		
2238	3.1	94		2356	3.8	116	1843	3.7	113	1645	1.7	52		
9 Th	0536	2.1	64	24 F	0615	1.4	43	2057	3.3	101	2312	3.5	107	
1208	3.3	101		1227	4.0	122	0133	1.9	58	0346	1.9	58		
1810	2.1	64		1837	1.3	40	0808	3.2	98	1007	3.6	110		
10 F	0015	3.6	110				1753	1.4	43	1645	1.7	52		
0633	1.6	49					1933	3.7	113	2124	3.6	110		
1246	3.8	116					2303	3.7	113	0346	1.9	58		
1849	1.5	46					2301	3.5	107	1007	3.6	110		
11 Sa	0056	4.1	125	25 Sa	0049	4.3	131	21 O	0349	1.8	55	1645	1.7	52
0707	1.1	34		0659	1.1	34	1015	3.6	110	2256	3.7	113		
1315	4.3	131		1307	4.4	134	1641	1.7	52	0514	2.0	61		
1920	1.0	30		1917	0.8	24	1501	1.8	55	1128	3.7	113		
12 W	0129	4.6	140	26 Su	0128	4.6	140	1225	4.1	125	1802	1.5	46	
0737	0.7	21		0734	0.8	24	1225	4.1	125	1859	1.3	40		
1342	4.8	146		1339	4.8	146	1843	1.1	34	0027	3.7	113		
1949	0.4	12		1949	0.4	12	1922	0.8	24	0625	1.8	55		
13 M	0159	5.0	152	27 F	0200	4.9	149	1935	1.0	30	1231	3.9	119	
0805	0.4	12		0804	0.6	18	1922	0.8	24	1859	1.3	40		
1410	5.1	155		1407	5.0	152	1914	0.5	18	0006	4.0	122		
2019	0.0	0		2019	0.2	6	1956	0.6	18	0120	3.9	119		
14 Tu	0229	5.4	165	28 Tu	0229	5.1	155	2056	0.3	9	0716	1.6	49	
0834	0.2	6		0831	0.5	15	0239	4.7	143	1319	4.2	128		
1438	5.4	165		1434	5.2	158	0837	0.9	27	1943	1.0	30		
2049	-0.3	-9		2046	0.1	3	1441	5.3	162	0201	4.1	125		
15 W	0300	5.5	168	29 W	0256	5.1	155	2027	-0.2	-6	0757	1.4	43	
0903	0.0	0		0856	0.5	15	● 2112	0.0	0	1359	4.4	134		
1508	5.6	171		1459	5.2	158	2112	0.0	0	2020	0.8	24		
○	2121	-0.4	-12	● 2112	0.0	0				2053	0.6	18		
16 Sa	0347	4.9	149	31 F	0347	4.9	149							
1103	0.8	24		0945	0.6	18								
1709	4.8	146		1549	5.1	155								
2322	0.6	18		2204	0.3	9								

Time meridian 90° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
Heights are referred to the chart datum of soundings.

**EXTRA TIDES, 2008**

<b>Port Lincoln, Australia</b>	<b>Townsville, Australia</b>
February	February
18 1902 2.4 80	27 1908 5.5 180
April	
11 2304 2.4 80	
September	
11 1944 1.2 40	

## TABLE 2. - TIDAL DIFFERENCES AND OTHER CONSTANTS

### EXPLANATION OF TABLE

The publication of full daily predictions is necessarily limited to a comparatively small number of stations. Tide predictions for many other places, however, can be obtained by applying certain differences to the predictions for the reference stations in table 1. The following pages list the places called "subordinate stations" for which such predictions can be made, and the differences or ratios to be used. These differences or ratios are to be applied to the predictions for the proper reference station which is listed in table 2 in boldface type above the differences for the subordinate station. The stations in this table are arranged in geographical order. The index to stations at the end of this volume will assist in locating a particular station.

**Time differences.**—To determine the time of high water or low water at any station listed in this table there is given in the columns headed "Differences, Time" the hours and minutes to be added to or subtracted from the time of high or low water at some reference station. A plus (+) sign indicates that the tide at the subordinate station is later than at the reference station and the difference should be added; a minus (-) sign indicates that it is earlier and should be subtracted.

To obtain the tide at a subordinate station on any date, apply the difference to the tide at the reference station for that same date. In some cases, however, to obtain an a.m. tide it may be necessary to use the preceding day's p.m. tide at the reference station (or to obtain a p.m. tide it may be necessary to use the following day's a.m. tide). For example, if a high water at a reference station occurs at 0200 on July 17, and the tide at the subordinate station occurs 5 hour earlier, the high water at the subordinate station will occur at 2100 on July 16. For the second case, if a high water occurs at a reference station at 2200 on July 2, and the tide at the subordinate station occurs 3 hours later, then high water will occur at 0100 on July 3 at the subordinate station. The necessary allowance for change in date when the international date line is crossed is included in the time difference. In such cases use the same date at the reference station as desired for the subordinate station as explained above.

The results obtained by the application of the time differences will be in the kind of time indicated by the time meridian shown above the name of the subordinate station. Summer or daylight-saving time is not used in the tide tables.

**Height differences.**—The height of the tide, referred to the datum of charts, is obtained by means of the height differences or ratios. A plus (+) sign indicates that the difference should be added to the height at the reference station, and a minus (-) sign indicates that it should be subtracted. All height differences, ranges, and levels in Table 2 are in feet but may be converted to centimeters by the use of table 6.

**Ratio.** — For some stations, use of predicted height difference would give unsatisfactory predictions. In such cases they have been omitted and one or two ratios are given (\*). Where two ratios are given, one in the "height of high water" column and one in the "height of low water" column, the high waters and low waters at the reference station should be multiplied by these respective ratios. Where only one is given, the omitted ratio is either unreliable or unknown. For some subordinate stations there is given in parentheses a ratio as well as a correction in feet. In those instances, each predicted high and low water at the reference station should first be multiplied by the ratio and then the correction in feet is added to or subtracted from each product as indicated.

As an example, at Porto Grande, the values in the time and height difference columns in Table 2 are given as -1 02, -0 13, and (\*0.73 + 0.7) as referred to the reference station at Hong Kong. If we assume that the tide predictions in column (1) below are those of Hong Kong on a particular day,

**TABLE 2. - TIDAL DIFFERENCES AND OTHER CONSTANTS**

application of the time and height corrections in columns (2) and (3) would result in the tide predictions for Chino Bay in column (4).

(1)	(2)	(3)	(4)		
Time h.m.	Height ft.	Time Corrections	Height Corrections	Time h.m.	Height centimeters
0230	3.6	-0 <sup>h</sup> 13 <sup>m</sup>	x0.73 + 0.7	0217	3.3
0926	7.2	-1 <sup>h</sup> 02 <sup>m</sup>	x0.73 + 0.7	0824	183
1645	1.0	-0 <sup>h</sup> 13 <sup>m</sup>	x0.73 + 0.7	1632	43
2318	4.3	-1 <sup>h</sup> 02 <sup>m</sup>	x0.73 + 0.7	2216	116

**Range.** —The *mean range* is the difference in height between mean high water (MHW) and mean low water (MLW). The *spring range* is the average semidiurnal range occurring semimonthly as a result of the Moon being new or full. It is larger than the mean range where the type of tide is either semidiurnal or mixed, and is of no practical significance where the type of tide is diurnal. The *diurnal range* is the difference in height between mean higher high water and mean lower low water. Mean higher high water is the average of the higher of the two high water and mean lower low water is the average of the lower of the two low waters. the *tropic range*, which is given for some stations, is the increased diurnal range occurring semimonthly when the effects of the Moon's maximum-declination is greatest.

**Caution.** —For stations where the tide is chiefly diurnal the time difference and the height differences and ratios are intended primarily for predicting the higher high and lower low waters. When the lower high water and the higher low water at the reference station are nearly the same height the corresponding tides often cannot be obtained satisfactorily by means of the tidal differences.

**Datum.** — The datum of the predictions obtained through the height differences or ratios is also the datum of the largest scale chart for the locality. To obtain the depth at the time of high or low water, the predicted height should be added to the depth on the chart unless such height is negative (-), when it should be subtracted. To find the height at times between high and low water see table 3. On some foreign charts the depths are given in meters and in such cases the heights of the tide can be converted to centimeters by the use of table 6. Chart datums for the Hawaiian and Philippines Islands is *mean lower low water*. For the rest of the area covered by these tables the datums generally used are approximately *mean low water springs*, *Indian spring low water*, or the *lowest possible low water*.

**Mean Tide Level (Half-Tide Level).** The mean tide level is a plane midway between mean low water and mean high water. Tabular values are reckoned from chart datum.

**NOTE<sup>1</sup>.**— Dashes are entered in the place of data which are unknown, unreliable, or not applicable.

**NOTE<sup>2</sup>.**— *Place Names.* - For the convenience of the mariner, places names are chosen to correspond to the place names on National Imagery and Mapping Agency nautical charts. The place names are also reviewed by the United States Board on Geographic Names.

**NOTE<sup>3</sup>.**— Subordinate locations referencing the Philippines of Jolo, San Fernando Harbor, and Legaspi Port were included only for future considerations, See the IMPORTANT NOTICE on page VI.

This edition includes an extensive revision of the tidal information for locations along the coast of mainland China. All such place names now use the new spelling convention. Where applicable, place names from the 1994 edition appear in hard brackets [ ] after the new spelling.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Latitude	Longitude	Time		Height		Mean	Spring		
				High Water	Low Water	High Water	Low Water				
	SIBERIA, Arctic Ocean <1> Time meridian, 120° E	North	East	h m	h m	ft	ft	ft	ft	ft	
on Pusan, p.48											
1	Domashnii I., Severnaya Zemlya .....	79° 30'	91° 08'	+6 38	+6 48	*0.26	*0.29	0.7	1.0	0.6	
3	Zarya Road .....	76° 08'	95° 08'	+5 30	+5 43	(*0.46+0.3)		1.3	1.7	1.3	
5	Bonevi Island .....	76° 10'	95° 10'	+4 01	+4 14	(*0.46+0.1)		1.3	1.8	1.1	
7	Dzhekmman Island .....	76° 25'	95° 06'	+4 25	+4 55	(*0.46+0.3)		1.3	1.8	1.3	
9	Russki Island .....	77° 11'	96° 24'	+5 16	+5 32	(*0.39+0.3)		1.1	1.5	1.1	
Time meridian, 120° E											
11	Taimyra River mouth .....	76° 15'	98° 52'	+5 47	+6 11	(*0.54+0.4)		1.5	2.0	1.5	
13	Cape Olovyanyy, Shokalskogo Strait .....	78° 56'	99° 56'	+4 24	+4 34	(*0.36+0.1)		1.0	1.4	0.9	
15	Gansena (Hansen) Island .....	77° 31'	102° 30'	+5 59	+6 09	*0.17 *0.14		0.5	0.6	0.4	
17	Cape Chelyuskina .....	77° 43'	104° 17'	+3 28	+3 59	*0.34 *0.34		0.9	1.2	0.8	
19	Samuila I., Komsomolskoi Pravdy Island .....	77° 25'	106° 54'	+2 48	+3 23	*0.40 *0.40		1.0	1.4	0.9	
21	Starokadomskogo Island .....	78° 14'	105° 58'	+3 32	+3 51	(*0.61+0.2)		1.7	2.1	1.5	
23	Pronchishchevoi Bay .....	75° 34'	113° 22'	-6 37	-6 36	+1.4 +0.9		3.3	4.4	3.3	
Time meridian, 135° E											
25	Preobrazheniya Island .....	74° 40'	112° 45'	-3 41	-3 28	+0.7 +0.4		3.1	4.4	2.7	
27	Mali (Small) Begichev Island .....	74° 18'	111° 04'	-2 32	-2 19	+1.4 +0.6		3.6	5.1	3.1	
29	Nordvik Bay <2> .....	74° 01'	111° 40'	-2 54	-2 48	(*2.14+0.7)		6.0	8.5	5.2	
Time meridian, 120° E											
31	Khara-Tumus Peninsula .....	74° 01'	110° 06'	-3 27	-2 36	+0.4 +0.4		2.8	3.6	2.5	
33	Kozhevnikova Bay .....	73° 26'	109° 42'	+1 15	+1 36	(*0.68+0.5)		1.9	2.6	1.9	
35	Syndaska Bay entrance .....	73° 14'	108° 09'	+1 40	+1 56	+0.8 +0.7		2.9	3.9	2.9	
37	Cape Bolshaya Karga .....	73° 11'	106° 22'	+2 44	+3 53	(*0.82+0.6)		2.3	3.1	2.3	
39	Kresty Peninsula, Khantanga River .....	72° 45'	105° 15'	+6 20	+8 08	*0.60 *0.60		1.6	2.1	1.3	
Time meridian, 135° E											
41	Cape Khorgo, Anabarski Bay .....	73° 31'	113° 24'	-2 04	-1 42	(*1.50+0.4)		4.2	6.0	3.6	
43	Bykovskoe, Lena River mouth .....	71° 59'	129° 09'	---	---	---		0.5	0.7	0.4	
45	Bulunkan Bay, Tiksi Bay .....	71° 40'	128° 58'	+1 58	+2 08	*0.34 *0.34		0.9	1.2	0.8	
Time meridian, 150° E											
47	Omoloi River entrance .....	71° 14'	132° 10'	+4 09	+4 33	(*0.39+0.2)		1.1	1.4	1.0	
49	Yana River mouth .....	71° 31'	136° 25'	---	---	---		Negligible			
51	Kotel'nyy Island Polar Station .....	75° 58'	137° 59'	+4 47	+5 03	(*0.50+0.4)		1.4	1.9	1.4	
53	Nerpalakh Lagoon, Kotel'nyy Island .....	75° 22'	137° 10'	+5 27	+5 25	*0.20 *0.20		0.5	0.8	0.5	
55	Cape Medvezhi, Kotel'nyy Island .....	74° 38'	139° 04'	+1 07	+1 23	*0.26 *0.26		0.6	0.8	0.6	
57	Bolshoi Lyakhovski Island .....	73° 26'	139° 55'	---	---	---		0.4	0.5	0.3	
59	Kigylakh Peninsula .....	73° 12'	143° 34'	-5 24	-5 10	*0.34 *0.34		0.9	1.1	0.8	
Time meridian, 180° E											
61	Chetyrekstolbovoi I., Medvezhi Island .....	70° 38'	162° 30'	---	---	---		Negligible			
63	Kolyma River mouth .....	69° 38'	162° 00'	---	---	---		Negligible			
65	Ayon Island .....	69° 53'	167° 52'	---	---	---		Negligible			
67	Cape Shelagiski .....	70° 05'	170° 34'	---	---	---		Negligible			
Time meridian, 195° E											
69	Cape Billingsa .....	69° 53'	176° 06'	+5 37	+5 50	*0.20 *0.20		0.5	0.8	0.5	
71	Wrangell Island .....	70° 58'	181° 27'	+3 53	+4 06	*0.57 *0.71		1.5	2.1	1.3	
73	Cape Shmidt .....	68° 55'	180° 31'	+5 42	+5 58	(*0.61+0.4)		1.7	2.2	1.7	
75	Kolychino Polar Station .....	67° 04'	186° 13'	---	---	---		0.3	0.4	0.3	
77	Cape Serdtse-Kamen .....	66° 57'	188° 22'	---	---	---		0.3	0.4	0.2	
79	Cape Uelen .....	66° 10'	190° 10'	---	---	---		0.4	0.5	0.4	
Bering Sea											
81	Alera Bay, Penkegnei Bay .....	64° 49'	187° 05'	-0 54	-0 50	*0.26 *0.29		0.7	0.9	0.6	
83	Plover Bay, Provideniya Bay .....	64° 22'	186° 38'	-2 03	-1 46	(*0.82+0.2)		2.3	2.9	1.9	
85	Emma Bay, Provideniya Bay .....	64° 25'	186° 47'	-2 16	-2 06	(*0.82+0.3)		2.3	3.1	2.0	
87	Cape Razdeleny, Kresta Bay .....	66° 11'	181° 00'	+0 55	+1 09	+5.8 +1.9		6.7	8.4	6.0	
89	Engaugin Bay, Kresta Bay .....	66° 09'	180° 26'	+0 52	+0 56	+5.4 +1.4		6.8	8.5	5.5	
Anadyr Bay											
91	Russkaya Koshka Spit .....	64° 35'	178° 31'	+2 48	+2 52	+2.6 +0.7		4.7	6.0	3.8	
93	Salomatova Spit .....	64° 38'	178° 01'	+3 19	+3 27	+3.1 +0.9		5.0	6.3	4.1	
95	Melkaya Bay .....	64° 47'	177° 34'	+4 15	+4 25	+1.7 +0.6		3.9	5.3	3.3	
97	Anadyr River entrance .....	64° 44'	177° 26'	+3 37	+3 47	+1.0 +0.3		3.5	4.4	2.8	
99	Strelka Spit, Anadyr Gulf .....	64° 25'	178° 15'	+4 22	+5 11	+0.1 +0.2		2.7	3.6	2.3	
101	Ugolnaya Bay .....	63° 04'	179° 23'	+4 04	+4 14	*0.49 *0.57		1.3	1.7	1.1	
on Paramushir Island, p.8											
103	Anastasii Bay † .....	61° 25'	172° 56'	-1 00	-0 29	+1.0 +0.9		4.6	5.4	4.8	
105	Imatra Bay, Glubokaya Bay † .....	61° 00'	172° 07'	-0 55	-0 37	(*0.96+0.8)		4.3	5.0	4.4	
107	Cape Olyutorski † .....	59° 55'	170° 20'	-0 29	-0 23	(*0.84+0.8)		3.8	4.5	4.0	
Kamchatka											
109	Lavora Harbor † .....	60° 23'	167° 04'	-1 14	-0 35	(*0.80+1.2)		3.6	4.2	4.2	
111	Sibir Harbor † .....	60° 27'	166° 14'	-0 39	-0 33	+1.3 +1.0		4.8	5.6	5.0	
113	Cape Kryugera † .....	56° 01'	161° 57'	-0 21	-0 18	(*0.87+1.0)		3.9	4.7	4.3	
115	Nikolski, Bering Island † .....	55° 12'	165° 59'	-1 17	-0 10	(*0.82+1.2)		3.7	4.4	4.3	
117	Morzhovaya Bay † .....	53° 14'	159° 57'	+0 01	+0 32	(*0.91+0.9)		4.1	5.1	4.4	
119	Petropavlovsk † .....	53° 01'	158° 39'	+1 23	+0 55	(*0.93+1.0)		4.2	4.9	4.5	
121	Tarya Bay † .....	52° 55'	158° 30'	+1 33	+1 05	+0.9 +0.9		4.4	5.1	4.7	
123	Akhoment Bay † .....	52° 26'	158° 28'	+1 08	+0 40	(*0.89+0.9)		4.0	4.7	4.3	
125	Vestnik Bay † .....	51° 33'	157° 42'	+1 43	+1 15	(*0.84+0.9)		3.8	4.4	4.1	

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Latitude	Longitude	Time		Height		Diurnal	Tropic		
				High Water	Low Water	High Water	Low Water				
	SIBERIA, Sea of Okhotsk Time meridian, 180° E	North	East	h m	h m	ft	ft	ft	ft	ft	
on Paramushir Island, p.8											
127	Kamchatka—cont. Golygina River entrance † .....	51° 53'	156° 31'	+1 28	+1 34	+1.3	+1.0	4.8	5.6	5.0	
129	Ust Bolsheretsk, Bolshaya River † .....	52° 46'	156° 14'	+4 35	+4 21	+1.6	+1.1	5.0	5.8	5.2	
131	Kompakova River entrance † .....	54° 40'	155° 42'	+3 43	+3 49	(*2.98+2.7)		13.4	15.7	14.0	
133	Oblukovina River entrance † .....	55° 19'	155° 34'	+4 53	+4 59	(*2.36+1.9)		10.6	12.3	10.9	
on Musi River, p.152											
135	Cape Astronomicheski † .....	62° 23'	164° 28'	-10 42	-9 27	*3.14	*2.72	24.1	30.1	17.8	
137	Penjinski Bay Matugin Point † .....	61° 41'	160° 15'	+8 10	+9 18	+13.4	+2.7	18.0	22.2	13.5	
139	Gizhiga River entrance † .....	61° 58'	160° 24'	+8 08	+10 26	+12.8	+2.1	18.0	22.2	14.0	
141	Nayakhanskaya Bay † .....	61° 54'	159° 00'	+8 15	+10 04	+11.6	+1.4	17.5	21.7	13.1	
143	Time meridian, 165° E Udacha Bay † .....	59° 13'	155° 10'	+9 23	+7 11	+3.2	+0.8	9.7	13.5	8.2	
on Moji, p.36											
145	Ola Anchorage, Tauiskaya Bay .....	59° 34'	151° 16'	+0 12	+0 24	*1.50	*1.50	6.9	8.9	7.4	
147	Nagaeva Bay, Tauiskaya Bay .....	59° 31'	150° 41'	-0 09	-0 18	*1.89	*1.89	8.7	11.3	9.4	
149	Time meridian, 150° E Okhotsk .....	59° 21'	143° 10'	+3 02	+2 55	*1.50	*1.50	6.9	8.9	7.4	
on Brisbane Bar, p.284											
151	Ayan Bay .....	56° 27'	138° 09'	+3 33	+3 25	+2.2	+1.3	5.9	7.9	5.7	
153	Udskaya Bay .....	54° 42'	135° 18'	+7 08	+6 59	+2.7	+1.0	6.7	9.5	5.8	
155	Levyazhyba Bay, Feklistov Island .....	54° 54'	136° 46'	+6 37	+6 29	(*2.50+0.7)		12.5	16.4	10.5	
157	Abrek Bay, Little Shantar Island .....	54° 24'	137° 37'	+6 50	+6 42	(*2.12+0.2)		10.6	13.5	8.5	
on Jolo, p.172											
159	Baldukov Island † .....	53° 18'	141° 28'	-1 41	-1 40	+2.7	+1.2	4.3	5.4	2.8	
Time meridian, 165° E											
Sakhalin Island											
161	Cape Tamlevo † .....	53° 21'	141° 46'	-0 24	-0 25	+2.3	+1.1	4.0	5.0	2.6	
163	Baikal Bay † .....	53° 32'	142° 14'	+0 12	+0 10	+2.6	+1.1	4.3	5.3	2.7	
165	Kuegda Bay † .....	54° 19'	142° 36'	+1 06	+1 05	(*0.61+0.5)		1.7	2.2	1.2	
on Yamato Wan, p.12											
167	Urkt Bay entrance † .....	53° 34'	143° 04'	-1 12	+3 44	+0.1	0.0	3.2	4.0	2.4	
169	Kyakrvo Anchorage † .....	52° 52'	143° 19'	-0 12	+4 46	+0.4	+0.3	3.2	4.4	2.7	
171	Chaivo Bay † .....	52° 52'	143° 12'	+3 11	+6 07	+0.8	+0.5	3.4	4.8	3.1	
173	Niski Bay † .....	51° 58'	143° 11'	+3 07	+8 01	+1.4	+0.2	4.3	5.3	3.2	
175	Luniski Bay entrance † .....	51° 18'	143° 30'	+5 33	+6 59	*0.42	*0.42	1.3	1.8	1.1	
KARAFUTO, Sakhalin Island											
177	Mys Popova † .....	49° 03'	144° 24'	-0 25	-0 25	(*0.50+0.2)		1.5	2.0	1.4	
179	Tyuleniy † .....	48° 30'	144° 38'	-0 55	-0 58	(*0.87+0.1)		2.6	3.1	2.2	
181	Mys Obshirnyy † .....	48° 42'	144° 39'	-0 45	-1 04	*0.87	*0.87	2.6	3.1	2.1	
183	Noto † .....	49° 07'	144° 15'	-0 36	-1 02	*0.97	*0.97	2.9	3.3	2.3	
185	Ozero Nevskoye † .....	49° 19'	143° 19'	-0 14	-0 49	*0.93	*0.93	2.8	3.2	2.2	
187	Shikuka † .....	49° 14'	143° 08'	-0 10	-0 49	*0.97	*0.97	2.9	3.4	2.3	
189	Higashi Chutoru † .....	48° 38'	142° 48'	-0 03	-0 32	(*0.93+0.1)		2.8	3.3	2.3	
191	Buruny † .....	48° 06'	142° 34'	-0 09	-0 31	*0.87	*0.87	2.6	3.0	2.1	
193	Sakayehama † .....	47° 25'	142° 49'	-0 13	-0 30	(*0.90-0.1)		2.7	3.1	2.1	
195	Noho Misaki † .....	47° 15'	143° 01'	-0 25	-0 25	(*0.83+0.1)		2.5	3.1	2.1	
197	Onto Numa † .....	46° 52'	143° 08'	+1 51	+1 51	(*0.47+0.1)		1.4	1.8	1.2	
199	Tomunai Hakuchi † .....	46° 51'	143° 10'	-0 24	-0 22	(*0.83+0.1)		2.5	3.1	2.1	
201	Airo Wan † .....	46° 49'	143° 25'	-0 23	-0 17	*0.87	*0.87	2.6	3.2	2.1	
203	Mys Menaputsy † .....	46° 23'	143° 35'	-0 56	-0 39	(*0.93+0.1)		2.8	3.4	2.3	
205	Tobuchi Ko † .....	46° 30'	143° 20'	+0 32	+0 54	(*0.83+0.1)		2.5	3.1	2.1	
207	OTOMARI † .....	46° 39'	142° 45'	Daily predictions				3.0	3.7	2.4	
209	Nishi Notoro Misaki, East coast † .....	45° 54'	142° 05'	+0 30	+1 15	(*0.93+0.2)		2.8	3.6	2.4	
211	Nishi Notoro Misaki, West coast † .....	45° 54'	142° 05'	+1 18	+2 04	(*0.60+0.1)		1.8	2.3	1.5	
213	Soni Misaki † .....	46° 03'	141° 55'	+2 53	---	(*0.40+0.1)		1.2	1.6	1.1	
215	Kaiba To (Todo Shima) † .....	46° 15'	141° 16'	---	---	---	---	0.5	--	0.4	
217	Tokombo Road † .....	46° 40'	141° 51'	---	---	---	---	0.8	--	0.7	
219	Port Kholmsk † .....	41° 03'	142° 02'	---	---	---	---	0.7	--	0.6	
221	Nodasan (Noda) † .....	47° 26'	141° 58'	---	---	---	---	0.7	--	0.6	
on Pusan, p.48											
223	Yatsu Misaki .....	48° 08'	142° 10'	-11 47	-11 39	(*0.29+0.2)		0.8	1.0	0.8	
225	Ushiro Wan .....	48° 54'	141° 58'	-10 55	-10 46	(*0.57+0.2)		1.6	2.1	1.4	
227	Toro Numa .....	49° 10'	142° 04'	-10 40	-10 32	(*0.71+0.1)		2.0	2.6	1.6	
229	Lesogorsk .....	49° 27'	142° 07'	-10 13	-10 05	(*0.71+0.1)		2.0	2.6	1.6	
231	Mys Polevogo .....	49° 46'	142° 09'	-10 22	-10 13	+0.1	+0.1	2.8	3.7	2.2	
233	Anbetsu .....	49° 59'	142° 10'	-10 20	-10 12	+0.5	+0.1	3.2	4.1	2.4	

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Latitude	Longitude	Time		Height		Mean	Spring		
				High Water	Low Water	High Water	Low Water				
	SIBERIA, Sakhalin Island Time meridian, 165° E	North	East	h m	h m	ft	ft	ft	ft	ft	
on Pusan, p.48											
235	Gulf of Tartary Pilevo Bay .....	50° 02'	142° 09'	-10 03	-9 59	+0.5	+0.2	3.1	3.9	2.5	
237	Alexandrovski .....	50° 54'	142° 08'	-10 03	-9 57	+2.3	+0.5	4.6	6.3	3.5	
239	Viyakhtu Bay .....	51° 35'	141° 54'	-9 52	-9 48	+4.1	+1.0	5.9	7.4	4.7	
241	Cape Tik .....	51° 44'	141° 41'	-9 48	-9 38	+3.6	+0.9	5.5	6.9	4.4	
243	Cape Pogobi, Strait of Tartary .....	52° 13'	141° 39'	-7 52	-7 48	+1.2	+0.3	3.7	4.6	2.9	
on Jolo, p.172											
245	Gulf of Amur Time meridian, 150° E	Diurnal	Tropic								
247	Amur River entrance † .....	52° 52'	141° 14'	+4 55	+4 55	(*0.54+0.7)		1.5	1.9	1.3	
249	Nikolayevsk, Amur River † .....	53° 08'	140° 45'	+6 15	+6 15	(*0.32+2.7)		0.9	1.1	3.1	
251	Uyuzyut Island † .....	52° 49'	141° 12'	+4 50	+4 50	(*0.71+0.9)		2.0	2.5	1.7	
	Cape Dzhaore † .....	52° 40'	141° 17'	+5 10	+5 10	(*0.93+1.1)		2.6	3.3	2.1	
on Pusan, p.48											
253	Cape Lazareva .....	52° 14'	141° 31'	-8 50	-8 10	+1.3	+0.9	3.2	4.1	3.2	
Gulf of Tartary											
255	Cape Muraveva .....	52° 09'	141° 33'	-9 38	-9 21	+1.4	+0.4	3.8	4.7	3.0	
257	Cape Chikacheva .....	51° 47'	141° 11'	-10 20	-10 16	+3.3	+0.8	5.3	6.7	4.2	
259	Cape Sushcheva .....	51° 42'	141° 07'	-10 58	-10 55	+2.2	+0.6	4.4	5.5	3.5	
261	Taba Bay .....	51° 37'	140° 53'	-10 42	-10 38	+3.1	+0.8	5.1	6.4	4.1	
263	Zaliv Chikhacheva .....	51° 27'	140° 50'	-10 37	-10 33	+3.1	+0.8	5.1	6.4	4.1	
265	Starika Bay .....	50° 08'	140° 34'	-10 30	-10 26	+0.9	+0.3	3.4	4.3	2.7	
267	Datta Bay .....	49° 17'	140° 24'	-10 17	-10 13	*0.68	*0.71	1.9	2.4	1.5	
269	Vanina Bay .....	49° 06'	140° 17'	-10 08	-10 04	*0.46	*0.46	1.3	1.6	1.0	
271	Sovetskaya Harbor .....	48° 59'	140° 17'	-10 00	-9 51	(*0.43+0.2)		1.2	1.6	1.1	
273	Vetrychnui Point .....	48° 08'	139° 43'	---	---	---	---	0.2	--	0.3	
Japan Sea											
275	Tyutikha Bay .....	44° 21'	135° 51'	---	---	---	---	0.4	0.6	1.1	
277	St. Vladimir Bay .....	43° 53'	135° 27'	---	---	---	---	0.5	0.6	1.2	
279	Olga Bay .....	43° 43'	135° 15'	---	---	---	---	0.5	0.6	1.2	
281	Syaukhui Bay .....	42° 54'	133° 53'	---	---	---	---	0.6	0.7	1.4	
283	Nakhodka Bay, America Bay .....	42° 49'	132° 54'	---	---	---	---	0.5	0.7	1.3	
285	Sukhodol Bay, Ussuri Bay .....	43° 10'	132° 22'	---	---	---	---	0.5	0.7	1.3	
287	Vladivostok .....	43° 07'	131° 54'	---	---	---	---	0.6	0.7	1.4	
289	Reineke Island, Peter the Great Bay .....	42° 55'	133° 44'	---	---	---	---	0.6	0.7	1.4	
291	Slavyanski Bay .....	42° 52'	131° 23'	---	---	---	---	0.5	0.7	1.3	
293	Furugelma Island .....	42° 28'	130° 56'	---	---	---	---	0.6	0.7	1.5	
295	Posiet, Gulf of Posiet .....	42° 39'	130° 48'	---	---	---	---	0.6	0.7	1.4	
CHISHIMA RETTO Time meridian, 165° E											
on Paramushir Island, p.8											
297	Shumshu	Diurnal	Tropic								
299	Kotomari Zaki † .....	50° 50'	156° 30'	+0 40	+0 40	*0.85	*0.85	3.8	4.8	3.4	
301	Nakagawa Wan † .....	50° 39'	156° 24'	-0 20	-0 20	*0.91	*0.91	4.1	5.0	3.5	
303	Kozyrevskoye † .....	50° 43'	156° 12'	+1 20	+1 20	+0.2	+0.2	4.5	5.7	3.9	
305	Araido To † .....	50° 50'	155° 39'	+1 55	+1 55	+1.2	+0.3	5.4	6.7	4.4	
307	Banjo Zaki † .....	50° 45'	156° 08'	+1 35	+1 35	+0.6	+0.2	4.9	6.1	4.1	
309	Yotsuwa † .....	50° 17'	155° 55'	-0 25	-0 25	*0.89	*0.80	4.1	4.9	3.4	
311	PARAMUSHIR ISLAND † .....	50° 11'	155° 39'	Daily predictions				4.5	5.2	3.8	
313	Mys Kapustnyy † .....	50° 04'	155° 13'	+1 25	+1 25	+0.3	+0.2	4.6	5.7	3.9	
315	Kujira Wan † .....	50° 17'	155° 20'	+1 30	+1 30	+0.2	+0.1	4.6	5.6	4.0	
	Kakumabetsu Wan † .....	50° 23'	155° 35'	+1 40	+1 40	+0.9	+0.2	5.2	6.5	4.3	
on Yamato Wan, p.12											
317	Kuroishi Wan, Onekotan To † .....	49° 29'	154° 50'	+0 07	+0 18	+0.1	0.0	3.2	4.1	2.6	
on Paramushir Island, p.8											
319	Shiomii Wan, Onekotan To .....	49° 31'	154° 44'	+1 20	+1 20	*0.89	*0.89	3.9	4.9	3.5	
321	Kharimkotan .....	49° 10'	154° 29'	+1 10	+1 10	*0.80	*0.80	3.5	4.3	3.2	
323	Higashi Ura, Shasukotan To .....	48° 47'	154° 05'	+0 25	+0 25	*0.80	*0.80	3.4	4.1	3.0	
325	Otome Wan, Shasukotan To .....	48° 47'	154° 03'	+1 00	+1 00	*0.89	*0.89	3.9	4.9	3.5	
on Yamato Wan, p.12											
327	YAMATO WAN, Matsuwa To .....	48° 05'	153° 16'	Daily predictions				3.1	3.9	2.6	
329	Ushishiro To .....	47° 32'	152° 49'	+0 05	+0 05	+0.5	+0.1	3.5	4.4	3.0	
331	Bukhta Broutona, Shimushiru To .....	47° 09'	152° 15'	+1 00	+1 00	*0.84	*0.84	2.6	3.3	2.1	
333	Shimushiru Wan, Shimushiru To .....	46° 52'	151° 52'	+0 20	+0 20	+0.3	+0.1	3.3	4.3	2.7	
335	Suna Wan, Kita Jima .....	46° 32'	150° 54'	+0 20	+0 20	*0.90	*0.75	2.9	3.5	2.3	

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Latitude	Longitude	Time		Height		Diurnal	Tropic		
				High Water	Low Water	High Water	Low Water				
	CHISHIMA RETTO—cont. Time meridian, 165° E	North	East	h m	h m	ft	ft	ft	ft	ft	
				on Paramushir Island, p.8							
337	Uruppu To										
339	Yosinohama .....	46° 12'	150° 31'	+0 15	+0 15	*0.58	*0.58	2.6	3.0	2.2	
	Garan Zaki .....	45° 48'	149° 56'	+0 15	+0 15	*0.67	*0.60	3.1	3.6	2.5	
				on Otomari, p.4							
341	Tokotan Wan .....	45° 51'	149° 44'	-0 15	-0 15	+0.1	+0.1	3.0	3.8	2.5	
343	Tsurigane Wan .....	46° 06'	150° 10'	-0 15	-0 15	*0.87	*0.87	2.6	3.3	2.1	
				on Paramushir Island, p.8							
345	Yetorofu Jima										
347	Zaliv Kasatka .....	44° 56'	147° 38'	+0 30	+0 30	*0.69	*0.60	3.2	3.7	2.8	
	Kodnyy .....	44° 43'	147° 21'	+0 25	+0 25	(*0.78+0.2)		3.5	4.2	3.2	
				on Otomari, p.4							
349	Naibo Wan .....	44° 46'	147° 12'	-0 15	-0 15	*0.95	*0.95	2.8	3.5	2.3	
351	Kitovyy .....	45° 15'	147° 53'	-0 20	-0 20	*0.90	*0.90	2.7	3.4	2.2	
353	Shamambe Byochi .....	45° 20'	148° 01'	-0 20	-0 20	*0.97	*0.97	2.8	3.6	2.3	
355	Shibetoro .....	45° 30'	148° 37'	-0 15	-0 15	*0.87	*0.87	2.6	3.2	2.1	
357	Moyoro Wan .....	45° 26'	148° 51'	-0 25	-0 25	*0.90	*0.78	2.8	3.2	2.1	
				on Paramushir Island, p.8							
359	Kunashiri Jima										
361	Yuzhno Kurilsk .....	44° 02'	145° 51'	+0 15	+0 15	*0.73	*0.70	3.3	3.8	2.9	
363	Tomari Wan .....	43° 44'	145° 27'	+0 50	+0 50	*0.78	*0.78	3.5	4.1	3.0	
365	Shakotan Ko, Shikotan Jima .....	43° 52'	146° 49'	+0 30	+0 30	*0.67	*0.67	3.1	3.5	2.6	
367	Taraku Jima .....	43° 38'	146° 21'	+0 25	+0 25	*0.73	*0.73	3.2	3.8	2.8	
	Suisho To .....	43° 25'	145° 54'	+0 35	+0 35	*0.80	*0.80	3.6	4.1	2.9	
				on Kamaisi, p.16							
	JAPAN										
	Hokkaido										
	Time meridian, 135° E										
369	Rausu Hakuchi .....	44° 01'	145° 12'	-0 47	-0 47	(*0.65+0.4)		1.5	2.0	2.3	
371	Nemuro Ko .....	43° 20'	145° 35'	-0 32	-0 34	+0.1	0.0	2.4	3.1	2.9	
373	Hanasaki .....	43° 17'	145° 35'	-0 07	-0 05	-0.3	-0.1	2.1	2.7	2.7	
375	Ochiishi Wan .....	43° 10'	145° 31'	-0 22	-0 25	-0.1	0.0	2.2	2.9	2.8	
377	Kiritappu Jima, Hamanaka Wan .....	43° 04'	145° 10'	-0 28	-0 30	-0.2	-0.1	2.2	2.8	2.7	
379	Akkeshi Wan .....	43° 02'	144° 51'	-0 23	-0 25	-0.2	-0.2	2.3	2.9	2.7	
381	Kushiro Ko .....	42° 58'	144° 22'	-0 08	-0 15	0.0	0.0	2.3	3.0	2.9	
383	Rubeshibetsu Saki .....	42° 12'	143° 20'	-0 26	-0 28	-0.2	-0.1	2.2	2.7	2.7	
385	Utaro .....	41° 58'	143° 12'	-0 16	-0 18	0.0	-0.1	2.4	3.1	2.8	
387	Muroran Ko .....	42° 19'	140° 58'	-0 29	-0 19	+0.6	+0.3	2.6	3.6	3.3	
389	Usu Wan, Iburu Wan .....	42° 31'	140° 46'	-0 14	-0 16	+0.3	0.0	2.6	3.5	3.0	
391	Mori Ko, Iburu Wan .....	42° 07'	140° 36'	-0 19	-0 21	0.0	-0.1	2.4	3.2	2.8	
393	Usujiri Wan .....	41° 56'	140° 57'	-0 15	-0 17	-0.2	-0.1	2.2	2.9	2.7	
395	Shiokubi Saki .....	41° 43'	140° 58'	+0 16	+0 14	0.0	0.0	2.3	3.0	2.9	
397	Hakodate Ko .....	41° 47'	140° 43'	+0 00	+0 10	(*0.74-0.2)		1.7	2.3	1.9	
399	Wakimoto .....	41° 34'	140° 26'	+0 09	+0 07	(*0.65-0.1)		1.5	2.0	1.8	
401	Yoshioka .....	41° 27'	140° 14'	+0 38	+0 35	(*0.48-0.1)		1.1	1.4	1.3	
403	Fukuyama Byochi .....	41° 26'	140° 07'	---	---	---	---	0.5	---	0.7	
405	Kamome Jima, Yesashi Ko .....	41° 52'	140° 06'	---	---	---	---	0.5	---	0.8	
407	Aonai Wan, Okushiri Shima .....	42° 04'	139° 27'	---	---	---	---	0.5	---	0.7	
409	Setana Ko .....	42° 28'	139° 50'	---	---	---	---	0.4	---	0.7	
411	Sutsu Ko .....	42° 47'	140° 16'	---	---	---	---	0.4	---	0.6	
413	Iwanai Byochi .....	42° 59'	140° 30'	---	---	---	---	0.5	---	0.6	
415	Kamo Misaki .....	43° 20'	140° 21'	---	---	---	---	0.4	---	0.6	
417	Otaru Ko .....	43° 13'	141° 01'	---	---	---	---	0.4	---	0.5	
419	Moye .....	43° 36'	141° 23'	---	---	---	---	0.4	---	0.6	
421	Rumoi Ko .....	43° 57'	141° 39'	---	---	---	---	0.3	---	0.5	
423	Tomamai .....	44° 19'	141° 39'	---	---	---	---	0.4	---	0.6	
425	Rishiri To .....	45° 14'	141° 14'	---	---	---	---	0.4	---	0.6	
427	Wakkana Ko .....	45° 25'	141° 41'	---	---	---	---	0.4	---	0.6	
429	Soya Misaki .....	45° 31'	141° 57'	---	---	---	---	0.5	---	0.6	
				on Otomari, p.4							
431	Esashi Byochi .....	44° 56'	142° 35'	-2 35	-2 35	*0.80	*0.80	2.4	2.9	1.9	
433	Ornu Ko .....	44° 35'	142° 58'	-2 30	-2 30	(*0.83+0.1)		2.5	3.2	2.1	
435	Monbetsu Byochi .....	44° 21'	143° 22'	-2 58	-2 46	*0.97	*0.97	2.8	3.4	2.4	
437	Abashiri Byochi .....	44° 01'	144° 16'	-2 15	-2 15	*0.90	*0.90	2.7	3.4	2.2	
439	Koiseboi .....	44° 02'	144° 56'	-2 30	-2 30	*0.87	*0.87	2.6	3.2	2.1	
				on Naha, p.44							
	Honshu, North Coast										
441	Tappi Saki .....	41° 15'	140° 21'	-3 53	-3 53	(*0.24+0.2)		1.0	1.4	1.1	
443	Mimmaya, Mimmaya Wan .....	41° 12'	140° 26'	-4 07	-4 08	*0.24	*0.24	1.0	1.4	0.9	
445	Aomori Ko, Mutsu Kaiwan .....	40° 50'	140° 44'	-4 11	-4 12	*0.34	*0.34	1.4	2.0	1.3	
447	Shiranai Wan, Mutsu Kaiwan .....	40° 57'	140° 58'	-4 09	-4 10	*0.32	*0.32	1.3	1.8	1.2	
449	Ominato Ko, Mutsu Kaiwan .....	41° 15'	141° 09'	-4 12	-3 49	*0.32	*0.28	1.4	2.0	1.2	
451	Oma .....	41° 32'	140° 54'	-4 09	-4 10	*0.37	*0.37	1.5	2.0	1.5	
453	Ohata .....	41° 24'	141° 10'	-4 11	-4 12	(*0.49+0.4)		2.0	2.6	2.3	

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Latitude	Longitude	Time		Height		Mean	Spring		
				High Water	Low Water	High Water	Low Water				
	JAPAN Honshu, East Coast Time meridian, 135° E	North	East	h m	h m	ft	ft	ft	ft	ft	
on Kamaisi, p.16											
455	Shiruya .....	41° 24'	141° 27'	-0 12	-0 15	+0.4	+0.2	2.5	3.2	3.2	
457	Tomari .....	41° 05'	141° 24'	-0 10	-0 13	+0.1	-0.1	2.5	3.2	2.9	
459	Hachinohe Ko .....	40° 32'	141° 33'	-0 16	-0 15	-0.2	-0.1	2.2	2.9	2.7	
461	Kuji Wan .....	40° 11'	141° 49'	-0 10	-0 13	+0.1	0.0	2.4	3.1	2.9	
463	Miyako Ko <3> .....	39° 38'	141° 58'	+0 00	+0 06	-0.2	-0.1	2.2	2.9	2.7	
465	Yamada Ko .....	39° 28'	141° 58'	-0 09	-0 11	-0.1	-0.1	2.3	3.0	2.8	
467	KAMAIISI .....	39° 16'	141° 54'	Daily predictions				2.3	3.0	2.9	
469	Kesennuma Wan .....	38° 53'	141° 37'	+0 02	+0 00	-0.1	-0.1	2.3	3.0	2.8	
471	Oginohama Ko .....	38° 23'	141° 26'	+0 08	+0 06	+0.4	+0.1	2.6	3.4	3.1	
473	Same Ura, Nobiru Wan .....	38° 21'	141° 10'	+0 14	+0 12	+0.2	+0.1	2.4	3.3	3.0	
475	Hirakata Wan .....	36° 51'	140° 48'	+0 11	+0 08	-0.1	-0.1	2.3	3.0	2.8	
477	Choshi Ko (inside) .....	35° 44'	140° 50'	+0 48	+0 45	*0.65	*0.65	1.5	1.9	1.9	
479	Nagasaki, Inubo Saki .....	35° 42'	140° 52'	+0 45	+0 43	+0.1	0.0	2.4	3.2	2.9	
on Yokohama, p.20											
481	Katsuura Wan .....	35° 08'	140° 18'	-0 43	-0 35	*0.78	*0.80	2.7	3.5	3.0	
483	Kamogawa, Kamogawa Wan .....	35° 06'	140° 06'	-0 31	-0 22	(*0.74+0.2)		2.6	3.5	3.0	
485	Otohama .....	34° 55'	139° 56'	-0 31	-0 22	(*0.74+0.1)		2.6	3.4	2.9	
Honshu, South Coast											
487	Tokyo Wan	35° 01'	139° 51'	-0 22	-0 14	*0.83	*0.83	2.9	3.9	3.2	
489	Tateyama Wan .....	35° 14'	139° 43'	-0 12	-0 04	(*0.83+0.1)		2.9	3.8	3.3	
491	Uraga Ko .....	35° 17'	139° 40'	-0 04	-0 04	*0.91	*0.91	3.2	4.3	3.5	
493	YOKOHAMA <4> .....	35° 26'	139° 40'	Daily predictions				3.5	4.7	3.8	
495	Shinagawa, Tokyo Ko .....	35° 37'	139° 45'	+0 02	+0 11	0.0	-0.1	3.6	4.8	3.7	
497	Chiba .....	35° 36'	140° 07'	-0 06	+0 02	+0.4	+0.1	3.8	5.1	4.0	
499	Aburatsubo <5> .....	35° 09'	139° 37'	-0 08	+0 00	(*0.77+0.1)		2.7	3.6	3.0	
501	Koto Wan .....	35° 13'	139° 37'	-0 23	-0 14	*0.80	*0.80	2.8	3.7	3.0	
503	Ajiro Ko .....	35° 03'	139° 05'	-0 21	-0 12	(*0.77+0.1)		2.7	3.5	3.0	
505	Shimoda Ko <6> .....	34° 40'	138° 57'	+0 05	+0 14	*0.86	*0.86	3.0	3.9	3.3	
507	Merakoura Ko .....	34° 40'	138° 47'	+0 23	+0 31	*0.85	*0.85	3.0	3.9	3.2	
509	Tago Minato .....	34° 48'	138° 46'	+0 25	+0 33	(*0.89-0.1)		3.1	4.2	3.3	
511	Eno Ura .....	35° 01'	138° 53'	+0 32	+0 41	*0.80	*0.80	2.8	3.8	3.0	
513	Shimizu Ko .....	35° 00'	138° 30'	+0 32	+0 36	*0.85	*0.85	3.0	4.1	3.2	
515	Omai Saki .....	34° 36'	138° 13'	+0 18	+0 27	*0.89	*0.85	3.2	4.3	3.3	
517	Shino Shima, Mikawa Wan .....	34° 41'	137° 00'	+0 54	+1 03	+0.8	0.0	4.3	5.8	4.2	
519	Gamagori, Mikawa Wan .....	34° 49'	137° 14'	+0 56	+1 04	+1.3	+0.1	4.7	6.3	4.5	
521	Nagoya Ko, Iseno Umi .....	35° 05'	136° 53'	+1 01	+1 05	(*1.40-0.6)		4.9	6.8	4.7	
523	Yokkaichi Ko, Iseno Umi .....	34° 57'	136° 38'	+1 01	+1 10	+1.0	0.0	4.5	6.0	4.3	
525	Tsu Ko, Iseno Umi .....	34° 43'	136° 32'	+0 59	+1 07	+1.2	+0.1	4.6	6.2	4.4	
527	Toba Ko .....	34° 29'	136° 51'	+0 54	+1 08	+0.3	-0.1	3.9	5.3	3.9	
529	Matoya Ko .....	34° 22'	136° 52'	+0 40	+0 49	*0.89	*0.85	3.2	4.3	3.3	
531	Hamashima, Ago Wan .....	34° 17'	136° 45'	+0 49	+0 58	*0.91	*0.85	3.3	4.4	3.4	
533	Gokasho Ko .....	34° 19'	136° 40'	+0 31	+0 39	*0.91	*0.85	3.3	4.5	3.4	
535	Hikimoto Ura, Owashi Wan .....	34° 05'	136° 15'	+0 44	+0 49	*0.93	*0.90	3.3	4.5	3.5	
537	Katsuura Wan .....	33° 37'	135° 57'	+0 42	+0 51	*0.91	*0.85	3.3	4.3	3.4	
539	Urakami Ko .....	33° 33'	135° 54'	+0 44	+0 53	-0.4	-0.3	3.4	4.5	3.4	
541	Kushimoto, Fukuro Ko .....	33° 28'	135° 46'	+0 53	+1 02	*0.91	*0.85	3.3	4.5	3.4	
543	Susami .....	33° 33'	135° 30'	+0 56	+1 05	-0.1	-0.1	3.5	4.7	3.7	
545	Tanabe Ko .....	33° 43'	135° 22'	+0 47	+0 56	-0.1	-0.3	3.7	4.8	3.6	
547	Mio .....	33° 53'	135° 05'	+0 50	+0 58	-0.2	-0.2	3.5	4.7	3.6	
Nampo Shotō (Southern Islands)											
549	Habu Ko, O Shima .....	34° 41'	139° 26'	-0 28	-0 20	(*0.77+0.2)		2.7	3.5	3.1	
551	Shikine Shima .....	34° 19'	139° 13'	+0 06	+0 15	(*0.80+0.2)		2.8	3.8	3.2	
553	Kaminato Hakuchi, Hachijo Jima .....	33° 08'	139° 48'	-0 05	+0 04	(*0.66+0.2)		2.3	3.1	2.7	
555	Tori Shima .....	30° 29'	140° 19'	+0 39	+0 47	(*0.63+0.1)		2.2	3.0	2.5	
557	Muko Jima, Ogasawara Gunto .....	27° 41'	142° 08'	+0 50	+0 50	(*0.63-0.1)		2.2	2.8	2.3	
559	Futami Ko, Ogasawara Gunto <7> .....	27° 05'	142° 11'	+0 47	+0 55	*0.57	*0.57	2.0	2.8	2.2	
561	Okimura, Ogasawara Gunto .....	26° 38'	142° 09'	+0 05	+1 13	(*0.63-0.1)		2.2	2.8	2.3	
563	Ishino, Kita Iwo Jima, Kazan Retto .....	25° 26'	141° 18'	+1 39	+1 39	*0.51	*0.51	1.8	2.3	1.9	
565	Nishi, Iwo Jima, Kazan Retto .....	24° 48'	141° 18'	+1 35	+1 43	*0.51	*0.51	1.8	2.3	1.9	
Shikoku, South Coast											
567	Kannoura Ko .....	33° 33'	134° 18'	-1 25	-1 25	-0.5	0.0	3.6	4.8	3.6	
569	Muroto Saki .....	33° 17'	134° 09'	-1 22	-1 23	0.0	+0.1	4.0	5.2	3.9	
571	Urado Ko .....	33° 30'	133° 34'	-1 15	-1 12	*0.92	*0.92	3.6	4.8	3.6	
573	Susaki Ko <8> .....	33° 24'	133° 17'	-1 19	-1 20	-0.3	0.0	3.8	5.0	3.7	
Naikai (Inland Sea)											
on Yokohama, p.20											
575	Kii Suido	33° 55'	135° 05'	+1 08	+1 17	-0.3	-0.2	3.4	4.6	3.5	
577	Hii Wan .....	34° 07'	135° 08'	+1 15	+1 23	-0.2	-0.1	3.4	4.8	3.6	
579	Wakanoura Wan .....	34° 11'	135° 11'	+1 44	+1 46	(*0.89+0.2)		3.1	4.3	3.6	
581	Tachibana Ura .....	33° 52'	134° 39'	+0 55	+1 04	-0.4	-0.3	3.4	4.5	3.4	
583	Komatsushima Ko .....	34° 01'	134° 36'	+1 03	+1 11	*0.87	*0.85	3.1	4.2	3.3	

