

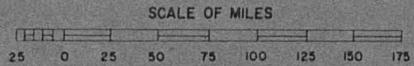
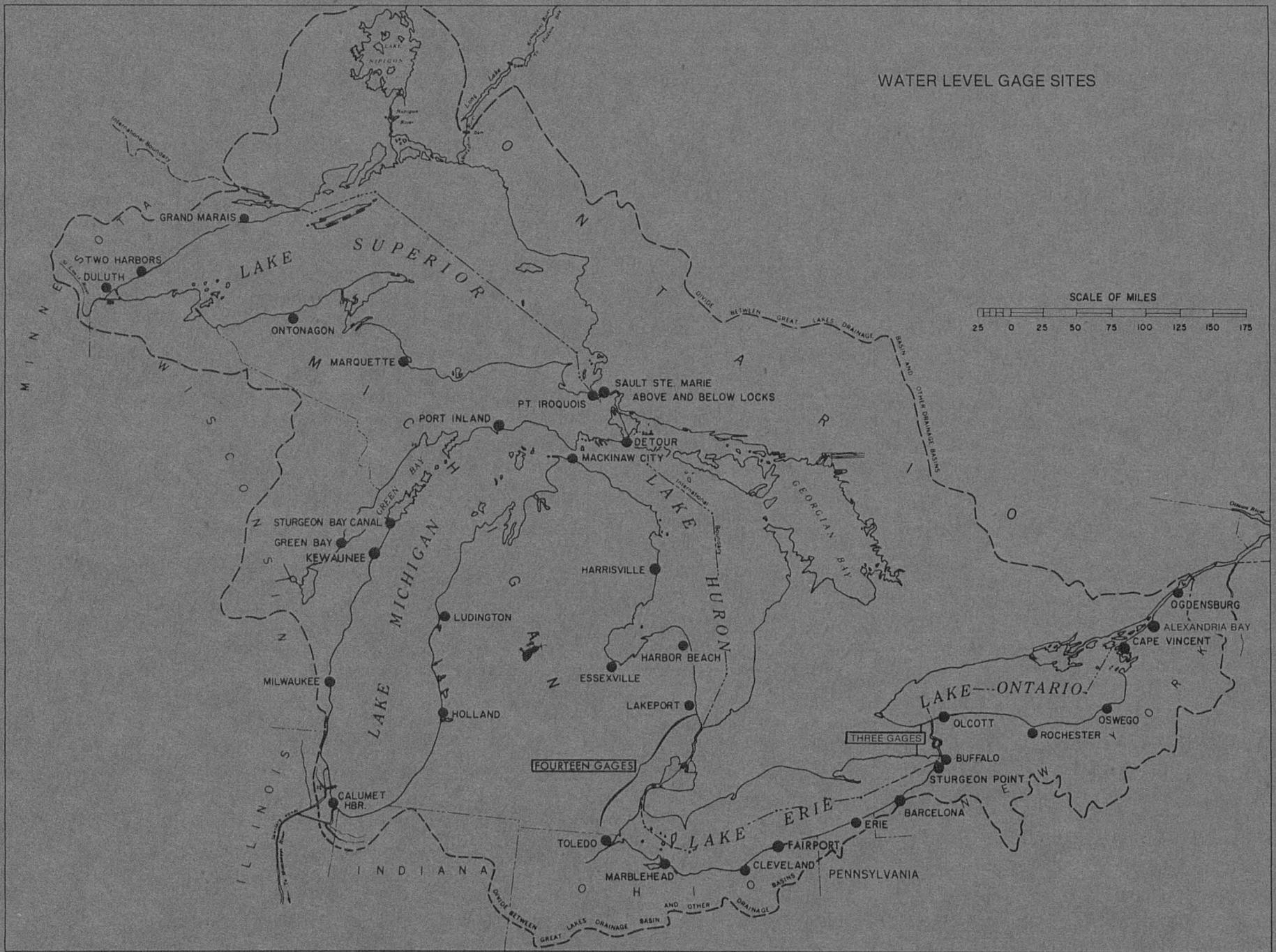


Great Lakes Water Levels, 1986

U.S. DEPARTMENT OF COMMERCE, National Oceanic and Atmospheric Administration, National Ocean Service



WATER LEVEL GAGE SITES





GREAT LAKES WATER LEVELS

1986

Daily and Monthly Average Water Surface Elevations

I N T R O D U C T I O N

The Office of Oceanography and Marine Assessment (OMA), within the National Oceanic and Atmospheric Administration (NOAA), is responsible for collecting water level data for the entire Great Lakes basin watershed (295,000 square miles), and for maintaining the International Great Lakes Datum of 1955 (IGLD 1955). In meeting these responsibilities, close coordination is maintained with other Federal Agencies and Canadian counterparts. Exchanges of water level data with Canada are made under treaties that require regulation of operations and support of cooperative power generation. These exchanges are coordinated under the International Joint Commission (IJC), a group of six commissioners appointed by the President of the United States and the Prime Minister of Canada. Parties involved in meeting the international agreements include: several boards of control, IJC committees of two Federal agencies, eight states and two Canadian provinces.

Beginning in 1970 (under authority of Presidential Reorganization Plan No. 4 (now part of U.S. Code 33 Title 883)), OMA's predecessor organization began a program of monitoring and collecting water levels, and maintaining a vertical control reference system for the Great Lakes and their connecting channels. The program, required by Congress and by international treaties, has a mission of providing a hydraulic vertical reference datum by which the governments of Canada and the United States manage water resources in the Great Lakes basin. International management of water resources in the Great Lakes basin is vital to ensuring the safety of the Lake's many users. The Great Lakes Program takes into account fluctuations of the Lakes' water levels and the outflows of rivers relative to: regulation, lake level forecasting, shipping, international cooperative treaties and agreements, riparian interests, hydroelectric power generation, construction, dredging, litigation, and other water resource management and development activities.

Presently, the Great Lakes Program is divided into office and field functions to address: basic water level measurements, vertical datums, earth movement (for the International Great Lakes Datum), basin precipitation, abstracts of diversions, vertical control support for hydrographic surveys, construction and maintenance activities, and needs of user communities. Since 1973, OMA has provided real-time data for emergency water planning situations by using water-level gages with electronic telemetry units. Presently, 24 water level measurement units are operating in the field; OMA plans to operate 50 field units by 1991 through the use of improved, state-of-the-art electronic telemetry systems.

This report, published annually, contains water level gage records for the Great Lakes in units of both feet and meters. The following information is presented in tabular form for the calendar year:

1. Daily and monthly average water levels for each gage in the network;
2. The highest and lowest daily average water level for each month;
3. A frequency distribution of daily average water levels that shows the number of times each month recorded levels were at or above specific elevations; and
4. Monthly average water level stages for each lake, from 1900 to the present.

OMA gages record water levels, in either analog or digital form, on strip charts retained by OMA. Recorded hourly values are used to compute daily averages; monthly values are derived from daily averages. Data are recorded in units of feet that are converted later to metric units. The metric data are less precise than the English unit data (0.01 meter vs. 0.01 foot). Reconverting the metric data to English units will often disagree with the original data (recorded in feet) by a small amount.

Locations of gages for recording water levels are shown on the inside cover page. An index on subsequent pages lists gage identification numbers, their locations, and their geographic coordinates.

A separate publication, printed every five years, shows only monthly and annual averages, and highest and lowest monthly averages for the period of record (latest issue: Great Lakes Water Levels, 1860-1985). A hydrograph, that depicts data for master control gages for each lake, is available for a minimal fee by writing: National Ocean Service, Office of Oceanography and Marine Assessment, N/OMA12, Rockville, Maryland, 20852.

DATUM OF REFERENCE: All tabulated elevations are referred to the International Great Lakes Datum (1955). A complete explanation of the datum can be obtained at no charge by writing the address above.

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STATION NUMBER AND LOCATION	LATITUDE NORTH	LONGITUDE WEST	PAGE FEET	PAGE METERS
ST. LAWRENCE RIVER				
1030 Ogdensburg, New York	44 42 10	75 29 40	1	113
1062 Alexandria Bay C.G., New York	44 19 56	75 56 06	3	115
LAKE ONTARIO (CHART DATUM 242.8)				
2000 Cape Vincent, New York	44 07 45	76 20 15	5	117
2030 OSWEGO, NEW YORK	43 27 51	76 30 42	7	119
2058 Rochester, New York	43 16 10	77 37 34	9	121
2076 Olcott, New York	43 20 17	78 43 39	11	123
NIAGARA RIVER				
3007 Ashland Avenue, Niagara Falls, New York	43 06 00	79 03 35	13	125
3009 American Falls, Niagara Falls, New York	43 04 54	79 03 42	15	127
3012 Niagara Intake, Niagara Falls, New York	43 04 40	79 00 55	17	129
LAKE ERIE (CHART DATUM 568.6)				
3020 Buffalo, New York	42 52 39	78 53 27	19	131
3028 Sturgeon Point, New York	42 41 27	79 02 52	21	133
3032 Barcelona, New York	42 20 35	79 35 50	23	135
3038 Erie, Pennsylvania	42 09 15	80 04 32	25	137
3053 Fairport, Ohio	41 45 00	81 17 00	27	139
3063 CLEVELAND, OHIO	41 32 27	81 38 08	29	141
3079 Marblehead, Ohio	41 32 40	82 43 53	31	143
3085 Toledo, Ohio	41 41 36	83 28 20	33	145
3087 Monroe, Michigan	41 53 54	83 21 42	35	147
3090 Fermi Power Plant, Stony Point, Michigan	41 57 35	83 15 30	37	149

NOTE: Locations shown in CAPITAL letters are master gages.

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STATION NUMBER AND LOCATION	LATITUDE NORTH	LONGITUDE WEST	PAGE FEET	PAGE METERS
DETROIT RIVER				
4020 Gibraltar, Michigan	42 05 30	83 11 10	39	151
4030 Wyandotte, Michigan	42 12 12	83 08 50	41	153
4036 Fort Wayne, Detroit, Michigan	42 17 53	83 05 34	43	155
4049 Windmill Point, Detroit, Michigan	42 21 26	82 55 45	45	157
LAKE ST. CLAIR (CHART DATUM 571.7)				
4052 ST. CLAIR SHORES, MICHIGAN	42 28 24	82 52 45	47	159
ST. CLAIR RIVER				
4070 Algonac, Michigan	42 37 15	82 31 37	49	161
4080 St. Clair S.P., St. Clair, Michigan	42 48 45	82 29 09	51	163
4084 Marysville, Michigan	42 54 22	82 27 58	53	165
4087 Dry Dock, Port Huron, Michigan	42 56 43	82 26 37	55	167
4090 Mouth of the Black River, Port Huron, MI	42 58 25	82 25 16	57	169
4096 Dunn Paper Company, Port Huron, MI	43 00 12	82 25 20	59	171
4098 Fort Gratiot, Port Huron, MI	43 00 23	82 25 21	61	173
LAKE HURON (CHART DATUM 576.8)				
5002 Lakeport, Michigan	43 08 30	82 29 35	63	175
5014 HARBOR BEACH, MICHIGAN	43 50 45	82 38 38	65	177
5035 Essexville, Michigan	43 38 29	83 50 48	67	179
5059 Harrisville, Michigan	44 39 34	83 17 11	69	181
5080 Mackinaw City, Michigan	45 46 40	84 43 10	71	183
5099 DeTour Village, Michigan	45 59 30	83 53 48	73	185

NOTE: Locations shown in CAPITAL letters are master gages.

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STATION NUMBER AND LOCATION	LATITUDE NORTH	LONGITUDE WEST	PAGE FEET	PAGE METERS
ST. MARY'S RIVER				
6060 U.S. Slip below locks, Sault Ste. Marie, MI	46 30 03	84 20 24	75	187
6070 S.W. Pier above locks, Sault Ste. Marie, MI	46 30 05	84 22 21	77	189
LAKE MICHIGAN (CHART DATUM 576.8)				
7023 Ludington, Michigan	43 56 48	86 26 30	79	191
7031 Holland, Michigan	42 46 05	86 12 06	81	193
7044 Calumet Harbor, S. Chicago, Illinois	41 43 48	87 32 18	83	195
7057 Milwaukee, Wisconsin	43 00 05	87 53 13	85	197
7068 Kewaunee, Wisconsin	44 27 48	87 30 00	87	199
7072 Sturgeon Bay Canal, Wisconsin	44 47 40	87 18 48	89	201
7079 Green Bay, Wisconsin	44 32 27	88 00 30	91	203
7096 Port Inland, Michigan	45 58 10	85 52 20	93	205
LAKE SUPERIOR (CHART DATUM 600.0)				
9004 POINT IROQUOIS, Michigan	46 29 06	84 37 52	95	207
9018 Marquette C.G., Michigan	46 32 42	87 22 42	97	209
9044 Ontonagon, Michigan	46 52 40	89 19 15	99	211
9064 Duluth, Minnesota	46 46 32	92 05 34	101	213
9070 Two Harbors, Minnesota	47 01 03	91 40 30	103	215
9090 Grand Marais, Minnesota	47 44 53	90 20 30	105	217
Lake Ontario Stages at Oswego, New York			106	218
Lake Erie Stages at Cleveland, Ohio			107	219
Lake St. Clair Stages at St. Clair Shores, Michigan			108	220
Lakes Huron-Michigan Stages at Harbor Beach, Michigan			109	221
Lake Superior Stages at Marquette, Michigan			110	222

NOTE: Locations shown in CAPITAL letters are master gages.

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 1030: Ogdensburg, New York on St. Lawrence River

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	244.31	244.05	244.13	245.27	245.45	245.30	245.49	245.15	244.82	244.76	244.95	243.82
2	244.17	244.22	244.02	245.30	245.60	245.23	245.51	245.23	244.73	244.74	244.78	243.80
3	243.69	244.11	243.93	245.14	245.34	245.35	245.51	245.32	244.52	244.80	244.80	244.37
4	243.79	243.98	243.92	245.06	245.33	245.45	245.59	245.30	244.66	244.78	244.69	245.01
5	244.17	244.12	243.91	244.96	245.41	245.22	245.59	245.31	244.76	244.93	244.42	244.64
6	244.46	244.00	243.80	245.25	245.24	245.13	245.53	245.26	244.68	245.12	244.53	244.74
7	244.32	243.92	244.22	245.41	245.40	245.20	245.56	245.15	244.58	245.05	244.52	244.47
8	244.40*	244.12	244.07	245.65	245.18	245.49	245.59	245.18	244.58	245.26	244.53	243.86
9	244.58	244.17	243.92	245.54	245.05	245.43	245.47	245.32	244.67	244.93	244.97	243.94
10	244.36	244.25	243.87	245.58	245.15	245.37	245.34	245.29	244.52	244.79	244.77	244.75
11	244.23	244.19	244.12	245.53	245.03	245.28	245.28	245.53	244.75	244.93	244.61	244.50
12	244.36	244.20	243.96	245.62	244.80	245.17	245.16	245.38	244.99	244.85	244.58	244.66
13	244.21	244.27	243.85	245.64	244.93	245.59	245.24	245.30	244.99	244.86	244.58	244.48
14	244.19	244.17	244.00	245.45	245.01	245.55	245.47	245.20	244.82	245.08	244.72	244.84
15	244.20	244.13	244.18	245.26	245.02	245.51	245.45	245.28	244.71	245.13	244.71	244.62
16	244.11	244.04	244.34	245.27	245.08	245.66	245.38	245.30	244.65	244.90	244.43	244.38
17	244.13	243.91	244.40	245.18	245.18	245.59	245.35	245.22	244.60	244.68	244.50	244.21
18	244.08	243.95	244.40	245.28	245.12	245.70	245.33	245.03	244.66	244.77	244.13	244.34
19	243.99	243.93	244.92	245.34	244.90	245.63	245.30	244.89	244.61	244.94	243.99	244.44
20	244.18	243.97	244.72	245.41	244.96	245.50	245.32	244.90	244.42	244.93	243.92	244.35
21	244.36	243.98	244.79	245.59	245.22	245.52	245.21	245.02	244.52	244.99	244.03	244.35
22	244.48	243.94	244.98	245.40	245.24	245.54	245.25	244.80	244.56	244.97	244.12	244.76
23	244.31	244.06	245.02	245.28	245.32	245.73	245.29	245.00	244.73	244.95	244.22	244.75
24	244.21	244.05	244.90	245.38	245.36	245.64	245.24	245.06	244.76	244.75	244.50	244.11
25	244.29	244.05	244.91	245.33	245.40	245.59	245.28	244.95	244.62	244.73	244.21	244.27
26	244.32	244.06	245.09	245.28	245.38	245.58	245.18	244.96	244.54	244.65	244.10	244.43
27	244.31	244.07	244.98	245.26	245.45	245.64	245.02	245.14	244.19	244.68	244.20	244.31
28	244.45	244.07	245.11	245.28	245.44	245.64	245.09	245.06	244.38	244.75	244.41	244.45
29	244.37		245.18	245.43	245.53	245.65	245.16	245.13	244.59	244.90	244.28	244.39
30	244.34		245.24	245.41	245.43	245.57	245.01	245.13	244.80	244.67	243.98	244.20
31	244.29		245.20		245.30		245.02	244.94		244.63		244.15
MEAN	244.25	244.07	244.45	245.36	245.23	245.48	245.33	245.15	244.65	244.87	244.44	244.40
MAX.	244.78	244.36	245.49	246.06	245.94	245.95	245.72	245.70	245.45	245.52	245.46	245.34
MIN.	2000/22	1200/10	1800/19	1500/21	0400/02	1300/24	1200/05	0600/11	1300/12	2100/14	2000/09	0200/04
	243.53	243.80	243.61	244.84	244.71	244.94	244.90	244.69	244.03	244.50	243.79	243.53
	0700/03	0500/07	1400/06	1100/05	1700/12	2100/01	0800/27	0400/22	0600/27	0700/31	0700/21	0500/09

* Indicates Less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL MEAN: 244.81

ANNUAL SUMMARY OF LEVELS, 1986
 Station 1062: Alexandria Bay C.G., New York on St. Lawrence River

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

HIGHEST
 Monthly mean elevation: 246.11 Jun
 Daily mean elevation: 246.30 23 Jun
 Instant/hourly Elevation: 246.58 1300/24 Jun

LOWEST
 Monthly mean elevation: 244.92 Feb
 Daily mean elevation: 244.62 1 Dec
 Instant/hourly Elevation: 244.46 0300/9 Dec

HIGHEST DAILY MEAN
 FOR EACH MONTH

Elev.	Date
245.13	28 Jan
245.07	13 Feb
245.75	30 Mar
246.17	21 Apr
246.22	2 May
246.30	23 Jun
246.24	5 Jul
246.14	11 Aug
245.60	12 Sep
245.77	8 Oct
245.55	1 Nov
245.46	4 Dec

LOWEST DAILY MEAN
 FOR EACH MONTH

Elev.	Date
244.80	24 Jan
244.73	7 Feb
244.83	6 Mar
245.62	5 Apr
245.65	12 May
245.87	6 Jun
245.80	31 Jul
245.56	22 Aug
245.06	27 Sep
245.36	26 Oct
244.75	30 Nov
244.62	1 Dec

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(ft.) | No. of days<br>above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 246.20         |     |     |     |     | 1   | 9   | 1   |     |     |     |     |     | 246.20         | 11                         |
| 246.00         |     |     |     | 14  | 9   | 12  | 15  | 2   |     |     |     |     | 246.00         | 63                         |
| 245.80         |     |     |     | 12  | 12  | 9   | 14  | 16  |     |     |     |     | 245.80         | 126                        |
| 245.60         |     |     | 6   | 4   | 9   |     | 1   | 11  |     | 5   |     |     | 245.60         | 162                        |
| 245.40         |     |     | 6   |     |     |     |     | 2   |     | 22  | 4   | 1   | 245.40         | 206                        |
| 245.20         |     |     | 4   |     |     |     |     |     | 18  | 4   | 10  | 7   | 245.20         | 249                        |
| 245.00         | 4   | 3   | 5   |     |     |     |     |     | 3   |     | 5   | 16  | 245.00         | 285                        |
| 244.80         | 3   | 22  | 10  |     |     |     |     |     |     |     | 9   | 4   | 244.80         | 333                        |
| 244.60         | 1   | 3   |     |     |     |     |     |     |     |     | 2   | 3   | 244.60         | 342                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 1062: Alexandria Bay C.G., New York on St. Lawrence River

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | /       | 244.83  | 245.03  | 245.78  | 246.10  | 245.93  | 246.15  | 245.87  | 245.52  | 245.46  | 245.55  | 244.62  |
| 2    | /       | 245.01  | 244.96  | 245.83  | 246.22  | 245.92  | 246.18  | 245.93  | 245.46  | 245.45  | 245.43  | 244.63  |
| 3    | /       | 244.89  | 244.90  | 245.72  | 246.01  | 245.96  | 246.20  | 245.97  | 245.33  | 245.49  | 245.45  | 245.08  |
| 4    | /       | 244.81  | 244.91  | 245.70  | 245.98  | 246.01  | 246.18  | 245.94  | 245.41  | 245.47  | 245.36  | 245.46  |
| 5    | /       | 244.96  | 244.90  | 245.62  | 246.04  | 245.89  | 246.24  | 245.95  | 245.48  | 245.60  | 245.19  | 245.22  |
| 6    | /       | 244.78  | 244.83  | 245.84  | 245.94  | 245.87  | 246.17  | 245.92  | 245.40  | 245.70  | 245.27  | 245.30  |
| 7    | /       | 244.73  | 245.16  | 245.93  | 246.05  | 245.90  | 246.19  | 245.87  | 245.32  | 245.63  | 245.24  | 245.13  |
| 8    | /       | 244.93  | 244.93  | 246.08  | 245.90  | 246.09  | 246.20  | 245.92  | 245.29  | 245.77  | 245.25  | 244.67  |
| 9    | /       | 244.97  | 244.85  | 246.03  | 245.82  | 246.03  | 246.15  | 245.99  | 245.33  | 245.57  | 245.54  | 244.84  |
| 10   | /       | 245.03  | 244.84  | 246.08  | 245.86  | 245.97  | 246.06  | 245.95  | 245.24  | 245.47  | 245.36  | 245.37  |
| 11   | /       | 244.98  | 245.10  | 246.02  | 245.79  | 245.96  | 245.99  | 246.14  | 245.44  | 245.58  | 245.28  | 245.16  |
| 12   | /       | 244.99* | 244.92  | 246.11  | 245.65  | 245.90  | 245.93  | 246.01  | 245.60  | 245.53  | 245.27  | 245.27  |
| 13   | /       | 245.07  | 244.90  | 246.09  | 245.71  | 246.19  | 245.99  | 245.95  | 245.57  | 245.55  | 245.25  | 245.08  |
| 14   | /       | 244.99  | 245.04  | 245.98  | 245.73  | 246.12  | 246.15  | 245.88  | 245.44  | 245.70  | 245.37  | 245.34  |
| 15   | /       | 244.98  | 245.17  | 245.87  | 245.74  | 246.10  | 246.11  | 245.93  | 245.35  | 245.70  | 245.30  | 245.17  |
| 16   | /       | 244.88  | 245.25  | 245.92  | 245.79  | 246.21  | 246.05  | 245.94  | 245.34  | 245.55  | 245.11  | 245.06  |
| 17   | /       | 244.79  | 245.26  | 245.92  | 245.83  | 246.20  | 246.04  | 245.89  | 245.28  | 245.43  | 245.16  | 244.95  |
| 18   | /       | 244.83  | 245.23  | 245.97  | 245.77  | 246.27  | 246.01  | 245.77  | 245.33  | 245.48  | 244.89  | 245.05  |
| 19   | /       | 244.82  | 245.50  | 245.99  | 245.67  | 246.20  | 246.00  | 245.66  | 245.26  | 245.56  | 244.81  | 245.13  |
| 20   | /       | 244.88  | 245.40  | 246.04  | 245.76  | 246.16  | 246.04  | 245.66  | 245.15  | 245.54  | 244.75  | 245.05  |
| 21   | /       | 244.90  | 245.47  | 246.17  | 245.91  | 246.16  | 245.95  | 245.73  | 245.21  | 245.58  | 244.85  | 245.06  |
| 22   | /       | 244.85  | 245.51  | 246.08  | 245.94  | 246.17  | 245.95  | 245.56  | 245.21  | 245.56  | 244.86  | 245.28  |
| 23   | /       | 244.99  | 245.54  | 246.01  | 245.99  | 246.30  | 245.96  | 245.73  | 245.39  | 245.56  | 244.97  | 245.28  |
| 24   | 244.80* | 244.98  | 245.51  | 246.08  | 246.00  | 246.27  | 245.93  | 245.71  | 245.37  | 245.42  | 245.13  | 244.86  |
| 25   | 245.00  | 244.98  | 245.52  | 246.05  | 246.02  | 246.25  | 245.95  | 245.62  | 245.30  | 245.40  | 244.89  | 245.07  |
| 26   | 245.00  | 244.96  | 245.63  | 246.00  | 245.98  | 246.20  | 245.91  | 245.63  | 245.28  | 245.36  | 244.85  | 245.13  |
| 27   | 245.00  | 244.97  | 245.63  | 246.00  | 246.03  | 246.26  | 245.82  | 245.83  | 245.06  | 245.41  | 244.93  | 245.06  |
| 28   | 245.13  | 244.98  | 245.66  | 245.97  | 246.06  | 246.25  | 245.85  | 245.74  | 245.18  | 245.46  | 245.02  | 245.15  |
| 29   | 245.04  |         | 245.68  | 246.08  | 246.10  | 246.28  | 245.90  | 245.75  | 245.33  | 245.53  | 244.98  | 245.12  |
| 30   | 245.06  |         | 245.75  | 246.04  | 246.02  | 246.23  | 245.81  | 245.73  | 245.47  | 245.37  | 244.75  | 245.02  |
| 31   | 245.03  |         | 245.72  |         | 245.94  |         | 245.80  | 245.59  |         | 245.37  |         | 245.00  |
| MEAN | 245.01  | 244.92  | 245.25  | 245.97  | 245.91  | 246.11  | 246.03  | 245.83  | 245.34  | 245.52  | 245.14  | 245.08  |
| MAX. | 245.26  | 245.18  | 245.85  | 246.42  | 246.49  | 246.58  | 246.32  | 246.33  | 245.93  | 246.03  | 245.98  | 245.83  |
|      | 2100/28 | 0900/23 | 2300/30 | 1400/21 | 0400/02 | 1300/24 | 0200/05 | 0500/11 | 1200/12 | 2000/14 | 1900/09 | 0100/04 |
| MIN. | 244.73  | 244.64  | 244.65  | 245.56  | 245.56  | 245.71  | 245.75  | 245.48  | 244.95  | 245.25  | 244.65  | 244.46  |
|      | 0200/25 | 0200/07 | 0200/10 | 1200/05 | 0700/12 | 2000/01 | 1500/30 | 0800/22 | 0800/27 | 0500/31 | 2100/18 | 0300/09 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 245.51

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 2000: Cape Vincent, New York on Lake Ontario

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST  
 Monthly mean elevation: 246.64 Jun  
 Daily mean elevation: 246.81 24 Jun  
 Instant/hourly Elevation: 247.17 1100/24 Jun

LOWEST  
 Monthly mean elevation: 245.10 Jan  
 Daily mean elevation: 244.25 1 Jan  
 Instant/hourly Elevation: 244.10 1700/2 Jan

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 245.54 | 28 Jan |
|        | Feb    |
| 245.99 | 27 Mar |
| 246.63 | 21 Apr |
| 246.68 | 2 May  |
| 246.81 | 24 Jun |
| 246.76 | 5 Jul  |
| 246.65 | 11 Aug |
| 246.04 | 13 Sep |
|        | Oct    |
|        | Nov    |
| 245.68 | 28 Dec |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 244.25 | 1 Jan  |
|        | Feb    |
| 245.38 | 13 Mar |
| 246.31 | 15 Apr |
| 246.24 | 19 May |
| 246.45 | 5 Jun  |
| 246.39 | 27 Jul |
| 246.09 | 31 Aug |
| 245.65 | 19 Sep |
|        | Oct    |
|        | Nov    |
| 245.56 | 31 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(ft.) | No. of days
above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 246.80 | | | | | | 1 | | | | | | | 246.80 | 1 |
| 246.60 | | | | 1 | 2 | 17 | 18 | 1 | | | | | 246.60 | 40 |
| 246.40 | | | | 16 | 17 | 12 | 12 | 16 | | | | | 246.40 | 113 |
| 246.20 | | | | 4 | 12 | | 1 | 9 | | | | | 246.20 | 139 |
| 246.00 | | | | | | | | 5 | 2 | | | | 246.00 | 146 |
| 245.80 | | | 9 | | | | | | 12 | | | | 245.80 | 167 |
| 245.60 | | | 3 | | | | | | 11 | | | | 245.60 | 182 |
| 245.40 | 3 | | 3 | | | | | | | | | 1 | 245.40 | 191 |
| 245.20 | 8 | | 2 | | | | | | | | | 3 | 245.20 | 201 |
| 245.00 | 10 | | | | | | | | | | | | 245.00 | 211 |
| 244.80 | 4 | | | | | | | | | | | | 244.80 | 215 |
| 244.60 | 2 | | | | | | | | | | | | 244.60 | 217 |
| 244.40 | | | | | | | | | | | | | 244.40 | 217 |
| 244.20 | 2 | | | | | | | | | | | | 244.20 | 219 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 2000: Cape Vincent, New York on Lake Ontario

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|-----|---------|---------|---------|---------|---------|---------|---------|-----|-----|---------|
| 1 | 244.25 | / | / | / | 246.61 | 246.47 | 246.70 | 246.49 | 246.04 | / | / | / |
| 2 | 244.38 | / | / | / | 246.68 | 246.51 | 246.76 | 246.53 | 246.00 | / | / | / |
| 3 | 244.74 | / | / | / | 246.54 | 246.49 | 246.76 | 246.55 | 245.92 | / | / | / |
| 4 | 244.80 | / | / | / | 246.50 | 246.51 | 246.73 | 246.52 | 245.99 | / | / | / |
| 5 | 245.14 | / | / | / | 246.50 | 246.45 | 246.76 | 246.52 | 246.00 | / | / | / |
| 6 | 245.16 | / | / | / | 246.45 | 246.46 | 246.72 | 246.50 | 245.94 | / | / | / |
| 7 | 245.00* | / | / | / | 246.54 | 246.47 | 246.74 | 246.47 | 245.87 | / | / | / |
| 8 | 245.11* | / | / | / | 246.43 | 246.60 | 246.73 | 246.53 | 245.79 | / | / | / |
| 9 | 245.23 | / | / | / | 246.40 | 246.54 | 246.71 | 246.59 | / | / | / | / |
| 10 | 245.08 | / | / | 246.47* | 246.40 | 246.50 | 246.65 | 246.54 | / | / | / | / |
| 11 | 244.99 | / | 245.57 | 246.40 | 246.35 | 246.50 | 246.59 | 246.65 | / | / | / | / |
| 12 | 245.10 | / | 245.40 | 246.48 | 246.27 | 246.52 | 246.57 | 246.57 | / | / | / | / |
| 13 | 244.95 | / | 245.38 | 246.46 | 246.27 | 246.69 | 246.61 | 246.51 | 246.04* | / | / | / |
| 14 | 245.00 | / | 245.49 | 246.37 | 246.26 | 246.64 | 246.72 | 246.46 | 245.94* | / | / | / |
| 15 | 245.03* | / | 245.60 | 246.31 | 246.27 | 246.62 | 246.68 | 246.50 | / | / | / | / |
| 16 | 245.05* | / | 245.65 | 246.39 | 246.31 | 246.70 | 246.64 | 246.50 | 245.85* | / | / | / |
| 17 | 245.12 | / | 245.66 | 246.46 | 246.33 | 246.72 | 246.63 | 246.46 | 245.75 | / | / | / |
| 18 | 245.09 | / | 245.64 | 246.50 | 246.30 | 246.75 | 246.61 | 246.38 | 245.71 | / | / | / |
| 19 | 245.07 | / | 245.89 | 246.50 | 246.24 | 246.69 | 246.63 | 246.28 | 245.65 | / | / | / |
| 20 | 245.27 | / | 245.84 | 246.52 | 246.37 | 246.72 | 246.65 | 246.25 | 245.67 | / | / | / |
| 21 | 245.31 | / | 245.90 | 246.63 | 246.43 | 246.71 | 246.57 | 246.26 | 245.71 | / | / | / |
| 22 | 245.43 | / | 245.90 | 246.58 | 246.46 | 246.71 | 246.56 | 246.15 | 245.70 | / | / | / |
| 23 | 245.28 | / | 245.89 | 246.57 | 246.48 | 246.80 | 246.52 | 246.27 | 245.85 | / | / | / |
| 24 | 245.21 | / | 245.89 | 246.60 | 246.51 | 246.81 | 246.46 | 246.21 | 245.84 | / | / | / |
| 25 | 245.37 | / | 245.89 | 246.58 | 246.51 | 246.79 | 246.45 | 246.11 | 245.79 | / | / | / |
| 26 | 245.36 | / | 245.96 | 246.56 | 246.49 | 246.73 | 246.43 | 246.14 | 245.80 | / | / | / |
| 27 | 245.36 | / | 245.99* | 246.54 | 246.51 | 246.77 | 246.39 | 246.35 | 245.67 | / | / | / |
| 28 | 245.54* | / | / | 246.50 | 246.54 | 246.76 | 246.43 | 246.26 | 245.76 | / | / | 245.68* |
| 29 | 245.44* | / | / | 246.58 | 246.58 | 246.80 | 246.52 | 246.24 | 245.86 | / | / | 245.60 |
| 30 | / | / | / | 246.54 | 246.53 | 246.78 | 246.45 | 246.20 | 245.97 | / | / | 245.57 |
| 31 | / | / | / | / | 246.49 | / | 246.44 | 246.09 | / | / | / | 245.56 |
| MEAN | 245.10 | / | 245.74 | 246.50 | 246.44 | 246.64 | 246.61 | 246.39 | 245.84 | / | / | 245.60 |
| MAX. | 245.74 | | 246.18 | 246.93 | 247.10 | 247.17 | 246.89 | 246.91 | 246.28 | | | 245.75 |
| MIN. | 1700/22 | | 1500/19 | 1200/21 | 1400/01 | 1100/24 | 2400/04 | 0100/09 | 0800/30 | | | 1600/28 |
| | 244.10 | | 245.20 | 246.19 | 246.12 | 246.23 | 246.31 | 246.02 | 245.49 | | | 245.49 |
| | 1700/02 | | 0100/11 | 0800/15 | 0100/19 | 1800/01 | 0500/27 | 1400/31 | 1300/22 | | | 1500/31 |

* Indicates Less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL MEAN: 246.10