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Latitude	Longitude	Time		Height		Mean	Spring		
				High Water	Low Water	High Water	Low Water				
	JAPAN Naikai (Inland Sea)–cont. Time meridian, 135° E	North	East	h m	h m	ft	ft	ft	ft	ft	
on Kobe, p.24											
585	Tomoga Shima, Tomogashima Suido .....	34° 17'	135° 00'	-0 46	-0 44	+0.6	+0.1	3.0	4.5	3.4	
587	Yura Ko, Tomogashima Suido .....	34° 16'	134° 57'	-0 48	-0 48	0.0	-0.1	2.6	3.6	3.0	
589	Sumoto .....	34° 20'	134° 54'	-0 27	-0 42	*0.98	*0.98	2.4	3.4	3.0	
591	Osaka Ko .....	34° 39'	135° 26'	-0 06	-0 11	+0.2	+0.1	2.6	3.7	3.2	
593	KOBE .....	34° 41'	135° 12'			Daily predictions		2.5	3.6	3.1	
595	Karumo Jima .....	34° 39'	135° 10'	+0 05	-0 04	+0.1	+0.1	2.5	3.4	3.2	
597	Akashi Ko, Akashi Seto <10> .....	34° 39'	135° 00'	---	+0 48	*0.67	*0.67	--	2.4	2.2	
599	E Saki, Awaji, Akashi Seto <11> .....	34° 36'	134° 59'	---	+0 55	*0.65	*0.65	--	2.3	2.2	
on Sakate, p.28											
601	Murotsu, Awaji .....	34° 31'	134° 52'	+0 19	+0 23	(*0.64+0.5)		1.8	2.2	2.6	
603	Ei, Awaji .....	34° 28'	134° 50'	+0 19	+0 09	(*0.68+0.4)		1.9	2.2	2.6	
605	Anaga Ura, Awaji .....	34° 16'	134° 40'	+0 29	+0 37	(*0.86+0.2)		2.4	2.6	3.0	
607	Ajiro, Naruto .....	34° 14'	134° 38'	+0 53	+0 57	*0.92	*0.89	2.6	3.1	3.0	
on Yokohama, p.20											
609	Fukura Ura, Awaji .....	34° 15'	134° 42'	+1 29	+1 36	(*0.94-0.1)		3.3	4.5	3.5	
on Kobe, p.24											
611	Tosadomari, Muyano Seto .....	34° 11'	134° 37'	-0 11	-0 19	+0.1	0.0	2.6	3.6	3.1	
613	Kita-tomariura, Muyano Seto <10> .....	34° 14'	134° 35'	---	+1 46	-1.2	-0.3	--	2.8	2.4	
615	Aziro .....	34° 14'	134° 38'	+4 31	+4 18	0.0	-0.1	2.6	3.4	3.0	
on Sakate, p.28											
617	Hikeda, Harima Nada .....	34° 14'	134° 24'	+0 22	+0 23	*0.93	*0.93	2.6	2.8	3.1	
619	SAKATE, Shodo Shima .....	34° 27'	134° 19'			Daily predictions		2.8	3.1	3.3	
621	Ikeda Wan, Shodo Shima .....	34° 29'	134° 12'	-0 11	-0 06	+1.0	+0.2	3.6	4.5	3.9	
Harima Nada											
623	Takasago Ko .....	34° 45'	134° 49'	-0 29	-0 25	(*0.75+0.4)		2.1	2.5	2.9	
625	Shikama Ko .....	34° 47'	134° 41'	-0 24	-0 28	(*0.82+0.6)		2.3	2.4	3.3	
627	Ie Shima .....	34° 41'	134° 32'	-0 16	-0 16	(*0.82+0.2)		2.3	2.5	2.9	
629	O-O Wan .....	34° 47'	134° 28'	-0 20	-0 16	(*0.93+0.2)		2.6	3.1	3.3	
631	Otabu Shima .....	34° 41'	134° 18'	-0 12	-0 08	-0.1	-0.1	2.8	3.3	3.2	
633	Ushimado Ko .....	34° 36'	134° 09'	-0 01	+0 03	+0.8	+0.1	3.5	4.4	3.8	
635	Kogushi, Okayama Suido .....	34° 36'	134° 02'	+0 01	+0 05	+1.0	+0.1	3.7	4.6	3.9	
Bisan Seto											
637	Nao Shima .....	34° 27'	133° 58'	+1 29	+1 26	(*0.67+0.4)		5.0	6.2	4.8	
639	Ogi Shima .....	34° 26'	134° 03'	+1 25	+1 46	(*0.56+0.6)		4.2	5.0	4.3	
641	Takamatsu Ko .....	34° 21'	134° 02'	+1 25	+1 26	(*0.60+0.4)		4.5	5.3	4.4	
643	Nabe Shima .....	34° 23'	133° 50'	+1 40	+1 37	(*0.84+0.3)		6.3	8.1	5.8	
645	Shimotsui .....	34° 26'	133° 48'	+1 32	+1 28	(*0.80+0.3)		6.0	7.8	5.6	
647	Awashima, Awa Shima .....	34° 16'	133° 38'	+1 46	+1 46	+0.2	0.0	7.7	9.6	6.7	
649	Tomo Tsu, Bingo Nada .....	34° 23'	133° 23'	+1 25	+1 26	+0.5	0.0	8.0	9.9	6.8	
651	Tachibana, Mekari Seto .....	34° 21'	133° 12'	+1 25	+1 21	+0.1	+0.1	7.5	9.7	6.7	
653	Onomichi Seto .....	34° 24'	133° 12'	+1 16	+1 13	+0.1	0.0	7.6	9.2	6.6	
655	Itosaki, Miura Wan .....	34° 23'	133° 06'	+1 08	+1 04	-0.3	-0.1	7.3	9.2	6.4	
657	Setoda, Iuchi Jima .....	34° 18'	133° 05'	+0 49	+0 46	-0.2	-0.2	7.5	9.6	6.4	
659	Tadanomi, Miura Seto .....	34° 20'	132° 59'	+0 31	+0 27	+0.6	+0.3	7.8	10.3	7.0	
661	Takahama, Hiuchi Nada .....	33° 59'	133° 21'	+1 24	+1 20	+0.5	+0.1	7.9	10.4	6.9	
663	Imabari, Kurushima Kaikyo .....	34° 04'	133° 00'	+1 06	+1 03	-0.3	0.0	7.2	9.4	6.4	
665	Hashihama, Kurushima Kaikyo .....	34° 07'	132° 58'	+0 28	+0 22	+0.3	+0.1	7.7	9.9	6.8	
667	Mitarai, Osaki Shimo Shima .....	34° 11'	132° 52'	+0 11	+0 08	+0.3	+0.1	7.7	10.1	6.8	
669	Koyo, Aki Nada .....	34° 14'	132° 43'	+0 16	+0 13	-1.0	-0.2	6.7	8.9	6.0	
671	Mutsuki Seto, Naka Shima .....	33° 59'	132° 38'	-0 21	-0 25	-0.7	-0.1	6.9	9.0	6.2	
Hiroshima Wan											
673	Karoto Koso .....	34° 04'	132° 33'	-0 13	-0 16	(*0.88+0.1)		6.6	8.7	5.9	
675	Ondo Seto .....	34° 12'	132° 32'	-0 04	-0 08	(*0.88+0.1)		6.6	8.6	5.9	
677	KURE .....	34° 14'	132° 33'			Daily predictions		7.5	9.9	6.6	
679	Yeta Uchi .....	34° 15'	132° 28'	-0 05	-0 09	0.0	+0.1	7.4	9.8	6.6	
681	Nasami Seto .....	34° 15'	132° 23'	-0 18	-0 21	-0.8	-0.1	6.8	9.3	6.1	
683	Hiroshima Ko (Ujina Ko) .....	34° 21'	132° 28'	-0 09	-0 13	-0.2	0.0	7.3	9.7	6.5	
685	Itsuku Shima .....	34° 18'	132° 19'	-0 09	-0 13	-0.2	0.0	7.3	9.6	6.5	
687	Shimminato .....	34° 11'	132° 14'	-0 12	-0 15	-0.8	-0.1	6.8	9.1	6.1	
689	Moro Shima Suido .....	33° 57'	132° 28'	-0 35	-0 38	-0.5	0.0	7.0	9.1	6.3	
691	Yashiro Jima .....	33° 55'	132° 18'	-0 09	-0 13	(*0.88+0.1)		6.6	8.8	5.9	
693	Obatake Seto .....	33° 57'	132° 10'	-0 50	-0 53	(*0.85+0.2)		6.4	8.5	5.8	
Iyo Nada											
695	Okikamuro Shima .....	33° 51'	132° 22'	-0 41	-0 44	(*0.85+0.2)		6.4	8.3	5.8	
697	Kaminoseki Kaikyo .....	33° 50'	132° 07'	-0 58	-1 02	(*0.79+0.2)		5.9	8.0	5.4	
699	Mitsugahama Hakuchi .....	33° 52'	132° 42'	-0 31	-0 33	-0.4	0.0	7.1	9.3	6.4	
701	Ao Shima .....	33° 44'	132° 29'	-0 55	-0 59	(*0.88+0.2)		6.6	8.7	6.0	
703	Nagahama Ko .....	33° 37'	132° 29'	-1 16	-1 20	(*0.85+0.1)		6.4	8.5	5.7	
705	Mitsukuye Ko .....	33° 27'	132° 14'	-1 12	-1 15	(*0.83+0.3)		6.2	8.2	5.8	
707	Saganoseki .....	33° 15'	131° 53'	-1 16	-1 19	(*0.52+0.6)		3.9	5.1	4.0	
709	Beppu Ko .....	33° 17'	131° 30'	-1 20	-1 24	(*0.59+0.4)		4.4	5.7	4.3	

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Latitude	Longitude	Time		Height		Mean	Spring		
				High Water	Low Water	High Water	Low Water				
		North	East	h m	h m	ft	ft	ft	ft	ft	
JAPAN Naikai (Inland Sea)–cont. Time meridian, 135° E											
<i>Bungo Suido</i>											
711	Yawatahama Ko . . . . .	33° 27'	132° 24'	+0 10	+0 09	+0.5	+0.3	4.3	5.7	4.3	
713	Okuchi Wan . . . . .	33° 20'	132° 23'	+0 08	+0 07	+0.4	+0.2	4.3	5.7	4.2	
715	Hiburi Shima . . . . .	33° 10'	132° 16'	+0 00	-0 01	+0.1	+0.2	4.0	5.3	4.0	
717	Mizugaura, Uwajima Wan . . . . .	33° 12'	132° 27'	+0 03	+0 03	+0.4	+0.3	4.2	5.6	4.2	
719	Uwajima Ko . . . . .	33° 14'	132° 33'	+0 05	+0 04	(0.90+0.8)		3.7	5.2	4.3	
721	Kashiba . . . . .	33° 01'	132° 30'	-0 47	-0 47	0.0	+0.1	4.0	5.2	3.9	
723	Sukumo Ko . . . . .	32° 54'	132° 42'	-1 08	-1 08	-0.2	0.0	3.9	5.2	3.8	
725	Katsura, Saeki Wan . . . . .	32° 59'	131° 54'	-0 05	-0 02	(0.80+0.3)		3.3	4.4	3.4	
727	Saganoseki, Shita Ura . . . . .	33° 14'	131° 53'	+0 35	+0 26	+0.1	+0.2	4.0	5.4	4.0	
on Naha, p.44											
<i>Suo Nada</i>											
729	Hirne Shima . . . . .	33° 44'	131° 38'	-0 48	-0 47	(*0.84+0.2)		6.3	8.5	5.7	
731	Kakaji . . . . .	33° 41'	131° 31'	-0 45	-0 49	-0.8	-0.1	6.8	9.1	6.1	
733	Unoshima Ko . . . . .	33° 38'	131° 08'	-0 52	-0 56	+0.5	+0.2	7.8	10.4	6.9	
735	Tokuyama Wan . . . . .	34° 01'	131° 49'	-1 02	-1 01	(*0.84+0.4)		6.3	8.5	5.9	
737	Mitajiri Ko . . . . .	34° 02'	131° 35'	-0 54	-0 58	(*0.84+0.1)		6.3	8.5	5.6	
739	Ube Ko . . . . .	33° 56'	131° 15'	-0 52	-0 51	+0.6	+0.3	7.8	10.5	7.0	
<i>Shimonoseki Kaikyo</i>											
741	Aohama, Kyushu . . . . .	33° 57'	131° 01'	-0 47	-0 47	+0.6	+0.1	8.0	10.8	6.9	
743	Iwakuro, Honshu . . . . .	33° 58'	130° 59'	-0 37	-0 41	+0.3	+0.1	7.7	10.4	6.8	
on Kure, p.32											
<i>on Moji, p.36</i>											
745	Shimonoseki, Honshu . . . . .	33° 58'	130° 57'	+0 00	+0 00	*1.07	*1.07	5.4	7.2	4.4	
747	Isakimachi . . . . .	33° 57'	130° 55'	+0 09	+0 02	*1.02	*1.02	4.7	6.4	4.1	
749	Moji, Kyushu . . . . .	33° 57'	130° 58'			Daily predictions		4.59	6.56	4.27	
751	Tanokubi . . . . .	33° 55'	130° 55'	+0 35	+0 22	*0.74	*0.74	3.4	4.8	3.0	
753	Haidomari . . . . .	33° 57'	130° 53'	+0 38	+0 39	*0.59	*0.59	2.7	3.8	2.6	
755	Wakamatsu Ko . . . . .	33° 55'	130° 49'	+0 54	+0 48	*0.59	*0.59	2.7	3.7	2.6	
Honshu, Northwest Coast											
757	Yoshimo . . . . .	34° 05'	130° 52'	+0 46	+0 39	*0.50	*0.50	2.3	3.2	2.3	
759	Kottai . . . . .	34° 19'	130° 54'	+1 05	+0 58	*0.52	*0.52	2.4	3.2	2.4	
761	Yuya Wan (Aburatani Wan) . . . . .	34° 24'	130° 57'	+1 11	+1 04	*0.39	*0.39	1.8	2.5	1.9	
on Hong Kong, p.120											
763	Senzaki Ko . . . . .	34° 24'	131° 12'	+1 07	+1 17	*0.39	*0.32	1.5	2.0	1.7	
765	Hagi Ko . . . . .	34° 26'	131° 25'	+1 27	+1 37	*0.36	*0.32	1.3	1.8	1.6	
767	Esaki Ko . . . . .	34° 38'	131° 39'	+2 05	+2 15	*0.26	*0.25	0.9	1.2	1.2	
769	Hamada Ko (Tono Ura entrance) <12> . . . . .	34° 55'	132° 04'	+2 41	+2 50	*0.20	*0.18	0.7	0.9	0.9	
771	Sagi Ura . . . . .	35° 27'	132° 41'	—	—	—	—	0.5	—	—	
773	Kaka Ura . . . . .	35° 35'	133° 03'	—	—	—	—	0.5	—	—	
775	Sakai Ko, Miho Wan . . . . .	35° 33'	133° 14'	—	—	—	—	0.3	—	—	
777	Yonago Nakami . . . . .	35° 26'	133° 19'	—	—	—	—	0.3	—	—	
779	Hitotsu Ura, Dozen, Oki Retto . . . . .	36° 05'	133° 04'	—	—	—	—	0.4	—	—	
781	Saigo Ko, Dogo, Oki Retto . . . . .	36° 12'	133° 20'	—	—	—	—	0.5	—	—	
783	Shibayama Ko . . . . .	35° 40'	134° 40'	—	—	—	—	0.5	—	—	
785	Ine Ko, Wakasa Wan . . . . .	35° 40'	135° 17'	—	—	—	—	0.5	—	—	
787	Maizuru Ko, Wakasa Wan <13> . . . . .	35° 27'	135° 19'	—	—	—	—	0.5	—	—	
789	Tsuruga Ko, Wakasa Wan <14> . . . . .	35° 40'	136° 04'	—	—	—	—	0.5	—	—	
791	Mikuni Ko . . . . .	36° 15'	136° 08'	—	—	—	—	0.5	—	—	
793	Wajima Ko . . . . .	37° 24'	136° 54'	—	—	—	—	0.5	—	0.6	
795	Nanao, Nanao Wan . . . . .	37° 03'	136° 58'	—	—	—	—	0.5	—	—	
797	Fushiki Ko, Toyama Wan . . . . .	36° 48'	137° 04'	—	—	—	—	0.5	—	—	
799	Naoetsu Ko . . . . .	37° 11'	138° 15'	—	—	—	—	0.5	—	—	
801	Niigata Ko . . . . .	37° 57'	139° 04'	—	—	—	—	0.4	—	—	
803	Ogi Ko, Sado Shima . . . . .	37° 49'	138° 17'	—	—	—	—	0.5	—	—	
805	Ryo Zu Ko, Sado Shima . . . . .	38° 05'	138° 26'	—	—	—	—	0.5	—	—	
807	Kamo Ko . . . . .	38° 46'	139° 44'	—	—	—	—	0.4	—	—	
809	Tsuchizaki . . . . .	39° 45'	140° 03'	—	—	—	—	0.4	—	—	
811	Funakawa Wan . . . . .	39° 53'	139° 52'	—	—	—	—	0.5	—	—	
813	Iwasaki . . . . .	40° 35'	139° 54'	—	—	—	—	0.4	—	—	
815	Fuka Ura . . . . .	40° 39'	139° 55'	—	—	—	—	0.4	—	—	
817	Kodomari Wan . . . . .	41° 08'	140° 18'	—	—	—	—	0.6	—	—	
Kyushu, East Coast											
819	Inokushi Ko <15> . . . . .	32° 48'	131° 54'	-1 07	-1 07	(*0.88+0.2)		3.6	4.8	3.6	
821	Todoro Ko . . . . .	32° 30'	131° 41'	-1 04	-1 04	*0.97	*0.97	3.9	5.3	3.8	
823	Hososhima <16> . . . . .	32° 26'	131° 40'	-0 51	-0 43	*0.90	*0.90	3.6	4.8	3.5	
825	Mimitsu . . . . .	32° 20'	131° 37'	-0 57	-0 58	*0.92	*0.92	3.7	4.9	3.6	
827	Uchiumi <17> . . . . .	31° 45'	131° 28'	-1 07	-1 07	(*0.93+0.2)		3.8	5.0	3.8	
829	Tonoura . . . . .	31° 31'	131° 22'	-1 09	-1 09	(*0.95+0.2)		3.9	5.2	3.9	
831	Fukushima Inamachi, Ariake Wan . . . . .	31° 27'	131° 12'	-0 59	-1 00	-0.1	0.0	4.0	5.3	3.8	

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Latitude	Longitude	Time		Height		Mean	Spring		
				High Water	Low Water	High Water	Low Water				
	JAPAN Kyushu, South Coast Time meridian, 135° E	North	East	h m	h m	ft	ft	ft	ft	ft	
on Naha, p.44											
833	Odomari Wan .....	31° 01'	130° 41'	-0 24	-0 25	+1.3	+0.4	5.0	6.6	4.7	
835	Yamagawa Ko, Kagoshima Kaiwan .....	31° 12'	130° 38'	-0 02	-0 02	+1.9	+0.5	5.5	7.3	5.1	
837	Furue Ko, Kagoshima Kaiwan .....	31° 23'	130° 46'	-0 02	-0 02	+2.1	+0.5	5.7	7.5	5.2	
839	Kagoshima Ko, Kagoshima Kaiwan .....	31° 36'	130° 34'	-0 01	+0 07	+2.1	+0.7	5.5	7.5	5.3	
841	Bono Tsu, Tomari Ura .....	31° 16'	130° 13'	+0 09	+0 08	+1.6	+0.4	5.3	7.1	4.9	
on Sasebo, p.40											
843	Nakagawara Ura <18> .....	31° 51'	129° 51'	-0 40	-0 42	(*0.90+0.3)		5.5	7.3	5.2	
845	Akune .....	32° 01'	130° 11'	-0 47	-0 49	-0.2	0.0	5.9	7.8	5.3	
847	Fukuro Oki, Yatsushiro Kai .....	32° 11'	130° 22'	+0 15	+0 14	+1.7	+0.4	7.4	9.9	6.4	
849	Kaga Shima, Yatsushiro Kai .....	32° 31'	130° 33'	+0 19	+0 18	+2.7	+0.6	8.2	11.0	7.0	
851	Yanagino Seto, Yatsushiro Kai .....	32° 33'	130° 25'	+0 19	+0 18	+2.9	+0.5	8.5	11.3	7.1	
853	Misumi Ko, Misumi No Seto .....	32° 37'	130° 27'	+0 24	+0 22	*1.39	*1.22	8.9	11.8	7.3	
855	Ushibuka, Amakusa Shimo Shima .....	32° 12'	130° 01'	-0 32	-0 34	+0.1	+0.1	6.1	8.1	5.5	
857	Sakitsu Wan, Amakusa Shimo Shima .....	32° 19'	130° 01'	-0 36	-0 38	0.0	+0.1	6.0	8.2	5.4	
859	Tomioka Wan, Amakusa Shimo Shima .....	32° 32'	130° 02'	-0 24	-0 26	+1.1	+0.3	6.9	9.3	6.1	
861	Kuchinotsu Wan .....	32° 36'	130° 11'	+0 23	+0 21	+1.7	+0.4	7.4	9.7	6.4	
863	Shimabara, Shimabara Kaiwan .....	32° 47'	130° 23'	+0 32	+0 30	*1.58	*1.26	10.4	13.6	8.1	
865	Miike Ko, Shimabara Kaiwan .....	33° 01'	130° 25'	+0 36	+0 37	*1.76	*1.57	11.2	14.9	9.2	
867	Kabashima Suido .....	32° 34'	129° 47'	-0 25	-0 27	+0.1	0.0	6.2	8.2	5.4	
869	Fukahori .....	32° 41'	129° 49'	-0 26	-0 23	+0.1	+0.2	6.0	8.3	5.5	
871	Nagasaki Ko <19> .....	32° 43'	129° 51'	-0 24	-0 26	-0.6	-0.1	5.6	7.5	5.0	
873	Terashima Suido .....	33° 02'	129° 38'	-0 12	-0 14	+0.1	+0.1	6.1	8.3	5.5	
875	Omodake .....	33° 05'	129° 41'	-0 06	-0 08	+0.4	+0.2	6.3	8.5	5.7	
877	SASEBO <20> .....	33° 10'	129° 43'	Daily predictions				6.1	8.4	5.4	
879	Kogushi Wan, Omura Wan .....	33° 04'	129° 49'	+2 51	+2 49	(*0.26+0.1)		1.6	1.9	1.5	
881	Omura, Omura Wan .....	32° 54'	129° 57'	+2 55	+2 53	(*0.28+0.2)		1.7	2.2	1.7	
883	Kusudomari .....	33° 13'	129° 35'	-0 05	-0 07	0.0	+0.1	6.0	8.1	5.4	
885	Shijiki Wan, Hirado Shima .....	33° 12'	129° 23'	+0 19	+0 18	-0.3	0.0	5.8	7.7	5.2	
887	Usuka Wan, Hirado Shima .....	33° 23'	129° 32'	+0 42	+0 40	*0.88	*0.88	5.4	7.3	4.7	
Goto Retto											
889	Me Shima, Danjo Gunto .....	32° 00'	128° 21'	-0 21	-0 22	(*0.85+0.7)		5.2	7.1	5.3	
891	Tamano Ura, Fukaye Jima .....	32° 37'	128° 37'	+0 07	+0 05	-0.1	+0.1	5.9	8.1	5.4	
893	Fukaye, Fukaye Jima .....	32° 42'	128° 51'	+0 04	+0 02	-0.3	0.0	5.8	7.8	5.2	
895	Wakamatsu Ura, Wakamatsu Shima .....	32° 53'	129° 01'	+0 21	+0 20	-0.1	0.0	6.0	8.0	5.3	
897	Arikawa Wan, Nakadori Shima .....	32° 59'	129° 07'	+0 08	+0 07	*0.87	*0.87	5.3	7.1	4.7	
899	Kono Ura, Uku Shima .....	33° 16'	129° 05'	+0 25	+0 24	-0.7	-0.2	5.6	7.6	4.9	
Kyushu, Northwest Coast											
901	Kazamoto Ura, Iki Shima .....	33° 51'	129° 41'	+0 22	+0 15	*0.96	*0.96	4.4	5.9	3.8	
903	Gono Ura, Iki Shima .....	33° 45'	129° 41'	+0 26	+0 19	*1.05	*1.05	4.8	6.6	4.2	
905	Mikuriya, Imari Wan .....	33° 22'	129° 40'	+0 07	+0 01	*1.18	*1.18	5.4	7.6	5.0	
907	Kariya Ko .....	33° 29'	129° 50'	+0 25	+0 18	*1.00	*1.00	4.6	6.2	4.2	
909	Yobuko Ko <21> .....	33° 33'	129° 53'	+0 06	+0 00	*0.94	*0.94	4.3	6.1	3.9	
911	Fukuoka Wan .....	33° 36'	130° 23'	+0 41	+0 35	*0.87	*0.87	4.0	5.6	3.7	
913	Konomato Ura .....	33° 51'	130° 29'	+0 41	+0 35	*0.72	*0.72	3.3	4.5	3.1	
915	Iwaya .....	33° 56'	130° 41'	+0 45	+0 38	*0.59	*0.59	2.7	3.7	2.7	
Tsushima											
917	Mikata, Aso Wan .....	34° 18'	129° 16'	+0 33	+0 31	(*0.79-0.4)		4.8	6.5	3.9	
919	Tsuna Shima .....	34° 25'	129° 16'	+0 33	+0 31	(*0.72-0.4)		4.4	6.0	3.5	
921	Sasuna Ko .....	34° 39'	129° 23'	+0 16	+0 14	*0.51	*0.43	3.3	4.5	2.7	
on Moji, p.36											
923	Ajirō, Nishitomari Wan .....	34° 39'	129° 29'	-0 19	-0 25	*0.54	*0.54	2.5	3.5	1.9	
925	Oshika .....	34° 31'	129° 26'	-0 16	-0 23	*0.63	*0.63	2.9	4.0	2.2	
927	Miura Wan .....	34° 18'	129° 23'	-0 16	-0 23	*0.76	*0.76	3.5	4.8	2.8	
929	Izuhara Ko .....	34° 12'	129° 17'	-0 10	-0 23	*0.83	*0.83	3.8	5.4	3.0	
Nansei Shoto (Southwestern Islands)											
931	Nishinomote Wan, Tanega Shima .....	30° 44'	130° 59'	-0 24	-0 24	+0.5	+0.2	4.4	5.8	4.2	
933	O Ura, Tanega Shima .....	30° 27'	130° 58'	-0 52	-0 53	0.0	0.0	4.1	5.4	3.9	
935	Isso, Yaku Shima .....	30° 27'	130° 30'	-0 07	-0 08	+0.7	+0.2	4.6	6.1	4.3	
937	Kuchinoerabu Shima .....	30° 28'	130° 11'	-0 08	-0 09	+0.7	+0.2	4.6	6.2	4.3	
939	Nakano Shima .....	29° 50'	129° 51'	-0 15	-0 16	+0.1	0.0	4.2	5.5	3.9	
941	Takara Shima .....	29° 09'	129° 12'	+0 10	+0 10	-0.1	0.0	4.0	5.3	3.8	
943	Somachi Hakuchi, Kikai Jima .....	28° 20'	130° 00'	+0 30	+0 30	(*0.76+0.3)		3.1	4.3	3.3	
	Amami O Shima										
945	Sumiyo Wan .....	28° 14'	129° 25'	-0 36	-0 37	0.0	0.0	4.1	5.2	3.9	
947	Koniya .....	28° 09'	129° 18'	-0 10	-0 11	-0.1	0.0	4.0	5.4	3.8	
949	Nishikomi .....	28° 14'	129° 10'	-0 08	-0 09	+0.1	0.0	4.2	5.5	3.9	
951	Uken, Yakiuchi Wan .....	28° 18'	129° 14'	-0 04	-0 05	0.0	0.0	4.1	5.4	3.9	
953	Kasari Wan .....	28° 27'	129° 39'	-0 04	-0 05	+0.1	-0.1	4.3	5.6	3.9	
955	Uke Shima .....	28° 02'	129° 14'	-0 24	-0 26	0.0	+0.1	4.0	5.3	3.9	
957	Sammura Wan, Tokuno Shima .....	27° 52'	128° 58'	-0 32	-0 32	*0.93	*0.93	3.8	5.0	3.6	
959	Wadomari, Okinoyerabu Jima .....	27° 24'	128° 40'	-0 31	-0 31	*0.90	*0.90	3.6	4.7	3.5	

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Latitude	Longitude	Time		Height		Mean	Spring		
				High Water	Low Water	High Water	Low Water				
	JAPAN Nansei Shoto (Southwestern Islands)–cont. Time meridian, 135° E	North	East	h m	h m	ft	ft	ft	ft	ft	
on Naha, p.44											
961	Gakiya, Iheya Jima . . . . .	27° 03'	127° 58'	-0 09	-0 10	*0.90	*0.90	3.8	5.0	3.5	
963	Okinawa Shima	26° 33'	128° 02'	-0 39	-0 39	0.0	0.0	4.1	5.5	3.9	
965	Sukku, Ora Wan . . . . .	26° 12'	127° 46'	-0 44	-0 42	-0.1	-0.1	4.1	5.4	3.7	
967	Yonabaru, Buckner Bay . . . . .	26° 12'	127° 40'			Daily predictions		4.1	5.6	3.9	
969	NAHA . . . . .	26° 38'	127° 53'	+0 11	+0 11	-0.2	-0.2	4.1	5.4	3.7	
971	Sesoko Byochi . . . . .	26° 40'	128° 01'	-0 07	-0 08	*0.93	*0.93	3.8	5.0	3.6	
973	Unten Ko . . . . .	26° 40'	128° 01'	-0 07	-0 08	*0.93	*0.93	3.8	5.0	3.6	
975	Zamami Jima, Kerama Kaikyo . . . . .	26° 13'	127° 18'	-0 06	-0 07	-0.1	-0.1	4.1	5.4	3.8	
977	Gima Ko, Kume Shima . . . . .	26° 20'	126° 44'	-0 07	-0 07	-0.1	-0.1	4.1	5.4	3.8	
979	Minami Daito Jima . . . . .	25° 49'	131° 14'	-0 35	-0 35	*0.81	*0.81	3.3	4.4	3.2	
981	Miyako Hakuchi, Miyako Jima . . . . .	24° 48'	125° 17'	+0 08	+0 07	*0.90	*0.90	3.8	4.9	3.5	
983	Ishigaki, Ishigaki Shima . . . . .	24° 20'	124° 10'	+0 03	+0 02	(0.83+0.2)		3.4	4.4	3.4	
985	Funauke, Iriomote Jima . . . . .	24° 20'	123° 44'	+0 19	+0 18	(0.83+0.2)		3.3	4.4	3.4	
987	Yonakuni Jima . . . . .	24° 26'	123° 00'	-0 03	-0 03	(0.76+0.2)		3.1	4.2	3.2	
	Kobi Sho, Sento Shosho . . . . .	25° 56'	123° 41'	+0 44	+0 43	(0.80+0.4)		3.3	4.5	3.5	
on Pusan, p.48											
989	KOREA Korea, Japan Sea	42° 20'	130° 25'	---	---	---	---	0.5	--	0.7	
991	Unggi-hang . . . . .	41° 59'	130° 00'	---	---	---	---	0.5	--	0.7	
993	Sajin-man . . . . .	41° 12'	129° 44'	---	---	---	---	0.5	--	0.7	
995	Taeryangwha-man . . . . .	40° 40'	129° 13'	---	---	---	---	0.6	--	0.8	
997	Songjin-hang . . . . .	40° 12'	128° 39'	---	---	---	---	0.5	--	0.7	
999	Ch'aho-hang . . . . .	40° 01'	128° 12'	---	---	---	---	0.6	--	0.7	
1001	Sinp'o-hang . . . . .	39° 49'	127° 38'	---	---	---	---	0.6	--	0.7	
1003	Sohojin-hang . . . . .	39° 10'	127° 26'	---	---	---	---	0.6	--	0.7	
1005	Wonsan-hang, Yonghung-man . . . . .	38° 44'	128° 12'	---	---	---	---	0.5	--	0.7	
1007	Changjon-hang . . . . .	37° 54'	128° 50'	---	---	---	---	0.5	--	0.6	
1009	Chumunjin-hang . . . . .	37° 29'	130° 54'	---	---	---	---	0.3	--	0.4	
1011	Ullung-do . . . . .	37° 04'	129° 26'	---	---	---	---	0.4	--	0.5	
1013	Chukpyon-man . . . . .	36° 30'	129° 27'	---	---	---	---	0.3	--	0.4	
1015	Ch'uksan-hand . . . . .	36° 03'	129° 23'	---	---	---	---	0.3	--	0.4	
1017	Yongil-man . . . . .	35° 30'	129° 23'	-0 52	-0 44	(0.46+0.1)		1.3	1.8	1.1	
1019	Ulsan . . . . .	35° 28'	129° 25'	-1 00	-0 52	(0.43+0.2)		1.2	1.7	1.1	
1021	PUSAN . . . . .	35° 06'	129° 02'			Daily predictions		2.8	4.0	2.1	
1023	Yong-do . . . . .	35° 05'	129° 03'	-0 11	-0 03	0.0	-0.1	2.9	3.9	2.1	
1025	Yong-song-man, Kadok-to . . . . .	35° 01'	128° 49'	+0 07	+0 15	*1.50	*1.50	4.1	5.6	3.2	
1027	Ch'onsong-man . . . . .	35° 10'	128° 34'	+0 10	+0 18	*1.60	*1.60	4.4	6.1	3.4	
1029	Masan-man . . . . .	35° 06'	128° 29'	+0 08	+0 16	*1.74	*1.74	4.8	6.6	3.7	
1031	Unp'ung-p'o, Chinhae-man . . . . .	34° 53'	128° 28'	+0 20	+0 29	*1.80	*1.80	5.0	6.8	3.8	
1033	Hyonnaeryang-haehyop, Chinhae-man . . . . .	34° 50'	128° 43'	+0 03	+0 11	*1.54	*1.54	4.3	5.7	3.3	
on Ch'ang Chiang Approach, p.92											
1035	Choguri-man, Koe-do . . . . .	34° 43'	128° 36'	-1 10	-1 23	(*0.63-1.6)		5.4	7.3	4.4	
1037	Koje-man, Koe-do . . . . .	34° 50'	128° 35'	-1 08	-1 20	(*0.67-1.7)		5.8	7.8	4.7	
1039	Ch'ungmu-hang . . . . .	34° 51'	128° 25'	-0 49	-1 12	(*0.67-1.7)		5.8	8.1	4.7	
1041	Yokchi-do . . . . .	34° 39'	128° 16'	-0 59	-1 11	(*0.71-1.9)		6.1	8.2	4.9	
1043	Wis-som, Saryang-do . . . . .	34° 51'	128° 14'	-1 01	-1 13	(*0.74-1.9)		6.4	8.7	5.2	
1045	Kosong-man . . . . .	34° 55'	128° 21'	-0 55	-1 07	(*0.77-2.2)		6.6	8.8	5.2	
1047	Mijo-man, Namhae-do . . . . .	34° 43'	128° 03'	-1 04	-1 16	(*0.74-1.8)		6.4	8.8	5.3	
1049	Samch'onp'o . . . . .	34° 56'	128° 04'	-1 00	-1 12	(*0.77-2.1)		6.6	8.9	5.3	
1051	Ch'ojon-ni . . . . .	35° 03'	128° 03'	-0 31	-0 43	-3.9	-2.9	7.6	10.4	6.2	
1053	P'yousan-ni, Namhae-do . . . . .	34° 46'	127° 51'	-0 59	-1 11	-4.4	-3.0	7.2	10.0	5.9	
1055	Yosu . . . . .	34° 45'	127° 46'	-0 43	-1 08	-4.3	-3.1	7.4	10.2	5.9	
1057	Kwangyang-man . . . . .	34° 51'	127° 45'	-0 40	-0 53	-3.7	-2.9	7.8	10.7	6.3	
1059	Noryang-ni . . . . .	34° 57'	127° 53'	-0 43	-0 55	-3.9	-2.9	7.6	10.4	6.2	
1061	Chobal-to, Yojia-man . . . . .	34° 38'	127° 34'	-0 18	-0 31	-3.3	-2.7	8.0	11.0	6.6	
1063	Tonae-hae, Komun-do . . . . .	34° 01'	127° 19'	-0 21	-0 34	(*0.77-1.6)		6.6	9.0	5.8	
1065	Sonjuk-to, Sonjuk-yolto . . . . .	34° 17'	127° 22'	-0 01	-0 13	(*0.79-1.6)		6.8	9.4	6.0	
1067	Sayang-do, Naro-yolto . . . . .	34° 28'	127° 27'	-0 35	-0 47	-3.7	-2.7	7.6	10.2	6.4	
1069	Kogum-sudo . . . . .	34° 30'	127° 09'	-0 02	-0 14	-3.0	-2.4	8.0	10.9	6.9	
1071	Mafo-sudo . . . . .	34° 26'	126° 51'	+0 20	+0 07	-2.7	-2.4	8.3	11.5	7.1	
1073	Wando . . . . .	34° 18'	126° 46'	+1 09	+1 09	-3.8	-2.5	7.3	9.9	6.5	
1075	Soan-hang, Soan-do . . . . .	34° 09'	126° 38'	+0 44	+0 31	-3.9	-2.6	7.3	9.8	6.4	
KOREA, Yellow Sea											
1077	Sangch'uja-do, Ch'uja-kundo . . . . .	33° 57'	126° 17'	+1 24	+1 12	(*0.70-1.3)		6.0	7.9	5.4	
	Cheju-do	33° 30'	126° 55'	-0 03	-0 16	(*0.56-0.9)		4.8	6.5	4.5	
1079	Udo-sudo . . . . .	33° 14'	126° 33'	-0 08	-0 21	(*0.65-1.2)		5.6	7.5	5.0	
1081	Sogwi-p'o . . . . .	33° 18'	126° 09'	+1 02	+0 50	(*0.63-1.0)		5.4	7.1	5.0	
1083	Ch'agwi-do . . . . .	33° 31'	126° 32'	+0 56	+0 54	(*0.59-1.1)		5.1	6.9	4.6	
1085	Cheju Harbor . . . . .	33° 31'	126° 35'	+0 54	+0 41	(*0.56-0.8)		4.8	6.4	4.6	
1087	Hwabuk-ni . . . . .	34° 21'	126° 29'	+1 23	+1 11	-3.6	-2.5	7.5	9.9	6.6	
1089	Oran-ni, Maro-hae . . . . .	34° 27'	126° 25'	+1 24	+1 12	-2.8	-2.4	8.2	10.8	7.0	
1091	Sangma-do, Samma-do . . . . .	34° 18'	126° 03'	+3 40	+3 01	(*0.72-1.9)		6.2	8.1	5.0	
1093	Hachodo . . . . .	34° 32'	126° 03'	+3 08	+2 56	(*0.90-2.0)		7.7	9.9	6.6	
1095	Hat'ae-do, Naju-kundo . . . . .	34° 30'	126° 12'	+4 02	+3 50	-3.1	-2.5	8.0	10.3	6.8	
1097	Chin-do . . . . .	34° 32'	126° 21'	+1 40	+2 03	-3.7	-2.7	7.6	10.0	6.4	
1099	Baikpachin . . . . .	34° 35'	126° 18'	+3 50	+3 21	-3.6	-3.0	8.0	10.0	6.3	
1101	Usuyong . . . . .										

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Latitude	Longitude	Time		Height		Mean	Spring		
				High Water	Low Water	High Water	Low Water				
		North	East	h m	h m	ft	ft	ft	ft	ft	
KOREA, Yellow Sea—cont. Time meridian, 135° E											
1103	Siha-do .....	34° 42'	126° 15'	+4 28	+3 36	-2.5	-2.5	8.6	10.6	7.1	
1105	Mok'po .....	34° 47'	126° 23'	+5 26	+4 36	-3.0	-3.3	8.9	11.2	6.5	
1107	Yongsan-dong .....	34° 53'	126° 32'	+6 02	+5 50	*0.88	*0.60	9.0	11.2	7.7	
1109	Taeuhksan-do, Taehuksan-kundo .....	34° 41'	125° 26'	+4 01	+3 49	*0.68	*0.43	7.2	9.2	5.9	
1111	Pigum-sudo, Naju-kundo .....	34° 43'	125° 56'	+3 40	+3 28	-2.4	-2.5	8.7	11.2	7.2	
1113	Chaun-do, Naju-kundo .....	34° 53'	126° 06'	+4 08	+3 56	-0.8	-2.2	10.0	12.8	8.1	
1115	Imja-do .....	35° 03'	126° 05'	+4 31	+4 19	-0.9	-2.4	10.1	13.5	8.0	
on Ch'ang Chiang Approach, p.92											
1117	Hamp'yong-man .....	35° 09'	126° 21'	-2 35	-2 30	(*0.63+0.7)		13.1	16.6	10.3	
1119	Anma-do, Anma-kundo .....	35° 21'	126° 01'	-2 28	-2 23	(*0.57+0.5)		11.8	15.1	9.2	
1121	Kogunsan-kundo .....	35° 49'	126° 24'	-1 58	-1 53	(*0.69+0.5)		14.3	18.4	11.0	
1123	Chuk-to, Kunsan-hang .....	36° 02'	126° 32'	-1 50	-1 46	(*0.72+0.7)		15.0	19.6	11.6	
1125	Kunsan, Kun-gang .....	35° 59'	126° 43'	-1 36	-0 54	*0.73	*0.75	15.1	19.0	11.2	
1127	Ochongdo .....	36° 07'	125° 59'	-1 44	-1 39	(*0.64+0.8)		13.2	17.3	10.5	
1129	Oeyon-do, Oeyon-yolto .....	36° 13'	126° 04'	-1 36	-1 32	(*0.60+1.1)		12.5	16.7	10.2	
1131	So-do, Ch'onsu-man .....	36° 24'	126° 26'	-1 10	-1 06	(*0.77+0.6)		15.9	20.8	12.3	
1133	Mohang-ni .....	36° 47'	126° 08'	-0 57	-0 52	(*0.74+0.7)		15.4	20.0	11.9	
1135	Umo-do .....	37° 02'	126° 27'	-0 27	-0 23	*0.91	*0.98	18.4	23.7	13.9	
1137	Asan .....	36° 58'	126° 47'	+0 02	+0 02	+0.3	+0.3	20.7	27.4	15.5	
1139	Soya-do, So-sudo .....	37° 14'	126° 10'	-0 15	-0 11	(*0.85+0.6)		17.6	22.9	13.5	
1141	Taemui-do, (Marie Fortunee Arch.) .....	37° 23'	126° 27'	-0 09	-0 04	-0.8	+0.3	19.6	25.6	14.9	
1143	INCH'ON, Yom-ha .....	37° 28'	126° 37'	Daily predictions				20.7	27.1	15.2	
1145	Yongjong-do, Yom-ha .....	37° 30'	126° 34'	+0 06	+0 06	+0.4	+0.4	20.7	27.2	15.6	
1147	Sinan-ni, Yom-ha .....	37° 40'	126° 32'	+0 55	---	+1.2	---	---	---	---	
1149	Chumun-do, Songmo-sudo .....	37° 39'	126° 15'	+0 15	+0 20	(*0.92+0.4)		19.0	24.8	14.4	
1151	Taeyonp'yong-do, Yonp'yong-yolto .....	37° 40'	125° 43'	+0 14	+0 18	(*0.76+0.5)		15.7	20.3	12.1	
1153	Mu-do, Haeju-man .....	37° 44'	125° 35'	+0 16	+0 20	(*0.72+0.9)		15.0	19.7	11.8	
1155	Haeju, Haeju-man .....	38° 00'	125° 42'	+0 44	+0 49	(*0.82+0.5)		16.9	22.0	13.0	
1157	Tungsan-got .....	37° 41'	125° 22'	+0 21	+0 25	(*0.62+1.1)		12.8	16.8	10.5	
1159	Sunwi-do, Sunwido-myoji .....	37° 45'	125° 20'	+0 31	+0 36	(*0.53+1.1)		10.9	14.3	9.2	
on Dalian, p.60											
1161	Kirin-do .....	37° 50'	125° 03'	-4 22	-4 26	*1.41	*1.55	9.4	12.4	8.1	
1163	Taech'ong-do, Taech'ong-kundo .....	37° 50'	124° 43'	-4 02	-4 05	+1.4	+0.8	7.5	9.7	6.8	
1165	Wollae-do .....	38° 03'	124° 49'	-3 59	-4 02	+1.3	+0.7	7.5	9.5	6.7	
1167	Ch'angam-dong .....	38° 07'	124° 43'	-3 24	-3 28	+1.6	+0.8	7.7	10.0	6.9	
1169	Monggum-do .....	38° 11'	124° 47'	-2 28	-2 31	+1.9	+0.8	8.0	10.1	7.0	
1171	Chin po Ki .....	38° 27'	124° 56'	-2 15	-2 19	*1.41	*1.45	9.6	12.3	8.0	
on Namp'o-Hang, p.56											
1173	Taedong-gang	38° 38'	125° 00'	-0 40	-0 44	-1.9	-0.2	11.0	14.0	8.9	
1175	Sok-to .....	38° 41'	125° 11'	-0 27	-0 24	+1.0	+0.1	13.6	16.8	10.5	
1177	P'i-do .....	38° 43'	125° 24'	Daily predictions				12.7	15.6	10.0	
1179	Ch'ol-do .....	38° 39'	125° 38'	+0 20	+0 24	+1.7	+0.2	14.2	17.9	10.9	
1181	Kyomip'o .....	38° 44'	125° 38'	+0 31	+0 30	(*1.21-0.3)		15.4	19.3	11.8	
1183	Sokhojung .....	38° 57'	125° 38'	+1 16	+2 05	+1.6	+0.4	13.9	16.9	11.0	
1185	P'yongyang .....	39° 01'	125° 45'	+3 01	+4 52	(*0.18+0.6)		2.3	3.0	2.4	
1187	Sokhae-dong .....	38° 31'	125° 40'	+0 06	+0 28	(*1.31-0.4)		16.6	20.5	12.7	
1189	Unmu-do .....	39° 25'	125° 07'	+0 08	+0 11	*1.23	*1.23	15.6	20.0	12.3	
1191	Nap-to .....	39° 16'	124° 43'	-0 07	-0 03	+1.2	+0.4	13.5	17.6	10.8	
1193	Taehwa-do .....	39° 27'	124° 37'	+0 06	+0 09	*1.10	*1.10	13.8	17.6	11.0	
1195	Ka-do .....	39° 31'	124° 40'	+0 10	+0 13	(*1.15-0.2)		14.6	18.5	11.3	
Yalu River and Approach											
1197	Suun-do .....	39° 42'	124° 25'	+0 11	+0 19	+2.0	+0.3	14.4	18.2	11.1	
1199	Tasa-do .....	39° 48'	124° 25'	+0 17	+0 39	(*1.19-0.3)		15.1	19.3	11.6	
1201	Shinto Islands .....	39° 48'	124° 16'	+0 28	+0 32	(*1.17-0.2)		14.9	19.2	11.5	
1203	Yongamp'o .....	39° 56'	124° 21'	+1 38	+1 41	-1.7	-0.2	11.2	14.0	9.0	
CHINA, Yellow Sea, North Shore Time meridian, 120° E											
1205	Yalu River and Approach-cont.	39° 53'	124° 12'	-0 52	+0 08	(*1.09+0.7)		13.5	17.4	11.5	
1207	Zhaoshigou [Chao-shin-kou] .....	40° 07'	124° 24'	+1 21	+3 20	(*0.59-0.3)		8.5	8.9	4.9	
1209	Dalu Dao [Talu Tao] .....	39° 45'	123° 45'	-0 47	-0 26	(*1.01+0.7)		12.5	15.7	10.8	
CHINA, Liaoning, South Coast											
1211	Dayang He .....	39° 58'	123° 40'	+0 06	+1 25	(*1.07+1.0)		8.2	8.9	6.6	
1213	Shishanzi .....	39° 46'	123° 33'	-0 59	-1 03	(*1.92-0.3)		13.1	15.4	9.8	
1215	Shicheng Liedao .....	39° 32'	123° 05'	-1 06	-1 09	(*1.62+0.7)		10.8	13.8	9.2	
1217	Xiaowangjia Dao .....	39° 27'	123° 04'	-1 16	-1 09	(*1.60+0.0)		10.8	13.8	8.5	
1219	Waichangshan Liedao .....	39° 03'	122° 45'	-0 52	-0 55	(*1.21+0.0)		8.2	10.2	6.6	
1221	Zhangzi Dao [Changtze Tao, Blonde Group] .....	39° 48'	122° 40'	-0 54	-0 54	(*1.29+0.7)		8.5	10.8	7.5	
1223	Lichangshan Liedao .....	39° 14'	122° 40'	-0 43	-0 46	(*1.35+0.3)		9.2	11.5	7.5	

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Latitude	Longitude	Time		Height		Mean	Spring		
				High Water	Low Water	High Water	Low Water				
	CHINA, Liaoning, South Coast—cont. Time meridian, 120° E	North	East	h m	h m	ft	ft	ft	ft	ft	
1225	Guanglu Dao [Hu-lu Tao, Lump Island] .....	39° 12'	122° 18'	-0 29	-0 32	(*1.34+0.3)		10.5	10.8	7.5	
1227	Changjiang Ao .....	39° 05'	122° 03'	-0 22	-0 26	(*1.18+0.0)		7.9	9.8	6.2	
1229	Dagukou [Ta-ku K'ou, Dairen Wan] .....	38° 58'	121° 50'	-0 06	-0 09	(*1.03+0.3)		6.9	8.5	5.9	
1231	Sanshan Dao .....	38° 53'	121° 49'	-0 32	-0 32	(*1.01-0.3)		6.9	8.5	6.3	
1233	DALIAN [Dairen Ko] .....	38° 55'	121° 40'			Daily predictions		6.6	8.5	6.3	
1235	Yuyan .....	38° 34'	121° 19'	+1 07	+1 03	(*0.92-0.3)		6.2	7.9	4.6	
	Gulfs of Liaodong and Bohai					on Dalian, p.60					
1237	Yangtouwa [Yang-tou Wan] .....	38° 47'	121° 08'	+1 15	+1 16	(*0.61+0.7)		5.3	5.6	3.9	
1239	Yingchengzi Wan [Eijoshi Wan, Yingchengtze] .....	38° 58'	121° 19'	+2 26	+2 02	(*0.59+0.7)		5.3	5.6	3.9	
1241	Hulutao [Hu-Li-Tao, Pulantien Chiang] .....	39° 16'	121° 36'	+3 11	+2 36	(*0.65+0.7)		5.9	6.2	4.3	
	Pulan										
1243	Changshan Dao .....	39° 19'	121° 40'	+3 40	+3 07	(*0.69+0.7)		5.9	6.6	4.3	
1245	Boqi Dao [Pochi Tao, Pulantien Chiang] .....	39° 23'	121° 45'	+3 59	+3 43	(*0.74+0.7)		6.2	6.9	4.6	
1247	Xizhong Dao .....	39° 23'	121° 14'	+3 51	+3 06	(*0.53+1.0)		4.9	5.9	3.9	
1249	Changxing Dao [Changhing Tao, Fuchou Bay] .....	39° 39'	121° 28'	+5 21	+5 00	(*0.58+1.3)		5.3	5.9	4.3	
1251	Bayuquan .....	40° 18'	122° 05'	+6 44	+6 56	(*1.22+0.0)		9.8	10.2	6.2	
	Liao He										
1253	Sidaogou [Bar Signal Station, Liao Ho] .....	40° 38'	122° 10'	+8 04	+8 46	(*1.22+0.3)		9.5	9.8	6.6	
1255	Yingkou Neigang .....	40° 40'	122° 13'	+7 43	+8 25	(*1.26+0.0)		9.8	10.2	6.9	
1257	Bar .....	40° 32'	122° 04'	+8 11	+8 06	(*1.13+0.7)		8.9	9.5	6.6	
1259	Changshansi [Chang-shan-ssu Chiao] .....	40° 23'	120° 35'	+8 06	+7 30	(*0.63+0.7)		5.3	5.6	3.9	
						on Qinhuangdao, p.64					
1261	Ninghai .....	39° 58'	119° 48'	-1 20	+1 20	(*0.99+0.0)		2.6	3.9	2.6	
1263	Qinhuangdao .....	39° 55'	119° 37'			Daily predictions		2.6	3.6	3.0	
1265	Dapu He (Bar) .....	39° 40'	119° 21'	+2 41	+1 00	(*1.39-1.3)		3.6	4.3	3.0	
						on Tanggu, p.68					
1267	Daqinghekuo .....	39° 10'	118° 52'	-1 22	-1 22	(*0.43+1.3)		4.6	5.3	4.6	
	Caojidian Tan										
1269	Off Choushui Gou .....	38° 58'	119° 26'	-2 06	-1 50	(*0.26+2.6)		2.6	2.6	4.6	
1271	Caojidian .....	38° 57'	118° 31'	-0 19	-0 40	(*0.63+1.0)		6.2	6.9	5.9	
1273	Nangoutuo .....	39° 00'	118° 34'	-0 41	-0 25	(*0.53+1.6)		4.9	5.3	5.9	
1275	Nanbao .....	39° 03'	118° 19'	+0 05	+0 30	(*0.52+1.0)		4.9	5.3	4.9	
1277	Jianhekou .....	39° 14'	118° 04'	-0 15	-0 12	(*1.04+0.0)		9.8	10.5	8.2	
	Hai He										
1279	Bar .....	38° 56'	117° 50'	+0 02	-0 01	(*0.90+1.0)		8.5	9.2	7.9	
1281	TANGGU (Xingang) .....	39° 00'	117° 43'			Daily predictions		9.5	10.2	7.9	
1283	Dagu .....	39° 00'	117° 43'	+0 07	+0 31	(*0.77+2.0)		7.2	7.2	7.9	
	Qi He										
1285	Bar .....	38° 34'	117° 35'	+1 01	+0 34	(*0.82+2.0)		7.9	8.2	8.2	
1287	Qikou .....	38° 36'	117° 43'	+0 03	+0 19	(*1.03+0.0)		9.8	10.5	8.2	
1289	Off Chengkou .....	38° 27'	118° 26'	+0 56	-0 11	(*0.56+2.3)		5.9	6.6	6.6	
1291	Dakou He (Bar) .....	38° 15'	117° 51'	+0 43	+0 37	(*0.95+0.3)		9.2	9.8	7.9	
1293	Dongfeng Gang .....	38° 15'	118° 10'	+2 17	+2 15	(*0.71+0.0)		6.9	7.2	5.6	
1295	Wanwangoukou .....	38° 11'	118° 27'	+1 24	+0 03	(*0.62-0.3)		6.6	7.2	4.3	
1297	Huanghekou (east) .....	38° 09'	118° 52'	+2 34	-0 31	(*0.20+1.6)		3.0	3.6	3.0	
	CHINA, Shandong, North Coast					on Dalian, p.60					
1299	Tianshigoukou .....	37° 43'	119° 05'	+13 11	+13 34	(*0.50-0.3)		4.3	4.6	2.3	
	Laizhou Wan										
1301	Xiaqinghekuo .....	37° 20'	119° 03'	+10 41	+10 25	(*0.47+0.3)		3.9	4.6	3.0	
1303	Weihekou .....	37° 11'	119° 31'	+13 15	+14 22	(*0.53+0.0)		4.6	4.9	3.0	
1305	Huhekuo .....	37° 19'	119° 48'	+12 04	+11 48	(*0.47+0.3)		3.9	4.6	3.0	
1307	Longkou .....	37° 39'	120° 19'	+13 45	+13 35	(*0.43+0.0)		3.6	3.9	2.3	
1309	Jimu Dao (Gaojiao) [Mu-chi-tao Chiao] .....	37° 41'	120° 13'	+12 23	+12 13	(*0.47+0.3)		3.9	4.3	3.0	
	Miaodao Liedao										
1311	Beihuangcheng Dao .....	38° 22'	120° 54'	+0 27	+0 28	(*0.60+0.0)		4.3	5.3	3.3	
						on Yantai, p.72					
1313	Tuoji Dao .....	38° 10'	120° 45'	+0 18	+0 19	(*0.70-0.7)		3.6	4.6	3.0	
1315	Tangluanzi [Tanglwan Anchorage, Miao-tao Group] .....	37° 59'	120° 41'	-0 12	-0 28	(*0.72-0.7)		3.6	4.6	3.0	
1317	Nanchangshan Dao .....	37° 55'	120° 43'	+0 11	-0 09	(*0.69-0.3)		3.6	4.6	3.0	
1319	Penglai .....	37° 50'	120° 44'	+0 18	+0 22	(*0.65+0.0)		3.3	4.3	3.3	
1321	Bajiao .....	37° 39'	121° 08'	+0 04	+0 00	(*0.98-0.3)		5.3	6.2	4.3	
1323	YANTAI [Chefoo Harbor] .....	37° 33'	121° 23'			Daily Predictions		5.3	6.6	4.9	
1325	Kongdong Dao .....	37° 33'	121° 30'	+0 10	+0 04	(*0.98-0.3)		5.3	6.2	4.6	
1327	Yangma Dao [White Rock Point] .....	37° 29'	121° 38'	+0 30	+0 32	(*0.81-0.3)		5.3	5.6	3.6	
1329	Chu Dao .....	37° 34'	122° 05'	+0 10	+0 07	(*0.90-0.3)		4.6	5.9	3.9	
1331	Jiming Dao (Wangjia Zhuang) .....	37° 25'	122° 28'	+0 34	+1 01	(*0.74+0.3)		4.9	5.3	3.9	
						on Tanggu, p.68					
1333	Hailu Dao .....	37° 27'	122° 40'	+8 11	+8 30	(*0.33+0.3)		3.6	4.3	3.0	
1335	Malan Wan [Malan Cove] .....	37° 25'	122° 39'	+8 33	+8 31	(*0.38+0.7)		4.3	4.9	3.6	

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Latitude	Longitude	Time		Height		Mean	Spring		
				High Water	Low Water	High Water	Low Water				
		North	East	h m	h m	ft	ft	ft	ft	ft	
CHINA, Shandong, Southeast Coast Time meridian, 120° E											
1337	Chengshan Jiao [Dove Cove, Jungcheng Bay] . . . . .	37° 23'	122° 40'	+8 56	+9 18	(*0.32+0.3)		3.6	4.3	3.0	
1339	Lido Wan [Litao Bay] . . . . .	37° 16'	122° 33'	+9 50	+9 40	(*0.46-0.7)		4.9	5.6	3.0	
on Tanggu, p.68											
1341	Jinghai Jiao [Chinghai Point] . . . . .	36° 51'	122° 11'	-1 52	-2 26	(*0.72+1.0)		7.5	7.9	6.6	
1343	Guiongzu [Niao-tsui Head] . . . . .	36° 45'	121° 38'	-1 41	-2 08	(*0.84+0.3)		7.5	9.5	6.9	
1345	Haiyang [Haiyanghsein] . . . . .	36° 41'	121° 14'	-1 08	-1 32	(*0.85+0.3)		8.5	9.2	6.9	
1347	Quinlyan [Jiaozhou Wan] . . . . .	36° 15'	121° 23'	-1 10	-1 25	(*0.72+0.3)		6.6	8.2	5.9	
1349	Nu Dao [Star Reef, Lao Shan Bay] . . . . .	36° 23'	120° 50'	-0 24	-0 57	(*0.90-0.3)		9.2	9.5	6.6	
1351	Dongjia Wan [Tung-chai Harbor] . . . . .	36° 06'	120° 32'	-0 05	-0 37	(*0.96-0.7)		9.8	10.2	6.9	
1353	Mai Dao . . . . .	36° 04'	120° 25'	-0 12	-0 15	(*0.90+0.0)		7.9	9.8	7.2	
1355	Qingdao (Qianhai) . . . . .	36° 03'	120° 19'	-0 05	-0 09	(*0.93+0.7)		8.2	10.5	7.9	
1357	Huang Dao . . . . .	36° 05'	120° 19'	-0 07	-0 03	(*0.98+0.0)		8.5	10.8	7.5	
1359	QINGDAO (DA GANG) [Chingtao, Kaochou Wan] . . . . .	36° 05'	120° 19'			Daily predictions		8.9	11.2	7.9	
1361	Tangdao Wan . . . . .	35° 55'	120° 09'	+0 13	+0 06	(*0.91+0.7)		7.9	10.5	7.9	
1363	Lingshan Dao . . . . .	35° 46'	120° 10'	+0 21	+0 08	(*0.86+0.7)		7.5	9.5	7.5	
1365	Huangjiatang Wan [Huangchiatang Wan] . . . . .	35° 32'	119° 45'	+0 39	+0 07	(*0.93-0.3)		8.2	10.5	6.9	
1367	Shiju Suo . . . . .	35° 25'	119° 35'	+1 07	+0 54	(*1.09+0.3)		9.5	12.1	8.9	
on Qingdao, p.76											
1369	Pingshan Dao . . . . .	35° 08'	119° 54'	-0 21	-0 41	(*0.75+0.0)		8.2	10.5	7.2	
CHINA, East Coast											
1371	Qinshan Dao . . . . .	34° 52'	119° 17'	-0 04	+0 03	(*1.02-0.7)		11.2	14.4	9.2	
1373	LIANYUN GANG . . . . .	34° 45'	119° 28'			Daily predictions		10.8	14.1	9.5	
1375	Kaishan Dao . . . . .	34° 32'	119° 52'	+0 20	+0 16	(*0.85+1.0)		10.8	11.5	8.9	
1377	Kuataokou . . . . .	34° 04'	120° 22'	+1 54	+2 41	(*0.57-0.3)		7.2	7.9	4.9	
1379	Xinyang Gang . . . . .	33° 37'	120° 28'	+5 41	+6 46	(*0.52+1.6)		5.9	7.2	6.6	
1381	Chenjiawu . . . . .	33° 06'	121° 13'	+5 34	+5 22	(*1.00+0.3)		11.2	14.4	9.8	
1383	Off Chuanshui Gang . . . . .	32° 58'	121° 07'	+6 26	+6 04	(*1.22+0.3)		13.1	17.1	11.8	
1385	Xiaoyangkou . . . . .	32° 33'	120° 59'	+4 27	+3 55	(*0.69+3.0)		7.5	9.8	9.5	
1387	Lusi . . . . .	32° 08'	121° 35'	+6 11	+5 41	(*1.06+0.0)		11.8	16.1	10.2	
on Liyun Gang, p.80											
1389	Changjiangkou										
1391	Tongsha Shazui . . . . .	31° 06'	122° 01'	-1 57	-2 21	(*1.21+0.7)		9.2	11.8	8.5	
1393	She Shan . . . . .	31° 25'	122° 14'	-1 38	-2 26	(*1.09+0.3)		8.2	11.2	7.5	
1395	ZHONGJUN, CHANGJIANG APPROACH . . . . .	31° 07'	121° 54'			Daily predictions, p.88		8.5	11.8	7.5	
1397	Jiuduan Beacon . . . . .	31° 16'	121° 43'	-0 50	-1 20	(*1.05+0.7)		7.9	10.5	7.5	
	Hengsha . . . . .	31° 17'	121° 51'	-0 49	-1 01	(*1.11-0.3)		8.2	11.2	6.9	
on Wusong, p.84											
1399	Chongming Dao										
1401	Laomihung . . . . .	31° 30'	121° 40'	-0 40	-0 49	(*1.15-0.7)		8.5	9.8	6.9	
1403	Qixiao Gang . . . . .	31° 28'	121° 44'	-0 38	-0 47	(*1.12-0.7)		8.2	11.2	6.9	
1405	Shixiao Gang . . . . .	31° 28'	121° 47'	-0 22	-0 30	(*1.12-0.7)		8.2	11.2	6.6	
	Bao Zhen . . . . .	31° 32'	121° 38'	+0 28	+0 23	(*0.95-0.7)		6.9	9.5	5.6	
Huangpu Jiang											
1407	Gaoqiao . . . . .	31° 22'	121° 35'	-0 06	-0 21	(*1.05-0.7)		7.9	10.5	6.6	
1409	WUSONG [Shanghai, Wusung Bar] . . . . .	31° 24'	121° 31'			Daily predictions		7.5	9.8	6.6	
1411	Shanghai Gang [Shanghai, Huangpu River] . . . . .	31° 15'	121° 29'	+0 41	+0 45	(*0.83+0.7)		6.2	8.2	5.9	
1413	Jianyuan Dock . . . . .	31° 12'	121° 30'	+0 55	+1 06	*0.80	--	--	--	--	
Chang Jiang											
1415	Xulujing . . . . .	31° 46'	120° 56'	+2 58	+3 02	(*0.82-0.7)		6.2	8.2	4.9	
1417	Jiangyin . . . . .	31° 57'	120° 18'	+5 14	+5 36	(*0.68-0.7)		4.9	6.9	3.9	
Hangzhou Wan											
1419	Jinshanlui . . . . .	30° 44'	121° 22'	-0 10	-0 38	(*1.61-1.0)		11.8	15.7	10.2	
1421	Zhapu . . . . .	30° 36'	121° 05'	+0 43	-0 04	(*1.97-2.0)		14.8	19.4	11.5	
1423	Haining . . . . .	30° 25'	120° 32'	+1 59	+4 46	(*1.69+0.0)		12.8	16.7	11.2	
1425	CH'ANG CHIANG APPROACH (Side Saddle) <41>	30° 49'	122° 38'			Daily predictions, p.92		8.6	11.7	9.6	
1427	KANMEN (Yuhuan Dao) . . . . .	28° 05'	121° 17'			Daily predictions, p.96		13.1	17.1	10.8	
on Naha, p.44											
1429	KEELUNG (CHI-LUNG CHIANG) <25> . . . . .	25° 09'	121° 45'			Daily predictions, p.112		1.5	2.4	1.9	
1431	Su-ao Kang . . . . .	24° 35'	121° 52'	-1 13	-1 13	(*0.78+0.2)		3.2	4.2	3.2	
1433	Hua-lien Kang . . . . .	23° 58'	121° 37'	-1 15	-1 15	*0.83 *0.83		3.4	4.5	3.2	
1435	Ch'eng-kuang-ao Po-ti . . . . .	23° 08'	121° 24'	-1 19	-1 20	*0.86 *0.83		3.6	4.8	3.3	
1437	Tu-lan Wan . . . . .	22° 50'	121° 11'	-1 17	-1 17	*0.76 *0.76		3.1	4.1	3.0	
1439	Nan-liao Wan, Lu Tao . . . . .	22° 40'	121° 28'	-1 22	-1 22	*0.73 *0.72		3.0	4.1	2.8	
1441	Pa-tai Wan, Lan Yu . . . . .	22° 02'	121° 34'	-1 03	-1 04	(*0.80-0.2)		3.3	4.4	2.9	
on Hong Kong, p.120											
1443	Ta-pan-lieh Mao-ti . . . . .	21° 58'	120° 45'	-2 55	-2 46	*0.59 *0.57		2.0	2.6	2.6	
1445	Ch'e-ch'eng Po-ti . . . . .	22° 04'	120° 42'	-2 31	-2 21	*0.51 *0.54		1.6	2.1	2.3	
1447	Tung-kang Po-ti . . . . .	22° 28'	120° 26'	-1 31	-1 22	*0.48 *0.46		1.6	1.9	2.1	
1449	Kao-hsiung <26> . . . . .	22° 37'	120° 16'	-1 16	-1 07	*0.38 *0.39		1.2	1.5	1.7	
1451	An-p'ing Kang . . . . .	23° 00'	120° 09'	-0 09	+0 00	*0.43 *0.39		1.5	1.9	1.9	
1453	Ting-t'ou-o-shan . . . . .	23° 06'	120° 04'	+0 45	+0 54	*0.54 *0.43		2.1	2.3	2.3	

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Latitude	Longitude	Time		Height		Mean	Spring		
				High Water	Low Water	High Water	Low Water				
	P'ENG-HU CH'UN-TAO Time meridian, 120° E (Pescadores Islands)			North	East	h m	h m	ft	ft		
1455	Ch'i-mei Yu .....	23° 13'	119° 25'	+0 07	+0 11	(*0.62+0.5)		3.8	4.5	3.7	
1457	Pa-chao Yu .....	23° 22'	119° 31'	-0 04	+0 00	*0.72	*0.72	4.2	4.9	3.7	
1459	Tung-p'an Hsu .....	23° 31'	119° 31'	+0 06	+0 10	+0.1	+0.1	6.1	7.1	5.2	
1461	PENGHU (MA-KUNG KANG) .....	23° 33'	119° 34'			Daily predictions		6.1	7.1	5.1	
1463	Pei-liao .....	23° 36'	119° 40'	-0 01	+0 03	+1.1	+0.1	7.1	8.9	5.7	
1465	Hsiao-men Hsu, Niu-kung Wan .....	23° 39'	119° 31'	+0 21	+0 24	*1.31	*1.20				
1467	Chi-pei Tao .....	23° 44'	119° 36'	+0 13	+0 16	*1.30	*1.10	8.3	10.1	6.4	
	TAIWAN, West Coast—cont.					on PengHu (Ma-Kung Kang), p.108					
1469	Pu-tai Po-ti .....	23° 23'	120° 09'	-0 29	-0 25	*0.72	*0.72	4.2	5.0	3.7	
1471	Hai-k'ou Po-ti .....	23° 42'	120° 10'	+0 12	+0 15	+1.5	-0.2	7.8	9.4	5.7	
1473	Fang-yuan Po-ti .....	23° 55'	120° 18'	+0 12	+0 15	(*1.61-1.1)		9.8	11.8	7.1	
1475	T'u-ko-k'u Kang .....	24° 11'	120° 29'	+0 02	+0 06	(*1.67-1.3)		10.2	12.4	7.2	
1477	Ta-an Kang .....	24° 23'	120° 34'	-0 06	-0 03	(*2.00-1.5)		12.0	15.0	8.7	
1479	Hou-lung Po-ti .....	24° 37'	120° 45'	-0 05	-0 01	(*1.85-1.2)		11.3	14.3	8.2	
1481	Tan-shui Kang .....	25° 11'	121° 26'	-0 14	-0 10	+0.9	0.0	7.0	8.8	5.5	
	CHINA, East Coast—cont.					on Xiamen, p.100					
1483	Shizhen (Zhongwai Yu) .....	24° 33'	118° 30'	-0 55	-0 42	(*0.99+0.0)		12.5	15.7	10.8	
1485	Wutongdao .....	24° 32'	118° 11'	-0 04	-0 03	(*1.03-0.3)		12.8	15.7	10.8	
1487	Dadan Dao [Amoy, outer harbor] .....	24° 23'	118° 10'	-0 04	+0 02	(*0.99-0.3)		12.5	15.1	10.8	
1489	XIAMEN [Amoy, inner harbor] .....	24° 27'	118° 04'			Daily predictions		12.5	15.7	10.8	
1491	Qianyan [Knob Rock] .....	23° 55'	117° 52'	+0 07	+0 12	(*0.80-1.0)		11.5	11.8	7.9	
						on Shantou, p.104					
1493	Nanao Dao (Yunao Wan) .....	23° 24'	117° 03'	-0 46	-0 34	(*1.17-0.3)		5.3	5.9	4.9	
1495	SHANTOU (MAYU) [Swatow, Double Island] .....	23° 20'	116° 45'			Daily predictions		4.3	4.9	4.6	
1497	Dahao .....	23° 15'	116° 55'	-0 11	+0 21	(*0.74-0.3)		3.3	4.3	3.0	
1499	Biaojiao .....	23° 15'	116° 45'	+0 09	-0 05	(*1.04+0.0)		4.6	5.6	4.6	
1501	Dahao Dock .....	23° 15'	116° 45'	+0 15	-0 19	(*0.87-0.3)		3.9	4.9	3.6	
1503	Haimen Wan .....	23° 11'	116° 37'	+0 26	-0 27	(*0.73+0.3)		3.3	4.3	3.6	
	CHINA, South Coast										
1505	Shibeshan Jiao .....	22° 56'	116° 29'	-0 09	-0 26	(*0.74-0.3)		3.3	3.9	3.0	
						on Hong Kong, p.120					
1507	Mirs Bay										
1509	Peng Chau .....	22° 33'	114° 26'	+0 03	-0 04	-0.6	-0.3	3.0	5.3	4.0	
1511	Jones Cove .....	22° 28'	114° 20'	-0 27	-0 16	-0.4	-0.1	3.0	4.9	4.2	
1513	Tide Cove .....	22° 24'	114° 12'	-0 12	-0 15	-0.2	+0.1	3.0	5.3	4.4	
	Port Shelter .....	22° 23'	114° 17'	-0 33	-0 27	-0.4	-0.1	3.0	5.3	4.2	
1515	Hong Kong Island										
1517	Taitam Bay .....	22° 14'	114° 14'	-0 07	-0 07	-0.6	-0.1	2.8	4.6	4.1	
1519	Aberdeen Harbor .....	22° 15'	114° 09'	-0 04	-0 01	-0.6	-0.1	2.8	4.6	4.1	
	HONG KONG .....	22° 18'	114° 12'			Daily predictions		3.3	5.1	4.5	
1521	Canton River approach										
1523	Wen Wei Rock .....	21° 49'	113° 56'	+0 08	+0 21	(*0.88-1.0)		2.2	4.5	3.0	
1525	Wai-ling-ting .....	22° 06'	114° 02'	+0 11	+0 01	-0.4	-0.3	3.2	5.0	4.1	
1527	Kapshui Mun .....	22° 21'	114° 03'	+0 16	+0 06	+0.5	+0.4	3.4	5.8	4.9	
1529	West Brother .....	22° 20'	113° 58'	+0 53	+0 52	+0.7	+0.3	3.7	5.9	5.0	
	Macao Harbor .....	22° 11'	113° 33'	+0 45	+0 49	+3.3	+3.0	3.6	5.5	7.6	
	Zhu Jiang					on Huangpu, p.116					
1531	Sishengwei .....	22° 55'	113° 36'	-0 59	-1 07	(*1.01+0.3)		7.2	8.2	5.6	
1533	Sanshakou .....	22° 53'	113° 31'	-0 49	-0 51	(*0.97+0.7)		6.9	7.9	5.6	
1535	Nizhouou .....	22° 54'	113° 34'	-0 35	-0 56	(*1.03+0.7)		7.2	8.2	6.2	
1537	Haixin .....	22° 58'	113° 32'	-0 46	-0 54	(*0.99+0.7)		7.2	8.2	5.9	
1539	Dasheng .....	23° 03'	113° 32'	-0 14	-0 20	(*0.96+0.3)		6.9	7.5	5.3	
1541	Chisha (Lighthouse) .....	23° 03'	113° 30'	+0 07	-0 27	(*1.00+0.0)		6.9	7.9	5.3	
1543	HUANGPU .....	23° 06'	113° 27'			Daily predictions		6.9	7.9	5.3	
1545	Bazhou .....	23° 07'	113° 22'	+0 43	+0 14	(*0.90+0.3)		6.2	7.2	4.9	
						on Haikou, p.124					
1547	Leizhou Bandao										
1549	Chikanzi (Hongkan Wan) .....	20° 19'	110° 24'	+1 13	+0 05	(*0.79+0.3)		3.6	4.3	4.6	
	Haian .....	20° 16'	110° 13'	+0 04	+0 04	(*0.87+1.0)		4.3	5.6	5.6	
	Hainan Island										
	Hainan Dao North Coast										
1551	Dengmai Wan .....	19° 57'	110° 07'	-1 15	-0 25	(*1.32+0.3)		6.2	9.2	6.6	
1553	HAIKOU (XIUYING) .....	20° 01'	110° 16'	+0 52	+0 30	(*0.65+1.3)		4.6	6.6	4.9	
1555	Haikoushi (Hai-k'ou, Hoihow) .....	20° 03'	110° 20'	+2 05	+1 05	(*0.73+0.3)		3.3	4.3	4.6	
1557	Puqian .....	20° 02'	110° 34'	+2 30	+1 13	(*0.79-0.3)		3.6	4.3	4.3	
1559	Dongxicun .....	20° 02'	110° 37'					3.9	4.3	3.9	

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Latitude	Longitude	Time		Height		Mean	Spring		
				High Water	Low Water	High Water	Low Water				
	CHINA Hainan Island—cont. Time meridian, 120° E	North	East	h m	h m	ft	ft	ft	ft	ft	
				on Beihai, p.128							
1561	Hainan Dao, West Coast Yinggehai .....	18° 30'	108° 43'	-5 30	-6 14	(*0.38-0.3)		3.6	4.9	2.3	
	CHINA, South Coast—cont.			on Haikou, p.124							
1563	Reizhou Bandao Kuwei Jiao .....	20° 13'	109° 56'	-1 51	-0 21	(*1.14+0.7)		5.6	7.9	6.2	
				on Beihai, p.128							
1565	Beibu Wan Weizhou Dao .....	21° 02'	109° 07'	-0 19	-0 07	(*0.91+0.3)		8.5	12.5	7.9	
1567	BEIHAII .....	21° 29'	109° 05'			Daily predictions		9.5	13.1	8.5	
1569	Off Beihai .....	21° 29'	108° 59'	-0 02	+0 04	(*1.11+0.3)		10.5	14.4	9.5	
1571	Dafeng Jiang .....	21° 38'	108° 52'	+0 15	+0 31	(*0.98-0.3)		9.2	13.1	7.9	
1573	Sanniang Wan .....	21° 38'	108° 47'	-0 10	-0 03	(*0.99+1.6)		9.2	13.1	10.2	
	VIETNAM Time meridian, 105° E			on Paramushir Island, p.8				Diurnal	Tropic		
1575	Lochuc San § .....	21° 15'	107° 57'	-1 48	-1 41	(*0.74+0.5)		7.8	10.8	7.8	
1577	Cu Xu, Kao Tao § .....	20° 59'	107° 45'	-1 55	-1 11	(*0.68-0.3)		7.2	10.2	6.4	
1579	Tsieng Mun § .....	21° 08'	107° 37'	-1 40	-0 59	*0.68 *0.68		7.2	10.2	6.8	
1581	Cai Bau, Cai Bau Island § .....	21° 07'	107° 30'	+0 18	-1 32	+1.2 +0.9		6.8	10.8	7.1	
1583	Campha Port § .....	21° 02'	107° 22'	+0 06	-1 44	+1.1 +0.9		6.7	9.6	7.1	
1585	Norway Islands § .....	20° 37'	107° 09'	+0 05	-0 29	+0.1 +0.1		6.5	9.7	6.2	
1587	Hon Gai, Halong Bay § .....	20° 57'	107° 04'	+0 21	-0 09	+2.9 +1.7		7.7	11.4	8.4	
1589	Cat Ba, Isle de la Cat Ba § .....	20° 43'	107° 03'	+0 05	-0 24	(*0.97+0.7)		6.3	9.3	6.6	
1591	DO SON (Hon Dau) § .....	20° 40'	106° 49'			Daily predictions, p.132		6.5	9.7	6.1	
1593	Cua Namtrieu § .....	20° 46'	106° 50'	+0 00	+0 44	-0.1 -0.1		6.5	9.7	6.0	
1595	Haiphong, Cua Cam § .....	20° 52'	106° 40'	+1 11	+1 04	*0.97 *0.97		6.1	9.0	6.0	
1597	Bach Long Vi Island § .....	20° 08'	107° 43'	-0 23	-2 11	(*0.95+0.6)		6.2	9.2	6.4	
1599	Balat River entrance § .....	20° 18'	106° 32'	-0 47	+0 12	(*0.95+0.5)		6.2	9.2	6.3	
1601	Hon Ne § .....	19° 55'	106° 00'	-1 00	+0 07	+0.2 +0.2		6.5	9.3	6.5	
1603	Hon Me § .....	19° 23'	105° 55'	-1 05	+0 46	-0.1 -0.3		6.7	8.6	6.2	
1605	Hon Nieu § .....	18° 48'	105° 46'	-1 27	+1 00	*0.93 *0.93		6.1	7.8	6.0	
1607	Hoi River entrance § .....	18° 46'	105° 45'	-0 14	+1 45	*0.72 *0.69		4.8	6.4	4.8	
1609	Sot River entrance § .....	18° 28'	105° 55'	-1 14	+1 39	(*0.54+0.7)		3.5	4.5	4.0	
1611	Vung Chua Bay § .....	17° 56'	106° 30'	-1 12	+1 21	*0.39 *0.34		2.7	3.4	2.5	
1613	Nhat Le River entrance § .....	17° 30'	106° 37'	-1 12	+1 21	*0.32 *0.28		2.2	2.8	2.0	
				on Manila, p.184							
1615	Paracel Islands <27> † .....	16° 33'	111° 37'	-1 20	-1 16	+2.1 +2.1		3.1	3.8	3.9	
1617	Chon May Bay <27> † .....	16° 20'	108° 01'	+0 29	-0 29	(*0.48+1.8)		1.6	2.0	2.5	
1619	Da Nang <27> † .....	16° 07'	108° 13'	-0 12	-0 57	(*0.70+1.9)		2.3	2.7	3.0	
1621	Culaos Cham <27> † .....	15° 57'	108° 30'	-0 27	-0 36	(*0.85+2.2)		2.8	3.5	3.6	
1623	Dung Quat Bay <27> † .....	15° 24'	108° 45'	-0 38	-0 30	+2.2 +2.1		3.4	4.4	3.9	
1625	Tam Quan <27> † .....	14° 35'	109° 04'	-0 51	-0 31	+2.2 +2.2		3.2	4.3	4.0	
1627	Qui Nhon <27> † .....	13° 45'	109° 13'	-0 53	-0 29	+2.8 +2.5		3.6	4.5	4.3	
1629	Vung Xuan Dai <27> † .....	13° 23'	109° 16'	-0 54	-0 39	+2.3 +2.3		3.2	4.3	4.1	
1631	Vung Ro <27> † .....	12° 52'	109° 25'	-1 01	-0 42	+2.6 +2.5		3.4	4.6	4.3	
1633	Port Van <27> † .....	12° 40'	109° 23'	-1 03	-0 45	+2.6 +2.5		3.4	4.6	4.3	
1635	Nha Trang, Baie de <27> † .....	12° 15'	109° 13'	-1 15	-0 46	+2.7 +2.4		3.6	4.6	4.3	
1637	Cam Ranh Bay <27> † .....	11° 53'	109° 12'	-1 18	-0 53	+2.4 +1.9		3.8	4.8	4.1	
1639	Mui Dinh <27> † .....	11° 22'	109° 01'	-0 39	-0 30	+1.7 +1.4		3.6	4.8	3.3	
1641	Pointe Lagan <27> † .....	11° 10'	108° 42'	-0 50	-0 23	+5.3 +4.5		4.1	5.2	6.8	
1643	Poulo Cecir de Mer <27> † .....	10° 32'	108° 56'	-0 36	-0 24	+3.5 +3.4		3.4	4.2	5.3	
1645	Phan Thiet <27> † .....	10° 55'	108° 06'	+0 13	+0 14	+5.7 +4.7		4.3	5.8	7.0	
				on Mui Vung Tau, p.136				Mean Diurnal			
1647	Mui Ke Ga .....	10° 42'	107° 59'	-1 28	-1 27	(*0.59+2.5)		3.0	5.1	7.2	
1649	Mui Ba Kiem .....	10° 30'	107° 30'	-0 31	-0 31	(*0.85+0.8)		5.0	7.3	7.5	
	Saigon River										
1651	MUI VUNG TAU .....	10° 20'	107° 05'			Daily predictions		5.9	8.6	7.9	
1653	Coral Bank .....	10° 37'	106° 51'	+0 51	+1 23	(*0.97+1.6)		5.6	8.3	9.3	
1655	Ho Chi Minh City .....	10° 46'	106° 42'	+2 10	+2 39	-0.4 <28>		6.9	8.6	7.5	
1657	Nha Be River entrance .....	10° 23'	106° 48'	+0 28	+1 25	0.0 0.0		5.9	8.6	7.9	
1659	Cua Tieu entrance .....	10° 15'	106° 47'	+0 43	+0 42	(*1.10-0.3)		6.6	9.5	8.4	
1661	My Tho, Cua Tieu .....	10° 21'	106° 21'	+1 30	+2 49	-1.3 --		--	--	--	
1663	Hau Giang River entrance .....	9° 24'	106° 27'	+0 40	+1 00	0.0 0.0		5.9	8.6	7.9	
1665	Mac Bat, Hau Giang River .....	9° 43'	106° 09'	+1 30	+2 29	+0.9 --		--	--	--	
1667	Con Son .....	8° 41'	106° 36'	+0 33	+0 33	-0.4 -0.4		5.9	8.7	7.5	
1669	Cau Lon River entrance .....	8° 39'	104° 45'	--	--	-- --		--	--	2.9	
1671	Pulau Panjang, Gulf of Siam .....	9° 18'	103° 28'	--	--	-- --		--	--	2.5	
1673	Rai Island, Gulf of Siam .....	9° 50'	104° 40'	--	--	-- --		--	--	2.1	
				on Musi River, p.152				Diurnal	Tropic		
1675	Ha Tien † .....	10° 22'	104° 28'	-4 09	-4 16	*0.36 <29>		2.2	2.7	2.5	

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Latitude	Longitude	Time		Height		Diurnal	Tropic		
				High Water	Low Water	High Water	Low Water				
		North	East	h m	h m	ft	ft	ft	ft	ft	
	CAMBODIA Time meridian, 105° E			on Do Son, p.132							
1677	Phumi Phsar Ream Bay § .....	10° 30'	103° 36'	+0 48	+1 03	(*0.26+0.9)		1.7	2.2	2.5	
	on Manila, p.184										
1679	Cone Island <27> † .....	11° 26'	103° 00'	-11 17	-9 54	+1.2	+1.2	3.2	4.5	3.0	
	on Bangkok Bar, p.140										
1681	Chong Samet † .....	12° 35'	101° 26'	+0 43	-0 52	-2.8	-0.7	5.7	6.7	5.4	
1683	Sattahip † .....	12° 39'	100° 55'	-0 10	-0 48	-1.5	+1.0	5.3	6.2	6.8	
1685	<i>Chao Phraya River</i>										
1687	BANGOK BAR † .....	13° 30.0'	100° 59.3'	+0 04	<i>Daily predictions</i> (0.90+0.8)			7.8	9.1	7.7	
1689	Entrance † .....	13° 32'	100° 35'	+2 00	+2 00	*0.93	*0.88	7.0	8.2	7.7	
	Bangkok † .....	13° 44'	100° 30'					7.4	8.6	7.0	
	on Chuuk, p.204										
1691	Ko Lak § .....	11° 48'	99° 49'	-5 23	-1 14	*2.0	*2.0	3.8	4.9	6.2	
1693	Chumphon § .....	10° 27'	99° 15'	---	-1 42	*1.7	*1.7	3.2	3.9	3.5	
1695	Ko Prap § .....	9° 16'	99° 26'	-3 59	-3 34	*2.3	*2.3	4.4	5.5	5.7	
	on Singapore, p.144										
1697	Lakon Roads .....	8° 33'	100° 03'	-0 59	-0 59	(*0.28+1.0)		1.6	1.9	2.5	
1699	Songkhla .....	7° 13'	100° 36'	-1 11	-1 13	(*0.26+1.8)		1.5	1.7	3.2	
	on Barito River, p.168										
	on Barito River, p.168										
1701	Trengganu † .....	5° 21'	103° 08'	+2 41	+2 32	*0.84	*0.84	4.9	6.0	3.4	
	on Singapore, p.144										
1703	<i>SINGAPORE (Tanjong Pagar)</i>										
1705	Pulau Bukum .....	1° 15.7'	103° 51.1'	+0 01	+0 13	*0.5	+0.1	6.1	8.1	5.6	
1707	Malacca .....	1° 14'	103° 46'	-3 10	-2 52	*0.74	*0.67	4.4	5.9	3.8	
1709	Port Kelang .....	2° 11'	102° 15'	-5 38	-5 23	(*1.68-1.2)		9.6	13.6	7.6	
1711	Bagan Datoh .....	3° 00'	101° 23'	-7 07	-6 44	+0.7	+0.6	5.8	7.8	5.9	
1713	Lumut, Dinding River .....	4° 00'	100° 45'	-7 21	-7 17	-0.5	+0.4	4.8	7.7	5.2	
	on Belawan Channel, p.148										
1715	Pinang (Georgetown) .....	5° 25'	100° 21'	-1 22	-1 07	+0.1	+0.3	4.3	6.2	5.1	
	THAILAND, West Coast										
	Time meridian, 105° E										
1717	Pulau Lela .....	6° 44'	99° 42'	-2 34	-2 43	+2.2	+0.4	6.3	9.0	6.2	
1719	Puket Harbor .....	7° 51'	98° 24'	-3 14	-2 57	+0.5	-0.8	5.8	8.5	4.7	
1721	Ao Kaulak .....	8° 36'	98° 15'	-3 28	-3 24	+0.1	-0.6	5.2	7.2	4.6	
	on Davao, p.176										
	on Davao, p.176										
1723	<i>Sumatra Island, Malacca Strait</i>										
1725	Sabang Bay, Poelau We .....	5° 53'	95° 19'	+4 00	+4 03	(*0.77+0.7)		3.3	4.7	2.6	
1727	Uleelheue .....	5° 34'	95° 17'	+4 48	+4 50	(*0.70+1.5)		3.0	4.0	3.3	
1729	Sigli .....	5° 23'	95° 58'	+4 23	+4 25	(*0.60+1.8)		2.6	3.9	3.3	
1731	Lhokseumawe .....	5° 11'	97° 09'	+4 27	+4 29	(*0.79+1.3)		3.4	4.9	3.3	
1733	Idi .....	4° 58'	97° 47'	+5 27	+5 29	(*0.79+1.3)		3.4	4.8	3.3	
	on Belawan Channel, p.148										
1735	Sembilan Channel, Aroe Bay .....	4° 08'	98° 15'	-0 37	-0 37	+0.1	-0.1	4.7	6.6	4.9	
1737	BELAWAN CHANNEL .....	3° 50'	98° 43'	+1 56	+1 56	Daily predictions		4.5	6.2	4.9	
1739	Tanjong Tiram .....	3° 14'	99° 35'			-0.3	-0.9	5.1	7.0	4.3	
	on Mergui, p.308										
1741	Asahan River entrance .....	3° 01'	99° 52'	+5 40	+5 33	(*0.59+1.5)		7.3	10.2	6.9	
1743	Berembang, Sungi Panai .....	2° 37'	100° 07'	+6 22	+6 14	(*0.69+0.9)		8.5	11.4	7.2	
1745	Labuhanbilik, Sungai Panai .....	2° 31'	100° 10'	+6 45	+6 37	(*0.73+0.6)		9.0	12.4	7.2	
1747	Bagan-siapipi, Sungi Rokan .....	2° 09'	100° 48'	+7 09	+7 02	-0.3	-0.2	12.3	17.3	8.9	
	on Ch'ang Chiang Approach, p.92										
1749	Bengkalis .....	1° 28'	102° 06'	-2 22	-2 35	*0.60	*0.53	5.6	7.8	5.6	
1751	Siak River entrance .....	1° 15'	105° 10'	-1 31	-1 44	*0.58	*0.57	5.1	7.2	5.6	
1753	Selat-pandjang .....	1° 01'	102° 42'	+0 11	-0 02	(*0.86-2.1)		7.4	10.2	6.2	

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Latitude	Longitude	Time		Height		Mean	Spring		
				High Water	Low Water	High Water	Low Water				
		North	East	h m	h m	ft	ft	ft	ft	ft	
INDONESIA—cont. Time meridian, 105° E											
1755	<i>Sumatra Island, Malacca Strait—cont.</i>										
1757	Balai Point, Gelam Strait .....	0° 59'	103° 26'	-7 33	-7 30	(*1.32+2.2)		5.8	8.1	5.6	
1759	Pulo Kenipaan, Gelam Strait .....	0° 55'	103° 20'	-7 17	-7 14	+3.9	+1.5	6.7	8.7	5.2	
1761	Bandung, Pulo Mendol .....	0° 32'	103° 18'	-6 50	-6 47	(*1.74+2.5)		7.5	10.5	6.9	
	Pulo Muda, Kampar River .....	0° 22'	102° 53'	-5 04	-5 02	(*2.14+1.5)		9.2	12.3	6.9	
<b>on Davao, p.176</b>											
1763	<i>Bojan, Bulan Strait .....</i>										
1765	Bojan, Bulan Strait .....	1° 01'	103° 55'	-4 45	-4 48	*1.32	*1.32	4.4	5.4	3.6	
1767	Oeban Point, Bintan Island .....	1° 04'	104° 13'	-5 31	-5 33	*1.77	*1.44	6.3	6.9	4.9	
1769	Tandjungpinang, Bintan Island .....	0° 55'	104° 26'	-4 35	-4 37	*1.42	*1.67	4.6	5.5	3.9	
	Dendang, Kidjang Strait .....	0° 51'	104° 37'	-5 06	-5 09	*1.40	*1.67	4.5	5.5	4.1	
<b>on Kamaisi, p.16</b>											
1771	<i>Sungaitung .....</i>										
	0° 18'	103° 36'	-9 00	-8.51	+1.6	-0.4		7.1	8.0	5.3	
<b>on Hong Kong, p.120</b>											
1773	<i>Sumatra, East Coast</i>										
1775	Pulo Berelas, Berhalas Strait .....	0° 30'	104° 02'	-11 42	-11 42	(*0.93-0.7)		8.0	9.7	6.6	
1777	Kwala Ladjau, Indragiri River .....	0° 24'	103° 34'	-10 25	-10 25	+0.7	+0.1	9.2	10.4	8.2	
1779	Tembilahan, Indragiri River .....	0° 19'	103° 14'	-8 42	-8 42	+3.3	+0.4	11.5	12.6	9.8	
	Kwala Niur .....	1° 00'	103° 49'	-10 50	-10 50	+0.4	+0.3	8.7	10.1	8.2	
<b>on Musi River, p.152</b>											
1781	<i>Tandjung Butun, Linga Island † .....</i>										
1783	Kotadabok, Singkep Island, † .....	0° 30'	104° 34'	+0 38	-2 09	*0.69	*0.59	5.3	7.2	4.6	
1785	Pulo Berhalas, Berhalas Strait † .....	0° 52'	104° 24'	-0 06	-1 42	(*0.73+0.2)		5.3	7.2	5.3	
1787	Chebia, Tudjuh Islands † .....	1° 13'	105° 16'	-2 49	-1 29	-1.0	-1.1	7.4	9.4	6.2	
1789	Sungai Merawang ent., Bangka Island † .....	2° 05'	106° 10'	-0 22	-1 14	*0.75	*0.72	5.6	8.0	4.9	
1791	Klabat Bay, Bangka Island † .....	1° 42'	105° 42'	-0 07	-1 50	*0.59	*0.59	4.2	6.3	3.9	
1793	Sungai Kampa, Bangka Island † .....	1° 45'	105° 24'	+1 02	+0 03	*0.77	*0.69	5.9	8.4	4.9	
1795	Tandjung Butun, Linga Island † .....	0° 15'	104° 36'	-0 04	-0 22	*0.90	*0.79	6.9	9.7	5.6	
1797	MUSI RIVER (outer bar) † .....	2° 14'	104° 56'	+0 42	+1 09	0.0	-0.2	7.5	10.0	6.2	
1799	Soengsang, Palembang River † .....	2° 22'	104° 54'	+2 44	+4 17	*0.83	*0.83	6.1	8.3	5.3	
1801	Perajin, Palembang River † .....	2° 56'	104° 53'	+4 12	+4 56	*0.75	*0.66	5.7	7.8	4.6	
1803	Tandjung Kelian, Bangka Strait † .....	2° 05'	105° 07'	+0 03	+0 12	-0.2	-0.3	7.4	10.3	6.2	
1805	Muritok, Bangka Island † .....	2° 05'	105° 10'	-0 13	+0 09	0.0	-0.3	7.6	10.5	6.2	
1807	Nangka Island, Bangka Strait † .....	2° 23'	105° 46'	-0 12	+0 48	*1.12	*0.97	8.6	10.7	6.9	
1809	Besar Island, Bangka Strait † .....	2° 53'	106° 08'	+0 19	+0 86	*0.86	*0.86	5.8	8.1	5.9	
<b>on Surabaya Strait, p.160</b>											
1811	<i>Dapur Island, Banka Island § .....</i>										
1813	3° 08'	106° 31'	+11 43	+14 02	+0.8	-0.1	4.6	6.3	3.9		
1815	Tjelaka, Liat Island § .....	2° 52'	107° 01'	+11 59	+13 00	+0.7	-0.4	4.8	6.9	3.6	
	Tulangbawang River entrance § .....	4° 25'	105° 51'	+11 39	+13 42	*0.85	*0.62	3.5	4.0	3.0	
Time meridian, 120° E											
1817	<i>Gaspar Strait</i>										
1819	Simedang Island § .....	3° 19'	107° 13'	+13 52	+14 09	+0.3	+0.3	3.7	5.3	3.9	
1821	Tandjungpandan, Belitung Island § .....	2° 45'	107° 38'	+13 01	+13 51	+2.1	+0.6	5.2	7.5	4.9	
	Langkuas Island § .....	2° 32'	107° 37'	+13 13	+13 26	+1.2	+0.4	4.5	6.7	4.3	
Time meridian, 105° E											
1823	<i>Sumatra, Sunda Strait</i>										
1825	Bangkai Anchorage, Sebuku Island .....	5° 52'	105° 31'	+1 45	+1 48	(*0.51+1.0)		2.2	3.0	2.3	
	Tulukbetung, Lampung Bay .....	5° 27'	105° 16'	+1 56	+1 58	(*0.53+1.3)		2.3	3.1	2.6	
<b>on Kutei River Ent., p.164</b>											
1827	<i>Kotaagung, Semangka Bay .....</i>										
	5° 30'	104° 37'	+1 20	+1 21	*0.54	*0.54	2.3	3.2	2.6		
Sumatra, West Coast											
1829	Enggano Bay, Enggano Island .....	5° 28'	102° 22'	+0 23	+0 23	*0.49	*0.49	2.2	2.8	2.3	
1831	Benkuh .....	3° 47'	102° 15'	+1 02	+1 02	*0.49	*0.49	2.3	3.1	2.3	
1833	Sawangtungku, North Pagai Island .....	2° 47'	100° 13'	+0 20	+0 21	*0.49	*0.49	2.3	3.0	2.3	
1835	Siberut Bay, Siberut Island .....	1° 35'	99° 13'	+0 19	+0 19	*0.49	*0.49	2.2	2.8	2.3	
1837	Padang .....	0° 58'	100° 21'	+0 23	+0 23	*0.52	*0.45	2.6	3.4	2.3	
1839	Telo Island, Batoe Islands .....	0° 04'	98° 17'	+0 02	+0 02	(*0.38+0.6)		1.8	2.6	2.3	
<b>on Davao, p.176</b>											
	North	East									
1841	Ajerbangis .....	0° 12'	99° 22'	-0 08	-0 08	*0.48	*0.48	2.0	2.8	2.3	
1843	Natal .....	0° 33'	99° 06'	+0 20	+0 21	*0.48	*0.48	2.0	2.8	2.3	
1845	Telukdalem, Nias Island .....	0° 34'	97° 49'	-0 02	-0 02	(*0.34+0.7)		1.6	2.1	2.3	
1847	Simanari Bay, Nias Island .....	1° 24'	97° 11'	+0 06	+0 06	(*0.32+0.8)		1.5	2.2	2.3	
1849	Sibolga, Sibolga Bay .....	1° 45'	98° 46'	+0 06	+0 06	(*0.26+1.1)		1.2	1.7	2.3	
1851	Barus .....	2° 01'	98° 23'	+0 08	+0 09	(*0.40+0.5)		1.9	2.7	2.3	
1853	Singkil .....	2° 17'	97° 47'	+0 39	+0 39	(*0.34+0.7)		1.6	2.3	2.3	
1855	Sinabang Bay, Pulo Simalur .....	2° 30'	96° 23'	+0 08	+0 09	*0.26	*0.26	1.0	1.4	1.3	
1857	Tapaktuan .....	3° 15'	97° 11'	+0 52	+0 52	*0.23	*0.14	1.3	1.8	1.0	

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Latitude	Longitude	Time		Height		Mean	Spring		
				High Water	Low Water	High Water	Low Water				
	INDONESIA—cont. Time meridian, 105° E			North	East	h m	h m	ft	ft	ft	
on Kutei River Ent., p.164											
1859	Sumatra, West Coast—cont. Meulaboh .....	4° 08'	96° 08'	+1 12	+1 12	*0.20	*0.20	0.8	1.2	1.0	
1861	Tjolang Bay .....	4° 37'	95° 35'	+1 53	+1 54	*0.22	*0.18	1.1	1.6	1.0	
1863	Pulau Raja .....	4° 52'	95° 23'	—	—	—	—	0.4	0.6	0.7	
1865	Pulau Rusa .....	5° 17'	95° 12'	+2 50	+2 50	*0.26	*0.18	1.4	1.9	1.1	
on Jakarta, p.156											
1867	Java DJAKARTA (Tandjungpriok) § .....	6° 06'	106° 53'	Daily predictions				2.0	2.6	2.0	
1869	Tjirebon .....	6° 43'	108° 34'	—	—	—	—	1.9	2.0	2.0	
1871	Semarang § .....	6° 58'	110° 25'	+10 44	+9 15	(*0.85+0.3)	—	1.7	2.2	2.0	
on Surabaja Strait, p.160											
1873	Rembang § .....	6° 42'	111° 20'	+0 31	-0 10	*0.66	*0.62	2.5	3.7	2.3	
1875	Udjung Pangah § .....	6° 54'	112° 34'	-0 14	+0 38	(*0.92+0.3)	3.4	4.9	3.5		
1877	SURABAJA STRAIT (Djamuang Reef) § .....	6° 56'	112° 44'	Daily predictions				3.7	5.3	3.6	
1879	Sembilangan, Surabaja Strait § .....	7° 03'	112° 41'	+1 39	-0 58	+0.5	+0.3	3.9	5.1	3.9	
on Hong Kong, p.120											
1881	Surabaja, Surabaja Strait .....	7° 13'	112° 44'	+1 55	+2 04	+0.6	+0.3	5.8	6.7	4.9	
1883	Surabaja Strait, east entrance .....	7° 20'	112° 52'	+1 34	+1 43	+1.0	-0.2	6.6	7.4	4.9	
1885	Pasuruan, Madura Strait .....	7° 38'	112° 55'	+1 31	+1 40	+1.5	+0.2	6.7	7.4	5.3	
1887	Gading, Madura Island .....	7° 12'	112° 55'	+1 39	+1 49	+1.0	-0.2	6.7	7.3	4.9	
1889	Kaliangket, Madura Island .....	7° 03'	113° 56'	+0 25	+0 34	0.0	+0.2	5.1	5.9	4.6	
on Manila, p.184											
1891	Sapudi Island, Sapudi Strait † .....	7° 05'	114° 16'	-0 01	-0 23	+2.1	+1.5	3.9	4.8	3.6	
1893	Pulau Karangmas, Madura Strait † .....	7° 41'	114° 26'	-0 22	-0 43	+1.8	+1.3	3.8	4.7	3.3	
1895	Tabuan Island, Bali Strait † .....	8° 02'	114° 28'	-0 45	-1 00	(*0.88+2.9)	—	2.9	3.6	4.3	
on Belawan Channel, p.148											
Mean Spring											
1897	Banjuwangi, Bali Strait .....	8° 13'	114° 23'	-4 19	-4 19	(*0.80+1.3)	—	3.6	4.9	5.2	
1899	Tjilatjap .....	7° 44'	109° 00'	-5 25	-5 25	*0.76	*0.65	3.7	5.0	3.6	
1901	Genteng Bay .....	7° 24'	106° 24'	-5 53	-5 54	(*0.60+0.4)	—	2.7	3.7	3.3	
1903	Labuhan, Sunda Strait .....	6° 22'	105° 49'	-6 22	-6 22	*0.49	*0.38	2.5	3.2	2.3	
1905	Tandjung Tjikoneng, Sunda Strait .....	6° 04'	105° 53'	-6 33	-6 33	(*0.40-0.7)	—	1.8	2.4	1.3	
Time meridian, 120° E											
1907	Bali Benoa .....	8° 45'	115° 13'	-3 36	-3 37	-0.2	-0.9	5.2	7.0	4.3	
on Hong Kong, p.120											
1909	Buleleng .....	8° 06'	115° 05'	+2 10	+2 20	-1.7	-0.7	2.3	3.0	3.3	
on Manila, p.184											
Diurnal Tropic											
1911	Lombok Ampenan † .....	8° 34'	116° 04'	-0 55	-0 51	(*0.85+2.2)	—	2.8	3.6	3.6	
1913	Labuan, Tring Bay † .....	8° 43'	116° 03'	-0 35	-1 06	+2.0	+1.2	3.8	4.7	3.6	
Time meridian, 120° E											
1915	Sumbawa Bima Bay .....	8° 27'	118° 43'	+2 05	+1 52	(*0.41+0.7)	—	2.5	3.1	3.0	
1917	Sape Bay .....	8° 34'	119° 02'	+1 32	+1 19	(*0.57+0.7)	—	3.5	4.5	3.9	
on Shatt Al Arab, p.336											
Mean Spring											
1919	Sumba Sendikari Bay .....	9° 46'	119° 37'	-3 52	-3 52	+1.4	-0.8	6.7	9.4	5.2	
1921	Nangamesi Bay .....	9° 38'	120° 15'	-3 12	-3 12	+1.1	-0.4	6.0	8.3	5.2	
Flores Island											
1923	Tuluk Perapat .....	8° 47'	119° 50'	-3 05	-3 06	+2.3	+0.4	6.4	8.4	6.2	
1925	Ende Bay .....	8° 47'	121° 24'	-3 17	-3 17	+1.9	+0.2	6.2	8.6	5.9	
Alor Island											
1927	Kalabahi .....	8° 14'	124° 31'	-1 40	-1 40	-0.3	-0.9	5.1	6.7	4.3	
Timor											
1929	Kupang Bay .....	10° 10'	123° 34'	-3 05	-3 05	*0.75	*0.73	3.4	4.8	3.6	
1931	Atapupu .....	9° 00'	124° 52'	-2 31	-2 31	*0.90	*0.85	4.2	5.8	4.3	
Time meridian, 135° E											
1933	Tanimbar Islands Ritabel Bay, Larat Island .....	7° 09'	131° 43'	+0 49	+0 49	*0.90	*0.85	4.2	5.2	4.3	

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Latitude	Longitude	Time		Height		Mean	Spring		
				High Water	Low Water	High Water	Low Water				
	INDONESIA—cont. Time meridian, 135° E	South	East	h m	h m	ft	ft	ft	ft		
on Belawan Channel, p.148											
1935	Moluccas Islands Dobo, Wamar Island, Aru Islands .....	5° 45'	134° 13'	+0 23	+0 23	*0.90	*0.81	4.3	5.4	4.3	
1937	Naira, Banda Islands .....	4° 32'	129° 53'	+3 13	+3 03	(*0.67+0.5)		4.1	5.3	4.3	
1939	Ambon Bay, Ambon Island .....	3° 41'	128° 11'	+3 20	+3 08	(*0.56+0.4)		3.4	4.4	3.6	
1941	Namlea, Kajeli Bay, Buru Island .....	3° 16'	127° 06'	+2 58	+2 46	(*0.39+1.4)		2.4	3.1	3.6	
on Shantou, p.104											
1943	Taniwel, Seram Island .....	2° 51'	128° 28'	+0 44	+1 17	*0.64	*0.61	2.2	3.0	3.6	
1945	Sanana, Sula Sanana, Sula Islands .....	2° 03'	125° 59'	+1 11	+1 43	*0.64	*0.61	2.2	2.8	3.6	
on Belawan Channel, p.148											
1947	Galela Bay, Halmahera Island .....	1° 49'	127° 51'	-7 04	-7 04	(*0.67+0.3)		3.0	4.3	3.6	
on Kutei River Ent., p.164											
1949	Ternate, Halmahera Island .....	0° 47'	127° 23'	+0 13	+0 13	(*0.47+0.8)		2.2	3.3	3.0	
1951	Taruna Bay, Sangi Island .....	3° 37'	125° 29'	+0 16	+0 16	*0.84	*0.84	3.9	5.7	3.9	
on Surabaja Strait, p.160											
1953	Celebes (Sulawesi) Makasar § .....	South	East	on Shatt Al Arab, p.336				Diurnal	Tropic		
		5° 09'	119° 24'	-1 37	+0 24	(*0.59+0.5)				2.6	
		on Shatt Al Arab, p.336				Mean Spring					
1955	Kolaka, Gulf of Boni .....	4° 04'	121° 36'	+2 09	+1 57	*0.67	*0.70	4.0	4.9	3.9	
1957	Tampunawu, Muna Island .....	5° 13'	122° 18'	+2 14	+2 02	(*0.67+0.8)		4.1	5.0	4.6	
1959	Baubau, Buton Island .....	5° 28'	122° 37'	+2 10	+1 58	*0.66	*0.66	3.8	4.7	3.9	
1961	Lasolo Bay .....	3° 43'	122° 19'	+2 52	+2 40	(*0.57+0.6)		3.5	4.5	3.9	
on Shantou, p.104											
1963	Lingkobu .....	2° 04'	121° 32'	-1 18	-0 45	-2.1	-2.2	3.4	4.3	3.6	
1965	Teluk Lamala, Peling Strait .....	0° 54'	123° 09'	-0 08	+0 24	*0.58	*0.56	2.0	2.7	3.3	
on Kutei River Ent., p.164											
1967	Poso .....	1° 22'	120° 45'	-1 56	-1 55	(*0.45+0.5)		2.1	3.0	2.6	
on Jolo, p.172											
1969	Gorontalo River entrance † .....	0° 30'	123° 03'	---	---	---	---	2.9	--	2.6	
on Kutei River Ent., p.164											
1971	Lembeh Strait .....	1° 27'	125° 12'	-0 48	-0 48	*0.58	*0.50	2.9	4.2	2.6	
1973	Manado .....	1° 30'	124° 50'	-0 23	-0 22	*0.87	*0.82	4.2	6.1	3.9	
1975	Tolitoli Bay .....	1° 02'	120° 49'	-0 37	-0 36	(*0.72+0.6)		3.4	5.2	3.9	
on Kutei River Ent., p.164											
1977	Donggala .....	0° 40'	119° 44'	-0 37	-0 36	*0.84	*0.84	3.9	5.8	3.9	
on Kutei River Ent., p.164											
Borneo, East Coast											
1979	Bakapit, Darvel Bay .....	4° 57'	118° 35'	-0 21	-0 21	*0.75	*0.64	3.8	5.4	3.3	
1981	Lahad Datu, Darvel Bay .....	5° 02'	118° 20'	-0 27	-0 37	*0.74	*0.59	3.8	5.0	3.2	
1983	Semporna, Darvel Bay .....	4° 29'	118° 37'	-0 28	-0 19	*0.74	*0.59	3.8	5.2	3.2	
1985	Tawau .....	4° 15'	117° 53'	+0 02	-0 26	+0.9	-0.1	5.7	8.0	5.0	
1987	Lingkas, Tarakan Island .....	3° 17'	117° 35'	-0 49	-0 48	+1.9	+0.1	6.5	9.3	5.6	
1989	Biwan Mouth, Kajan River .....	2° 55'	117° 42'	+0 01	+0 02	*1.29	*1.29	6.0	8.7	5.9	
1991	Tandjungselor, Kahan River .....	2° 49'	117° 22'	+2 11	+2 11	*0.46	*0.36	2.4	3.4	2.0	
1993	Kasseimouth, Berau River .....	2° 10'	117° 52'	-0 06	-0 05	*1.30	*1.23	6.3	9.1	5.9	
1995	Haji Bank, Beraoe River .....	2° 11'	117° 32'	+1 30	+2 14	0.0	-0.6	5.3	7.4	4.3	
1997	Miang Besar, Sangkulirang Bay .....	0° 45'	118° 00'	-0 39	-0 39	*0.86	*0.86	4.0	5.8	3.9	
1999	Sangkulirang, Sangkulirang River .....	0° 59'	117° 59'	-0 17	-0 16	-0.2	-1.1	5.6	8.4	3.9	
on Kutei River Ent., p.164											
2001	KUTEI RIVER ENTRANCE .....	0° 42'	117° 30'	Daily predictions				4.7	6.8	4.6	
2003	Samarinda, Kutei River .....	0° 30'	117° 08'	+1 18	+1 18	(*0.68+1.2)		3.2	4.6	4.3	
2005	Balik Papan .....	1° 16'	116° 48'	-0 43	-0 43	+0.3	-0.2	5.2	7.9	4.6	
2007	Tanahgrogot, Pasir River .....	1° 55'	116° 12'	+0 55	+0 55	+0.4	-0.3	5.4	7.8	4.6	
2009	Aru Bank .....	2° 15'	116° 40'	-0 49	-0 48	(*0.32+0.5)		1.5	2.3	2.0	
2011	Pamukan Bay .....	2° 36'	116° 30'	-0 38	-0 37	+0.1	-0.1	4.9	7.1	4.6	
2013	Klumpeng Bay .....	3° 01'	116° 13'	-1 10	-1 09	*0.99	*0.99	4.4	6.7	4.6	
2015	Kampung Baru, Laut Strait .....	3° 25'	116° 01'	-0 19	-0 18	(*0.72+1.0)		3.4	5.1	4.3	