ANNUAL SUMMARY OF LEVELS, 1986
 Station 2030: Oswego, New York on Lake Ontario

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

HIGHEST
 Monthly mean elevation: 246.66 Jun
 Daily mean elevation: 246.84 24 Jun
 Instant/hourly Elevation: 247.23 2200/4 Jul

LOWEST
 Monthly mean elevation: 245.27 Jan
 Daily mean elevation: 245.05 16 Jan
 Instant/hourly Elevation: 244.88 2200/4 Jan

HIGHEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 245.66 | 28 Jan |
| 245.62 | 13 Feb |
| 246.18 | 31 Mar |
| 246.71 | 23 Apr |
| 246.73 | 2 May |
| 246.84 | 24 Jun |
| 246.81 | 3 Jul |
| 246.63 | 11 Aug |
| 246.08 | 12 Sep |
| 246.35 | 6 Oct |
| 246.04 | 2 Nov |
| 245.82 | 10 Dec |

LOWEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 245.05 | 16 Jan |
| 245.32 | 7 Feb |
| 245.40 | 9 Mar |
| 246.19 | 1 Apr |
| 246.30 | 14 May |
| 246.50 | 7 Jun |
| 246.51 | 31 Jul |
| 246.14 | 31 Aug |
| 245.68 | 22 Sep |
| 245.91 | 31 Oct |
| 245.37 | 23 Nov |
| 245.33 | 2 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(ft.) | No. of days<br>above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 246.80         |     |     |     |     |     | 3   | 1   |     |     |     |     |     | 246.80         | 4                          |
| 246.60         |     |     |     | 9   | 3   | 16  | 17  | 1   |     |     |     |     | 246.60         | 50                         |
| 246.40         |     |     |     | 13  | 22  | 11  | 13  | 17  |     |     |     |     | 246.40         | 126                        |
| 246.20         |     |     |     | 7   | 6   |     |     | 10  |     | 1   |     |     | 246.20         | 150                        |
| 246.00         |     |     | 8   | 1   |     |     |     | 3   | 4   | 24  | 1   |     | 246.00         | 191                        |
| 245.80         |     |     | 6   |     |     |     |     |     | 20  | 6   | 8   | 1   | 245.80         | 232                        |
| 245.60         | 1   | 1   | 6   |     |     |     |     |     | 6   |     | 10  | 21  | 245.60         | 277                        |
| 245.40         | 7   | 21  | 10  |     |     |     |     |     |     |     | 9   | 7   | 245.40         | 331                        |
| 245.20         | 10  | 6   | 1   |     |     |     |     |     |     |     | 2   | 2   | 245.20         | 352                        |
| 245.00         | 13  |     |     |     |     |     |     |     |     |     |     |     | 245.00         | 365                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 2030: Oswego, New York on Lake Ontario

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 245.15  | 245.38  | 245.53  | 246.19  | 246.62  | 246.59  | 246.72  | 246.51  | 246.08  | 246.03  | 245.92  | 245.37  |
| 2    | 245.06  | 245.55  | 245.47  | 246.27  | 246.73  | 246.61  | 246.76  | 246.50  | 246.05  | 246.06  | 246.04  | 245.33  |
| 3    | 245.12  | 245.45  | 245.45  | 246.25  | 246.65  | 246.54  | 246.81  | 246.52  | 245.99  | 246.01  | 245.95  | 245.62  |
| 4    | 245.05  | 245.37  | 245.44  | 246.28  | 246.54  | 246.51  | 246.74  | 246.52  | 245.85  | 246.10  | 245.99  | 245.76  |
| 5    | 245.23  | 245.52  | 245.45  | 246.21  | 246.51  | 246.55  | 246.73  | 246.49  | 245.97  | 246.15  | 245.81  | 245.68  |
| 6    | 245.38  | 245.46  | 245.49  | 246.21  | 246.51  | 246.55  | 246.71  | 246.48  | 245.99  | 246.35  | 245.83  | 245.60  |
| 7    | 245.23  | 245.32  | 245.83  | 246.35  | 246.54  | 246.50  | 246.73  | 246.46  | 245.96  | 246.12  | 245.79  | 245.61  |
| 8    | 245.24  | 245.46  | 245.50  | 246.41  | 246.53  | 246.57  | 246.72  | 246.50  | 245.90  | 246.08  | 245.77  | 245.57  |
| 9    | 245.24  | 245.47  | 245.40  | 246.49  | 246.51  | 246.57  | 246.73  | 246.56  | 245.84  | 246.18  | 245.95  | 245.53  |
| 10   | 245.22  | 245.54  | 245.42  | 246.53  | 246.47  | 246.52  | 246.69  | 246.48  | 245.78  | 246.09  | 245.90  | 245.82  |
| 11   | 245.10  | 245.51  | 245.65  | 246.46  | 246.45  | 246.58  | 246.61  | 246.63  | 245.90  | 245.98  | 245.76  | 245.63  |
| 12   | 245.13  | 245.57  | 245.51  | 246.50  | 246.42  | 246.53  | 246.59  | 246.52  | 246.08  | 245.98  | 245.80  | 245.74  |
| 13   | 245.20  | 245.62  | 245.52  | 246.48  | 246.36  | 246.64  | 246.60  | 246.48  | 246.06  | 246.03  | 245.93  | 245.67  |
| 14   | 245.14  | 245.43  | 245.62  | 246.44  | 246.30  | 246.63  | 246.71  | 246.39  | 245.97  | 246.14  | 245.73  | 245.61  |
| 15   | 245.13  | 245.51  | 245.68  | 246.40  | 246.31  | 246.64  | 246.70  | 246.41  | 245.94  | 246.20  | 245.62  | 245.64  |
| 16   | 245.05  | 245.43  | 245.74  | 246.52  | 246.31  | 246.67  | 246.65  | 246.42  | 245.99  | 246.12  | 245.65  | 245.59  |
| 17   | 245.08  | 245.35  | 245.75  | 246.61  | 246.35  | 246.76  | 246.62  | 246.42  | 245.87  | 246.15  | 245.63  | 245.52  |
| 18   | 245.09  | 245.39  | 245.73  | 246.61  | 246.32  | 246.74  | 246.61  | 246.44  | 245.78  | 246.13  | 245.61  | 245.53  |
| 19   | 245.11  | 245.43  | 245.85  | 246.59  | 246.41  | 246.69  | 246.63  | 246.32  | 245.76  | 246.12  | 245.54  | 245.70  |
| 20   | 245.35  | 245.40  | 246.01  | 246.58  | 246.48  | 246.77  | 246.63  | 246.24  | 245.75  | 246.08  | 245.39  | 245.66  |
| 21   | 245.38  | 245.52  | 245.97  | 246.65  | 246.48  | 246.73  | 246.60  | 246.26  | 245.75  | 246.09  | 245.65  | 245.64  |
| 22   | 245.43  | 245.44  | 245.94  | 246.69  | 246.52  | 246.70  | 246.56  | 246.23  | 245.68  | 246.06  | 245.48  | 245.65  |
| 23   | 245.42  | 245.54  | 245.97  | 246.71  | 246.52  | 246.78  | 246.54  | 246.20  | 245.83  | 246.09  | 245.37  | 245.63  |
| 24   | 245.34  | 245.53  | 246.06  | 246.66  | 246.54  | 246.84  | 246.52  | 246.41  | 245.86  | 246.04  | 245.56  | 245.50  |
| 25   | 245.24  | 245.58  | 245.98  | 246.65  | 246.54  | 246.83  | 246.51  | 246.26  | 245.86  | 245.99  | 245.44  | 245.69  |
| 26   | 245.43  | 245.53  | 246.01  | 246.66  | 246.54  | 246.73  | 246.54  | 246.21  | 245.87  | 245.96  | 245.43  | 245.72  |
| 27   | 245.56  | 245.55  | 246.13  | 246.64  | 246.54  | 246.72  | 246.52  | 246.40  | 245.83  | 245.98  | 245.50  | 245.69  |
| 28   | 245.66  | 245.54  | 246.10  | 246.59  | 246.56  | 246.76  | 246.51  | 246.35  | 245.81  | 246.06  | 245.51  | 245.71  |
| 29   | 245.48  |         | 246.10  | 246.60  | 246.56  | 246.81  | 246.52  | 246.29  | 245.81  | 246.01  | 245.56  | 245.66  |
| 30   | 245.51  |         | 246.13  | 246.58  | 246.55  | 246.78  | 246.54  | 246.19  | 245.98  | 246.07  | 245.48  | 245.71  |
| 31   | 245.56  |         | 246.18  |         | 246.55  |         | 246.51  | 246.14  |         | 245.91  |         | 245.67  |
| MEAN | 245.27  | 245.48  | 245.76  | 246.49  | 246.49  | 246.66  | 246.63  | 246.39  | 245.89  | 246.08  | 245.69  | 245.63  |
| MAX. | 245.83  | 245.73  | 246.32  | 246.80  | 246.93  | 247.11  | 247.23  | 246.75  | 246.40  | 246.63  | 246.33  | 246.04  |
|      | 1000/28 | 0800/21 | 0300/24 | 0900/23 | 1900/01 | 2000/16 | 2200/04 | 0300/11 | 2000/15 | 0700/06 | 1900/09 | 0500/04 |
| MIN. | 244.88  | 245.08  | 245.04  | 246.05  | 246.08  | 246.34  | 246.13  | 246.01  | 245.46  | 245.45  | 245.19  | 245.16  |
|      | 2200/04 | 1900/01 | 2200/09 | 2400/01 | 0800/16 | 0800/01 | 2000/04 | 1400/26 | 0600/23 | 1600/04 | 0400/20 | 0900/02 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 246.04

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 2058: Rochester, New York on Lake Ontario

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST  
 Monthly mean elevation: 246.69 Jun  
 Daily mean elevation: 246.83 24 Jun  
 Instant/hourly Elevation: 247.08 2000/18 Jul

LOWEST  
 Monthly mean elevation: 245.26 Jan  
 Daily mean elevation: 245.08 17 Jan  
 Instant/hourly Elevation: 244.79 0500/12 Jan

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 245.53 | 28 Jan |
| 245.58 | 25 Feb |
| 246.22 | 31 Mar |
| 246.72 | 23 Apr |
| 246.66 | 2 May  |
| 246.83 | 24 Jun |
| 246.80 | 3 Jul  |
| 246.59 | 11 Aug |
| 246.12 | 1 Sep  |
| 246.26 | 6 Oct  |
| 246.02 | 2 Nov  |
| 245.75 | 27 Dec |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 245.08 | 17 Jan |
| 245.39 | 16 Feb |
| 245.42 | 10 Mar |
| 246.24 | 1 Apr  |
| 246.37 | 14 May |
| 246.54 | 4 Jun  |
| 246.54 | 29 Jul |
| 246.18 | 31 Aug |
| 245.79 | 19 Sep |
| 246.00 | 31 Oct |
| 245.47 | 23 Nov |
| 245.42 | 2 Dec  |

| Elev.<br>(ft.) | ~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~ |     |     |     |     |     |     |     |     |     |     |     | Elev.<br>(ft.) | No. of days<br>above elev. |
|----------------|---------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
|                | Jan                                                     | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |                |                            |
| 246.80         |                                                         |     |     |     |     | 4   |     |     |     |     |     |     | 246.80         | 4                          |
| 246.60         |                                                         |     |     | 14  | 3   | 16  | 23  |     |     |     |     |     | 246.60         | 60                         |
| 246.40         |                                                         |     |     | 8   | 24  | 10  | 8   | 16  |     |     |     |     | 246.40         | 126                        |
| 246.20         |                                                         |     | 1   | 8   | 4   |     |     | 13  |     | 3   |     |     | 246.20         | 155                        |
| 246.00         |                                                         |     | 9   |     |     |     |     | 2   | 6   | 27  | 1   |     | 246.00         | 200                        |
| 245.80         |                                                         |     | 3   |     |     |     |     |     | 21  | 1   | 11  |     | 245.80         | 236                        |
| 245.60         |                                                         |     | 5   |     |     |     |     |     | 3   |     | 5   | 21  | 245.60         | 270                        |
| 245.40         | 8                                                       | 27  | 13  |     |     |     |     |     |     |     | 13  | 10  | 245.40         | 341                        |
| 245.20         | 9                                                       | 1   |     |     |     |     |     |     |     |     |     |     | 245.20         | 351                        |
| 245.00         | 14                                                      |     |     |     |     |     |     |     |     |     |     |     | 245.00         | 365                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 2058: Rochester, New York on Lake Ontario

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 245.12  | 245.49  | 245.47  | 246.24  | 246.60  | 246.60  | 246.76  | 246.51  | 246.12  | 246.13  | 245.96  | 245.44  |
| 2    | 245.11  | 245.51  | 245.49  | 246.26  | 246.66  | 246.62  | 246.76  | 246.56  | 246.06  | 246.10  | 246.02  | 245.42  |
| 3    | 245.16  | 245.50  | 245.48  | 246.29  | 246.65  | 246.60  | 246.80  | 246.58  | 246.03  | 246.08  | 245.96  | 245.53  |
| 4    | 245.16  | 245.49  | 245.46  | 246.30  | 246.56  | 246.54  | 246.74  | 246.57  | 245.93  | 246.14  | 245.98  | 245.55  |
| 5    | 245.14  | 245.53  | 245.48  | 246.32  | 246.55  | 246.57  | 246.74  | 246.53  | 245.96  | 246.20  | 245.91  | 245.60  |
| 6    | 245.21  | 245.51  | 245.48  | 246.33  | 246.56  | 246.58  | 246.76  | 246.52  | 246.00  | 246.26  | 245.87  | 245.57  |
| 7    | 245.27  | 245.41  | 245.57  | 246.37  | 246.56  | 246.55  | 246.74  | 246.52  | 245.99  | 246.18  | 245.87  | 245.60  |
| 8    | 245.21  | 245.48  | 245.53  | 246.38  | 246.55  | 246.56  | 246.74  | 246.49  | 245.93  | 246.15  | 245.83  | 245.65  |
| 9    | 245.11  | 245.47  | 245.49  | 246.45  | 246.51  | 246.57  | 246.72  | 246.52  | 245.88  | 246.25  | 245.87  | 245.63  |
| 10   | 245.15  | 245.48  | 245.42  | 246.50  | 246.48  | 246.58  | 246.71  | 246.56  | 245.86  | 246.15  | 245.85  | 245.68  |
| 11   | 245.13  | 245.53  | 245.52  | 246.49  | 246.46  | 246.60  | 246.66  | 246.59  | 245.96  | 246.04  | 245.83  | 245.63  |
| 12   | 245.09  | 245.52  | 245.56  | 246.49  | 246.43  | 246.62  | 246.64  | 246.55  | 246.03  | 246.04  | 245.78  | 245.69  |
| 13   | 245.22  | 245.49  | 245.58  | 246.49  | 246.42  | 246.68  | 246.62  | 246.47  | 246.04  | 246.08  | 245.82  | 245.67  |
| 14   | 245.21  | 245.43  | 245.66  | 246.49  | 246.37  | 246.68  | 246.68  | 246.40  | 245.97  | 246.08  | 245.69  | 245.59  |
| 15   | 245.13  | 245.42  | 245.67  | 246.50  | 246.39  | 246.68  | 246.68  | 246.36  | 245.96  | 246.13  | 245.62  | 245.62  |
| 16   | 245.13  | 245.39  | 245.71  | 246.57  | 246.41  | 246.69  | 246.66  | 246.45  | 245.97  | 246.17  | 245.63  | 245.64  |
| 17   | 245.08  | 245.41  | 245.78  | 246.61  | 246.39  | 246.76  | 246.64  | 246.47  | 245.89  | 246.21  | 245.60  | 245.62  |
| 18   | 245.14  | 245.44  | 245.80  | 246.61  | 246.40  | 246.76  | 246.67  | 246.46  | 245.80  | 246.14  | 245.65  | 245.60  |
| 19   | 245.18  | 245.46  | 245.85  | 246.63  | 246.43  | 246.77  | 246.63  | 246.39  | 245.79  | 246.11  | 245.59  | 245.66  |
| 20   | 245.28  | 245.45  | 246.01  | 246.63  | 246.50  | 246.78  | 246.65  | 246.32  | 245.87  | 246.10  | 245.49  | 245.68  |
| 21   | 245.37  | 245.52  | 245.97  | 246.68  | 246.52  | 246.78  | 246.67  | 246.30  | 245.83  | 246.10  | 245.58  | 245.67  |
| 22   | 245.40  | 245.50  | 245.99  | 246.71  | 246.53  | 246.76  | 246.59  | 246.27  | 245.80  | 246.08  | 245.53  | 245.61  |
| 23   | 245.45  | 245.49  | 246.01  | 246.72  | 246.56  | 246.79  | 246.57  | 246.20  | 245.89  | 246.10  | 245.47  | 245.60  |
| 24   | 245.45  | 245.54  | 246.10  | 246.69  | 246.57  | 246.83  | 246.56  | 246.39  | 245.90  | 246.10  | 245.48  | 245.62  |
| 25   | 245.35  | 245.58  | 246.05  | 246.68  | 246.58  | 246.81  | 246.58  | 246.32  | 245.88  | 246.04  | 245.48  | 245.68  |
| 26   | 245.43  | 245.55  | 246.07  | 246.68  | 246.58  | 246.80  | 246.63  | 246.24  | 245.91  | 246.02  | 245.49  | 245.73  |
| 27   | 245.51  | 245.54  | 246.14  | 246.65  | 246.58  | 246.78  | 246.58  | 246.36  | 245.93  | 246.01  | 245.55  | 245.75  |
| 28   | 245.53  | 245.52  | 246.14  | 246.65  | 246.60  | 246.82  | 246.54  | 246.34  | 245.88  | 246.03  | 245.54  | 245.73  |
| 29   | 245.49  |         | 246.16  | 246.62  | 246.58  | 246.81  | 246.54  | 246.26  | 245.91  | 246.02  | 245.52  | 245.71  |
| 30   | 245.50  |         | 246.18  | 246.62  | 246.58  | 246.79  | 246.64  | 246.21  | 246.01  | 246.10  | 245.55  | 245.74  |
| 31   | 245.50  |         | 246.22  |         | 246.64  |         | 246.55  | 246.18  |         | 246.00  |         | 245.71  |
| MEAN | 245.26  | 245.49  | 245.78  | 246.52  | 246.52  | 246.69  | 246.66  | 246.42  | 245.93  | 246.11  | 245.70  | 245.63  |
| MAX. | 245.65  | 245.74  | 246.34  | 246.82  | 246.87  | 247.01  | 247.08  | 246.77  | 246.71  | 246.78  | 246.20  | 245.84  |
| MIN. | 2300/27 | 0300/06 | 1800/30 | 0800/23 | 0900/31 | 0800/24 | 2000/18 | 2200/15 | 2200/15 | 1700/04 | 2300/01 | 2400/12 |
|      | 244.79  | 245.20  | 245.06  | 246.05  | 246.05  | 246.38  | 246.35  | 246.00  | 245.58  | 245.68  | 245.23  | 245.28  |
|      | 0500/12 | 2100/20 | 2300/10 | 0100/02 | 2300/18 | 1600/01 | 2100/18 | 1600/23 | 0500/22 | 1500/04 | 2000/27 | 2100/02 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 246.06

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 2076: Olcott, New York on Lake Ontario

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST  
 Monthly mean elevation: 246.74 Jun  
 Daily mean elevation: 246.91 27 Jun  
 Instant/hourly Elevation: 247.08 1600/27 Jun

LOWEST  
 Monthly mean elevation: 245.29 Jan  
 Daily mean elevation: 245.02 9 Jan  
 Instant/hourly Elevation: 244.85 1800/9 Jan

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 245.53 | 24 Jan |
| 245.67 | 7 Feb  |
| 246.26 | 31 Mar |
| 246.73 | 28 Apr |
| 246.64 | 26 May |
| 246.91 | 27 Jun |
| 246.83 | 5 Jul  |
| 246.63 | 1 Aug  |
| 246.15 | 30 Sep |
| 246.20 | 9 Oct  |
| 246.01 | 5 Nov  |
| 245.77 | 27 Dec |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 245.02 | 9 Jan  |
| 245.41 | 13 Feb |
| 245.37 | 7 Mar  |
| 246.23 | 1 Apr  |
| 246.44 | 18 May |
| 246.55 | 8 Jun  |
| 246.58 | 29 Jul |
| 246.22 | 31 Aug |
| 245.82 | 19 Sep |
| 246.03 | 27 Oct |
| 245.45 | 24 Nov |
| 245.48 | 4 Dec  |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(ft.) | No. of days
above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 246.80 | | | | | | 11 | 4 | | | | | | 246.80 | 15 |
| 246.60 | | | | 16 | 6 | 17 | 24 | 3 | | | | | 246.60 | 81 |
| 246.40 | | | | 9 | 25 | 2 | 3 | 17 | | | | | 246.40 | 137 |
| 246.20 | | | 2 | 5 | | | | 11 | | | | | 246.20 | 155 |
| 246.00 | | | 8 | | | | | | 10 | 31 | 1 | | 246.00 | 205 |
| 245.80 | | | 5 | | | | | | 20 | | 9 | | 245.80 | 239 |
| 245.60 | | 4 | 5 | | | | | | | | 9 | 20 | 245.60 | 277 |
| 245.40 | 9 | 24 | 10 | | | | | | | | 11 | 11 | 245.40 | 342 |
| 245.20 | 12 | | 1 | | | | | | | | | | 245.20 | 355 |
| 245.00 | 10 | | | | | | | | | | | | 245.00 | 365 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 2076: Olcott, New York on Lake Ontario

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 245.10 | 245.64 | 245.46 | 246.23 | 246.63 | 246.62 | 246.81 | 246.63 | 246.14 | 246.15 | 245.98 | 245.54 |
| 2 | 245.20 | 245.51 | 245.51 | 246.26 | 246.57 | 246.61 | 246.75 | 246.62 | 246.12 | 246.14 | 245.97 | 245.59 |
| 3 | 245.25 | 245.59 | 245.52 | 246.33 | 246.60 | 246.61 | 246.75 | 246.61 | 246.10* | 246.15 | 245.97 | 245.51 |
| 4 | 245.28 | 245.63 | 245.50 | 246.35 | 246.61 | 246.58 | 246.82 | 246.59 | 246.02 | 246.19 | 245.95 | 245.48 |
| 5 | 245.17 | 245.58 | 245.49 | 246.44 | 246.57 | 246.62 | 246.83 | 246.60 | 245.99 | 246.18 | 246.01 | 245.57 |
| 6 | 245.24 | 245.66 | 245.54 | 246.41 | 246.60 | 246.61 | 246.81 | 246.55 | 246.03 | 246.18 | 245.91 | 245.54 |
| 7 | 245.27 | 245.67 | 245.37 | 246.44 | 246.52 | 246.61 | 246.77 | 246.55 | 245.98 | 246.19 | 245.93 | 245.59 |
| 8 | 245.17 | 245.57 | 245.50 | 246.40 | 246.56 | 246.55 | 246.76 | 246.55 | 245.93 | 246.17 | 245.93 | 245.76 |
| 9 | 245.02 | 245.55 | 245.58 | 246.42 | 246.54 | 246.61 | 246.72 | 246.56 | 245.90 | 246.20 | 245.80 | 245.71 |
| 10 | 245.14 | 245.52 | 245.57 | 246.47 | 246.49 | 246.64 | 246.72 | 246.58 | 245.89 | 246.17 | 245.84 | 245.56 |
| 11 | 245.21 | 245.56 | 245.50 | 246.50 | 246.51 | 246.62 | 246.70 | 246.54 | 245.96 | 246.10 | 245.82 | 245.69 |
| 12 | 245.13 | 245.50 | 245.68 | 246.46 | 246.50 | 246.72 | 246.72 | 246.55 | 245.96 | 246.12 | 245.78 | 245.62 |
| 13 | 245.21 | 245.41 | 245.72 | 246.48 | 246.48 | 246.68 | 246.72 | 246.49 | 245.92 | 246.15 | 245.72 | 245.65 |
| 14 | 245.22 | 245.48 | 245.69 | 246.53 | 246.47 | 246.73 | 246.68 | 246.44 | 245.90 | 246.13 | 245.65 | 245.57 |
| 15 | 245.16 | 245.47 | 245.70 | 246.63 | 246.46 | 246.77 | 246.72 | 246.50 | 245.92 | 246.17 | 245.65 | 245.63 |
| 16 | 245.20 | 245.48 | 245.75 | 246.65 | 246.46 | 246.76 | 246.75 | 246.52 | 245.87 | 246.17 | 245.65 | 245.66 |
| 17 | 245.17 | 245.54 | 245.81 | 246.65 | 246.45 | 246.81 | 246.74 | 246.50 | 245.89 | 246.18 | 245.63 | 245.68 |
| 18 | 245.21 | 245.51 | 245.87 | 246.66 | 246.44 | 246.80 | 246.76 | 246.47 | 245.87 | 246.11 | 245.65 | 245.66 |
| 19 | 245.25 | 245.49 | 245.86 | 246.70 | 246.47 | 246.83 | 246.75 | 246.41 | 245.82 | 246.08 | 245.60 | 245.63 |
| 20 | 245.23 | 245.53 | 245.96 | 246.71 | 246.51 | 246.85 | 246.70 | 246.40 | 245.87 | 246.10 | 245.62 | 245.66 |
| 21 | 245.36 | 245.54 | 245.98 | 246.71 | 246.55 | 246.87 | 246.69 | 246.38 | 245.85 | 246.10 | 245.54 | 245.65 |
| 22 | 245.37 | 245.60 | 246.02 | 246.72 | 246.54 | 246.85 | 246.68 | 246.41 | 245.87 | 246.08 | 245.58 | 245.56 |
| 23 | 245.45 | 245.52 | 246.04 | 246.69 | 246.62 | 246.84 | 246.67 | 246.36 | 245.90 | 246.08 | 245.57 | 245.58 |
| 24 | 245.53 | 245.56 | 246.07 | 246.71 | 246.59 | 246.86 | 246.67 | 246.38 | 245.98 | 246.09 | 245.45 | 245.73 |
| 25 | 245.52 | 245.56 | 246.13 | 246.72 | 246.60 | 246.86 | 246.68 | 246.35 | 246.02 | 246.07 | 245.52 | 245.67 |
| 26 | 245.48 | 245.54 | 246.11 | 246.71 | 246.64 | 246.90 | 246.68 | 246.34 | 246.02 | 246.05 | 245.54 | 245.72 |
| 27 | 245.49 | 245.51 | 246.14 | 246.69 | 246.60 | 246.91 | 246.61 | 246.37 | 246.04 | 246.03 | 245.52 | 245.77 |
| 28 | 245.44 | 245.48 | 246.19 | 246.73 | 246.58 | 246.88 | 246.59 | 246.32 | 245.92 | 246.05 | 245.52 | 245.72 |
| 29 | 245.52 | | 246.20 | 246.66 | 246.59 | 246.80 | 246.58 | 246.27 | 246.02 | 246.06 | 245.52 | 245.75 |
| 30 | 245.50 | | 246.22 | 246.69 | 246.61 | 246.78 | 246.62 | 246.26 | 246.15 | 246.07 | 245.56 | 245.74 |
| 31 | 245.49 | | 246.26 | | 246.62 | | 246.59 | 246.22 | | 246.07 | | 245.71 |
| MEAN | 245.29 | 245.54 | 245.80 | 246.56 | 246.55 | 246.74 | 246.71 | 246.46 | 245.96 | 246.12 | 245.71 | 245.64 |
| MAX. | 245.72 | 245.87 | 246.39 | 246.93 | 246.83 | 247.08 | 247.07 | 246.81 | 246.36 | 246.48 | 246.13 | 245.94 |
| MIN. | 0400/27 | 1800/01 | 2300/31 | 0200/21 | 2400/06 | 1600/27 | 2100/04 | 1800/01 | 2100/30 | 1700/04 | 0700/05 | 0100/09 |
| | 1800/09 | 1700/13 | 1000/11 | 2300/01 | 1900/17 | 0300/02 | 2000/31 | 2000/23 | 2100/19 | 0500/06 | 1500/24 | 2300/03 |

* Indicates less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL MEAN: 246.09

ANNUAL SUMMARY OF LEVELS, 1986
 Station 3007: Ashland Avenue, Niagara Falls, New York on Niagara River

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

HIGHEST
 Monthly mean elevation: 326.78 Jun
 Daily mean elevation: 330.03 4 Dec
 Instant/hourly Elevation: 336.18 2400/5 Jan

LOWEST
 Monthly mean elevation: 320.69 Feb
 Daily mean elevation: 316.68 1 Dec
 Instant/hourly Elevation: 314.17 0500/7 Feb

HIGHEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 329.23 | 6 Jan |
| 324.50 | 23 Feb |
| 326.83 | 11 Mar |
| 328.03 | 22 Apr |
| 327.94 | 21 May |
| 328.32 | 13 Jun |
| 327.37 | 18 Jul |
| 327.01 | 4 Aug |
| 325.97 | 12 Sep |
| 328.05 | 15 Oct |
| 326.48 | 9 Nov |
| 330.03 | 4 Dec |

LOWEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 317.69 | 15 Jan |
| 317.43 | 7 Feb |
| 322.07 | 5 Mar |
| 323.09 | 15 Apr |
| 325.57 | 13 May |
| 325.81 | 2 Jun |
| 325.56 | 12 Jul |
| 324.16 | 31 Aug |
| 322.87 | 21 Sep |
| 322.93 | 25 Oct |
| 319.73 | 30 Nov |
| 316.68 | 1 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(ft.) | No. of days<br>above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 330.00         |     |     |     |     |     |     |     |     |     |     |     | 1   | 330.00         | 1                          |
| 329.50         |     |     |     |     |     |     |     |     |     |     |     |     | 329.50         | 1                          |
| 329.00         | 1   |     |     |     |     |     |     |     |     |     |     |     | 329.00         | 2                          |
| 328.50         |     |     |     |     |     |     |     |     |     |     |     |     | 328.50         | 2                          |
| 328.00         |     |     |     | 1   |     | 1   |     |     |     | 1   |     |     | 328.00         | 5                          |
| 327.50         |     |     |     |     | 2   |     |     |     |     |     |     |     | 327.50         | 7                          |
| 327.00         |     |     |     | 3   | 4   | 9   | 2   | 1   |     | 2   |     |     | 327.00         | 28                         |
| 326.50         |     |     | 2   | 3   | 6   | 11  | 20  | 6   |     | 2   |     | 1   | 326.50         | 79                         |
| 326.00         |     |     | 3   | 4   | 12  | 7   | 5   | 3   |     | 3   | 1   | 2   | 326.00         | 119                        |
| 325.50         | 1   |     | 4   | 2   | 7   | 2   | 4   | 5   | 3   |     |     | 3   | 325.50         | 150                        |
| 325.00         |     |     | 4   | 8   |     |     |     | 6   | 3   | 5   |     | 5   | 325.00         | 181                        |
| 324.50         |     |     | 4   | 4   |     |     |     | 6   | 4   | 11  |     | 2   | 324.50         | 212                        |
| 324.00         |     | 1   | 2   | 2   |     |     |     | 4   | 8   | 3   | 1   | 6   | 324.00         | 239                        |
| 323.50         |     |     | 3   | 2   |     |     |     |     | 3   | 2   | 5   | 3   | 323.50         | 257                        |
| 323.00         | 1   | 1   | 2   | 1   |     |     |     |     | 3   | 1   | 8   | 1   | 323.00         | 275                        |
| 322.50         | 2   | 2   | 2   |     |     |     |     |     | 6   | 1   | 2   |     | 322.50         | 290                        |
| 322.00         | 2   | 2   | 5   |     |     |     |     |     |     |     | 4   | 1   | 322.00         | 304                        |
| 321.50         |     |     |     |     |     |     |     |     |     |     | 2   | 2   | 321.50         | 308                        |
| 321.00         | 2   | 5   |     |     |     |     |     |     |     |     | 3   |     | 321.00         | 318                        |
| 320.50         | 4   | 5   |     |     |     |     |     |     |     |     |     | 2   | 320.50         | 329                        |
| 320.00         | 5   | 2   |     |     |     |     |     |     |     |     | 2   |     | 320.00         | 338                        |
| 319.50         | 4   | 4   |     |     |     |     |     |     |     |     | 2   | 1   | 319.50         | 349                        |
| 319.00         | 4   | 2   |     |     |     |     |     |     |     |     |     |     | 319.00         | 355                        |
| 318.50         | 1   |     |     |     |     |     |     |     |     |     |     |     | 318.50         | 356                        |
| 318.00         | 2   | 2   |     |     |     |     |     |     |     |     |     |     | 318.00         | 360                        |
| 317.50         | 2   | 1   |     |     |     |     |     |     |     |     |     |     | 317.50         | 363                        |
| 317.00         |     | 1   |     |     |     |     |     |     |     |     |     |     | 317.00         | 364                        |
| 316.50         |     |     |     |     |     |     |     |     |     |     |     | 1   | 316.50         | 365                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 3007: Ashland Avenue, Niagara Falls, New York on Niagara River