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Latitude	Longitude	Time		Height		Diurnal	Tropic		
				High Water	Low Water	High Water	Low Water				
	INDONESIA—cont. Time meridian, 120° E	South	East	h m	h m	ft	ft	ft	ft	ft	
on Barito River, p.168											
2017	Borneo, South Coast BARITO RIVER (outer bar) †	3° 34'	114° 29'			Daily predictions		5.9	7.5	4.3	
2019	Banjermasin, Martapura River †	3° 20'	114° 36'	+1 17	+1 14	(*0.93+0.3)		5.5	7.0	4.3	
2021	Pangkoh, Kahajan River †	3° 04'	114° 10'	+1 29	+1 59	(*0.95+0.8)		5.6	6.9	4.9	
2023	Pegatan, Mendawai River †	3° 17'	113° 21'	+0 05	+0 29	+0.5	+0.1	6.3	7.8	4.3	
2025	Sampit Bay †	3° 00'	113° 03'	+0 16	+0 57	+0.8	+0.1	6.6	8.0	4.6	
2027	Pembuang River entrance †	3° 25'	112° 34'	+0 17	+0 25	(*0.64+1.5)		3.8	4.8	4.3	
on Jolo, p.172											
2029	Sungai Aru Tobal, Kumai Bay †	3° 10'	111° 48'	-0 03	-0 03	+1.4	+1.0	3.2	4.0	2.3	
2031	Lurah, Kota Waringin River entrance †	2° 54'	111° 26'	-0 30	-0 30	+2.5	+2.2	3.1	3.8	3.3	
2033	Djelai River entrance †	2° 59'	110° 44'	-0 04	-0 04	(*0.57+1.0)		1.6	1.9	1.6	
on Jakarta, p.156											
2035	Borneo, West Coast Pawan River entrance	1° 46'	109° 54'	-0 02	-0 46	(*2.20–0.8)		4.4	6.2	3.6	
2037	Sukadana, Sukadana Bay §	1° 14'	109° 57'	-0 31	-0 21	(*2.30–0.7)		4.6	6.4	3.9	
on Musi River, p.152											
2039	Pontianak, Little Kapuas River §	0° 01'	109° 20'	-0 20	-0 09	(*0.38+0.2)		2.8	3.8	2.6	
on Cebu, p.180											
2041	Kapuas–ketjil River entrance	0° 05'	109° 08'	-1 07	-0 34	*0.48	*0.45	3.6	4.9	3.0	
2043	Pamangkat, Sambas–besar River	1° 11'	108° 59'	+5 45	+5 43	(*0.55+0.7)		1.8	2.1	2.0	
on Darwin, p.276											
MALAYSIA Sarawak and Sabah											
Borneo, northwest coast											
2045	Tandjung Datu	2° 05'	109° 39'	-1 42	-1 47	*0.41	*0.30	6.2	7.2	5.2	
2047	Kuching, Sarawak River	1° 34'	110° 21'	-1 18	-0 56	*0.72	*0.72	9.7	12.1	9.9	
2049	Pulau Lakei	1° 45'	110° 30'	-1 52	-1 53	*0.71	*0.86	8.6	11.1	10.2	
on Manila, p.184											
Diurnal Tropic											
2051	Kuala Similajau §	3° 31'	113° 18'	-0 19	+0 18	+2.2	+1.8	3.7	5.0	3.8	
2053	Kuala Niah §	3° 58'	113° 42'	+0 18	+1 03	+2.1	+1.7	3.7	5.1	3.7	
2055	Miri †	4° 23'	113° 59'	+0 27	+1 09	+2.1	+1.8	3.6	4.8	3.7	
2057	Baram River entrance †	4° 35'	113° 59'	+0 08	+0 29	+1.4	+1.4	3.2	4.2	3.1	
2059	Sapo Point, Brunei Bay †	5° 00'	115° 08'	+0 50	+0 30	+3.6	+2.0	4.9	6.0	4.6	
2061	Sipitang, Brunei Bay †	5° 05'	115° 33'	+0 22	+0 24	+3.4	+2.0	4.7	5.8	4.5	
2063	Victoria Harbor, Labuan Island †	5° 16'	115° 15'	+0 26	+0 19	+3.9	+2.6	4.6	5.8	5.0	
2065	Kuala Papar, Kimanis Bay †	5° 45'	115° 54'	-0 09	-0 03	+2.1	+1.5	3.9	4.9	3.5	
2067	Kota Kinabalu †	5° 59'	116° 04'	+0 19	+0 17	+2.4	+1.6	4.1	5.2	3.7	
2069	Kudat, Marudu Bay †	6° 53'	116° 51'	+0 21	+0 00	+2.9	+1.7	4.5	5.6	4.0	
on Cebu, p.180											
Mean Diurnal											
2071	Tigabu Island	6° 53'	117° 29'	-0 13	-0 15	(*0.94+1.7)		2.8	4.8	3.9	
2073	Lankayan Island	6° 30'	117° 55'	-0 18	-0 19	(*0.90+1.9)		2.8	4.6	4.0	
2075	Sandakan	5° 50'	118° 07'	-0 01	-0 20	+1.2	+1.2	3.1	5.1	3.6	
PHILIPPINE ISLANDS Sulu Islands											
on Davao, p.176											
2077	Tumindao Channel	4° 47'	119° 25'	+0 06	+0 14	*0.70	*0.70	3.1	3.8	1.7	
2079	Port Bongao, Tawitawi Island	5° 02'	119° 46'	+0 07	+0 16	*0.74	*0.74	3.3	4.2	1.8	
2081	Batu Batu Bay, Tawitawi Island	5° 04'	119° 53'	+0 05	-0 08	*0.80	*0.80	3.4	4.4	2.0	
2083	Baranar Island	5° 02'	120° 06'	+0 15	-0 15	+0.4	-0.1	4.8	5.6	2.6	
2085	Gallo Malo Channel, south entrance	5° 08'	120° 14'	+0 26	+0 27	+0.7	-0.1	5.1	5.9	2.7	
2087	Tandugan Channel, Tawitawi Island	5° 13'	120° 19'	+0 25	+0 20	*0.80	*0.80	3.4	4.4	2.0	
2089	South Ubian Island	5° 12'	120° 30'	-0 34	-0 17	*0.61	*0.61	2.6	3.4	1.5	
2091	Maimbung, Jolo Island	5° 55'	121° 01'	-0 08	+0 45	*0.72	*0.72	3.2	3.9	1.7	
on Jolo, p.172											
2093	Tataan Pass, Tawitawi Island †	5° 15'	119° 57'	-0 31	-0 31	*0.86	*0.86	—	2.4	1.0	
2095	Basbas Channel, Tawitawi Island †	5° 21'	120° 13'	-0 39	-0 39	*0.89	*0.89	—	2.5	1.2	
2097	Lahatlahat Island †	5° 39'	120° 17'	-0 33	-0 33	*0.93	*0.93	—	2.6	1.3	
2099	Pearl Bank †	5° 51'	119° 44'	+1 12	+1 12	+0.6	0.0	—	3.4	1.7	
2101	Pangutaran Island †	6° 15'	120° 30'	+1 25	+1 25	+0.7	0.0	—	3.5	1.7	
2103	Port Siasi, Siasi Island †	5° 33'	120° 49'	-1 33	-1 33	+1.3	0.0	—	4.1	2.0	
2105	Banting, Tapul Island †	5° 42'	120° 53'	-1 29	-0 58	+0.3	0.0	—	3.1	1.3	
2107	JOLO, Jolo Island †	6° 04'	121° 00'			Daily predictions		—	2.8	0.9	
2109	Tulayan Island †	6° 01'	121° 19'	-1 55	-1 55	*0.86	*0.86	—	2.4	1.0	
2111	Dassalan Island †	6° 44'	121° 28'	+0 20	+0 20	+0.5	0.0	—	3.3	1.6	

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Latitude	Longitude	Time		Height		Mean	Diurnal		
				High Water	Low Water	High Water	Low Water				
	PHILIPPINE ISLANDS Sulu Islands—cont. Time meridian, 120° E	North	East	h m	h m	ft	ft	ft	ft	ft	
on Davao, p.176											
2113	Capual Island .....	6° 01'	121° 25'	-0 15	+0 24	*0.89	*0.89	3.9	4.9	2.2	
2115	Simisa Island .....	5° 58'	121° 34'	-0 02	-0 01	*0.78	*0.78	3.5	4.2	1.9	
2117	Bulan Island .....	6° 09'	121° 50'	-0 07	+0 04	*0.91	*0.91	4.0	4.7	2.2	
2119	Linawan Island .....	6° 19'	121° 56'	-0 29	-0 12	*0.78	*0.78	3.5	4.1	1.9	
2121	Balas, Basilan Island .....	6° 41'	122° 08'	+0 13	+0 20	*0.83	*0.83	3.6	4.3	2.0	
2123	Bojelebung, Basilan Island .....	6° 31'	122° 12'	+0 11	-0 17	+0.2	0.0	4.5	5.2	2.5	
2125	Amoylo, Basilan Island .....	6° 26'	122° 08'	-0 08	+0 52	+0.9	-0.2	5.4	6.2	2.8	
on Jolo, p.172											
2127	Port Holland, Basilan Island † .....	6° 33'	121° 52'	-1 49	-1 49	+0.2	0.0	--	3.0	1.3	
2129	Isabela, Basilan Island † .....	6° 42'	121° 58'	+0 01	+0 01	*0.79	*0.79	--	2.2	1.1	
Mindanao Island											
2131	Zamboanga † .....	6° 54'	122° 04'	-1 54	-1 54	+0.5	0.0	--	3.3	1.4	
on Cebu, p.180											
2133	Sibuco Bay .....	7° 19'	122° 04'	-0 40	-0 40	*0.76	*0.76	2.5	4.0	1.8	
2135	Panabutan Bay .....	7° 35'	122° 08'	-0 40	-0 40	*0.76	*0.76	2.5	4.1	1.8	
2137	Port Santa Maria .....	7° 46'	122° 07'	-0 40	-0 40	*0.76	*0.76	2.5	4.2	1.8	
2139	Dapitan .....	8° 40'	123° 25'	-0 40	-0 40	*0.79	*0.79	2.6	4.4	1.9	
2141	Murcielagos .....	8° 38'	123° 34'	-0 08	-0 13	*0.85	*0.85	2.8	4.2	2.0	
2143	Plaridel (Langaran) .....	8° 37'	123° 43'	-0 25	-0 25	*0.79	*0.79	2.6	4.1	1.9	
<i>Iligan Bay</i>											
2145	Oroquieta .....	8° 29'	123° 48'	-0 15	-0 15	*0.82	*0.82	2.7	4.0	1.8	
2147	Jiminez .....	8° 20'	123° 51'	-0 05	-0 05	*0.82	*0.82	2.7	4.1	1.8	
2149	Misamis .....	8° 09'	123° 51'	+0 00	-0 04	*0.88	*0.88	2.9	4.4	2.0	
2151	Iligan .....	8° 14'	124° 14'	-0 10	-0 10	*0.79	*0.79	2.6	4.2	2.0	
2153	Macabalan Pt., Macajalar Bay .....	8° 30'	124° 40'	-0 15	-0 15	*0.82	*0.82	2.7	4.2	1.8	
2155	Canauyor Anchorage .....	9° 00'	124° 51'	-0 15	-0 15	*0.79	*0.79	2.6	4.1	1.8	
2157	Mambajao, Camiguin Island .....	9° 15'	124° 43'	-0 15	-0 15	*0.76	*0.76	2.5	4.1	1.8	
2159	Nasipit Harbor, Butuan Bay .....	8° 59'	125° 20'	-0 13	-0 21	*0.82	*0.71	2.8	4.1	1.9	
2161	Agusan River ent., Butuan Bay .....	9° 00'	125° 31'	-0 09	-0 13	*0.72	*0.57	2.5	3.8	1.6	
on Manila, p.184											
2163	Surigao † .....	9° 48'	125° 29'	+0 45	+0 45	+0.1	0.0	--	3.4	1.7	
2165	Dinagat, Dinagat Island † .....	9° 58'	125° 35'	+0 20	+0 20	+0.1	0.0	--	3.4	1.7	
2167	Melgar, Dinagat Island † .....	10° 04'	125° 31'	+0 00	+0 00	+0.1	0.0	--	3.4	1.7	
2169	San Roque, Dinagat Island † .....	10° 06'	125° 29'	-0 20	-0 20	+0.2	0.0	--	3.5	1.8	
on Legaspi Port, p.192											
2171	Malinao Inlet, Dinagat Island .....	10° 15'	125° 38'	+0 40	+0 40	*0.88	*0.88	3.2	4.0	2.2	
2173	Gaas Bay, Dinagat Island .....	10° 11'	125° 39'	+0 40	+0 40	*0.88	*0.88	3.2	4.0	2.2	
2175	Cuyomongan, Talavera Island .....	9° 45'	125° 41'	+0 40	+0 40	+0.1	+0.1	3.8	4.6	2.5	
2177	Tayanan, Kangbangyo Island .....	9° 54'	125° 54'	+0 35	+0 35	-0.1	0.0	3.7	4.4	2.4	
2179	Port Pilar, Siargao Island .....	9° 52'	126° 06'	+0 25	+0 25	*0.86	*0.86	3.2	4.0	2.1	
2181	San Miguel, East Bugas Island .....	9° 44'	126° 02'	+0 30	+0 30	*0.88	*0.88	3.2	4.1	2.2	
2183	Sohutan Bay, Bucas Grande Island .....	9° 36'	125° 55'	+0 30	+0 30	+0.1	+0.1	3.8	4.6	2.5	
2185	Tugas Point .....	9° 29'	125° 57'	+0 20	+0 20	+0.1	+0.1	3.8	4.6	2.5	
2187	Dahikan Bay .....	9° 27'	125° 56'	+0 27	+0 22	+0.2	+0.2	3.8	4.7	2.6	
2189	Buenavista, General Island .....	9° 25'	126° 00'	+0 20	+0 20	+0.1	+0.1	3.8	4.6	2.5	
2191	Tandag .....	9° 05'	126° 12'	+0 15	+0 15	+0.2	+0.1	3.9	4.7	2.6	
2193	Hinatuan .....	8° 22'	126° 20'	+0 15	+0 15	+0.3	+0.1	4.0	4.9	2.6	
2195	Caraga Bay .....	7° 17'	126° 35'	+0 10	+0 10	+0.4	+0.1	4.1	5.0	2.6	
2197	Mati, Pujada Bay .....	6° 57'	126° 13'	+0 10	+0 10	+0.2	0.0	4.0	4.8	2.5	
on Davao, p.176											
2199	<i>Davao Gulf</i>		6° 18'	126° 11'	+0 04	+0 04	-0.1	+0.1	4.1	4.9	2.4
2201	Lavigan Anchorage .....	6° 38'	126° 04'	+0 04	+0 05	0.0	+0.1	4.2	5.0	2.5	
2203	DÁVAO .....	7° 05'	125° 38'	Daily predictions				4.3	5.1	2.5	
2205	Malalag .....	6° 36'	125° 25'	+0 04	+0 04	-0.1	+0.1	4.1	4.9	2.4	
2207	Malita .....	6° 25'	125° 37'	-0 04	-0 06	0.0	+0.2	4.1	5.1	2.5	
2209	Sarangani Island .....	5° 25'	125° 27'	-0 01	+0 06	0.0	0.0	4.3	5.2	2.4	
2211	Sarangani Bay .....	5° 50'	125° 12'	+0 03	+0 06	+0.2	0.0	4.5	5.3	2.5	
2213	Port Lebak .....	6° 32'	124° 03'	+0 07	+0 10	+0.7	0.0	5.0	5.8	2.8	
2215	Cotabato, Mindanao River .....	7° 13'	124° 15'	+1 01	+1 42	*0.67	*0.67	3.0	3.5	1.6	
2217	Polloc Harbor .....	7° 21'	124° 13'	+0 14	+0 14	+0.4	-0.1	4.8	5.6	2.6	
2219	Port Baras .....	7° 38'	124° 01'	+0 14	+0 14	+0.5	0.0	4.8	5.6	2.7	
2221	Tukuran .....	7° 51'	123° 35'	+0 19	+0 19	+0.5	0.0	4.8	5.6	2.7	
2223	Pagadian .....	7° 49'	123° 27'	+0 19	+0 19	+0.6	0.0	4.9	5.7	2.8	
2225	Port Sambuluan .....	7° 32'	123° 24'	+0 19	+0 19	+0.5	0.0	4.8	5.6	2.7	
2227	Limbug Cove .....	7° 28'	123° 24'	+0 19	+0 19	+0.4	0.0	4.7	5.5	2.6	
2229	Maligay Bay .....	7° 32'	123° 15'	+0 19	+0 19	+0.5	0.0	4.8	5.6	2.7	
2231	Margosatubig, Dumanquilas Bay .....	7° 35'	123° 10'	+0 11	+0 15	+0.2	-0.1	4.6	5.3	2.5	
2233	Port Sibulan .....	7° 26'	122° 53'	+0 19	+0 19	+0.6	0.0	4.9	5.8	2.8	

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Latitude	Longitude	Time		Height		Mean	Diurnal		
				High Water	Low Water	High Water	Low Water				
	PHILIPPINE ISLANDS Mindanao Island—cont. Time meridian, 120° E	North	East	h m	h m	ft	ft	ft	ft	ft	
				on Davao, p.176							
2235	Taba Bay, Sibuguey Bay .....	7° 35'	122° 47'	+0 24	+0 24	+0.8	0.0	5.1	6.0	2.8	
2237	Ticauan Point, Sibuguey Bay .....	7° 45'	122° 44'	+0 24	+0 24	+0.9	0.0	5.2	6.1	2.9	
2239	Port Banga, Sibuguey Bay .....	7° 31'	122° 25'	+0 24	+0 24	+0.7	0.0	5.0	5.9	2.8	
2241	Landang, Sacol Island .....	6° 57'	122° 15'	+0 17	+0 20	-0.7	-0.2	3.8	4.6	2.0	
	Palawan and Vicinity			on Manila, p.184							
2243	Balabac, Balabac Island † .....	8° 00'	117° 04'	+0 10	+0 10	+1.0	0.0	--	4.3	2.1	
2245	Secam Island, N. Balabac Strait † .....	8° 11'	117° 01'	+0 10	+0 10	+0.7	0.0	--	4.0	2.0	
2247	Tagbita Bay † .....	8° 42'	117° 20'	-0 24	+0 17	+0.5	0.0	--	3.8	1.9	
2249	Eran Bay † .....	9° 05'	117° 42'	+0 05	+0 05	+0.7	0.0	--	4.0	2.0	
2251	Ulugan Bay † .....	10° 06'	118° 47'	-0 05	-0 05	+0.7	0.0	--	4.0	2.0	
2253	Port Barton † .....	10° 28'	119° 08'	-0 10	-0 10	+0.7	0.0	--	4.0	2.0	
2255	Boayan Island † .....	10° 34'	119° 11'	-0 05	+0 01	+0.4	0.0	--	3.7	1.8	
2257	Bolalo Bay, Malampaya Sound † .....	10° 56'	119° 14'	-0 07	-0 14	0.0	0.0	--	3.3	1.6	
2259	Alligator Bay, Malampaya Sound † .....	10° 52'	119° 17'	-0 04	+0 02	+0.2	0.0	--	3.5	1.8	
2261	Bacuit † .....	11° 11'	119° 23'	+0 20	-0 29	*0.97	*0.97	--	3.2	1.6	
2263	Northwest Bay, Linapacan Island † .....	11° 28'	119° 46'	-0 05	-0 05	+0.8	0.0	--	4.1	2.0	
2265	San Nicolas, Linapacan Island † .....	11° 27'	119° 49'	-0 05	-0 05	+0.9	0.0	--	4.2	2.1	
2267	San Miguel, Linapacan Island † .....	11° 30'	119° 52'	+0 10	+0 10	+1.1	0.0	--	4.4	2.2	
2269	Batas Island † .....	11° 10'	119° 36'	+0 10	+0 10	+1.3	0.0	--	4.6	2.3	
2271	Taytay † .....	10° 50'	119° 31'	+0 15	+0 15	+1.3	0.0	--	4.6	2.3	
2273	Paly Island † .....	10° 42'	119° 42'	+0 15	+0 15	+1.3	0.0	--	4.6	2.3	
2275	Araceli, Dumaran Island † .....	10° 33'	119° 59'	+0 15	+0 15	+1.3	0.0	--	4.6	2.3	
2277	Tinitian, Green Island Bay † .....	10° 04'	119° 12'	+0 40	+0 40	+1.1	0.0	--	4.4	2.2	
2279	Puerto Princesa † .....	9° 44'	118° 43'	+0 05	+0 05	+1.1	0.0	--	4.4	2.2	
2281	Island Bay † .....	9° 06'	118° 07'	+0 15	+0 15	+0.8	0.0	--	4.1	2.0	
2283	Sir J. Brooke Point † .....	8° 46'	117° 50'	+0 10	+0 10	+0.9	0.0	--	4.2	2.1	
2285	Cuyo, Cuyo Island † .....	10° 51'	121° 00'	+0 05	+0 05	+1.2	0.0	--	4.5	2.2	
2287	Halsey Harbor, Culion Island † .....	11° 47'	119° 58'	+0 05	+0 05	+0.7	0.0	--	4.0	2.0	
2289	Culion, Culion Island † .....	11° 53'	120° 01'	+0 05	+0 05	+1.2	0.0	--	4.5	2.2	
2291	Coron, Busuanga Island † .....	12° 01'	120° 12'	+0 10	+0 10	+1.2	0.0	--	4.5	2.2	
2293	Apo Island, Mindoro Strait † .....	12° 40'	120° 24'	-0 05	-0 05	+0.3	0.0	--	3.6	1.8	
				on Cebu, p.180							
2295	Cagayan Anchorage, Cagayan Island .....	9° 35'	121° 14'	-0 29	-0 37	*0.80	*0.80	2.6	4.0	1.9	
2297	Cagayan Sulu Island .....	6° 59'	118° 32'	-3 00	-3 00	*0.80	*0.80	2.7	4.2	2.1	
	Panay and Guimaras Islands										
2299	Aniniy .....	10° 26'	121° 55'	-0 25	-0 25	*0.95	*0.95	3.0	4.9	2.3	
2301	San Jose .....	10° 44'	121° 56'	-0 30	-0 30	*0.88	*0.88	2.7	4.6	2.1	
2303	Tibiao .....	11° 17'	122° 02'	-0 35	-0 35	+0.3	+0.1	3.5	5.4	2.5	
2305	Borocay Island .....	11° 57'	121° 56'	-0 25	-0 25	+0.3	0.0	3.6	5.3	2.5	
2307	Aclan River entrance .....	11° 44'	122° 22'	-0 05	-0 05	+0.3	0.0	3.6	5.3	2.5	
2309	Port Batan .....	11° 36'	122° 30'	+0 00	+0 00	+0.4	0.0	3.7	5.4	2.5	
2311	Libas (Capiz Landing) .....	11° 36'	122° 43'	+0 00	+0 00	+0.4	+0.1	3.6	5.4	2.6	
2313	Estancia .....	11° 28'	123° 09'	+0 15	+0 15	+1.8	+0.2	4.9	6.9	3.4	
2315	Concepcion .....	11° 13'	123° 06'	+0 15	+0 15	+1.9	+0.2	5.0	7.0	3.4	
2317	Banate .....	11° 00'	122° 49'	+0 25	+0 25	+2.0	+0.2	5.1	7.1	3.4	
2319	Navalas, Guimaras Island .....	10° 44'	122° 41'	+0 15	+0 15	+1.3	+0.2	4.4	6.4	3.1	
2321	Inampuligan I., Guimaras Island .....	10° 27'	122° 43'	-0 10	-0 10	0.0	0.0	3.3	5.1	2.3	
2323	Lugmayan Point, Guimaras Island .....	10° 25'	122° 32'	-0 20	-0 20	*0.85	*0.85	2.7	4.5	2.0	
2325	Liloilo .....	10° 42'	122° 34'	+0 05	+0 05	+0.3	+0.1	3.5	5.4	2.6	
2327	Miagao .....	10° 38'	122° 14'	-0 20	-0 20	*0.88	*0.88	2.7	4.6	2.2	
	Negros Island										
2329	Cadiz .....	10° 57'	123° 19'	+0 30	+0 30	+1.6	+0.1	4.8	6.6	3.2	
2331	Himugaan River entrance .....	10° 57'	123° 24'	+0 25	+0 25	+1.3	+0.1	4.5	6.3	3.0	
2333	Danao River entrance .....	10° 49'	123° 33'	+0 15	+0 15	+0.7	0.0	4.0	5.8	2.7	
2335	San Carlos .....	10° 29'	123° 25'	+0 15	+0 15	+0.8	0.0	4.1	5.8	2.7	
2337	Calagcalag Bay .....	9° 49'	123° 08'	+0 10	+0 10	+0.4	0.0	3.7	5.4	2.6	
2339	Bais .....	9° 36'	123° 08'	+0 10	+0 10	+0.3	0.0	3.6	5.3	2.5	
2341	Dumaguete .....	9° 18'	123° 18'	-0 25	-0 25	*0.92	*0.71	3.2	4.8	2.1	
2343	Larena, Siquijor Island .....	9° 15'	123° 35'	-0 25	-0 25	*0.80	*0.71	2.7	4.2	1.8	
2345	Port Bonbonon .....	9° 03'	123° 07'	-0 30	-0 30	*0.88	*0.71	3.0	4.5	2.0	
2347	Campomanes Bay .....	9° 42'	122° 25'	-0 30	-0 30	*0.90	*0.71	3.1	4.5	2.0	
2349	Himamaylan .....	10° 06'	122° 52'	-0 30	-0 30	0.0	0.0	3.3	5.0	2.3	
2351	Bacolod .....	10° 40'	122° 57'	+0 10	+0 10	+1.0	+0.1	4.2	6.1	2.9	
	Cebu Island										
2353	Moalboal .....	9° 56'	123° 24'	+0 10	+0 10	+0.4	0.0	3.7	5.5	2.6	
2355	Barili Bay .....	10° 07'	123° 29'	+0 10	+0 10	+0.4	0.0	3.7	5.5	2.6	
2357	Balamban Bay .....	10° 30'	123° 43'	+0 10	+0 10	+0.6	0.0	3.9	5.7	2.6	
2359	Tuburan .....	10° 44'	123° 49'	+0 15	+0 15	+0.7	+0.1	3.9	5.8	2.7	
2361	Medellin .....	11° 08'	123° 58'	+0 20	+0 20	+0.9	0.0	4.2	6.0	2.8	
2363	Bantayan, Bantayan Island .....	11° 10'	123° 43'	+0 20	+0 20	+0.9	0.0	4.2	6.0	2.8	
2365	Bogo Bay .....	11° 04'	124° 00'	+0 20	+0 20	+0.4	0.0	3.7	5.4	2.6	

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Latitude	Longitude	Time		Height		Mean	Diurnal		
				High Water	Low Water	High Water	Low Water				
	PHILIPPINE ISLANDS Cebu Island—cont. Time meridian, 120° E	North	East	h m	h m	ft	ft	ft	ft	ft	
on Cebu, p.180											
2367	Carmen .....	10° 35'	124° 01'	+0 10	+0 10	+0.3	0.0	3.6	5.3	2.5	
2369	CEBU, Fort San Pedro .....	10° 18'	123° 54'			Daily predictions		3.3	5.1	2.3	
2371	Carcar Bay .....	10° 05'	123° 39'	-0 05	-0 05	0.0	0.0	3.3	5.0	2.3	
2373	Boljoon .....	9° 38'	123° 29'	-0 15	-0 15	*0.91	*0.91	3.0	4.5	2.1	
Bohol Island											
2375	Maribojoc .....	9° 44'	123° 50'	-0 15	-0 15	*0.91	*0.91	3.0	4.6	2.1	
2377	Tubigon .....	9° 57'	123° 58'	-0 10	-0 10	0.0	0.0	3.3	5.1	2.3	
2379	Ubay .....	10° 04'	124° 28'	+0 00	+0 00	+0.1	0.0	3.4	5.1	2.4	
2381	Cogton Bay .....	9° 50'	124° 31'	-0 15	-0 15	*0.76	*0.76	2.5	4.0	1.8	
2383	Garcia Hernandez .....	9° 37'	124° 18'	-0 20	-0 20	*0.79	*0.79	2.6	4.1	1.8	
Leyte Island											
2385	Liloan, Sogod Bay .....	10° 09'	125° 07'	-0 40	-0 40	*0.76	*0.76	2.5	4.1	1.8	
2387	Maasin .....	10° 08'	124° 50'	-0 15	-0 15	*0.91	*0.91	3.0	4.6	2.1	
2389	Baybay .....	10° 41'	124° 48'	+0 00	+0 00	+0.6	0.0	3.9	5.6	2.6	
2391	Ormoc .....	11° 00'	124° 36'	+0 05	+0 05	+0.6	0.0	3.9	5.6	2.6	
2393	Palompon .....	11° 03'	124° 23'	+0 10	+0 10	+0.5	0.0	3.8	5.6	2.6	
2395	Genuruan Island, Biliran Island .....	11° 42'	124° 21'	+0 05	+0 05	+0.5	0.0	3.8	5.5	2.6	
2397	Poro Island, Biliran Strait .....	11° 28'	124° 29'	+0 10	+0 10	+0.5	0.0	3.8	5.5	2.6	
2399	Carigara .....	11° 18'	124° 41'	+0 15	+0 15	+0.2	0.0	3.5	5.2	2.4	
2401	Canauay Island, Janabatas Channel .....	11° 26'	124° 51'	+0 15	+0 15	*0.97	*0.97	3.2	4.8	2.2	
2403	Santa Rita I., San Juanico Strait .....	11° 26'	124° 58'	+0 24	+0 06	*0.88	*0.88	2.9	4.3	2.0	
2405	Uban Point, San Juanico Strait .....	11° 22'	124° 59'	-1 10	-1 10	*0.67	*0.67	2.2	3.6	1.5	
on Jolo, p.172											
2407	Tacloban, San Juanico Strait † .....	11° 15'	125° 00'	-1 25	-1 25	*0.82	*0.82	—	2.3	0.9	
2409	Abuyog † .....	10° 45'	125° 01'	-1 40	-1 40	*0.79	*0.79	—	2.2	0.8	
2411	Hinunangan † .....	10° 24'	125° 12'	-0 20	-0 20	*0.82	*0.82	—	2.3	0.9	
Samar Island											
2413	Talalora .....	11° 32'	124° 50'	+0 15	+0 15	-0.1	-0.2	3.4	4.9	2.2	
2415	Parasan Harbor, Daram Island .....	11° 42'	124° 45'	+0 10	+0 10	+0.2	-0.2	3.7	5.2	2.4	
2417	Catbalogan .....	11° 47'	124° 53'	+0 10	+0 10	+0.2	-0.2	3.7	5.2	2.4	
2419	Santo Nino, Santo Nino Island .....	11° 56'	124° 27'	+0 05	+0 05	0.0	-0.2	3.5	4.8	2.2	
2421	Calbayog .....	12° 04'	124° 35'	+0 05	+0 05	*0.82	*0.82	2.7	4.1	1.8	
on Manila, p.184											
2423	Maubo † .....	12° 26'	124° 19'	+0 25	+0 25	*0.73	*0.73	—	2.4	1.2	
on Davao, p.176											
2425	Biri Island .....	12° 39'	124° 22'	-0 20	-0 08	*0.46	*0.46	2.0	2.4	1.1	
2427	Talisay Island .....	12° 39'	124° 25'	+0 13	+0 15	*0.58	*0.58	2.5	2.9	1.5	
on Legaspi Port, p.192											
2429	Catarman River entrance .....	12° 31'	124° 39'	+0 24	+0 21	*0.93	*0.93	3.6	4.2	2.2	
2431	Laoang, Laoang Island .....	12° 34'	125° 01'	+0 23	+0 20	+0.1	0.0	3.9	4.6	2.4	
2433	Helm Harbor, Gamay Bay .....	12° 18'	125° 21'	+0 15	+0 18	+0.3	0.0	4.1	4.8	2.5	
2435	Hilabon Island .....	12° 02'	125° 34'	+0 13	+0 16	+0.1	+0.1	3.8	4.7	2.5	
2437	Andis Island, Port Borongan .....	11° 39'	125° 29'	+0 17	+0 20	+0.3	+0.1	4.0	4.9	2.6	
2439	Matarinao Bay .....	11° 14'	125° 35'	+0 19	+0 18	+0.4	+0.1	4.1	5.0	2.6	
2441	Guiluan .....	11° 02'	125° 43'	+0 30	+0 01	*0.51	*0.51	2.1	2.6	1.1	
Masbate Island											
2443	Port Cataingan .....	12° 00'	124° 00'	+0 00	+0 00	-0.1	-0.2	3.4	4.6	2.2	
2445	Nin Bay .....	12° 14'	123° 17'	+0 00	+0 00	+0.3	0.0	3.6	5.3	2.5	
2447	Port Barrera .....	12° 30'	123° 22'	+0 05	+0 05	+0.3	0.0	3.6	5.3	2.5	
2449	Masbate .....	12° 22'	123° 37'	+0 00	+0 00	+0.3	0.0	3.6	5.3	2.5	
2451	Dimasalang, Naro Bay .....	12° 12'	123° 51'	+0 00	+0 00	+0.1	-0.1	3.5	5.0	2.4	
Ticao and Burias Islands											
2453	Port San Miguel, Ticao Island .....	12° 40'	123° 35'	+0 00	+0 00	+0.3	0.0	3.6	5.3	2.5	
2455	San Jacinto, Ticao Island .....	12° 34'	123° 44'	+0 00	+0 00	*0.95	*0.95	3.2	4.6	2.2	
2457	Batuhan Bay, Ticao Island .....	12° 25'	123° 47'	+0 10	+0 10	*0.80	*0.80	2.6	3.9	1.9	
2459	Port Boca Engano, Burias Island .....	12° 47'	123° 19'	+0 05	+0 05	+0.4	0.0	3.7	5.3	2.6	
2461	San Pascual, Burias Island .....	13° 08'	122° 59'	+0 00	+0 00	+0.7	+0.1	3.9	5.6	2.8	
Romblon and Vicinity											
2463	Cangouac Point, Sibuyan Island .....	12° 30'	122° 30'	-0 25	-0 25	+0.7	+0.1	3.9	5.8	2.7	
2465	Romblon, Romblon Island .....	12° 35'	122° 16'	-0 05	-0 05	+0.5	+0.1	3.7	5.5	2.6	
2467	Guimbriswan, Tablas Island .....	12° 10'	122° 02'	+0 00	+0 00	+0.7	+0.1	3.9	5.6	2.8	
2469	Looc, Tablas Island .....	12° 16'	122° 00'	-0 07	-0 08	+0.3	+0.1	3.5	5.2	2.5	
2471	Port Concepcion, Maestre de Campo I. ....	12° 55'	121° 44'	-0 10	-0 10	+0.1	+0.1	3.3	5.1	2.4	

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Latitude	Longitude	Time		Height		Mean	Diurnal		
				High Water	Low Water	High Water	Low Water				
	PHILIPPINE ISLANDS Marinduque Island Time meridian, 120° E	North	East	h m	h m	ft	ft	ft	ft	ft	
				on Cebu, p.180							
2473	Port Balanacan .....	13° 32'	121° 52'	-0 10	-0 10	*0.95	*0.95	3.0	4.9	2.3	
2475	Santa Cruz Harbor .....	13° 30'	122° 04'	+0 00	+0 00	*0.98	*0.98	3.1	5.0	2.4	
2477	Torrijos .....	13° 19'	122° 05'	-0 05	-0 05	+0.1	+0.1	3.3	5.2	2.4	
	Mindoro Island										
2479	Port Galera .....	13° 31'	120° 58'	-0 30	-0 30	*0.75	*0.75	2.2	4.0	1.9	
2481	Calapan Bay .....	13° 26'	121° 11'	-0 20	-0 20	*0.90	*0.90	2.8	4.7	2.2	
2483	Mansalay .....	12° 31'	121° 26'	-0 10	-0 10	+0.1	+0.1	3.3	5.1	2.4	
				on Manila, p.184							
2485	Mangarin † .....	12° 21'	121° 06'	+0 05	+0 05	+0.4	0.0	--	3.7	1.8	
2487	Sablayan † .....	12° 50'	120° 46'	-0 05	-0 05	+0.3	0.0	--	3.6	1.8	
2489	Palaun † .....	13° 25'	120° 28'	-0 10	-0 10	+0.3	0.0	--	3.6	1.8	
2491	Port Tilig, Lubang Island † .....	13° 49'	120° 12'	-0 10	-0 10	+0.2	0.0	--	3.5	1.7	
	Luzon Island, West Coast										
2493	Anilao, Balayan Bay † .....	13° 46'	120° 55'	+0 14	+0 20	+0.4	0.0	--	3.7	1.7	
2495	Corregidor Island, Manila Bay † .....	14° 23'	120° 36'	-0 10	-0 10	0.0	0.0	--	3.3	1.6	
2497	Cavite, Manila Bay † .....	14° 29'	120° 55'	+0 14	+0 13	*0.97	*0.97	--	3.2	1.6	
2499	MANILA, Pasig River entrance † .....	14° 35'	120° 58'			Daily predictions		--	3.3	1.6	
2501	Olongapo, Subic Bay † .....	14° 49'	120° 17'	-0 04	+0 03	*0.91	*0.91	--	3.0	1.5	
2503	Port Silanguin † .....	14° 46'	120° 07'	-0 20	-0 20	*0.91	*0.91	--	3.0	1.5	
2505	Port Masinloc † .....	15° 31'	119° 55'	-0 31	-0 34	*0.85	*0.85	--	2.8	1.4	
2507	Santa Cruz † .....	15° 46'	119° 54'	-0 41	-0 42	*0.82	*0.82	--	2.7	1.3	
				on San Fernando Harbor, p.188							
2509	Bolinao, Lingayen Gulf § .....	16° 24'	119° 54'	+0 07	-0 51	+0.3	0.0	--	2.5	1.2	
2511	Sual, Lingayen Gulf § .....	16° 04'	120° 06'	+0 17	-0 47	+0.3	0.0	--	2.5	1.2	
2513	Santo Tomas, Lingayen Gulf § .....	16° 17'	120° 23'	+0 11	-0 47	+0.3	0.0	--	2.5	1.2	
2515	SAN FERNANDO HARBOR § .....	16° 37'	120° 18'			Daily predictions		--	2.2	1.1	
2517	Solvec Cove § .....	17° 27'	120° 27'	-0 35	-1 09	+0.1	0.0	--	2.3	1.1	
2519	Salomaque § .....	17° 47'	120° 25'	-1 18	-1 34	*0.91	*0.91	--	2.0	1.0	
2521	Laoag River entrance § .....	18° 13'	120° 31'	-1 30	-1 46	*0.86	*0.86	--	1.9	0.9	
2523	Nagabungan Bay § .....	18° 29'	120° 34'	-1 32	+4 13	*0.91	*0.91	--	2.0	1.0	
	Luzon Island, North Coast				on Legaspi Port, p.192						
2525	Claveria Bay .....	18° 37'	121° 06'	+1 25	+1 05	*0.37	*0.37	1.5	2.1	0.8	
2527	Aparri, Cagayan River .....	18° 21'	121° 38'	+0 34	+0 44	*0.71	*0.71	2.7	3.5	1.7	
2529	Camalaniugan, Cagayan River .....	18° 17'	121° 40'	+0 44	+0 53	*0.74	*0.74	2.8	3.6	1.8	
2531	Port San Vicente .....	18° 31'	122° 08'	-0 03	-0 07	*0.79	*0.79	2.9	3.6	1.9	
2533	Port San Pio Quinto, Camiguin Island .....	18° 54'	121° 52'	+0 34	+0 32	*0.70	*0.70	2.7	3.2	1.6	
2535	Musa Bay, Fuga Island .....	18° 52'	121° 17'	+0 47	+0 44	*0.47	*0.47	1.8	2.3	1.0	
2537	Calayan Island .....	19° 16'	121° 30'	+0 05	-0 01	*0.71	*0.71	2.7	3.4	1.5	
2539	Babuyan Island .....	19° 34'	121° 56'	+0 16	+0 08	*0.79	*0.79	3.2	3.8	1.8	
2541	Basco, Batan Island .....	20° 27'	121° 58'	+0 55	+1 06	*0.53	*0.53	2.0	2.5	1.3	
	Luzon Island, East Coast										
2543	Patunungan Bay .....	18° 24'	122° 18'	+0 05	+0 01	*0.84	*0.84	3.2	3.9	2.0	
2545	Divilacan Bay .....	17° 25'	122° 14'	-0 26	-0 29	*0.84	*0.84	3.2	3.8	2.0	
2547	Port Bicolian .....	17° 17'	122° 25'	+0 35	+0 26	*0.88	*0.88	3.4	4.0	2.1	
2549	Diapitan Bay .....	16° 24'	122° 13'	+0 18	+0 14	*0.87	*0.87	3.3	4.0	2.1	
2551	Casiguran Bay .....	16° 14'	122° 08'	+0 06	+0 02	-0.1	-0.1	3.7	4.4	2.3	
2553	Baler Bay .....	15° 45'	121° 35'	+0 12	+0 16	-0.1	0.0	3.7	4.4	2.3	
2555	Umiray River ent., Dingalan Bay .....	15° 12'	121° 26'	+0 12	+0 10	-0.2	-0.1	3.7	4.3	2.2	
2557	Hook Bay, Polillo Island .....	14° 57'	121° 50'	+0 10	+0 13	0.0	0.0	3.8	4.5	2.4	
2559	Burdeos Bay, Polillo Island .....	14° 54'	121° 58'	+0 22	+0 20	0.0	-0.1	3.9	4.5	2.3	
2561	Polillo, Polillo Island .....	14° 43'	121° 56'	+0 10	+0 06	+0.3	0.0	4.1	4.8	2.5	
	Lamon Bay										
2563	Port Lampon .....	14° 40'	121° 37'	+0 23	+0 20	+0.4	0.0	4.2	4.9	2.6	
2565	Sangirin Bay .....	14° 12'	121° 55'	+0 22	+0 16	+0.7	0.0	4.5	5.2	2.7	
2567	Atimonan .....	14° 00'	121° 55'	+0 24	+0 19	+0.7	0.0	4.5	5.2	2.7	
2569	Apat Bay .....	14° 01'	122° 19'	+0 25	+0 20	+0.7	0.0	4.5	5.2	2.7	
2571	Capalonga .....	14° 20'	122° 29'	+0 19	+0 12	+0.3	0.0	4.1	4.9	2.5	
2573	Port Jose Panganiban .....	14° 18'	122° 41'	+0 21	+0 17	+0.4	0.0	4.2	4.9	2.6	
2575	Guintina Island, Calagua Islands .....	14° 25'	122° 56'	+0 08	+0 11	+0.3	0.0	4.1	4.9	2.5	
2577	Mercedes .....	14° 07'	123° 01'	+0 26	+0 24	+0.2	0.0	4.0	4.8	2.5	
2579	Cabgan Island, San Miguel Bay .....	13° 46'	123° 16'	+0 25	+0 26	+1.4	+0.2	5.0	5.9	3.2	
2581	Sisiran Bay .....	13° 56'	123° 39'	+0 23	+0 27	+0.2	0.0	4.0	4.8	2.5	
2583	Tabgon Bay .....	13° 50'	123° 49'	+0 21	+0 23	+0.3	+0.1	4.0	4.8	2.6	
2585	Hitoma, Catanduanes Island .....	13° 47'	124° 08'	+0 18	+0 19	+0.2	0.0	4.0	4.8	2.5	
2587	Port Anjao, Catanduanes Island .....	13° 57'	124° 20'	+0 13	+0 14	+0.1	0.0	3.9	4.7	2.4	
2589	Virac, Catanduanes Island .....	13° 35'	124° 14'	+0 25	+0 15	+0.4	0.0	4.2	5.0	2.6	
2591	Tabaco, Tabaco Bay .....	13° 22'	123° 44'	+0 07	+0 05	+0.1	0.0	3.9	4.7	2.4	
2593	Batan Island .....	13° 14'	124° 03'	+0 04	+0 03	+0.1	-0.1	4.0	4.7	2.4	
2595	LEGASPI PORT, Albay Gulf .....	13° 09'	123° 45'			Daily predictions		3.8	4.6	2.4	
2597	Gubat .....	12° 55'	124° 08'	-0 04	+0 02	-0.1	0.0	3.7	4.5	2.3	
2599	San Bernardino Island .....	12° 45'	124° 17'	-0 12	+0 00	*0.72	*0.72	2.6	3.4	1.8	

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Latitude	Longitude	Time		Height		Mean	Diurnal		
				High Water	Low Water	High Water	Low Water				
	PHILIPPINE ISLANDS Luzon Island, South Coast Time meridian, 120° E	North	East	h m	h m	ft	ft	ft	ft	ft	
on Cebu, p.180											
2601	Butag Bay .....	12° 37'	123° 56'	+0 00	+0 00	*0.82	*0.82	2.7	3.9	1.9	
2603	Bagatao Island .....	12° 50'	123° 48'	+0 05	+0 05	*0.1	0.0	3.4	5.0	2.4	
2605	Sorsogon .....	12° 58'	124° 00'	+0 30	+0 30	*0.88	*0.88	3.0	4.1	2.0	
2607	Pasacao, Ragay Gulf .....	13° 30'	123° 02'	+0 00	+0 00	*0.2	0.0	3.5	5.2	2.4	
2609	Guinayangan, Ragay Gulf .....	13° 54'	122° 27'	+0 15	+0 15	*0.6	+0.1	3.8	5.7	2.7	
2611	Port Pusgo .....	13° 31'	122° 36'	+0 00	+0 00	*0.7	0.0	4.0	5.5	2.7	
2613	Aguasa Bay .....	13° 17'	122° 31'	+0 00	+0 00	*0.2	+0.1	3.4	5.3	2.5	
2615	Catanauan .....	13° 36'	122° 19'	+0 00	+0 00	*0.1	+0.1	3.3	5.2	2.4	
2617	Pitogo .....	13° 47'	122° 05'	+0 00	+0 00	*0.92	*0.92	2.9	4.8	2.2	
2619	Tayabas River entrance .....	13° 54'	121° 36'	+0 05	+0 05	*0.95	*0.95	3.0	4.8	2.3	
on Guam, p.196											
2621	Pagan Island .....	18° 08'	145° 46'	+0 05	+0 01	(*0.75+0.4)		1.3	1.9	1.5	
2623	Tanapag Harbor, Saipan Island .....	15° 13.6'	145° 44.2'	+0 21	+0 15	*0.92	*1.00	1.46	2.20	1.34	
2625	Saipan Harbor, Saipan Island .....	15° 12'	145° 43'	+0 02	+0 07	*0.80	*0.80	1.3	1.9	1.2	
2627	Tinian Island .....	14° 58'	145° 37'	-0 02	-0 23	*0.74	*0.33	1.5	1.8	1.0	
2629	Rota Island .....	14° 08'	145° 08'	-0 03	-0 06	(*0.71+0.5)		1.2	2.1	1.5	
2631	APRA HARBOR, GUAM .....	13° 26.5'	144° 39.2'			Daily predictions		1.6	2.4	1.4	
on Malakal Harbor, p.200											
	PALAU Time meridian, 135° E									Mean Spring	
2633	Shonian Harbor .....	7° 03'	134° 16'	+0 07	-0 13	*0.89	*1.00	3.3	4.4	3.3	
2635	Koror .....	7° 21'	134° 29'	-0 07	-0 04	-0.1	0.0	3.8	5.0	3.5	
2637	MALAKAL HARBOR .....	7° 20'	134° 28'			Daily predictions		3.9	5.1	3.6	
2639	West Passage .....	7° 30'	134° 31'	-0 21	-0 41	-0.1	0.0	3.8	4.8	3.5	
FEDERATED STATES of MICRONESIA Time meridian, 150° E											
2641	Ngulu Islands .....	8° 18'	137° 29'	+0 40	+0 19	*0.77	*0.77	3.0	3.8	2.8	
2643	Tomil Harbor, Yap Island .....	9° 30'	138° 08'	+0 35	+0 14	(*0.74+0.5)		2.9	3.7	3.2	
2645	Ulithi Islands .....	10° 02'	139° 46'	+0 34	+0 13	(*0.67+0.2)		2.6	3.4	2.6	
on Guam, p.196											
2647	Woleai Islands .....	7° 22'	143° 54'	+0 21	+0 17	(*0.80+0.6)		1.4	1.6	1.7	
2649	Ifalik Atoll .....	7° 15'	144° 27'	-0 54	-0 13	*1.00	*1.33	1.5	1.8	1.6	
2651	Lamotrek Atoll .....	7° 28'	146° 23'	+0 11	+0 07	(*0.71+0.7)		1.2	1.3	1.7	
on Chuuk, p.204											
2653	Pulap Atoll § .....	7° 38'	149° 25'	-0 53	+0 43	*0.74	*0.74	1.4	1.9	1.4	
2655	Namonuto Atoll § .....	8° 35'	149° 39'	-1 23	+0 21	*0.69	*0.69	1.3	1.9	1.2	
2657	Moen Island, Truk Islands § .....	7° 27'	151° 51'	+0 10	+0 11	*0.85	*0.85	1.6	2.1	1.6	
2659	CHUUK, Moen Island § .....	7° 26.8'	151° 50.8'			Daily predictions		1.40	1.84	0.83	
2661	Dublon Island, Truk Islands § .....	7° 22'	151° 53'	+0 02	+0 30	*1.07	*1.07	1.5	2.0	1.5	
Time meridian, 165° E											
2663	Nomwin Atoll, Hall Islands § .....	8° 27'	151° 47'	-0 08	+0 20	*0.80	*0.80	1.5	1.9	1.5	
2665	Murilo Atoll, Hall Islands § .....	8° 36'	152° 15'	-0 28	+0 00	*0.85	*0.85	1.6	1.9	1.7	
2667	Losap Atoll § .....	6° 54'	152° 44'	-0 03	+0 25	*0.80	*0.80	1.5	2.0	1.5	
2669	Namoluk Atoll § .....	5° 54'	153° 08'	-0 01	+0 27	*0.80	*0.80	1.5	2.0	1.5	
2671	Satawan Anchorage, Nomoi Islands § .....	5° 20'	153° 44'	-0 03	+0 25	*0.96	*0.96	1.8	2.1	2.0	
Time meridian, 150° E											
2673	Marcus Island .....	24° 17'	153° 58'	-0 19	-0 19	(*0.65+0.3)		1.5	2.2	1.7	
Time meridian, 165° E											
2675	Oroluk Lagoon .....	7° 37'	155° 10'	+0 23	+0 20	(*0.70+0.3)		1.6	2.2	1.9	
2677	Ant Islands (Tauenai Channel) .....	6° 46'	158° 00'	+1 04	+0 0	+0.3		2.0	3.0	2.4	
2679	POHNPEI HARBOR, Pohnpei Island .....	6° 59'	158° 13'			Daily predictions		2.3	3.4	2.3	
2681	Metalanim Harbor, Pohnpei Island .....	6° 52'	158° 21'	+0 09	+0 06	+0.4	+0.2	2.5	3.7	2.6	
Time meridian, 180° E											
2683	Lele Harbor, Kusaie Island .....	5° 20'	163° 01'	+0 01	+0 00	(*0.91+0.3)		3.2	4.6	3.0	
MARSHALL ISLANDS											
2685	WAKE ISLAND (U.S.) .....	19° 17.4'	166° 37.1'			Daily predictions, p.212		2.02	2.36	1.13	
2687	Ujelang Atoll .....	9° 46'	160° 58'	+0 04	+0 03	(*0.80+0.2)		2.8	3.9	2.6	
2689	Enewetak .....	11° 21'	162° 21'	-0 07	-0 03	(*0.77+0.3)		2.7	3.9	2.6	
2691	Bikini Atoll .....	11° 36'	165° 33'	-0 19	-0 19	0.0	0.0	3.4	4.9	3.0	
2693	Enirikku Island, Bikini Atoll .....	11° 30'	165° 20'	-0 15	-0 16	*0.85	*0.85	2.9	4.2	2.6	
2695	Rongelap Island, Rongelap Atoll .....	11° 09'	166° 54'	-0 07	-0 07	*0.96	*0.96	3.3	4.7	2.9	
2697	Rongerik Atoll .....	11° 23'	167° 31'	-0 14	-0 15	+0.1	0.0	3.6	5.0	3.0	
2699	Ujae Atoll .....	9° 02'	165° 36'	-0 10	-0 10	0.0	0.0	3.5	5.0	3.0	
2701	Kwajalein Atoll (Namur Island) .....	9° 24'	167° 29'	-0 02	-0 05	0.0	0.0	3.5	5.0	3.0	
2703	KWAJALEIN ATOLL (Kwajalein I.) .....	8° 44.2'	167° 44.3'			Daily predictions		3.6	3.9	1.9	

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Latitude	Longitude	Time		Height		Mean	Spring		
				High Water	Low Water	High Water	Low Water				
	MARSHALL ISLANDS—cont. Time meridian, 180° E	North	East	h m	h m	ft	ft	ft	ft	ft	
2705	Ailinglapalap Atoll . . . . .	7° 17'	168° 45'	+0 08	+0 07	+0.4	+0.3	3.6	5.2	3.3	
2707	Jaluit Atoll (SE Pass) . . . . .	5° 55'	169° 39'	-0 12	-0 08	-0.1	-0.1	3.5	4.9	2.9	
2709	Ebon (Boston) Atoll . . . . .	4° 36'	168° 41'	-0 10	-0 10	+0.1	+0.1	3.4	4.8	3.0	
2711	Taongi Atoll . . . . .	14° 34'	168° 57'	-0 20	-0 20	0.0	0.0	3.3	4.7	3.0	
2713	Bikar (Dawson) Atoll . . . . .	12° 15'	170° 08'	-0 10	-0 10	0.0	0.0	3.5	4.9	3.0	
2715	Ailuk Atoll . . . . .	10° 13'	169° 59'	-0 10	-0 10	0.0	0.0	3.5	4.9	3.0	
2717	Likiep Atoll . . . . .	9° 49'	169° 19'	+0 00	-0 01	+0.1	0.0	3.6	5.0	3.0	
2719	Wotje Atoll . . . . .	9° 28'	170° 14'	-0 11	-0 11	-0.2	-0.2	3.4	4.7	2.8	
2721	Erikub Atoll . . . . .	9° 12'	169° 55'	-0 10	-0 10	0.0	0.0	3.5	4.9	3.0	
2723	Maloelap Atoll . . . . .	8° 43'	171° 14'	-0 04	-0 05	+0.1	-0.1	3.7	5.1	3.0	
2725	Majuro Atoll . . . . .	7° 07'	171° 22'	-0 05	-0 06	+0.3	+0.1	3.7	5.3	3.2	
2727	Arno Atoll . . . . .	7° 08'	171° 42'	-0 04	-0 05	+0.6	-0.1	4.2	5.7	3.2	
2729	Port Rhin, Mili Atoll . . . . .	6° 14'	171° 48'	+0 04	+0 04	+0.7	0.0	4.2	5.9	3.3	
	HAWAIIAN ISLANDS Time meridian, 165° W	North	West	on Honolulu, p.228				Mean Diurnal			
2731	SAND ISLAND, MIDWAY ISLANDS . . . . .	28° 12.7'	177° 21.6'	Daily predictions, p.220				0.9	1.3	0.7	
2733	Lisianski Island . . . . .	26° 04'	173° 58'	---	---	---	---	0.5	0.8	0.3	
	Time meridian, 150° W										
2735	Laysan Island . . . . .	25° 46'	171° 45'	+1 02	+1 12	*0.53	*0.50	0.7	1.0	0.4	
2737	East Island, French Frigate Shoals . . . . .	23° 47'	166° 13'	+0 03	+0 08	*0.73	*0.73	0.9	1.4	0.6	
2739	Nonopapa, Niihau Island . . . . .	21° 52'	160° 14'	-0 16	-0 11	*0.77	*0.77	1.0	1.6	0.7	
	Kauai Island			on Nawiliwili, p.224							
2741	Waimea Bay . . . . .	21° 57'	159° 40'	+0 07	+0 18	*0.86	*0.91	1.0	1.6	0.7	
2743	Port Allen, Hanapepe Bay . . . . .	21° 54.2'	159° 35.5'	-0 15	-0 10	*1.01	*1.00	1.24	1.84	0.82	
2745	NAWILIWILI . . . . .	21° 57.3'	159° 21.4'	Daily predictions				1.22	1.83	0.81	
2747	Hanamaulu Bay . . . . .	22° 00'	159° 20'	+0 10	+0 04	*1.00	*0.91	0.0	1.2	1.8	
2749	Hanaelei Bay . . . . .	22° 13'	159° 30'	-1 01	-1 22	*1.07	*0.91	1.3	1.8	0.8	
	Oahu Island			on Honolulu, p.228							
2751	Haleiwa, Waialua Bay † . . . . .	21° 36'	158° 07'	-1 02	-2 05	*0.80	*0.80	—	1.6	0.7	
2753	Waianae . . . . .	21° 27'	158° 12'	+0 20	+0 18	*0.93	*1.00	1.2	1.8	0.8	
2755	Pearl Harbor Entrance, Bishop Point . . . . .	21° 19.8'	157° 58.0'	+0 15	+0 06	*1.00	*0.88	1.30	1.66	0.79	
2757	Pearl Harbor, Ford Island Ferry . . . . .	21° 22.1'	157° 56.4'	+0 16	+0 08	*1.03	*0.88	1.35	1.73	0.82	
2759	HONOLULU . . . . .	21° 18.5'	157° 52.0'	Daily predictions				1.28	1.64	0.80	
2761	Hanauma Bay . . . . .	21° 17'	157° 42'	-0 59	-0 45	*1.00	*1.00	1.3	1.9	0.8	
				on Moku O Loe, p.232							
2763	Waimanalo . . . . .	21° 20'	157° 42'	+0 11	+0 05	*0.88	*0.75	1.1	1.8	0.8	
2765	MOKU O LOE . . . . .	21° 26.2'	157° 47.6'	Daily predictions				1.5	2.1	1.0	
2767	Waikane, Kaneohe Bay . . . . .	21° 30'	157° 51'	-0 22	-0 04	*1.13	*1.00	1.4	2.2	1.1	
2769	Laie Bay . . . . .	21° 39'	157° 56'	-0 21	-0 32	*1.00	*0.75	1.3	2.2	0.9	
	Molokai Island			on Honolulu, p.228							
2771	Kolo . . . . .	21° 06'	157° 12'	+0 05	+0 01	0.0	0.0	1.3	2.0	0.8	
2773	Kaunakakai . . . . .	21° 05.1'	157° 01.9'	-0 10	-0 14	*1.13	*1.25	1.42	1.82	0.91	
2775	Kamalo Harbor . . . . .	21° 03'	156° 53'	-0 37	-0 16	+0.1	0.0	1.4	2.1	0.9	
2777	Pukoo Harbor . . . . .	21° 04'	156° 48'	-1 03	-0 48	+0.1	0.0	1.4	2.1	0.9	
2779	Kaumalapau, Lanai Island . . . . .	20° 47'	157° 00'	+0 02	+0 03	+0.2	0.0	1.5	2.2	0.9	
	Kahoolawe Island			on Kahului, p.236							
2781	Kuheiia Bay . . . . .	20° 36'	156° 36'	-0 09	-0 09	+0.2	0.0	1.5	2.1	0.9	
2783	Smuggler Cove . . . . .	20° 31'	156° 41'	-0 15	+0 03	+0.2	0.0	1.5	2.2	0.9	
	Maui Island			on Kahului, p.236							
2785	KAHULUI . . . . .	20° 53.9'	156° 28.3'	Daily predictions				1.6	2.3	1.1	
2787	Hana . . . . .	20° 46'	155° 59'	+0 40	+0 18	*1.05	*0.54	1.8	2.5	1.1	
2789	Makena . . . . .	20° 39'	156° 27'	+1 21	+1 09	*0.73	*0.54	1.2	1.8	0.8	
2791	Kihei, Maalaea Bay . . . . .	20° 47'	156° 28'	+1 52	+1 19	*0.94	*0.54	1.6	2.3	1.0	
2793	Lahaina . . . . .	20° 53'	156° 41'	+1 18	+1 01	*0.89	*0.81	1.4	2.2	1.0	
	Hawaii Island			on Hilo, p.240							
2795	Mahukona . . . . .	20° 11'	155° 54'	+0 38	+0 42	*0.80	*0.67	1.4	2.1	0.9	
2797	Kawaihae . . . . .	20° 02.4'	155° 49.9'	+1 01	+0 57	*0.83	*0.60	1.46	2.14	0.91	
2799	Kailua Kona . . . . .	19° 39'	156° 00'	+0 38	+0 37	*0.80	*0.67	1.4	2.1	0.9	
2801	Napoopo, Kealakekua Bay . . . . .	19° 28'	155° 55'	+0 48	+0 47	*0.80	*0.67	1.4	2.1	0.9	
2803	Honuapo . . . . .	19° 05'	155° 33'	+0 38	+0 33	*1.01	*1.00	1.7	2.5	1.1	
2805	HILO . . . . .	19° 43.8'	155° 03.4'	Daily predictions				1.67	2.40	1.13	
2807	JOHNSTON ATOLL . . . . .	16° 44.3'	169° 31.8'	Daily predictions, p.244				1.9	2.2	1.1	