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 323.32  | 318.02  | 322.23  | 325.82  | 327.13  | 326.72  | 326.58  | 326.74  | 324.01  | 324.54  | 323.85  | 316.68  |
| 2    | 321.24  | 321.12  | 322.46  | 325.38  | 327.52  | 325.81  | 326.87  | 326.72  | 324.18  | 324.51  | 323.96  | 319.93  |
| 3    | 320.36  | 319.65  | 322.13  | 324.84  | 327.20  | 326.09  | 326.72  | 326.72  | 324.09  | 325.24  | 323.60  | 326.40  |
| 4    | 319.62  | 319.27  | 322.46  | 324.57  | 326.71  | 326.19  | 326.88  | 327.01  | 324.40  | 324.82  | 322.94  | 330.03  |
| 5    | 325.54  | 320.96  | 322.07  | 323.64  | 326.90  | 326.14  | 326.52  | 326.59  | 325.27  | 326.69  | 322.25  | 324.68  |
| 6    | 329.23  | 318.37  | 323.72  | 324.73  | 326.51  | 325.88  | 325.99  | 326.12  | 325.06  | 327.17  | 322.79  | 325.28  |
| 7    | 320.80  | 317.43  | 323.61  | 326.02  | 327.24  | 326.11  | 326.98  | 326.53  | 324.17  | 326.45  | 321.94  | 324.14  |
| 8    | 318.52  | 321.36  | 322.95  | 325.41  | 326.62  | 326.60  | 326.64  | 325.93  | 324.83  | 326.25  | 322.42  | 320.97  |
| 9    | 320.81  | 321.40  | 322.54  | 325.13  | 325.91  | 326.20  | 326.53  | 326.23  | 324.99  | 325.17  | 326.48  | 321.99  |
| 10   | 320.27  | 321.02  | 323.28  | 325.18  | 325.84  | 326.02  | 326.18  | 325.60  | 324.30  | 323.41  | 323.67  | 326.86  |
| 11   | 318.36  | 319.93  | 326.83  | 325.12  | 326.12  | 326.89  | 325.97  | 326.06  | 325.67  | 327.23  | 322.47  | 324.01  |
| 12   | 322.81  | 320.86  | 323.49  | 324.79  | 325.66  | 326.86  | 325.56  | 325.54  | 325.97  | 324.60  | 323.29  | 325.57  |
| 13   | 320.50  | 319.34  | 324.41  | 323.92  | 325.57  | 328.32  | 326.53  | 325.25  | 324.63  | 324.92  | 324.06  | 323.43  |
| 14   | 318.34  | 317.92  | 325.52  | 324.32  | 325.85  | 326.74  | 327.25  | 325.24  | 324.19  | 326.85  | 323.07  | 325.35  |
| 15   | 317.69  | 319.85  | 326.10  | 323.09  | 326.29  | 326.49  | 326.72  | 325.54  | 324.13  | 328.05  | 323.70  | 324.01  |
| 16   | 317.76  | 320.46  | 325.88  | 324.50  | 326.24  | 327.50  | 326.65  | 325.54  | 323.07  | 326.06  | 323.15  | 322.04  |
| 17   | 319.28  | 319.91  | 325.09  | 325.39  | 326.07  | 326.99  | 326.62  | 324.66  | 322.97  | 325.11  | 323.20  | 321.72  |
| 18   | 319.86  | 320.43  | 324.20  | 325.43  | 325.67  | 326.58  | 327.37  | 324.85  | 323.27  | 324.83  | 320.19  | 323.94  |
| 19   | 319.11  | 320.85  | 326.69  | 326.10  | 326.20  | 327.08  | 326.52  | 324.33  | 322.97  | 324.84  | 319.93  | 326.40  |
| 20   | 322.23  | 321.50  | 326.50  | 325.55  | 326.21  | 327.31  | 326.88  | 324.21  | 322.92  | 325.29  | 320.26  | 324.30  |
| 21   | 320.69  | 322.72  | 326.13  | 327.33  | 327.94  | 326.76  | 326.37  | 324.82  | 322.87  | 325.03  | 322.01  | 324.10  |
| 22   | 322.26  | 320.91  | 325.64  | 328.03  | 326.26  | 326.84  | 326.75  | 324.22  | 323.13  | 324.83  | 321.03  | 325.12  |
| 23   | 320.27  | 324.50  | 325.68  | 327.17  | 326.91  | 327.37  | 326.40  | 324.87  | 324.60  | 324.95  | 321.30  | 325.78  |
| 24   | 319.20  | 322.11  | 324.66  | 326.76  | 326.40  | 327.25  | 326.62  | 325.17  | 323.96  | 323.65  | 323.14  | 320.98  |
| 25   | 319.88  | 322.71  | 324.88  | 326.66  | 326.27  | 326.80  | 326.55  | 325.33  | 323.84  | 322.93  | 321.92  | 325.36  |
| 26   | 320.01  | 322.21  | 324.99  | 326.67  | 326.23  | 327.46  | 326.96  | 324.98  | 323.92  | 323.58  | 321.20  | 325.94  |
| 27   | 321.08  | 320.95  | 325.42  | 325.49  | 325.99  | 327.14  | 326.11  | 326.67  | 322.98  | 324.50  | 323.45  | 324.94  |
| 28   | 322.88  | 323.46  | 324.59  | 326.15  | 326.40  | 327.37  | 326.24  | 324.77  | 322.99  | 324.58  | 323.42  | 325.48  |
| 29   | 319.70  |         | 325.23  | 327.15  | 326.98  | 327.02  | 326.81  | 325.18  | 325.15  | 324.89  | 323.35  | 324.50  |
| 30   | 319.25  |         | 325.41  | 326.15  | 327.06  | 326.75  | 326.52  | 325.01  | 325.77  | 324.37  | 319.73  | 323.73  |
| 31   | 320.57  |         | 323.78  |         | 326.41  |         | 325.88  | 324.16  |         | 324.23  |         | 323.59  |
| MEAN | 320.69  | 320.69  | 324.47  | 325.55  | 326.46  | 326.78  | 326.55  | 325.50  | 324.14  | 325.15  | 322.59  | 324.10  |
| MAX. | 336.18  | 326.83  | 332.93  | 331.27  | 331.13  | 330.24  | 330.74  | 330.20  | 330.12  | 331.67  | 332.48  | 333.90  |
|      | 2400/05 | 0600/23 | 0900/11 | 1400/22 | 0900/02 | 1200/26 | 1600/18 | 1600/05 | 1200/12 | 1400/11 | 1800/09 | 2100/03 |
| MIN. | 316.53  | 314.17  | 320.44  | 315.12  | 320.68  | 321.29  | 319.73  | 318.19  | 317.29  | 318.33  | 318.68  | 314.33  |
|      | 0600/16 | 0500/07 | 0700/06 | 0300/15 | 2300/12 | 2300/05 | 2300/11 | 2400/31 | 2200/21 | 0300/25 | 2400/30 | 1000/01 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 324.39

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 3009: American Falls, Niagara Falls, New York on Niagara River

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST  
 Monthly mean elevation: 559.00 Jun  
 Daily mean elevation: 559.72 10 Dec  
 Instant/hourly Elevation: 559.87 1400/9 Nov

LOWEST  
 Monthly mean elevation: 558.16 Apr  
 Daily mean elevation: 557.26 5 Apr  
 Instant/hourly Elevation: 556.28 2200/8 Apr

HIGHEST DAILY MEAN  
 FOR EACH MONTH

-----  
 Elev. Date  
 558.90 9 Jan  
 558.45 21 Feb  
 558.89 11 Mar  
 558.86 22 Apr  
 559.04 28 May  
 559.46 19 Jun  
 559.07 18 Jul  
 558.92 1 Aug  
 558.73 11 Sep  
 559.47 14 Oct  
 559.47 15 Nov  
 559.72 10 Dec

LOWEST DAILY MEAN  
 FOR EACH MONTH

-----  
 Elev. Date  
 557.60 23 Jan  
 557.86 6 Feb  
 557.40 20 Mar  
 557.26 5 Apr  
 558.40 13 May  
 558.47 6 Jun  
 558.52 6 Jul  
 558.25 19 Aug  
 558.04 16 Sep  
 558.24 10 Oct  
 558.52 18 Nov  
 557.90 1 Dec

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(ft.) | No. of days
above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 559.60 | | | | | | | | | | | | 4 | 559.60 | 4 |
| 559.40 | | | | | | 3 | | | | 1 | 1 | 4 | 559.40 | 13 |
| 559.20 | | | | | | 6 | | | | 1 | 3 | 2 | 559.20 | 25 |
| 559.00 | | | | | 2 | 5 | 2 | | | 2 | 1 | 3 | 559.00 | 40 |
| 558.80 | 3 | | 2 | 1 | 10 | 5 | 9 | 3 | | 1 | 9 | 5 | 558.80 | 88 |
| 558.60 | 3 | | 1 | 3 | 17 | 9 | 17 | 6 | 6 | 9 | 11 | 9 | 558.60 | 179 |
| 558.40 | 4 | 3 | 14 | 7 | 1 | 2 | 3 | 16 | 13 | 12 | 5 | 2 | 558.40 | 261 |
| 558.20 | 5 | 11 | 4 | 2 | 1 | | | 6 | 8 | 5 | | 1 | 558.20 | 304 |
| 558.00 | 6 | 12 | 4 | 6 | | | | | 3 | | | | 558.00 | 335 |
| 557.80 | 2 | 2 | 4 | 5 | | | | | | | | 1 | 557.80 | 349 |
| 557.60 | 7 | | | 3 | | | | | | | | | 557.60 | 359 |
| 557.40 | 1 | | 1 | 2 | | | | | | | | | 557.40 | 363 |
| 557.20 | | | 1 | 1 | | | | | | | | | 557.20 | 365 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 3009: American Falls, Niagara Falls, New York on Niagara River

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 557.70 | 558.43 | 558.27 | 557.86 | 558.90 | 559.11 | 558.73 | 558.92 | 558.41 | 558.31 | 558.68 | 557.90 |
| 2 | 557.70 | 558.09 | 558.13 | 557.56 | 558.90 | 558.55 | 558.85 | 558.83 | 558.41 | 558.52 | 558.66 | 558.36 |
| 3 | 558.33 | 558.14 | 558.28 | 557.69 | 558.91 | 558.70 | 559.05 | 558.71 | 558.66 | 558.67 | 559.01 | 559.42 |
| 4 | 558.43 | 558.08 | 558.42 | 557.95 | 558.70 | 558.79 | 558.66 | 558.64 | 558.72 | 558.45 | 558.60 | 559.68 |
| 5 | 558.68 | 558.07 | 558.53 | 557.26 | 558.78 | 558.80 | 558.78 | 558.65 | 558.63 | 558.68 | 558.82 | 559.54 |
| 6 | 558.86 | 557.86 | 558.54 | 558.12 | 558.77 | 558.47 | 558.52 | 558.61 | 558.41 | 559.09 | 558.71 | 559.57 |
| 7 | 558.82 | 557.98 | 558.14 | 557.93 | 558.73 | 558.79 | 558.98 | 558.64 | 558.40 | 558.65 | 558.72 | 559.12 |
| 8 | 558.74 | 558.35 | 557.97 | 557.43 | 558.75 | 558.76 | 558.62 | 558.45 | 558.45 | 558.70 | 558.71 | 558.61 |
| 9 | 558.90 | 558.19 | 557.93 | 557.95 | 558.66 | 558.90 | 558.66 | 558.59 | 558.34 | 558.30 | 559.26 | 558.91 |
| 10 | 558.52 | 558.11 | 558.23 | 558.38 | 558.63 | 558.77 | 558.63 | 558.40 | 558.34 | 558.24 | 558.65 | 559.72 |
| 11 | 558.11 | 558.17 | 558.89 | 558.14 | 558.66 | 558.77 | 558.55 | 558.89 | 558.73 | 558.64 | 558.68 | 559.61 |
| 12 | 558.13 | 558.15 | 557.98 | 558.02 | 558.52 | 558.93 | 558.73 | 558.50 | 558.67 | 558.58 | 558.89 | 559.65 |
| 13 | 558.13 | 558.22 | 558.37 | 557.94 | 558.40 | 558.90 | 558.95 | 558.45 | 558.44 | 558.59 | 558.98 | 559.02 |
| 14 | 558.20 | 558.22 | 558.43 | 558.02 | 558.69 | 558.67 | 558.97 | 558.58 | 558.18 | 559.47 | 558.99 | 559.24 |
| 15 | 558.18 | 558.15 | 558.53 | 557.74 | 558.67 | 558.70 | 558.82 | 558.68 | 558.14 | 559.23 | 559.47 | 558.86 |
| 16 | 558.27 | 558.20 | 558.46 | 558.22 | 559.01 | 559.18 | 558.67 | 558.52 | 558.04 | 558.56 | 558.68 | 559.00 |
| 17 | 558.26 | 558.04 | 558.58 | 558.48 | 558.80 | 558.87 | 558.74 | 558.58 | 558.39 | 558.41 | 558.70 | 558.96 |
| 18 | 558.24 | 558.17 | 558.50 | 558.12 | 558.74 | 559.29 | 559.07 | 558.35 | 558.49 | 558.51 | 558.52 | 559.16 |
| 19 | 558.19 | 558.22 | 558.84 | 558.01 | 558.84 | 559.46 | 558.91 | 558.25 | 558.40 | 558.62 | 558.57 | 558.57 |
| 20 | 557.83 | 558.44 | 557.40 | 557.67 | 558.99 | 559.24 | 559.00 | 558.36 | 558.43 | 558.56 | 558.53 | 558.69 |
| 21 | 557.90 | 558.45 | 557.59 | 558.56 | 558.88 | 559.26 | 558.64 | 558.49 | 558.39 | 558.57 | 558.82 | 558.62 |
| 22 | 557.75 | 558.32 | 557.91 | 558.86 | 558.73 | 559.15 | 558.67 | 558.34 | 558.34 | 558.49 | 558.85 | 558.91 |
| 23 | 557.60 | 558.24 | 558.13 | 558.60 | 558.92 | 559.41 | 558.64 | 558.52 | 558.46 | 558.61 | 558.86 | 559.52 |
| 24 | 557.68 | 558.37 | 558.55 | 558.55 | 558.77 | 559.41 | 558.64 | 558.52 | 558.44 | 558.34 | 559.21 | 558.73 |
| 25 | 557.74 | 558.24 | 558.52 | 558.58 | 558.74 | 559.34 | 558.91 | 558.43 | 558.35 | 558.35 | 558.83 | 559.21 |
| 26 | 557.63 | 558.27 | 558.48 | 558.58 | 558.67 | 559.02 | 558.81 | 558.50 | 558.56 | 558.57 | 558.77 | 558.65 |
| 27 | 557.71 | 558.28 | 558.06 | 558.48 | 558.90 | 559.32 | 558.77 | 558.47 | 558.44 | 558.79 | 558.83 | 558.58 |
| 28 | 558.43 | 558.36 | 558.41 | 558.67 | 559.04 | 559.24 | 558.57 | 558.50 | 558.56 | 559.00 | 559.27 | 558.67 |
| 29 | 558.57 | | 558.47 | 558.75 | 558.82 | 559.19 | 558.75 | 558.53 | 558.60 | 559.09 | 558.75 | 558.61 |
| 30 | 558.63 | | 558.56 | 558.68 | 558.75 | 558.98 | 558.68 | 558.43 | 558.64 | 558.75 | 558.57 | 558.62 |
| 31 | 558.39 | | 558.66 | | 558.82 | | 558.77 | 558.40 | | 558.53 | | 558.72 |
| MEAN | 558.20 | 558.21 | 558.31 | 558.16 | 558.78 | 559.00 | 558.77 | 558.54 | 558.45 | 558.64 | 558.82 | 558.98 |
| MAX. | 559.26 | 558.66 | 559.71 | 559.49 | 559.45 | 559.71 | 559.82 | 559.54 | 559.53 | 559.82 | 559.87 | 559.82 |
| MIN. | 0800/09 | 0800/01 | 1600/19 | 1000/22 | 0600/24 | 0600/25 | 0600/26 | 0600/11 | 0700/30 | 0600/15 | 1400/09 | 0700/06 |
| | 1100/02 | 2300/06 | 1000/20 | 2200/08 | 2100/12 | 2000/06 | 2100/11 | 2100/19 | 1800/16 | 1900/01 | 2300/18 | 0600/01 |

* Indicates Less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL MEAN: 558.57

ANNUAL SUMMARY OF LEVELS, 1986
 Station 3012: Niagara Intake, Niagara Falls, New York on Niagara River

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

HIGHEST
 Monthly mean elevation: 562.06 Jun
 Daily mean elevation: 563.21 6 Jan
 Instant/hourly Elevation: 564.21 1700/6 Jan

LOWEST
 Monthly mean elevation: 561.34 Sep
 Daily mean elevation: 560.29 8 Jan
 Instant/hourly Elevation: 559.91 1000/8 Jan

HIGHEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 563.21 | 6 Jan |
| 561.80 | 28 Feb |
| 562.54 | 11 Mar |
| 562.65 | 22 Apr |
| 562.10 | 28 May |
| 562.64 | 19 Jun |
| 562.18 | 18 Jul |
| 561.94 | 11 Aug |
| 561.72 | 11 Sep |
| 562.56 | 14 Oct |
| 562.41 | 15 Nov |
| 563.00 | 4 Dec |

LOWEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 560.29 | 8 Jan |
| 560.86 | 7 Feb |
| 561.28 | 9 Mar |
| 561.10 | 12 Apr |
| 561.33 | 13 May |
| 561.49 | 6 Jun |
| 561.28 | 8 Jul |
| 561.16 | 19 Aug |
| 560.90 | 16 Sep |
| 561.07 | 10 Oct |
| 561.17 | 18 Nov |
| 560.35 | 1 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(ft.) | No. of days<br>above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 563.20         | 1   |     |     |     |     |     |     |     |     |     |     |     | 563.20         | 1                          |
| 563.00         |     |     |     |     |     |     |     |     |     |     |     |     | 563.00         | 1                          |
| 562.80         |     |     |     |     |     |     |     |     |     |     |     | 2   | 562.80         | 3                          |
| 562.60         | 1   |     |     | 1   |     | 1   |     |     |     |     |     | 3   | 562.60         | 9                          |
| 562.40         | 1   |     | 1   | 1   |     | 3   |     |     |     | 1   | 1   | 3   | 562.40         | 20                         |
| 562.20         |     |     |     |     |     | 7   |     |     |     | 1   | 1   | 2   | 562.20         | 31                         |
| 562.00         | 2   |     | 1   | 1   | 5   | 4   | 4   |     |     | 2   | 2   | 2   | 562.00         | 54                         |
| 561.80         | 5   |     |     | 2   | 11  | 9   | 7   | 3   |     | 1   | 3   | 3   | 561.80         | 98                         |
| 561.60         | 6   | 12  | 4   | 8   | 13  | 5   | 16  | 7   | 4   | 5   | 5   | 3   | 561.60         | 186                        |
| 561.40         | 6   | 12  | 22  | 5   | 1   | 1   | 3   | 14  | 4   | 11  | 13  | 10  | 561.40         | 288                        |
| 561.20         | 5   | 2   | 1   | 6   | 1   |     | 1   | 6   | 18  | 6   | 3   | 1   | 561.20         | 338                        |
| 561.00         | 1   |     |     | 6   |     |     |     | 1   | 3   | 4   | 2   | 1   | 561.00         | 356                        |
| 560.80         | 1   | 2   |     |     |     |     |     |     | 1   |     |     |     | 560.80         | 360                        |
| 560.60         | 1   |     |     |     |     |     |     |     |     |     |     |     | 560.60         | 361                        |
| 560.40         |     |     |     |     |     |     |     |     |     |     |     |     | 560.40         | 361                        |
| 560.20         | 1   |     |     |     |     |     |     |     |     |     |     | 1   | 560.20         | 363                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 3012: Niagara Intake, Niagara Falls, New York on Niagara River

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 561.84  | 561.73  | 561.49  | 561.34* | 562.02  | 562.17  | 561.76  | 561.93  | 561.29  | 561.20  | 561.52  | 560.35  |
| 2    | 561.55  | 561.49  | 561.52  | 561.32  | 562.01  | 561.64* | 561.90  | 561.86  | 561.32  | 561.41  | 561.49  | 561.02  |
| 3    | 561.55  | 561.38  | 561.49  | 561.15  | 561.98  | 561.80  | 562.11  | 561.75  | 561.55  | 561.60  | 561.87  | 562.56  |
| 4    | 561.70  | 561.30  | 561.50  | 561.33  | 561.73  | 561.85  | 561.66  | 561.72  | 561.63  | 561.34  | 561.37  | 563.00  |
| 5    | 562.42  | 561.49  | 561.55  | 561.17  | 561.85  | 561.83  | 561.75  | 561.69  | 561.61  | 561.68  | 561.58  | 562.57  |
| 6    | 563.21  | 560.93  | 561.67  | 561.65  | 561.80  | 561.49  | 561.41  | 561.63  | 561.37  | 562.13  | 561.47  | 562.62  |
| 7    | 560.90  | 560.86  | 561.73  | 561.40  | 561.78  | 561.82  | 561.90* | 561.68  | 561.31  | 561.61  | 561.45  | 562.03  |
| 8    | 560.29  | 561.61  | 561.47  | 561.17  | 561.76  | 561.83  | 561.28* | 561.49  | 561.40  | 561.67  | 561.47  | 561.25  |
| 9    | 561.65  | 561.67  | 561.28  | 561.34  | 561.64  | 561.91  | 561.64  | 561.63  | 561.28  | 561.22  | 562.34  | 561.66  |
| 10   | 561.27  | 561.58  | 561.48  | 561.50  | 561.61  | 561.77  | 561.69  | 561.40  | 561.25  | 561.07  | 561.48  | 562.86  |
| 11   | 560.67  | 561.53  | 562.54  | 561.59  | 561.65  | 561.81  | 561.57  | 561.94  | 561.72  | 561.45  | 561.45  | 562.62  |
| 12   | 561.81  | 561.52  | 561.50  | 561.10  | 561.46  | 561.97  | 561.70  | 561.48  | 561.66  | 561.47  | 561.73  | 562.79  |
| 13   | 561.60  | 561.63  | 561.44  | 561.13  | 561.33  | 562.02  | 561.96  | 561.45* | 561.35  | 561.48  | 561.90  | 561.93  |
| 14   | 561.34  | 561.61  | 561.48  | 561.20  | 561.66  | 561.70  | 562.02  | 561.56  | 561.09  | 562.56  | 561.83  | 562.29  |
| 15   | 561.13  | 561.63  | 561.56  | 561.26  | 561.67  | 561.73  | 561.84  | 561.66  | 561.03  | 562.31  | 562.41  | 561.78  |
| 16   | 561.77* | 561.66  | 561.48  | 561.97  | 562.08  | 562.36  | 561.68  | 561.46  | 560.90  | 561.54  | 561.48  | 561.86  |
| 17   | 561.94  | 561.49  | 561.54  | 561.62  | 561.83  | 561.98  | 561.78  | 561.50  | 561.23  | 561.33  | 561.52  | 561.79  |
| 18   | 561.85  | 561.52  | 561.41  | 561.98  | 561.78  | 562.43  | 562.18  | 561.29  | 561.34  | 561.42  | 561.17  | 562.14  |
| 19   | 561.68  | 561.53  | 562.20  | 562.01  | 561.88  | 562.64  | 561.96  | 561.16  | 561.23  | 561.53  | 561.24  | 561.59  |
| 20   | 561.37  | 561.49  | 561.64  | 561.75  | 562.03  | 562.35  | 562.08  | 561.25  | 561.25  | 561.49  | 561.19  | 561.59  |
| 21   | 561.34  | 561.62  | 561.53  | 562.55  | 562.00  | 562.34  | 561.67  | 561.41  | 561.22  | 561.47  | 561.61  | 561.51  |
| 22   | 561.55  | 561.48  | 561.63  | 562.65  | 561.77  | 562.19  | 561.72  | 561.23  | 561.18  | 561.39  | 561.58  | 561.92  |
| 23   | 561.50  | 561.63  | 561.50  | 561.66  | 562.00  | 562.48  | 561.65  | 561.46  | 561.38  | 561.50  | 561.63  | 562.59  |
| 24   | 561.40  | 561.66  | 561.53  | 561.57  | 561.82  | 562.43  | 561.64  | 561.48  | 561.32  | 561.16  | 562.12  | 561.44  |
| 25   | 561.65  | 561.61  | 561.45  | 561.61  | 561.77  | 562.31  | 561.91  | 561.41  | 561.21  | 561.14  | 561.61  | 562.21  |
| 26   | 561.52  | 561.60  | 561.57  | 561.60  | 561.69  | 561.99  | 561.84  | 561.45  | 561.42  | 561.40  | 561.52  | 561.58  |
| 27   | 561.71  | 561.45  | 561.46  | 561.42  | 561.93  | 562.39  | 561.75  | 561.50  | 561.23  | 561.68  | 561.68  | 561.46  |
| 28   | 562.66  | 561.80* | 561.55  | 561.67  | 562.10  | 562.37  | 561.55  | 561.44  | 561.37  | 561.91  | 562.20  | 561.60  |
| 29   | 562.17  |         | 561.53* | 561.80  | 561.90  | 562.29  | 561.78  | 561.48  | 561.51  | 562.04  | 561.58  | 561.48  |
| 30   | 562.17  |         | /       | 561.69  | 561.81  | 562.02  | 561.68  | 561.37  | 561.59  | 561.63  | 561.22  | 561.47  |
| 31   | 561.82  |         | /       |         | 561.83  |         | 561.72  | 561.29  |         | 561.38  |         | 561.56  |
| MEAN | 561.65  | 561.52  | 561.58  | 561.57  | 561.81  | 562.06  | 561.77  | 561.52  | 561.34  | 561.56  | 561.62  | 561.91  |
| MAX. | 564.21  | 561.97  | 563.18  | 563.43  | 562.57  | 562.87  | 562.88  | 562.57  | 562.56  | 563.04  | 563.13  | 563.18  |
|      | 1700/06 | 0500/23 | 0800/11 | 0300/22 | 0600/24 | 0700/19 | 0600/26 | 0600/11 | 0700/30 | 2400/14 | 1700/09 | 2000/03 |
| MIN. | 559.91  | 560.04  | 561.17  | 560.15  | 560.57  | 560.88  | 560.71  | 560.50  | 560.40  | 560.28  | 560.47  | 560.01  |
|      | 1000/08 | 0200/07 | 0200/10 | 2200/12 | 2100/13 | 2000/15 | 2100/06 | 2100/22 | 1900/21 | 1900/10 | 2200/18 | 0600/01 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 561.66

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 3020: Buffalo Harbor, Buffalo, New York on Lake Erie

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST  
 Monthly mean elevation: 573.59 Jul  
 Daily mean elevation: 574.91 4 Dec  
 Instant/hourly Elevation: 576.41 0100/4 Dec

LOWEST  
 Monthly mean elevation: 572.50 Feb  
 Daily mean elevation: 571.24 6 Feb  
 Instant/hourly Elevation: 569.55 2400/6 Feb

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 573.83 | 5 Jan  |
| 573.04 | 23 Feb |
| 573.65 | 19 Mar |
| 573.72 | 21 Apr |
| 573.66 | 1 May  |
| 573.94 | 24 Jun |
| 573.94 | 14 Jul |
| 573.74 | 9 Aug  |
| 573.49 | 12 Sep |
| 574.51 | 14 Oct |
| 574.43 | 9 Nov  |
| 574.91 | 4 Dec  |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 572.10 | 24 Jan |
| 571.24 | 6 Feb  |
| 572.43 | 12 Mar |
| 572.74 | 4 Apr  |
| 572.90 | 12 May |
| 573.06 | 6 Jun  |
| 573.25 | 11 Jul |
| 572.84 | 22 Aug |
| 572.46 | 17 Sep |
| 572.70 | 10 Oct |
| 572.12 | 18 Nov |
| 571.79 | 1 Dec  |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(ft.) | No. of days
above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 574.80 | | | | | | | | | | | | 1 | 574.80 | 1 |
| 574.60 | | | | | | | | | | | | | 574.60 | 1 |
| 574.40 | | | | | | | | | | 1 | 1 | 1 | 574.40 | 4 |
| 574.20 | | | | | | | | | | | | 1 | 574.20 | 5 |
| 574.00 | | | | | | | | | | | | | 574.00 | 5 |
| 573.80 | 1 | | | | | 6 | 2 | | | 1 | | 2 | 573.80 | 17 |
| 573.60 | | | 1 | 1 | 2 | 12 | 12 | 4 | | 4 | | 3 | 573.60 | 56 |
| 573.40 | | | 1 | 3 | 7 | 4 | 15 | 9 | 2 | | 5 | 6 | 573.40 | 111 |
| 573.20 | 2 | | 7 | 11 | 14 | 4 | 2 | 8 | 2 | 9 | 4 | 5 | 573.20 | 179 |
| 573.00 | 1 | 1 | 10 | 11 | 5 | 4 | | 6 | 6 | 7 | 8 | 7 | 573.00 | 245 |
| 572.80 | 4 | 1 | 3 | 1 | 3 | | | 4 | 9 | 4 | 7 | 1 | 572.80 | 282 |
| 572.60 | 3 | 10 | 8 | 3 | | | | | 7 | | 2 | 1 | 572.60 | 316 |
| 572.40 | 7 | 10 | 1 | | | | | | 4 | | | | 572.40 | 341 |
| 572.20 | 9 | 2 | | | | | | | | | | 2 | 572.20 | 354 |
| 572.00 | 4 | 2 | | | | | | | | | | | 572.00 | 362 |
| 571.80 | | 1 | | | | | | | | | 2 | | 571.80 | 363 |
| 571.60 | | | | | | | | | | | | | 571.60 | 364 |
| 571.40 | | | | | | | | | | | | 1 | 571.40 | 364 |
| 571.20 | | 1 | | | | | | | | | | | 571.20 | 365 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 3020: Buffalo Harbor, Buffalo, New York on Lake Erie

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 572.95 | 572.22 | 572.80 | 573.20 | 573.66 | 573.45 | 573.40 | 573.67 | 572.91 | 572.87 | 573.32 | 571.79 |
| 2 | 572.34 | 572.48 | 572.71 | 573.06 | 573.62 | 573.10 | 573.66 | 573.59 | 572.82 | 573.05 | 573.16 | 572.54 |
| 3 | 572.41 | 572.20 | 572.68 | 572.88 | 573.57 | 573.14 | 573.61 | 573.58 | 572.81 | 573.41 | 573.54 | 574.43 |
| 4 | 572.13 | 572.07 | 572.76 | 572.74 | 573.32 | 573.34 | 573.68 | 573.48 | 573.03 | 573.09 | 572.97 | 574.91 |
| 5 | 573.83 | 572.47 | 572.68 | 572.78 | 573.42 | 573.16 | 573.67 | 573.37 | 573.27 | 573.93 | 572.83 | 573.50 |
| 6 | 573.25 | 571.24 | 573.13 | 573.16 | 573.38 | 573.06 | 573.59 | 573.25 | 572.95 | 573.71 | 573.11 | 573.67 |
| 7 | 572.50 | 571.92 | 573.20 | 573.19 | 573.38 | 573.29 | 573.64 | 573.49 | 572.96 | 573.65 | 572.95 | 573.60 |
| 8 | 572.61 | 572.73 | 572.73 | 573.29 | 573.26 | 573.57 | 573.53 | 573.64 | 573.14 | 573.75 | 573.02 | 572.36 |
| 9 | 573.33 | 572.71 | 572.61 | 573.42 | 572.95 | 573.32 | 573.61 | 573.74 | 572.89 | 572.97 | 574.43 | 573.27 |
| 10 | 572.66 | 572.62 | 572.84 | 573.38 | 573.09 | 573.33 | 573.50 | 573.47 | 572.96 | 572.70 | 573.14 | 574.28 |
| 11 | 572.42 | 572.56 | 573.44 | 573.34 | 573.11 | 573.63 | 573.25 | 573.65 | 573.33 | 573.12 | 573.09 | 573.56 |
| 12 | 573.09 | 572.70 | 572.43 | 573.18 | 572.90 | 573.86 | 573.55 | 573.41 | 573.49 | 573.22 | 573.56 | 573.82 |
| 13 | 572.41 | 572.80 | 572.77 | 573.15 | 573.00 | 573.85 | 573.89 | 573.13 | 573.09 | 573.26 | 573.43 | 573.27 |
| 14 | 572.19 | 572.55 | 572.97 | 572.80 | 573.02 | 573.67 | 573.94 | 573.27 | 572.80 | 574.51 | 573.50 | 573.91 |
| 15 | 572.21 | 572.69 | 573.14 | 573.24 | 573.19 | 573.66 | 573.62 | 573.45 | 572.46 | 573.69 | 573.49 | 573.31 |
| 16 | 572.17 | 572.33 | 573.13 | 573.19 | 573.37 | 573.93 | 573.58 | 573.33 | 572.58 | 573.38 | 573.16 | 573.06 |
| 17 | 572.33 | 572.42 | 573.07 | 573.10 | 573.22 | 573.74 | 573.58 | 573.28 | 572.46 | 572.96 | 573.21 | 572.98 |
| 18 | 572.21 | 572.54 | 572.92 | 573.20 | 573.29 | 573.78 | 573.73 | 573.11 | 572.75 | 573.10 | 572.12 | 573.74 |
| 19 | 572.22 | 572.56 | 573.65 | 573.23 | 573.08 | 573.88 | 573.64 | 572.87 | 572.63 | 573.22 | 572.59 | 573.49 |
| 20 | 572.77 | 572.55 | 573.28 | 573.14 | 573.40 | 573.68 | 573.68 | 572.96 | 572.70 | 573.38 | 572.56 | 573.13 |
| 21 | 572.40 | 572.66 | 573.23 | 573.72 | 573.40 | 573.57 | 573.47 | 573.14 | 572.54 | 573.40 | 572.95 | 573.08 |
| 22 | 572.81 | 572.50 | 573.27 | 573.35 | 573.40 | 573.78 | 573.51 | 572.84 | 572.71 | 573.27 | 572.85 | 573.62 |
| 23 | 572.35 | 573.04 | 573.31 | 573.41 | 573.48 | 573.82 | 573.50 | 573.54 | 573.04 | 573.28 | 572.96 | 573.42 |
| 24 | 572.10 | 572.74 | 573.14 | 573.30 | 573.38 | 573.94 | 573.51 | 573.31 | 572.91 | 572.79 | 573.36 | 572.40 |
| 25 | 572.54 | 572.78 | 573.15 | 573.28 | 573.36 | 573.73 | 573.57 | 573.10 | 572.70 | 572.89 | 572.87 | 573.51 |
| 26 | 572.47 | 572.42 | 573.26 | 573.27 | 573.22 | 573.63 | 573.72 | 573.32 | 573.02 | 573.04 | 572.71 | 573.21 |
| 27 | 572.91 | 572.67 | 573.32 | 573.20 | 573.30 | 573.78 | 573.48 | 573.54 | 572.79 | 573.42 | 573.15 | 573.14 |
| 28 | 572.93 | 572.93 | 573.19 | 573.28 | 573.44 | 573.78 | 573.46 | 573.25 | 572.97 | 573.38 | 573.33 | 573.37 |
| 29 | 572.36 | | 573.20 | 573.45 | 573.47 | 573.69 | 573.74 | 573.10 | 573.09 | 573.52 | 573.15 | 573.12 |
| 30 | 572.45 | | 573.27 | 573.28 | 573.51 | 573.58 | 573.51 | 573.04 | 573.44 | 573.08 | 572.15 | 573.01 |
| 31 | 572.38 | | 573.02 | | 573.49 | | 573.42 | 572.87 | | 573.02 | | 573.04 |
| MEAN | 572.57 | 572.50 | 573.04 | 573.21 | 573.31 | 573.59 | 573.59 | 573.32 | 572.91 | 573.29 | 573.09 | 573.34 |
| MAX. | 576.16 | 574.11 | 575.65 | 575.27 | 574.93 | 574.94 | 574.99 | 576.30 | 574.82 | 575.31 | 576.21 | 576.41 |
| | 2300/05 | 1900/07 | 0700/11 | 2200/28 | 2100/18 | 2000/12 | 0200/26 | 0200/27 | 0900/12 | 1100/14 | 1700/09 | 0100/04 |
| MIN. | 571.68 | 569.55 | 571.72 | 572.03 | 572.46 | 572.23 | 572.83 | 572.15 | 571.79 | 572.07 | 570.98 | 571.28 |
| | 1700/24 | 2400/06 | 1300/11 | 0500/05 | 0200/13 | 2300/01 | 2100/11 | 0800/27 | 0100/16 | 1100/09 | 2000/18 | 0400/01 |