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Latitude	Longitude	Time		Height		Mean	Spring		
				High Water	Low Water	High Water	Low Water				
	HAWAIIAN ISLANDS—cont. Time meridian, 150° W	North	West	h m	h m	ft	ft	ft	ft	ft	
	on Honolulu, p.228										
2809	Palmyra Island . . . . .	5° 53'	162° 05'	+1 19	+1 13	+0.6	-0.2	2.0	2.7	1.0	
2811	Howland Island . . . . .	0° 48'	176° 38'	+3 48	+3 46	+4.2	+0.4	5.0	6.2	3.1	
	Time meridian, 105° W										
2813	Easter Island (Chile) . . . . .	27° 09'	109° 27'	-1 22	-1 46	-0.7	+0.4	1.5	1.9	1.5	
	FRENCH POLYNESIA Time meridian, 142° 30' W										
2815	<i>Marquesas Islands</i>										
2817	Taio Hae Bay, Nuku Hiva Island . . . . .	8° 56'	140° 06'	-3 10	-3 38	+1.1	+0.5	3.2	3.8	2.4	
	Vai Tahu, Tahu Ata Island . . . . .	9° 56'	139° 06'	-4 42	-5 08	+0.8	+0.9	2.5	3.1	2.4	
	Time meridian, 135° W										
2819	<i>Tuamotu Archipelago</i>										
	Mangareva Island . . . . .	23° 08'	134° 58'	-4 29	-4 57	-0.7	+0.1	1.8	2.3	1.3	
2821	Time meridian, 150° W										
2823	Hao (Bow or La Harpe) Island . . . . .	18° 04'	140° 59'	-4 54	-5 20	-0.2	+0.5	1.9	2.4	1.7	
	Rahiroa (Rangiroa) Island . . . . .	14° 57'	147° 44'	-2 36	-3 04	-0.3	+0.6	1.7	2.1	1.7	
	on Papeete, p.248										
2825	<i>Society Islands</i>										
2827	PAPEETE HARBOR, Tahiti Island <30> . . . . .	17° 32'	149° 34'					0.8	1.1	0.5	
2829	Papeari Harbor, Tahiti Island <30> . . . . .	17° 45'	149° 22'	--	--	*0.31	*0.31	0.8	1.1	0.5	
	Borabora Island <30> . . . . .	16° 30'	151° 46'	--	--	--	--	0.5	0.7	--	
	on Apia, p.252										
2831	<i>Tubuai or Asutral Islands</i>										
2833	Rapa (Oparo) Island . . . . .	27° 36'	144° 17'	-7 11	-7 37	-0.2	+0.5	1.9	2.4	1.7	
	Tubuai Island . . . . .	23° 22'	149° 28'	-4 13	-4 41	-0.2	+0.5	1.9	2.4	1.7	
	COOK ISLANDS										
2835	Penrhyn (Tongareva) Island . . . . .	9° 00'	157° 59'	-0 13	-0 15	(*0.27+0.9)		0.7	0.8	1.3	
	Time meridian, 157° 30' W										
2837	Manihiki . . . . .	10° 25'	161° 01'	--	--	--	--	0.3	0.4	1.0	
2839	Aitutaki Island . . . . .	18° 51'	159° 47'	+1 51	+1 19	(*0.46+0.8)		1.2	1.4	1.5	
2841	Avarua, Rarotonga . . . . .	21° 12'	159° 46'	+2 04	+1 35	-1.0	-0.2	1.8	2.2	1.0	
	Time meridian, 165° W										
2843	Pukapuka . . . . .	10° 52'	165° 53'	+0 26	+0 28	-0.9	+0.3	1.0	1.2	1.5	
2845	Suvarov Island . . . . .	13° 13'	163° 09'	+0 32	-0 05	(*0.54+0.6)		1.4	1.9	1.5	
	TOKELAU										
	Time meridian, 165° W										
2847	Fakaofa Island . . . . .	9° 23'	171° 15'	-0 29	-0 57	-0.2	+0.5	1.9	2.4	1.7	
	SAMOA and AMERICAN SAMOA										
2849	Asau Harbor, Savaii Island . . . . .	13° 30'	172° 38'	-0 03	-0 32	+0.2	-0.3	3.1	3.9	1.6	
2851	APIA (Observatory), Upolu Island . . . . .	13° 48'	171° 46'					2.6	3.2	1.6	
2853	PAGO PAGO Harbor, Tutuila Island . . . . .	14° 16.8'	170° 41.4'					2.51	2.72	1.32	
2855	Tau Island, Manua Islands . . . . .	14° 13'	169° 32'	-0 04	-0 34	+0.8	-0.3	3.7	4.6	1.8	
2857	Niue Island (N.Z.) . . . . .	19° 02'	169° 55'	+1 09	+0 37	+0.6	+1.0	2.2	2.4	2.4	
	Time meridian, 180° E										
	<i>South</i>		<i>East</i>								
2859	Wallis Islands (France) . . . . .	13° 22'	176° 11'	-1 38	-1 51	(*1.42+0.5)		3.7	4.6	2.8	
	TONGA										
	Time meridian, 195° E										
2861	Neiafu . . . . .	18° 39'	186° 01'	+0 04	-0 21	+1.9	+1.5	3.0	3.4	3.3	
2863	Lifuka Island . . . . .	19° 48'	185° 39'	-0 09	-0 45	+1.7	+1.4	2.9	3.2	3.2	
2865	Nomuka . . . . .	20° 16'	185° 12'	+0 09	-0 16	+1.8	+1.1	3.3	3.8	3.1	
2867	Nukualofa . . . . .	21° 08'	184° 48'	+0 09	-0 13	+1.8	+0.9	3.5	4.0	3.0	
	Time meridian, 180° E										
2869	Raoul or Sunday Island . . . . .	29° 15'	182° 03'	-1 52	-2 20	+1.9	+1.5	3.0	3.3	3.3	
	FIJI										
2871	Tailevu, Viti Levu Island . . . . .	17° 39'	178° 35'	+0 00	-0 06	+0.8	+1.0	3.6	4.4	3.0	
2873	Nandi Waters, Viti Levu . . . . .	17° 45'	177° 26'	-0 03	-0 08	+1.3	+1.0	4.1	4.9	3.3	
2875	Ngaloa Harbor, Kandavu Island . . . . .	19° 05'	178° 11'	-0 07	+0 01	+0.8	+0.2	4.4	5.1	2.6	
2877	Matuku Island . . . . .	19° 10'	179° 45'	-0 04	-0 01	+0.7	+1.1	3.4	4.1	3.0	
2879	Totoya Island . . . . .	18° 59'	180° 07'	+1 00	+0 51	+0.9	+0.9	3.8	4.1	3.0	
2881	Moala Island . . . . .	18° 32'	179° 58'	-0 49	-0 38	+1.2	+0.6	4.4	4.9	3.0	

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Latitude	Longitude	Time		Height		Mean	Spring		
				High Water	Low Water	High Water	Low Water				
		South	East	h m	h m	ft	ft	ft	ft	ft	
FIJI-cont. Time meridian, 180° E											
2883	SUVA HARBOR, Viti Levu Island .....	18° 09'	178° 26'								
2885	Ngau Island .....	18° 00'	179° 14'	+0 14	-0 12	+0.4	+0.8	3.82	4.27	2.15	
2887	Nairai Island .....	17° 48'	179° 23'	-0 11	+0 08	-0.1	+0.3	3.4	3.7	2.7	
2889	Levuka, Ovalau Island .....	17° 41'	178° 51'	-0 14	-0 12	+0.9	+1.1	3.6	4.3	3.1	
2891	Nandi, Vanua Levu Island .....	16° 58'	178° 47'	+0 01	+0 09	+0.3	+0.9	3.2	3.9	2.7	
on Suva, p.256											
2893	Rotumah Island .....	12° 29'	177° 07'	-0 15	+0 00	(*0.81+1.0)		3.5	4.7	2.9	
TUVALU											
2895	Fongafale, Funafuti Atoll .....	8° 32'	179° 12'	-0 37	-0 30	+0.2	+0.4	4.1	5.6	2.8	
KIRIBATI Time meridian, 150° W											
2897	<i>Line Islands</i>										
2899	Christmas Island .....	1° 59'	157° 28'	+0 49	+0 39	+0.7	0.0	1.9	2.3	1.2	
	Fanning Island .....	3° 51'	159° 22'	+2 38	+2 39	+0.4	+0.4	1.2	1.6	1.2	
on Apia, p.252											
2901	Caroline Island .....	10° 00'	150° 14'	-2 56	-3 23	(*0.35+0.4)		0.9	1.1	0.9	
Time meridian, 165° W											
2903	<i>Phoenix Islands</i>										
	Canton Island .....	2° 48'	171° 43'	-0 01	-0 40	+0.4	+0.5	2.5	3.4	2.1	
Time meridian, 180° E											
2905	<i>Gilbert Islands</i>										
2907	Makin Atoll .....	3° 02'	172° 48'	+0 12	+0 15	+0.7	-0.1	4.3	6.1	3.3	
2909	Tarawa Atoll .....	1° 22'	172° 56'	+0 19	+0 21	+0.8	-0.1	4.4	6.2	3.3	
	Abemama Atoll .....	0° 28'	173° 50'	+0 27	+1 03	+0.7	-0.1	4.3	6.1	3.3	
2911	Nonouti Atoll .....	0° 40'	174° 27'	-0 05	-0 05	+1.0	+0.1	4.4	6.2	3.5	
Time meridian, 165° E											
2913	Ocean Island .....	0° 52'	169° 35'	-0 21	-0 18	+0.5	+0.3	3.7	5.2	3.4	
NEW ZEALAND, South Island											
Time meridian, 180° E											
2915	Paterson Inlet, Stewart Island .....	46° 54'	168° 07'	-5 42	-5 37	-1.9	+0.6	5.5	6.4	5.2	
2917	Akaroa .....	43° 48'	172° 55'	-3 31	-3 12	*0.65	*0.33	5.8	6.3	3.5	
2919	Timaru .....	44° 24'	171° 15'	-4 24	-4 13	*0.72	*1.00	5.3	5.8	4.5	
2921	Oamaru .....	45° 06'	170° 58'	-4 06	-3 55	*0.66	*1.06	4.6	5.3	4.2	
2923	Otago Harbor entrance .....	45° 47'	170° 44'	-4 33	-3 50	*0.58	*0.33	5.1	5.6	3.2	
2925	Port Chalmers, Otago Harbor .....	45° 49'	170° 39'	-3 35	-3 23	*0.58	*0.33	5.1	5.7	3.2	
2927	Dunedin, Otago Harbor .....	45° 53'	170° 33'	-3 00	-2 11	-4.0	-1.2	5.2	5.7	3.2	
2929	Nugget Point .....	46° 26'	169° 48'	-4 52	-4 32	-2.4	+0.5	5.1	5.8	4.9	
2931	Waipapa Point .....	46° 39'	168° 51'	-5 17	-5 11	-1.3	+0.6	6.1	6.8	5.5	
2933	Bluff .....	46° 36'	168° 20'	-5 34	-5 27	-1.4	+0.5	6.1	7.2	5.4	
2935	New River .....	46° 32'	168° 15'	-5 56	-5 49	-1.1	-0.1	7.0	7.9	5.2	
2937	Colac Bay .....	46° 22'	167° 54'	-7 16	-6 56	-2.6	-0.2	5.6	6.8	4.4	
2939	Preservation Inlet .....	46° 04'	166° 41'	+4 59	+5 08	-2.9	-0.6	5.7	6.7	4.0	
2941	Dusky Sound .....	45° 47'	166° 32'	+4 49	+4 58	-3.1	-0.4	5.3	6.4	4.0	
2943	Deep Cove .....	45° 27'	167° 10'	+4 42	+4 49	-3.6	-0.3	4.7	5.4	3.9	
2945	Bligh Sound .....	44° 53'	167° 32'	+4 29	+4 38	-3.2	-0.3	5.1	6.1	4.0	
2947	Milford Sound .....	44° 40'	167° 56'	+4 24	+4 33	-3.2	-0.3	5.1	6.1	4.0	
2949	Jackson's Bay .....	43° 59'	168° 37'	+4 09	+4 18	-3.1	-0.4	5.3	6.4	4.0	
2951	Haast River entrance .....	43° 50'	169° 03'	+3 59	+4 08	-3.1	-0.4	5.3	6.4	4.0	
2953	Bruce Bay .....	43° 35'	169° 36'	+3 49	+3 58	-3.0	-0.5	5.5	6.6	4.0	
2955	Okitoto .....	43° 13'	170° 11'	+3 44	+3 53	-2.9	-0.5	5.6	6.7	4.1	
2957	Hokitika Bar .....	42° 43'	170° 58'	+3 39	+3 48	-2.9	-0.6	5.7	7.0	4.0	
2959	Greymouth .....	42° 26'	171° 13'	+3 34	+3 43	-2.8	-0.7	5.9	7.3	4.0	
2961	Westport .....	41° 44'	171° 36'	+3 29	+3 38	-0.1	+0.1	7.8	9.8	5.8	
2963	West Haven Inlet .....	40° 35'	172° 32'	+2 24	+2 33	-1.1	-0.6	7.5	9.0	4.9	
2965	Motupipi River entrance .....	40° 50'	172° 51'	+1 48	+1 41	*1.43	*1.28	11.7	14.0	8.2	
2967	Astrolabe Road .....	40° 58'	173° 03'	+1 53	+1 46	+4.5	+0.2	12.3	15.4	8.2	
2969	Nelson .....	41° 16'	173° 16'	+2 13	+2 06	+1.2	+0.2	9.0	11.6	6.5	
2971	Croixilles Harbor .....	41° 05'	173° 42'	+1 58	+1 51	+2.4	+0.1	10.3	12.1	7.1	
2973	Greville Harbor, D'Urville Island .....	40° 52'	173° 48'	+2 17	+2 20	-0.4	-0.6	8.2	10.8	5.3	
2975	Stephens Island .....	40° 40'	174° 01'	+1 43	+1 36	-2.2	-0.3	6.1	7.0	4.6	
2977	Elmslie Bay .....	40° 56'	173° 51'	+1 23	+1 06	-1.8	-1.5	7.7	8.9	4.2	
2979	Pelorus Sound entrance .....	40° 55'	173° 59'	+1 13	+0 46	-2.4	-0.5	6.1	7.2	4.4	
2981	Queen Charlotte Sound entrance .....	41° 07'	174° 17'	+1 16	+0 53	-5.7	-1.2	3.5	4.7	2.4	
2983	Picton, Queen Charlotte Sound .....	41° 17'	174° 00'	+1 20	+0 50	-5.8	-1.3	3.5	4.8	2.3	

Endnotes can be found at the end of table 2.

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No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Latitude	Longitude	Time		Height		Mean	Spring		
				High Water	Low Water	High Water	Low Water				
	NEW ZEALAND, South Island—cont. Time meridian, 180° E	South	East	h m	h m	ft	ft	ft	ft	ft	
on Wellington, p.264											
2985	Cape Campbell .....	41° 44'	174° 15'	+0 38	+0 35	+1.1	0.0	4.3	4.6	3.5	
2987	Kaikoura Peninsula .....	42° 24'	173° 42'	+0 13	+0 15	+1.3	-0.1	4.6	4.9	3.5	
2989	Lyttelton .....	43° 37'	172° 43'	-0 17	-0 15	+1.7	-1.1	6.0	6.4	3.2	
NEW ZEALAND, North Island											
2991	Gisborne .....	38° 41'	178° 02'	+1 05	+1 08	+1.5	+0.3	4.4	4.8	3.8	
2993	Clyde, Wairoa River .....	39° 03'	177° 26'	+1 00	+0 51	+0.8	-0.5	4.5	4.8	3.0	
2995	Napier .....	39° 29'	176° 55'	+0 58	+0 49	+0.7	-0.5	4.4	4.6	3.0	
2997	Cape Palliser .....	41° 37'	175° 17'	+0 10	+0 10	+0.2	-0.1	3.5	3.7	3.0	
2999	WELLINGTON .....	41° 17'	174° 47'				Daily predictions	3.2	3.4	2.9	
on Auckland, p.268											
3001	Porirua Harbor .....	41° 04'	174° 51'	+2 05	+2 02	-4.6	0.0	3.4	4.8	3.5	
3003	Manawatu River entrance .....	40° 28'	175° 13'	+1 43	+1 36	-2.9	-0.2	5.3	6.8	4.3	
3005	Wanganui River entrance .....	39° 57'	174° 49'	+2 38	+2 31	-1.9	+0.5	5.6	7.2	5.1	
3007	Opunake Bay .....	39° 28'	173° 51'	+1 58	+1 51	+0.1	+0.2	7.9	10.1	6.0	
3009	Port Taranaki .....	39° 04'	174° 02'	+2 21	+2 39	+0.5	+0.1	8.4	10.6	6.1	
3011	Waitara River entrance .....	38° 59'	174° 14'	+2 22	+2 40	+0.9	+0.5	8.4	10.5	6.5	
3013	Kawhia .....	38° 04'	174° 49'	+2 39	+2 57	-0.6	-0.5	7.9	10.0	5.3	
3015	Raglan .....	37° 48'	174° 53'	+2 47	+3 05	-0.6	-0.6	8.0	10.2	5.2	
3017	Waikato River .....	37° 24'	174° 45'	+2 17	+2 35	+1.5	+0.9	8.6	10.9	7.0	
3019	Manukau Harbor entrance .....	37° 03'	174° 31'	+2 49	+2 48	-0.3	+0.4	7.3	9.0	5.9	
3021	Cornwallis, Manukau Harbor .....	37° 00'	174° 36'	+2 52	+3 10	+0.7	+0.6	8.1	10.0	6.5	
3023	Onehunga, Manukau Harbor .....	36° 56'	174° 47'	+3 21	+3 30	+2.1	+1.1	9.0	11.1	7.4	
3025	Pouto Point, Kaipara Harbor .....	36° 22'	174° 11'	+3 07	+3 25	+0.4	+0.5	7.9	9.9	6.2	
3027	Martins Bay, Hokianga River .....	35° 32'	173° 23'	+2 22	+2 40	+0.2	-0.3	8.5	10.8	5.8	
3029	Cape Maria van Diemen .....	34° 29'	172° 38'	+1 47	+2 05	-2.1	-0.5	6.4	7.4	4.5	
3031	Parangarenga .....	34° 32'	173° 00'	+0 50	+0 50	-2.2	0.0	5.8	6.9	4.7	
3033	Awanui River .....	34° 54'	173° 18'	+0 50	+0 30	-3.9	-1.3	5.4	6.3	3.2	
3035	Whangaroa .....	35° 02'	173° 47'	+0 20	+0 20	-2.7	-0.1	5.4	6.2	4.4	
3037	Port Russell .....	35° 16'	174° 07'	+0 12	+0 12	-2.4	0.0	5.6	6.4	4.6	
3039	Whangarei Heads .....	35° 49'	174° 30'	+0 20	+0 20	-2.3	-0.1	5.8	6.7	4.6	
3041	Port Whangarei, railway wharf .....	35° 45'	174° 20'	+0 40	+0 40	-1.1	+0.3	6.6	7.7	5.4	
3043	Bon Accord Harbor, Kauai Island .....	36° 27'	174° 50'	+0 15	+0 25	-1.0	-0.1	7.1	8.0	5.2	
3045	Nagle Cove, Great Barrier Island .....	36° 09'	175° 21'	-0 24	-0 11	-2.6	-0.4	5.8	6.6	4.3	
3047	AUCKLAND .....	36° 51'	174° 46'			Daily predictions		8.0	9.2	5.8	
3049	Waiheke .....	36° 47'	175° 09'	-0 06	-0 06	-0.4	0.0	7.6	8.6	5.6	
3051	Coromandel .....	36° 46'	175° 30'	-0 15	-0 15	+0.6	+0.2	8.4	9.7	6.2	
3053	Mercury Bay .....	36° 50'	175° 43'	-0 20	-0 20	-3.0	+0.2	4.8	5.4	4.4	
3055	Tauranga Harbor entrance .....	37° 39'	176° 11'	-0 12	-0 01	-3.9	-0.6	4.7	5.2	3.6	
3057	Ohia .....	37° 59'	177° 07'	+0 17	-0 03	-3.7	-0.6	4.9	5.3	3.7	
3059	East Cape .....	37° 41'	178° 33'	-0 55	-0 45	-3.3	+0.2	4.5	5.0	4.2	
NEW CALEDONIA Time meridian, 165° E											
on Yokohama, p.20											
3061	Port Goro, Toemo Island .....	22° 20'	167° 01'	+2 06	+2 07	(*0.57+0.5)		2.0	2.6	2.7	
3063	Noumea .....	22° 16'	166° 27'	+3 05	+3 16	(*0.83+0.8)		2.9	3.8	4.0	
3065	Port Nepui .....	21° 21'	164° 58'	+3 11	+3 35	(*0.89+0.3)		3.1	4.0	3.7	
3067	Paagoumene .....	20° 29'	164° 11'	+3 10	+3 18	(*0.91-0.2)		3.2	4.1	3.3	
3069	Loyalty Islands Shepenehe Anchorage .....	20° 47'	167° 08'	+1 23	+1 23	+0.3	-0.4	4.2	5.4	3.7	
VANUATU											
3071	Vila Harbor, Efate Island .....	17° 44'	168° 19'	+0 49	+0 59	(*0.80-0.7)		2.8	3.5	2.3	
3073	Havannah Harbor, Efate Island .....	17° 35'	168° 15'	+0 55	+0 59	*0.70 *0.70		2.4	3.0	2.6	
3075	Port Sandwich, Malekula Island .....	16° 26'	167° 47'	+0 03	+0 11	(*0.80-0.7)		2.8	3.8	2.3	
3077	Tangoa Island .....	15° 35'	166° 59'	+1 07	+1 11	*0.56 *0.50		2.1	2.6	2.1	
3079	Espirito Santo Island, Pekoa Chan .....	15° 31'	167° 10'	+0 23	+0 28	*0.76 *0.65		2.9	3.6	2.8	
3081	Aesi .....	15° 26'	167° 14'	-0 22	-0 15	*0.80 *0.70		3.0	3.8	2.9	
3083	Port Patteson, Banks Islands .....	13° 51'	167° 34'	+1 31	+1 31	+0.55 *0.45		2.1	2.6	2.0	
SOLOMON ISLANDS											
3085	Santa Cruz Islands Manevai Bay .....	11° 38'	166° 55'	-0 14	-0 14	*0.55 *0.45		2.1	2.6	2.0	
on Dreger Harbor, p.272											
3087	Kukum, Guadalcanal Island § .....	9° 25'	160° 01'	+0 25	+0 00	-2.5	-2.5	1.6	2.3	1.4	
3089	Port Purvis, Florida Island § .....	9° 09'	160° 15'	+1 30	+0 15	-2.0	-2.3	2.0	2.3	1.7	
3091	Tulagi Island § .....	9° 06'	160° 09'	+0 38	-0 35	-2.0	-2.3	2.0	2.3	1.7	
on Cebu, p.180											
3093	Auki Harbor, Malaita Island .....	8° 47'	160° 42'	-7 20	-7 10	(*0.88+0.6)		2.9	4.1	2.6	

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Latitude	Longitude	Time		Height		Diurnal	Tropic		
				High Water	Low Water	High Water	Low Water				
	SOLOMON ISLANDS—cont. Time meridian, 165° E	South	East	h m	h m	ft	ft	ft	ft	ft	
on Dreger Harbor, p.272											
3095	Karunohu Island § .....	8° 30'	157° 58'	+0 14	+1 05	-2.4	-2.3	1.6	2.3	1.5	
3097	Nususonga, New Georgia Island § .....	8° 20'	157° 15'	-0 01	+1 56	-2.7	-2.7	1.7	2.4	1.2	
3099	Gizo Harbor, New Georgia Group § .....	8° 06'	156° 51'	-0 40	+1 22	-2.0	-1.8	1.5	2.2	1.9	
on Chuuk, p.204											
3101	Bismark Archipelago Kokopo, New Britain Island § .....	4° 21'	152° 17'	+0 23	+0 48	-2.1	-2.1	1.7	2.4	1.8	
3103	Rabaul, New Britain Island § .....	4° 12'	152° 12'	-0 24	+0 18	-2.7	-2.7	1.5	2.1	1.0	
3105	Bagaterre Haven, New Ireland I § .....	2° 47'	151° 00'	-8 49	-6 46	-2.7	-2.7	1.7	2.4	1.2	
3107	West Harbor, New Hanover Island § .....	2° 28'	149° 58'	-9 04	-7 01	-2.8	-2.8	1.6	2.3	1.1	
on Djakarta, p.156											
3109	Emirau Island § .....	1° 40'	149° 55'	-0 39	-0 23	*1.17	*1.17	1.7	2.2	2.0	
3111	Seeadler Harbor, Manus Island § .....	2° 01'	147° 16'	+5 36	+5 18	-0.4	-0.4	2.0	2.6	1.7	
on Dreger Harbor, p.272											
3113	Finsch Harbor § .....	6° 33'	147° 52'	-0 12	-0 40	-1.8	-1.8	1.7	2.2	2.0	
3115	DREGER HARBOR § .....	6° 39'	147° 53'	<i>Daily predictions</i>				1.7	2.4	3.8	
3117	East Ape (Goschen Strait) § .....	10° 14'	150° 53'	-1 43	+0 04	-2.5	-2.4	1.6	2.3	1.4	
3119	Blakeney Island § .....	10° 25'	151° 13'	-1 37	+1 28	-1.8	-2.0	--	2.6	1.9	
on Townsville, p.280											
3121	South Cape .....	10° 43'	150° 16'	-0 03	-0 19	(*0.48+1.2)		2.6	3.7	3.7	
3123	Dedele Point .....	10° 14'	148° 43'	+0 21	+0 21	*0.78	*0.78	4.2	6.0	4.1	
3125	Port Moresby .....	9° 29'	147° 08'	+0 17	-0 04	(*0.67+1.2)		3.6	5.2	4.8	
on Darwin, p.276											
3127	Fly River entrance .....	8° 42'	143° 37'	+2 55	+2 47	*0.54	*0.43	7.9	11.2	7.0	
on Singapore, p.144											
3129	INDONESIA, NEW GUINEA Merauke .....	8° 29'	140° 23'	+1 36	+1 50	+7.2	+4.5	8.4	10.7	11.0	
3131	Digul River entrance § .....	7° 07'	138° 45'	-7 00	-7 03	*1.94	*1.65	15.9	19.3	14.5	
3133	Etna Bay .....	3° 56'	134° 40'	-8 36	-8 36	-0.4	-0.1	5.4	6.7	4.9	
3135	Sekar Bay, Berau Gulf .....	2° 42'	132° 25'	-0 36	-0 28	(*0.74+2.1)		2.6	3.3	4.9	
3137	Wasian River entrance, Berau Gulf .....	2° 13'	133° 33'	-5 20	-5 17	+1.4	+0.3	9.8	12.3	9.2	
3139	Modan, Berau Gulf .....	2° 23'	133° 54'	-5 21	-5 18	+5.6	+1.3	13.0	16.4	11.8	
on Yokohama, p.20											
3141	AUSTRALIA, North Coast Saonek, Dampier Strait .....	0° 27'	130° 46'	+1 53	+2 02	(*0.94+0.3)		3.3	4.5	3.9	
3143	Manokwari .....	0° 52'	134° 05'	+1 50	+1 59	-0.2	-0.1	3.4	4.6	3.6	
3145	Mios Woendi Lagoon, Schouten Islands .....	1° 16'	136° 23'	+1 52	+1 44	*0.95	*0.95	3.3	4.2	3.6	
3147	Kajo Bay .....	2° 32'	140° 44'	+1 51	+1 59	(*0.51+1.1)		1.8	2.0	3.0	
on Darwin, p.276											
3149	Tapa Bay, Bynoe Harbor .....	12° 27'	130° 36'	-0 04	-0 04	*0.88	*0.90	11.6	16.8	12.0	
3151	East Point, Bynoe Harbor .....	12° 35'	130° 34'	+0 04	+0 04	*0.91	*0.96	11.9	17.0	12.6	
3153	Night Cliff, Point Darwin .....	12° 23'	130° 50'	+0 06	+0 06	-1.6	-0.5	12.3	17.6	12.6	
3155	DARWIN .....	12° 28'	130° 51'	<i>Daily predictions</i>				13.4	18.8	13.6	
3157	Cape Hotham .....	12° 03'	131° 17'	+1 14	+1 14	*0.64	*0.67	8.3	11.2	8.8	
on Darwin, p.276											
3159	Time meridian, 120° E Cape Keith, Melville Island .....	11° 36'	131° 28'	+0 03	+0 03	*0.54	*0.55	7.2	9.6	7.4	
3161	Cape Don Boat Harbor .....	11° 19'	131° 46'	-1 02	-1 19	*0.33	*0.33	4.0	5.6	4.6	
3163	Arnhem Bay .....	12° 11'	136° 06'	+4 15	+4 10	(*0.85-3.0)		11.4	13.6	8.6	

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Latitude	Longitude	Time		Height		Mean	Spring		
				High Water	Low Water	High Water	Low Water				
	AUSTRALIA, East Coast Time meridian, 150° E	South	East	h m	h m	ft	ft	ft	ft	ft	
on Townsville, p.280											
3165	Thursday Island, Torres Strait <31>	10° 35'	142° 13'	---	---	---	---	---	6.1	--	
3167	Tern Island	11° 00'	142° 45'	+1 38	+1 36	+1.1	+0.9	5.6	8.4	6.3	
3169	Hannibal Island	11° 36'	142° 56'	+1 02	+1 01	0.0	0.0	5.4	8.0	5.3	
3171	Piper Island	12° 15'	143° 15'	+0 27	+0 28	*0.86	*0.96	4.4	6.6	4.7	
3173	Restoration Island	12° 37'	143° 28'	+0 23	+0 23	(*0.70+1.0)	3.8	5.8	4.7		
3175	Flinders Islands	14° 10'	144° 15'	+0 15	+0 15	(*0.78+1.9)	4.2	6.2	6.0		
3177	Low Wooded Isle	15° 05'	145° 24'	-0 12	-0 12	(*0.72+1.0)	3.9	5.8	4.8		
3179	Cooktown	15° 28'	145° 15'	+0 10	+0 10	(*0.72+0.4)	3.9	5.8	4.2		
3181	Low Isles	16° 23'	145° 34'	+0 00	+0 00	(*0.70+1.1)	3.8	5.6	4.8		
3183	Cairns	16° 55'	145° 47'	-0 02	-0 02	(*0.76+0.6)	4.1	6.0	4.6		
3185	Green Island	16° 46'	145° 58'	-0 18	-0 18	(*0.72+0.7)	3.9	5.6	4.5		
3187	High Island	17° 10'	146° 01'	-0 06	-0 06	(*0.72+0.7)	3.9	5.8	4.5		
3189	North Barnard Island	17° 41'	146° 11'	-0 04	-0 04	(*0.76+0.9)	4.1	6.0	4.9		
3191	Dunk Island	17° 56'	146° 09'	-0 06	-0 06	(*0.81+2.3)	4.4	6.4	6.6		
3193	Dungeness (Lucinda)	18° 31'	146° 19'	+0 15	+0 15	+0.3	0.0	5.7	8.0	5.5	
3195	TOWNSVILLE	19° 15'	146° 50'	<i>Daily predictions</i>				5.4	7.6	5.3	
3197	Bowen	20° 01'	148° 15'	+0 52	+0 52	-0.2	0.0	5.2	7.0	5.2	
on Brisbane Bar, p.284											
3199	Hook Island	20° 04'	148° 56'	+1 10	+1 05	+1.9	+1.0	5.9	7.9	5.4	
3201	Molle Island	20° 15'	148° 50'	+1 23	+1 18	*1.36	*1.43	6.7	8.8	5.4	
3203	East Repulse Island	20° 35'	148° 53'	+1 39	+1 34	(*1.82+2.0)	9.1	12.1	9.1		
3205	Carlisle Island	20° 47'	149° 18'	+1 26	+1 21	(*1.88+2.0)	9.4	12.7	9.3		
3207	St. Bees Island	20° 54'	149° 27'	+1 31	+1 26	(*2.10+1.7)	10.5	14.1	9.9		
3209	Refuge Bay, Scafell Island	20° 52'	149° 37'	+1 26	+1 21	(*1.96+2.5)	9.8	13.1	10.1		
3211	Mackay, Queensland	21° 07'	149° 14'	+1 35	+1 30	(*2.44+0.3)	12.2	16.0	9.8		
3213	Sarina Inlet	21° 24'	149° 20'	+1 43	+1 38	(*2.58+1.1)	12.9	16.8	11.2		
3215	Dove Point, Shoalwater Bay	22° 14'	150° 28'	+0 58	+0 53	(*2.58+0.8)	12.9	17.1	10.9		
3217	High Peak Island	21° 57'	150° 41'	+0 40	+0 35	(*2.00+0.8)	10.0	13.4	8.6		
3219	Port Clinton, Coral Sea	22° 32'	150° 45'	+0 15	+0 10	*1.84 *1.64	9.5	12.8	7.1		
3221	Tryon Island	23° 15'	151° 47'	-0 38	-0 43	+1.9 +1.1	5.8	7.6	5.4		
3223	Port Alma, Fitzroy River	23° 34'	150° 52'	-0 10	-0 15	(*1.88+1.2)	9.4	12.5	8.5		
3225	Gladstone, Port Curtis	23° 50'	151° 15'	-0 10	-0 15	+4.2 +1.4	7.8	10.2	6.7		
3227	Lady Musgrave Island	23° 54'	152° 23'	-1 25	-1 25	0.0 +0.6	4.4	5.9	4.2		
3229	Pancake Creek	24° 01'	151° 45'	-0 56	-1 02	+2.3 +1.1	6.2	8.2	5.6		
3231	Lady Elliot Island	24° 07'	152° 43'	-1 19	-1 19	0.0 +0.8	4.2	5.6	4.3		
3233	Burnett Heads	24° 46'	152° 23'	-0 41	-0 41	+1.1 +0.9	5.2	6.6	4.9		
3235	Urangan Jetty	25° 17'	152° 55'	-0 48	-0 48	+3.5 +0.7	7.8	10.2	6.0		
3237	Mary River, Middle Bank	25° 30'	152° 52'	+0 20	+1 00	+3.2 +0.1	8.1	10.5	5.6		
3239	BRISBANE BAR	27° 19'	153° 10'	<i>Daily predictions</i>				5.0	5.9	4.0	
3241	Ballina	28° 52'	153° 35'	-0 59	-0 58	(*0.46+0.7)	2.3	2.9	2.5		
3243	Iluka	29° 25'	153° 22'	-1 15	-1 15	(*0.56+0.8)	2.8	3.6	3.0		
3245	Lord Howe Island	31° 32'	159° 04'	-1 25	-1 20	-0.6 +0.3	4.1	5.3	3.8		
3247	Norfolk Island	29° 04'	167° 56'	-1 17	-1 29	-1.3 -0.4	4.1	5.0	2.9		
Time meridian, 150° E											
on Sydney, p.288											
3249	Coffs Harbor	30° 18'	153° 09'	-0 22	-0 20	0.0 -0.1	3.7	4.7	3.0		
3251	Port Macquarie bar	31° 26'	152° 56'	+0 12	+0 11	-0.3 -0.1	3.2	4.0	2.8		
3253	Nelson's Bay	32° 43'	152° 09'	+0 16	+0 17	+0.1 +0.3	3.4	4.2	3.2		
3255	Newcastle	32° 56'	151° 47'	-0 04	-0 09	0.0 +0.2	3.4	4.2	3.1		
3257	SYDNEY (Fort Denison)	33° 51'	151° 14'	<i>Daily predictions</i>				3.6	4.5	3.0	
3259	Port Kembla	34° 29'	150° 55'	+0 00	+0 00	-0.4 -0.2	3.4	4.0	2.7		
3261	Moruya River bar	35° 54'	150° 08'	+0 10	+0 10	-0.4 +0.1	3.1	3.9	2.9		
3263	Eden	37° 04'	149° 54'	+0 00	+0 00	-0.8 -0.1	2.9	3.6	2.5		
3265	Gabo Island	37° 34'	149° 55'	-0 10	-0 01	+0.2 +1.2	2.6	3.0	3.7		
Tasmania											
on Port Phillip, p.292											
3267	Stack Island	40° 36'	144° 47'	+0 46	+1 32	(*1.81-1.1)	5.6	6.2	4.1		
3269	Devonport	41° 09'	146° 23'	-0 14	+0 32	+4.8 +0.1	7.8	8.5	5.4		
3271	Port Dalrymple entrance	41° 04'	146° 48'	-0 34	+0 12	(*2.26-1.1)	7.0	8.0	5.5		
3273	Launceston, Tamar River	41° 26'	147° 08'	+1 26	+3 17	(*3.13-0.9)	9.7	10.8	8.2		
on Hong Kong, p.120											
3275	Parsons Bay	43° 06'	147° 45'	+11 22	+11 31	(*0.52+0.8)	1.7	1.8	3.1		
3277	Hobart	42° 53'	147° 20'	+11 09	+11 14	(*0.55+0.9)	1.8	1.9	3.4		
on Port Adelaide, p.296											
3279	Bramble Cove, Port Davey	43° 19'	146° 00'	-3 40	-3 40	(*0.19+1.4)	0.9	1.1	2.3		
on Port Phillip, p.292											
3281	Rabbit Island	38° 55'	146° 31'	+0 01	+0 47	*1.47 *1.00	5.2	6.0	4.0		
3283	Winter Cove, Kent Islands	39° 28'	147° 21'	-0 34	+0 12	*1.67 *1.07	6.0	7.0	4.5		
3285	Great Glennie Island	39° 05'	146° 14'	-0 24	+0 22	*1.67 *1.07	6.0	6.8	4.5		
3287	Venus Bay	38° 40'	145° 44'	+0 00	---	+2.3 --	---	---	---		
3289	Mussel Rock, Westernport	38° 27'	145° 15'	+0 25	-0 10	*1.94 *1.94	6.0	7.5	5.6		
3291	PORT PHILLIP (Point Lonsdale)	38° 18'	144° 37'	<i>Daily predictions</i>				3.1	3.9	2.9	

Endnotes can be found at the end of table 2.

**TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS**

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Latitude	Longitude	Time		Height		Mean	Spring		
				High Water	Low Water	High Water	Low Water				
	AUSTRALIA, South Coast—cont. Time meridian, 150° E	South	East	h m	h m	ft	ft	ft	ft	ft	
3293	Queenscliff, Port Phillip . . . . .	38° 19'	144° 40'	+0 24	+0 24	*0.61	*0.61	1.9	2.1	1.8	
3295	Melbourne (Williamstown) . . . . .	37° 52'	144° 55'	+2 58	+3 41	(*0.55+0.2)		1.7	1.9	1.8	
3297	Geelong, Port Phillip . . . . .	38° 07'	144° 25'	+3 22	+3 22	*0.60	*0.60	1.8	2.0	1.8	
3299	Port Campbell . . . . .	38° 38'	143° 00'	-1 18	-0 53	(*0.45+0.4)		1.4	2.0	1.7	
3301	Warrnambool . . . . .	38° 24'	142° 29'	+0 20	+0 20	(*0.52+0.7)		1.6	2.4	2.2	
		on Port Phillip, p.292									
3303	Portland . . . . .	38° 21'	141° 37'	-4 47	-4 48	(*0.28+0.7)		1.3	1.7	2.0	
	Time meridian, 142° 30' E										
3305	Port MacDonnell . . . . .	38° 04'	140° 42'	-5 16	-5 14	*0.62	*0.62	2.9	4.1	3.0	
3307	Kingston . . . . .	36° 50'	139° 51'	-3 59	-4 15	(*0.47+0.9)		1.6	2.2	3.2	
3309	Second Valley . . . . .	35° 31'	138° 13'	-0 25	-0 26	*0.63	*0.67	2.9	4.0	3.1	
3311	Hog Bay, Kangaroo Island . . . . .	35° 44'	137° 57'	-1 16	-0 59	(*0.53+1.3)		2.2	3.1	3.8	
3313	PORT ADELAIDE . . . . .	34° 51'	138° 30'			Daily predictions		4.7	6.6	4.8	
3315	Port Wakefield . . . . .	34° 16'	138° 06'	-- -	-- -	+1.9	--	--	--	6.3	
3317	PORT LINCOLN . . . . .	34° 43'	135° 52'			Daily predictions, p.300		2.2	3.1	2.9	
3319	Ardrossan, Gulf of St. Vincent . . . . .	34° 26'	137° 55'	-0 23	-0 15	+1.4	+1.4	5.5	7.8	5.8	
3321	Editburg, Gulf of St. Vincent . . . . .	35° 05'	137° 45'	-0 52	-0 48	*0.79	*0.79	3.7	5.2	3.8	
3323	Port Victoria, Spencer Gulf . . . . .	34° 30'	137° 27'	-2 37	-2 37	*0.59	*0.59	2.8	4.0	2.8	
3325	Wallaroo, Spencer Gulf . . . . .	33° 55'	137° 37'	+0 28	+0 34	*0.59	*0.59	2.7	3.8	2.9	
3327	Port Pirie, Spencer Gulf . . . . .	33° 10'	138° 01'	+2 40	+2 48	+0.8	+0.2	5.3	7.4	5.3	
3329	Port Augusta, Spencer Gulf . . . . .	32° 30'	137° 46'	+3 08	+3 16	+1.2	-0.1	6.0	8.4	5.3	
3331	Coffin Bay . . . . .	34° 30'	135° 20'	-4 32	-4 26	*0.70	*0.67	3.4	4.8	3.3	
3333	Port Eyre . . . . .	32° 00'	132° 27'	-5 17	-5 17	*0.70	*0.67	3.4	4.8	3.3	
		on Port Adelaide, p.296									
3335	Albany, Princess Royal Harbor † . . . . .	35° 02'	117° 53'	+12 28	+12 11	(*0.85+0.4)		--	2.2	2.1	
	AUSTRALIA, West and Northwest Coasts										
3337	Bunbury Harbor § . . . . .	33° 19'	115° 39'	+11 04	+10 43	+1.0	+1.6	--	1.9	3.3	
3339	Fremantle, Swan River entrance † . . . . .	32° 03'	115° 45'	+10 52	+10 20	(*0.81+0.5)		--	2.1	2.1	
3341	Champion Bay † . . . . .	28° 47'	114° 35'	+10 41	+9 51	-1.3	-0.8	--	2.0	0.9	
		on Djakarta, p.156									
3343	Carnarvon, Shark Bay . . . . .	24° 52'	113° 39'	+5 08	+4 51	(*0.49+2.3)		2.1	2.9	3.5	
3345	Red Cliff Bay, Shark Bay . . . . .	25° 48'	113° 40'	+7 32	+7 30	(*0.63+1.6)		2.7	3.5	3.2	
3347	Learmonth, Exmouth Gulf . . . . .	22° 11'	114° 05'	+5 17	+5 19	+2.7	+2.1	4.9	6.8	4.9	
3349	Long Island . . . . .	21° 38'	114° 41'	+4 34	+4 28	(*0.84+1.3)		3.6	5.0	3.4	
3351	Beadon Point . . . . .	21° 38'	115° 06'	+4 58	+4 48	+1.0	+1.1	4.2	5.8	3.5	
		on Davao, p.176									
3353	Large Islet . . . . .	21° 18'	115° 30'	+0 23	+0 28	(*0.51+0.9)		6.7	9.7	5.9	
3355	Trimouille Island, Monte Bello Islands . . . . .	20° 23'	115° 33'	-0 04	+0 02	(*0.42+1.5)		5.6	8.1	5.7	
3357	Point Samson . . . . .	20° 38'	117° 12'	-0 27	-0 16	(*0.81+1.3)		10.7	15.3	9.3	
3359	PORT HEDLAND . . . . .	20° 18'	118° 35'			Daily predictions		13.2	19.0	9.9	
3361	Broome . . . . .	18° 00'	122° 13'	-0 22	-0 12	*1.41	*1.41	18.4	27.2	14.0	
3363	Red Bluff . . . . .	17° 04'	122° 19'	+0 01	+0 10	(*1.08+0.7)		14.3	21.6	11.4	
3365	Pender Bay . . . . .	16° 42'	122° 43'	+0 15	+0 15	(*1.23-1.2)		16.2	23.4	11.0	
3367	Karrakatta Bay . . . . .	16° 22'	123° 02'	+1 05	+0 51	(*1.26-0.6)		16.6	23.6	11.9	
3369	Bedford Island . . . . .	16° 09'	123° 19'	+0 43	+0 48	(*1.41+0.2)		18.6	26.8	14.2	
3371	Cockatoo Island . . . . .	16° 05'	123° 35'	+0 21	+0 26	(*1.44+1.4)		19.0	27.3	15.7	
3373	Hall Point, Kid Islet . . . . .	15° 40'	124° 24'	+0 17	+0 22	(*1.54-0.9)		20.3	29.4	14.3	
3375	Prince Frederick Harbor . . . . .	15° 05'	125° 18'	+0 00	+0 00	*1.48	*1.48	19.5	28.1	14.8	
3377	Baudin Island . . . . .	14° 08'	125° 36'	-0 23	-0 18	+1.5	+1.5	13.0	18.8	11.4	
3379	Troughton Island . . . . .	13° 46'	126° 08'	-0 35	-0 35	*1.10	*1.10	14.5	20.9	11.0	
		on Port Hedland, p.304									
3381	Geranium Hbr., Napier Broome Bay . . . . .	13° 56'	126° 35'	-6 45	-7 21	0.0	-0.5	5.2	7.5	4.5	
		on Port Adelaide, p.296									
3383	Reveley Island . . . . .	14° 22'	127° 50'	-0 49	-0 54	*0.80	*0.80	10.7	14.6	11.0	
3385	Lacrosse I., Cambridge Gulf . . . . .	14° 45'	128° 20'	-0 22	-0 28	-1.3	-0.3	12.4	16.9	12.8	
	LESSER ISLANDS, Detached Islands Time meridian, 191° 15' E										
3387	Chatham Islands . . . . .	43° 55'	183° 23'	-1 17	-1 17	+1.4	+0.6	3.4	3.9	2.6	
3389	Auckland Island . . . . .	50° 52'	166° 05'	+6 06	+5 21	+0.2	+0.3	2.5	3.2	1.9	
3391	Perseverance Harbor, Campbell Island . . . . .	52° 34'	169° 07'	+6 57	+6 35	+0.9	+0.5	3.0	3.5	2.3	
3393	Macquarie Island . . . . .	54° 31'	158° 58'	+5 36	+5 08	-0.2	+0.5	1.9	2.4	1.8	
		on Apia, p.252									

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Latitude	Longitude	Time		Height		Mean	Spring		
				High Water	Low Water	High Water	Low Water				
	Islands, Bay of Bengal Time meridian, 82° 30' E	North	East	h m	h m	ft	ft	ft	ft	ft	
on Mergui, p.308											
3395	<i>Nicobar Islands</i> Galathaea Bay .....	6° 47'	93° 51'	-2 08	-2 17	(*0.27+0.5)		3.4	4.6	3.0	
3397	Nankauri Harbor .....	8° 02'	93° 33'	-1 50	-1 58	(*0.29+1.7)		3.6	5.0	4.3	
3399	Car Nicobar .....	9° 10'	92° 50'	-2 05	-2 05	(*0.31+0.5)		3.8	5.3	3.3	
3401	<i>Andaman Islands</i> Sisters Island .....	11° 09'	92° 44'	-1 54	-1 49	(*0.35+0.3)		4.3	5.8	3.5	
3403	Port Blair .....	11° 41'	92° 46'	-1 38	-1 42	(*0.35+0.3)		4.4	6.1	3.5	
3405	Port Cornwallis .....	13° 19'	93° 03'	-1 03	-1 17	(*0.41+0.9)		5.1	7.2	4.6	
BURMA <32> Time meridian, 97° 30' E											
3407	Pulo Besin .....	9° 59'	98° 29'	-0 32	-0 43	(*0.67+1.1)		8.3	11.5	7.2	
3409	Hastings harbor .....	10° 07'	98° 17'	-0 35	-0 42	*0.60 *0.52		7.7	10.8	5.4	
3411	Lanbi Island .....	10° 46'	98° 18'	-0 24	-0 36	*0.73 *0.76		9.0	12.5	6.7	
3413	Owen Island .....	11° 12'	98° 15'	-0 24	-0 36	(*0.69+0.9)		8.5	11.9	7.2	
3415	Pigeon Island .....	11° 47'	98° 13'	-0 32	-0 44	*0.69 *0.69		8.6	12.0	6.3	
3417	MÉRGUI .....	12° 26'	98° 36'			Daily predictions		12.4	17.5	9.1	
3419	Padaw Sound .....	12° 37'	98° 25'	-0 17	-0 17	-0.2 +1.5		10.7	15.1	9.8	
3421	Myinkwa Aw, Tavoy R. entrance .....	13° 33'	98° 08'	-0 11	-0 16	(*0.78+1.1)		9.7	13.6	8.2	
3423	Heinze Bok (Long Island) .....	14° 24'	97° 47'	+0 31	+0 31	(*0.72+1.0)		8.9	12.6	7.6	
3425	Wa Kyun .....	15° 12'	97° 44'	+1 44	+1 46	(*0.78+4.4)		9.7	14.0	11.5	
3427	Double Island .....	15° 52'	97° 35'	+3 17	+3 43	0.0 +0.5		11.9	17.2	9.4	
3429	Kyaikkami, Moulmein River .....	16° 05'	97° 34'	+4 02	+4 15	+2.0 0.0		14.4	20.0	10.1	
on Rangoon, p.312											
3431	Moulmein, Moulmein River <33> .....	16° 29'	97° 37'	-0 53	-0 03	-6.0 <34>		9.5	12.2	6.2	
on Mergui, p.308											
3433	Elephant Point, Rangoon River .....	16° 28'	96° 19'	+5 26	+5 52	+3.7 +2.1		14.0	18.9	12.0	
3435	RANGOON, Rangoon River .....	16° 46'	96° 10'			Daily predictions		13.4	17.0	10.3	
on Mergui, p.308											
3437	China Bakir (Old Lighthouse) .....	16° 17'	96° 12'	+5 04	+5 05	(*0.82+1.1)		10.2	14.2	8.6	
3439	Pymbong Beacon .....	15° 47'	95° 31'	+0 42	+0 33	(*0.35+1.2)		4.3	6.2	4.4	
on Sagar, p.316											
3441	Diamond Island, Bassein River .....	15° 52'	94° 17'	+0 14	+0 00	*0.48 *0.46		4.8	6.5	4.7	
3443	Bassein, Bassein River <35> .....	16° 47'	94° 47'	+4 34	+4 53	*0.52 *0.54		4.9	5.7	5.2	
3445	Chaungtha River entrance .....	16° 57'	94° 26'	-0 23	-0 36	*0.42 *0.32		4.6	6.4	3.9	
3447	Andrew Bay .....	18° 21'	94° 21'	-0 26	-0 42	*0.47 *0.34		5.2	7.2	4.3	
3449	Searle Point, Cheduba Island .....	18° 55'	93° 37'	-0 03	-0 15	+0.56 *0.48		5.8	8.0	5.3	
3451	Kyaukpyu, Ramree Island .....	19° 26'	93° 33'	-0 06	-0 33	*0.58 *0.40		6.5	9.0	5.3	
3453	Sittwe .....	20° 08'	92° 54'	+0 13	-0 05	*0.48 *0.28		5.6	7.6	4.2	
3455	St. Martins Island .....	20° 37'	92° 19'	-0 12	-0 31	*0.62 *0.56		6.3	8.8	6.0	
BANGLADESH <36> Time meridian, 90° E											
3457	Cox's Bazar .....	21° 27'	91° 59'	+0 47	+0 26	*0.67 *0.52		7.2	8.9	6.2	
3459	Pusur River .....	21° 43'	89° 33'	+0 19	+0 12	*0.61 *0.64		5.7	7.5	6.1	
3461	Kutubdia Island .....	21° 52'	91° 50'	+1 45	+1 44	*0.76 *0.44		8.9	11.0	6.7	
3463	Chittagong .....	22° 20'	91° 50'	+3 37	+4 06	*0.80 *0.42		9.6	11.9	6.9	
INDIA <36> Bay of Bengal Time meridian, 82° 30' E											
3465	Matla River Approach .....	20° 58'	88° 35'	-0 22	-0 42	*0.63 *0.54		6.5	8.8	6.0	
3467	SAGAR, Hooghly River .....	21° 39'	88° 03'			Daily predictions		9.7	14.1	9.9	
3469	Diamond Harbor, Hooghly River .....	22° 11'	88° 11'	+1 35	+2 34	*1.11 *0.88		12.0	16.0	10.4	
3471	Calcutta (Garden Reach) Hooghly River .....	22° 33'	88° 18'	+3 56	+5 38	*1.06 *1.00		10.6	13.7	10.3	
3473	Shortt Island .....	20° 47'	87° 04'	-0 31	-0 36	*0.63 *0.52		6.6	9.0	5.9	
3475	Chandbali .....	20° 46'	86° 44'	+1 22	+1 58	*0.54 +0.52		5.3	6.4	5.3	
on Madras, p.320											
3477	False Point .....	20° 25'	86° 47'	+0 35	+0 31	(*2.04+0.8)		4.9	6.8	5.1	
3479	Gopalpur .....	19° 16'	84° 55'	+0 05	+0 05	*1.52 *1.52		3.7	5.2	3.2	
3481	Vizagapatam .....	17° 41'	83° 17'	+0 06	+0 05	+0.9 0.0		3.3	4.6	2.6	
3483	Cocanada .....	16° 56'	82° 15'	+0 17	+0 27	+1.1 +0.2		3.3	4.4	2.8	
3485	Sacramento Shoal .....	16° 36'	82° 19'	+0 03	+0 18	+0.7 +0.1		3.0	4.0	2.5	
3487	MADRAS .....	13° 06'	80° 18'			Daily predictions		2.4	3.2	2.1	
3489	Cuddalore .....	11° 43'	79° 47'	-0 01	+0 05	-0.3 +0.2		1.9	2.5	2.1	
3491	Negapatam .....	10° 45'	79° 51'	+0 19	+0 36	*0.55 +0.33		1.5	2.0	1.1	