* Indicates Less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL MEAN: 573.15

ANNUAL SUMMARY OF LEVELS, 1986
 Station 3028: Sturgeon Point, New York on Lake Erie

INTERNATIONAL
 GREAT LAKES
 DATUM (1955).

| HIGHEST | | | LOWEST | | |
|---------------------------|--------|------------|---------------------------|--------|------------|
| Monthly mean elevation: | 573.60 | Jun | Monthly mean elevation: | 572.58 | Feb |
| Daily mean elevation: | 574.65 | 4 Dec | Daily mean elevation: | 571.34 | 6 Feb |
| Instant/hourly Elevation: | 575.79 | 2300/5 Jan | Instant/hourly Elevation: | 569.94 | 2400/6 Feb |

HIGHEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 573.80 | 5 Jan |
| 573.11 | 23 Feb |
| 573.70 | 19 Mar |
| 573.68 | 21 Apr |
| 573.64 | 1 May |
| 573.92 | 24 Jun |
| 573.89 | 14 Jul |
| 573.68 | 9 Aug |
| 573.39 | 30 Sep |
| 574.36 | 14 Oct |
| 574.24 | 9 Nov |
| 574.65 | 4 Dec |

LOWEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 572.18 | 24 Jan |
| 571.34 | 6 Feb |
| 572.49 | 12 Mar |
| 572.89 | 4 Apr |
| 572.97 | 12 May |
| 573.14 | 6 Jun |
| 573.27 | 11 Jul |
| 572.85 | 22 Aug |
| 572.48 | 17 Sep |
| 572.78 | 10 Oct |
| 572.22 | 18 Nov |
| 571.91 | 1 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(ft.) | No. of days<br>above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 574.60         |     |     |     |     |     |     |     |     |     |     |     | 1   | 574.60         | 1                          |
| 574.40         |     |     |     |     |     |     |     |     |     |     |     |     | 574.40         | 1                          |
| 574.20         |     |     |     |     |     |     |     |     |     | 1   | 1   | 2   | 574.20         | 5                          |
| 574.00         |     |     |     |     |     |     |     |     |     |     |     |     | 574.00         | 5                          |
| 573.80         |     |     |     |     |     | 5   | 2   |     |     | 1   |     |     | 573.80         | 13                         |
| 573.60         | 1   |     | 1   | 1   | 1   | 12  | 8   | 3   |     | 3   |     | 3   | 573.60         | 46                         |
| 573.40         |     |     | 2   | 5   | 9   | 5   | 19  | 9   |     | 3   | 3   | 7   | 573.40         | 108                        |
| 573.20         | 1   |     | 11  | 17  | 14  | 5   | 2   | 9   | 4   | 10  | 5   | 6   | 573.20         | 192                        |
| 573.00         | 3   | 1   | 6   | 4   | 5   | 3   |     | 6   | 4   | 9   | 9   | 7   | 573.00         | 249                        |
| 572.80         | 4   | 4   | 5   | 3   | 2   |     |     | 4   | 11  | 3   | 7   | 1   | 572.80         | 293                        |
| 572.60         | 3   | 12  | 5   |     |     |     |     |     | 7   | 1   | 2   |     | 572.60         | 323                        |
| 572.40         | 11  | 6   | 1   |     |     |     |     |     | 4   |     | 1   | 3   | 572.40         | 349                        |
| 572.20         | 7   | 2   |     |     |     |     |     |     |     |     | 2   |     | 572.20         | 360                        |
| 572.00         | 1   | 2   |     |     |     |     |     |     |     |     |     |     | 572.00         | 363                        |
| 571.80         |     |     |     |     |     |     |     |     |     |     |     | 1   | 571.80         | 364                        |
| 571.60         |     |     |     |     |     |     |     |     |     |     |     |     | 571.60         | 364                        |
| 571.40         |     |     |     |     |     |     |     |     |     |     |     |     | 571.40         | 364                        |
| 571.20         |     | 1   |     |     |     |     |     |     |     |     |     |     | 571.20         | 365                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 3028: Sturgeon Point, New York on Lake Erie

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 572.95  | 572.32  | 572.86  | 573.28  | 573.64  | 573.49  | 573.41  | 573.64  | 572.90  | 572.89  | 573.28  | 571.91  |
| 2    | 572.42  | 572.53  | 572.78  | 573.18  | 573.56  | 573.18  | 573.67  | 573.53  | 572.84  | 573.07  | 573.16  | 572.59  |
| 3    | 572.50  | 572.27  | 572.76  | 573.02  | 573.53  | 573.16  | 573.60  | 573.59  | 572.80  | 573.39  | 573.49  | 574.25  |
| 4    | 572.23  | 572.16  | 572.81  | 572.89  | 573.30  | 573.33  | 573.65  | 573.47  | 572.98  | 573.13  | 572.99  | 574.65  |
| 5    | 573.80  | 572.52  | 572.75  | 572.90  | 573.39  | 573.22  | 573.63  | 573.34  | 573.21  | 573.90  | 572.86  | 573.44  |
| 6    | 573.20  | 571.34  | 573.22  | 573.22  | 573.34  | 573.14  | 573.58  | 573.24  | 572.94  | 573.67  | 573.11  | 573.55  |
| 7    | 572.54  | 572.08  | 573.22  | 573.30  | 573.36  | 573.31  | 573.60  | 573.51  | 572.94  | 573.60  | 572.97  | 573.50  |
| 8    | 572.66  | 572.80  | 572.79  | 573.40  | 573.29  | 573.54  | 573.48  | 573.61  | 573.09  | 573.67  | 573.01  | 572.48  |
| 9    | 573.39  | 572.79  | 572.68  | 573.53  | 572.99  | 573.32  | 573.58  | 573.68  | 572.86  | 573.01  | 574.24  | 573.28  |
| 10   | 572.70  | 572.69  | 572.90  | 573.49  | 573.12  | 573.35  | 573.50  | 573.44  | 572.91  | 572.78  | 573.12  | 574.21  |
| 11   | 572.47  | 572.63  | 573.47  | 573.46  | 573.16  | 573.60  | 573.27  | 573.60  | 573.23  | 573.10  | 573.09  | 573.50  |
| 12   | 573.15  | 572.77  | 572.49  | 573.28  | 572.97  | 573.87  | 573.60  | 573.39  | 573.38  | 573.22  | 573.52  | 573.72  |
| 13   | 572.47  | 572.85  | 572.82  | 573.24  | 573.03  | 573.79  | 573.84  | 573.14  | 573.03  | 573.25  | 573.42  | 573.28  |
| 14   | 572.24  | 572.61  | 573.04  | 572.91  | 573.03  | 573.68  | 573.89  | 573.26  | 572.80  | 574.36  | 573.38  | 573.75  |
| 15   | 572.28  | 572.75  | 573.18  | 573.31  | 573.22  | 573.70  | 573.59  | 573.41  | 572.51  | 573.69  | 573.40  | 573.29  |
| 16   | 572.23  | 572.41  | 573.17  | 573.30  | 573.36  | 573.92  | 573.59  | 573.32  | 572.60  | 573.40  | 573.16  | 573.09  |
| 17   | 572.39  | 572.52  | 573.12  | 573.19  | 573.22  | 573.74  | 573.55  | 573.25  | 572.48  | 573.02  | 573.13  | 572.98  |
| 18   | 572.26  | 572.62  | 572.98  | 573.25  | 573.29* | 573.77  | 573.68  | 573.13  | 572.72  | 573.11  | 572.22  | 573.66  |
| 19   | 572.28  | 572.63  | 573.70  | 573.28  | 573.14* | 573.89  | 573.62  | 572.90  | 572.64  | 573.22  | 572.63  | 573.48  |
| 20   | 572.81  | 572.63  | 573.35  | 573.17  | 573.40  | 573.70  | 573.71  | 572.96  | 572.71  | 573.35  | 572.59  | 573.15  |
| 21   | 572.46  | 572.73  | 573.30  | 573.68  | 573.42  | 573.60  | 573.49  | 573.11  | 572.56  | 573.37  | 572.98  | 573.10  |
| 22   | 572.87  | 572.59  | 573.35  | 573.40  | 573.41  | 573.78  | 573.49  | 572.85  | 572.73  | 573.26  | 572.86  | 573.51  |
| 23   | 572.42  | 573.11  | 573.40  | 573.42  | 573.46  | 573.83  | 573.48  | 573.50  | 572.97  | 573.29  | 572.94  | 573.33  |
| 24   | 572.18  | 572.81  | 573.19  | 573.32  | 573.40  | 573.92  | 573.51  | 573.28  | 572.91  | 572.85  | 573.32  | 572.48  |
| 25   | 572.62  | 572.85  | 573.22  | 573.31  | 573.38  | 573.73  | 573.54  | 573.07  | 572.72  | 572.91  | 572.84  | 573.47  |
| 26   | 572.54  | 572.49  | 573.34  | 573.29  | 573.25  | 573.63  | 573.65  | 573.24  | 573.02  | 573.04  | 572.75  | 573.22  |
| 27   | 572.98  | 572.73  | 573.41  | 573.23  | 573.32  | 573.76  | 573.47  | 573.41  | 572.83  | 573.42  | 573.13  | 573.15  |
| 28   | 573.01  | 573.00  | 573.30  | 573.29  | 573.43  | 573.75  | 573.46  | 573.22  | 572.98  | 573.36  | 573.25  | 573.34  |
| 29   | 572.43  |         | 573.30  | 573.45  | 573.46  | 573.69  | 573.69  | 573.07  | 573.07  | 573.48  | 573.14  | 573.13  |
| 30   | 572.51  |         | 573.36  | 573.30  | 573.52  | 573.57  | 573.51  | 573.01  | 573.39  | 573.11  | 572.23  | 573.04  |
| 31   | 572.43  |         | 573.12  |         | 573.48  |         | 573.40  | 572.88  |         | 573.01  |         | 573.05  |
| MEAN | 572.63  | 572.58  | 573.11  | 573.28  | 573.32  | 573.60  | 573.57  | 573.29  | 572.89  | 573.29  | 573.07  | 573.31  |
| MAX. | 575.79  | 574.18  | 575.54  | 574.52  | 574.20  | 574.89  | 574.55  | 574.77  | 574.59  | 575.02  | 575.63  | 575.74  |
|      | 2300/05 | 1900/07 | 0600/11 | 0600/21 | 1900/01 | 2000/12 | 0200/26 | 0300/27 | 0900/12 | 2300/14 | 1700/09 | 2000/03 |
| MIN. | 571.81  | 569.94  | 571.77  | 572.46  | 572.51  | 572.71  | 572.87  | 572.39  | 572.03  | 572.16  | 571.15  | 571.40  |
|      | 1800/04 | 2400/06 | 1200/11 | 2300/14 | 0200/13 | 2300/01 | 2100/11 | 0800/27 | 2000/17 | 1100/09 | 1900/18 | 0300/01 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 573.16

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 3032: Barcelona, New York on Lake Erie

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST  
 Monthly mean elevation: 573.58 Jun  
 Daily mean elevation: 574.16 4 Dec  
 Instant/hourly Elevation: 575.20 0600/11 Mar

LOWEST  
 Monthly mean elevation: 572.54 Jan  
 Daily mean elevation: 571.62 6 Feb  
 Instant/hourly Elevation: 570.50 0100/7 Feb

HIGHEST DAILY MEAN  
 FOR EACH MONTH

-----  
 Elev. Date  
 573.40 5 Jan  
 573.01 23 Feb  
 573.56 19 Mar  
 573.56 21 Apr  
 573.49 1 May  
 573.92 16 Jun  
 573.81 14 Jul  
 573.57 8 Aug  
 573.27 30 Sep  
 574.07 14 Oct  
 573.89 9 Nov  
 574.16 4 Dec

LOWEST DAILY MEAN  
 FOR EACH MONTH

-----  
 Elev. Date  
 572.22 24 Jan  
 571.62 6 Feb  
 572.53 12 Mar  
 572.92 4 Apr  
 573.03 9 May  
 573.18 3 Jun  
 573.28 11 Jul  
 572.88 31 Aug  
 572.60 21 Sep  
 572.86 10 Oct  
 572.37 30 Nov  
 572.10 1 Dec

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(ft.) | No. of days
above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 574.00 | | | | | | | | | | 1 | | 1 | 574.00 | 2 |
| 573.80 | | | | | | 4 | 1 | | | | 1 | 2 | 573.80 | 10 |
| 573.60 | | | | | | 13 | 7 | | | 2 | | | 573.60 | 32 |
| 573.40 | | | 1 | 3 | 7 | 5 | 21 | 9 | | 3 | 1 | 3 | 573.40 | 85 |
| 573.20 | 1 | | 10 | 20 | 16 | 7 | 2 | 10 | 1 | 10 | 4 | 9 | 573.20 | 175 |
| 573.00 | | 1 | 9 | 4 | 8 | 1 | | 7 | 6 | 10 | 12 | 11 | 573.00 | 244 |
| 572.80 | 5 | 3 | 4 | 3 | | | | 5 | 12 | 5 | 7 | 1 | 572.80 | 289 |
| 572.60 | 3 | 13 | 6 | | | | | | 9 | | 3 | 3 | 572.60 | 326 |
| 572.40 | 12 | 6 | 1 | | | | | | 2 | | | | 572.40 | 347 |
| 572.20 | 10 | 3 | | | | | | | | | 2 | | 572.20 | 362 |
| 572.00 | | 1 | | | | | | | | | | | 572.00 | 364 |
| 571.80 | | | | | | | | | | | | 1 | 571.80 | 364 |
| 571.60 | | 1 | | | | | | | | | | | 571.60 | 365 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 3032: Barcelona, New York on Lake Erie

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 572.73 | 572.33 | 572.84 | 573.23 | 573.49 | 573.45 | 573.45 | 573.57 | 572.86 | 572.89 | 573.22 | 572.10 |
| 2 | 572.38 | 572.50 | 572.78 | 573.16 | 573.45 | 573.22 | 573.66 | 573.49 | 572.84 | 573.02 | 573.17 | 572.62 |
| 3 | 572.49 | 572.31 | 572.75 | 573.03 | 573.40 | 573.18 | 573.59 | 573.54 | 572.79 | 573.34 | 573.38 | 573.98 |
| 4 | 572.28 | 572.22 | 572.80 | 572.92 | 573.25 | 573.31 | 573.59 | 573.43 | 572.96 | 573.18 | 573.02 | 574.16 |
| 5 | 573.40 | 572.51 | 572.75 | 572.94 | 573.27 | 573.26 | 573.57 | 573.34 | 573.11 | 573.76 | 572.91 | 573.32 |
| 6 | 572.97 | 571.62 | 573.18 | 573.22 | 573.25 | 573.21 | 573.53 | 573.24 | 572.94 | 573.62 | 573.07 | 573.34 |
| 7 | 572.53 | 572.20 | 573.13 | 573.26 | 573.26 | 573.30 | 573.54 | 573.48 | 572.93 | 573.48 | 572.98 | 573.38 |
| 8 | 572.54 | 572.71 | 572.78 | 573.30 | 573.27 | 573.48 | 573.47 | 573.57 | 573.01 | 573.53 | 573.03 | 572.68 |
| 9 | 572.88 | 572.76 | 572.69 | 573.46 | 573.03 | 573.33 | 573.59 | 573.56 | 572.85 | 573.08 | 573.89 | 573.20 |
| 10 | 572.56 | 572.66 | 572.88 | 573.43 | 573.12 | 573.37 | 573.50 | 573.42 | 572.86 | 572.86 | 573.06 | 573.87 |
| 11 | 572.40 | 572.62 | 573.34 | 573.40 | 573.15 | 573.61 | 573.28 | 573.54 | 573.12 | 573.07 | 573.05 | 573.37 |
| 12 | 572.82 | 572.74 | 572.53 | 573.23 | 573.04 | 573.83 | 573.60 | 573.36 | 573.20 | 573.20 | 573.42 | 573.56 |
| 13 | 572.46 | 572.78 | 572.86 | 573.19 | 573.07 | 573.74 | 573.76 | 573.16 | 573.01 | 573.23 | 573.34 | 573.24 |
| 14 | 572.25 | 572.60 | 573.03 | 572.93 | 573.05 | 573.69 | 573.81 | 573.25 | 572.79 | 574.07 | 573.20 | 573.55 |
| 15 | 572.26 | 572.72 | 573.15 | 573.30 | 573.20 | 573.68 | 573.57 | 573.37 | 572.60 | 573.60 | 573.24 | 573.18 |
| 16 | 572.24 | 572.43 | 573.14 | 573.28 | 573.30 | 573.92 | 573.55 | 573.29 | 572.65 | 573.36 | 573.07 | 573.08 |
| 17 | 572.34 | 572.51 | 573.10 | 573.21 | 573.17 | 573.71 | 573.59 | 573.25 | 572.67 | 573.08 | 573.00 | 572.98 |
| 18 | 572.25 | 572.61 | 572.97 | 573.25 | 573.25 | 573.71 | 573.66 | 573.15 | 572.67 | 573.12 | 572.38 | 573.51 |
| 19 | 572.29 | 572.62 | 573.56 | 573.27 | 573.22 | 573.81 | 573.63 | 572.97 | 572.64 | 573.19 | 572.71 | 573.39 |
| 20 | 572.74 | 572.63 | 573.33 | 573.18 | 573.37 | 573.68 | 573.68 | 573.00 | 572.71 | 573.28 | 572.68 | 573.14 |
| 21 | 572.43 | 572.73 | 573.26 | 573.56 | 573.41 | 573.57 | 573.53 | 573.16 | 572.60 | 573.29 | 573.00 | 573.08 |
| 22 | 572.73 | 572.63 | 573.32 | 573.39 | 573.38 | 573.73 | 573.52 | 572.98 | 572.76 | 573.22 | 572.88 | 573.34 |
| 23 | 572.41 | 573.01 | 573.35 | 573.38 | 573.42 | 573.76 | 573.51 | 573.39 | 572.96 | 573.25 | 572.90 | 573.20 |
| 24 | 572.22 | 572.81 | 573.16 | 573.30 | 573.37 | 573.86 | 573.51 | 573.26 | 572.87 | 572.93 | 573.18 | 572.61 |
| 25 | 572.48 | 572.81 | 573.20 | 573.30 | 573.34 | 573.68 | 573.53 | 573.05 | 572.72 | 572.92 | 572.82 | 573.34 |
| 26 | 572.52 | 572.50 | 573.29 | 573.30 | 573.24 | 573.60 | 573.62 | 573.19 | 572.98 | 573.08 | 572.79 | 573.19 |
| 27 | 572.95 | 572.72 | 573.35 | 573.24 | 573.30 | 573.70 | 573.46 | 573.38 | 572.85 | 573.38 | 573.08 | 573.14 |
| 28 | 572.86 | 572.94 | 573.27 | 573.30 | 573.40 | 573.72 | 573.43 | 573.19 | 572.95 | 573.31 | 573.15 | 573.25 |
| 29 | 572.43 | | 573.25 | 573.37 | 573.41 | 573.65 | 573.64 | 573.04 | 573.04 | 573.38 | 573.07 | 573.10 |
| 30 | 572.48 | | 573.29 | 573.29 | 573.43 | 573.56 | 573.52 | 573.00 | 573.27 | 573.13 | 572.37 | 573.05 |
| 31 | 572.41 | | 573.08 | | 573.44 | | 573.39 | 572.88 | | 573.00 | | 573.06 |
| MEAN | 572.54 | 572.58 | 573.08 | 573.25 | 573.28 | 573.58 | 573.56 | 573.27 | 572.87 | 573.25 | 573.04 | 573.23 |
| MAX. | 574.82 | 573.87 | 575.20 | 574.19 | 573.83 | 574.61 | 574.43 | 574.57 | 574.18 | 574.65 | 574.93 | 574.97 |
| MIN. | 2300/05 | 2000/07 | 0600/11 | 2300/07 | 2200/18 | 2100/12 | 0100/26 | 0300/27 | 0900/12 | 2300/05 | 1800/09 | 1600/03 |
| | 571.94 | 570.50 | 571.93 | 572.50 | 572.67 | 572.71 | 573.03 | 572.61 | 572.22 | 572.30 | 571.39 | 571.62 |
| | 1500/24 | 0100/07 | 1300/11 | 2200/14 | 0100/13 | 2100/01 | 2200/11 | 0300/29 | 0600/15 | 1800/01 | 1900/18 | 0300/01 |

* Indicates Less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL MEAN: 573.13

ANNUAL SUMMARY OF LEVELS, 1986
 Station 3038: Erie, Pennsylvania on Lake Erie

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

HIGHEST
 Monthly mean elevation: 573.65 Jul
 Daily mean elevation: 573.98 4 Dec
 Instant/hourly Elevation: 574.82 1900/9 Nov

LOWEST
 Monthly mean elevation: 572.58 Jan
 Daily mean elevation: 571.90 6 Feb
 Instant/hourly Elevation: 570.80 0200/7 Feb

HIGHEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 573.29 | 5 Jan |
| 573.05 | 23 Feb |
| 573.52 | 19 Mar |
| 573.60 | 21 Apr |
| 573.53 | 1 May |
| 573.89 | 24 Jun |
| 573.86 | 14 Jul |
| 573.63 | 1 Aug |
| 573.26 | 30 Sep |
| 573.96 | 14 Oct |
| 573.81 | 9 Nov |
| 573.98 | 4 Dec |

LOWEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 572.33 | 16 Jan |
| 571.90 | 6 Feb |
| 572.71 | 12 Mar |
| 573.07 | 14 Apr |
| 573.18 | 14 May |
| 573.31 | 3 Jun |
| 573.44 | 11 Jul |
| 572.99 | 31 Aug |
| 572.65 | 17 Sep |
| 573.04 | 1 Oct |
| 572.56 | 30 Nov |
| 572.33 | 1 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(ft.) | No. of days<br>above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 573.80         |     |     |     |     |     | 6   | 2   |     |     | 1   | 1   | 2   | 573.80         | 12                         |
| 573.60         |     |     |     |     |     | 14  | 22  | 3   |     | 2   |     | 1   | 573.60         | 54                         |
| 573.40         |     |     | 3   | 7   | 15  | 6   | 7   | 11  |     | 6   | 2   | 3   | 573.40         | 114                        |
| 573.20         | 1   |     | 14  | 19  | 12  | 4   |     | 10  | 1   | 15  | 3   | 13  | 573.20         | 206                        |
| 573.00         |     | 1   | 4   | 4   | 4   |     |     | 6   | 11  | 7   | 15  | 8   | 573.00         | 266                        |
| 572.80         | 3   | 8   | 8   |     |     |     |     | 1   | 13  |     | 5   | 1   | 572.80         | 305                        |
| 572.60         | 6   | 12  | 2   |     |     |     |     |     | 5   |     | 2   | 2   | 572.60         | 334                        |
| 572.40         | 13  | 4   |     |     |     |     |     |     |     |     | 2   |     | 572.40         | 353                        |
| 572.20         | 8   | 2   |     |     |     |     |     |     |     |     |     | 1   | 572.20         | 364                        |
| 572.00         |     |     |     |     |     |     |     |     |     |     |     |     | 572.00         | 364                        |
| 571.80         |     | 1   |     |     |     |     |     |     |     |     |     |     | 571.80         | 365                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 3038: Erie, Pennsylvania on Lake Erie

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 572.73  | 572.44  | 572.93  | 573.33  | 573.53  | 573.51  | 573.56  | 573.63  | 573.00  | 573.04  | 573.22  | 572.33  |
| 2    | 572.42  | 572.57  | 572.87  | 573.26  | 573.51  | 573.34  | 573.74  | 573.57  | 572.97  | 573.21  | 573.25  | 572.73  |
| 3    | 572.56  | 572.42  | 572.85  | 573.18  | 573.46  | 573.31  | 573.68  | 573.61  | 572.92  | 573.43  | 573.41  | 573.82  |
| 4    | 572.37  | 572.38  | 572.90  | 573.07  | 573.33  | 573.41  | 573.65  | 573.49  | 573.02  | 573.33  | 573.11  | 573.98  |
| 5    | 573.29  | 572.62  | 572.85  | 573.12  | 573.33  | 573.38  | 573.60  | 573.42  | 573.16  | 573.77  | 573.02  | 573.34  |
| 6    | 572.88  | 571.90  | 573.23  | 573.29  | 573.33  | 573.34  | 573.61  | 573.35  | 573.01  | 573.68  | 573.15  | 573.30  |
| 7    | 572.59  | 572.39  | 573.15  | 573.32  | 573.32  | 573.45  | 573.61  | 573.53  | 573.02  | 573.50  | 573.05  | 573.33  |
| 8    | 572.56  | 572.78  | 572.88  | 573.35  | 573.37  | 573.56  | 573.58  | 573.61  | 573.05  | 573.50  | 573.09  | 572.85  |
| 9    | 572.76  | 572.83  | 572.80  | 573.54  | 573.19  | 573.45  | 573.68  | 573.57  | 572.86  | 573.21  | 573.81  | 573.28  |
| 10   | 572.57  | 572.75  | 572.96  | 573.52  | 573.27  | 573.48  | 573.61  | 573.45  | 572.86  | 573.06  | 573.15  | 573.79  |
| 11   | 572.40  | 572.71  | 573.33  | 573.47  | 573.28  | 573.63  | 573.44  | 573.56  | 573.02  | 573.18  | 573.11  | 573.37  |
| 12   | 572.74  | 572.81  | 572.71  | 573.31  | 573.18  | 573.88  | 573.72  | 573.44  | 573.19  | 573.27  | 573.43  | 573.56  |
| 13   | 572.55  | 572.84  | 572.98  | 573.29  | 573.20  | 573.81  | 573.82  | 573.29  | 572.98  | 573.32  | 573.40  | 573.30  |
| 14   | 572.33  | 572.71  | 573.13  | 573.07  | 573.18  | 573.77  | 573.86  | 573.35  | 572.85  | 573.96  | 573.17  | 573.43  |
| 15   | 572.34  | 572.79  | 573.22  | 573.34  | 573.26  | 573.74  | 573.64  | 573.43  | 572.74  | 573.58  | 573.16  | 573.23  |
| 16   | 572.33  | 572.53  | 573.22  | 573.40  | 573.41  | 573.86  | 573.67  | 573.35  | 572.76  | 573.41  | 573.08  | 573.14  |
| 17   | 572.39  | 572.64  | 573.19  | 573.35  | 573.31  | 573.79  | 573.65  | 573.34  | 572.65  | 573.22  | 572.98  | 573.08  |
| 18   | 572.34  | 572.71  | 573.09  | 573.35  | 573.34  | 573.77  | 573.76  | 573.29  | 572.81  | 573.24  | 572.58  | 573.52  |
| 19   | 572.41  | 572.70  | 573.52  | 573.38  | 573.30  | 573.83  | 573.72  | 573.14  | 572.76  | 573.28  | 572.79  | 573.40  |
| 20   | 572.79  | 572.72  | 573.43  | 573.31  | 573.51  | 573.77  | 573.75  | 573.16  | 572.82  | 573.34  | 572.76  | 573.20  |
| 21   | 572.48  | 572.83  | 573.35  | 573.60  | 573.52  | 573.68  | 573.65  | 573.27  | 572.75  | 573.33  | 573.07  | 573.16  |
| 22   | 572.73  | 572.77  | 573.39  | 573.51  | 573.50  | 573.80  | 573.64  | 573.10  | 572.82  | 573.28  | 572.94  | 573.33  |
| 23   | 572.50  | 573.05  | 573.42  | 573.49  | 573.51  | 573.81  | 573.62  | 573.45  | 572.99  | 573.31  | 572.93  | 573.20  |
| 24   | 572.34  | 572.89  | 573.27  | 573.40  | 573.48  | 573.89  | 573.61  | 573.32  | 572.96  | 573.06  | 573.18  | 572.78  |
| 25   | 572.52  | 572.90  | 573.28  | 573.38  | 573.46  | 573.75  | 573.61  | 573.12  | 572.82  | 573.05  | 572.88  | 573.40  |
| 26   | 572.61  | 572.63  | 573.33  | 573.39  | 573.38  | 573.66  | 573.65  | 573.22  | 573.05  | 573.20  | 572.83  | 573.27  |
| 27   | 572.97  | 572.84  | 573.40  | 573.25  | 573.44  | 573.75  | 573.59  | 573.41  | 573.01  | 573.42  | 573.13  | 573.21  |
| 28   | 572.81  | 573.00  | 573.34  | 573.37  | 573.50  | 573.77  | 573.57  | 573.24  | 573.06  | 573.36  | 573.16  | 573.29  |
| 29   | 572.52  |         | 573.33  | 573.46  | 573.48  | 573.72  | 573.72  | 573.11  | 573.10  | 573.39  | 573.10  | 573.18  |
| 30   | 572.55  |         | 573.35  | 573.38  | 573.50  | 573.66  | 573.62  | 573.05  | 573.26  | 573.23  | 572.56  | 573.15  |
| 31   | 572.49  |         | 573.23  |         | 573.51  |         | 573.49  | 572.99  |         | 573.08  |         | 573.14  |
| MEAN | 572.58  | 572.68  | 573.16  | 573.35  | 573.38  | 573.65  | 573.65  | 573.35  | 572.94  | 573.33  | 573.08  | 573.26  |
| MAX. | 574.46  | 573.80  | 574.69  | 573.98  | 573.80  | 574.46  | 574.21  | 574.45  | 574.09  | 574.52  | 574.82  | 574.69  |
| MIN. | 2200/05 | 1900/07 | 0600/11 | 0400/21 | 1900/01 | 0800/24 | 0300/26 | 0400/27 | 1000/12 | 2200/14 | 1900/09 | 1000/10 |
|      | 1800/24 | 0200/07 | 1200/11 | 2100/14 | 0100/13 | 2100/01 | 1000/26 | 1000/27 | 1800/17 | 1700/01 | 1900/18 | 0500/01 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 573.20

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 3053: Fairport Harbor, Ohio on Lake Erie

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST  
 Monthly mean elevation: 573.73 Jun  
 Daily mean elevation: 573.89 17 Jun  
 Instant/hourly Elevation: 574.80 2104/5 Oct

LOWEST  
 Monthly mean elevation: 572.50 Jan  
 Daily mean elevation: 572.23 9 Jan  
 Instant/hourly Elevation: 571.91 2200/5 Jan

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 572.83 | 27 Jan |
| 573.04 | 22 Feb |
| 573.46 | 20 Mar |
| 573.62 | 22 Apr |
| 573.61 | 20 May |
| 573.89 | 17 Jun |
| 573.79 | 20 Jul |
| 573.57 | 2 Aug  |
| 573.21 | 29 Sep |
| 573.59 | 5 Oct  |
| 573.30 | 2 Nov  |
| 573.33 | 9 Dec  |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 572.23 | 9 Jan  |
| 572.59 | 1 Feb  |
| 572.94 | 8 Mar  |
| 573.34 | 1 Apr  |
| 573.32 | 6 May  |
| 573.45 | 4 Jun  |
| 573.59 | 31 Jul |
| 573.12 | 30 Aug |
| 572.79 | 11 Sep |
| 573.26 | 31 Oct |
| 572.89 | 15 Nov |
| 573.05 | 6 Dec  |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(ft.) | No. of days
above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 573.80 | | | | | | 12 | | | | | | | 573.80 | 12 |
| 573.60 | | | | 1 | 2 | 10 | 29 | | | | | | 573.60 | 54 |
| 573.40 | | | 1 | 16 | 19 | 8 | 2 | 17 | | 9 | | | 573.40 | 126 |
| 573.20 | | | 17 | 13 | 10 | | | 10 | 1 | 22 | 6 | 20 | 573.20 | 225 |
| 573.00 | | 2 | 5 | | | | | 4 | 14 | | 14 | 11 | 573.00 | 275 |
| 572.80 | 1 | 11 | 8 | | | | | | 14 | | 10 | | 572.80 | 319 |
| 572.60 | 5 | 14 | | | | | | | 1 | | | | 572.60 | 339 |
| 572.40 | 18 | 1 | | | | | | | | | | | 572.40 | 358 |
| 572.20 | 7 | | | | | | | | | | | | 572.20 | 365 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 3053: Fairport Harbor, Ohio on Lake Erie

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 572.47 | 572.59 | 572.96 | 573.34 | 573.43 | 573.56 | 573.73 | 573.55 | 573.13 | 573.31 | 573.22 | 573.07 |
| 2 | 572.50 | 572.61 | 572.95 | 573.36 | 573.45 | 573.61 | 573.74 | 573.57 | 573.11 | 573.32 | 573.30 | 573.06 |
| 3 | 572.56 | 572.62 | 572.96 | 573.37 | 573.40 | 573.49 | 573.71 | 573.56 | 573.09 | 573.36 | 573.21 | 573.12 |
| 4 | 572.56 | 572.69 | 572.95 | 573.35 | 573.40 | 573.45 | 573.67 | 573.54 | 573.07 | 573.57 | 573.25 | 573.06 |
| 5 | 572.43 | 572.71 | 572.96 | 573.38 | 573.33 | 573.57 | 573.60 | 573.49 | 573.11 | 573.59 | 573.25 | 573.17 |
| 6 | 572.43 | 572.84 | 573.05 | 573.40 | 573.32 | 573.60 | 573.63 | 573.48 | 573.09 | 573.57 | 573.20 | 573.05 |
| 7 | 572.48 | 572.95 | 572.94 | 573.37 | 573.43 | 573.57 | 573.63 | 573.54 | 573.09 | 573.40 | 573.18 | 573.10 |
| 8 | 572.38 | 572.80 | 572.94 | 573.35 | 573.44 | 573.59 | 573.66 | 573.55 | 572.97 | 573.30 | 573.21 | 573.32 |
| 9 | 572.23 | 572.79 | 573.02 | 573.43 | 573.45 | 573.61 | 573.72 | 573.51 | 572.90 | 573.48 | 573.14 | 573.33 |
| 10 | 572.40 | 572.78 | 572.97 | 573.42 | 573.42 | 573.60 | 573.67 | 573.51 | 572.85 | 573.46 | 573.16 | 573.27 |
| 11 | 572.38 | 572.80 | 573.01 | 573.40 | 573.38 | 573.71 | 573.67 | 573.52 | 572.79 | 573.32 | 573.17 | 573.21 |
| 12 | 572.28 | 572.79 | 573.11 | 573.37 | 573.39 | 573.89 | 573.78 | 573.48 | 572.96 | 573.32 | 573.13 | 573.30 |
| 13 | 572.58 | 572.73 | 573.20 | 573.36 | 573.39 | 573.83 | 573.72 | 573.48 | 572.93 | 573.40 | 573.18 | 573.32 |
| 14 | 572.44 | 572.78 | 573.23 | 573.37 | 573.38 | 573.86 | 573.76 | 573.43 | 572.94 | 573.42 | 572.91 | 573.06 |
| 15 | 572.40 | 572.79 | 573.22 | 573.37 | 573.37 | 573.87 | 573.72 | 573.40 | 573.03 | 573.44 | 572.89 | 573.18 |
| 16 | 572.42 | 572.76 | 573.25 | 573.45 | 573.39 | 573.88 | 573.79 | 573.37 | 572.94 | 573.41 | 572.92 | 573.21 |
| 17 | 572.36 | 572.84 | 573.26 | 573.48 | 573.43 | 573.89 | 573.77 | 573.42 | 572.88 | 573.48 | 572.91 | 573.21 |
| 18 | 572.42 | 572.78 | 573.28 | 573.44 | 573.42 | 573.82 | 573.74 | 573.44 | 572.88 | 573.39 | 573.14 | 573.28 |
| 19 | 572.56 | 572.84 | 573.33 | 573.42 | 573.61 | 573.82 | 573.78 | 573.43 | 572.90 | 573.36 | 572.97 | 573.26 |
| 20 | 572.66 | 572.83 | 573.46 | 573.48 | 573.61 | 573.87 | 573.79 | 573.36 | 572.93 | 573.30 | 572.95 | 573.26 |
| 21 | 572.54 | 573.00 | 573.38 | 573.55 | 573.60 | 573.85 | 573.78 | 573.34 | 572.91 | 573.30 | 573.10 | 573.26 |
| 22 | 572.53 | 573.04 | 573.36 | 573.62 | 573.59 | 573.81 | 573.72 | 573.37 | 572.94 | 573.32 | 572.96 | 573.13 |
| 23 | 572.62 | 572.92 | 573.34 | 573.52 | 573.56 | 573.79 | 573.69 | 573.34 | 572.97 | 573.31 | 572.93 | 573.15 |
| 24 | 572.61 | 572.98 | 573.38 | 573.52 | 573.57 | 573.88 | 573.66 | 573.32 | 573.01 | 573.37 | 572.95 | 573.30 |
| 25 | 572.51 | 572.98 | 573.35 | 573.50 | 573.55 | 573.75 | 573.66 | 573.22 | 573.09 | 573.31 | 572.92 | 573.29 |
| 26 | 572.65 | 572.99 | 573.34 | 573.47 | 573.55 | 573.75 | 573.62 | 573.18 | 573.03 | 573.33 | 573.12 | 573.28 |
| 27 | 572.83 | 573.01 | 573.39 | 573.50 | 573.57 | 573.73 | 573.66 | 573.28 | 573.19 | 573.36 | 573.07 | 573.30 |
| 28 | 572.53 | 572.90 | 573.35 | 573.51 | 573.56 | 573.74 | 573.63 | 573.28 | 573.16 | 573.33 | 573.03 | 573.25 |
| 29 | 572.61 | | 573.33 | 573.45 | 573.54 | 573.76 | 573.69 | 573.19 | 573.21 | 573.27 | 573.05 | 573.21 |
| 30 | 572.58 | | 573.32 | 573.46 | 573.52 | 573.75 | 573.64 | 573.12 | 573.18 | 573.35 | 573.10 | 573.26 |
| 31 | 572.57 | | 573.36 | | 573.52 | | 573.59 | 573.13 | | 573.26 | | 573.22 |
| MEAN | 572.50 | 572.83 | 573.19 | 573.43 | 573.47 | 573.73 | 573.70 | 573.40 | 573.01 | 573.38 | 573.08 | 573.21 |
| MAX. | 573.15 | 573.23 | 573.73 | 574.05 | 573.86 | 574.57 | 574.00 | 574.03 | 573.58 | 574.80 | 573.72 | 573.61 |
| MIN. | 0400/27 | 1400/07 | 0500/20 | 1200/25 | 0500/19 | 2000/15 | 0100/26 | 2400/02 | 0400/29 | 2104/05 | 2000/18 | 0600/10 |
| | 571.91 | 572.49 | 572.46 | 572.96 | 572.97 | 573.32 | 573.31 | 572.64 | 572.50 | 573.00 | 572.65 | 572.72 |
| | 2200/05 | 2000/07 | 0800/11 | 1600/08 | 1900/06 | 1400/04 | 0500/26 | 2100/26 | 0100/16 | 0100/01 | 0300/18 | 0200/02 |

* Indicates Less than 90% of the Hourly Data Available.

ANNUAL MEAN: 573.24

/ Indicates No Data.

ANNUAL SUMMARY OF LEVELS, 1986
 Station 3063: Cleveland, Ohio on Lake Erie

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

HIGHEST
 Monthly mean elevation: 573.70 Jun
 Daily mean elevation: 573.90 20 Jun
 Instant/hourly Elevation: 574.72 2118/5 Oct

LOWEST
 Monthly mean elevation: 572.36 Jan
 Daily mean elevation: 571.88 9 Jan
 Instant/hourly Elevation: 571.03 2300/5 Jan

HIGHEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 572.93 | 27 Jan |
| 573.14 | 6 Feb |
| 573.42 | 20 Mar |
| 573.58 | 22 Apr |
| 573.61 | 19 May |
| 573.90 | 20 Jun |
| 573.76 | 21 Jul |
| 573.56 | 2 Aug |
| 573.16 | 27 Sep |
| 573.56 | 4 Oct |
| 573.28 | 18 Nov |
| 573.38 | 24 Dec |

LOWEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 571.88 | 9 Jan |
| 572.60 | 13 Feb |
| 572.80 | 10 Mar |
| 573.18 | 8 Apr |
| 573.24 | 6 May |
| 573.44 | 4 Jun |
| 573.57 | 31 Jul |
| 573.08 | 30 Aug |
| 572.56 | 11 Sep |
| 573.10 | 8 Oct |
| 572.68 | 15 Nov |
| 572.66 | 4 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(ft.) | No. of days<br>above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 573.80         |     |     |     |     |     | 7   |     |     |     |     |     |     | 573.80         | 7                          |
| 573.60         |     |     |     |     | 1   | 16  | 22  |     |     |     |     |     | 573.60         | 46                         |
| 573.40         |     |     | 1   | 9   | 15  | 7   |     |     |     | 7   |     |     | 573.40         | 110                        |
| 573.20         |     |     | 12  | 20  | 15  |     |     | 16  |     |     |     |     | 573.20         | 204                        |
| 573.00         |     | 6   | 7   | 1   |     |     |     | 10  |     | 21  | 5   | 11  | 573.00         | 264                        |
| 572.80         | 1   | 6   | 10  |     |     |     |     | 5   | 14  | 3   | 10  | 14  | 572.80         | 309                        |
| 572.60         |     | 11  | 1   |     |     |     |     |     | 14  |     | 11  | 3   | 572.60         | 329                        |
| 572.40         | 10  | 1   |     |     |     |     |     |     | 1   |     | 4   | 3   | 572.40         | 341                        |
| 572.20         | 12  |     |     |     |     |     |     |     | 1   |     |     |     | 572.20         | 353                        |
| 572.00         | 2   |     |     |     |     |     |     |     |     |     |     |     | 572.00         | 355                        |
| 571.80         | 2   |     |     |     |     |     |     |     |     |     |     |     | 571.80         | 357                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 3063: Cleveland, Ohio on Lake Erie

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 572.34  | /       | 572.87  | 573.21  | 573.33  | 573.51  | 573.73  | 573.51  | 573.10  | 573.32  | 573.11  | 573.28  |
| 2    | 572.43  | /       | 572.88  | 573.24  | 573.41  | 573.64  | 573.69  | 573.56  | 573.10  | 573.31  | 573.27  | 573.06  |
| 3    | 572.45  | /       | 572.94  | 573.34  | 573.32  | 573.51  | 573.70  | 573.53  | 573.09  | 573.26  | 573.07  | 572.78  |
| 4    | 572.47  | /       | 572.90  | 573.30  | 573.35  | 573.44  | 573.59  | 573.49  | 573.02  | 573.56  | 573.26  | 572.66  |
| 5    | 572.04  | 572.76* | 572.90  | 573.30  | 573.28  | 573.58  | 573.57  | 573.46  | 573.02  | 573.45  | 573.24  | 573.05  |
| 6    | 572.18  | 573.14  | 572.91  | 573.25  | 573.24  | 573.66  | 573.59  | 573.46  | 573.05  | 573.45  | 573.16  | 572.86  |
| 7    | 572.38  | 573.04  | 572.89  | 573.26  | 573.36  | 573.58  | 573.58  | 573.45  | 573.03  | 573.26  | 573.14  | 572.91  |
| 8    | 572.27  | 572.79  | 572.89  | 573.18  | 573.40  | 573.59  | 573.60  | 573.47  | 572.88  | 573.10  | 573.16  | 573.38  |
| 9    | 571.88  | 572.70  | 572.95  | 573.34  | 573.46  | 573.62  | 573.71  | 573.43  | 572.86  | 573.51  | 572.93  | 573.24  |
| 10   | 572.26  | 572.74  | 572.80  | 573.36  | 573.40  | 573.57  | 573.65  | 573.46  | 572.75  | 573.49  | 573.13  | 573.06  |
| 11   | 572.24  | 572.77  | 572.81  | 573.32  | 573.38  | 573.68  | 573.70  | 573.49  | 572.56  | 573.27  | 573.12  | 573.05  |
| 12   | 572.00  | 572.69  | 573.17  | 573.30  | 573.42  | 573.79  | 573.75  | 573.43  | 572.89  | 573.23  | 572.97  | 573.14  |
| 13   | 572.51  | 572.60  | 573.17  | 573.32  | 573.39  | 573.83  | 573.67  | 573.48  | 572.86  | 573.39  | 573.08  | 573.24  |
| 14   | 572.41  | 572.70  | 573.18  | 573.39  | 573.34  | 573.83  | 573.70  | 573.38  | 572.90  | 573.12  | 572.74  | 572.79  |
| 15   | 572.31  | 572.69  | 573.13  | 573.26  | 573.34  | 573.81  | 573.70  | 573.33  | 573.05  | 573.25  | 572.68  | 573.06  |
| 16   | 572.35  | 572.79  | 573.21  | 573.36  | 573.34  | 573.76  | 573.68  | 573.34  | 572.98  | 573.29  | 572.77  | 573.15  |
| 17   | 572.24  | 572.82  | 573.22  | 573.44  | 573.37  | 573.86  | 573.72  | 573.39  | 572.88  | 573.49  | 572.78  | 573.18  |
| 18   | 572.33  | 572.76  | 573.22  | 573.39  | 573.35  | 573.78  | 573.68  | 573.44  | 572.81  | 573.37  | 573.28  | 573.16  |
| 19   | 572.52  | 572.79  | 573.08  | 573.35  | 573.61  | 573.79  | 573.72  | 573.45  | 572.89  | 573.32  | 572.96  | 573.14  |
| 20   | 572.52  | 572.83  | 573.42  | 573.41  | 573.55  | 573.90  | 573.73  | 573.39  | 572.87  | 573.23  | 572.91  | 573.21  |
| 21   | 572.39  | 573.04  | 573.31  | 573.42  | 573.56  | 573.84  | 573.76  | 573.33  | 572.93  | 573.21  | 573.07  | 573.21  |
| 22   | 572.34  | 573.05  | 573.23  | 573.58  | 573.57  | 573.73  | 573.69  | 573.42  | 572.86  | 573.24  | 572.87  | 572.98  |
| 23   | 572.57  | 572.82  | 573.20  | 573.48  | 573.53  | 573.74  | 573.67  | 573.29  | 572.90  | 573.26  | 572.81  | 573.02  |
| 24   | 572.60  | 572.96  | 573.33  | 573.44  | 573.54  | 573.83  | 573.63  | 573.30  | 572.95  | 573.41  | 572.81  | 573.38  |
| 25   | 572.28  | 572.95  | 573.26  | 573.40  | 573.54  | 573.74  | 573.59  | 573.20  | 573.08  | 573.34  | 572.85  | 573.21  |
| 26   | 572.54  | 573.07  | 573.23  | 573.41  | 573.55  | 573.70  | 573.60  | 573.12  | 573.03  | 573.32  | 573.10  | 573.22  |
| 27   | 572.93* | 573.04  | 573.30  | 573.46  | 573.56  | 573.62  | 573.65  | 573.27  | 573.16  | 573.24  | 572.98  | 573.24  |
| 28   | /       | 572.83  | 573.26  | 573.46  | 573.53  | 573.68  | 573.60  | 573.26  | 573.13  | 573.22  | 572.87  | 573.13  |
| 29   | /       |         | 573.23  | 573.32  | 573.50  | 573.73  | 573.65  | 573.15  | 573.10  | 573.16  | 572.96  | 573.12  |
| 30   | /       |         | 573.20  | 573.38  | 573.46  | 573.72  | 573.61  | 573.08  | 573.08  | 573.33  | 573.23  | 573.23  |
| 31   | /       |         | 573.29  |         | 573.48  |         | 573.57  | 573.12  |         | 573.23  |         | 573.15  |
| MEAN | 572.36  | 572.85  | 573.11  | 573.36  | 573.43  | 573.70  | 573.66  | 573.37  | 572.96  | 573.31  | 573.01  | 573.11  |
| MAX. | 573.15  | 573.69  | 573.59  | 573.76  | 573.89  | 574.41  | 574.00  | 574.05  | 573.57  | 574.72  | 573.98  | 573.86  |
| MIN. | 0500/27 | 0300/07 | 1400/20 | 0500/22 | 0100/02 | 0300/24 | 0100/12 | 1600/01 | 1100/29 | 2118/05 | 2000/18 | 1800/08 |
|      | 571.03  | 572.17  | 572.10  | 572.70  | 572.58  | 573.28  | 573.08  | 572.64  | 572.26  | 572.68  | 572.39  | 572.19  |
|      | 2300/05 | 1900/07 | 0600/11 | 0400/08 | 1800/06 | 1700/01 | 0800/08 | 0500/27 | 0600/11 | 2300/14 | 0100/15 | 1800/03 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 573.19

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 3079: Marblehead, Ohio on Lake Erie

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST  
 Monthly mean elevation: 573.73 Jun  
 Daily mean elevation: 574.01 1 Dec  
 Instant/hourly Elevation: 574.80 2400/6 Feb

LOWEST  
 Monthly mean elevation: 572.30 Jan  
 Daily mean elevation: 571.38 5 Jan  
 Instant/hourly Elevation: 569.74 2300/5 Jan

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 572.82 | 24 Jan |
| 573.67 | 6 Feb  |
| 573.54 | 12 Mar |
| 573.67 | 4 Apr  |
| 573.73 | 9 May  |
| 573.93 | 15 Jun |
| 573.90 | 11 Jul |
| 573.65 | 19 Aug |
| 573.22 | 27 Sep |
| 573.76 | 10 Oct |
| 573.79 | 30 Nov |
| 574.01 | 1 Dec  |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 571.38 | 5 Jan  |
| 572.42 | 13 Feb |
| 572.51 | 6 Mar  |
| 573.27 | 15 Apr |
| 573.25 | 5 May  |
| 573.47 | 4 Jun  |
| 573.51 | 29 Jul |
| 572.98 | 26 Aug |
| 572.36 | 11 Sep |
| 572.51 | 14 Oct |
| 572.28 | 9 Nov  |
| 571.89 | 4 Dec  |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(ft.) | No. of days
above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 574.00 | | | | | | | | | | | | | 574.00 | 1 |
| 573.80 | | | | | | 9 | 3 | | | | | 1 | 573.80 | 13 |
| 573.60 | | 1 | | 3 | 5 | 16 | 18 | 1 | | 3 | 1 | 1 | 573.60 | 62 |
| 573.40 | | | 3 | 12 | 17 | 5 | 10 | 14 | | 5 | 1 | 1 | 573.40 | 130 |
| 573.20 | | 1 | 13 | 15 | 9 | | | 10 | 1 | 12 | 4 | 6 | 573.20 | 201 |
| 573.00 | | 5 | 5 | | | | | 5 | 11 | 8 | 8 | 6 | 573.00 | 249 |
| 572.80 | 1 | 8 | 6 | | | | | 1 | 12 | 2 | 6 | 6 | 572.80 | 291 |
| 572.60 | 4 | 8 | 2 | | | | | | 4 | | 6 | 4 | 572.60 | 319 |
| 572.40 | 6 | 5 | 2 | | | | | | 1 | 1 | 2 | 2 | 572.40 | 338 |
| 572.20 | 14 | | | | | | | | 1 | | 2 | | 572.20 | 355 |
| 572.00 | 2 | | | | | | | | | | | 1 | 572.00 | 358 |
| 571.80 | 1 | | | | | | | | | | | 1 | 571.80 | 360 |
| 571.60 | 1 | | | | | | | | | | | | 571.60 | 361 |
| 571.40 | 1 | | | | | | | | | | | | 571.40 | 362 |
| 571.20 | 1 | | | | | | | | | | | | 571.20 | 363 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 3079: Marblehead, Ohio on Lake Erie

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 572.22 | 572.68 | 572.85 | 573.30 | 573.25 | 573.57 | 573.81 | 573.40 | 573.16 | 573.50 | 573.14 | 574.01 |
| 2 | 572.51 | 572.56 | 572.90 | 573.38 | 573.36 | 573.81 | 573.69 | 573.52 | 573.18 | 573.33 | 573.24 | 573.40 |
| 3 | 572.40 | 572.72 | 573.01 | 573.49 | 573.32 | 573.68 | 573.75 | 573.46 | 573.10 | 573.19 | 572.88 | 572.13 |
| 4 | 572.63 | 572.83 | 572.92 | 573.67 | 573.36 | 573.47 | 573.57 | 573.48 | 572.88 | 573.66 | 573.32 | 571.89 |
| 5 | 571.38 | 572.69 | 572.96 | 573.56 | 573.25 | 573.68 | 573.56 | 573.46 | 572.79 | 573.11 | 573.35 | 572.86 |
| 6 | 571.92 | 573.67 | 572.51 | 573.37 | 573.27 | 573.80 | 573.56 | 573.51 | 572.93 | 573.30 | 573.18 | 572.66 |
| 7 | 572.36* | 573.10 | 572.74 | 573.32 | 573.42 | 573.67 | 573.58 | 573.34 | 572.90 | 573.20 | 573.24 | 572.78 |
| 8 | 572.22 | 572.76 | 572.99 | 573.35 | 573.47 | 573.57 | 573.67 | 573.31 | 572.71 | 572.94 | 573.16 | 573.59 |
| 9 | 571.53 | 572.55 | 573.07 | 573.27 | 573.73 | 573.79 | 573.70 | 573.36 | 572.82 | 573.68 | 572.28 | 573.21 |
| 10 | 572.14 | 572.73 | 572.78 | 573.28 | 573.51 | 573.65 | 573.72 | 573.42 | 572.64 | 573.76 | 573.14 | 572.55 |
| 11 | 572.20 | 572.81 | 572.58 | 573.29 | 573.46 | 573.66 | 573.90 | 573.41 | 572.36 | 573.40 | 573.03 | 572.88 |
| 12 | 571.65 | 572.54 | 573.54 | 573.35 | 573.59 | 573.56 | 573.66 | 573.44 | 572.57 | 573.27 | 572.64 | 572.77 |
| 13 | 572.28 | 572.42 | 573.35 | 573.38 | 573.53 | 573.78 | 573.56 | 573.57 | 572.84 | 573.39 | 572.76 | 573.11 |
| 14 | 572.51* | 572.61 | 573.23 | 573.65 | 573.46 | 573.84 | 573.60 | 573.41 | 573.01 | 572.51 | 572.56 | 572.58 |
| 15 | 572.40 | 572.49 | 573.18 | 573.27 | 573.37 | 573.93 | 573.78 | 573.24 | 573.15 | 572.99 | 572.37 | 573.02 |
| 16 | 572.42 | 572.96 | 573.24 | 573.39 | 573.36 | 573.67 | 573.67 | 573.38 | 573.14 | 573.19 | 572.66 | 573.15 |
| 17 | 572.25 | 572.88 | 573.29 | 573.55 | 573.46 | 573.92 | 573.72 | 573.40 | 573.09 | 573.58 | 572.67 | 573.25 |
| 18 | 572.40 | 572.80 | 573.36 | 573.46 | 573.39 | 573.78 | 573.67 | 573.56 | 572.84 | 573.45 | 573.58 | 572.80 |
| 19 | 572.55 | 572.83 | 572.89 | 573.40 | 573.68 | 573.66 | 573.77 | 573.65 | 572.99 | 573.34 | 573.10 | 572.95 |
| 20 | 572.21 | 572.89 | 573.36 | 573.57 | 573.52 | 573.92 | 573.78 | 573.56 | 572.88 | 573.21 | 573.01 | 573.21 |
| 21 | 572.22 | 573.20 | 573.28 | 573.39 | 573.58 | 573.92 | 573.88 | 573.41 | 573.01 | 573.17 | 572.90 | 573.23 |
| 22 | 572.25 | 573.12 | 573.14 | 573.63 | 573.59 | 573.71 | 573.80 | 573.55 | 572.98 | 573.24 | 572.85 | 572.86 |
| 23 | 572.61 | 572.74 | 573.17 | 573.51 | 573.56 | 573.77 | 573.75 | 573.08 | 572.79* | 573.24 | 572.78 | 572.96 |
| 24 | 572.82 | 573.02 | 573.48 | 573.52 | 573.58 | 573.81 | 573.68 | 573.27 | 572.96 | 573.60 | 572.57 | 573.69 |
| 25 | 572.37 | 573.00 | 573.33 | 573.54 | 573.61 | 573.81 | 573.54 | 573.26 | 573.18 | 573.56 | 572.88 | 573.06 |
| 26 | 572.61 | 573.35 | 573.21 | 573.54 | 573.70 | 573.71 | 573.58 | 572.98 | 572.97 | 573.40 | 573.15 | / |
| 27 | 572.26* | 573.14 | 573.27 | 573.57 | 573.62 | 573.57 | 573.68 | 573.19 | 573.22 | 573.07 | 572.84 | / |
| 28 | 572.22 | 572.81 | 573.29 | 573.49 | 573.57 | 573.65 | 573.61 | 573.21 | 573.19 | 573.13 | 572.73 | 572.96* |
| 29 | 572.61 | | 573.25 | 573.32 | 573.55 | 573.79 | 573.51 | 573.18 | 573.08 | 573.02 | 572.90 | 573.11 |
| 30 | 572.50 | | 573.22 | 573.45 | 573.48 | 573.81 | 573.57 | 573.13 | 572.98 | 573.34 | 573.79 | 573.21 |
| 31 | 572.58 | | 573.46 | | 573.47 | | 573.61 | 573.19 | | 573.30 | | 573.19 |
| MEAN | 572.30 | 572.85 | 573.12 | 573.44 | 573.49 | 573.73 | 573.68 | 573.37 | 572.94 | 573.29 | 572.96 | 573.00 |
| MAX. | 573.11 | 574.80 | 574.07 | 574.05 | 574.01 | 574.51 | 574.27 | 574.08 | 573.89 | 574.31 | 574.60 | 574.50 |
| | 2400/26 | 2400/06 | 1300/11 | 2100/14 | 2000/19 | 0200/17 | 2100/11 | 0900/27 | 0200/16 | 0200/10 | 1700/18 | 0200/01 |
| MIN. | 569.74 | 571.59 | 571.15 | 572.81 | 572.76 | 572.89 | 573.05 | 572.48 | 571.76 | 571.99 | 571.34 | 570.96 |
| | 2300/05 | 1800/07 | 0400/11 | 1000/11 | 0100/07 | 2300/12 | 0200/26 | 2300/26 | 0500/11 | 2300/14 | 1800/09 | 1800/03 |

* Indicates Less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL MEAN: 573.18

ANNUAL SUMMARY OF LEVELS, 1986
Station 3085: Toledo, Ohio on Lake Erie

INTERNATIONAL
GREAT LAKES
DATUM (1955)

HIGHEST
Monthly mean elevation: 573.72 Jun
Daily mean elevation: 575.10 1 Dec
Instant/hourly Elevation: 576.22 0200/7 Feb

LOWEST
Monthly mean elevation: 572.33 Jan
Daily mean elevation: 571.14 5 Jan
Instant/hourly Elevation: 569.04 0100/6 Jan

HIGHEST DAILY MEAN
FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 573.13 | 24 Jan |
| 574.13 | 6 Feb |
| 574.03 | 12 Mar |
| 574.08 | 4 Apr |
| 574.08 | 9 May |
| 574.05 | 21 Jun |
| 574.10 | 11 Jul |
| 573.80 | 19 Aug |
| 573.33 | 17 Sep |
| 574.13 | 10 Oct |
| 574.38 | 30 Nov |
| 575.10 | 1 Dec |

LOWEST DAILY MEAN
FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 571.14 | 5 Jan |
| 572.48 | 13 Feb |
| 572.21 | 6 Mar |
| 572.96 | 9 Apr |
| 572.80 | 1 May |
| 573.27 | 12 Jun |
| 573.30 | 29 Jul |
| 572.79 | 23 Aug |
| 572.17 | 11 Sep |
| 571.92 | 14 Oct |
| 571.56 | 9 Nov |
| 571.23 | 4 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(ft.) | No. of days<br>above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 575.00         |     |     |     |     |     |     |     |     |     |     |     |     | 575.00         | 1                          |
| 574.80         |     |     |     |     |     |     |     |     |     |     |     | 1   | 574.80         | 1                          |
| 574.60         |     |     |     |     |     |     |     |     |     |     |     |     | 574.60         | 1                          |
| 574.40         |     |     |     |     |     |     |     |     |     |     |     |     | 574.40         | 1                          |
| 574.20         |     |     |     |     |     |     |     |     |     |     |     |     | 574.20         | 2                          |
| 574.00         |     | 1   | 1   | 2   | 1   | 2   | 1   |     |     | 1   |     |     | 574.00         | 11                         |
| 573.80         |     |     |     |     | 1   | 8   | 4   |     |     | 4   | 1   | 2   | 573.80         | 31                         |
| 573.60         |     | 1   |     | 7   | 8   | 10  | 12  | 5   |     | 2   |     | 1   | 573.60         | 77                         |
| 573.40         |     | 1   | 4   | 9   | 13  | 9   | 12  | 7   |     | 4   | 2   |     | 573.40         | 138                        |
| 573.20         |     | 1   | 8   | 6   | 5   | 1   | 2   | 10  | 6   | 8   | 5   | 8   | 573.20         | 198                        |
| 573.00         | 1   | 5   | 10  | 5   | 2   |     |     | 7   | 9   | 6   | 4   | 4   | 573.00         | 251                        |
| 572.80         |     | 9   | 3   | 1   |     |     |     | 1   | 8   | 3   | 4   | 4   | 572.80         | 284                        |
| 572.60         | 5   | 8   | 1   |     | 1   |     |     | 1   | 4   | 2   | 7   | 4   | 572.60         | 317                        |
| 572.40         | 9   | 2   | 2   |     |     |     |     |     |     |     | 2   | 3   | 572.40         | 336                        |
| 572.20         | 8   |     | 2   |     |     |     |     |     | 1   |     | 2   | 1   | 572.20         | 349                        |
| 572.00         | 3   |     |     |     |     |     |     |     |     |     | 2   |     | 572.00         | 356                        |
| 571.80         | 1   |     |     |     |     |     |     |     | 2   |     | 1   | 1   | 571.80         | 358                        |
| 571.60         | 3   |     |     |     |     |     |     |     |     | 1   |     |     | 571.60         | 361                        |
| 571.40         |     |     |     |     |     |     |     |     |     |     |     |     | 571.40         | 363                        |
| 571.20         |     |     |     |     |     |     |     |     |     |     | 1   | 1   | 571.20         | 364                        |
| 571.00         | 1   |     |     |     |     |     |     |     |     |     |     | 1   | 571.00         | 365                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 3085: Toledo, Ohio on Lake Erie

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 572.26  | 572.76  | 572.88  | 573.25  | 572.80  | 573.56  | 573.93  | 573.28  | 573.20  | 573.78  | 573.18  | 575.10  |
| 2    | 572.59  | 572.62  | 572.96  | 573.51  | 573.22  | 574.02  | 573.59  | 573.37  | 573.30  | 573.37  | 573.21  | 573.75  |
| 3    | 572.42  | 572.82  | 573.06  | 573.67  | 573.25  | 573.85  | 573.73  | 573.29  | 573.32  | 573.11  | 572.69  | 571.57  |
| 4    | 572.72  | 572.96  | 572.95  | 574.08  | 573.28  | 573.46  | 573.45  | 573.43  | 572.91  | 573.82  | 573.43  | 571.23  |
| 5    | 571.14  | 572.76  | 573.04  | 573.74  | 573.13  | 573.80  | 573.52  | 573.43  | 572.68  | 572.72  | 573.50  | 572.76  |
| 6    | 571.63  | 574.13  | 572.21  | 573.30  | 573.19  | 574.00  | 573.48  | 573.59  | 572.97  | 573.09  | 573.23  | 572.57  |
| 7    | 572.35  | 573.72  | 572.57  | 573.28  | 573.49  | 573.73  | 573.52  | 573.27  | 572.91  | 573.13  | 573.34  | 572.76  |
| 8    | 572.31  | 572.97  | 573.07  | 573.21  | 573.61  | 573.56  | 573.65  | 573.19  | 572.70  | 572.79  | 573.13  | 573.85  |
| 9    | 571.68  | 572.67  | 573.13  | 572.96  | 574.08  | 573.99  | 573.66  | 573.29  | 572.91  | 573.86  | 571.56  | 573.20  |
| 10   | 572.21  | 572.79  | 572.80  | 573.12  | 573.69  | 573.70  | 573.75  | 573.32  | 572.54  | 574.13  | 573.19  | 572.07  |
| 11   | 572.30  | 572.84  | 572.34  | 573.17  | 573.56  | 573.63  | 574.10  | 573.28  | 572.17  | 573.58  | 572.97  | 572.78  |
| 12   | 571.61  | 572.61  | 574.03  | 573.50  | 573.79  | 573.27  | 573.57  | 573.46  | 572.19  | 573.33  | 572.29  | 572.41  |
| 13   | 572.19  | 572.48  | 573.54  | 573.49  | 573.68  | 573.66  | 573.36  | 573.64  | 572.80  | 573.35  | 572.41  | 573.03  |
| 14   | 572.56  | 572.72  | 573.29  | 574.04  | 573.55  | 573.85  | 573.48  | 573.41  | 573.13  | 571.92  | 572.46  | 572.39  |
| 15   | 572.51  | 572.54  | 573.15  | 573.20  | 573.41  | 573.93  | 573.87  | 573.09  | 573.18  | 572.82  | 572.13  | 573.07  |
| 16   | 572.52  | 573.06  | 573.28  | 573.40  | 573.21  | 573.49  | 573.65  | 573.38  | 573.28  | 573.15  | 572.66  | 573.21  |
| 17   | 572.33  | 572.92  | 573.37  | 573.65  | 573.51  | 573.95  | 573.69  | 573.46  | 573.33  | 573.70  | 572.66  | 573.35  |
| 18   | 572.50  | 572.83  | 573.58  | 573.55  | 573.46  | 573.79  | 573.58  | 573.63  | 572.85  | 573.56  | 573.90  | 572.60  |
| 19   | 572.54  | 572.89  | 572.55  | 573.40  | 573.77  | 573.55  | 573.67  | 573.80  | 573.09  | 573.39  | 573.31  | 572.82  |
| 20   | 572.08  | 573.00  | 573.34  | 573.63  | 573.51  | 573.93  | 573.79  | 573.67  | 572.87  | 573.21  | 573.07  | 573.27  |
| 21   | 572.68  | 573.16  | 573.26  | 573.19  | 573.51  | 574.05  | 573.95  | 573.49  | 573.10  | 573.16  | 572.78  | 573.28  |
| 22   | 572.12  | 573.28  | 573.05  | 573.57  | 573.60  | 573.59  | 573.81  | 573.66  | 573.01  | 573.26  | 572.90  | 572.76  |
| 23   | 572.70  | 572.74  | 573.05  | 573.56  | 573.58  | 573.69  | 573.76  | 572.79  | 572.77  | 573.24  | 572.80  | 572.91  |
| 24   | 573.13  | 573.06  | 573.58  | 573.57  | 573.62  | 573.60  | 573.64  | 573.19  | 573.01  | 573.81  | 572.40  | 573.96  |
| 25   | 572.33  | 573.03  | 573.29  | 573.64  | 573.73  | 573.79  | 573.42  | 573.26  | 573.30  | 573.85  | 572.96  | 572.97  |
| 26   | 572.56  | 573.56  | 573.12  | 573.66  | 573.91  | 573.64  | 573.55  | 572.91  | 572.91  | 573.50  | 573.21  | 573.22  |
| 27   | 571.99  | 573.20  | 573.22  | 573.70  | 573.72  | 573.41  | 573.67  | 573.04  | 573.17  | 572.97  | 572.79  | 573.28  |
| 28   | 572.28  | 572.81  | 573.24  | 573.45  | 573.60  | 573.51  | 573.52  | 573.04  | 573.21  | 573.09  | 572.66  | 572.96  |
| 29   | 572.68  |         | 573.18  | 573.14  | 573.57  | 573.70  | 573.30  | 573.16  | 573.04  | 572.93  | 572.92  | 573.16  |
| 30   | 572.57  |         | 573.15  | 573.46  | 573.45  | 573.90  | 573.48  | 573.16  | 572.86  | 573.37  | 574.38  | 573.27  |
| 31   | 572.63  |         | 573.58  |         | 573.38  |         | 573.62  | 573.27  |         | 573.49  |         | 573.25  |
| MEAN | 572.33  | 572.96  | 573.12  | 573.47  | 573.51  | 573.72  | 573.64  | 573.33  | 572.96  | 573.31  | 572.94  | 572.99  |
| MAX. | 573.61  | 576.22  | 574.83  | 574.97  | 574.79  | 574.89  | 574.59  | 574.80  | 574.16  | 575.01  | 575.66  | 575.81  |
| MIN. | 2000/24 | 0200/07 | 1400/11 | 1900/14 | 0900/09 | 0500/17 | 2200/11 | 1100/27 | 2300/13 | 1600/10 | 2400/30 | 0400/01 |
|      | 569.04  | 571.49  | 570.38  | 572.08  | 571.94  | 572.35  | 572.61  | 571.83  | 570.70  | 570.97  | 570.18  | 569.96  |
|      | 0100/06 | 2100/07 | 0300/11 | 0900/11 | 1400/01 | 0100/13 | 0700/14 | 0200/27 | 1200/12 | 2300/14 | 1600/09 | 2000/03 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 573.19

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 3087: Monroe, Michigan on Lake Erie

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST  
 Monthly mean elevation: 573.73 Jun  
 Daily mean elevation: 574.75 1 Dec  
 Instant/hourly Elevation: 575.27 0900/1 Dec