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Latitude	Longitude	Time		Height		Mean	Spring		
				High Water	Low Water	High Water	Low Water				
	INDIA Bay of Bengal—cont. Time meridian, 82° 30' E	North	East	h m	h m	ft	ft	ft	ft	ft	
on Colombo, p.324											
3493	Pamban Channel, Gulf of Mannar .....	9° 16'	79° 12'	-0 07	-0 09	+0.1	+0.1	1.4	1.9	1.3	
3495	Tuticorin, Gulf of Mannar .....	8° 48'	78° 10'	-0 15	-0 15	+0.8	+0.6	1.6	2.3	1.9	
3497	Sri Lanka Point Pedro .....	9° 50'	80° 14'	-5 46	-5 42	0.0	-0.1	1.5	2.0	1.2	
3499	Trincomalee .....	8° 33'	81° 13'	-5 54	-5 50	0.0	0.0	1.2	1.7	1.3	
3501	Galle .....	6° 02'	80° 13'	+0 14	+0 19	*0.89	*0.89	1.2	1.8	1.1	
3503	COLOMBO .....	6° 57'	79° 51'			Daily predictions		1.4	2.0	1.2	
3505	Jaffna .....	9° 39'	80° 01'	+0 57	+1 13	(0.71+0.4)		1.0	1.4	1.3	
Arabian Sea											
3507	Quilon .....	8° 53'	76° 34'	-1 43	-1 52	+1.1	+0.8	1.7	2.3	2.2	
3509	Cochin .....	9° 58'	76° 15'	-2 22	-2 24	+0.8	+0.6	1.6	2.0	1.9	
3511	Beyapore .....	11° 10'	75° 48'	-2 34	-2 32	+2.0	+1.3	2.1	2.7	2.9	
on Karachi, p.332											
3513	Calicut .....	11° 15'	75° 46'	+0 43	+0 20	(*0.40+1.3)		2.3	2.9	3.5	
3515	Tellicherry .....	11° 45'	75° 29'	+0 29	+0 28	(*0.48+0.8)		2.8	3.1	3.4	
3517	Cannanore .....	11° 51'	75° 22'	+0 31	+0 22	(*0.47+0.7)		2.7	3.2	3.2	
3519	Mangalore .....	12° 51'	74° 50'	+0 43	+0 38	(*0.48+0.5)		2.8	3.5	3.1	
3521	Malpe .....	13° 21'	74° 41'	+0 09	+0 01	(*0.55+0.4)		3.2	4.0	3.4	
3523	Bhatkal .....	13° 58'	74° 32'	+0 36	+0 38	*0.43 *0.40		2.6	3.5	2.3	
3525	Karwar Bay .....	14° 48'	74° 06'	+0 22	+0 10	*0.67 *0.67		3.8	4.9	3.7	
3527	Mormugao .....	15° 25'	73° 48'	+0 18	+0 08	*0.66 *0.60		4.0	5.2	3.5	
on Bombay, p.328											
3529	Rajapur River entrance .....	16° 37'	73° 20'	-1 00	-1 00	*0.56	*0.72	4.2	5.7	5.0	
3531	BOMBAY (Apollo Bandar) .....	18° 55'	72° 50'			Daily predictions		8.7	11.8	8.4	
3533	Bassein .....	19° 18'	72° 48'	+0 30	+1 04	-0.9	-0.8	8.6	11.1	7.5	
3535	Dahanu .....	19° 58'	72° 43'	+1 40	+1 40	+1.1	+0.7	9.1	12.4	9.3	
3537	Bhavnagar, Gulf of Cambay .....	21° 45'	72° 14'	+5 03	+5 41	*2.40 *1.90		22.9	29.0	19.1	
3539	Port Albert Victor, Gulf of Cambay .....	20° 57'	71° 32'	+3 06	+2 49	*0.71 *0.62		6.5	8.7	5.8	
3541	Navabadar .....	20° 45'	71° 05'	+1 20	+1 10	(*0.44+2.2)		3.8	5.4	5.9	
on Karachi, p.332											
3543	Porbandar .....	21° 38'	69° 37'	+0 14	+0 17	(*0.79+1.6)		4.6	6.0	5.9	
on Bombay, p.328											
3545	Gulf of Kutch Okha Point .....	22° 28'	69° 05'	+0 54	+0 46	*0.84	*0.68	8.0	9.8	6.7	
3547	Navinar Point .....	22° 45'	69° 43'	+1 57	+2 06	+4.9	+0.6	13.0	15.5	11.1	
3549	Kandla .....	23° 02'	70° 14'	+2 39	+3 08	+7.8	-0.2	16.7	19.4	12.2	
3551	Khori Creek .....	22° 58'	70° 14'	+2 28	+2 58	+7.4	+0.1	16.0	18.2	12.1	
3553	Hanthal Point .....	22° 56'	70° 21'	+2 33	+3 20	+5.6	-0.2	14.5	16.8	11.1	
3555	Navlakhi .....	22° 58'	70° 27'	+3 02	+3 33	+9.2	+0.4	17.5	20.2	13.2	
3557	Navi Wat .....	23° 05'	70° 20'	+3 09	+3 55	+7.2	+0.1	15.8	17.6	12.0	
on Karachi, p.332											
3559	Kori Creek entrance .....	23° 31'	68° 21'	+0 25	+0 25	+0.4	0.0	6.2	8.1	5.6	
Arabian Sea Islands Time meridian, 75° E											
3561	Suvadiva Atoll, Maldives .....	0° 50'	73° 09'	+5 10	+5 10	0.0	+0.2	2.2	2.9	2.2	
on Colombo, p.324											
3563	Horsburgh Atoll, Maldives .....	4° 54'	72° 57'	-1 50	-1 35	(*0.86+1.1)		1.2	1.7	2.1	
3565	Ihavandu, Maldives .....	6° 57'	72° 55'	-2 32	-2 24	+1.1	+0.9	1.6	2.3	2.2	
3567	Minicoy Island .....	8° 16'	73° 01'	-2 50	-2 41	+2.3	+1.7	2.0	2.5	3.2	
Time meridian, 82° 30' E											
3569	Kardamum Island, Laccadive Islands .....	11° 13'	72° 46'	+1 15	+1 15	(*0.38+1.3)		1.8	2.9	3.4	
3571	Cherbaniani Reef, Laccadive Islands .....	12° 21'	71° 53'	+0 25	+0 25	(*0.45+1.6)		2.2	3.4	4.0	
PAKISTAN Time meridian, 75° E											
3573	Indus River Delta Hajamro River mouth .....	24° 06'	67° 19'	+0 00	+0 00	+1.0	+0.2	6.6	8.6	6.0	
3575	Jhari Creek .....	24° 44'	67° 19'	0 30	1 02	+1.6	+0.7	—	—	—	
3577	Port Muhammad Bin Qasim .....	24° 47'	67° 21'	0 23	0 23	+2.3	+1.0	—	—	—	
3579	Hasan Point .....	24° 47'	67° 14'	0 13	0 15	+1.6	+0.7	—	—	—	
3581	Bundal Island .....	24° 42'	67° 08'	+0 00	+0 00	+1.0	+0.3	—	—	—	
3583	Ghizri Creek .....	24° 46'	67° 06'	-0 02	0 01	+0.7	+0.3	—	—	—	
3585	KARACHI .....	24° 48'	66° 58'			Daily predictions		5.8	7.6	5.4	

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Latitude	Longitude	Time		Height		Mean	Spring		
				High Water	Low Water	High Water	Low Water				
	PAKISTAN-cont. Time meridian, 75° E	North	East	h m	h m	ft	ft	ft	ft	ft	
on Colombo, p.324											
3587	Sonmiani Harbor .....	25° 23'	66° 33'	-0 50	-0 50	0.0	-0.2	6.0	7.8	5.3	
3589	Ormara .....	25° 11'	64° 41'	-0 08	-0 10	*0.86	*0.72	5.3	7.0	4.5	
3591	Pasni .....	25° 12'	63° 30'	+0 09	+0 08	+0.2	+0.9	5.1	6.6	6.0	
3593	Gwatar Bay .....	25° 09'	61° 33'	+0 35	+0 35	(*0.90+0.2)		5.2	6.8	5.1	
on Hong Kong, p.120											
3595	Chah Bahar .....	25° 17'	60° 37'	-1 47	-1 43	+0.7	+0.7	—	—	—	
3597	Ras Tang .....	25° 21'	59° 54'	-1 38	-1 43	+0.7	+1.6	—	—	—	
3599	Koksar .....	25° 32'	58° 50'	-1 42	-1 38	-0.3	+0.7	—	—	—	
3601	Khalji-e Jask .....	25° 38'	57° 46'	-1 42	-1 40	-1.0	-0.3	—	—	—	
3603	Jask Bay, Gulf of Oman .....	25° 39'	57° 45'	-1 20	-1 20	(*0.93+0.3)		5.4	7.0	5.3	
3605	Ras al Kuh .....	25° 47'	57° 19'	-1 34	-1 31	-0.7	-0.3	—	—	—	
3607	Gonari Creek .....	26° 18'	57° 06'	-0 36	-0 28	+1.0	+0.3	—	—	—	
3609	Bandar-e Sirk .....	26° 31'	57° 05'	-0 46	-0 37	+1.3	+0.3	—	—	—	
3611	Hengam, Persian Gulf .....	26° 41'	55° 54'	-0 02	+0 06	-1.0	-0.4	5.2	6.7	4.7	
3613	Bandar Abbas, Persian Gulf .....	27° 11'	56° 17'	-0 40	-0 40	+1.5	+0.6	6.7	9.4	6.5	
on Shatt Al Arab, p.336											
3615	Jazirat Farur, Persian Gulf .....	26° 15'	54° 31'	-9 30	-9 12	-0.3	-0.4	3.4	5.1	4.1	
3617	Bushahr, Persian Gulf .....	28° 59'	50° 51'	-0 44	-0 37	*0.64	*0.43	2.7	4.5	2.6	
3619	Jazirat Kharg, Persian Gulf .....	29° 16'	50° 20'	-0 39	-0 41	*0.87	*0.96	2.6	4.4	4.0	
on Shatt Al Arab, p.336											
3621	SHATT AL ARAB (outer bar) .....	29° 50'	48° 43'	<i>Daily predictions</i>				6.1	8.5	5.7	
3623	Basra Reach <37> .....	30° 31'	47° 51'	+5 38	+6 41	(*0.54+2.0)		3.3	3.9	5.1	
3625	Abadan .....	30° 20'	48° 16'	+2 50	+3 45	-3.3	+0.7	—	—	—	
3627	Al Faw .....	29° 58'	48° 29'	+1 00	+1 00	0.0	+1.0	—	—	—	
on Mina Al Ahmadi, p.340											
3629	Um Qasr .....	30° 01'	47° 57'	+1 52	+2 01	+5.5	+1.5	10.1	12.8	9.3	
3631	Um Al-Aseed (Beacon No. 12) .....	29° 56'	48° 02'	+1 20	+1 10	+4.6	+1.3	—	—	—	
3633	Warba Spit .....	29° 59'	48° 09'	+1 20	+1 13	+3.7	+0.7	9.1	12.2	8.0	
3635	Ras al Barshah (Beacon No. 2) .....	29° 33'	48° 14'	+0 41	+0 43	+1.3	+1.3	—	—	—	
3637	Mina ad Dawhah .....	29° 23'	47° 48'	+1 09	+1 03	+1.6	+1.0	—	—	—	
3639	Ash Shuwaykh .....	29° 21'	47° 55'	+1 11	+1 07	+1.6	+1.6	—	—	—	
3641	Kuwait .....	29° 21'	47° 56'	+1 12	+1 08	+1.4	+0.9	6.6	8.9	6.9	
3643	Fahayhil .....	29° 04'	48° 10'	+1 12	+0 46	(*0.78+0.6)		4.5	6.6	5.0	
on Mina Al Ahmadi, p.340											
3645	Jazirat Auhah .....	29° 22'	48° 26'	-0 12	-0 14	+0.3	+0.7	—	—	—	
3647	MINA AL AHMADI .....	29° 04'	48° 10'	<i>Daily Predictions</i>				—	—	—	
3649	Ras al Qulai'ah .....	28° 52'	48° 17'	+0 00	+0 16	-1.6	-0.3	—	—	—	
3651	Jazirat Kubbar .....	29° 04'	48° 30'	-0 12	-0 19	-1.3	+0.3	—	—	—	
3653	Jazirat Qaruh .....	28° 49'	48° 47'	-0 37	-0 13	-2.3	0.0	—	—	—	
3655	Jazirat Umm al Maradim .....	28° 41'	48° 39'	-0 15	+0 08	-3.0	0.0	—	—	—	
3657	Ras al Khafji .....	28° 25'	48° 31'	-0 04	+0 19	-3.3	-0.3	—	—	—	
on Yamato Wan, p.12											
3659	Ras Al Mishab † .....	28° 07'	48° 37'	+8 40	+7 58	+1.2	+0.3	4.0	4.7	3.5	
3661	Safaniya † .....	28° 00'	48° 46'	+8 39	+8 29	+1.0	+0.2	3.9	4.8	3.5	
on Bangkok Bar, p.140											
3663	Munifah <38> † .....	27° 35'	48° 54'	+10 27	+10 51	(*0.46–0.8)		3.6	4.3	2.7	
on Mina Salman, p.348											
3665	Fasht Gharibah .....	26° 59'	50° 13'	-0 30	-0 42	-2.6	-1.3	—	—	—	
3667	Abu Sa'fah .....	26° 57'	50° 30'	-0 35	-0 40	-2.0	-0.7	—	—	—	
3669	RAS AT TANNURAH .....	26° 38'	50° 10'	<i>Daily predictions, p.344</i>				4.2	5.3	4.2	
3671	Dawhat at Tarut .....	26° 39'	50° 02'	-0 31	-0 07	-1.6	-1.0	—	—	—	
3673	Ad Dammam (K.A.A.P.) .....	26° 30'	50° 12'	-0 25	-0 28	-0.3	0.0	—	—	—	
3675	Al Kubar .....	26° 17'	50° 13'	-0 10	-0 20	-3.9	-0.7	—	—	—	
on Mina Salman, p.348											
Diurnal Tropic											
3677	Malik Fahd Causway .....	26° 11'	50° 20'	+0 25	+0 20	-4.3	-1.0	—	—	—	
3679	Khawr Fasht .....	26° 20'	50° 26'	-0 02	+0 11	-1.3	-0.3	—	—	—	
3681	Al Manarnah Harbor .....	26° 14'	50° 35'	-0 18	-0 25	-0.3	+0.2	4.4	5.8	4.1	
3683	MINA SALMAN, Bahrain Island .....	26° 13'	50° 36'	<i>Daily Predictions</i>				4.9	6.4	4.2	
3685	Sitra .....	26° 10'	50° 40'	+0 05	+0 05	-0.3	0.0	—	—	—	
3687	Bahrain Approach Bouy .....	26° 22'	50° 47'	-0 17	-0 13	-1.0	-0.7	—	—	—	
3689	Ras Ashraiq .....	25° 59'	51° 00'	+0 15	+0 02	*0.62	*0.76	2.8	3.5	2.7	
3691	Jabal Fuwaira .....	26° 03'	51° 22'	-0 49	-1 10	(*0.61+0.3)		3.0	3.8	2.9	

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Latitude	Longitude	Time		Height		Mean	Spring		
				High Water	Low Water	High Water	Low Water				
	QATAR, Persian Gulf Time meridian, 45° E	North	East	h m	h m	ft	ft	ft	ft	ft	
on Mina Salman, p.348											
3693	Ra's 'Ushayriq .....	25° 59'	51° 00'	+0 22	+0 22	-3.6	-1.0	--	--	--	
3695	Ar Ru'ays .....	26° 10'	51° 11'	-0 11	-0 06	-2.3	-1.0	--	--	--	
on Musay'id, p.352											
3697	Al Wakrah .....	25° 10'	51° 37'	-0 03	+0 15	-1.3	-0.7	--	--	--	
3699	Musay'id Harbour .....	24° 54'	51° 39'	+0 50	+0 40	0.0	0.0	--	--	--	
3701	OUTER CHANNEL ENTRANCE .....	25° 02'	51° 39'	<i>Daily predictions</i>				--	--	--	
3703	Khawr al Udayd .....	24° 42'	51° 27'	+1 00	+0 50	+0.3	0.0	--	--	--	
3705	Ras Abu Qumayvis .....	24° 34'	51° 30'	+1 03	+1 00	+0.7	+0.3	--	--	--	
3707	Jazirat Halul .....	25° 40'	52° 25'	-1 16	-1 17	-2.0	-0.7	--	--	--	
UNITED ARAB EMIRATES, Persian Gulf Time meridian, 60° E											
3709	Jazair Ghaghah .....	24° 24'	51° 33'	+2 18	+2 17	+0.7	0.0	--	--	--	
on Surabaja Strait, p.160											
3711	Jazirat Yas § .....	24° 17'	52° 37'	-10 51	-10 53	*0.86	*0.86	3.2	4.5	3.1	
3713	Jazirat Das § .....	25° 09'	52° 53'	-11 08	-11 04	(*0.68+0.7)	(*0.68+0.7)	2.5	3.5	3.1	
on Mina Jebel Ali, p.356											
3715	Ras Zubayyah .....	24° 20'	54° 10'	+1 24	+1 34	+1.0	+1.0	--	--	--	
on Mina Al Ahmadi, p.340											
3717	Sir Abu Nu'ayr .....	25° 13'	54° 13'	-10 30	-10 40	-3.3	0.0	--	--	--	
3719	Umm an Nar .....	24° 26'	54° 30'	-8 11	-8 12	-4.3	0.0	--	--	--	
3721	Mina Zayed Approaches .....	24° 38'	54° 17'	-10 32	-10 34	-2.0	0.0	--	--	--	
3723	Mina Zayed .....	24° 31'	54° 09'	-10 12	-10 09	-2.0	0.0	--	--	--	
3725	Umm ad Dalkh .....	24° 35'	54° 09'	-10 28	-10 33	-2.3	+0.3	--	--	--	
on Mina Jebel Ali, p.356											
3727	Khawr Ghurabi .....	24° 49'	54° 43'	+0 16	+0 18	-0.7	0.0	--	--	--	
3729	Khawr Ghanadah .....	24° 50'	54° 46'	+0 36	+0 35	-0.3	-0.3	--	--	--	
3731	MINA JEBEL ALI .....	25° 00'	55° 03'	<i>Daily predictions</i>				--	--	--	
3733	Mina Rashid .....	25° 15'	55° 16'	-0 11	-0 15	0.0	0.0	--	--	--	
3735	Dubayy (Al Maktoum Bridge) .....	25° 15'	55° 19'	+0 16	+0 07	+0.3	0.0	--	--	--	
3737	Ash Sharqaah .....	25° 22'	55° 23'	-0 16	-0 22	+0.7	+0.3	--	--	--	
3739	Ajman .....	25° 25'	55° 26'	+0 10	+0 00	+0.3	+0.7	--	--	--	
3741	Umm al Qaywayn .....	25° 35'	55° 35'	-0 23	-0 34	+0.3	+0.3	--	--	--	
on Karachi, p.332											
3743	Ras al Khaymah .....	25° 49'	55° 57'	+0 35	+0 45	-1.3	+1.0	--	--	--	
3745	Mina Saqr .....	25° 58'	56° 03'	+0 35	+0 45	-1.0	+0.7	--	--	--	
OMAN											
Strait of Hormoz											
3747	Bukha .....	26° 09'	56° 09'	+0 25	+0 34	-0.7	+0.7	--	--	--	
3749	Ghubbat Dabshun .....	26° 12'	56° 24'	+0 15	+0 22	-0.7	+0.7	--	--	--	
3751	Khasab .....	26° 12'	56° 15'	+0 10	+0 15	-0.3	+1.0	--	--	--	
3753	Khawr al Quway .....	26° 22'	56° 22'	+0 05	+0 10	-0.7	+0.7	--	--	--	
3755	Khor Kuwai .....	26° 21'	56° 22'	+0 09	-0 03	(*0.84+1.1)	4.9	6.4	5.6		
3757	Little Quoin I .....	26° 29'	56° 32'	-0 04	-0 21	(*0.95-0.6)	5.5	7.0	4.5		
3759	Masqat, Gulf of Oman .....	23° 37'	58° 36'	-1 07	-1 03	(*0.79+0.5)	4.6	6.1	4.8		
3761	Ras Dillah .....	26° 08'	56° 29'	-0 30	-0 30	+0.7	+1.3	--	--	--	
3763	Khawr Niad (Khawr Habalayn) .....	26° 08'	56° 24'	-0 35	-0 35	-0.3	+0.7	--	--	--	
3765	Mina Daba .....	25° 39'	56° 16'	-0 50	-0 50	+0.3	+1.0	--	--	--	
3767	Ras al Hadd .....	22° 31'	59° 48'	-0 54	-0 54	(*0.72+1.5)	4.2	5.8	5.4		
3769	Rounders Bay, Masira Island .....	20° 13'	58° 38'	-1 04	-1 05	(*0.69+0.7)	4.0	5.2	4.4		
on Aden, p.360											
3771	Marbat .....	16° 59'	54° 42'	+1 16	+1 16	(*0.92+0.1)	3.3	4.9	4.2		
YEMEN											
3773	Mukalla .....	14° 31'	49° 08'	-0 10	+0 00	(*0.75+0.7)	2.4	4.0	4.1		
3775	ADEN .....	12° 47'	44° 59'	<i>Daily predictions</i>				3.6	5.3	4.5	

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Latitude	Longitude	Time		Height		Mean	Diurnal		
				High Water	Low Water	High Water	Low Water				
	SAUDI ARABIA, Red Sea Time meridian, 45° E	North	East	h m	h m	ft	ft	ft	ft	ft	
on Aden, p.360											
3777	Perim, Bab el Mandeb Strait .....	12° 39'	43° 24'	+0 03	+0 10	(*0.78+1.0)		2.8	4.4	4.5	
3779	Al Mukha .....	13° 19'	43° 14'	+4 53	+4 53	(*0.39+0.2)		1.4	2.2	2.0	
on Suez, p.364											
3781	Kamaran Passage .....	15° 17'	42° 38'	+1 48	+1 53	-1.1	+0.4	2.3	2.8	3.4	
3783	Juddah .....	21° 28'	39° 11'	+11 25	+11 25	--	--	0.5	--	--	
on Aden, p.360											
3785	Sherm Rabegh .....	22° 45'	38° 58'	-5 00	-5 00	(*0.34+1.5)		1.3	1.6	2.8	
3787	Aqaba, Gulf of Aqaba .....	29° 31'	35° 00'	-5 12	-5 07	(*0.53+0.5)		2.0	2.6	2.5	
EGYPT to ERITREA <39>											
<i>Gulf of Suez</i>											
3789	At Tur .....	28° 14'	33° 37'	-2 37	-2 33	--	--	0.6	0.7	--	
3791	SUEZ .....	29° 56'	32° 33'			Daily predictions		3.8	4.7	3.7	
3793	Zafarana .....	29° 06'	32° 40'	+0 00	+0 04	-1.2	-0.2	2.8	3.5	3.0	
3795	Ras Gharib .....	28° 21'	33° 06'	-0 21	+0 02	*0.30	*0.22	1.3	1.7	1.0	
3797	Ashrafi Island .....	27° 47'	33° 43'	-5 38	-5 34	*0.29	*0.39	0.9	1.2	1.2	
3799	Shadwan Island .....	27° 27'	34° 02'	-5 37	-5 33	*0.45	*0.45	1.7	2.0	1.7	
3801	Al Qusayr .....	26° 06'	34° 17'	-5 48	-5 44	*0.40	*0.40	1.5	1.8	1.5	
3803	Muhammad Qol .....	20° 54'	37° 10'	-4 59	-5 23	--	--	0.4	0.4	1.2	
3805	Port Sudan .....	19° 36'	37° 15'	--	--	--	--	0.1	--	0.5	
3807	Trinkitat .....	18° 41'	37° 45'	--	--	--	--	0.1	--	0.5	
Time meridian, 45° E											
3809	Harmil Island .....	16° 29'	40° 11'	+2 00	+2 42	*0.25	*0.28	0.9	1.1	1.0	
3811	Massaua .....	15° 37'	39° 28'	+2 38	+2 43	(*0.63-0.8)		2.4	3.1	1.5	
3813	Assab .....	13° 00'	42° 44'	--	--	--	--	0.8	1.6	1.0	
REPUBLIC OF DJIBOUTI											
3815	Djibouti, Gulf of Aden .....	11° 35'	43° 08'	+0 05	+0 04	+1.3	+1.3	3.6	5.4	5.8	
<i>SOMALIA</i>											
3817	Zeila, Gulf of Aden .....	11° 24'	43° 28'	+0 00	+0 00	+0.8	+0.8	3.6	5.3	5.3	
3819	Berbera, Gulf of Aden .....	10° 26'	45° 01'	+0 03	+0 02	+0.6	+0.6	3.6	5.6	5.1	
3821	Cape Guardafui (Ras Asir) .....	11° 50'	51° 16'	-1 40	-1 40	*0.90	*0.85	3.4	5.0	4.0	
on Pohnpei Harbor, p.208											
3823	Obbia .....	5° 21'	48° 32'	-11 23	-11 25	+1.0	-0.3	3.6	5.3	2.6	
on Dar Es Salaam, p.368											
3825	Warsheik .....	2° 18'	45° 48'	+0 03	+0 06	*0.57	*0.58	4.3	5.8	2.9	
3827	Mogadishu .....	2° 02'	45° 21'	-0 11	-0 07	*0.63	*0.75	4.6	6.3	3.2	
3829	Brava .....	1° 06'	44° 02'	-0 12	-0 10	*0.71	*0.83	5.2	7.1	3.6	
3831	Giuba River .....	0° 15'	42° 38'	+0 14	+0 17	*0.95	*1.33	6.7	9.0	5.0	
3833	Chisimaio .....	0° 22'	42° 33'	-0 15	-0 12	*0.74	*0.83	5.4	7.5	3.7	
3835	Rirakau River entrance .....	1° 17'	41° 54'	-0 09	-0 07	*0.89	*1.00	6.5	9.0	4.5	
<i>KENYA and TANGANYIKA</i>											
3837	Malindi .....	3° 13'	40° 08'	-0 14	-0 13	(*0.89+1.8)		6.7	9.5	6.2	
3839	Port Mombasa (Kilindini) .....	4° 04'	39° 40'	-0 09	-0 08	(*1.03+1.0)		7.7	10.4	6.1	
3841	Wasin Island .....	4° 39'	39° 21'	-0 11	-0 12	(*1.05+1.0)		7.9	10.9	6.3	
3843	Mkoani, Pemba Island .....	5° 21'	39° 38'	-0 14	-0 14	(*1.05+0.6)		7.9	10.9	5.8	
3845	Mesale Island, Pemba Island .....	5° 14'	39° 36'	-0 16	-0 12	(*1.08+0.6)		8.1	11.2	6.0	
3847	Mkokotoni Harbor, Zanzibar Island .....	5° 52'	39° 16'	-0 13	-0 14	(*1.09+0.9)		8.2	11.3	6.4	
3849	Zanzibar, Zanzibar Island .....	6° 09'	39° 11'	-0 21	-0 19	(*1.16+1.0)		8.7	12.3	6.8	
3851	DAR ES SALAAM .....	6° 50'	39° 17'			Daily Predictions		7.5	10.6	5.0	
3853	Lindi River .....	9° 59'	39° 45'	+0 07	+0 09	*0.97	*1.33	6.8	9.4	5.0	
<i>MOZAMBIQUE</i>											
Time meridian, 30° E											
3855	Tunghi Bay .....	10° 45'	40° 35'	-1 16	-1 14	+2.8	+2.2	8.1	11.3	7.5	
3857	Porto de Mocimboa .....	11° 20'	40° 22'	-1 04	-0 56	+4.1	+3.0	8.6	12.0	8.5	
3859	Ibo .....	12° 21'	40° 35'	-1 30	-1 24	+3.1	+0.6	8.3	11.7	7.7	
3861	Porto Amelia .....	12° 58'	40° 29'	-1 13	-0 59	+2.9	+2.0	8.4	11.7	7.4	
3863	Porto de Mozambique .....	15° 02'	40° 44'	-1 00	-0 56	+2.9	+2.0	8.4	11.8	7.4	
3865	Antonio Enes .....	16° 14'	39° 54'	-0 17	-0 05	+2.8	+2.0	8.3	11.7	7.4	
3867	Porto de Quelimane .....	18° 00'	36° 54'	-0 30	-0 14	+3.6	+2.5	8.6	12.2	8.0	

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Latitude	Longitude	Time		Height		Mean	Spring		
				High Water	Low Water	High Water	Low Water				
	MOZAMBIQUE—cont. Time meridian, 30° E	South	East	h m	h m	ft	ft	ft	ft	ft	
on Beira, p.372											
3869	Porto do Chinde .....	18° 32'	36° 30'	-0 38	-0 31	-7.5	-2.3	8.0	11.1	6.8	
3871	BEIRA, Pungoe River .....	19° 49'	34° 50'			Daily predictions		13.2	18.6	11.7	
3873	Ilha de Chiloane .....	20° 37'	34° 53'	-0 19	-0 37	-0.5	+0.2	12.5	17.6	11.6	
3875	Bartolomeu Dias .....	21° 10'	35° 07'	-0 18	-0 23	*0.67	*0.71	8.6	12.0	7.9	
3877	Bahia de Bazaruto .....	21° 39'	35° 26'	-0 39	-0 33	*0.67	*0.71	8.7	12.5	8.0	
on Durban, p.376											
3879	Inhambane Bay .....	23° 44'	35° 24'	+0 29	+0 48	+3.7	+2.0	5.6	8.0	6.4	
3881	Porto de Inhambane .....	23° 51'	35° 23'	+1 12	+1 23	+4.1	+1.4	6.6	9.0	6.3	
3883	Inhampura .....	25° 11'	33° 31'	+0 35	+1 09	(*0.62+1.2)		2.4	3.4	3.4	
3885	Maputo .....	25° 58'	32° 34'	+0 47	+0 54	(*1.79+0.2)		7.0	9.8	6.6	
SOUTH AFRICA <40°											
3887	Richards Bay .....	28° 47'	32° 05'	+0 00	-0 02	+0.1	-0.1	4.1	5.9	3.6	
3889	DURBAN .....	29° 52'	31° 03'			Daily predictions		3.9	5.6	3.6	
3891	East London .....	33° 02'	27° 55'	+0 02	+0 01	+0.3	+0.4	3.8	5.4	3.9	
3893	Port Elizabeth .....	33° 58'	25° 38'	+0 00	-0 02	-0.1	+0.1	3.7	5.2	3.6	
INDIAN OCEAN ISLANDS											
Madagascar											
Time meridian, 45° E											
3895	Hellville, Nosi Be .....	13° 24'	48° 18'	-0 17	-0 14	+2.7	+2.0	8.2	11.2	7.3	
3897	Baie du Courrier .....	12° 11'	49° 08'	-0 29	-0 25	+0.3	+1.6	6.2	8.4	5.9	
3899	Diego Suarez .....	12° 16'	49° 18'	-0 41	-0 38	(*0.61+1.3)		4.6	6.2	4.4	
3901	Mangeriv Bay (Port Leven) .....	12° 48'	49° 49'	-0 49	-1 01	(*0.53+1.4)		4.0	5.2	4.1	
3903	Vohemar .....	13° 21'	50° 01'	-1 21	-1 18	(*0.41+1.4)		3.1	4.2	3.5	
3905	Maroantsetra .....	15° 27'	49° 49'	-0 51	-0 49	(*0.40+0.9)		3.0	4.2	2.9	
on Colombo, p.324											
3907	Fenerive .....	17° 22'	49° 24'	-0 19	-0 06	+2.1	+1.8	1.7	2.3	3.2	
3909	Tamatave .....	18° 09'	49° 26'	-0 13	-0 09	+0.8	+0.7	1.5	2.0	2.0	
on Dar Es Salaam, p.368											
3911	Fort Dauphin .....	25° 01'	47° 00'	+4 10	+4 41	(*0.19+0.4)		1.4	2.0	1.4	
3913	Androka .....	25° 04'	44° 07'	+1 10	+1 13	(*0.75+3.4)		5.6	8.0	7.2	
3915	Tulear .....	23° 21'	43° 40'	+0 46	+0 50	(*0.77+3.0)		5.8	8.4	6.9	
3917	Cap Ankaranana .....	20° 29'	44° 07'	+0 30	+0 33	+3.0	+2.6	7.9	11.3	7.8	
3919	Nosi Maroantaly .....	18° 25'	43° 56'	+0 26	+0 30	+3.4	+2.3	8.6	12.1	7.8	
3921	Majunga .....	15° 44'	46° 19'	-0 12	-0 09	+5.4	+3.8	9.1	12.7	9.6	
Lesser Islands											
3923	Moroni, Comoro Island .....	11° 41'	43° 15'	+0 24	+0 26	*1.03	--	--	--	--	
3925	Zaudzi, Ile Mayotte .....	12° 47'	45° 16'	-0 04	+0 00	+3.5	+2.8	8.2	11.2	8.1	
Time meridian, 60° E											
3927	Point des Galets, Reunion Island .....	20° 55'	55° 17'	-2 49	-2 40	(*0.34+0.3)		1.2	1.6	1.6	
3929	Port Louis, Mauritius Island .....	20° 09'	57° 29'	-3 58	-3 49	(*0.31+0.8)		1.1	1.6	2.0	
on Apia, p.252											
3931	Cargados Carajos Shoal .....	16° 49'	59° 31'	-5 34	-6 02	+0.5	+0.3	2.8	4.0	2.0	
3933	Rodriguez Island .....	19° 40'	63° 26'	-7 21	-7 50	+1.7	+0.5	3.8	4.7	2.7	
on Yokohama, p.20											
3935	Providence Island .....	9° 13'	51° 01'	+1 36	+1 40	(*0.72+0.3)		5.4	7.8	3.9	
3937	Port Victoria, Seychelle Islands .....	4° 37'	55° 27'	+0 18	+0 25	(*0.39+1.4)		2.9	4.0	3.4	
Time meridian, 75° E											
3939	DIEGO GARCIA ISLAND, Chagos Archipelago .....	7° 21'	72° 28'			Daily predictions, p.380		3.8	5.5	3.3	
Time meridian, 97° 30' E											
3941	Port Refuge, Cocos Islands .....	12° 05'	96° 53'	-0 39	-0 36	(*0.42+1.3)		1.8	2.4	2.3	
3943	Christmas Island .....	10° 25'	105° 43'	+1 48	+1 46	(*0.60+2.1)		2.6	3.4	3.6	
Time meridian, 75° E											
3945	Amsterdam Island .....	37° 50'	77° 33'	-5 25	-5 22	*0.51	*0.31	2.3	3.3	1.6	
3947	St. Paul Island .....	38° 43'	77° 35'	-2 54	-2 52	(*0.72+1.0)		2.8	3.9	3.6	

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level	
		Latitude	Longitude	Time		Height		Mean	Spring		
				High Water	Low Water	High Water	Low Water				
	INDIAN OCEAN ISLANDS Kerguelen Island Time meridian, 75° E	South	East	h m	h m	ft	ft	ft	ft	ft	
on Durban, p.376											
3949	Betsy Cove .....	49° 09'	70° 12'	-3 06	-2 55	-0.9	-0.2	3.2	4.6	3.0	
3951	Baie du Morbihan .....	49° 21'	70° 13'	-4 38	-4 36	+0.3	+0.4	3.8	5.1	3.9	
3953	Observatory Bay .....	49° 25'	69° 53'	-4 32	-4 30	-0.2	+0.1	3.6	5.2	3.5	
on Mui Vung Tau, p.136											
3955	Heard Island (Atlas Cove) .....	53° 01'	73° 23'	-1 56	-1 56	*0.31	*0.31	1.8	2.3	2.4	
on Cebu, p.180											
Diurnal Tropic											
3957	Gauss Station, Wilhelm II Coast .....	66° 02'	89° 38'	+2 00	+1 52	--	--	2.8	3.3	--	
3959	Mc Donald Bay .....	66° 33'	93° 01'	+1 03	+1 01	--	--	3.6	4.3	--	
3961	Wilkes Station .....	66° 15'	110° 31'	+0 58	+1 03	--	--	3.6	4.2	--	
on Jolo, p.172											
3963	Pointe Geologie, Adelie Coast † .....	66° 41'	139° 55'	+3 47	+4 42	--	--	3.7	4.5	--	
3965	Cape Margerie (Port Martin) † .....	66° 50'	141° 25'	+3 38	+4 19	--	--	3.8	5.2	--	
3967	Cade Denison, George V Coast † .....	67° 00'	142° 40'	+3 25	+4 21	--	--	3.9	4.7	--	
on Do Son, p.132											
3969	Cape Armitage, Ross Island § .....	77° 49'	166° 45'	-3 47	-4 15	--	--	2.2	3.1	--	
3971	Scott Base, Ross Sea § .....	77° 52'	166° 48'	-4 34	-4 49	--	--	2.7	3.9	5.5	
ANTARCTIC PENINSULA											
3973	Marguerite Bay (East Base) † .....	68° 12'	67° 03'	+5 50	+6 43	--	--	3.8	4.1	--	
on Yamato Wan, p.12											
3975	Lent Islands, Graham Land † .....	66° 53'	66° 48'	-11 16	-10 48	--	--	3.6	4.1	--	
3977	Ferin Head, Graham Land † .....	66° 01'	65° 21'	-11 15	-10 47	--	--	3.8	4.4	--	
3979	Argentine Islands (Stella Creek) † .....	65° 15'	64° 16'	-10 52	-10 43	--	--	4.6	5.4	--	
3981	Port Circconcision † .....	65° 10'	64° 14'	-10 35	-10 41	--	--	3.8	4.5	--	
3983	Port Charcot, Booth Island † .....	65° 04'	64° 02'	-10 55	-11 04	--	--	3.5	4.1	--	
3985	Lemaire Channel, De Gerlache Strait † .....	64° 47'	62° 43'	-10 32	-11 03	--	--	4.1	4.8	--	
3987	Neko Harbor † .....	64° 48'	62° 23'	-9 26	-10 01	--	--	4.4	5.1	--	
3989	Nansen Island, De Gerlache Strait † .....	64° 33'	61° 57'	-10 18	-11 14	--	--	5.0	5.7	--	
3991	Melchior Harbor, Dallman Bay † .....	64° 20'	62° 59'	-10 34	-11 04	--	--	4.1	4.8	4.0	
on Yokohama, p.20											
3993	Puerto Soberania .....	62° 29'	59° 38'	+13 12	+13 19	+1.3	+1.2	5.1	5.5	5.0	
3995	Shackleton Base, Vahsel Bay .....	77° 59'	37° 10'	-10 12	-10 03	--	--	6.2	--	--	

Endnotes can be found at the end of table 2.

## ENDNOTES

\* RATIO. If the ratio is accompanied by a correction factor multiply the heights of the high and low waters at the reference station by the ratio and then apply the correction factor. See note and example on pages 385 and 386.

† The tide at this location is chiefly diurnal.

§ The tide at this location is diurnal.

<1> For other places in Siberia, Arctic Ocean, see "Tide Tables, Europe and West Coast of Africa."

<2> Apply differences to predictions for Pusan 2 days earlier than the date desired.

<3> There is a seiche at Miyako Ko with a period of about 22 minutes and a range of about 1 foot.

<4> At YOKOHAMA, winds from the south may raise the level of the water 1 foot above normal.

<5> There is a seiche at Aburatsubo with a period of about 15 minutes and a range of about 1 foot during storms.

<6> There is a seiche at Shimoda Ko with a period of about 16 minutes. When the barometric pressure is low, the range is about 0.7 foot.

<7> There is a seiche at Futami Ko with a period of 16 to 20 minutes and a range of about 1 foot.

<8> There are seiches at Susaki Ko with periods of 18 to 40 minutes and ranges of about 0.7 foot.

<9> In Izumi Nada with a strong SW wind and a falling barometer, sea level may rise as much as 2 feet.

<10> Tide is frequently diurnal. Apply height ratios to HHW and LLW, and time difference to LLW only. Diurnal range is given.

<11> Tide is frequently diurnal. Apply height ratios to HHW and LLW, and time difference to LLW only. HHW occurs about 14 hours after LLW. Diurnal range is given.

<12> There is a seiche at Hamada Ko with a period of about 12 minutes and range of about 0.7 foot.

<13> There are seiches at Maizuru Ko with periods from 16 to 90 minutes and ranges up to 3 feet during storms.

<14> There are seiches at Tsuruga Ko with periods from 10 to 65 minutes and ranges of about 0.7 foot.

<15> There is a seiche in nearby Kamae Ko, with a period of about 20 minutes and a range of up to 1 foot.

<16> There is a seiche in Hososhima with a period of about 10 minutes and ranges of up to 0.7 foot in calm weather and 2 feet during storms.

<17> There is a seiche at Uchiumi with a period of about 10 minutes and a range of up to 1.3 feet.

<18> A seiche occurs in Nakagawara Ura before and after rough weather. During late spring or early summer, when there is a heavy sea in the offing the range may be 2 to 3 feet.

<19> A seiche occurs in Nagasaki Ko with a period of about 35 minutes and may have a range of up to 2 feet. The most pronounced oscillations usually occur with two localized low pressure areas.

<20> Sasebo has a seiche with periods from 64 to 83 minutes and may have ranges as much a 0.7 foot.

<21> There is a seiche in Yobuko Ko with a period of about 10 minutes which may have a range as much as 1 foot.

<25> Mean and diurnal ranges given.

<26> There is a marked seiche at Kao-hsiung with a period of 13 to 25 minutes.

<27> Seasonal height corrections-May through August, subtract 0.6 foot; November through January, add 0.6 foot.

<28> Low water heights at Mui Vung Tau. . . . .	10	8	6	4	2	0	-2
Corresponding LW heights at Ho Chi Minh City . . . . .	8.4	6.3	4.5	3.1	2.0	0.9	0.0

<29> Heights of low waters are about 1.5 feet.

<30> Except near times of the moon's quadrature when the range of tide is negligible the high waters occur about noon and midnight and the low waters about 6 a.m. and 6 p.m.

<31> Predictions through differences for stations in Torres Strait are not feasible. Diurnal range given for Thursday Island.

- <32> Bores occur in the following estuaries immediately after low water when the range of tide is large.  
Sittang River: Information is meager.  
Pegu River: Bore is said to reach a height of 3 feet.
- <33> Neap difference, -3.7; Spring difference, -0.5.
- <34> Seasonal height corrections— December through April, -0.7; July through September, +1.0.
- <35> Seasonal height corrections— December through April, -1.0; May, -0.5; June, +0.2; July, +1.2; August and September, +2.0; October, +1.0.
- <36> Bores occur in the following estuaries immediately after low water when the range of tide is large.  
Meghna River: In the outer channel the bore is particularly dangerous March through October.  
Hooghly River: The bore commences near Diamond Harbor but is of little importance until it enters the narrow reaches above Hooghly Point; it may attain a height of 4 feet at Kidderpore and 5 feet above that place.  
Cambay Channel and Mahi River.
- <37> Seasonal corrections to be applied to predictions for Basra Reach are: Jan., -0.9; Feb., -0.4; Mar., +0.5; Apr., +1.6; May, +2.3; June, +1.9; July, +0.8; Aug., -0.6; Sept., -1.3; Oct., -1.4; Nov., -1.3; Dec., -1.1.
- <38> Seasonal corrections to be applied to predictions for Munifah are: Jan., -0.2; Feb., -0.3; Mar., -0.4; Apr., -0.3; May, -0.1; June, +0.2; July, +0.4; Aug., +0.4; Sept., +0.3; Oct., +0.1; Nov., 0.0; Dec., -0.1.
- <39> For places on the Mediterranean Sea, see "Tide Tables, Europe and West Coast of Africa."
- <40> For places on the south and west coast, see "Tide Tables, Europe and West Coast of Africa."
- <41> Predictions at this station are not intended for use in navigating Ch'ang Chiang Approach. They are intended only for use in computing tides at designated Table 2 stations in Korea and Sumatra.

### TABLE 3.—HEIGHT OF TIDE AT ANY TIME

#### EXPLANATION OF TABLE

Although the footnote of table 3 may contain sufficient explanation for finding the height of tide at any time, two examples are given here to illustrate its use.

*Example 1.*—Find the height of the tide at 0735 at Namp'o-hang, Korea, on a day when the predicted tides from table 1 are given as:

Low Water		High Water	
Time h.m.	Height ft	Time h.m.	Height ft
0418	2.5	1105	4.4
1721	3.6	2324	15.2

An inspection of the above example shows that the desired time falls between the two morning tides

The duration of rise is  $11^{\text{h}} 05^{\text{m}} - 4^{\text{h}} 18^{\text{m}} = 6^{\text{h}} 47^{\text{m}}$ .

The time after low water for which the height is required is  $7^{\text{h}} 35^{\text{m}} - 4^{\text{h}} 18^{\text{m}} = 3^{\text{h}} 17^{\text{m}}$ .

The range of tide is  $20.5 - 2.5 = 18.0$  feet.

The duration of rise or fall in table 3 is given in heavy-faced type for each 20 minutes from  $4^{\text{h}} 00^{\text{m}}$  to  $10^{\text{h}} 40^{\text{m}}$ . The nearest tabular value to  $6^{\text{h}} 47^{\text{m}}$ , the above duration of rise, is  $6^{\text{h}} 40^{\text{m}}$ ; and on the horizontal line of  $6^{\text{h}} 40^{\text{m}}$ , the nearest tabular time to  $3^{\text{h}} 17^{\text{m}}$  after low water for which the height is required is  $3^{\text{h}} 20^{\text{m}}$ . Following down the column in which this  $3^{\text{h}} 20^{\text{m}}$  is found to its intersection with the line of the range 18.0 feet, the correction is 9.0 feet, which being reckoned from low water, must be added, making  $2.5 + 9.0 = 11.5$  feet or 351 centimeters which is the required height above the chart datum for Namp'o-hang.

*Example 2.*—Find the height of the tide at 1045 at Manilla, Philippines on a day when the predicted tides from table 1 are given as:

High Water		Low Water	
Time h.m.	Height ft	Time h.m.	Height ft
0728	4.2	1633	-0.9

The duration of fall is  $16^{\text{h}} 33^{\text{m}} - 07^{\text{h}} 28^{\text{m}} = 9^{\text{h}} 05^{\text{m}}$ .

The time after high water for which the height is required is  $10^{\text{h}} 45^{\text{m}} - 7^{\text{h}} 28^{\text{m}} = 3^{\text{h}} 17^{\text{m}}$ .

The range of tide is  $4.2 - (-0.9) = 5.1$  feet.

Entering table 3 at the duration of fall of  $9^{\text{h}} 00^{\text{m}}$ , which is the nearest value to  $9^{\text{h}} 05^{\text{m}}$ , the nearest value on the horizontal line to  $3^{\text{h}} 17^{\text{m}}$  is  $3^{\text{h}} 18^{\text{m}}$  after high water. Following down this column to its intersection with a range of 5.0 feet which is the nearest tabular value to 5.1 feet, one obtains 1.5 which, being calculated from high water, must be subtracted from it. The approximate height at  $10^{\text{h}} 45^{\text{m}}$  is, therefore,  $4.2 - 1.5 = 2.7$  feet or 82 centimeters.

When the duration of rise or fall is greater than  $10^{\text{h}} 40^{\text{m}}$ , enter the table with one-half the given duration and with one-half the time from the nearest high or low water; but if the duration of rise or fall is less than 4 hours, enter the table with double the given duration and with double the time from the nearest high or low water.

Similarly, when the range of tide is greater than 20 feet, enter the table with one-half the given range. The tabular correction should then be doubled before applying it to the given high or low water height. If the range of tide is greater than 40 feet, take one-third of the range and multiply the tabular correction by 3.

If the height at any time is desired for a place listed in table 2 predictions of the high and low waters for the day in question should be obtained by the use of the difference given for the place in that table. Having obtained these predictions, the height for any intermediate time is obtained in the same manner as illustrated in the foregoing example.

## GRAPHIC METHOD

If the height of the tide is required for a number of times on a certain day the full tide curve for the day may be obtained by the *one-quarter, one-tenth rule*. The procedure is as follows:

1. On cross-section paper plot the high and low water points in the order of their occurrence for the day, measuring time horizontally and height vertically. These are the basic points for the curve.
2. Draw light straight lines connecting the points representing successive high and low waters.
3. Divide each of these straight lines into four equal parts. The halfway point of each line gives another point for the curve.
4. At the quarter point adjacent to high water draw a vertical line above the point and at the quarter point adjacent to low water draw a vertical line below the point, making the length of these lines equal to one-tenth of the range between the high and low waters used. The points marking the ends of these vertical lines give two additional intermediate points for the curve.
5. Draw a smooth curve through the points of high and low waters and the intermediate points, making the curve well rounded near high and low waters. This curve will approximate the actual tide curve and heights for any time of the day may be readily scaled from it.

**Caution.**—Both methods presented are based on the assumption that the rise and fall conform to simple cosine curves. Therefore the heights obtained will be approximate. The roughness of approximation will vary as the tide curve differs from a cosine curve.

An example of the use of the graphical method is illustrated below. Using the same predicted tides as in example 2, the approximate height at 10<sup>h</sup> 45<sup>m</sup> could be determined as shown below.

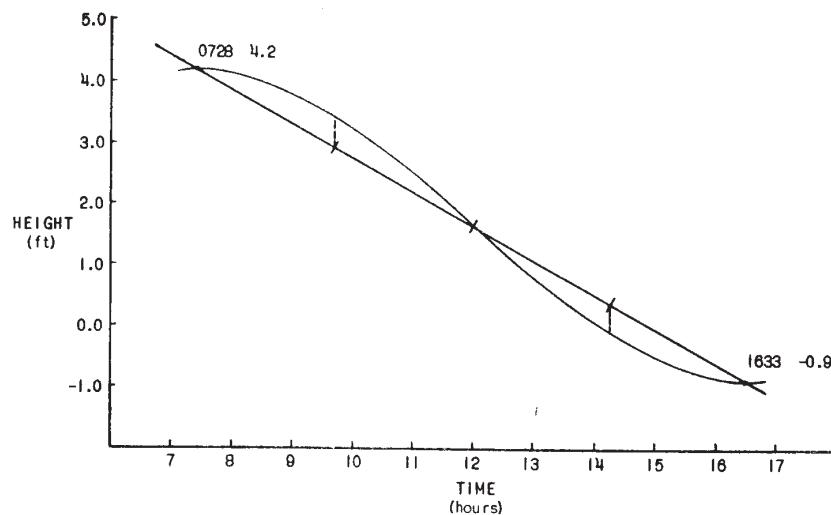


TABLE 3.—HEIGHT OF TIDE AT ANYTIME

		Time from the nearest high water or low water																	
		Duration of rise or fall, see footnote																	
		Correction to height																	
Ft.		Ft.	Ft.	Ft.	Ft.	Ft.	Ft.	Ft.	Ft.	Ft.	Ft.	Ft.	Ft.	Ft.	Ft.	Ft.	Ft.	Ft.	Ft.
0.5		0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
1.0		0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.5	0.6	0.7	0.8	0.9
1.5		0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1
2.0		0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3
2.5		0.0	0.0	0.1	0.1	0.2	0.2	0.3	0.4	0.5	0.6	0.7	0.9	1.0	1.1	1.2	1.3	1.4	1.5
3.0		0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.5	0.6	0.8	0.9	1.0	1.2	1.3	1.5	1.6	1.8	1.9
3.5		0.0	0.0	0.1	0.2	0.2	0.3	0.4	0.6	0.7	0.9	1.0	1.2	1.4	1.6	1.8	2.0	2.2	2.3
4.0		0.0	0.0	0.1	0.2	0.3	0.4	0.5	0.7	0.8	1.0	1.2	1.4	1.6	1.8	2.0	2.2	2.4	2.5
4.5		0.0	0.0	0.1	0.2	0.3	0.4	0.6	0.7	0.9	1.1	1.3	1.6	1.8	2.0	2.2	2.4	2.6	2.7
5.0		0.0	0.1	0.1	0.2	0.3	0.5	0.6	0.8	1.0	1.2	1.5	1.7	2.0	2.2	2.5	2.8	3.0	3.2
5.5		0.0	0.1	0.1	0.2	0.4	0.5	0.7	0.9	1.1	1.4	1.6	1.9	2.2	2.5	2.8	3.0	3.2	3.4
6.0		0.0	0.1	0.1	0.3	0.4	0.6	0.8	1.0	1.2	1.5	1.8	2.1	2.4	2.7	3.0	3.3	3.5	3.7
6.5		0.0	0.1	0.2	0.3	0.4	0.6	0.8	1.1	1.3	1.6	1.9	2.2	2.6	2.9	3.2	3.5	3.8	4.0
7.0		0.0	0.1	0.2	0.3	0.5	0.7	0.9	1.2	1.4	1.8	2.1	2.4	2.8	3.1	3.5	3.8	4.1	4.4
7.5		0.0	0.1	0.2	0.3	0.5	0.7	1.0	1.2	1.5	1.9	2.2	2.6	3.0	3.4	3.8	4.1	4.5	4.8
8.0		0.0	0.1	0.2	0.3	0.5	0.8	1.0	1.3	1.6	2.0	2.4	2.8	3.2	3.6	4.0	4.4	4.8	5.0
8.5		0.0	0.1	0.2	0.4	0.6	0.8	1.1	1.4	1.8	2.1	2.5	2.9	3.4	3.8	4.2	4.6	5.0	5.4
9.0		0.0	0.1	0.2	0.4	0.6	0.9	1.2	1.5	1.9	2.2	2.7	3.1	3.6	4.0	4.4	4.8	5.2	5.6
9.5		0.0	0.1	0.2	0.4	0.6	0.9	1.2	1.6	2.0	2.4	2.8	3.3	3.8	4.3	4.8	5.2	5.6	6.0
10.0		0.0	0.1	0.2	0.4	0.7	1.0	1.3	1.7	2.1	2.5	3.0	3.5	4.0	4.5	5.0	5.4	5.8	6.2
10.5		0.0	0.1	0.3	0.5	0.7	1.0	1.3	1.7	2.2	2.6	3.1	3.6	4.2	4.7	5.2	5.7	6.2	6.7
11.0		0.0	0.1	0.3	0.5	0.7	1.1	1.4	1.7	2.3	2.8	3.3	3.8	4.4	4.9	5.5	6.0	6.5	7.0
11.5		0.0	0.1	0.3	0.5	0.8	1.1	1.5	1.8	2.3	2.9	3.4	4.0	4.6	5.1	5.8	6.3	6.9	7.5
12.0		0.0	0.1	0.3	0.5	0.8	1.1	1.5	1.9	2.5	3.0	3.6	4.1	4.8	5.4	6.0	6.6	7.2	7.8
12.5		0.0	0.1	0.3	0.5	0.8	1.2	1.6	2.6	1.9	2.6	3.1	3.7	4.3	5.0	5.6	6.2	6.8	7.4
13.0		0.0	0.1	0.3	0.6	0.9	1.2	1.7	2.2	2.7	3.2	3.9	4.5	5.1	5.8	6.5	7.2	7.9	8.6
13.5		0.0	0.1	0.3	0.6	0.9	1.3	1.7	2.2	2.8	3.4	4.0	4.7	5.3	6.0	6.8	7.5	8.2	8.9
14.0		0.0	0.2	0.3	0.6	0.9	1.3	1.8	2.3	2.9	3.5	4.2	4.8	5.5	6.3	7.0	7.7	8.4	9.1
14.5		0.0	0.2	0.4	0.6	1.0	1.4	1.9	2.4	3.0	3.6	4.3	5.0	5.7	6.5	7.2	7.9	8.6	9.3
15.0		0.0	0.2	0.4	0.6	1.0	1.4	1.9	2.5	3.1	3.8	4.4	5.2	5.9	6.7	7.5	8.2	8.9	9.6
15.5		0.0	0.2	0.4	0.7	1.0	1.5	2.0	2.6	3.2	3.9	4.6	5.4	6.1	6.9	7.8	8.5	9.2	10.0
16.0		0.0	0.2	0.4	0.7	1.1	1.5	2.1	2.6	3.3	4.0	4.7	5.5	6.3	7.2	8.0	8.8	9.6	10.4
16.5		0.0	0.2	0.4	0.7	1.1	1.6	2.1	2.7	3.4	4.1	4.9	5.7	6.5	7.4	8.2	9.0	9.8	10.6
17.0		0.0	0.2	0.4	0.7	1.1	1.6	2.2	2.8	3.5	4.2	5.0	5.9	6.7	7.6	8.5	9.3	10.1	10.9
17.5		0.0	0.2	0.4	0.8	1.2	1.7	2.2	2.9	3.6	4.4	5.2	6.0	6.9	7.8	8.6	9.4	10.2	11.0
18.0		0.0	0.2	0.4	0.8	1.2	1.7	2.3	3.0	3.7	4.5	5.3	6.2	7.1	8.1	9.0	9.8	10.6	11.4
18.5		0.1	0.2	0.5	0.8	1.2	1.8	2.4	3.1	3.8	4.6	5.5	6.4	7.3	8.3	9.2	10.1	11.0	11.9
19.0		0.1	0.2	0.5	0.8	1.3	1.8	2.4	3.1	3.9	4.8	5.6	6.6	7.5	8.5	9.5	10.4	11.3	12.2
19.5		0.1	0.2	0.5	0.8	1.3	1.9	2.5	3.2	4.0	4.9	5.8	6.7	7.7	8.7	9.6	10.5	11.4	12.3
20.0		0.1	0.2	0.5	0.9	1.3	1.9	2.6	3.3	4.1	5.0	5.9	6.9	7.9	8.9	9.8	10.7	11.6	12.5

Obtain from the predictions the high water and low water, one of which is before and the other after the time for which the height is required. The difference between the times of occurrence of these tides is the duration of rise or fall, and the difference between their heights is the range of tide for the above table. Find the difference between the nearest high or low water and the time for which the height is required.