LOWEST  
 Monthly mean elevation: 572.23 Jan  
 Daily mean elevation: 571.18 5 Jan  
 Instant/hourly Elevation: 569.38 0100/6 Jan

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 572.71 | 4 Jan  |
| 573.53 | 26 Feb |
| 573.85 | 12 Mar |
| 574.00 | 14 Apr |
| 573.92 | 9 May  |
| 574.05 | 21 Jun |
| 574.10 | 11 Jul |
| 573.74 | 19 Aug |
| 573.33 | 17 Sep |
| 573.98 | 10 Oct |
| 574.04 | 30 Nov |
| 574.75 | 1 Dec  |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 571.18 | 5 Jan  |
| 572.49 | 13 Feb |
| 572.21 | 6 Mar  |
| 572.88 | 9 Apr  |
| 572.92 | 1 May  |
| 573.40 | 12 Jun |
| 573.34 | 29 Jul |
| 572.86 | 23 Aug |
| 572.25 | 12 Sep |
| 572.13 | 14 Oct |
| 572.44 | 24 Nov |
| 571.49 | 4 Dec  |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(ft.) | No. of days
above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 574.60 | | | | | | | | | | | | 1 | 574.60 | 1 |
| 574.40 | | | | | | | | | | | | | 574.40 | 1 |
| 574.20 | | | | | | | | | | | | | 574.20 | 1 |
| 574.00 | | | | | | 1 | 1 | | | | 1 | | 574.00 | 4 |
| 573.80 | | | 1 | 2 | 2 | 11 | 4 | | | 1 | | | 573.80 | 25 |
| 573.60 | | | | 5 | 7 | 10 | 16 | 3 | | 3 | | 3 | 573.60 | 72 |
| 573.40 | | 1 | 4 | 12 | 15 | 7 | 9 | 11 | | 2 | 1 | | 573.40 | 134 |
| 573.20 | | 1 | 10 | 5 | 5 | 1 | 1 | 10 | 6 | 3 | 1 | 8 | 573.20 | 185 |
| 573.00 | | 5 | 7 | 5 | 1 | | | 3 | 11 | 4 | 2 | 5 | 573.00 | 228 |
| 572.80 | | 8 | 3 | 1 | 1 | | | 4 | 7 | 2 | 5 | 6 | 572.80 | 265 |
| 572.60 | 2 | 5 | 1 | | | | | | 4 | 1 | 3 | 3 | 572.60 | 284 |
| 572.40 | 2 | 4 | 1 | | | | | | 1 | | 1 | 2 | 572.40 | 295 |
| 572.20 | 2 | | 2 | | | | | | 1 | | | | 572.20 | 300 |
| 572.00 | | | | | | | | | | 1 | | 1 | 572.00 | 302 |
| 571.80 | | | | | | | | | | | | 1 | 571.80 | 303 |
| 571.60 | 1 | | | | | | | | | | | | 571.60 | 304 |
| 571.40 | | | | | | | | | | | | 1 | 571.40 | 305 |
| 571.20 | | | | | | | | | | | | | 571.20 | 305 |
| 571.00 | 1 | | | | | | | | | | | | 571.00 | 306 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 3087: Monroe, Michigan on Lake Erie

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 572.28 | 572.72 | / | 573.18* | 572.92 | 573.48 | 573.96 | 573.31 | 573.20 | 573.70 | / | 574.75 |
| 2 | 572.55 | 572.59 | / | 573.43 | 573.16 | 573.82 | 573.58 | 573.45 | 573.28 | 573.35 | / | 573.71 |
| 3 | 572.40 | 572.71* | 572.92* | 573.61 | 573.22 | 573.84 | 573.74 | 573.33 | 573.33 | 573.18 | / | 571.82 |
| 4 | 572.71 | / | 572.93 | 573.87 | 573.38 | 573.49 | 573.61 | 573.48 | 572.97 | 573.71 | / | 571.49 |
| 5 | 571.18 | 572.70* | 573.03 | 573.69 | 573.26 | 573.75 | 573.62 | 573.49 | 572.70 | 572.74 | / | 572.82 |
| 6 | 571.63 | 573.21* | 572.21 | 573.36 | 573.28 | 573.91 | 573.56 | 573.58 | 572.96 | 573.10 | / | 572.66 |
| 7 | / | / | 572.44 | 573.34 | 573.45 | 573.74 | 573.55 | 573.33 | 572.91 | 573.19 | / | 572.76 |
| 8 | / | / | 573.06 | 573.19 | 573.52 | 573.54 | 573.68 | 573.24 | 572.72 | 572.94 | / | 573.76 |
| 9 | / | / | 573.12 | 572.88 | 573.92 | 573.89 | 573.66 | 573.34 | 572.95 | 573.67 | / | 573.18 |
| 10 | / | 572.86* | 572.91 | 573.05 | 573.61 | 573.74 | 573.77 | 573.38 | 572.74 | 573.98 | / | 572.19 |
| 11 | / | 572.81 | 572.37 | 573.16 | 573.54 | 573.69 | 574.10 | 573.31 | 572.41 | 573.55 | / | 572.90 |
| 12 | / | 572.59 | 573.85 | 573.44 | 573.72 | 573.40 | 573.66 | 573.46 | 572.25 | 573.37 | / | 572.45 |
| 13 | / | 572.49 | 573.46 | 573.43 | 573.64 | 573.72 | 573.44 | 573.64 | 572.80 | 573.34 | / | 573.02 |
| 14 | / | 572.71 | 573.26 | 574.00* | 573.60 | 573.84 | 573.49 | 573.45 | 573.05 | 572.13 | / | 572.55 |
| 15 | / | 572.54 | 573.17 | 573.25 | 573.45 | 573.95 | 573.88 | 573.23 | 573.11 | 572.88 | / | 573.08 |
| 16 | / | 573.03 | 573.25 | 573.34 | 573.31 | 573.57 | 573.71 | 573.43 | 573.11 | 573.15 | / | 573.22 |
| 17 | / | 572.89 | 573.35 | 573.54 | 573.56 | 573.93 | 573.71 | 573.43 | 573.33 | 573.46* | 572.70* | 573.33 |
| 18 | / | 572.81 | 573.57 | 573.52 | 573.43 | 573.83 | 573.64 | 573.52 | 572.85 | / | 573.54 | 572.66 |
| 19 | / | 572.84 | 572.72 | 573.45 | 573.68 | 573.65 | 573.76 | 573.74 | 573.04 | / | 573.25 | 572.89 |
| 20 | / | 572.93 | 573.20 | 573.55 | 573.50 | 573.90 | 573.75 | 573.60 | 572.85 | / | 573.08 | 573.25 |
| 21 | / | 573.04 | 573.27* | 573.15 | 573.53 | 574.05 | 573.92 | 573.44 | 573.04 | / | 572.76 | 573.25 |
| 22 | / | 573.19 | 573.20 | 573.47 | 573.60 | 573.68 | 573.84 | 573.63 | 573.06 | / | 572.91 | 572.84 |
| 23 | / | 572.70 | 573.10 | 573.53 | 573.58 | 573.75 | 573.80 | 572.86 | 572.82 | / | 572.83 | 572.94 |
| 24 | / | 573.01 | 573.49 | 573.60 | 573.63 | 573.58 | 573.71 | 573.18 | 573.01 | / | 572.44 | 573.80 |
| 25 | / | 573.00 | 573.40 | 573.63 | 573.68 | 573.81 | 573.52 | 573.32 | 573.32 | / | 572.93 | 572.98 |
| 26 | / | 573.53 | 573.24 | 573.62 | 573.83 | 573.73 | 573.53 | 572.98 | 573.01 | / | 573.12 | 573.21 |
| 27 | / | 573.13 | 573.22 | 573.67 | 573.71 | 573.52 | 573.68 | 572.99 | 573.21 | / | 572.83 | 573.26 |
| 28 | / | 572.84* | 573.36 | 573.51 | 573.58 | 573.55 | 573.60 | 572.99 | 573.22 | / | 572.72 | 573.04 |
| 29 | / | / | 573.31 | 573.23 | 573.57 | 573.68 | 573.34 | 573.15 | 573.15 | / | 572.89 | 573.20 |
| 30 | 572.51* | / | 573.22 | 573.48 | 573.49 | 573.87 | 573.50 | 573.18 | 573.02 | / | 574.04 | 573.25 |
| 31 | 572.61 | / | 573.46* | / | 573.45 | / | 573.66 | 573.26 | / | / | / | 573.25 |
| MEAN | 572.23 | 572.87 | 573.14 | 573.44 | 573.51 | 573.73 | 573.68 | 573.35 | 572.98 | 573.26 | 573.00 | 573.02 |
| MAX. | 572.99 | 574.29 | 574.60 | 574.75 | 574.52 | 574.82 | 574.57 | 574.56 | 574.10 | 574.84 | 575.01 | 575.27 |
| | 1300/04 | 2200/26 | 1400/11 | 1900/14 | 0800/09 | 0400/17 | 2100/11 | 1100/27 | 1200/30 | 1600/10 | 2400/30 | 0900/01 |
| MIN. | 569.38 | 571.95 | 570.42 | 572.23 | 572.23 | 572.42 | 572.51 | 571.84 | 570.80 | 571.23 | 571.87 | 570.26 |
| | 0100/06 | 0300/23 | 0600/11 | 0900/11 | 1600/01 | 2200/12 | 0300/26 | 0100/27 | 1100/12 | 2200/14 | 2300/20 | 1900/03 |

* Indicates Less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL MEAN: 573.18

ANNUAL SUMMARY OF LEVELS, 1986
 Station 3090: Fermi Power Plant, Stony Point, Michigan on Lake Erie

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

| HIGHEST | | | | LOWEST | | | |
|---------------------------|--------|------------|--|---------------------------|--------|------------|--|
| Monthly mean elevation: | 573.66 | Jun | | Monthly mean elevation: | 572.30 | Jan | |
| Daily mean elevation: | 574.58 | 1 Dec | | Daily mean elevation: | 571.33 | 5 Jan | |
| Instant/hourly Elevation: | 575.73 | 0200/7 Feb | | Instant/hourly Elevation: | 569.54 | 0100/6 Jan | |

HIGHEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 572.97 | 24 Jan |
| 573.83 | 6 Feb |
| 573.74 | 12 Mar |
| 573.82 | 14 Apr |
| 573.79 | 9 May |
| 573.97 | 21 Jun |
| 573.98 | 11 Jul |
| 573.84 | 10 Aug |
| 573.40 | 25 Sep |
| 574.11 | 10 Oct |
| 573.86 | 30 Nov |
| 574.58 | 1 Dec |

LOWEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 571.33 | 5 Jan |
| 572.46 | 13 Feb |
| 572.23 | 6 Mar |
| 572.85 | 9 Apr |
| 572.89 | 1 May |
| 573.40 | 1 Jun |
| 573.29 | 29 Jul |
| 572.83 | 23 Aug |
| 572.27 | 12 Sep |
| 572.50 | 14 Oct |
| 572.06 | 9 Nov |
| 571.60 | 4 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(ft.) | No. of days<br>above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 574.40         |     |     |     |     |     |     |     |     |     |     |     | 1   | 574.40         | 1                          |
| 574.20         |     |     |     |     |     |     |     |     |     |     |     |     | 574.20         | 1                          |
| 574.00         |     |     |     |     |     |     |     |     |     | 1   |     |     | 574.00         | 2                          |
| 573.80         |     | 1   |     | 1   |     | 5   | 2   | 1   |     | 1   | 1   |     | 573.80         | 14                         |
| 573.60         |     |     | 1   | 2   | 4   | 16  | 13  | 2   |     | 4   |     | 3   | 573.60         | 59                         |
| 573.40         |     | 1   | 3   | 13  | 19  | 8   | 15  | 7   |     | 8   | 2   |     | 573.40         | 135                        |
| 573.20         |     | 1   | 8   | 9   | 5   | 1   | 1   | 12  | 9   | 9   | 5   | 6   | 573.20         | 201                        |
| 573.00         |     | 2   | 10  | 4   | 2   |     |     | 5   | 9   | 5   | 6   | 7   | 573.00         | 251                        |
| 572.80         | 1   | 8   | 5   | 1   | 1   |     |     | 4   | 6   | 2   | 6   | 6   | 572.80         | 291                        |
| 572.60         | 3   | 10  | 1   |     |     |     |     |     | 4   |     | 5   | 4   | 572.60         | 318                        |
| 572.40         | 10  | 5   |     |     |     |     |     |     | 1   | 1   | 4   | 1   | 572.40         | 340                        |
| 572.20         | 8   |     | 3   |     |     |     |     |     | 1   |     |     | 1   | 572.20         | 353                        |
| 572.00         | 4   |     |     |     |     |     |     |     |     |     | 1   |     | 572.00         | 358                        |
| 571.80         | 1   |     |     |     |     |     |     |     |     |     |     | 1   | 571.80         | 360                        |
| 571.60         | 3   |     |     |     |     |     |     |     |     |     |     |     | 571.60         | 363                        |
| 571.40         |     |     |     |     |     |     |     |     |     |     |     | 1   | 571.40         | 364                        |
| 571.20         | 1   |     |     |     |     |     |     |     |     |     |     |     | 571.20         | 365                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 3090: Fermi Power Plant, Stony Point, Michigan on Lake Erie

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 572.26  | 572.69  | 572.82  | 573.25  | 572.89  | 573.40  | 573.87  | 573.26  | 573.13  | 573.76  | 573.19  | 574.58  |
| 2    | 572.54  | 572.55  | 572.92  | 573.38  | 573.13  | 573.68  | 573.54  | 573.40  | 573.21  | 573.46  | 573.18  | 573.68  |
| 3    | 572.38  | 572.71  | 572.97  | 573.53  | 573.16  | 573.76  | 573.67  | 573.28  | 573.25  | 573.36  | 572.88  | 571.86  |
| 4    | 572.67  | 572.87  | 572.91  | 573.75  | 573.36  | 573.45  | 573.60  | 573.42  | 572.94  | 573.89  | 573.31  | 571.60  |
| 5    | 571.33  | 572.67  | 573.02  | 573.60  | 573.25  | 573.66  | 573.54  | 573.42  | 572.67  | 573.12  | 573.44  | 572.82  |
| 6    | 571.70  | 573.83  | 572.23  | 573.33  | 573.28  | 573.80  | 573.52  | 573.54  | 572.90  | 573.12  | 573.20  | 572.69  |
| 7    | 572.28  | 573.33  | 572.39  | 573.29  | 573.41  | 573.67  | 573.50  | 573.32  | 572.84  | 573.27  | 573.28  | 572.79  |
| 8    | 572.26  | 572.80  | 573.04  | 573.16  | 573.41  | 573.50  | 573.59  | 573.46  | 572.71  | 573.07  | 573.24  | 573.70  |
| 9    | 571.73  | 572.57  | 573.07  | 572.85  | 573.79  | 573.81  | 573.60  | 573.79  | 572.91  | 573.76  | 572.06  | 573.16  |
| 10   | 572.18  | 572.70  | 572.90  | 573.01  | 573.53  | 573.65  | 573.69  | 573.84  | 572.75  | 574.11  | 573.28  | 572.27  |
| 11   | 572.31  | 572.77  | 572.35  | 573.15  | 573.46  | 573.62  | 573.98  | 573.35  | 572.45  | 573.59  | 573.01  | 572.94  |
| 12   | 571.73  | 572.57  | 573.74  | 573.38  | 573.61  | 573.41  | 573.62  | 573.40  | 572.27  | 573.41  | 572.47  | 572.48  |
| 13   | 572.09  | 572.46  | 573.39  | 573.37  | 573.56  | 573.66  | 573.43  | 573.58  | 572.77  | 573.41  | 572.42  | 573.02  |
| 14   | 572.49  | 572.67  | 573.20  | 573.82  | 573.54  | 573.77  | 573.44  | 573.39  | 573.01  | 572.50  | 572.76  | 572.62  |
| 15   | 572.44  | 572.51  | 573.12  | 573.21  | 573.42  | 573.89  | 573.80  | 573.20  | 573.13  | 572.89  | 572.41  | 573.06  |
| 16   | 572.45  | 572.97  | 573.20  | 573.31  | 573.30  | 573.53  | 573.64  | 573.34  | 573.21  | 573.18  | 572.77  | 573.18  |
| 17   | 572.32  | 572.85  | 573.30  | 573.46  | 573.47  | 573.84  | 573.64  | 573.35  | 573.35  | 573.51  | 572.70  | 573.30  |
| 18   | 572.45  | 572.77  | 573.51  | 573.46  | 573.37  | 573.75  | 573.58  | 573.39  | 572.97  | 573.48  | 573.50  | 572.66  |
| 19   | 572.38  | 572.81  | 572.77  | 573.42  | 573.56  | 573.60  | 573.68  | 573.63  | 573.04  | 573.37  | 573.24  | 572.89  |
| 20   | 572.04  | 572.87  | 573.14  | 573.48  | 573.44  | 573.83  | 573.68  | 573.52  | 572.91  | 573.23  | 573.14  | 573.22  |
| 21   | 572.66  | 572.97  | 573.26  | 573.13  | 573.50  | 573.97  | 573.80  | 573.33  | 573.04  | 573.22  | 572.79  | 573.22  |
| 22   | 572.18  | 573.14  | 573.21  | 573.42  | 573.56  | 573.63  | 573.74  | 573.55  | 573.11  | 573.28  | 572.92  | 572.84  |
| 23   | 572.60  | 572.66  | 573.11  | 573.49  | 573.52  | 573.69  | 573.71  | 572.83  | 573.03  | 573.27  | 572.85  | 572.91  |
| 24   | 572.97  | 572.97  | 573.46  | 573.56  | 573.56  | 573.48  | 573.63  | 573.12  | 573.15  | 573.66  | 572.50  | 573.73  |
| 25   | 572.53  | 572.96  | 573.38  | 573.56  | 573.60  | 573.73  | 573.49  | 573.28  | 573.40  | 573.72  | 572.93  | 572.97  |
| 26   | 572.42  | 573.45  | 573.23  | 573.57  | 573.74  | 573.69  | 573.52  | 572.98  | 573.08  | 573.52  | 573.11  | 573.20  |
| 27   | 571.83  | 573.08  | 573.18  | 573.62  | 573.62  | 573.51  | 573.62  | 572.91  | 573.35  | 573.09  | 572.86  | 573.24  |
| 28   | 572.25  | 572.76  | 573.33  | 573.47  | 573.53  | 573.52  | 573.57  | 572.96  | 573.31  | 573.21  | 572.77  | 573.04  |
| 29   | 572.62  |         | 573.30  | 573.24  | 573.52  | 573.62  | 573.29  | 573.13  | 573.29  | 573.00  | 572.93  | 573.19  |
| 30   | 572.51  |         | 573.20  | 573.48  | 573.43  | 573.77  | 573.46  | 573.13  | 573.34  | 573.33  | 573.86  | 573.23  |
| 31   | 572.57  |         | 573.47  |         | 573.41  |         | 573.60  | 573.19  |         | 573.54  |         | 573.23  |
| MEAN | 572.30  | 572.86  | 573.10  | 573.39  | 573.45  | 573.66  | 573.61  | 573.33  | 573.02  | 573.37  | 572.97  | 573.01  |
| MAX. | 573.31  | 575.73  | 574.54  | 574.60  | 574.34  | 574.65  | 574.40  | 574.41  | 573.98  | 574.68  | 574.79  | 575.07  |
| MIN. | 2000/24 | 0200/07 | 1400/11 | 1900/14 | 0800/09 | 0400/17 | 1900/11 | 1100/27 | 1300/30 | 1700/10 | 2400/30 | 0900/01 |
|      | 569.54  | 571.21  | 570.48  | 572.28  | 572.37  | 572.39  | 572.69  | 571.87  | 570.87  | 571.84  | 570.71  | 570.39  |
|      | 0100/06 | 2000/07 | 0600/11 | 0900/11 | 1600/01 | 2400/12 | 0600/14 | 0100/27 | 1100/12 | 2400/14 | 2000/09 | 2000/03 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 573.17

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 4020: Gibraltar, Michigan on Detroit River

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

|                           |        |            |  |                           |        |            |  |
|---------------------------|--------|------------|--|---------------------------|--------|------------|--|
| HIGHEST                   |        |            |  | LOWEST                    |        |            |  |
| Monthly mean elevation:   | 573.85 | Jun        |  | Monthly mean elevation:   | 572.57 | Jan        |  |
| Daily mean elevation:     | 574.60 | 1 Dec      |  | Daily mean elevation:     | 571.83 | 5 Jan      |  |
| Instant/hourly Elevation: | 575.78 | 0200/7 Feb |  | Instant/hourly Elevation: | 570.38 | 0200/6 Jan |  |

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 573.15 | 24 Jan |
| 573.89 | 6 Feb  |
| 573.82 | 12 Mar |
| 573.95 | 14 Apr |
| 573.90 | 9 May  |
| 574.16 | 21 Jun |
| 574.18 | 11 Jul |
| 573.85 | 19 Aug |
| 573.61 | 25 Sep |
| 574.06 | 10 Oct |
| 573.93 | 30 Nov |
| 574.60 | 1 Dec  |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 571.83 | 5 Jan  |
| 572.77 | 13 Feb |
| 572.39 | 6 Mar  |
| 572.96 | 9 Apr  |
| 573.05 | 1 May  |
| 573.52 | 1 Jun  |
| 573.49 | 29 Jul |
| 573.13 | 23 Aug |
| 572.58 | 12 Sep |
| 572.59 | 14 Oct |
| 572.13 | 9 Nov  |
| 571.97 | 4 Dec  |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(ft.) | No. of days
above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 574.40 | | | | | | | | | | | | 1 | 574.40 | 1 |
| 574.20 | | | | | | | | | | | | | 574.20 | 1 |
| 574.00 | | | | | | 3 | 3 | | | 1 | | | 574.00 | 8 |
| 573.80 | | 1 | 1 | 2 | 2 | 17 | 15 | 2 | | 2 | 1 | 2 | 573.80 | 53 |
| 573.60 | | | 2 | 11 | 16 | 9 | 12 | 9 | 1 | 8 | 1 | 1 | 573.60 | 122 |
| 573.40 | | 2 | 9 | 12 | 10 | 1 | 1 | 14 | 6 | 10 | 3 | 1 | 573.40 | 191 |
| 573.20 | | 2 | 9 | 3 | 2 | | | 4 | 11 | 6 | 8 | 11 | 573.20 | 247 |
| 573.00 | 1 | 9 | 6 | 1 | 1 | | | 2 | 8 | 3 | 7 | 7 | 573.00 | 292 |
| 572.80 | 7 | 12 | 1 | 1 | | | | | 3 | | 6 | 4 | 572.80 | 326 |
| 572.60 | 7 | 2 | | | | | | | | | 1 | 1 | 572.60 | 337 |
| 572.40 | 9 | | 2 | | | | | | 1 | 1 | 3 | 1 | 572.40 | 354 |
| 572.20 | 2 | | 1 | | | | | | | | | 1 | 572.20 | 358 |
| 572.00 | 3 | | | | | | | | | | 1 | | 572.00 | 362 |
| 571.80 | 2 | | | | | | | | | | | 1 | 571.80 | 365 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 4020: Gibraltar, Michigan on Detroit River

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 572.72 | 572.99 | 573.00 | 573.41 | 573.05 | 573.52 | 574.06 | 573.52 | 573.38 | 573.79 | 573.36 | 574.60 |
| 2 | 572.94 | 572.78 | 573.10 | 573.49 | 573.26 | 573.76 | 573.73 | 573.64 | 573.45 | 573.56 | 573.32 | 573.87 |
| 3 | 572.73 | 572.91 | 573.12 | 573.67 | 573.32 | 573.92 | 573.85 | 573.53 | 573.50 | 573.48 | 573.07 | 572.23 |
| 4 | 572.99 | 573.05 | 573.04 | 573.87 | 573.57 | 573.63 | 573.86 | 573.67 | 573.23 | 573.86 | 573.38 | 571.97 |
| 5 | 571.83 | 572.84 | 573.18 | 573.73 | 573.45 | 573.83 | 573.77 | 573.67 | 572.95 | 573.06 | 573.54 | 573.01 |
| 6 | 572.04 | 573.89 | 572.39 | 573.48 | 573.48 | 573.92 | 573.76 | 573.79 | 573.15 | 573.28 | 573.37 | 572.94 |
| 7 | 572.52 | 573.47 | 572.47 | 573.47 | 573.57 | 573.83 | 573.70 | 573.56 | 573.08 | 573.52 | 573.44 | 572.98 |
| 8 | 572.59 | 573.02 | 573.25 | 573.31 | 573.53 | 573.66 | 573.80 | 573.51 | 573.00 | 573.31 | 573.38 | 573.84 |
| 9 | 572.14 | 572.82 | 573.28 | 572.96 | 573.90 | 573.95 | 573.81 | 573.55 | 573.18 | 573.74 | 572.13 | 573.31 |
| 10 | 572.45 | 572.92 | 573.14 | 573.15 | 573.66 | 573.83 | 573.90 | 573.61 | 573.14 | 574.06 | 573.29 | 572.52 |
| 11 | 572.58 | 572.98 | 572.59 | 573.30 | 573.62 | 573.82 | 574.18 | 573.49 | 572.88 | 573.76 | 573.14 | 573.20 |
| 12 | 572.06 | 572.81 | 573.82 | 573.54 | 573.75 | 573.64 | 573.86 | 573.65 | 572.58 | 573.60 | 572.59 | 572.66 |
| 13 | 572.30 | 572.77 | 573.52 | 573.52 | 573.72 | 573.86 | 573.67 | 573.81 | 573.04 | 573.54 | 572.58 | 573.18 |
| 14 | 572.71 | 572.96 | 573.36 | 573.95 | 573.72 | 573.96 | 573.65 | 573.65 | 573.23 | 572.59 | 572.97 | 572.93 |
| 15 | 572.71 | 572.81 | 573.29 | 573.41 | 573.61 | 574.09 | 574.02 | 573.48 | 573.30 | 573.13 | 572.57 | 573.22 |
| 16 | 572.69 | 573.22 | 573.37 | 573.45 | 573.49 | 573.75 | 573.89 | 573.60 | 573.32 | 573.38 | 572.91 | 573.33 |
| 17 | 572.58 | 573.09 | 573.46 | 573.56 | 573.65 | 574.01 | 573.89 | 573.59 | 573.53 | 573.64 | 572.87 | 573.44 |
| 18 | 572.68 | 573.01 | 573.69 | 573.62 | 573.52 | 573.96 | 573.80 | 573.59 | 573.10 | 573.63 | 573.45 | 572.83 |
| 19 | 572.50 | 573.02 | 573.02 | 573.60 | 573.68 | 573.83 | 573.91 | 573.85 | 573.25 | 573.55 | 573.33 | 573.06 |
| 20 | 572.22 | 573.05 | 573.26 | 573.61 | 573.60 | 574.00 | 573.88 | 573.73 | 573.11 | 573.43 | 573.28 | 573.36 |
| 21 | 572.89 | 573.00 | 573.45 | 573.27 | 573.66 | 574.16 | 574.00 | 573.57 | 573.25 | 573.39 | 572.93 | 573.36 |
| 22 | 572.41 | 573.30 | 573.47 | 573.54 | 573.72 | 573.86 | 573.97 | 573.79 | 573.29 | 573.45 | 573.10 | 573.04 |
| 23 | 572.77 | 572.83 | 573.30 | 573.66 | 573.68 | 573.88 | 573.93 | 573.13 | 573.10 | 573.43 | 573.02 | 573.09 |
| 24 | 573.15 | 573.11 | 573.59 | 573.74 | 573.73 | 573.65 | 573.88 | 573.38 | 573.22 | 573.75 | 572.67 | 573.80 |
| 25 | 572.85 | 573.10 | 573.58 | 573.71 | 573.75 | 573.93 | 573.75 | 573.55 | 573.61 | 573.82 | 573.09 | 573.13 |
| 26 | 572.56 | 573.58 | 573.43 | 573.70 | 573.88 | 573.91 | 573.71 | 573.31 | 573.22 | 573.65 | 573.18 | 573.34 |
| 27 | 572.00 | 573.15 | 573.35 | 573.76 | 573.78 | 573.74 | 573.85 | 573.18 | 573.46 | 573.24 | 572.99 | 573.38 |
| 28 | 572.56 | 572.90 | 573.53 | 573.65 | 573.68 | 573.72 | 573.80 | 573.22 | 573.44 | 573.38 | 572.94 | 573.22 |
| 29 | 572.91 | | 573.49 | 573.42 | 573.68 | 573.80 | 573.49 | 573.41 | 573.44 | 573.19 | 573.05 | 573.38 |
| 30 | 572.83 | | 573.37 | 573.64 | 573.59 | 573.95 | 573.67 | 573.39 | 573.21 | 573.44 | 573.93 | 573.37 |
| 31 | 572.88 | | 573.62 | | 573.58 | | 573.84 | 573.44 | | 573.70 | | 573.38 |
| MEAN | 572.57 | 573.05 | 573.28 | 573.54 | 573.61 | 573.85 | 573.83 | 573.54 | 573.22 | 573.50 | 573.10 | 573.19 |
| MAX. | 573.53 | 575.78 | 574.65 | 574.70 | 574.49 | 574.82 | 574.60 | 574.80 | 574.99 | 574.79 | 574.72 | 575.04 |
| MIN. | 0800/25 | 0200/07 | 1400/11 | 1900/14 | 0800/09 | 0400/17 | 2000/11 | 2000/06 | 0700/25 | 1600/10 | 2400/30 | 0900/01 |
| | 0200/06 | 2000/07 | 0500/11 | 1000/11 | 1700/01 | 2400/12 | 0600/14 | 0100/27 | 1100/12 | 2200/14 | 1900/09 | 2100/03 |

* Indicates Less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL MEAN: 573.36

ANNUAL SUMMARY OF LEVELS, 1986
 Station 4030: Wyandotte, Michigan on Detroit River

INTERNATIONAL
 GREAT LAKES
 DATUM (1955).