Enter the table with the duration of rise or fall, printed in heavy-faced type, which most nearly agrees with the actual value, and on that horizontal line find the time from the nearest high or low water which agrees most nearly with the corresponding actual difference. The correction sought is in the column directly below, on the line with the range of tide.

When the nearest tide is high water, subtract the correction.

When the nearest tide is low, add the correction.



## **TABLE 4.—LOCAL MEAN TIME OF SUNRISE AND SUNSET**

### **EXPLANATION OF TABLE**

This table gives the local mean time of the rising and setting of the Sun's upper limb for every fifth day of the year. The times were computed for the instant when the true zenith distance of the Sun's center is  $90^{\circ} 50', 34'$  having been allowed for horizontal refraction and  $16'$  for semidiameter. No allowance has been made for elevation of the observer.

Because of the sensible variations which may be made in the time of rising or setting of the Sun by a difference in elevation of the observer, and by changes in the refraction, any great refinement in the interpolation of intermediate dates or latitudes in this table is unnecessary.

The value obtained from table 4 may be converted to standard time by means of table 5, which follows it.

TABLE 4. -SUNRISE AND SUNSET, 2008

Date	0°		5° N.		10° N.		15° N.		20° N.		25° N.	
	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.
Jan.	1 06 00	18 07	06 08	17 59	06 17	17 50	06 26	17 41	06 35	17 32	06 45	17 22
	6 06 02	18 09	06 10	18 01	06 19	17 53	06 27	17 44	06 36	17 35	06 46	17 25
	11 06 04	18 11	06 12	18 03	06 20	17 55	06 29	17 47	06 37	17 38	06 47	17 29
	16 06 06	18 13	06 14	18 06	06 21	17 58	06 29	17 50	06 38	17 41	06 47	17 33
	21 06 08	18 15	06 15	18 08	06 22	18 00	06 30	17 53	06 38	17 45	06 46	17 36
	26 06 09	18 16	06 16	18 09	06 23	18 02	06 30	17 55	06 37	17 48	06 45	17 40
	31 06 10	18 17	06 16	18 11	06 23	18 04	06 29	17 58	06 36	17 51	06 43	17 44
Feb.	5 06 10	18 17	06 16	18 12	06 22	18 06	06 28	18 00	06 34	17 54	06 41	17 47
	10 06 11	18 18	06 16	18 13	06 21	18 07	06 27	18 02	06 32	17 57	06 38	17 51
	15 06 11	18 18	06 15	18 13	06 20	18 09	06 25	18 04	06 30	17 59	06 35	17 54
	20 06 10	18 17	06 14	18 13	06 18	18 09	06 22	18 05	06 27	18 01	06 31	17 57
	25 06 10	18 16	06 13	18 13	06 16	18 10	06 20	18 07	06 23	18 03	06 27	18 00
Mar.	1 06 09	18 16	06 12	18 13	06 14	18 10	06 17	18 08	06 20	18 05	06 23	18 02
	6 06 08	18 14	06 10	18 13	06 12	18 11	06 14	18 09	06 16	18 07	06 18	18 05
	11 06 07	18 13	06 08	18 12	06 09	18 11	06 10	18 10	06 12	18 09	06 13	18 07
	16 06 05	18 12	06 06	18 11	06 06	18 11	06 07	18 10	06 07	18 10	06 08	18 10
	21 06 04	18 10	06 04	18 11	06 03	18 11	06 03	18 11	06 03	18 11	06 03	18 12
	26 06 02	18 09	06 01	18 10	06 01	18 11	06 00	18 12	05 59	18 13	05 58	18 14
	31 06 01	18 07	05 59	18 09	05 58	18 11	05 56	18 12	05 54	18 14	05 52	18 16
Apr.	5 05 59	18 06	05 57	18 08	05 55	18 10	05 53	18 13	05 50	18 15	05 47	18 18
	10 05 58	18 05	05 55	18 07	05 52	18 10	05 49	18 14	05 46	18 17	05 42	18 20
	15 05 57	18 03	05 53	18 07	05 50	18 11	05 46	18 14	05 42	18 18	05 38	18 23
	20 05 55	18 02	05 51	18 06	05 47	18 11	05 43	18 15	05 38	18 20	05 33	18 25
	25 05 55	18 01	05 50	18 06	05 45	18 11	05 40	18 16	05 35	18 22	05 29	18 27
	30 05 54	18 01	05 48	18 06	05 43	18 11	05 37	18 17	05 31	18 23	05 25	18 30
	May 5 05 53	18 00	05 47	18 06	05 41	18 12	05 35	18 18	05 28	18 25	05 21	18 32
May	10 05 53	18 00	05 46	18 06	05 40	18 13	05 33	18 20	05 26	18 27	05 18	18 35
	15 05 53	18 00	05 46	18 07	05 39	18 14	05 32	18 21	05 24	18 29	05 16	18 37
	20 05 53	18 00	05 46	18 07	05 38	18 15	05 30	18 23	05 22	18 31	05 13	18 40
	25 05 53	18 01	05 46	18 08	05 38	18 16	05 30	18 24	05 21	18 33	05 12	18 42
	30 05 54	18 01	05 46	18 09	05 38	18 18	05 29	18 26	05 20	18 35	05 10	18 45
June	4 05 55	18 02	05 46	18 10	05 38	18 19	05 29	18 28	05 20	18 37	05 10	18 47
	9 05 56	18 03	05 47	18 11	05 38	18 20	05 29	18 29	05 20	18 39	05 10	18 49
	14 05 57	18 04	05 48	18 13	05 39	18 21	05 30	18 31	05 20	18 40	05 10	18 51
	19 05 58	18 05	05 49	18 14	05 40	18 23	05 31	18 32	05 21	18 42	05 11	18 52
	24 05 59	18 06	05 50	18 15	05 41	18 24	05 32	18 33	05 22	18 43	05 12	18 53
	29 06 00	18 07	05 51	18 16	05 42	18 25	05 33	18 34	05 24	18 43	05 13	18 54
	July 4 06 01	18 08	05 52	18 17	05 44	18 25	05 35	18 34	05 25	18 44	05 15	18 54
Jul y	9 06 02	18 09	05 53	18 17	05 45	18 26	05 36	18 34	05 27	18 43	05 17	18 53
	14 06 02	18 09	05 54	18 17	05 46	18 26	05 38	18 34	05 29	18 43	05 19	18 52
	19 06 03	18 10	05 55	18 17	05 47	18 25	05 39	18 33	05 31	18 42	05 22	18 51
	24 06 03	18 10	05 56	18 17	05 48	18 25	05 41	18 32	05 33	18 40	05 24	18 49
	29 06 03	18 10	05 56	18 17	05 49	18 24	05 42	18 31	05 34	18 38	05 26	18 46
Aug.	3 06 03	18 10	05 56	18 16	05 50	18 22	05 43	18 29	05 36	18 36	05 29	18 43
	8 06 02	18 09	05 56	18 15	05 51	18 21	05 44	18 27	05 38	18 33	05 31	18 40
	13 06 01	18 08	05 56	18 13	05 51	18 19	05 45	18 24	05 39	18 30	05 33	18 36
	18 06 00	18 07	05 56	18 12	05 51	18 16	05 46	18 21	05 41	18 26	05 35	18 32
	23 05 59	18 06	05 55	18 10	05 51	18 14	05 47	18 18	05 42	18 22	05 37	18 27
	28 05 58	18 04	05 54	18 08	05 51	18 11	05 47	18 15	05 44	18 18	05 39	18 22
	Sept. 2 05 56	18 03	05 54	18 05	05 51	18 08	05 48	18 11	05 45	18 14	05 41	18 17
Sept.	7 05 55	18 01	05 53	18 03	05 50	18 05	05 48	18 07	05 46	18 10	05 43	18 12
	12 05 53	17 59	05 51	18 01	05 50	18 02	05 48	18 04	05 47	18 05	05 45	18 07
	17 05 51	17 58	05 50	17 58	05 50	17 59	05 49	18 00	05 48	18 01	05 47	18 01
	22 05 49	17 56	05 49	17 56	05 49	17 56	05 49	17 56	05 49	17 56	05 49	17 56
	27 05 48	17 54	05 48	17 53	05 49	17 53	05 49	17 52	05 50	17 51	05 51	17 51
Oct.	2 05 46	17 52	05 47	17 51	05 49	17 50	05 50	17 48	05 51	17 47	05 53	17 45
	7 05 44	17 51	05 46	17 49	05 48	17 47	05 50	17 45	05 52	17 43	05 55	17 40
	12 05 43	17 50	05 46	17 47	05 48	17 44	05 51	17 41	05 54	17 39	05 57	17 36
	17 05 42	17 49	05 45	17 45	05 49	17 42	05 52	17 38	05 56	17 35	05 59	17 31
	22 05 41	17 48	05 45	17 44	05 49	17 40	05 53	17 36	05 57	17 31	06 02	17 27
	27 05 40	17 47	05 45	17 43	05 50	17 38	05 54	17 33	05 59	17 28	06 05	17 23
	Nov. 1 05 40	17 47	05 45	17 42	05 51	17 36	05 56	17 31	06 02	17 25	06 08	17 19
Nov.	6 05 40	17 47	05 46	17 41	05 52	17 35	05 58	17 29	06 04	17 23	06 11	17 16
	11 05 41	17 48	05 47	17 41	05 53	17 35	06 00	17 28	06 07	17 21	06 14	17 14
	16 05 41	17 48	05 48	17 42	05 55	17 35	06 02	17 27	06 10	17 20	06 17	17 12
	21 05 42	17 50	05 50	17 42	05 57	17 35	06 05	17 27	06 13	17 19	06 21	17 11
	26 05 44	17 51	05 51	17 43	05 59	17 36	06 07	17 27	06 16	17 19	06 25	17 10
Dec.	1 05 45	17 53	05 54	17 45	06 02	17 37	06 10	17 28	06 19	17 19	06 28	17 10
	6 05 47	17 55	05 56	17 47	06 04	17 38	06 13	17 29	06 22	17 20	06 32	17 11
	11 05 50	17 57	05 58	17 49	06 07	17 40	06 16	17 31	06 25	17 22	06 35	17 12
	16 05 52	18 00	06 01	17 51	06 09	17 42	06 18	17 33	06 28	17 24	06 38	17 14
	21 05 54	18 02	06 03	17 53	06 12	17 45	06 21	17 35	06 31	17 26	06 41	17 16
	26 05 57	18 05	06 06	17 56	06 14	17 47	06 23	17 38	06 33	17 29	06 43	17 19
	31 05 59	18 07	06 08	17 58	06 17	17 50	06 26	17 41	06 35	17 32	06 45	17 22
Jan. 1 06 00	18 07	06 08	17 59	06 17	17 50	06 26	17 41	06 35	17 32	06 45	17 22	

Local mean time. To obtain standard time of rise or set, see table 5.

TABLE 4. - SUNRISE AND SUNSET, 2008

Date	30° N.		32° N.		34° N.		36° N.		38° N.		40° N.	
	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.
Jan.	06 56	17 11	07 00	17 06	07 05	17 01	07 11	16 56	07 16	16 51	07 22	16 45
	06 57	17 15	07 01	17 10	07 06	17 05	07 11	17 00	07 16	16 55	07 22	16 49
	06 57	17 19	07 01	17 14	07 06	17 10	07 11	17 05	07 16	17 00	07 21	16 54
	06 57	17 23	07 01	17 19	07 05	17 14	07 10	17 10	07 15	17 05	07 20	17 00
	06 56	17 27	06 59	17 23	07 04	17 19	07 08	17 15	07 13	17 10	07 17	17 05
	06 54	17 31	06 57	17 28	07 01	17 24	07 05	17 20	07 10	17 16	07 14	17 11
	06 51	17 36	06 55	17 32	06 58	17 29	07 02	17 25	07 06	17 21	07 10	17 17
Feb.	06 48	17 40	06 51	17 37	06 55	17 34	06 58	17 30	07 02	17 27	07 05	17 23
	06 45	17 44	06 47	17 41	06 50	17 39	06 53	17 36	06 56	17 32	07 00	17 29
	06 41	17 48	06 43	17 46	06 45	17 43	06 48	17 41	06 51	17 38	06 54	17 35
	06 36	17 52	06 38	17 50	06 40	17 48	06 42	17 46	06 45	17 43	06 47	17 41
	06 31	17 56	06 33	17 54	06 34	17 52	06 36	17 51	06 38	17 49	06 40	17 47
Mar.	06 26	17 59	06 27	17 58	06 28	17 57	06 30	17 55	06 31	17 54	06 33	17 52
	06 20	18 03	06 21	18 02	06 22	18 01	06 23	18 00	06 24	17 59	06 25	17 58
	06 14	18 06	06 15	18 05	06 16	18 05	06 16	18 04	06 17	18 04	06 18	18 03
	06 08	18 09	06 09	18 09	06 09	18 09	06 09	18 09	06 09	18 08	06 10	18 08
	06 02	18 12	06 02	18 12	06 02	18 13	06 02	18 13	06 02	18 13	06 01	18 13
	05 56	18 15	05 56	18 16	05 55	18 16	05 55	18 17	05 54	18 18	05 53	18 18
	05 50	18 18	05 49	18 19	05 48	18 20	05 47	18 21	05 46	18 22	05 45	18 24
Apr.	05 44	18 21	05 43	18 23	05 42	18 24	05 40	18 25	05 39	18 27	05 37	18 29
	05 39	18 24	05 37	18 26	05 35	18 28	05 33	18 30	05 31	18 32	05 29	18 34
	05 33	18 27	05 31	18 29	05 29	18 32	05 27	18 34	05 24	18 36	05 22	18 39
	05 28	18 31	05 25	18 33	05 23	18 35	05 20	18 38	05 17	18 41	05 15	18 44
	05 23	18 34	05 20	18 36	05 17	18 39	05 14	18 42	05 11	18 45	05 08	18 49
	05 18	18 37	05 15	18 40	05 12	18 43	05 08	18 47	05 05	18 50	05 01	18 54
May	05 14	18 40	05 10	18 44	05 07	18 47	05 03	18 51	04 59	18 55	04 55	18 59
	05 10	18 43	05 06	18 47	05 02	18 51	04 58	18 55	04 54	18 59	04 49	19 04
	05 06	18 47	05 03	18 51	04 58	18 55	04 54	18 59	04 49	19 04	04 45	19 09
	05 04	18 50	04 59	18 54	04 55	18 58	04 50	19 03	04 46	19 08	04 40	19 13
	05 01	18 53	04 57	18 57	04 52	19 02	04 48	19 07	04 42	19 12	04 37	19 18
	05 00	18 56	04 55	19 00	04 50	19 05	04 45	19 10	04 40	19 16	04 34	19 21
June	04 59	18 58	04 54	19 03	04 49	19 08	04 44	19 13	04 38	19 19	04 32	19 25
	04 58	19 00	04 53	19 05	04 48	19 10	04 43	19 16	04 37	19 22	04 31	19 28
	04 58	19 02	04 53	19 07	04 48	19 13	04 43	19 18	04 37	19 24	04 31	19 30
	04 59	19 04	04 54	19 09	04 49	19 14	04 43	19 20	04 37	19 26	04 31	19 32
	05 00	19 05	04 55	19 10	04 50	19 15	04 44	19 21	04 38	19 26	04 32	19 33
	05 02	19 05	04 57	19 10	04 52	19 15	04 46	19 21	04 40	19 27	04 34	19 33
July	05 04	19 05	04 59	19 10	04 54	19 15	04 48	19 20	04 43	19 26	04 37	19 32
	05 06	19 04	05 01	19 09	04 56	19 14	04 51	19 19	04 46	19 25	04 40	19 31
	05 09	19 03	05 04	19 07	04 59	19 12	04 54	19 17	04 49	19 22	04 43	19 28
	05 11	19 01	05 07	19 05	05 03	19 10	04 58	19 15	04 53	19 20	04 47	19 25
	05 14	18 58	05 10	19 02	05 06	19 07	05 01	19 11	04 57	19 16	04 51	19 21
	05 17	18 55	05 14	18 59	05 09	19 03	05 05	19 07	05 01	19 12	04 56	19 16
Aug.	05 20	18 52	05 17	18 55	05 13	18 59	05 09	19 03	05 05	19 07	05 00	19 11
	05 23	18 47	05 20	18 51	05 17	18 54	05 13	18 58	05 09	19 01	05 05	19 05
	05 26	18 43	05 23	18 46	05 20	18 49	05 17	18 52	05 14	18 55	05 10	18 59
	05 29	18 38	05 27	18 40	05 24	18 43	05 21	18 46	05 18	18 49	05 15	18 52
	05 32	18 32	05 30	18 35	05 27	18 37	05 25	18 39	05 22	18 42	05 19	18 45
	05 35	18 27	05 33	18 29	05 31	18 31	05 29	18 33	05 27	18 35	05 24	18 37
Sept.	05 38	18 21	05 36	18 22	05 34	18 24	05 33	18 26	05 31	18 28	05 29	18 29
	05 40	18 15	05 39	18 16	05 38	18 17	05 37	18 19	05 35	18 20	05 34	18 21
	05 43	18 09	05 42	18 10	05 41	18 10	05 40	18 11	05 39	18 12	05 38	18 13
	05 46	18 02	05 45	18 03	05 45	18 03	05 44	18 04	05 44	18 04	05 43	18 05
	05 48	17 56	05 48	17 56	05 48	17 56	05 48	17 56	05 48	17 57	05 48	17 57
	05 51	17 50	05 51	17 50	05 52	17 49	05 52	17 49	05 52	17 49	05 53	17 48
Oct.	05 54	17 44	05 55	17 43	05 55	17 43	05 56	17 42	05 57	17 41	05 57	17 40
	05 57	17 38	05 58	17 37	05 59	17 36	06 00	17 35	06 01	17 34	06 02	17 32
	06 00	17 32	06 01	17 31	06 03	17 29	06 04	17 28	06 06	17 26	06 08	17 25
	06 03	17 27	06 05	17 25	06 07	17 23	06 09	17 21	06 11	17 19	06 13	17 17
	06 07	17 22	06 09	17 20	06 11	17 17	06 13	17 15	06 16	17 13	06 18	17 10
	06 10	17 17	06 13	17 15	06 15	17 12	06 18	17 09	06 21	17 06	06 24	17 03
Nov.	06 14	17 13	06 17	17 10	06 20	17 07	06 23	17 04	06 26	17 01	06 29	16 57
	06 18	17 09	06 21	17 06	06 24	17 03	06 28	16 59	06 31	16 56	06 35	16 52
	06 22	17 06	06 25	17 02	06 29	16 59	06 33	16 55	06 37	16 51	06 41	16 47
	06 26	17 03	06 30	17 00	06 34	16 56	06 38	16 52	06 42	16 47	06 47	16 43
	06 30	17 01	06 34	16 57	06 38	16 53	06 43	16 49	06 47	16 44	06 52	16 39
	06 34	17 00	06 39	16 56	06 43	16 52	06 48	16 47	06 52	16 42	06 58	16 37
Dec.	06 38	17 00	06 43	16 55	06 47	16 51	06 52	16 46	06 57	16 41	07 03	16 35
	06 42	17 00	06 47	16 55	06 52	16 51	06 57	16 46	07 02	16 40	07 08	16 35
	06 46	17 01	06 51	16 56	06 55	16 51	07 01	16 46	07 06	16 41	07 12	16 35
	06 49	17 02	06 54	16 58	06 59	16 53	07 04	16 48	07 10	16 42	07 16	16 36
	06 52	17 05	06 57	17 00	07 02	16 55	07 07	16 50	07 12	16 44	07 18	16 38
	06 54	17 08	06 59	17 03	07 04	16 58	07 09	16 53	07 15	16 47	07 21	16 41
Jan.	06 56	17 11	07 00	17 06	07 05	17 01	07 10	16 56	07 16	16 51	07 22	16 45

Local mean time. To obtain standard time of rise or set, see table 5.

TABLE 4. - SUNRISE AND SUNSET, 2008

Date	42° N.		44° N.		46° N.		48° N.		50° N.		52° N.	
	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.
Jan.	07 28	16 39	07 35	16 32	07 42	16 25	07 50	16 17	07 59	16 08	08 08	15 59
	07 28	16 43	07 35	16 37	07 42	16 30	07 49	16 22	07 58	16 14	08 07	16 04
	07 27	16 48	07 34	16 42	07 40	16 35	07 48	16 28	07 56	16 20	08 05	16 11
	07 25	16 54	07 31	16 48	07 38	16 42	07 45	16 35	07 52	16 27	08 01	16 19
	07 23	17 00	07 28	16 54	07 34	16 48	07 41	16 42	07 48	16 35	07 56	16 27
	07 19	17 06	07 24	17 01	07 30	16 56	07 36	16 50	07 42	16 43	07 50	16 36
	07 15	17 13	07 19	17 08	07 24	17 03	07 30	16 57	07 36	16 51	07 43	16 45
Feb.	07 09	17 19	07 14	17 15	07 18	17 10	07 23	17 05	07 29	17 00	07 35	16 54
	07 03	17 26	07 07	17 22	07 11	17 18	07 16	17 13	07 21	17 09	07 26	17 03
	06 57	17 32	07 00	17 29	07 04	17 25	07 08	17 21	07 12	17 17	07 16	17 13
	06 50	17 38	06 53	17 35	06 56	17 32	06 59	17 29	07 03	17 26	07 06	17 22
	06 43	17 44	06 45	17 42	06 47	17 40	06 50	17 37	06 53	17 34	06 56	17 31
Mar.	06 35	17 50	06 37	17 49	06 38	17 47	06 41	17 45	06 43	17 43	06 45	17 40
	06 27	17 56	06 28	17 55	06 29	17 54	06 31	17 52	06 32	17 51	06 34	17 49
	06 18	18 02	06 19	18 02	06 20	18 01	06 21	18 00	06 22	17 59	06 23	17 58
	06 10	18 08	06 10	18 08	06 10	18 08	06 11	18 07	06 11	18 07	06 11	18 07
	06 01	18 14	06 01	18 14	06 01	18 14	06 00	18 15	06 00	18 15	06 00	18 15
	05 53	18 19	05 52	18 20	05 51	18 21	05 50	18 22	05 49	18 23	05 48	18 24
	05 44	18 25	05 43	18 26	05 41	18 28	05 40	18 29	05 38	18 31	05 37	18 33
Apr.	05 36	18 30	05 34	18 32	05 32	18 34	05 30	18 36	05 28	18 39	05 25	18 41
	05 27	18 36	05 25	18 38	05 23	18 41	05 20	18 44	05 17	18 46	05 14	18 50
	05 19	18 41	05 16	18 44	05 13	18 47	05 10	18 51	05 07	18 54	05 03	18 58
	05 11	18 47	05 08	18 50	05 05	18 54	05 01	18 58	04 57	19 02	04 52	19 07
	05 04	18 52	05 00	18 56	04 56	19 01	04 52	19 05	04 47	19 10	04 42	19 15
	04 57	18 58	04 53	19 02	04 48	19 07	04 43	19 12	04 38	19 18	04 32	19 24
May	04 51	19 03	04 46	19 08	04 41	19 13	04 35	19 19	04 29	19 25	04 22	19 32
	04 45	19 09	04 39	19 14	04 34	19 20	04 28	19 26	04 21	19 33	04 14	19 40
	04 39	19 14	04 34	19 20	04 28	19 26	04 21	19 33	04 14	19 40	04 06	19 48
	04 35	19 19	04 29	19 25	04 22	19 32	04 15	19 39	04 07	19 47	03 59	19 55
	04 31	19 24	04 24	19 30	04 18	19 37	04 10	19 45	04 02	19 53	03 52	20 02
	04 28	19 28	04 21	19 34	04 14	19 42	04 06	19 50	03 57	19 59	03 47	20 08
June	04 26	19 31	04 19	19 38	04 11	19 46	04 03	19 54	03 54	20 04	03 44	20 14
	04 24	19 35	04 17	19 42	04 09	19 50	04 01	19 58	03 51	20 08	03 41	20 18
	04 24	19 37	04 17	19 44	04 09	19 52	04 00	20 01	03 50	20 11	03 40	20 21
	04 24	19 39	04 17	19 46	04 09	19 54	04 00	20 03	03 50	20 13	03 39	20 23
	04 25	19 40	04 18	19 47	04 10	19 55	04 01	20 04	03 52	20 13	03 41	20 24
	04 27	19 40	04 20	19 47	04 12	19 55	04 04	20 03	03 54	20 13	03 43	20 24
July	04 30	19 39	04 23	19 46	04 15	19 53	04 07	20 02	03 57	20 11	03 47	20 22
	04 33	19 37	04 26	19 44	04 19	19 51	04 11	19 59	04 02	20 08	03 52	20 18
	04 37	19 34	04 30	19 41	04 23	19 48	04 15	19 56	04 07	20 04	03 57	20 14
	04 41	19 31	04 35	19 37	04 28	19 44	04 21	19 51	04 13	19 59	04 03	20 08
	04 46	19 27	04 40	19 32	04 33	19 39	04 26	19 46	04 19	19 53	04 10	20 02
	04 51	19 22	04 45	19 27	04 39	19 33	04 33	19 39	04 26	19 46	04 18	19 54
Aug.	04 56	19 16	04 51	19 21	04 45	19 26	04 39	19 32	04 33	19 39	04 25	19 46
	05 01	19 10	04 56	19 14	04 51	19 19	04 46	19 25	04 40	19 30	04 33	19 37
	05 06	19 03	05 02	19 07	04 57	19 11	04 52	19 16	04 47	19 21	04 41	19 27
	05 11	18 56	05 08	18 59	05 04	19 03	04 59	19 07	04 55	19 12	04 49	19 17
	05 16	18 48	05 13	18 51	05 10	18 54	05 06	18 58	05 02	19 02	04 58	19 06
	05 22	18 40	05 19	18 42	05 16	18 45	05 13	18 48	05 09	18 52	05 06	18 55
Sept.	05 27	18 31	05 25	18 34	05 22	18 36	05 20	18 38	05 17	18 41	05 14	18 44
	05 32	18 23	05 30	18 25	05 28	18 26	05 26	18 28	05 24	18 30	05 22	18 33
	05 37	18 14	05 36	18 15	05 35	18 17	05 33	18 18	05 32	18 19	05 30	18 21
	05 42	18 06	05 42	18 06	05 41	18 07	05 40	18 08	05 39	18 08	05 38	18 09
	05 48	17 57	05 47	17 57	05 47	17 57	05 47	17 57	05 47	17 57	05 46	17 58
	05 53	17 48	05 53	17 48	05 54	17 47	05 54	17 47	05 54	17 46	05 55	17 46
Oct.	05 58	17 39	05 59	17 39	06 00	17 38	06 01	17 37	06 02	17 36	06 03	17 34
	06 04	17 31	06 05	17 30	06 06	17 28	06 08	17 27	06 10	17 25	06 11	17 23
	06 09	17 23	06 11	17 21	06 13	17 19	06 15	17 17	06 18	17 14	06 20	17 12
	06 15	17 15	06 17	17 12	06 20	17 10	06 23	17 07	06 25	17 04	06 29	17 01
	06 21	17 07	06 24	17 04	06 27	17 01	06 30	16 58	06 34	16 54	06 37	16 50
	06 27	17 00	06 30	16 57	06 34	16 53	06 38	16 49	06 42	16 45	06 46	16 40
Nov.	06 33	16 54	06 37	16 50	06 41	16 46	06 45	16 41	06 50	16 36	06 55	16 31
	06 39	16 48	06 43	16 43	06 48	16 39	06 53	16 34	06 58	16 28	07 04	16 22
	06 45	16 42	06 50	16 38	06 55	16 32	07 01	16 27	07 07	16 21	07 13	16 14
	06 51	16 38	06 57	16 33	07 02	16 27	07 08	16 21	07 15	16 14	07 22	16 07
	06 57	16 34	07 03	16 29	07 09	16 22	07 16	16 16	07 23	16 09	07 31	16 01
	07 03	16 31	07 09	16 25	07 16	16 19	07 23	16 12	07 30	16 04	07 39	15 56
Dec.	07 09	16 29	07 15	16 23	07 22	16 16	07 29	16 09	07 37	16 01	07 46	15 52
	07 14	16 29	07 20	16 22	07 27	16 15	07 35	16 07	07 43	15 59	07 53	15 49
	07 18	16 29	07 25	16 22	07 32	16 15	07 40	16 07	07 49	15 58	07 58	15 48
	07 22	16 30	07 29	16 23	07 36	16 15	07 44	16 07	07 53	15 59	08 03	15 49
	07 25	16 32	07 32	16 25	07 39	16 17	07 47	16 09	07 56	16 00	08 06	15 51
	07 27	16 35	07 34	16 28	07 41	16 21	07 49	16 12	07 58	16 04	08 08	15 54
Jan.	07 28	16 39	07 35	16 32	07 42	16 25	07 50	16 17	07 59	16 08	08 08	15 58

Local mean time. To obtain standard time of rise or set, see table 5.

TABLE 4. - SUNRISE AND SUNSET, 2008

Date	54° N.		56° N.		58° N.		60° N.		62° N.		64° N.	
	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.
Jan.	08 19	15 48	08 31	15 35	08 46	15 21	09 03	15 04	09 23	14 44	09 50	14 17
	08 18	15 54	08 29	15 42	08 43	15 28	08 59	15 12	09 19	14 53	09 44	14 28
	08 15	16 01	08 26	15 50	08 39	15 37	08 54	15 22	09 12	15 03	09 35	14 41
	08 10	16 09	08 21	15 59	08 33	15 47	08 47	15 33	09 04	15 16	09 25	14 55
	08 05	16 18	08 14	16 09	08 26	15 57	08 39	15 44	08 54	15 29	09 12	15 11
	07 58	16 28	08 07	16 19	08 17	16 09	08 29	15 57	08 42	15 43	08 59	15 27
	07 50	16 38	07 58	16 29	08 07	16 20	08 18	16 10	08 30	15 58	08 44	15 43
Feb.	07 41	16 48	07 48	16 40	07 56	16 32	08 06	16 23	08 16	16 12	08 29	16 00
	07 32	16 58	07 38	16 51	07 45	16 44	07 53	16 36	08 02	16 27	08 13	16 16
	07 21	17 08	07 27	17 02	07 33	16 56	07 40	16 49	07 48	16 42	07 57	16 33
	07 11	17 18	07 15	17 13	07 20	17 08	07 26	17 03	07 33	16 56	07 40	16 49
	06 59	17 28	07 03	17 24	07 07	17 20	07 12	17 15	07 17	17 10	07 23	17 04
Mar.	06 48	17 38	06 51	17 35	06 54	17 32	06 58	17 28	07 02	17 24	07 06	17 20
	06 36	17 47	06 38	17 45	06 40	17 43	06 43	17 41	06 46	17 38	06 49	17 35
	06 24	17 57	06 25	17 56	06 26	17 55	06 28	17 53	06 30	17 52	06 31	17 50
	06 12	18 07	06 12	18 06	06 12	18 06	06 13	18 06	06 13	18 05	06 14	18 05
	05 59	18 16	05 59	18 17	05 58	18 17	05 58	18 18	05 57	18 19	05 56	18 20
	05 47	18 25	05 46	18 27	05 44	18 28	05 43	18 30	05 41	18 32	05 39	18 34
	05 35	18 35	05 32	18 37	05 30	18 39	05 27	18 42	05 24	18 45	05 21	18 49
Apr.	05 22	18 44	05 19	18 47	05 16	18 51	05 12	18 54	05 08	18 59	05 03	19 04
	05 10	18 53	05 06	18 57	05 02	19 02	04 57	19 07	04 52	19 12	04 46	19 19
	04 59	19 03	04 54	19 07	04 49	19 13	04 43	19 19	04 36	19 26	04 28	19 34
	04 47	19 12	04 41	19 18	04 35	19 24	04 28	19 31	04 20	19 40	04 10	19 49
	04 36	19 21	04 29	19 28	04 22	19 35	04 14	19 44	04 04	19 54	03 53	20 05
	04 25	19 30	04 18	19 38	04 09	19 46	04 00	19 56	03 49	20 07	03 36	20 21
May	04 15	19 40	04 07	19 48	03 57	19 58	03 46	20 09	03 34	20 21	03 19	20 37
	04 05	19 48	03 56	19 58	03 46	20 08	03 34	20 21	03 19	20 35	03 02	20 53
	03 57	19 57	03 47	20 07	03 35	20 19	03 22	20 33	03 06	20 49	02 46	21 09
	03 49	20 05	03 38	20 16	03 25	20 29	03 11	20 44	02 53	21 02	02 30	21 25
	03 42	20 13	03 30	20 25	03 17	20 38	03 01	20 55	02 41	21 15	02 16	21 41
	03 36	20 19	03 24	20 32	03 09	20 47	02 52	21 05	02 30	21 26	02 02	21 55
June	03 32	20 25	03 19	20 39	03 03	20 54	02 45	21 13	02 22	21 37	01 50	22 09
	03 29	20 30	03 15	20 44	02 59	21 00	02 40	21 20	02 15	21 45	01 40	22 20
	03 27	20 34	03 13	20 48	02 57	21 04	02 36	21 25	02 11	21 51	01 34	22 28
	03 27	20 36	03 13	20 50	02 56	21 07	02 36	21 27	02 09	21 54	01 31	22 32
	03 28	20 36	03 14	20 51	02 57	21 07	02 37	21 28	02 11	21 54	01 33	22 32
	03 31	20 36	03 17	20 50	03 01	21 06	02 41	21 26	02 15	21 51	01 38	22 27
July	03 35	20 33	03 21	20 47	03 05	21 03	02 46	21 22	02 22	21 46	01 48	22 19
	03 40	20 30	03 27	20 43	03 12	20 58	02 53	21 16	02 31	21 39	02 00	22 09
	03 46	20 25	03 34	20 37	03 19	20 51	03 02	21 08	02 41	21 29	02 14	21 56
	03 53	20 18	03 42	20 30	03 28	20 43	03 12	20 59	02 53	21 18	02 28	21 42
	04 01	20 11	03 50	20 22	03 38	20 34	03 23	20 48	03 06	21 05	02 44	21 27
	04 09	20 03	03 59	20 13	03 48	20 24	03 34	20 37	03 19	20 52	03 00	21 11
Aug.	04 17	19 54	04 08	20 03	03 58	20 13	03 46	20 24	03 32	20 38	03 15	20 54
	04 26	19 44	04 18	19 52	04 09	20 01	03 58	20 11	03 46	20 23	03 31	20 38
	04 35	19 34	04 28	19 41	04 19	19 49	04 10	19 58	03 59	20 08	03 47	20 21
	04 44	19 23	04 37	19 29	04 30	19 36	04 22	19 44	04 13	19 53	04 02	20 03
	04 53	19 11	04 47	19 16	04 41	19 22	04 34	19 29	04 26	19 37	04 17	19 46
	05 02	18 59	04 57	19 04	04 52	19 09	04 46	19 14	04 40	19 21	04 32	19 28
Sept.	05 10	18 47	05 07	18 51	05 03	18 55	04 58	19 00	04 53	19 05	04 47	19 11
	05 19	18 35	05 17	18 38	05 13	18 41	05 10	18 44	05 06	18 48	05 01	18 53
	05 28	18 23	05 26	18 25	05 24	18 27	05 21	18 29	05 19	18 32	05 15	18 35
	05 37	18 10	05 36	18 11	05 35	18 13	05 33	18 14	05 31	18 16	05 30	18 17
	05 46	17 58	05 46	17 58	05 45	17 58	05 45	17 59	05 44	17 59	05 44	18 00
	05 55	17 45	05 56	17 45	05 56	17 44	05 57	17 44	05 57	17 43	05 58	17 42
Oct.	06 04	17 33	06 06	17 32	06 07	17 30	06 09	17 29	06 10	17 27	06 12	17 25
	06 13	17 21	06 16	17 19	06 18	17 16	06 21	17 14	06 24	17 11	06 27	17 07
	06 23	17 09	06 26	17 06	06 29	17 03	06 33	16 59	06 37	16 55	06 42	16 50
	06 32	16 57	06 36	16 54	06 40	16 49	06 45	16 44	06 50	16 39	06 57	16 33
	06 42	16 46	06 46	16 41	06 52	16 36	06 58	16 30	07 04	16 23	07 12	16 16
	06 51	16 35	06 57	16 30	07 03	16 24	07 10	16 16	07 18	16 08	07 27	15 59
Nov.	07 01	16 25	07 08	16 19	07 15	16 11	07 23	16 03	07 32	15 54	07 43	15 43
	07 11	16 16	07 18	16 08	07 26	16 00	07 36	15 51	07 47	15 40	07 59	15 27
	07 21	16 07	07 29	15 59	07 38	15 49	07 49	15 39	08 01	15 26	08 16	15 12
	07 30	15 59	07 39	15 50	07 49	15 40	08 01	15 28	08 15	15 14	08 32	14 57
	07 39	15 52	07 49	15 42	08 00	15 31	08 13	15 18	08 29	15 02	08 47	14 44
	07 48	15 46	07 59	15 36	08 11	15 23	08 25	15 09	08 42	14 52	09 03	14 31
Dec.	07 56	15 42	08 07	15 31	08 20	15 18	08 36	15 02	08 54	14 44	09 17	14 21
	08 03	15 39	08 15	15 27	08 29	15 13	08 45	14 57	09 05	14 37	09 30	14 12
	08 09	15 38	08 21	15 25	08 36	15 11	08 53	14 54	09 13	14 33	09 40	14 06
	08 14	15 38	08 26	15 25	08 41	15 10	08 58	14 53	09 20	14 32	09 48	14 04
	08 17	15 39	08 30	15 27	08 45	15 12	09 02	14 54	09 24	14 33	09 52	14 04
	08 19	15 43	08 31	15 30	08 46	15 15	09 04	14 58	09 25	14 37	09 53	14 09
Jan.	08 19	15 48	08 31	15 35	08 46	15 21	09 03	15 04	09 23	14 43	09 50	14 16

Local mean time. To obtain standard time of rise or set, see table 5.

TABLE 4. -SUNRISE AND SUNSET, 2008

Date	66° N.		68° N.		70° N.		72° N.		74° N.		76° N.		
	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	
Jan.	10 29	13 38	Rise h. m.	Set h. m.	11 26	12 46	11 01	13 22	10 01	14 28	10 59	13 30	
	10 19	13 53			10 56	13 20	Sun does not rise until 17 January	Sun does not rise until 26 January	09 27	15 02	10 05	14 25	
	10 06	14 10			10 31	13 49	11 01	13 22	09 28	15 02	11 21	13 10	
	09 52	14 28			10 08	14 15	11 01	13 22	08 37	15 53	09 25	15 05	
	09 36	14 47			09 46	14 40	10 24	14 01	08 13	16 17	08 50	15 40	
	09 19	15 06			09 24	15 04	09 54	14 34	07 49	16 39	08 01	16 27	
	09 02	15 26			10 41	13 47	10 41	13 47	08 17	16 11	08 39	15 50	
Feb.	5	08 44	15 45	09 03	15 26	09 27	15 02	10 01	14 28	10 59	13 30	Sun does not rise until 9 February	
	8	08 26	16 04	08 42	15 48	09 01	15 28	09 28	15 02	10 05	14 25		
	10	08 08	16 22	08 21	16 09	08 37	15 53	08 57	15 33	10 25	15 05		
	15	07 49	16 40	08 00	16 29	08 13	16 17	08 29	16 01	09 19	15 10		
	25	07 30	16 57	07 39	16 49	07 49	16 39	08 01	16 27	08 17	16 11		
Mar.	1	07 12	17 14	07 18	17 08	07 26	17 01	07 35	16 52	07 47	16 40	08 02	16 25
	6	06 53	17 31	06 57	17 27	07 02	17 22	07 09	17 16	07 17	17 08	07 27	16 58
	11	06 34	17 48	06 36	17 45	06 39	17 43	06 43	17 39	06 47	17 35	06 53	17 29
	16	06 15	18 04	06 15	18 04	06 16	18 03	06 17	18 02	06 18	18 01	06 20	18 00
	21	05 55	18 21	05 54	18 22	05 53	18 23	05 52	18 25	05 50	18 27	05 47	18 30
	26	05 36	18 37	05 33	18 40	05 30	18 44	05 26	18 48	05 20	18 54	05 14	19 01
	31	05 17	18 53	05 12	18 58	05 06	19 04	05 00	19 12	04 51	19 21	04 39	19 33
Apr.	5	04 58	19 10	04 51	19 17	04 43	19 25	04 33	19 36	04 20	19 49	04 04	20 06
	10	04 38	19 27	04 29	19 36	04 19	19 47	04 06	20 00	03 49	20 18	03 26	20 43
	15	04 19	19 44	04 08	19 55	03 54	20 09	03 37	20 27	03 15	20 50	02 43	21 24
	20	03 59	20 01	03 46	20 15	03 29	20 32	03 07	20 55	02 37	21 26	01 50	22 18
	25	03 40	20 19	03 23	20 35	03 03	20 57	02 35	21 26	01 53	22 11	...	...
	30	03 20	20 37	03 01	20 57	02 35	21 24	01 58	22 03	00 46	23 38	...	...
May	5	03 00	20 56	02 37	21 20	02 04	21 54	01 10	22 55	...	...	...	...
	10	02 41	21 15	02 12	21 45	01 29	22 32	...	...	...	...	...	...
	15	02 21	21 35	01 45	22 12	00 35	23 42	...	...	...	...	...	...
	20	02 01	21 56	01 14	22 45	...	...	...	...	...	...	...	...
	25	01 40	22 17	00 29	23 46	...	...	...	...	...	...	...	...
	30	01 20	22 40	...	...	...	...	...	...	...	...	...	...
June	4	00 58	23 04	Sun rises 27 May Sun sets 17 July	...	...	...	...	...	...	...	...	...
	9	00 32	23 32		...	...	...	...	...	...	...	...	...
	14	Sun rises 12 June	...		...	...	...	...	...	...	...	...	...
	19	...	...		...	...	...	...	...	...	...	...	...
	24	...	...		...	...	...	...	...	...	...	...	...
	29	23 56	...		...	...	...	...	...	...	...	...	...
July	4	00 44	23 20	...	...	...	...	...	...	...	...	...	...
	9	01 09	22 57	...	...	...	...	...	...	...	...	...	...
	14	01 32	22 36	...	...	...	...	...	...	...	...	...	...
	19	01 54	22 15	00 50	23 13	...	...	...	...	...	...	...	...
	24	02 15	21 55	01 31	22 36	...	...	...	...	...	...	...	...
	29	02 35	21 35	02 01	22 07	00 58	23 04	...	...	...	...	...	...
Aug.	3	02 54	21 15	02 27	21 42	01 46	22 20	01 28	22 34	...	...	...	...
	8	03 13	20 55	02 50	21 17	02 19	21 47	02 12	21 51	01 08	22 48	...	...
	13	03 31	20 35	03 12	20 54	02 48	21 18	02 46	21 16	02 07	21 53	00 37	23 05
	18	03 49	20 16	03 33	20 31	03 13	20 51	03 16	20 45	02 47	21 12	02 02	21 54
	23	04 06	19 56	03 53	20 09	03 37	20 25	03 43	20 16	03 21	20 36	02 50	21 05
	28	04 23	19 37	04 12	19 47	03 59	20 00	06 02	17 37	06 04	17 35	06 06	17 33
Sept.	2	04 39	19 17	04 31	19 26	04 21	19 36	04 08	19 48	03 51	20 03	03 29	20 24
	7	04 56	18 58	04 49	19 04	04 41	19 12	04 32	19 21	04 20	19 32	04 04	19 47
	12	05 11	18 39	05 07	18 43	05 02	18 48	04 55	18 54	04 47	19 02	04 36	19 12
	17	05 27	18 20	05 25	18 22	05 21	18 25	05 18	18 28	05 13	18 33	05 06	18 39
	22	05 43	18 00	05 42	18 01	05 41	18 02	05 40	18 03	05 38	18 04	05 36	18 06
	27	05 59	17 41	06 00	17 40	06 01	17 39	06 02	17 37	06 04	17 35	06 06	17 33
Oct.	2	06 15	17 22	06 18	17 19	06 21	17 16	06 25	17 12	06 30	17 06	06 36	17 00
	7	06 31	17 03	06 35	16 58	06 41	16 53	06 48	16 46	06 56	16 37	07 07	16 26
	12	06 47	16 44	06 54	16 37	07 02	16 29	07 11	16 20	07 23	16 07	07 39	15 51
	17	07 04	16 25	07 12	16 17	07 23	16 06	07 36	15 53	07 52	15 36	08 14	15 14
	22	07 21	16 07	07 32	15 56	07 45	15 42	08 01	15 26	08 23	15 04	08 54	14 33
	27	07 38	15 48	07 52	15 35	08 08	15 18	08 29	14 57	08 58	14 28	09 42	13 44
Nov.	1	07 56	15 30	08 12	15 14	08 32	14 54	08 59	14 27	09 38	13 47	11 03	12 22
	6	08 15	15 12	08 34	14 53	08 58	14 28	09 33	13 53	10 35	12 51	...	...
	11	08 33	14 54	08 56	14 31	09 27	14 00	10 15	13 12	...	...	...	...
	16	08 52	14 37	09 19	14 10	09 59	13 30	...	...	...	...	...	...
	21	09 11	14 20	09 44	13 47	10 38	12 53	...	...	...	...	...	...
	26	09 30	14 04	10 10	13 24	...	...	...	...	...	...	...	...
Dec.	1	09 48	13 50	10 38	12 59	...	...	...	...	...	...	...	...
	6	10 05	13 37	11 13	12 29	...	...	...	...	...	...	...	...
	11	10 19	13 28	...	...	...	...	...	...	...	...	...	...
	16	10 30	13 22	...	...	...	...	...	...	...	...	...	...
	21	10 35	13 22	...	...	...	...	...	...	...	...	...	...
	26	10 35	13 27	...	...	...	...	...	...	...	...	...	...
	31	10 29	13 38	...	...	...	...	...	...	...	...	...	...
Jan.	1	10 27	13 40	...	...	...	...	...	...	...	...	...	...

Local mean time. To obtain standard time of rise or set, see table 5.

TABLE 4. - SUNRISE AND SUNSET, 2008

Date	0°		5° S.		10° S.		15° S.		20° S.		25° S.	
	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.
Jan.	06 00	18 07	05 51	18 16	05 42	18 24	05 33	18 33	05 24	18 43	05 13	18 53
	06 02	18 09	05 54	18 18	05 45	18 26	05 36	18 35	05 27	18 44	05 17	18 54
	06 04	18 11	05 56	18 19	05 48	18 28	05 39	18 36	05 30	18 45	05 20	18 55
	06 06	18 13	05 58	18 21	05 50	18 29	05 42	18 37	05 33	18 46	05 24	18 55
	06 08	18 15	06 00	18 22	05 53	18 30	05 45	18 37	05 37	18 45	05 28	18 54
	06 09	18 16	06 02	18 23	05 55	18 30	05 48	18 37	05 40	18 45	05 32	18 53
	06 10	18 17	06 03	18 23	05 57	18 30	05 50	18 36	05 43	18 43	05 35	18 51
Feb.	06 10	18 17	06 05	18 23	05 59	18 29	05 53	18 35	05 46	18 42	05 39	18 48
	06 11	18 18	06 06	18 23	06 00	18 28	05 55	18 34	05 49	18 39	05 43	18 46
	06 11	18 18	06 06	18 22	06 01	18 27	05 57	18 32	05 51	18 37	05 46	18 42
	06 10	18 17	06 06	18 21	06 02	18 25	05 58	18 29	05 54	18 34	05 49	18 38
	06 10	18 16	06 07	18 20	06 03	18 23	06 00	18 26	05 56	18 30	05 52	18 34
Mar.	06 09	18 16	06 06	18 18	06 04	18 21	06 01	18 23	05 58	18 26	05 55	18 29
	06 08	18 14	06 06	18 16	06 04	18 18	06 02	18 20	06 00	18 22	05 57	18 25
	06 07	18 13	06 05	18 14	06 04	18 16	06 03	18 17	06 01	18 18	06 00	18 20
	06 05	18 12	06 05	18 12	06 04	18 13	06 03	18 13	06 03	18 14	06 02	18 15
	06 04	18 10	06 04	18 10	06 04	18 10	06 04	18 10	06 04	18 10	06 04	18 10
	06 02	18 09	06 03	18 08	06 04	18 07	06 05	18 06	06 06	18 05	06 06	18 04
	06 01	18 07	06 02	18 06	06 04	18 04	06 05	18 03	06 07	18 01	06 09	17 59
Apr.	05 59	18 06	06 02	18 04	06 04	18 01	06 06	17 59	06 08	17 57	06 11	17 54
	05 58	18 05	06 01	18 02	06 04	17 59	06 07	17 56	06 10	17 53	06 13	17 49
	05 57	18 03	06 00	18 00	06 04	17 56	06 07	17 52	06 11	17 49	06 15	17 45
	05 55	18 02	06 00	17 58	06 04	17 54	06 08	17 49	06 13	17 45	06 17	17 40
	05 55	18 01	05 59	17 56	06 04	17 52	06 09	17 47	06 14	17 41	06 20	17 36
	05 54	18 01	05 59	17 55	06 04	17 50	06 10	17 44	06 16	17 38	06 22	17 32
May	05 53	18 00	05 59	17 54	06 05	17 48	06 11	17 42	06 18	17 36	06 24	17 29
	05 53	18 00	05 59	17 53	06 06	17 47	06 12	17 40	06 19	17 33	06 27	17 26
	05 53	18 00	06 00	17 53	06 07	17 46	06 14	17 39	06 21	17 31	06 29	17 23
	05 53	18 00	06 00	17 53	06 08	17 45	06 15	17 38	06 23	17 30	06 32	17 21
	05 53	18 01	06 01	17 53	06 09	17 45	06 17	17 37	06 25	17 28	06 34	17 19
	05 54	18 01	06 02	17 53	06 10	17 45	06 18	17 37	06 27	17 28	06 37	17 18
June	05 55	18 02	06 03	17 54	06 11	17 45	06 20	17 37	06 29	17 28	06 39	17 18
	05 56	18 03	06 04	17 54	06 13	17 46	06 22	17 37	06 31	17 28	06 41	17 18
	05 57	18 04	06 05	17 55	06 14	17 47	06 23	17 38	06 32	17 28	06 43	17 18
	05 58	18 05	06 06	17 56	06 15	17 48	06 24	17 39	06 34	17 29	06 44	17 19
	05 59	18 06	06 08	17 57	06 16	17 49	06 25	17 40	06 35	17 30	06 45	17 20
	06 00	18 07	06 08	17 59	06 17	17 50	06 26	17 41	06 36	17 32	06 46	17 22
July	06 01	18 08	06 09	18 00	06 18	17 51	06 27	17 42	06 36	17 33	06 46	17 23
	06 02	18 09	06 10	18 01	06 18	17 52	06 27	17 44	06 36	17 35	06 45	17 25
	06 02	18 09	06 10	18 02	06 18	17 54	06 27	17 45	06 35	17 37	06 44	17 27
	06 03	18 10	06 10	18 02	06 18	17 55	06 26	17 47	06 34	17 39	06 43	17 30
	06 03	18 10	06 10	18 03	06 17	17 56	06 25	17 48	06 33	17 40	06 41	17 32
	06 03	18 10	06 10	18 03	06 17	17 56	06 24	17 49	06 31	17 42	06 39	17 34
Aug.	06 03	18 10	06 09	18 03	06 15	17 57	06 22	17 51	06 29	17 44	06 36	17 37
	06 02	18 09	06 08	18 03	06 14	17 58	06 20	17 52	06 26	17 45	06 33	17 39
	06 01	18 08	06 07	18 03	06 12	17 58	06 17	17 53	06 23	17 47	06 29	17 41
	06 00	18 07	06 05	18 03	06 10	17 58	06 14	17 53	06 19	17 48	06 25	17 43
	05 59	18 06	06 03	18 02	06 07	17 58	06 11	17 54	06 16	17 50	06 20	17 45
	05 58	18 04	06 01	18 01	06 05	17 58	06 08	17 54	06 12	17 51	06 15	17 47
Sept.	05 56	18 03	05 59	18 00	06 02	17 57	06 05	17 55	06 07	17 52	06 10	17 49
	05 55	18 01	05 57	17 59	05 59	17 57	06 01	17 55	06 03	17 53	06 05	17 51
	05 53	17 59	05 54	17 58	05 56	17 57	05 57	17 55	05 59	17 54	06 00	17 53
	05 51	17 58	05 52	17 57	05 53	17 56	05 53	17 56	05 54	17 55	05 55	17 54
	05 49	17 56	05 49	17 56	05 49	17 56	05 49	17 56	05 49	17 56	05 49	17 56
	05 48	17 54	05 47	17 55	05 46	17 56	05 46	17 56	05 45	17 57	05 44	17 58
Oct.	05 46	17 52	05 45	17 54	05 43	17 55	05 42	17 57	05 40	17 58	05 39	18 00
	05 44	17 51	05 42	17 53	05 40	17 55	05 38	17 57	05 36	18 00	05 34	18 02
	05 43	17 50	05 40	17 52	05 38	17 55	05 35	17 58	05 32	18 01	05 29	18 05
	05 42	17 49	05 39	17 52	05 35	17 55	05 32	17 59	05 28	18 03	05 24	18 07
	05 41	17 48	05 37	17 52	05 33	17 56	05 29	18 00	05 24	18 05	05 20	18 10
	05 40	17 47	05 36	17 52	05 31	17 57	05 26	18 02	05 21	18 07	05 16	18 12
Nov.	05 40	17 47	05 35	17 52	05 30	17 58	05 24	18 03	05 18	18 09	05 12	18 16
	05 40	17 47	05 34	17 53	05 28	17 59	05 22	18 05	05 16	18 12	05 09	18 19
	05 41	17 48	05 34	17 54	05 28	18 01	05 21	18 07	05 14	18 14	05 06	18 22
	05 41	17 48	05 34	17 55	05 27	18 02	05 20	18 10	05 12	18 17	05 04	18 26
	05 42	17 50	05 35	17 57	05 28	18 04	05 20	18 12	05 12	18 20	05 03	18 29
	05 44	17 51	05 36	17 59	05 28	18 07	05 20	18 15	05 11	18 24	05 02	18 33
Dec.	05 45	17 53	05 37	18 01	05 29	18 09	05 21	18 18	05 12	18 27	05 02	18 37
	05 47	17 55	05 39	18 03	05 31	18 12	05 22	18 21	05 12	18 30	05 02	18 40
	05 50	17 57	05 41	18 06	05 32	18 14	05 23	18 24	05 14	18 33	05 03	18 43
	05 52	18 00	05 43	18 08	05 35	18 17	05 25	18 26	05 16	18 36	05 05	18 46
	05 54	18 02	05 46	18 11	05 37	18 20	05 28	18 29	05 18	18 39	05 07	18 49
	05 57	18 05	05 48	18 13	05 39	18 22	05 30	18 31	05 21	18 41	05 10	18 51
Jan.	05 59	18 07	05 51	18 15	05 42	18 24	05 33	18 33	05 23	18 43	05 13	18 53

Local mean time. To obtain standard time of rise or set, see table 5.