HIGHEST
 Monthly mean elevation: 575.03 Jul
 Daily mean elevation: 575.46 1 Dec
 Instant/hourly Elevation: 576.02 0300/7 Feb

LOWEST
 Monthly mean elevation: 574.29 Jan
 Daily mean elevation: 573.73 27 Jan
 Instant/hourly Elevation: 573.24 1600/9 Nov

HIGHEST DAILY MEAN
 FOR EACH MONTH

 Elev. Date
 574.88 4 Jan
 575.31 7 Feb
 574.84 18 Mar
 574.94 14 Apr
 574.98 26 May
 575.25 21 Jun
 575.27 11 Jul
 575.03 19 Aug
 574.89 27 Sep
 575.36 10 Oct
 574.96 30 Nov
 575.46 1 Dec

LOWEST DAILY MEAN
 FOR EACH MONTH

 Elev. Date
 573.73 27 Jan
 574.21 23 Feb
 573.93 7 Mar
 574.87 9 Apr
 574.84 1 May
 574.78 1 Jun
 574.83 29 Jul
 574.56 23 Aug
 574.15 12 Sep
 574.40 14 Oct
 573.89 9 Nov
 573.77 4 Dec

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(ft.) | No. of days<br>above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 575.40         |     |     |     |     |     |     |     |     |     |     |     | 1   | 575.40         | 1                          |
| 575.20         |     | 1   |     |     |     | 2   | 1   |     |     | 2   |     |     | 575.20         | 7                          |
| 575.00         |     | 2   |     |     |     | 14  | 16  | 1   |     | 8   |     |     | 575.00         | 48                         |
| 574.80         | 2   | 4   | 1   | 8   | 16  | 12  | 14  | 19  | 5   | 15  | 2   | 3   | 574.80         | 149                        |
| 574.60         | 2   | 11  | 13  | 15  | 11  | 2   |     | 10  | 13  | 5   | 8   | 2   | 574.60         | 241                        |
| 574.40         | 5   | 4   | 6   | 6   | 3   |     |     | 1   | 8   |     | 6   | 13  | 574.40         | 293                        |
| 574.20         | 9   | 6   | 8   | 1   | 1   |     |     |     | 3   | 1   | 9   | 9   | 574.20         | 340                        |
| 574.00         | 10  |     | 1   |     |     |     |     |     | 1   |     | 4   | 1   | 574.00         | 357                        |
| 573.80         | 2   |     | 2   |     |     |     |     |     |     |     | 1   | 1   | 573.80         | 363                        |
| 573.60         | 1   |     |     |     |     |     |     |     |     |     |     | 1   | 573.60         | 365                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 4030: Wyandotte, Michigan on Detroit River

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 574.76  | 574.70  | 574.26  | 574.58  | 574.34  | 574.78  | 575.15  | 574.86  | 574.70  | 575.12  | 574.74  | 575.46  |
| 2    | 574.86  | 574.60  | 574.29  | 574.67  | 574.53  | 574.95  | 575.00  | 574.90  | 574.72  | 574.99  | 574.73  | 574.99  |
| 3    | 574.75  | 574.65  | 574.34  | 574.74  | 574.58  | 574.96  | 575.06  | 574.85  | 574.74  | 575.02  | 574.54  | 573.99  |
| 4    | 574.88  | 574.71  | 574.21  | 574.88  | 574.66  | 574.79  | 574.97  | 574.90  | 574.55  | 575.29  | 574.74  | 573.77  |
| 5    | 574.38  | 574.66  | 574.29  | 574.82  | 574.59  | 574.96  | 574.94  | 574.90  | 574.38  | 574.85  | 574.87  | 574.33  |
| 6    | 574.26  | 575.06  | 573.93  | 574.63  | 574.64  | 575.04  | 574.93  | 575.00  | 574.50  | 574.91  | 574.71  | 574.30  |
| 7    | 574.43  | 575.31  | 573.93  | 574.61  | 574.73  | 574.98  | 574.92  | 574.90  | 574.46  | 575.01  | 574.75  | 574.38  |
| 8    | 574.34  | 575.14  | 574.36  | 574.53  | 574.72  | 574.88  | 574.98  | 574.85  | 574.38  | 574.86  | 574.67  | 574.95  |
| 9    | 573.96  | 575.00  | 574.38  | 574.37  | 574.93  | 575.04  | 575.07  | 574.84  | 574.46  | 575.16  | 573.89  | 574.63  |
| 10   | 574.13  | 574.97  | 574.31  | 574.45  | 574.81  | 574.97  | 575.09  | 574.88  | 574.43  | 575.36  | 574.62  | 574.10  |
| 11   | 574.21  | 574.98  | 574.15  | 574.54  | 574.76  | 575.00  | 575.27  | 574.80  | 574.25  | 575.10  | 574.53  | 574.46  |
| 12   | 574.16  | 574.91  | 574.75  | 574.71  | 574.83  | 574.96  | 575.07  | 574.91  | 574.15  | 574.99  | 574.20  | 574.21  |
| 13   | 574.22  | 574.73  | 574.74  | 574.70  | 574.83  | 575.05  | 574.90  | 575.00  | 574.42  | 574.94  | 574.14  | 574.47  |
| 14   | 574.22  | 574.73  | 574.69  | 574.94  | 574.81  | 575.15  | 574.91  | 574.90  | 574.62  | 574.40  | 574.29  | 574.27  |
| 15   | 574.16  | 574.63  | 574.61  | 574.62  | 574.72  | 575.22  | 575.13  | 574.79  | 574.68  | 574.63  | 574.12  | 574.47  |
| 16   | 574.10  | 574.77  | 574.69  | 574.65  | 574.63  | 574.96  | 575.07  | 574.85  | 574.73  | 574.80  | 574.29  | 574.54  |
| 17   | 574.15  | 574.71  | 574.71  | 574.74  | 574.75  | 575.18  | 575.07  | 574.88  | 574.82  | 575.00  | 574.27  | 574.60  |
| 18   | 574.31  | 574.74  | 574.84  | 574.76  | 574.72  | 575.10  | 575.00  | 574.90  | 574.57  | 575.01  | 574.69  | 574.25  |
| 19   | 574.32  | 574.75  | 574.46  | 574.74  | 574.85  | 575.05  | 575.06  | 575.03  | 574.64  | 574.94  | 574.58  | 574.34  |
| 20   | 574.14  | 574.54  | 574.71  | 574.76  | 574.81  | 575.18  | 575.09  | 574.97  | 574.55  | 574.85  | 574.60  | 574.56  |
| 21   | 574.42  | 574.39  | 574.75  | 574.59  | 574.85  | 575.25  | 575.16  | 574.88  | 574.62  | 574.82  | 574.34  | 574.58  |
| 22   | 574.04  | 574.53  | 574.67  | 574.79  | 574.91* | 575.02  | 575.11  | 574.99  | 574.68  | 574.84  | 574.40  | 574.35  |
| 23   | 574.20  | 574.21  | 574.57  | 574.84  | 574.86  | 575.05  | 575.09  | 574.56  | 574.61  | 574.83  | 574.37  | 574.40  |
| 24   | 574.36  | 574.34  | 574.78  | 574.86  | 574.91  | 574.94  | 575.04  | 574.70  | 574.67  | 575.02  | 574.13  | 574.85  |
| 25   | 574.14  | 574.33  | 574.70  | 574.86  | 574.90  | 575.08  | 574.97  | 574.79  | 574.86  | 575.08  | 574.37  | 574.46  |
| 26   | 574.02  | 574.58  | 574.59  | 574.85  | 574.98  | 575.02  | 574.99  | 574.66  | 574.70  | 574.96  | 574.48  | 574.58  |
| 27   | 573.73  | 574.38  | 574.57  | 574.86  | 574.94  | 574.92  | 575.06  | 574.61  | 574.89  | 574.71  | 574.39  | 574.62  |
| 28   | 573.95  | 574.22  | 574.64  | 574.77  | 574.88  | 574.95  | 575.00  | 574.65  | 574.87  | 574.75  | 574.30  | 574.48  |
| 29   | 574.43  |         | 574.59  | 574.60  | 574.85  | 575.01  | 574.83  | 574.71  | 574.84  | 574.64  | 574.43  | 574.57  |
| 30   | 574.46  |         | 574.54  | 574.76  | 574.80  | 575.10  | 574.96  | 574.70  | 574.75  | 574.81  | 574.96  | 574.58  |
| 31   | 574.58  |         | 574.72  |         | 574.79  |         | 575.02  | 574.74  |         | 574.94  |         | 574.56  |
| MEAN | 574.29  | 574.69  | 574.51  | 574.71  | 574.77  | 575.02  | 575.03  | 574.84  | 574.61  | 574.92  | 574.47  | 574.49  |
| MAX. | 574.97  | 576.02  | 575.27  | 575.37  | 575.22  | 575.59  | 575.51  | 575.35  | 575.27  | 575.73  | 575.48  | 575.78  |
| MIN. | 1400/04 | 0300/07 | 1500/11 | 2000/14 | 2400/26 | 0500/17 | 2100/11 | 2000/06 | 1300/30 | 1700/10 | 2400/30 | 1000/01 |
|      | 573.58  | 573.97  | 573.37  | 574.07  | 573.83  | 574.42  | 574.55  | 574.22  | 573.64  | 574.00  | 573.24  | 573.27  |
|      | 0200/27 | 0400/23 | 0600/11 | 1000/11 | 1700/01 | 0100/13 | 0700/14 | 0300/27 | 1200/12 | 2300/14 | 1600/09 | 2200/03 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 574.70

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 4036: Fort Wayne, Detroit, Michigan on Detroit River

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST  
 Monthly mean elevation: 575.48 Jul  
 Daily mean elevation: 575.85 10 Oct  
 Instant/hourly Elevation: 576.12 0500/4 Oct

LOWEST  
 Monthly mean elevation: 574.95 Dec  
 Daily mean elevation: 574.31 27 Jan  
 Instant/hourly Elevation: 573.89 2200/3 Dec

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 575.74 | 2 Jan  |
| 575.55 | 8 Feb  |
| 575.30 | 18 Mar |
| 575.31 | 14 Apr |
| 575.38 | 27 May |
| 575.66 | 21 Jun |
| 575.69 | 11 Jul |
| 575.47 | 19 Aug |
| 575.43 | 27 Sep |
| 575.85 | 10 Oct |
| 575.35 | 5 Nov  |
| 575.75 | 1 Dec  |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 574.31 | 27 Jan |
| 574.67 | 28 Feb |
| 574.47 | 6 Mar  |
| 574.88 | 9 Apr  |
| 574.82 | 1 May  |
| 575.20 | 4 Jun  |
| 575.32 | 29 Jul |
| 575.10 | 23 Aug |
| 574.72 | 12 Sep |
| 575.05 | 14 Oct |
| 574.53 | 9 Nov  |
| 574.41 | 4 Dec  |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(ft.) | No. of days
above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 575.80 | | | | | | | | | | 2 | | | 575.80 | 2 |
| 575.60 | 6 | | | | | 3 | 1 | | | 3 | | 1 | 575.60 | 16 |
| 575.40 | 3 | 5 | | | | 18 | 24 | 5 | 2 | 14 | | | 575.40 | 87 |
| 575.20 | 4 | 9 | 5 | 9 | 17 | 8 | 6 | 19 | 9 | 10 | 7 | 3 | 575.20 | 193 |
| 575.00 | 3 | 5 | 13 | 17 | 12 | 1 | | 7 | 10 | 2 | 7 | 7 | 575.00 | 277 |
| 574.80 | 5 | 4 | 3 | 4 | 2 | | | | 7 | | 7 | 13 | 574.80 | 322 |
| 574.60 | 7 | 5 | 8 | | | | | | 2 | | 8 | 5 | 574.60 | 357 |
| 574.40 | 2 | | 2 | | | | | | | | 1 | 2 | 574.40 | 364 |
| 574.20 | 1 | | | | | | | | | | | | 574.20 | 365 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986
Station 4036: Fort Wayne, Detroit, Michigan on Detroit River

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 575.70 | 575.07 | 574.70 | 575.01 | 574.82 | 575.24 | 575.57 | 575.36 | 575.18 | 575.62 | 575.25 | 575.75 |
| 2 | 575.74 | 575.01 | 574.72 | 575.09 | 574.99 | 575.35 | 575.46 | 575.37 | 575.19 | 575.52 | 575.26 | 575.37 |
| 3 | 575.67* | 575.05 | 574.76 | 575.16 | 575.04 | 575.36 | 575.50 | 575.35 | 575.21 | 575.58 | 575.08 | 574.60 |
| 4 | 575.71 | 575.13 | 574.65 | 575.25 | 575.07 | 575.20 | 575.41 | 575.37 | 575.05 | 575.83 | 575.26 | 574.41 |
| 5 | 575.38 | 575.11 | 574.71 | 575.22 | 575.02 | 575.37 | 575.39 | 575.38 | 574.91 | 575.48 | 575.35 | 574.83 |
| 6 | 575.50 | 575.38 | 574.47 | 575.06 | 575.07 | 575.45 | 575.38 | 575.46 | 575.00 | 575.53 | 575.21 | 574.80 |
| 7 | 575.70 | 575.46* | 574.48 | 575.05 | 575.15 | 575.40 | 575.38 | 575.40 | 574.96 | 575.59 | 575.23 | 574.89 |
| 8 | 575.64 | 575.55 | 574.81 | 574.98 | 575.15 | 575.33 | 575.44 | 575.36 | 574.90 | 575.45 | 575.17 | 575.36 |
| 9 | 575.24 | 575.46 | 574.80 | 574.88 | 575.28 | 575.44 | 575.54 | 575.34 | 574.96 | 575.69 | 574.53 | 575.09 |
| 10 | 575.46 | 575.42 | 574.77 | 574.92 | 575.21 | 575.38 | 575.55 | 575.36 | 574.92 | 575.85 | 575.11 | 574.65 |
| 11 | 575.45 | 575.40 | 574.70 | 575.00 | 575.17 | 575.43 | 575.69 | 575.29 | 574.78 | 575.62 | 575.05 | 574.93 |
| 12 | 575.14 | 575.35 | 575.14 | 575.14 | 575.22 | 575.44 | 575.53 | 575.39 | 574.72 | 575.52 | 574.76 | 574.75 |
| 13 | 575.25 | 575.32 | 575.17 | 575.12 | 575.23 | 575.50 | 575.37 | 575.46 | 574.95 | 575.46 | 574.71 | 574.94 |
| 14 | 575.29 | 575.32 | 575.16 | 575.31 | 575.20 | 575.60 | 575.39 | 575.37 | 575.14 | 575.05 | 574.77 | 574.76 |
| 15 | 575.13 | 575.21 | 575.09 | 575.06 | 575.13 | 575.65 | 575.56 | 575.27 | 575.21 | 575.22 | 574.68 | 574.94 |
| 16 | 575.03 | 575.40 | 575.19 | 575.09 | 575.05 | 575.42 | 575.52 | 575.33 | 575.24 | 575.35 | 574.80 | 574.99 |
| 17 | 574.85 | 575.43 | 575.22 | 575.16 | 575.17 | 575.60 | 575.52 | 575.36 | 575.30 | 575.51 | 574.79 | 575.02 |
| 18 | 574.80 | 575.29 | 575.30 | 575.18 | 575.16 | 575.54 | 575.47 | 575.38 | 575.11 | 575.52 | 575.13 | 574.74 |
| 19 | 574.77 | 575.22 | 575.00 | 575.15 | 575.27 | 575.50 | 575.52 | 575.47 | 575.16 | 575.47 | 575.04 | 574.82 |
| 20 | 574.69 | 575.00 | 575.22 | 575.17 | 575.26 | 575.63 | 575.55 | 575.43 | 575.09 | 575.38 | 575.05 | 575.00 |
| 21 | 574.92 | 574.85 | 575.24 | 575.06 | 575.28 | 575.66 | 575.60 | 575.36 | 575.12 | 575.36 | 574.87 | 575.02 |
| 22 | 574.61 | 574.96 | 575.14 | 575.23 | 575.32 | 575.48 | 575.55 | 575.44 | 575.18 | 575.37 | 574.90 | 574.82 |
| 23 | 574.72 | 574.70 | 575.05 | 575.27 | 575.31 | 575.50 | 575.53 | 575.10 | 575.17 | 575.38 | 574.84 | 574.87 |
| 24 | 574.82 | 574.77 | 575.23 | 575.29 | 575.34 | 575.41 | 575.48 | 575.19 | 575.22 | 575.51 | 574.65 | 575.23 |
| 25 | 574.65 | 574.76 | 575.14 | 575.28 | 575.34 | 575.52 | 575.44 | 575.25 | 575.36 | 575.56 | 574.85 | 574.94 |
| 26 | 574.54 | 574.93 | 575.04 | 575.26 | 575.38 | 575.45 | 575.46 | 575.16 | 575.25 | 575.46 | 574.94 | 575.03 |
| 27 | 574.31 | 574.79 | 575.03 | 575.26 | 575.38 | 575.38 | 575.52 | 575.15 | 575.43 | 575.26 | 574.85 | 575.07 |
| 28 | 574.47 | 574.67 | 575.07 | 575.18 | 575.32 | 575.42 | 575.46 | 575.17 | 575.41 | 575.26 | 574.79 | 574.95 |
| 29 | 574.80 | | 575.03 | 575.03 | 575.28 | 575.47 | 575.32 | 575.20 | 575.39 | 575.18 | 574.90 | 575.01 |
| 30 | 574.84 | | 575.00 | 575.18 | 575.24 | 575.53 | 575.44 | 575.19 | 575.32 | 575.32 | 575.31 | 575.02 |
| 31 | 574.96 | | 575.13 | | 575.23 | | 575.47 | 575.22 | | 575.40 | | 574.99 |
| MEAN | 575.09 | 575.14 | 574.97 | 575.13 | 575.20 | 575.46 | 575.48 | 575.32 | 575.13 | 575.46 | 574.97 | 574.95 |
| MAX. | 575.77 | 575.78 | 575.51 | 575.67 | 575.63 | 575.87 | 575.88 | 575.85 | 575.66 | 576.12 | 575.71 | 575.98 |
| MIN. | 0100/04 | 2400/06 | 1500/11 | 2000/14 | 2400/26 | 0500/17 | 2100/11 | 2100/06 | 1400/30 | 0500/04 | 2400/30 | 1000/01 |
| | 574.20 | 574.53 | 574.10 | 574.61 | 574.34 | 575.04 | 575.11 | 574.85 | 574.35 | 574.68 | 574.04 | 573.89 |
| | 0200/27 | 0400/23 | 1600/06 | 1100/11 | 1700/01 | 1100/24 | 0700/14 | 0800/27 | 1200/12 | 2300/14 | 1500/09 | 2200/03 |

* Indicates less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL MEAN: 575.19

ANNUAL SUMMARY OF LEVELS, 1986
 Station 4049: Windmill Point, Detroit, Michigan on Detroit River

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

| HIGHEST | | | | LOWEST | | | |
|---------------------------|--------|------------|--|---------------------------|--------|------------|--|
| Monthly mean elevation: | 576.48 | Oct | | Monthly mean elevation: | 575.90 | Dec | |
| Daily mean elevation: | 576.83 | 4 Oct | | Daily mean elevation: | 575.44 | 27 Jan | |
| Instant/hourly Elevation: | 576.99 | 1342/4 Oct | | Instant/hourly Elevation: | 575.23 | 2200/3 Dec | |

HIGHEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 576.37 | 7 Jan |
| 576.24 | 7 Feb |
| 576.28 | 20 Mar |
| 576.19 | 22 Apr |
| 576.23 | 24 May |
| 576.52 | 20 Jun |
| 576.53 | 11 Jul |
| 576.35 | 7 Aug |
| 576.41 | 27 Sep |
| 576.83 | 4 Oct |
| 576.33 | 5 Nov |
| 576.43 | 1 Dec |

LOWEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 575.44 | 27 Jan |
| 575.64 | 28 Feb |
| 575.53 | 7 Mar |
| 575.90 | 1 Apr |
| 575.80 | 1 May |
| 576.08 | 4 Jun |
| 576.23 | 4 Jul |
| 576.09 | 23 Aug |
| 575.72 | 11 Sep |
| 576.22 | 14 Oct |
| 575.69 | 24 Nov |
| 575.62 | 4 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(ft.) | No. of days<br>above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 576.80         |     |     |     |     |     |     |     |     |     | 1   |     |     | 576.80         | 1                          |
| 576.60         |     |     |     |     |     |     |     |     |     | 6   |     |     | 576.60         | 7                          |
| 576.40         |     |     |     |     |     | 7   | 8   |     | 1   | 12  |     | 1   | 576.40         | 36                         |
| 576.20         | 7   | 3   | 5   |     | 5   | 20  | 23  | 22  | 7   | 12  | 5   | 1   | 576.20         | 146                        |
| 576.00         | 6   | 11  | 9   | 19  | 17  | 3   |     | 6   | 12  |     | 8   | 3   | 576.00         | 240                        |
| 575.80         | 3   | 5   | 6   | 11  | 8   |     |     |     | 7   |     | 12  | 18  | 575.80         | 310                        |
| 575.60         | 9   | 9   | 7   |     | 1   |     |     |     | 3   |     | 5   | 8   | 575.60         | 352                        |
| 575.40         | 6   |     | 4   |     |     |     |     |     |     |     |     |     | 575.40         | 362                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 4049: Windmill Point, Detroit, Michigan on Detroit River

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 576.26  | 575.73  | 575.63  | 575.90  | 575.80  | 576.20  | 576.40  | 576.34  | 576.10  | 576.56  | 576.26  | 576.43  |
| 2    | 576.28  | 575.74  | 575.62  | 575.99  | 575.97  | 576.22  | 576.39  | 576.29  | 576.10  | 576.54  | 576.30  | 576.21  |
| 3    | 576.30  | 575.78  | 575.62  | 576.00  | 576.00  | 576.13  | 576.40  | 576.33  | 576.10  | 576.61  | 576.12  | 575.77  |
| 4    | 576.33  | 575.84  | 575.57  | 576.05  | 575.92  | 576.08  | 576.23  | 576.27  | 575.97  | 576.83  | 576.30  | 575.62  |
| 5    | 576.19  | 575.92  | 575.58  | 576.07  | 575.92  | 576.23  | 576.26  | 576.28  | 575.91  | 576.65  | 576.33  | 575.82  |
| 6    | 576.24  | 576.01  | 575.57  | 575.96  | 575.96  | 576.28  | 576.27  | 576.35  | 575.98  | 576.70  | 576.20  | 575.78  |
| 7    | 576.37  | 576.24  | 575.53  | 575.93  | 576.01  | 576.26  | 576.29  | 576.35  | 575.96  | 576.62  | 576.22  | 575.89  |
| 8    | 576.34  | 576.23  | 575.62  | 575.93  | 576.07  | 576.24  | 576.32  | 576.29  | 575.89  | 576.54  | 576.13  | 576.20  |
| 9    | 576.11  | 576.21  | 575.62  | 575.92  | 576.10  | 576.27  | 576.45  | 576.29  | 575.88  | 576.74  | 575.73  | 576.03  |
| 10   | 576.09  | 576.18  | 575.63  | 575.92  | 576.07  | 576.22  | 576.44  | 576.28  | 575.79  | 576.77  | 576.09  | 575.73  |
| 11   | 576.10  | 576.17  | 575.76  | 575.95  | 576.03  | 576.29  | 576.53  | 576.26  | 575.72  | 576.59  | 576.08  | 575.84  |
| 12   | 576.00  | 576.12  | 576.02  | 576.02  | 576.06  | 576.34  | 576.42  | 576.31  | 575.77  | 576.49  | 575.88  | 575.84  |
| 13   | 576.08  | 576.09  | 576.12  | 576.02  | 576.06  | 576.43  | 576.28  | 576.34  | 575.94  | 576.46  | 575.86  | 575.89  |
| 14   | 576.06  | 576.06  | 576.16  | 576.10  | 576.03  | 576.50  | 576.33  | 576.30  | 576.10  | 576.22  | 575.72  | 575.72  |
| 15   | 575.89  | 576.01  | 576.20  | 575.99  | 575.95  | 576.50  | 576.40  | 576.21  | 576.20  | 576.30  | 575.78  | 575.88  |
| 16   | 575.74  | 576.07  | 576.24  | 576.01  | 575.91  | 576.36  | 576.40  | 576.24  | 576.23  | 576.37  | 575.81  | 575.91  |
| 17   | 575.63  | 576.12  | 576.24  | 576.09  | 575.99  | 576.47  | 576.39  | 576.31  | 576.20  | 576.53  | 575.82  | 575.91  |
| 18   | 575.63  | 576.07  | 576.21  | 576.08  | 576.05  | 576.41  | 576.38  | 576.33  | 576.12  | 576.52  | 576.08  | 575.76  |
| 19   | 575.70  | 576.04  | 576.07  | 576.02  | 576.17  | 576.39  | 576.40  | 576.34  | 576.14  | 576.46  | 576.01  | 575.77  |
| 20   | 575.73  | 575.97  | 576.28  | 576.07  | 576.17  | 576.52  | 576.46  | 576.32  | 576.10  | 576.40  | 575.99  | 575.92  |
| 21   | 575.82  | 575.92  | 576.22  | 576.07  | 576.17  | 576.48  | 576.47  | 576.31  | 576.10  | 576.39  | 575.92  | 575.94  |
| 22   | 575.71  | 575.87  | 576.06  | 576.19  | 576.20  | 576.36  | 576.41  | 576.30  | 576.13  | 576.38  | 575.84  | 575.79  |
| 23   | 575.77  | 575.73  | 576.04  | 576.18  | 576.19  | 576.39  | 576.40  | 576.09  | 576.20  | 576.40  | 575.81  | 575.85  |
| 24   | 575.78  | 575.71  | 576.16  | 576.16  | 576.23  | 576.36  | 576.37  | 576.19  | 576.23  | 576.45  | 575.69  | 576.05  |
| 25   | 575.60  | 575.67  | 576.03  | 576.16  | 576.22  | 576.37  | 576.32  | 576.19* | 576.29  | 576.47  | 575.80  | 575.92  |
| 26   | 575.54  | 575.70  | 575.95  | 576.14  | 576.22  | 576.32  | 576.41  | /       | 576.26  | 576.42  | 575.92  | 575.96  |
| 27   | 575.44  | 575.67  | 575.98  | 576.11  | 576.22  | 576.27  | 576.40  | /       | 576.41  | 576.31  | 575.87  | 575.99  |
| 28   | 575.45  | 575.64  | 575.91  | 576.04  | 576.21  | 576.34  | 576.36  | /       | 576.39  | 576.25  | 575.83  | 575.89  |
| 29   | 575.47  |         | 575.90  | 575.95  | 576.18  | 576.39  | 576.32  | 576.12* | 576.35  | 576.23  | 575.94  | 575.90  |
| 30   | 575.51  |         | 575.91  | 576.04  | 576.15  | 576.38  | 576.37  | 576.14  | 576.39  | 576.33  | 576.20  | 575.93  |
| 31   | 575.61  |         | 575.99  |         | 576.14  |         | 576.36  | 576.15  |         | 576.32  |         | 575.88  |
| MEAN | 575.90  | 575.95  | 575.92  | 576.04  | 576.08  | 576.33  | 576.38  | 576.27  | 576.10  | 576.48  | 575.98  | 575.90  |
| MAX. | 576.40  | 576.30  | 576.37  | 576.33  | 576.32  | 576.71  | 576.67  | 576.60  | 576.56  | 576.99  | 576.44  | 576.57  |
|      | 0500/08 | 0900/07 | 1700/20 | 2200/14 | 1200/27 | 2000/29 | 1900/20 | 2000/17 | 0400/29 | 1342/04 | 0500/05 | 0800/01 |
| MIN. | 575.39  | 575.62  | 575.40  | 575.65  | 575.39  | 575.99  | 576.03  | 575.94  | 575.48  | 576.00  | 575.34  | 575.23  |
|      | 0500/27 | 2400/28 | 0100/11 | 1400/01 | 1500/01 | 1200/01 | 1600/04 | 1300/23 | 0300/11 | 2300/14 | 1500/09 | 2200/03 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 576.11

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 4052: St. Clair Shores, Michigan on Lake St. Clair

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

|                           |        |            |  |                           |        |            |  |
|---------------------------|--------|------------|--|---------------------------|--------|------------|--|
| HIGHEST                   |        |            |  | LOWEST                    |        |            |  |
| Monthly mean elevation:   | 576.69 | Oct        |  | Monthly mean elevation:   | 576.13 | Jan        |  |
| Daily mean elevation:     | 577.00 | 4 Oct      |  | Daily mean elevation:     | 575.69 | 29 Jan     |  |
| Instant/hourly Elevation: | 577.13 | 1244/4 Oct |  | Instant/hourly Elevation: | 575.64 | 1500/1 May |  |

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 576.54 | 7 Jan  |
| 576.44 | 8 Feb  |
| 576.51 | 16 Mar |
| 576.38 | 24 Apr |
| 576.41 | 24 May |
| 576.70 | 15 Jun |
| 576.68 | 11 Jul |
| 576.56 | 7 Aug  |
| 576.62 | 27 Sep |
| 577.00 | 4 Oct  |
| 576.50 | 5 Nov  |
| 576.52 | 1 Dec  |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 575.69 | 29 Jan |
| 575.87 | 26 Feb |
| 575.82 | 7 Mar  |
| 576.08 | 9 Apr  |
| 575.99 | 1 May  |
| 576.26 | 4 Jun  |
| 576.46 | 7 Jul  |
| 576.31 | 23 Aug |
| 576.03 | 12 Sep |
| 576.46 | 29 Oct |
| 575.94 | 24 Nov |
| 575.97 | 4 Dec  |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(ft.) | No. of days
above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 576.80 | | | | | | 6 | 6 | | 2 | 9 | | | 576.80 | 9 |
| 576.60 | | | | | 1 | 18 | 25 | 22 | 8 | 13 | 6 | 2 | 576.60 | 36 |
| 576.40 | 8 | 3 | 8 | | | 6 | | 9 | 10 | 9 | 5 | 2 | 576.40 | 146 |
| 576.20 | 6 | 11 | 6 | 15 | 19 | | | | 10 | | 18 | 25 | 576.20 | 235 |
| 576.00 | 5 | 6 | 7 | 15 | 10 | | | | | | 1 | 2 | 576.00 | 331 |
| 575.80 | 9 | 8 | 10 | | 1 | | | | | | | | 575.80 | 362 |
| 575.60 | 3 | | | | | | | | | | | | 575.60 | 365 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986
Station 4052: St. Clair Shores, Michigan on Lake St. Clair

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 576.42 | 575.92 | 575.93 | 576.10 | 575.99 | 576.32 | 576.58 | 576.52 | 576.30 | 576.74 | 576.47 | 576.52 |
| 2 | 576.42 | 575.97 | 575.90 | 576.16 | 576.14 | 576.32 | 576.56 | 576.50 | 576.29 | 576.74 | 576.49 | 576.42 |
| 3 | 576.45 | 576.00 | 575.87 | 576.16 | 576.17 | 576.31 | 576.56 | 576.52 | 576.28 | 576.84 | 576.39 | 576.08 |
| 4 | 576.50 | 576.06 | 575.87 | 576.19 | 576.15 | 576.26 | 576.49 | 576.49 | 576.20 | 577.00 | 576.47 | 575.97 |
| 5 | 576.47 | 576.16 | 575.89 | 576.22 | 576.14 | 576.38 | 576.48 | 576.49 | 576.12 | 576.89 | 576.50 | 576.09 |
| 6 | 576.45 | 576.20 | 575.92 | 576.16 | 576.16 | 576.44 | 576.48 | 576.52 | 576.15 | 576.92 | 576.43 | 576.08 |
| 7 | 576.54 | 576.41 | 575.82 | 576.14 | 576.18 | 576.42 | 576.46 | 576.56 | 576.13 | 576.90 | 576.42 | 576.14 |
| 8 | 576.51 | 576.44 | 575.86 | 576.10 | 576.21 | 576.40 | 576.49 | 576.52 | 576.10 | 576.81 | 576.36 | 576.37 |
| 9 | 576.33 | 576.43 | 575.85 | 576.08 | 576.24 | 576.42 | 576.62 | 576.50 | 576.11 | 576.89 | 576.05 | 576.24 |
| 10 | 576.25 | 576.40 | 575.88 | 576.10 | 576.22 | 576.41 | 576.62 | 576.50 | 576.06 | 576.93 | 576.29 | 576.04 |
| 11 | 576.31 | 576.38 | 576.05 | 576.14 | 576.20 | 576.49 | 576.68 | 576.46 | 576.04 | 576.81 | 576.28 | 576.15 |
| 12 | 576.25 | 576.34 | 576.27 | 576.20 | 576.21 | 576.58 | 576.61 | 576.50 | 576.03 | 576.73 | 576.14 | 576.07 |
| 13 | 576.27 | 576.31 | 576.44 | 576.19 | 576.22 | 576.62 | 576.51 | 576.53 | 576.16 | 576.67 | 576.09 | 576.10 |
| 14 | 576.27 | 576.25 | 576.48 | 576.24 | 576.21 | 576.68 | 576.53 | 576.50 | 576.31 | 576.53 | 576.05 | 576.05 |
| 15 | 576.11 | 576.23 | 576.50 | 576.18 | 576.17 | 576.70 | 576.59 | 576.44 | 576.37 | 576.55 | 576.07 | 576.11 |
| 16 | 575.95 | 576.23 | 576.51 | 576.18 | 576.12 | 576.56 | 576.59 | 576.44 | 576.41 | 576.61 | 576.07 | 576.11 |
| 17 | 575.86 | 576.29 | 576.48 | 576.23 | 576.19 | 576.64 | 576.58 | 576.46 | 576.43 | 576.68 | 576.03 | 576.11 |
| 18 | 575.84 | 576.28 | 576.45 | 576.25 | 576.22 | 576.59 | 576.55 | 576.46 | 576.34 | 576.71 | 576.14 | 575.99 |
| 19 | 575.92 | 576.26 | 576.34 | 576.23 | 576.30 | 576.60 | 576.58 | 576.50 | 576.33 | 576.68 | 576.19 | 576.02 |
| 20 | 576.03 | 576.21 | 576.45 | 576.22 | 576.34 | 576.69 | 576.61 | 576.49 | 576.30 | 576.64 | 576.18 | 576.12 |
| 21 | 576.10 | 576.20 | 576.46 | 576.23 | 576.35 | 576.67 | 576.62 | 576.47 | 576.29 | 576.61 | 576.11 | 576.13 |
| 22 | 576.00 | 576.12 | 576.36 | 576.32 | 576.38 | 576.58 | 576.59 | 576.48 | 576.36 | 576.59 | 576.11 | 576.05 |
| 23 | 576.05 | 576.01 | 576.25 | 576.37 | 576.37 | 576.57 | 576.59 | 576.31 | 576.41 | 576.59 | 576.05 | 576.08 |
| 24 | 576.07 | 575.94 | 576.34 | 576.38 | 576.41 | 576.53 | 576.56 | 576.34 | 576.43 | 576.62 | 575.94 | 576.19 |
| 25 | 575.98 | 575.90 | 576.26 | 576.34 | 576.38 | 576.56 | 576.54 | 576.38 | 576.48 | 576.66 | 576.02 | 576.14 |
| 26 | 575.84 | 575.87 | 576.17 | 576.31 | 576.38 | 576.52 | 576.58 | 576.34 | 576.49 | 576.63 | 576.07 | 576.17 |
| 27 | 575.84 | 575.95 | 576.16 | 576.27 | 576.40 | 576.48 | 576.59 | 576.35 | 576.62 | 576.54 | 576.11 | 576.19 |
| 28 | 575.76 | 575.96 | 576.16 | 576.24 | 576.39 | 576.53 | 576.56 | 576.33 | 576.60 | 576.50 | 576.09 | 576.13 |
| 29 | 575.69 | | 576.12 | 576.17 | 576.36 | 576.53 | 576.49 | 576.36 | 576.58 | 576.46 | 576.15 | 576.14 |
| 30 | 575.73 | | 576.11 | 576.24 | 576.33 | 576.55 | 576.55 | 576.35 | 576.61 | 576.51 | 576.31 | 576.13 |
| 31 | 575.81 | | 576.15 | | 576.32 | | 576.55 | 576.33 | | 576.54 | | 576.09 |
| MEAN | 576.13 | 576.17 | 576.17 | 576.21 | 576.25 | 576.51 | 576.56 | 576.45 | 576.31 | 576.69 | 576.20 | 576.14 |
| MAX. | 576.56 | 576.47 | 576.53 | 576.50 | 576.49 | 576.75 | 576.76 | 576.78 | 576.68 | 577.13 | 576.63 | 576.63 |
| MIN. | 0200/08 | 1700/07 | 1900/20 | 2200/14 | 1200/27 | 1200/20 | 2100/08 | 1700/02 | 2200/30 | 1244/04 | 0400/05 | 0100/02 |
| | 575.68 | 575.84 | 575.81 | 575.93 | 575.64 | 576.21 | 576.34 | 576.16 | 575.88 | 576.36 | 575.78 | 575.71 |
| | 1000/29 | 1300/26 | 1700/07 | 1400/01 | 1500/01 | 1200/01 | 2000/13 | 2100/26 | 0700/12 | 2300/14 | 1700/09 | 2100/03 |

* Indicates Less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL MEAN: 576.32

ANNUAL SUMMARY OF LEVELS, 1986
 Station 4070: Algonac, Michigan on St. Clair River

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

HIGHEST
 Monthly mean elevation: 577.22 Oct
 Daily mean elevation: 577.58 5 Oct
 Instant/hourly Elevation: 577.86 1945/5 Oct

LOWEST
 Monthly mean elevation: 576.67 Apr
 Daily mean elevation: 576.36 5 Mar
 Instant/hourly Elevation: 576.30 1200/10 Mar

HIGHEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 577.44 | 28 Jan |
| 577.09 | 17 Feb |
| 576.99 | 19 Mar |
| 576.83 | 23 Apr |
| 576.83 | 28 May |
| 577.16 | 16 Jun |
| 577.09 | 25 Jul |
| 577.08 | 8 Aug |
| 577.18 | 30 Sep |
| 577.58 | 5 Oct |
| 577.11 | 3 Nov |
| 576.93 | 3 Dec |

LOWEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 576.43 | 26 Jan |
| 576.36 | 26 Feb |
| 576.36 | 5 Mar |
| 576.57 | 2 Apr |
| 576.60 | 8 May |
| 576.68 | 2 Jun |
| 576.96 | 7 Jul |
| 576.83 | 31 Aug |
| 576.68 | 9 Sep |
| 577.00 | 31 Oct |
| 576.54 | 18 Nov |
| 576.57 | 24 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(ft.) | No. of days<br>above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 577.40         | 2   |     |     |     |     |     |     |     |     | 5   |     |     | 577.40         | 7                          |
| 577.20         | 9   |     |     |     |     |     |     |     |     | 8   |     |     | 577.20         | 24                         |
| 577.00         | 6   | 6   |     |     |     | 18  | 26  | 12  | 5   | 17  | 4   |     | 577.00         | 118                        |
| 576.80         | 5   | 12  | 10  | 1   | 7   | 8   | 5   | 19  | 13  | 1   | 11  | 6   | 576.80         | 216                        |
| 576.60         | 2   | 4   | 10  | 24  | 23  | 4   |     |     | 12  |     | 12  | 21  | 576.60         | 328                        |
| 576.40         | 7   | 5   | 7   | 5   | 1   |     |     |     |     |     | 3   | 4   | 576.40         | 360                        |
| 576.20         |     | 1   | 4   |     |     |     |     |     |     |     |     |     | 576.20         | 365                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 4070: Algonac, Michigan on St. Clair River