TABLE 4. - SUNRISE AND SUNSET, 2008

Date	30° S.		32° S.		34° S.		36° S.		38° S.		40° S.	
	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.
Jan.	05 02	19 05	04 57	19 09	04 52	19 15	04 46	19 20	04 41	19 26	04 34	19 32
	05 06	19 05	05 01	19 10	04 56	19 15	04 50	19 20	04 45	19 26	04 39	19 32
	05 10	19 06	05 05	19 10	05 00	19 15	04 55	19 20	04 50	19 26	04 44	19 31
	05 14	19 05	05 09	19 09	05 05	19 14	05 00	19 19	04 55	19 24	04 49	19 30
	05 18	19 04	05 14	19 08	05 10	19 12	05 05	19 17	05 00	19 22	04 55	19 27
	05 23	19 02	05 19	19 06	05 15	19 10	05 10	19 14	05 06	19 19	05 01	19 23
	05 27	18 59	05 24	19 03	05 20	19 07	05 16	19 10	05 11	19 15	05 07	19 19
Feb.	05 31	18 56	05 28	18 59	05 25	19 03	05 21	19 06	05 17	19 10	05 13	19 14
	05 36	18 52	05 33	18 55	05 30	18 58	05 26	19 01	05 23	19 05	05 19	19 08
	05 40	18 48	05 37	18 51	05 35	18 53	05 32	18 56	05 29	18 59	05 25	19 02
	05 44	18 43	05 42	18 46	05 39	18 48	05 37	18 50	05 34	18 53	05 31	18 56
	05 48	18 38	05 46	18 40	05 44	18 42	05 42	18 44	05 39	18 46	05 37	18 48
Mar.	05 51	18 33	05 50	18 34	05 48	18 36	05 46	18 38	05 45	18 39	05 43	18 41
	05 55	18 27	05 53	18 28	05 52	18 30	05 51	18 31	05 50	18 32	05 48	18 33
	05 58	18 21	05 57	18 22	05 56	18 23	05 56	18 24	05 55	18 25	05 54	18 25
	06 01	18 15	06 01	18 16	06 00	18 16	06 00	18 17	05 59	18 17	05 59	18 17
	06 04	18 09	06 04	18 09	06 04	18 09	06 04	18 09	06 04	18 09	06 04	18 09
	06 07	18 03	06 08	18 03	06 08	18 03	06 08	18 02	06 09	18 02	06 09	18 01
	06 10	17 57	06 11	17 57	06 12	17 56	06 13	17 55	06 13	17 54	06 14	17 53
Apr.	06 13	17 52	06 14	17 50	06 16	17 49	06 17	17 48	06 18	17 47	06 19	17 45
	06 16	17 46	06 18	17 44	06 19	17 43	06 21	17 41	06 23	17 39	06 24	17 38
	06 19	17 40	06 21	17 38	06 23	17 36	06 25	17 34	06 27	17 32	06 29	17 30
	06 22	17 35	06 25	17 33	06 27	17 30	06 29	17 28	06 32	17 25	06 34	17 23
	06 25	17 30	06 28	17 27	06 31	17 25	06 33	17 22	06 36	17 19	06 39	17 16
	06 29	17 25	06 31	17 23	06 34	17 20	06 37	17 16	06 41	17 13	06 44	17 10
May	06 32	17 21	06 35	17 18	06 38	17 15	06 42	17 11	06 45	17 08	06 49	17 04
	06 35	17 18	06 38	17 14	06 42	17 10	06 46	17 07	06 50	17 03	06 54	16 58
	06 38	17 14	06 42	17 11	06 46	17 07	06 50	17 03	06 54	16 58	06 59	16 54
	06 41	17 12	06 45	17 08	06 49	17 04	06 54	16 59	06 58	16 55	07 03	16 50
	06 44	17 10	06 48	17 05	06 53	17 01	06 57	16 56	07 02	16 51	07 07	16 46
	06 47	17 08	06 51	17 04	06 56	16 59	07 01	16 54	07 06	16 49	07 11	16 44
June	06 49	17 07	06 54	17 03	06 59	16 58	07 04	16 53	07 09	16 48	07 15	16 42
	06 52	17 07	06 56	17 02	07 01	16 57	07 06	16 52	07 12	16 47	07 18	16 41
	06 54	17 07	06 58	17 02	07 03	16 57	07 09	16 52	07 14	16 47	07 20	16 41
	06 55	17 08	07 00	17 03	07 05	16 58	07 10	16 53	07 16	16 47	07 22	16 41
	06 56	17 09	07 01	17 04	07 06	16 59	07 11	16 54	07 17	16 48	07 23	16 42
	06 57	17 11	07 01	17 06	07 06	17 01	07 11	16 56	07 17	16 50	07 23	16 44
July	06 56	17 13	07 01	17 08	07 06	17 03	07 11	16 58	07 16	16 53	07 22	16 47
	06 56	17 15	07 00	17 10	07 05	17 06	07 10	17 01	07 15	16 56	07 21	16 50
	06 55	17 17	06 59	17 13	07 03	17 09	07 08	17 04	07 13	16 59	07 19	16 53
	06 53	17 20	06 57	17 16	07 01	17 12	07 06	17 07	07 11	17 02	07 16	16 57
	06 50	17 23	06 54	17 19	06 58	17 15	07 03	17 11	07 07	17 06	07 12	17 01
	06 47	17 26	06 51	17 22	06 55	17 18	06 59	17 14	07 03	17 10	07 07	17 06
Aug.	06 44	17 29	06 47	17 25	06 51	17 22	06 54	17 18	06 58	17 14	07 02	17 10
	06 40	17 32	06 43	17 29	06 46	17 26	06 49	17 22	06 53	17 19	06 57	17 15
	06 35	17 35	06 38	17 32	06 41	17 29	06 44	17 26	06 47	17 23	06 51	17 20
	06 30	17 37	06 33	17 35	06 35	17 33	06 38	17 30	06 41	17 27	06 44	17 24
	06 25	17 40	06 27	17 38	06 29	17 36	06 32	17 34	06 34	17 31	06 37	17 29
	06 20	17 43	06 21	17 41	06 23	17 39	06 25	17 38	06 27	17 36	06 29	17 34
Sept.	06 14	17 46	06 15	17 44	06 17	17 43	06 18	17 41	06 20	17 40	06 21	17 38
	06 08	17 48	06 09	17 47	06 10	17 46	06 11	17 45	06 12	17 44	06 14	17 43
	06 02	17 51	06 02	17 50	06 03	17 50	06 04	17 49	06 05	17 48	06 05	17 47
	05 55	17 54	05 56	17 53	05 56	17 53	05 56	17 53	05 57	17 52	05 57	17 52
	05 49	17 56	05 49	17 56	05 49	17 57	05 49	17 57	05 49	17 57	05 49	17 57
	05 43	17 59	05 43	18 00	05 42	18 00	05 42	18 01	05 41	18 01	05 41	18 02
Oct.	05 37	18 02	05 36	18 03	05 35	18 04	05 34	18 05	05 33	18 06	05 32	18 07
	05 31	18 05	05 30	18 06	05 28	18 08	05 27	18 09	05 26	18 10	05 24	18 12
	05 25	18 08	05 23	18 10	05 22	18 11	05 20	18 13	05 18	18 15	05 17	18 17
	05 19	18 11	05 18	18 13	05 16	18 15	05 14	18 18	05 11	18 20	05 09	18 22
	05 14	18 15	05 12	18 17	05 10	18 20	05 07	18 22	05 05	18 25	05 02	18 28
	05 09	18 19	05 07	18 21	05 04	18 24	05 01	18 27	04 58	18 30	04 55	18 33
Nov.	05 05	18 22	05 02	18 25	04 59	18 29	04 56	18 32	04 52	18 35	04 49	18 39
	05 01	18 26	04 58	18 30	04 54	18 33	04 51	18 37	04 47	18 41	04 43	18 45
	04 58	18 31	04 54	18 34	04 51	18 38	04 47	18 42	04 42	18 46	04 38	18 51
	04 55	18 35	04 51	18 39	04 47	18 43	04 43	18 47	04 38	18 52	04 33	18 57
	04 53	18 39	04 49	18 43	04 45	18 48	04 40	18 52	04 35	18 57	04 30	19 03
	04 52	18 43	04 47	18 48	04 43	18 52	04 38	18 57	04 33	19 03	04 27	19 08
Dec.	04 51	18 47	04 47	18 52	04 42	18 57	04 37	19 02	04 31	19 08	04 25	19 13
	04 51	18 51	04 47	18 56	04 42	19 01	04 36	19 06	04 31	19 12	04 25	19 18
	04 52	18 55	04 47	19 00	04 42	19 05	04 37	19 10	04 31	19 16	04 25	19 22
	04 54	18 58	04 49	19 03	04 43	19 08	04 38	19 14	04 32	19 20	04 26	19 26
	04 56	19 01	04 51	19 06	04 45	19 11	04 40	19 17	04 34	19 23	04 28	19 29
	04 59	19 03	04 54	19 08	04 48	19 13	04 43	19 19	04 37	19 25	04 31	19 31
Jan.	05 02	19 04	04 57	19 09	04 52	19 15	04 47	19 20	04 40	19 26	04 34	19 32

Local mean time. To obtain standard time of rise or set, see table 5.

TABLE 4. - SUNRISE AND SUNSET, 2008

Date	42° S.		44° S.		46° S.		48° S.		50° S.		52° S.	
	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.
Jan.	04 28	19 39	04 21	19 46	04 13	19 54	04 04	20 02	03 55	20 12	03 44	20 22
	04 32	19 39	04 25	19 46	04 18	19 53	04 09	20 01	04 00	20 11	03 50	20 21
	04 37	19 38	04 31	19 44	04 23	19 51	04 15	19 59	04 07	20 08	03 57	20 18
	04 43	19 35	04 37	19 42	04 30	19 49	04 22	19 56	04 14	20 05	04 05	20 14
	04 49	19 32	04 43	19 38	04 37	19 45	04 30	19 52	04 22	20 00	04 13	20 08
	04 56	19 29	04 50	19 34	04 44	19 40	04 37	19 47	04 30	19 54	04 22	20 02
	05 02	19 24	04 57	19 29	04 51	19 34	04 45	19 40	04 39	19 47	04 31	19 54
Feb.	05 09	19 18	05 04	19 23	04 59	19 28	04 54	19 33	04 48	19 39	04 41	19 46
	05 15	19 12	05 11	19 16	05 07	19 21	05 02	19 26	04 56	19 31	04 51	19 37
	05 22	19 06	05 18	19 09	05 14	19 13	05 10	19 17	05 05	19 22	05 00	19 27
	05 28	18 58	05 25	19 02	05 22	19 05	05 18	19 09	05 14	19 12	05 10	19 17
	05 35	18 51	05 32	18 53	05 29	18 56	05 26	18 59	05 23	19 03	05 19	19 06
Mar.	05 41	18 43	05 39	18 45	05 36	18 47	05 34	18 50	05 31	18 52	05 28	18 55
	05 47	18 35	05 45	18 36	05 43	18 38	05 42	18 40	05 40	18 42	05 37	18 44
	05 53	18 26	05 52	18 27	05 50	18 29	05 49	18 30	05 48	18 31	05 46	18 32
	05 58	18 18	05 58	18 18	05 57	18 19	05 57	18 20	05 56	18 20	05 55	18 21
	06 04	18 09	06 04	18 09	06 04	18 09	06 04	18 09	06 04	18 09	06 04	18 09
	06 10	18 01	06 10	18 00	06 11	18 00	06 11	17 59	06 12	17 58	06 12	17 58
	06 15	17 52	06 16	17 51	06 17	17 50	06 18	17 49	06 20	17 48	06 21	17 46
Apr.	06 21	17 44	06 22	17 42	06 24	17 41	06 26	17 39	06 27	17 37	06 29	17 35
	06 26	17 36	06 28	17 34	06 30	17 31	06 33	17 29	06 35	17 27	06 38	17 24
	06 32	17 28	06 34	17 25	06 37	17 22	06 40	17 19	06 43	17 16	06 46	17 13
	06 37	17 20	06 40	17 17	06 43	17 14	06 47	17 10	06 50	17 06	06 55	17 02
	06 43	17 13	06 46	17 09	06 50	17 05	06 54	17 01	06 58	16 57	07 03	16 52
	06 48	17 06	06 52	17 02	06 56	16 58	07 01	16 53	07 06	16 48	07 11	16 43
May	06 53	17 00	06 58	16 55	07 02	16 50	07 07	16 45	07 13	16 40	07 19	16 34
	06 58	16 54	07 03	16 49	07 09	16 44	07 14	16 38	07 20	16 32	07 27	16 25
	07 04	16 49	07 09	16 44	07 14	16 38	07 21	16 32	07 27	16 25	07 35	16 18
	07 08	16 44	07 14	16 39	07 20	16 33	07 27	16 26	07 34	16 19	07 42	16 11
	07 13	16 41	07 19	16 35	07 25	16 28	07 32	16 21	07 40	16 14	07 48	16 05
	07 17	16 38	07 23	16 32	07 30	16 25	07 37	16 17	07 45	16 09	07 54	16 00
June	07 21	16 36	07 27	16 29	07 34	16 22	07 42	16 15	07 50	16 06	08 00	15 57
	07 24	16 35	07 30	16 28	07 38	16 21	07 46	16 13	07 54	16 04	08 04	15 55
	07 26	16 34	07 33	16 28	07 40	16 20	07 48	16 12	07 57	16 03	08 07	15 54
	07 28	16 35	07 35	16 28	07 42	16 21	07 50	16 12	07 59	16 04	08 09	15 54
	07 29	16 36	07 36	16 29	07 43	16 22	07 51	16 14	08 00	16 05	08 10	15 55
	07 29	16 38	07 36	16 31	07 43	16 24	07 51	16 16	08 00	16 07	08 10	15 58
July	07 28	16 41	07 35	16 34	07 42	16 27	07 50	16 19	07 59	16 11	08 08	16 01
	07 27	16 44	07 33	16 38	07 40	16 31	07 48	16 23	07 56	16 15	08 05	16 06
	07 24	16 48	07 31	16 42	07 37	16 35	07 44	16 28	07 52	16 20	08 01	16 11
	07 21	16 52	07 27	16 46	07 33	16 40	07 40	16 33	07 48	16 25	07 56	16 17
	07 17	16 56	07 23	16 51	07 28	16 45	07 35	16 39	07 42	16 32	07 50	16 24
	07 12	17 01	07 17	16 56	07 23	16 50	07 29	16 45	07 35	16 38	07 42	16 31
Aug.	07 07	17 06	07 12	17 01	07 17	16 56	07 22	16 51	07 28	16 45	07 34	16 38
	07 01	17 11	07 05	17 07	07 10	17 02	07 15	16 57	07 20	16 52	07 26	16 46
	06 54	17 16	06 58	17 12	07 02	17 08	07 06	17 04	07 11	16 59	07 16	16 54
	06 47	17 21	06 50	17 18	06 54	17 14	06 58	17 10	07 02	17 06	07 07	17 02
	06 39	17 26	06 42	17 23	06 45	17 20	06 49	17 17	06 52	17 14	06 56	17 10
	06 31	17 31	06 34	17 29	06 36	17 26	06 39	17 24	06 42	17 21	06 45	17 18
Sept.	06 23	17 36	06 25	17 35	06 27	17 33	06 29	17 30	06 32	17 28	06 34	17 26
	06 15	17 42	06 16	17 40	06 18	17 39	06 19	17 37	06 21	17 36	06 23	17 34
	06 06	17 47	06 07	17 46	06 08	17 45	06 09	17 44	06 10	17 43	06 11	17 42
	05 58	17 52	05 58	17 51	05 58	17 51	05 59	17 51	05 59	17 50	06 00	17 50
	05 49	17 57	05 49	17 57	05 49	17 57	05 48	17 58	05 48	17 58	05 48	17 58
	05 40	18 02	05 39	18 03	05 39	18 04	05 38	18 05	05 37	18 05	05 36	18 06
Oct.	05 31	18 08	05 30	18 09	05 29	18 10	05 28	18 12	05 26	18 13	05 25	18 15
	05 23	18 13	05 21	18 15	05 19	18 17	05 18	18 19	05 15	18 21	05 13	18 23
	05 15	18 19	05 12	18 21	05 10	18 24	05 08	18 26	05 05	18 29	05 02	18 32
	05 06	18 25	05 04	18 28	05 01	18 30	04 58	18 34	04 55	18 37	04 51	18 41
	04 59	18 31	04 56	18 34	04 52	18 37	04 49	18 41	04 45	18 45	04 40	18 50
	04 52	18 37	04 48	18 41	04 44	18 45	04 40	18 49	04 35	18 54	04 30	18 59
Nov.	04 45	18 43	04 41	18 47	04 36	18 52	04 31	18 57	04 26	19 02	04 20	19 08
	04 39	18 49	04 34	18 54	04 29	18 59	04 23	19 05	04 17	19 11	04 11	19 17
	04 33	18 56	04 28	19 01	04 22	19 07	04 16	19 13	04 10	19 19	04 03	19 27
	04 28	19 02	04 23	19 08	04 17	19 14	04 10	19 20	04 03	19 28	03 55	19 36
	04 24	19 08	04 18	19 14	04 12	19 21	04 05	19 28	03 57	19 36	03 48	19 44
	04 21	19 14	04 15	19 20	04 08	19 27	04 00	19 35	03 52	19 43	03 43	19 53
Dec.	04 19	19 20	04 12	19 26	04 05	19 34	03 57	19 42	03 48	19 51	03 39	20 00
	04 18	19 25	04 11	19 32	04 03	19 39	03 55	19 48	03 46	19 57	03 36	20 07
	04 18	19 29	04 11	19 36	04 03	19 44	03 54	19 53	03 45	20 02	03 34	20 13
	04 19	19 33	04 12	19 40	04 04	19 48	03 55	19 57	03 45	20 07	03 34	20 17
	04 21	19 36	04 13	19 43	04 05	19 51	03 57	20 00	03 47	20 10	03 36	20 20
	04 24	19 38	04 16	19 45	04 08	19 53	04 00	20 02	03 50	20 11	03 39	20 22
Jan.	04 28	19 39	04 20	19 46	04 12	19 54	04 04	20 02	03 54	20 12	03 44	20 22

Local mean time. To obtain standard time of rise or set, see table 5.

TABLE 4. -SUNRISE AND SUNSET, 2008

Date	54° S.		56° S.		58° S.		60° S.	
	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.
Jan.	03 32	20 34	03 18	20 48	03 02	21 04	02 42	21 24
	03 38	20 32	03 25	20 46	03 09	21 01	02 50	21 20
	03 46	20 29	03 33	20 41	03 18	20 56	03 01	21 13
	03 54	20 24	03 42	20 36	03 29	20 49	03 12	21 05
	04 03	20 18	03 52	20 29	03 40	20 41	03 25	20 56
	04 13	20 10	04 03	20 20	03 52	20 32	03 38	20 45
Feb.	04 23	20 02	04 14	20 11	04 04	20 21	03 52	20 33
	04 34	19 53	04 26	20 01	04 16	20 10	04 06	20 20
	04 44	19 43	04 37	19 50	04 29	19 58	04 19	20 07
	04 55	19 32	04 48	19 39	04 41	19 46	04 33	19 53
	05 05	19 21	05 00	19 27	04 54	19 33	04 47	19 39
Mar.	05 15	19 10	05 11	19 14	05 06	19 19	05 00	19 25
	05 25	18 58	05 22	19 02	05 18	19 06	05 13	19 10
	05 35	18 46	05 32	18 49	05 29	18 52	05 26	18 55
	05 45	18 34	05 43	18 36	05 41	18 38	05 39	18 40
	05 54	18 22	05 53	18 23	05 52	18 24	05 51	18 25
	06 04	18 09	06 04	18 09	06 03	18 09	06 03	18 10
Apr.	06 13	17 57	06 14	17 56	06 15	17 55	06 15	17 54
	06 22	17 45	06 24	17 43	06 26	17 41	06 27	17 39
	06 32	17 33	06 34	17 30	06 37	17 27	06 40	17 24
	06 41	17 21	06 44	17 17	06 48	17 14	06 52	17 10
	06 50	17 09	06 54	17 05	06 58	17 00	07 04	16 55
May	06 59	16 58	07 04	16 53	07 09	16 47	07 16	16 41
	07 08	16 47	07 14	16 41	07 20	16 35	07 28	16 27
	07 17	16 37	07 24	16 30	07 31	16 22	07 39	16 14
	07 26	16 27	07 33	16 19	07 42	16 11	07 51	16 01
	07 34	16 18	07 43	16 09	07 52	16 00	08 03	15 49
June	07 43	16 09	07 52	16 00	08 02	15 50	08 14	15 38
	07 50	16 02	08 00	15 52	08 12	15 41	08 25	15 28
	07 58	15 56	08 08	15 45	08 21	15 33	08 35	15 19
	08 04	15 51	08 16	15 39	08 29	15 26	08 44	15 11
	08 10	15 47	08 22	15 35	08 35	15 21	08 52	15 05
July	08 15	15 44	08 27	15 32	08 41	15 17	08 58	15 00
	08 18	15 42	08 31	15 30	08 45	15 15	09 03	14 58
	08 20	15 43	08 33	15 30	08 48	15 15	09 05	14 57
	08 21	15 44	08 34	15 31	08 49	15 17	09 06	14 59
	08 21	15 47	08 33	15 34	08 48	15 20	09 05	15 02
Aug.	08 19	15 50	08 31	15 38	08 45	15 24	09 01	15 08
	08 15	15 55	08 27	15 44	08 40	15 30	08 56	15 15
	08 11	16 01	08 22	15 50	08 35	15 38	08 49	15 23
	08 05	16 08	08 15	15 58	08 27	15 46	08 41	15 32
	07 58	16 15	08 08	16 06	08 19	15 55	08 32	15 42
Sept.	07 50	16 23	07 59	16 14	08 09	16 04	08 21	15 53
	07 42	16 31	07 50	16 23	07 59	16 14	08 09	16 04
	07 32	16 40	07 39	16 32	07 48	16 24	07 57	16 15
	07 22	16 48	07 29	16 42	07 36	16 35	07 44	16 27
	07 12	16 57	07 17	16 51	07 23	16 45	07 30	16 38
Oct.	07 00	17 05	07 05	17 01	07 10	16 56	07 16	16 50
	06 49	17 14	06 53	17 10	06 57	17 06	07 02	17 01
	06 37	17 23	06 40	17 20	06 44	17 17	06 47	17 13
	06 25	17 32	06 27	17 30	06 30	17 27	06 32	17 24
	06 13	17 41	06 14	17 39	06 16	17 38	06 17	17 36
Nov.	06 00	17 49	06 01	17 49	06 02	17 48	06 02	17 48
	05 48	17 58	05 48	17 59	05 47	17 59	05 47	17 59
	05 35	18 07	05 34	18 08	05 33	18 10	05 32	18 11
	05 23	18 17	05 21	18 18	05 19	18 21	05 17	18 23
	05 11	18 26	05 08	18 29	05 05	18 32	05 02	18 35
Dec.	04 59	18 35	04 55	18 39	04 51	18 43	04 47	18 48
	04 47	18 45	04 42	18 49	04 37	18 55	04 32	19 00
	04 35	18 55	04 30	19 00	04 24	19 06	04 17	19 13
	04 24	19 05	04 18	19 11	04 11	19 18	04 03	19 26
	04 14	19 15	04 06	19 22	03 58	19 30	03 49	19 40
Jan.	04 04	19 25	03 56	19 33	03 46	19 43	03 36	19 53
	03 54	19 35	03 45	19 44	03 35	19 55	03 23	20 07
	03 46	19 45	03 36	19 55	03 25	20 07	03 11	20 20
	03 39	19 54	03 28	20 05	03 15	20 18	03 01	20 33
	03 33	20 03	03 21	20 15	03 07	20 29	02 51	20 45
Dec.	03 28	20 12	03 15	20 24	03 00	20 39	02 43	20 57
	03 24	20 19	03 11	20 32	02 55	20 48	02 37	21 07
	03 22	20 25	03 09	20 39	02 52	20 55	02 33	21 15
	03 22	20 30	03 08	20 44	02 51	21 01	02 31	21 21
	03 24	20 33	03 09	20 47	02 53	21 04	02 32	21 24
Jan.	03 27	20 34	03 13	20 48	02 56	21 05	02 36	21 25
	03 32	20 34	03 18	20 48	03 02	21 04	02 42	21 24

Local mean time. To obtain standard time of rise or set, see table 5.

**TABLE 5.—REDUCTION OF LOCAL MEAN TIME TO STANDARD TIME**

Difference of longitude between local and standard meridian	Correction to local mean time to obtain standard time	Difference of longitude between local and standard meridian	Correction to local mean time to obtain standard time	Difference of longitude between local and standard meridian	Correction to local mean time to obtain standard time
° ′   ° ′	Minutes	° ′   ° ′	Minutes	°	Hours
0 00 to 0 07	0	7 23 to 7 37	30	15	1
0 08 to 0 22	1	7 38 to 7 52	31	30	2
0 23 to 0 37	2	7 53 to 8 07	32	45	3
0 38 to 0 52	3	8 08 to 8 22	33	60	4
0 53 to 1 07	4	8 23 to 8 37	34	75	5
1 08 to 1 22	5	8 38 to 8 52	35	90	6
1 23 to 1 37	6	8 53 to 9 07	36	105	7
1 38 to 1 52	7	9 08 to 9 22	37	120	8
1 53 to 2 07	8	9 23 to 9 37	38	135	9
2 08 to 2 22	9	9 38 to 9 52	39	150	10
2 23 to 2 37	10	9 53 to 10 07	40	165	11
2 38 to 2 52	11	10 08 to 10 22	4	180	12
2 53 to 3 07	12	10 23 to 10 37	42		
3 08 to 3 22	13	10 38 to 10 52	43		
3 23 to 3 37	14	10 53 to 11 07	44		
3 38 to 3 52	15	11 08 to 11 22	45		
3 53 to 4 07	16	11 23 to 11 37	46		
4 08 to 4 22	17	11 38 to 11 52	47		
4 23 to 4 37	18	11 53 to 12 07	48		
4 38 to 4 52	19	12 08 to 12 22	49		
4 53 to 5 07	20	12 23 to 12 37	50		
5 08 to 5 22	21	12 38 to 12 52	51		
5 23 to 5 37	22	12 53 to 13 07	52		
5 38 to 5 52	23	13 08 to 13 22	53		
5 53 to 6 07	24	13 23 to 13 37	54		
6 08 to 6 22	25	13 38 to 13 52	55		
6 23 to 6 37	26	13 53 to 14 07	56		
6 38 to 6 52	27	14 08 to 14 22	57		
6 53 to 7 07	28	14 23 to 14 37	58		
7 08 to 7 22	29	14 38 to 14 52	59		

If local meridian is east of standard meridian, subtract the correction from local time.

If local meridian is west of standard meridian, add the correction to local time.

For differences of longitude less than  $15^\circ$ , use the first part of the table. For greater differences use both parts thus:  $47^\circ 23'$  is equivalent to  $45^\circ + 2^\circ 23'$ , the correction for  $45^\circ$  is 3 hours, the correction for  $2^\circ 23'$  is 10 minutes; therefore the total correction for the difference in longitude  $47^\circ 23'$  is 3 hours and 10 minutes.

**TABLE 6. — CONVERSION OF FEET TO CENTIMETERS**

Feet	Tenths of a Foot										Feet
	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	
0	0	3	6	9	12	15	18	21	24	27	0
1	30	34	37	40	43	46	49	52	55	58	1
2	61	64	67	70	73	76	79	82	85	88	2
3	91	94	98	101	104	107	110	113	116	119	3
4	122	125	128	131	134	137	140	143	146	149	4
5	152	155	158	162	165	168	171	174	177	180	5
6	183	186	189	192	195	198	201	204	207	210	6
7	213	216	219	223	226	229	232	235	238	241	7
8	244	247	250	253	256	259	262	265	268	271	8
9	274	277	280	283	287	290	293	296	299	302	9
10	305	308	311	314	317	320	323	326	329	332	10
11	335	338	341	344	347	351	354	357	360	363	11
12	366	369	372	375	378	381	384	387	390	393	12
13	396	399	402	405	408	411	415	418	421	424	13
14	427	430	433	436	439	442	445	448	451	454	14
15	457	460	463	466	469	472	475	479	482	485	15
16	488	491	494	497	500	503	506	509	512	515	16
17	518	521	524	527	530	533	536	539	543	546	17
18	549	552	555	558	561	564	567	570	573	576	18
19	579	582	585	588	591	594	597	600	604	607	19
20	610	613	616	619	622	625	628	631	634	637	20
21	640	643	646	649	652	655	658	661	664	668	21
22	671	674	677	680	683	686	689	692	695	698	22
23	701	704	707	710	713	716	719	722	725	728	23
24	732	735	738	741	744	747	750	753	756	759	24
25	762	765	768	771	774	777	780	783	786	789	25
26	792	796	799	802	805	808	811	814	817	820	26
27	823	826	829	832	835	838	841	844	847	850	27
28	853	856	860	863	866	869	872	875	878	881	28
29	884	887	890	893	896	899	902	905	908	911	29
30	914	917	920	924	927	930	933	936	939	942	30
31	945	948	951	954	957	960	963	966	969	972	31
32	975	978	981	985	988	991	994	997	1000	1003	32
33	1006	1009	1012	1015	1018	1021	1024	1027	1030	1033	33
34	1036	1039	1042	1045	1049	1052	1055	1058	1061	1064	34
35	1067	1070	1073	1076	1079	1082	1085	1088	1091	1094	35
36	1097	1100	1103	1106	1109	1113	1116	1119	1122	1125	36
37	1128	1131	1134	1137	1140	1143	1146	1149	1152	1155	37
38	1158	1161	1164	1167	1170	1173	1177	1180	1183	1186	38
39	1189	1192	1195	1198	1201	1204	1207	1210	1213	1216	39
40	1219	1222	1225	1228	1231	1234	1237	1241	1244	1247	40
41	1250	1253	1256	1259	1262	1265	1268	1271	1274	1277	41
42	1280	1283	1286	1289	1292	1295	1298	1301	1305	1308	42
43	1311	1314	1317	1320	1323	1326	1329	1332	1335	1338	43
44	1341	1344	1347	1350	1353	1356	1359	1362	1366	1369	44
45	1372	1375	1378	1381	1384	1387	1390	1393	1396	1399	45
46	1402	1405	1408	1411	1414	1417	1420	1423	1426	1430	46
47	1433	1436	1439	1442	1445	1448	1451	1454	1457	1460	47
48	1463	1466	1469	1472	1475	1478	1481	1484	1487	1490	48
49	1494	1497	1500	1503	1506	1509	1512	1515	1518	1521	49

Feet to Meters = Centimeters divided by 100 (from above table)

Example: 09.40 feet = (287 centimeters) / (100) = 02.87 meters.

1 Meter = 100 centimeters

1 Foot = 0.30480061 meters

## **PUBLICATIONS RELATING TO TIDES AND TIDAL CURRENTS**

### **TIDE TABLES**

Advance information relative to the rise and fall of the tide is given in annual tide tables. These tables include the predicted times and heights of high and low waters for every day in the year for a number of reference stations and differences for obtaining similar predictions for numerous other places.

Tide Tables, Central and Western Pacific Ocean and Indian Ocean.

Tide Tables, East Coast of North and South America (Including Greenland).

Tide Tables, Europe and West Coast of Africa (Including the Mediterranean Sea).

Tide Tables, West Coast of North and South America (Including the Hawaiian Islands).

### **TIDAL CURRENT TABLES**

Accompanying the rise and fall of the tide is a periodic horizontal flow of the water known as the tidal current. Advance information relative to these currents is made available in annual tidal current tables which include daily predictions of the times of slack water and the times and velocities of strength of flood and ebb currents for a number of waterways together with differences for obtaining predictions for numerous other places.

Tidal Current Tables, Atlantic Coast of North America.

Tidal Current Tables, Pacific Coast of North America and Asia.

### **TIDAL CIRCULATION AND WATER LEVEL FORECAST ATLAS**

This atlas series provides a composite view of the total tidal phenomenon for major estuaries of the United States. Twelve pairs of hourly charts are used to depict the information. The first of each pair presents contours of mean tidal height throughout the specified estuary. Inserts and a vertical section provide additional tidal information. The second chart presents the speed and direction of the tidal current throughout the area. Corange, cotidal, cospeed, and cophase charts are shown in the following section. Finally, daily tide predictions are provided for important locations, in tabular form, for several years in advance.

Tidal Circulation and Water Level Forecast Atlas, Delaware River and Bay.



## GLOSSARY OF TERMS

**ANNUAL INEQUALITY**—Seasonal variation in the water level or current, more or less periodic, due chiefly to meteorological causes.

**APOGEAN TIDES OR TIDAL CURRENTS**—Tides of decreased range or currents of decreased speed occurring monthly as the result of the Moon being in apogee (farthest from the Earth).

**AUTOMATIC TIDE GAGE**—An instrument that automatically registers the rise and fall of the tide. In some instruments, the registration is accomplished by recording the heights at regular intervals in digital format, in others by a continuous graph in which the height versus corresponding time of the tide is recorded.

**BENCH MARK (BM)**—A fixed physical object or marks used as reference for a vertical datum. A *tidal bench mark* is one near a tide station to which the tide staff and tidal datums are referred. A *Geodetic bench mark* identifies a surveyed point in the National Geodetic Vertical Network.

**CHART DATUM**—The tidal datum to which soundings on a chart are referred. It is usually taken to correspond to low water elevation of the tide, and its depression below mean sea level is represented by the symbol Zo.

**CURRENT**—Generally, a horizontal movement of water. Currents may be classified as *tidal* and *nontidal*. Tidal currents are caused by gravitational interactions between the Sun, Moon, and Earth and are a part of the same general movement of the sea that is manifested in the vertical rise and fall, called *tide*. Nontidal currents include the permanent currents in the general circulatory systems of the sea as well as temporary currents arising from more pronounced meteorological variability.

**CURRENT DIFFERENCE**—Difference between the time of slack water (or minimum current) or strength of current in any locality and the time of the corresponding phase of the tidal current at a reference station, for which predictions are given in the *Tidal Current Tables*.

**CURRENT ELLIPSE**—A graphic representation of a rotary current in which the velocity of the current at different hours of the tidal cycle is represented by radius vectors and vectorial angles. A line joining the extremities of the radius vectors will form a curve roughly approximating an ellipse. The cycle is completed in one-half tidal day or in a whole tidal day according to whether the tidal current is of the semidiurnal or the diurnal type. A current of the mixed type will give a curve of two unequal loops each tidal day.

**CURRENT METER**—An instrument for measuring the speed and direction or just the speed of a current. The measurements are usually Eulerian since the meter is most often fixed or moored at a specific location.

**DATUM (vertical)**—For marine applications, a base elevation used as a reference from which to reckon heights or depths. It is called a *tidal datum* when defined by a certain phase of the tide. Tidal datums are local datums and should not be extended into areas which have differing topographic features without substantiating measurements. In order that they may be recovered when needed, such datums are referenced to fixed points known as *bench marks*.

**DAYLIGHT SAVING TIME**—A time used during the summer in some localities in which clocks are advanced 1 hour from the usual standard time.

**DIURNAL**—Having a period or cycle of approximately 1 tidal day. Thus, the tide is said to be diurnal when only one high water and one low water occur during a tidal day, and the tidal current is said to be diurnal when there is a single flood and single ebb period in the tidal day. A rotary current is diurnal if it changes its direction through all points of the compass once each tidal day.

**DIURNAL INEQUALITY**—The difference in height of the two high waters or of the two low waters of each day; also the difference in speed between the two flood tidal currents or the two ebb tidal currents of each day. The difference changes with the declination of the Moon and to a lesser extent with the declination of the Sun. In general, the inequality tends to increase with an increasing declination, either north or south, and to diminish as the Moon approaches the Equator. *Mean diurnal high water inequality* (DHQ) is one-half the average difference between the two high waters of each day observed over a specific 19-year Metonic cycle (the National Tidal Datum Epoch). It is obtained by subtracting the mean of all high waters from the mean of the higher high waters. *Mean diurnal low water inequality* (DLQ) is one-half the average difference between the two low waters of each day observed over a specific 19-year Metonic cycle (the National Tidal Datum Epoch). It is obtained by subtracting the mean of the lower low waters from the mean of all low waters. *Tropic high water inequality* (HWQ) is the average difference between the two high waters of the day at the times of the tropic tides. *Tropic low water inequality* (LWQ) is the average difference between the two low waters of the day at the times of the tropic tides. Mean and tropic inequalities as

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defined above are applicable only when the type of tide is either semidiurnal or mixed. Diurnal inequality is sometimes called *declinational inequality*.

**DOUBLE EBB**—An ebb tidal current where, after ebb begins, the speed increases to a maximum called *first ebb*; it then decreases, reaching a *minimum ebb* near the middle of the ebb period (and at some places it may actually run in a flood direction for a short period); it then again ebbs to a maximum speed called *second ebb* after which it decreases to slack water.

**DOUBLE FLOOD**—A flood tidal current where, after flood begins, the speed increases to a maximum called *first flood*; it then decreases, reaching a *minimum flood* near the middle of the flood period (and at some places it may actually run in an ebb direction for a short period); it then again floods to a maximum speed called *second flood* after which it decreases to slack water.

**DOUBLE TIDE**—A double-headed tide, that is, a high water consisting of two maxima of nearly the same height separated by a relatively small depression, or a low water consisting of two minima separated by a relatively small elevation. Sometimes, it is called an *agger*.

**DURATION OF FLOOD AND DURATION OF EBB**—Duration of flood is the interval of time in which a tidal current is flooding, and the *duration of ebb* is the interval in which it is ebbing. Together they cover, on an average, a period of 12.42 hours for a semidiurnal tidal current or a period of 24.84 hours for a diurnal current. In a normal semidiurnal tidal current, the duration of flood and duration of ebb will each be approximately equal to 6.21 hours, but the times may be modified greatly by the presence of a nontidal flow. In a river the duration of ebb is usually longer than the duration of flood because of the freshwater discharge, especially during the spring when snow and ice melt are the predominant influences.

**DURATION OF RISE AND DURATION OF FALL**—*Duration of rise* is the interval from low water to high water, and *duration of fall* is the interval from high water to low water. Together they cover, on an average, a period of 12.42 hours for a semidiurnal tide or a period of 24.84 hours for a diurnal tide. In a normal semidiurnal tide, the duration of rise and duration of fall will each be approximately equal to 6.21 hours, but in shallow waters and in rivers there is a tendency for a decrease in the duration of rise and a corresponding increase in the duration of fall.

**EBB CURRENT**—The movement of a tidal current away from shore or down a tidal river or estuary. In the

mixed type of reversing tidal current, the terms *greater ebb* and *lesser ebb* are applied respectively to the ebb tidal currents of greater and lesser speed of each day. The terms *maximum ebb* and *minimum ebb* are applied to the maximum and minimum speeds of a current running continuously ebb, the speed alternately increasing and decreasing without coming to a slack or reversing. The expression *maximum ebb* is also applicable to any ebb current at the time of greatest speed.

**EQUATORIAL TIDAL CURRENTS**—Tidal currents occurring semimonthly as a result of the Moon being over the Equator. At these times the tendency of the Moon to produce a diurnal inequality in the tidal current is at a minimum.

**EQUATORIAL TIDES**—Tides occurring semi monthly as the result of the Moon being over the Equator. At these times the tendency of the Moon to produce a diurnal inequality in the tide is at a minimum.

**FLOOD CURRENT**—The movement of a tidal current toward the shore or up a tidal river or estuary. In the mixed type of reversing current, the terms *greater flood* and *lesser flood* are applied respectively to the flood currents of greater and lesser speed of each day. The terms *maximum flood* and *minimum flood* are applied to the maximum and minimum speeds of a flood current, the speed of which alternately increases and decreases without coming to a slack or reversing. The expression *maximum flood* is also applicable to any flood current at the time of greatest speed.

**GREAT DIURNAL RANGE (Gt)**—The difference in height between mean higher high water and mean lower low water. The expression may also be used in its contracted form, *diurnal range*.

**GREENWICH INTERVAL**—An interval referred to the transit of the Moon over the meridian of Greenwich as distinguished from the local interval which is referred to the Moon's transit over the local meridian. The relation in hours between Greenwich and local intervals may be expressed by the formula:

$$\text{Greenwich interval} = \text{local interval} + 0.069 L$$

where L is the west longitude of the local meridian in degrees. For east longitude, L is to be considered negative.

**GULF COAST LOW WATER DATUM**—A chart datum. Specifically, the tidal datum formerly designated for the coastal waters of the Gulf Coast of the United States. It was defined as *mean lower low water* when the type of tide was mixed and *mean low water* when the type of tide was diurnal.

**HALF-TIDE LEVEL**—See *mean tide level*.

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**HARMONIC ANALYSIS**—The mathematical process by which the observed tide or tidal current at any place is separated into basic harmonic constituents.

**HARMONIC CONSTANTS**—The amplitudes and epochs of the harmonic constituents of the tide or tidal current at any place.

**HARMONIC CONSTITUENT**—One of the harmonic elements in a mathematical expression for the tide-producing force and in corresponding formulas for the tide or tidal current. Each constituent represents a periodic change or variation in the relative positions of the Earth, Moon, and Sun. A single constituent is usually written in the form  $y=A \cos (at+\alpha)$ , in which  $y$  is a function of time as expressed by the symbol  $t$  and is reckoned from a specific origin. The coefficient  $A$  is called the amplitude of the constituent and is a measure of its relative importance. The angle  $(at+\alpha)$  changes uniformly and its value at any time is called the phase of the constituent. The speed of the constituent is the rate of change in its phase and is represented by the symbol  $a$  in the formula. The quantity  $\alpha$  is the phase of the constituent at the initial instant from which the time is reckoned. The period of the constituent is the time required for the phase to change through  $360^\circ$  and is the cycle of the astronomical condition represented by the constituent.

**HIGH WATER (HW)**—The maximum height reached by a rising tide. The height may be due solely to the periodic tidal forces or it may have superimposed upon it the effects of prevailing meteorological conditions. Use of the synonymous term, *high tide*, is discouraged.

**HIGHER HIGH WATER (HHW)**—The higher of the two high waters of any tidal day.

**HIGHER LOW WATER (HLW)**—The higher of the two low waters of any tidal day.

**HYDRAULIC CURRENT**—A current in a channel caused by a difference in the surface level at the two ends. Such a current may be expected in a strait connecting two bodies of water in which the tides differ in time or range. The current in the East River, N.Y., connecting Long Island Sound and New York Harbor, is an example.

**KNOT**—A unit of speed, one international nautical mile (1,852.0 meters or 6,076.11549 international feet) per hour.

**LOW WATER (LW)**—The minimum height reached by a falling tide. The height may be due solely to the periodic tidal forces or it may have superimposed

upon it the effects of meteorological conditions. Use of the synonymous term, *low tide*, is discouraged.

**LOWER HIGH WATER (LHW)**—The lower of the two high waters of any tidal day.

**LOWER LOW WATER (LLW)**—The lower of the two low waters of any tidal day.

**LUNAR DAY**—The time of the rotation of the Earth with respect to the Moon, or the interval between two successive upper transits of the Moon over the meridian of a place. The mean lunar day is approximately 24.84 solar hours long, or 1.035 times as long as the mean solar day.

**LUNAR INTERVAL**—The difference in time between the transit of the Moon over the meridian of Greenwich and over a local meridian. The average value of this interval expressed in hours is  $0.069 L$ , in which  $L$  is the local longitude in degrees, positive for west longitude and negative for east longitude. The lunar interval equals the difference between the local and Greenwich interval of a tide or current phase.

**LUNICURRENT INTERVAL**—The interval between the Moon's transit (upper or lower) over the local or Greenwich meridian and a specified phase of the tidal current following the transit. Examples: *strength of flood interval and strength of ebb interval*, which may be abbreviated to *flood interval and ebb interval*, respectively. The interval is described as local or Greenwich according to whether the reference is to the Moon's transit over the local or Greenwich meridian. When not otherwise specified, the reference is assumed to be local.

**LUNITIDAL INTERVAL**—The interval between the Moon's transit (upper or lower) over the local or Greenwich meridian and the following high or low water. The average of all high water intervals for all phases of the Moon is known as *mean high water lunitidal interval* and is abbreviated to high water interval (HWI). Similarly the *mean low water lunitidal interval* is abbreviated to *low water interval (LWI)*. The interval is described as local or Greenwich according to whether the reference is to the transit over the local or Greenwich meridian. When not otherwise specified, the reference is assumed to be local.

**MEAN HIGH WATER (MHW)**—A tidal datum. The arithmetic mean of the high water heights observed over a specific 19-year Metonic cycle (the National Tidal Datum Epoch). For stations with shorter series, simultaneous observational comparisons are made with a primary control tide station in order to derive the equivalent of a 19-year value.

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**MEAN HIGHER HIGH WATER (MHHW)**—A tidal datum. The arithmetic mean of the higher high water heights of a mixed tide observed over a specific 19-year Metonic cycle (the National Tidal Datum Epoch). Only the higher high water of each pair of high waters, or the only high water of a tidal day is included in the mean.

**MEAN HIGHER HIGH WATER LINE (MHHWL)**—The intersection of the land with the water surface at the elevation of mean higher high water.

**MEAN LOW WATER (MLW)**—A tidal datum. The arithmetic mean of the low water heights observed over a specific 19-year Metonic cycle (the National Tidal Datum Epoch). For stations with shorter series, simultaneous observational comparisons are made with a primary control tide station in order to derive the equivalent of a 19-year value.

**MEAN LOW WATER SPRINGS (MLWS)**—A tidal datum. Frequently abbreviated *spring low water*. The arithmetic mean of the low water heights occurring at the time of the spring tides observed over a specific 19-year Metonic cycle (the National Tidal Datum Epoch).

**MEAN LOWER LOW WATER (MLLW)**—A tidal datum. The arithmetic mean of the lower low water heights of a mixed tide observed over a specific 19-year Metonic cycle (the National Tidal Datum Epoch). Only the lower low water of each pair of low waters, or the only low water of a tidal day is included in the mean.

**MEAN RANGE OF TIDE (Mn)**—The difference in height between mean high water and mean low water.

**MEAN RIVER LEVEL**—A tidal datum. The average height of the surface of a tidal river at any point for all stages of the tide observed over a 19-year Metonic cycle (the National Tidal Datum Epoch), usually determined from hourly height readings. In rivers subject to occasional freshets the river level may undergo wide variations, and for practical purposes certain months of the year may be excluded in the determination of tidal datums. For charting purposes, tidal datums for rivers are usually based on observations during selected periods when the river is at or near low water stage.

**MEAN SEA LEVEL (MSL)**—A tidal datum. The arithmetic mean of hourly water elevations observed over a specific 19-year Metonic cycle (the National Tidal Datum Epoch). Shorter series are specified in the name; e.g., monthly mean sea level and yearly mean sea level.

**MEAN TIDE LEVEL (MTL)**—Also called half-tide level. A tidal datum midway between mean high water and mean low water.

**MIXED TIDE**—Type of tide with a large inequality in the high and/or low water heights, with two high waters and two low waters usually occurring each tidal day. In strictness, all tides are mixed but the name is usually applied to the tides intermediate to those predominantly semidiurnal and those predominantly diurnal.

**NATIONAL TIDAL DATUM EPOCH**—The specific 19-year period adopted by the National Ocean Service as the official time segment over which tide observations are taken and reduced to obtain mean values (e.g., mean lower low water, etc.) for tidal datums. It is necessary for standardization because of periodic and apparent secular trends in sea level. The present National Tidal Datum Epoch is 1960 through 1978. It is reviewed annually for possible revision and must be actively considered for revision every 25 years.

**NEAP TIDES OR TIDAL CURRENTS**—Tides of decreased range or tidal currents of decreased speed occurring semimonthly as the result of the Moon being in quadrature. The *neap range* (Np) of the tide is the average semidiurnal range occurring at the time of neap tides and is most conveniently computed from the harmonic constants. It is smaller than the mean range where the type of tide is either semidiurnal or mixed and is of no practical significance where the type of tide is diurnal. The average height of the high waters of the neap tides is called *neap high water* or *high water neaps* (MHWN) and the average height of the corresponding low waters is called *neap low water* or *low water neaps* (MLWN).

**PERIGEAN TIDES OR TIDAL CURRENTS**—Tides of increased range or tidal currents of increased speed occurring monthly as the result of the Moon being in perigee or nearest the Earth. The *perigean range* (Pn) of tide is the average semidiurnal range occurring at the time of perigean tides and is most conveniently computed from the harmonic constants. It is larger than the mean range where the type of tide is either semidiurnal or mixed, and is of no practical significance where the type of tide is diurnal.

**RANGE OF TIDE**—The difference in height between consecutive high and low waters, the *mean range* is the difference in height between mean high water and mean low water. Where the type of tide is diurnal the mean range is the same as the diurnal range. For

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other ranges, see great diurnal, spring, neap, perigean, apogean, and tropic tides.

**REFERENCE STATION**—A tide or current station for which independent daily predictions are given in the *Tide Tables and Tidal Current Tables*, and from which corresponding predictions are obtained for subordinate stations by means of differences and ratios.

**REVERSING CURRENT**—A tidal current which flows alternately in approximately opposite directions with a slack water at each reversal of direction. Currents of this type usually occur in rivers and straits where the direction of flow is more or less restricted to certain channels. When the movement is towards the shore or up a stream, the current is said to be flooding, and when in the opposite direction it is said to be ebbing. The combined flood and ebb movement including the slack water covers, on an average, 12.42 hours for the semidiurnal current. If unaffected by a nontidal flow, the flood and ebb movements will each last about 6 hours, but when combined with such a flow, the durations of flood and ebb may be quite unequal. During the flow in each direction the speed of the current will vary from zero at the time of slack water to a maximum about midway between the slacks.

**ROTARY CURRENT**—A tidal current that flows continually with the direction of flow changing through all points of the compass during the tidal period. Rotary currents are usually found offshore where the direction of flow is not restricted by any barriers. The tendency for the rotation in direction has its origin in the Coriolis force and, unless modified by local conditions, the change is clockwise in the Northern Hemisphere and counterclockwise in the Southern. The speed of the current usually varies throughout the tidal cycle, passing through the two maxima in approximately opposite directions and the two minima with the direction of the current at approximately  $90^{\circ}$  from the direction at time of maximum speed.

**SEMIIDIURNAL**—Having a period or cycle of approximately one-half of a tidal day. The predominating type of tide throughout the world is semidiurnal, with two high waters and two low waters each tidal day. The tidal current is said to be semidiurnal when there are two flood and two ebb periods each day.

**SET (OF CURRENT)**—The direction *towards* which the current flows.

**SLACK WATER**—The state of a tidal current when its speed is near zero, especially the moment when a

reversing current changes direction and its speed is zero. The term is also applied to the entire period of low speed near the time of turning of the current when it is too weak to be of any practical importance in navigation. The relation of the time of slack water to the tidal phases varies in different localities. For standing tidal waves, slack water occurs near the times of high and low water, while for progressive tidal waves, slack water occurs midway between high and low water.

**SPRING TIDES OR TIDAL CURRENTS**—Tides of increased range or tidal currents of increased speed occurring semimonthly as the result of the Moon being new or full. The *spring range* (Sg) of tide is the average semidiurnal range occurring at the time of spring tides and is most conveniently computed from the harmonic constants. It is larger than the mean range where the type of tide is either semidiurnal or mixed, and is of no practical significance where the type of tide is diurnal. The mean of the high waters of the spring tide is called *spring high water or mean high water springs* (MHWS), and the average height of the corresponding low waters is called *spring low water or mean low water springs* (MLWS).

**STAND OF TIDE**—Sometimes called a platform tide. An interval at high or low water when there is no sensible change in the height of the tide. The water level is stationary at high and low water for only an instant, but the change in level near these times is so slow that it is not usually perceptible. In general, the duration of the apparent stand will depend upon the range of tide, being longer for a small range than for a large range, but where there is a tendency for a double tide the stand may last for several hours even with a large range of tide.

**STANDARD TIME**—A kind of time based upon the transit of the Sun over a certain specified meridian, called the *time meridian*, and adopted for use over a considerable area. With a few exceptions, standard time is based upon some meridian which differs by a multiple of  $15^{\circ}$  from the meridian of Greenwich.

**STRENGTH OF CURRENT**—Phase of tidal current in which the speed is a maximum; also the speed at this time. Beginning with slack before flood in the period of a reversing tidal current (or minimum before flood in a rotary current), the speed gradually increases to flood strength and then diminishes to slack before ebb (or minimum before ebb in a rotary current), after which the current turns in direction, the speed increases to ebb strength and then diminishes to slack before flood completing the cycle. If it is assumed that the speed throughout the cycle varies as the ordinates of a cosine curve, it can

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be shown that the average speed for an entire flood or ebb period is equal to  $2/\pi$  or 0.6366 of the speed of the corresponding strength of current.

**SUBORDINATE CURRENT STATION**—(1) A current station from which a relatively short series of observations is reduced by comparison with simultaneous observations from a control current station. (2) A station listed in the *Tidal Current Tables* for which predictions are to be obtained by means of differences and ratios applied to the full predictions at a reference station.

**SUBORDINATE TIDE STATION**—(1) A tide station from which a relatively short series of observations is reduced by comparison with simultaneous observations from a tide station with a relatively long series of observations. (2) A station listed in the *Tide Tables* for which predictions are to be obtained by means of differences and ratios applied to the full predictions at a reference station.

**TIDAL CURRENT TABLES**—Tables which give daily predictions of the times and speeds of the tidal currents. These predictions are usually supplemented by current differences and constants through which additional predictions can be obtained for numerous other places.

**TIDAL DIFFERENCE**—Difference in time or height of a high or low water at a subordinate station and at a reference station for which predictions are given in the *Tide Tables*. The difference, when applied according to sign to the prediction at the reference station, gives the corresponding time or height for the subordinate station.

**TIDE**—The periodic rise and fall of the water resulting from gravitational interactions between the Sun, Moon, and Earth. The vertical component of the particulate motion of a tidal wave. Although the accompanying horizontal movement of the water is part of the same phenomenon, it is preferable to designate the motion as tidal current.

**TIDE TABLES**—Tables which give daily predictions of the times and heights of high and low waters. These predictions are usually supplemented by tidal differences and constants through which additional predictions can be obtained for numerous other places.

**TIME MERIDIAN**—A meridian used as a reference for time.

**TROPIC CURRENTS**—Tidal currents occurring semimonthly when the effect of the Moon's maximum declination is greatest. At these times the tendency of the Moon to produce a diurnal inequality in the current is at a maximum.

**TROPIC RANGES**—The *great tropic range* ( $G_c$ ), or *tropic range*, is the difference in height between tropic higher high water and tropic lower low water. The *small tropic range* ( $S_c$ ) is the difference in height between tropic lower high water and tropic higher low water. The *mean tropic range* ( $M_c$ ) is the mean between the great tropic range and the small tropic range. The small tropic range and the mean tropic range are applicable only when the type of tide is semidiurnal or mixed. Tropic ranges are most conveniently computed from the harmonic constants.

**TROPIC TIDES**—Tides occurring semimonthly when the effect of the Moon's maximum declination is greatest. At these times there is a tendency for an increase in the diurnal range. The tidal datums pertaining to the tropic tides are designated as *tropic higher high water* ( $T_{cHHW}$ ), *tropic lower high water* ( $T_{cLHW}$ ), *tropic higher low water* ( $T_{cHLW}$ ), and *tropic lower low water* ( $T_{cLLW}$ ).

**TYPE OF TIDE**—A classification based on characteristic forms of a tide curve. Qualitatively, when the two high waters and two low waters of each tidal day are approximately equal in height, the tide is said to be *semidiurnal*; when there is a relatively large diurnal inequality in the high or low waters or both, it is said to be *mixed*; and when there is only one high water and one low water in each tidal day, it is said to be *diurnal*.

**VANISHING TIDE**—In a mixed tide with very large diurnal inequality, the lower high water (or higher low water) frequently becomes indistinct (or vanishes) at time of extreme declinations. During these periods the diurnal tide has such overriding dominance that the semidiurnal tide, although still present, cannot be readily seen on the tide curve.

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○	22	13 35
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●	7	09 04
E	12	19 ..
○	14	20 02
P	17	06 ..
N	19	01 ..
○	21	11 55
E	25	14 ..
●	28	23 14

November		
	d.	h m
S	1	21 ..
A	2	05 ..
●	6	04 03
E	9	05 ..
○	13	06 17
P	14	10 ..
N	15	09 ..
○	19	21 31
E	21	18 ..
●	27	16 55
S	29	03 ..
A	29	17 ..

December		
	d.	h m
○	5	21 26
E	6	13 ..
○	12	16 37
N	12	19 ..
P	12	22 ..
E	19	00 ..
○	19	10 29
○ <sub>d</sub>	21	12 04
S	26	08 ..
A	26	18 ..
●	27	12 22

## LUNAR DATA

- – new Moon
- – first quarter
- – full Moon
- – last quarter
- A – Moon in apogee
- P – Moon in perigee
- N – Moon farthest north of Equator
- E – Moon on Equator
- S – Moon farthest south of Equator

## SOLAR DATA

- <sub>a</sub> – March equinox
- <sub>b</sub> – June solstice
- <sub>c</sub> – September equinox
- <sub>d</sub> – December solstice

Greenwich mean time (GMT) or universal time (UT) is the mean solar time on the Greenwich meridian reckoned in days of 24 mean solar hours written as 00<sup>h</sup> at midnight and 12<sup>h</sup> at noon. To convert the above times to those of other standard time meridians, add 1 hour for each 15° of east longitude of the desired meridian and subtract 1 hour for each 15° of west longitude. This table was compiled from data supplied by the Nautical Almanac Office, United States Naval Observatory.