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 577.30  | 576.98  | 576.48  | 576.58  | 576.74  | 576.70  | 577.01  | 577.05  | 576.79  | 577.18  | 577.01  | 576.66  |
| 2    | 577.26  | 576.95  | 576.42  | 576.57  | 576.69  | 576.68  | 577.03  | 577.05  | 576.78  | 577.24  | 577.03  | 576.77  |
| 3    | 577.40  | 576.86  | 576.37  | 576.58  | 576.68  | 576.74  | 576.99  | 577.03  | 576.76  | 577.37  | 577.11  | 576.93  |
| 4    | 577.40  | 576.80  | 576.37  | 576.58  | 576.70  | 576.74  | 577.04  | 577.04  | 576.77  | 577.47  | 576.94  | 576.92  |
| 5    | 577.37  | 576.87  | 576.36  | 576.63  | 576.70  | 576.81  | 577.00  | 577.02  | 576.75  | 577.58  | 576.90  | 576.79  |
| 6    | 577.42  | 576.84  | 576.48  | 576.61  | 576.67  | 576.86  | 576.98  | 577.00  | 576.72  | 577.54  | 576.94  | 576.81  |
| 7    | 577.38  | 576.98  | 576.50  | 576.65  | 576.63  | 576.85  | 576.96  | 577.07  | 576.69  | 577.52  | 576.90  | 576.76  |
| 8    | 577.07  | 577.05  | 576.50  | 576.66  | 576.60  | 576.86  | 576.98  | 577.08  | 576.71  | 577.46  | 576.91  | 576.67  |
| 9    | 576.84  | 576.99  | 576.51  | 576.65  | 576.62  | 576.84  | 577.05  | 577.06  | 576.68  | 577.29  | 577.06  | 576.71  |
| 10   | 577.02  | 576.97  | 576.39  | 576.65  | 576.65  | 576.84  | 577.07  | 577.05  | 576.70  | 577.29  | 576.87  | 576.90  |
| 11   | 577.08  | 577.01  | 576.61  | 576.65  | 576.63  | 576.92  | 577.02  | 577.03  | 576.85  | 577.27  | 576.88  | 576.91  |
| 12   | 577.19  | 576.99  | 576.69  | 576.63  | 576.63  | 577.12  | 577.07  | 577.02  | 576.78  | 577.21  | 576.90  | 576.77  |
| 13   | 577.37  | 576.95  | 576.84  | 576.61  | 576.64  | 577.11  | 577.09  | 577.00  | 576.78  | 577.20  | 576.82  | 576.72  |
| 14   | 577.32  | 577.02  | 576.89  | 576.60  | 576.63  | 577.10  | 577.05  | 576.99  | 576.81  | 577.34  | 576.94  | 576.83  |
| 15   | 576.98  | 577.06  | 576.92  | 576.65  | 576.64  | 577.12  | 577.05  | 577.01  | 576.84  | 577.22  | 576.81  | 576.64  |
| 16   | 576.92  | 577.05  | 576.93  | 576.65  | 576.69  | 577.16  | 577.06  | 576.97  | 576.88  | 577.20  | 576.70  | 576.59  |
| 17   | 576.94  | 577.09  | 576.86  | 576.66  | 576.63  | 577.06  | 577.06  | 576.95  | 576.87  | 577.15  | 576.64  | 576.59  |
| 18   | 576.67  | 576.93  | 576.80  | 576.69  | 576.66  | 577.05  | 577.05  | 576.92  | 576.84  | 577.19  | 576.54  | 576.66  |
| 19   | 576.55  | 576.82  | 576.99  | 576.68  | 576.72  | 577.10  | 577.06  | 576.95  | 576.82  | 577.20  | 576.63  | 576.65  |
| 20   | 576.66  | 576.73  | 576.91  | 576.64  | 576.79  | 577.09  | 577.04  | 576.95  | 576.81  | 577.19  | 576.65  | 576.63  |
| 21   | 576.57  | 576.78  | 576.93  | 576.73  | 576.82  | 577.09  | 577.04  | 576.93  | 576.82  | 577.13  | 576.66  | 576.65  |
| 22   | 576.56  | 576.63  | 576.94  | 576.75  | 576.82  | 577.09  | 577.06  | 576.93  | 576.87  | 577.10  | 576.72  | 576.76  |
| 23   | 576.53  | 576.56  | 576.85  | 576.83  | 576.82  | 577.07  | 577.07  | 576.94  | 576.96  | 577.10  | 576.64  | 576.66  |
| 24   | 576.49  | 576.49  | 576.76  | 576.80  | 576.82  | 577.03  | 577.05  | 576.91  | 576.95  | 577.06  | 576.63  | 576.57  |
| 25   | 576.45  | 576.43  | 576.72  | 576.76  | 576.80  | 577.02  | 577.09  | 576.90  | 576.96  | 577.05  | 576.59  | 576.66  |
| 26   | 576.43  | 576.36  | 576.70  | 576.72  | 576.80  | 577.03  | 577.06  | 576.94  | 577.03  | 577.07  | 576.56  | 576.68  |
| 27   | 576.83  | 576.48  | 576.65  | 576.70  | 576.82  | 577.03  | 577.08  | 576.92  | 577.10  | 577.08  | 576.73  | 576.67  |
| 28   | 577.44  | 576.53  | 576.67  | 576.69  | 576.83  | 577.01  | 577.08  | 576.90  | 577.07  | 577.09  | 576.78  | 576.75  |
| 29   | 577.25  |         | 576.66  | 576.74  | 576.81  | 576.98  | 577.06  | 576.90  | 577.16  | 577.06  | 576.71  | 576.69  |
| 30   | 577.12  |         | 576.63  | 576.69  | 576.79  | 577.01  | 577.05  | 576.86  | 577.18  | 577.01  | 576.66  | 576.60  |
| 31   | 577.04  |         | 576.57  |         | 576.78  |         | 577.06  | 576.83  |         | 577.00  |         | 576.62  |
| MEAN | 577.00  | 576.83  | 576.67  | 576.67  | 576.72  | 576.97  | 577.04  | 576.97  | 576.86  | 577.22  | 576.80  | 576.72  |
| MAX. | 577.77  | 577.17  | 577.27  | 576.88  | 576.99  | 577.45  | 577.23  | 577.31  | 577.41  | 577.86  | 577.33  | 577.12  |
| MIN. | 0600/28 | 0800/17 | 1000/19 | 2200/23 | 1500/01 | 1600/16 | 1700/04 | 1600/08 | 2100/26 | 1945/05 | 1500/09 | 2200/03 |
|      | 576.37  | 576.32  | 576.30  | 576.44  | 576.48  | 576.47  | 576.87  | 576.76  | 576.47  | 576.93  | 576.42  | 576.49  |
|      | 2400/26 | 1700/26 | 1200/10 | 2300/07 | 1300/06 | 2200/01 | 0200/08 | 1700/28 | 1200/10 | 0300/31 | 1600/18 | 0700/24 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 576.87

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 4080: St. Clair S.P., St. Clair, Michigan on St. Clair River

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST  
 Monthly mean elevation: 578.85 Oct  
 Daily mean elevation: 579.28 6 Oct  
 Instant/hourly Elevation: 579.88 2020/5 Oct

LOWEST  
 Monthly mean elevation: 578.02 Mar  
 Daily mean elevation: 577.62 25 Jan  
 Instant/hourly Elevation: 577.40 0800/25 Jan

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 578.95 | 2 Jan  |
| 578.24 | 1 Feb  |
| 578.38 | 20 Mar |
| 578.32 | 22 Apr |
| 578.42 | 19 May |
| 578.61 | 20 Jun |
| 578.71 | 29 Jul |
| 578.71 | 11 Aug |
| 578.86 | 30 Sep |
| 579.28 | 6 Oct  |
| 578.73 | 9 Nov  |
| 578.46 | 4 Dec  |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 577.62 | 25 Jan |
| 577.70 | 26 Feb |
| 577.66 | 10 Mar |
| 577.98 | 1 Apr  |
| 578.08 | 14 May |
| 578.24 | 3 Jun  |
| 578.44 | 4 Jul  |
| 578.41 | 31 Aug |
| 578.24 | 10 Sep |
| 578.53 | 31 Oct |
| 578.17 | 23 Nov |
| 578.03 | 2 Dec  |

| Elev.<br>(ft.) | ~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~ |     |     |     |     |     |     |     |     |     |     |     | Elev.<br>(ft.) | No. of days<br>above elev. |
|----------------|---------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
|                | Jan                                                     | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |                |                            |
| 579.20         |                                                         |     |     |     |     |     |     |     |     | 1   |     |     | 579.20         | 1                          |
| 579.00         |                                                         |     |     |     |     |     |     |     |     | 4   |     |     | 579.00         | 5                          |
| 578.80         | 6                                                       |     |     |     |     |     |     |     | 1   | 13  |     |     | 578.80         | 25                         |
| 578.60         | 7                                                       |     |     |     |     | 1   | 15  | 15  | 6   | 12  | 7   |     | 578.60         | 88                         |
| 578.40         | 7                                                       |     |     |     | 1   | 19  | 16  | 16  | 15  | 1   | 7   | 1   | 578.40         | 171                        |
| 578.20         | 3                                                       | 6   | 4   | 9   | 16  | 10  |     |     | 8   |     | 13  | 13  | 578.20         | 253                        |
| 578.00         | 2                                                       | 15  | 15  | 20  | 14  |     |     |     |     |     | 3   | 17  | 578.00         | 339                        |
| 577.80         | 5                                                       | 5   | 6   | 1   |     |     |     |     |     |     |     |     | 577.80         | 356                        |
| 577.60         | 1                                                       | 2   | 6   |     |     |     |     |     |     |     |     |     | 577.60         | 365                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 4080: St. Clair S.P., St. Clair, Michigan on St. Clair River

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 578.85  | 578.24  | 577.86  | 577.98  | 578.23  | 578.31  | 578.52  | 578.67  | 578.38  | 578.86  | 578.70  | 578.05  |
| 2    | 578.95  | 578.20  | 577.79  | 578.05  | 578.36  | 578.27  | 578.55  | 578.64  | 578.36  | 578.87  | 578.72  | 578.03  |
| 3    | 578.84  | 578.14  | 577.75  | 578.03  | 578.25  | 578.24  | 578.56  | 578.65  | 578.29  | 578.94  | 578.71  | 578.29  |
| 4    | 578.59  | 578.06  | 577.76  | 578.04  | 578.16  | 578.27  | 578.44  | 578.64  | 578.33  | 579.08  | 578.72  | 578.46  |
| 5    | 578.50  | 578.10  | 577.77  | 578.03  | 578.19  | 578.34  | 578.50  | 578.61  | 578.42  | 579.17  | 578.53  | 578.37  |
| 6    | 578.72  | 578.05  | 577.85  | 578.01  | 578.12  | 578.35  | 578.48  | 578.61  | 578.41  | 579.28  | 578.56  | 578.30  |
| 7    | 578.88  | 578.11  | 578.06  | 578.13  | 578.16  | 578.33  | 578.52  | 578.68  | 578.39  | 579.01  | 578.52  | 578.28  |
| 8    | 578.91  | 578.16  | 577.83  | 578.24  | 578.16  | 578.38  | 578.52  | 578.66  | 578.32  | 579.08  | 578.39  | 578.22  |
| 9    | 578.65  | 578.16  | 577.80  | 578.32  | 578.13  | 578.37  | 578.61  | 578.69  | 578.28  | 578.96  | 578.73  | 578.13  |
| 10   | 578.89  | 578.18  | 577.66  | 578.31  | 578.15  | 578.30  | 578.62  | 578.63  | 578.24  | 578.86  | 578.68  | 578.34  |
| 11   | 578.48  | 578.22  | 578.08  | 578.26  | 578.13  | 578.41  | 578.51  | 578.71  | 578.43  | 578.81  | 578.56  | 578.33  |
| 12   | 578.51  | 578.17  | 578.06  | 578.13  | 578.13  | 578.49  | 578.54  | 578.65  | 578.53  | 578.71  | 578.54  | 578.37  |
| 13   | 578.74  | 578.15  | 578.11  | 578.09  | 578.15  | 578.58  | 578.55  | 578.60  | 578.58  | 578.87  | 578.61  | 578.28  |
| 14   | 578.79  | 578.21  | 578.15  | 578.08  | 578.08  | 578.57  | 578.62  | 578.54  | 578.53  | 578.89  | 578.42  | 578.22  |
| 15   | 578.72  | 578.22  | 578.19  | 578.09  | 578.10  | 578.53  | 578.57  | 578.54  | 578.58  | 578.91  | 578.49  | 578.18  |
| 16   | 578.60  | 578.21  | 578.25  | 578.22  | 578.13  | 578.59  | 578.58  | 578.58  | 578.60  | 578.86  | 578.27  | 578.09  |
| 17   | 578.22  | 578.22  | 578.11  | 578.26  | 578.16  | 578.57  | 578.60  | 578.59  | 578.44  | 578.86  | 578.33  | 578.04  |
| 18   | 578.00  | 578.10  | 578.04  | 578.20  | 578.22  | 578.52  | 578.61  | 578.65  | 578.47  | 578.81  | 578.37  | 578.15  |
| 19   | 578.07  | 578.06  | 578.25  | 578.09  | 578.42  | 578.52  | 578.63  | 578.59  | 578.47  | 578.82  | 578.26  | 578.21  |
| 20   | 578.24  | 578.05  | 578.38  | 578.16  | 578.38  | 578.61  | 578.67  | 578.56  | 578.47  | 578.80  | 578.20  | 578.17  |
| 21   | 577.92  | 578.13  | 578.23  | 578.31  | 578.37  | 578.47  | 578.64  | 578.59  | 578.50  | 578.78  | 578.34  | 578.15  |
| 22   | 577.96  | 577.89  | 578.15  | 578.32  | 578.34  | 578.48  | 578.60  | 578.50  | 578.45  | 578.73  | 578.24  | 578.16  |
| 23   | 578.01  | 577.87  | 578.20  | 578.31  | 578.33  | 578.55  | 578.62  | 578.53  | 578.61  | 578.80  | 578.17  | 578.24  |
| 24   | 577.84  | 577.87  | 578.16  | 578.20  | 578.33  | 578.58  | 578.55  | 578.64  | 578.61  | 578.70  | 578.26  | 578.04  |
| 25   | 577.62  | 577.80  | 577.99  | 578.20  | 578.31  | 578.55  | 578.65  | 578.47  | 578.58  | 578.68  | 578.20  | 578.14  |
| 26   | 578.00  | 577.70  | 578.07  | 578.13  | 578.33  | 578.49  | 578.70  | 578.55  | 578.65  | 578.64  | 578.27  | 578.19  |
| 27   | 578.34  | 577.83  | 578.12  | 578.12  | 578.32  | 578.55  | 578.67  | 578.65  | 578.64  | 578.72  | 578.25  | 578.16  |
| 28   | 578.79  | 577.92  | 577.99  | 578.14  | 578.34  | 578.56  | 578.66  | 578.59  | 578.64  | 578.68  | 578.34  | 578.21  |
| 29   | 578.71  |         | 578.05  | 578.20  | 578.32  | 578.56  | 578.71  | 578.50  | 578.69  | 578.75  | 578.31  | 578.08  |
| 30   | 578.52  |         | 578.03  | 578.12  | 578.33  | 578.55  | 578.69  | 578.47  | 578.86  | 578.75  | 578.26  | 578.06  |
| 31   | 578.46  |         | 577.98  |         | 578.34  |         | 578.64  | 578.41  |         | 578.53  |         | 578.05  |
| MEAN | 578.46  | 578.07  | 578.02  | 578.16  | 578.24  | 578.46  | 578.59  | 578.59  | 578.49  | 578.85  | 578.43  | 578.19  |
| MAX. | 579.30  | 578.44  | 578.72  | 578.60  | 578.59  | 579.07  | 578.92  | 579.18  | 579.14  | 579.88  | 579.11  | 578.68  |
|      | 0700/10 | 2200/20 | 1400/19 | 2100/07 | 1800/01 | 1700/16 | 0200/26 | 2200/26 | 2000/26 | 2020/05 | 1500/09 | 1200/04 |
| MIN. | 577.40  | 577.64  | 577.49  | 577.74  | 577.89  | 577.96  | 577.61  | 578.21  | 577.99  | 578.43  | 577.87  | 577.89  |
|      | 0800/25 | 0800/26 | 0800/10 | 0200/01 | 0100/01 | 2400/02 | 1500/04 | 2200/28 | 1100/10 | 1800/31 | 0900/20 | 1700/17 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 578.38

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 4084: Marysville, Michigan on St. Clair River

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST  
 Monthly mean elevation: 579.67 Oct  
 Daily mean elevation: 580.14 6 Oct  
 Instant/hourly Elevation: 580.76 2010/5 Oct

LOWEST  
 Monthly mean elevation: 578.70 Mar  
 Daily mean elevation: 578.19 25 Jan  
 Instant/hourly Elevation: 577.87 0800/25 Jan

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 579.43 | 10 Jan |
| 578.82 | 14 Feb |
| 579.08 | 20 Mar |
| 579.17 | 9 Apr  |
| 579.25 | 19 May |
| 579.41 | 24 Jun |
| 579.59 | 29 Jul |
| 579.57 | 11 Aug |
| 579.73 | 30 Sep |
| 580.14 | 6 Oct  |
| 579.64 | 4 Nov  |
| 579.30 | 4 Dec  |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 578.19 | 25 Jan |
| 578.39 | 26 Feb |
| 578.33 | 10 Mar |
| 578.67 | 1 Apr  |
| 578.85 | 14 May |
| 579.02 | 3 Jun  |
| 579.20 | 4 Jul  |
| 579.21 | 31 Aug |
| 579.09 | 3 Sep  |
| 579.30 | 31 Oct |
| 578.95 | 23 Nov |
| 578.71 | 2 Dec  |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(ft.) | No. of days
above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 580.00 | | | | | | | | | | 1 | | | 580.00 | 1 |
| 579.80 | | | | | | | | | | 4 | | | 579.80 | 5 |
| 579.60 | | | | | | | | | 1 | 17 | 2 | | 579.60 | 25 |
| 579.40 | 3 | | | | | 1 | 15 | 21 | 7 | 8 | 5 | | 579.40 | 85 |
| 579.20 | 7 | | | | 2 | 17 | 15 | 10 | 11 | 1 | 5 | 2 | 579.20 | 155 |
| 579.00 | 10 | | 1 | 5 | 15 | 12 | 1 | | 6 | | 11 | 10 | 579.00 | 226 |
| 578.80 | 3 | 6 | 10 | 9 | 14 | | | | | | 2 | 15 | 578.80 | 285 |
| 578.60 | 5 | 16 | 11 | 5 | | | | | | | | 4 | 578.60 | 326 |
| 578.40 | 2 | 5 | 8 | | | | | | | | | | 578.40 | 341 |
| 578.20 | | 1 | 1 | | | | | | | | | | 578.20 | 343 |
| 578.00 | 1 | | | | | | | | | | | | 578.00 | 344 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 4084: Marysville, Michigan on St. Clair River

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 579.35 | 578.77 | 578.58 | 578.67 | 579.03 | 579.13 | 579.34 | 579.51 | 579.19 | 579.71 | 579.57 | 578.80 |
| 2 | 579.41 | 578.77 | 578.47 | 578.81 | 579.24 | 579.09 | 579.36 | 579.48 | 579.20 | 579.71 | 579.61 | 578.71 |
| 3 | 579.31 | 578.74 | 578.46 | 578.78 | 579.06 | 579.02 | 579.35 | 579.49 | 579.09 | 579.73 | 579.53 | 579.01 |
| 4 | 579.07 | 578.67 | 578.47 | 578.79 | 578.93 | 579.05 | 579.20 | 579.46 | 579.12 | 579.90 | 579.64 | 579.30 |
| 5 | 579.01 | 578.71 | 578.50 | 578.77 | 578.97 | 579.14 | 579.24 | 579.45 | 579.25 | 579.96 | 579.38 | 579.17 |
| 6 | 579.33 | 578.70 | 578.56 | 578.70 | 578.88 | 579.12 | 579.26 | 579.44 | 579.27 | 580.14 | 579.41 | 579.13 |
| 7 | 579.42 | 578.71 | 578.89 | 578.86 | 578.95 | 579.07 | 579.30 | 579.50 | 579.22 | 579.74 | 579.35 | 579.09 |
| 8 | 579.30 | 578.73 | 578.52* | 579.04 | 578.99 | 579.16 | 579.31 | 579.49 | 579.16 | 579.88 | 579.20 | 579.04 |
| 9 | 579.14 | 578.74 | 578.47 | 579.17 | 578.93 | 579.14 | 579.42* | 579.53 | 579.11* | 579.82 | 579.59 | 578.86 |
| 10 | 579.43 | 578.82 | 578.33* | 579.12* | 578.94 | 579.06 | 579.36* | 579.46 | / | 579.66 | 579.57 | 579.10 |
| 11 | 578.99 | 578.82* | 578.81 | / | 578.93 | 579.15 | 579.29 | 579.57 | / | 579.59 | 579.40 | 579.05 |
| 12 | 579.11 | 578.81 | 578.74* | / | 578.92 | 579.18 | 579.28 | 579.50 | 579.38 | 579.48 | 579.30* | 579.22 |
| 13 | 579.38 | 578.79 | 578.74 | / | 578.95 | 579.33 | 579.30 | 579.44 | 579.50 | 579.70 | / | 579.09 |
| 14 | 579.26 | 578.82 | 578.81 | / | 578.85 | 579.30 | 579.42 | 579.36 | 579.41 | 579.67 | / | 578.94 |
| 15 | 579.11 | 578.81 | 578.82 | / | 578.87 | 579.26 | 579.34 | 579.36 | 579.47 | 579.75 | / | 579.00 |
| 16 | 579.07 | 578.78 | 578.88 | / | 578.88 | 579.36 | 579.35* | 579.41 | 579.49 | 579.67 | / | 578.88 |
| 17 | 578.73 | 578.77 | 578.67* | / | 578.93 | 579.35 | 579.40* | 579.44 | 579.27 | 579.72 | / | 578.85 |
| 18 | 578.65 | 578.71 | 578.69 | / | 579.05 | 579.27 | 579.42 | 579.55 | 579.33 | 579.66 | 579.34* | 578.94 |
| 19 | 578.81 | 578.71 | 578.86 | / | 579.25 | 579.30 | 579.46 | 579.46 | 579.36 | 579.63 | 579.11 | 579.04 |
| 20 | 579.00 | 578.68 | 579.08 | / | 579.19 | 579.38 | 579.52 | 579.40 | 579.31 | 579.62 | 579.00 | 578.98 |
| 21 | 578.60 | 578.81 | 578.87 | / | 579.14 | 579.23 | 579.48 | 579.46 | 579.39* | 579.61 | 579.20 | 578.95 |
| 22 | 578.66 | 578.56 | 578.76 | 579.10 | 579.10 | 579.24 | 579.41 | 579.31 | / | 579.56 | 579.02 | 578.93 |
| 23 | 578.72 | 578.55 | 578.89 | 579.05 | 579.12 | 579.34 | 579.43 | 579.36 | / | 579.68 | 578.95 | 579.07 |
| 24 | 578.48 | 578.57 | 578.86 | 578.92 | 579.11 | 579.41 | 579.35 | 579.52 | / | 579.54 | 579.09 | 578.85 |
| 25 | 578.19 | 578.52 | 578.62 | 578.95 | 579.07 | 579.34 | 579.48 | 579.27 | 579.37 | 579.51 | 579.02 | 578.91 |
| 26 | 578.76 | 578.39 | 578.74 | 578.87 | 579.10 | 579.25 | 579.56 | 579.37 | 579.45 | 579.46 | 579.12 | 578.98 |
| 27 | 579.07 | 578.53 | 578.85 | 578.86 | 579.09 | 579.31 | 579.50 | 579.53 | 579.40 | 579.54 | 579.09 | 578.93 |
| 28 | 579.27 | 578.64 | 578.65 | 578.88 | 579.11 | 579.35 | 579.47 | 579.46 | 579.43 | 579.51 | 579.14 | 578.95 |
| 29 | 579.19 | | 578.75 | 578.95 | 579.11 | 579.39 | 579.59* | 579.30 | 579.56 | 579.62 | 579.15 | 578.80 |
| 30 | 579.03 | | 578.75 | 578.87 | 579.12 | 579.37 | 579.57 | 579.27 | 579.73 | 579.63 | 579.09 | 578.83 |
| 31 | 579.02 | | 578.71 | | 579.14 | | 579.49 | 579.21 | | 579.30 | | 578.80 |
| MEAN | 579.03 | 578.70 | 578.70 | 578.90 | 579.03 | 579.24 | 579.40 | 579.43 | 579.34 | 579.67 | 579.27 | 578.97 |
| MAX. | 579.93 | 579.10 | 579.42 | 579.30 | 579.47 | 579.91 | 579.84 | 579.97 | 579.94 | 580.76 | 579.94 | 579.49 |
| MIN. | 0200/13 | 2200/20 | 1500/19 | 1000/09 | 1800/01 | 0900/24 | 0200/26 | 2200/26 | 2300/30 | 2010/05 | 0400/04 | 1200/04 |
| | 577.87 | 578.33 | 578.13 | 578.42 | 578.67 | 578.74 | 578.51 | 579.04 | 578.96 | 579.17 | 578.67 | 578.52 |
| | 0800/25 | 0800/26 | 0800/10 | 0700/01 | 0300/01 | 0500/01 | 1500/04 | 0700/23 | 1000/04 | 1100/31 | 0900/20 | 1000/02 |

* Indicates Less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL MEAN: 579.14

ANNUAL SUMMARY OF LEVELS, 1986
 Station 4087: Dry Dock, Port Huron, Michigan on St. Clair River

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

HIGHEST
 Monthly mean elevation: 580.14 Oct
 Daily mean elevation: 580.61 6 Oct
 Instant/hourly Elevation: 581.32 1945/5 Oct

LOWEST
 Monthly mean elevation: 579.10 Feb
 Daily mean elevation: 578.58 25 Jan
 Instant/hourly Elevation: 578.22 0900/25 Jan

HIGHEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 579.81 | 13 Jan |
| 579.28 | 21 Feb |
| 579.54 | 20 Mar |
| 579.69 | 9 Apr |
| 579.75 | 19 May |
| 579.88 | 24 Jun |
| 580.07 | 29 Jul |
| 580.05 | 27 Aug |
| 580.18 | 30 Sep |
| 580.61 | 6 Oct |
| 580.15 | 4 Nov |
| 579.75 | 4 Dec |

LOWEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 578.58 | 25 Jan |
| 578.83 | 26 Feb |
| 578.71 | 10 Mar |
| 579.12 | 1 Apr |
| 579.27 | 14 May |
| 579.48 | 3 Jun |
| 579.65 | 4 Jul |
| 579.68 | 31 Aug |
| 579.47 | 10 Sep |
| 579.74 | 31 Oct |
| 579.39 | 23 Nov |
| 579.11 | 2 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(ft.) | No. of days<br>above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 580.60         |     |     |     |     |     |     |     |     |     | 1   |     |     | 580.60         | 1                          |
| 580.40         |     |     |     |     |     |     |     |     |     |     |     |     | 580.40         | 1                          |
| 580.20         |     |     |     |     |     |     |     |     |     | 6   |     |     | 580.20         | 7                          |
| 580.00         |     |     |     |     |     |     | 3   | 4   | 2   | 18  | 6   |     | 580.00         | 40                         |
| 579.80         | 1   |     |     |     |     | 4   | 17  | 20  | 11  | 5   | 7   |     | 579.80         | 105                        |
| 579.60         | 6   |     |     | 3   | 3   | 17  | 11  | 7   | 9   | 1   | 8   | 3   | 579.60         | 173                        |
| 579.40         | 9   |     | 1   | 8   | 16  | 9   |     |     | 5   |     | 8   | 13  | 579.40         | 242                        |
| 579.20         | 8   | 3   | 8   | 17  | 12  |     |     |     |     |     | 1   | 14  | 579.20         | 305                        |
| 579.00         | 5   | 19  | 14  | 2   |     |     |     |     |     |     |     | 1   | 579.00         | 346                        |
| 578.80         | 1   | 6   | 7   |     |     |     |     |     |     |     |     |     | 578.80         | 360                        |
| 578.60         |     |     | 1   |     |     |     |     |     |     |     |     |     | 578.60         | 361                        |
| 578.40         | 1   |     |     |     |     |     |     |     |     |     |     |     | 578.40         | 362                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 4087: Dry Dock, Port Huron, Michigan on St. Clair River

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 579.67  | 579.13  | 579.01  | 579.12  | 579.51  | 579.58  | 579.80  | 579.96  | 579.65  | 580.18  | 580.04  | 579.25  |
| 2    | 579.70  | 579.18  | 578.91  | 579.30  | 579.74  | 579.57  | 579.84  | 579.94  | 579.66  | 580.15  | 580.09  | 579.11  |
| 3    | 579.67  | 579.16  | 578.90  | 579.25  | 579.53  | 579.48  | 579.82  | 579.97  | 579.54  | 580.18  | 579.96  | 579.42  |
| 4    | 579.43  | 579.07  | 578.92  | 579.25  | 579.35  | 579.50  | 579.65  | 579.92  | 579.58  | 580.35  | 580.15  | 579.75  |
| 5    | 579.36  | 579.12  | 578.95  | 579.21  | 579.40  | 579.61  | 579.68  | 579.90  | 579.71  | 580.40  | 579.87  | 579.62  |
| 6    | 579.74  | 579.10  | 578.99  | 579.13  | 579.31* | 579.58  | 579.71  | 579.90  | 579.77  | 580.61  | 579.89  | 579.59  |
| 7    | 579.77  | 579.08  | 579.38  | 579.31  | 579.43* | 579.52  | 579.75  | 579.95  | 579.71  | 580.17  | 579.83  | 579.53  |
| 8    | 579.56  | 579.08  | 578.96  | 579.51  | 579.47  | 579.63  | 579.78  | 579.94  | 579.61  | 580.33  | 579.66  | 579.51  |
| 9    | 579.44  | 579.11  | 578.90  | 579.69  | 579.38  | 579.61  | 579.86  | 579.97  | 579.56  | 580.29  | 580.07  | 579.28  |
| 10   | 579.77  | 579.22  | 578.71  | 579.63  | 579.38  | 579.52  | 579.86  | 579.91  | 579.47  | 580.11  | 580.08  | 579.54  |
| 11   | 579.32  | 579.23  | 579.25  | 579.55  | 579.36  | 579.56  | 579.72  | 580.03  | 579.58  | 580.04  | 579.87  | 579.48  |
| 12   | 579.49  | 579.18  | 579.16  | 579.38  | 579.37  | 579.57  | 579.73  | 579.97  | 579.90  | 579.92  | 579.86  | 579.72  |
| 13   | 579.81  | 579.17  | 579.10  | 579.34  | 579.39  | 579.77  | 579.76  | 579.88  | 580.03  | 580.18  | 580.05  | 579.56  |
| 14   | 579.57  | 579.17  | 579.17  | 579.31  | 579.27  | 579.73  | 579.89  | 579.80  | 579.90  | 580.13  | 579.62  | 579.36  |
| 15   | 579.40  | 579.18  | 579.19  | 579.26  | 579.30  | 579.70  | 579.81  | 579.80  | 579.96  | 580.25  | 579.80  | 579.47  |
| 16   | 579.40  | 579.17  | 579.29  | 579.49  | 579.29  | 579.80  | 579.79  | 579.84  | 579.96  | 580.17  | 579.52  | 579.35  |
| 17   | 579.10  | 579.12  | 579.10  | 579.56  | 579.37  | 579.80  | 579.81  | 579.89  | 579.71  | 580.22  | 579.68  | 579.30  |
| 18   | 579.10  | 579.09  | 579.09  | 579.43  | 579.53  | 579.70  | 579.85  | 580.02  | 579.79  | 580.14  | 579.82  | 579.40  |
| 19   | 579.31  | 579.13  | 579.26  | 579.28  | 579.75  | 579.74  | 579.88  | 579.93  | 579.88* | 580.10  | 579.59  | 579.50  |
| 20   | 579.49  | 579.10  | 579.54  | 579.43  | 579.68  | 579.83  | 579.96  | 579.85  | /       | 580.10  | 579.42  | 579.45  |
| 21   | 579.02  | 579.28  | 579.29  | 579.61  | 579.60  | 579.67  | 579.94  | 579.92  | /       | 580.08  | 579.68  | 579.42  |
| 22   | 579.12  | 578.98  | 579.15  | 579.59  | 579.55  | 579.67  | 579.85  | 579.75  | /       | 580.03  | 579.48  | 579.38  |
| 23   | 579.18  | 578.98  | 579.32  | 579.51  | 579.58  | 579.75  | 579.87  | 579.81  | 579.91* | 580.18  | 579.39  | 579.55  |
| 24   | 578.91  | 579.00  | 579.32  | 579.34  | 579.57  | 579.88  | 579.78  | 580.01  | 579.94  | 580.04  | 579.59  | 579.32  |
| 25   | 578.58  | 578.96  | 579.02  | 579.36  | 579.53  | 579.79  | 579.92  | 579.71  | 579.83  | 580.00  | 579.51  | 579.39  |
| 26   | 579.27  | 578.83  | 579.16  | 579.31  | 579.55  | 579.65  | 580.04  | 579.84  | 579.88  | 579.92  | 579.65  | 579.45  |
| 27   | 579.56  | 578.98  | 579.28  | 579.32  | 579.54  | 579.72  | 579.97  | 580.05  | 579.79  | 580.00  | 579.58  | 579.38  |
| 28   | 579.60  | 579.08  | 579.06  | 579.32  | 579.55  | 579.80  | 579.92  | 579.96  | 579.85  | 579.97  | 579.61  | 579.40  |
| 29   | 579.51  |         | 579.19  | 579.38  | 579.54  | 579.85  | 580.07  | 579.77  | 580.00  | 580.10  | 579.67  | 579.21  |
| 30   | 579.39  |         | 579.18  | 579.31  | 579.55  | 579.82  | 580.03  | 579.75  | 580.18  | 580.13  | 579.58  | 579.28  |
| 31   | 579.39  |         | 579.16  |         | 579.56  |         | 579.93  | 579.68  |         | 579.74  |         | 579.24  |
| MEAN | 579.41  | 579.10  | 579.13  | 579.38  | 579.48  | 579.68  | 579.85  | 579.89  | 579.79  | 580.14  | 579.75  | 579.43  |
| MAX. | 580.44  | 579.66  | 579.90  | 579.89  | 579.96  | 580.44  | 580.34  | 580.50  | 580.45  | 581.32  | 580.48  | 579.93  |
|      | 0200/13 | 0400/21 | 0400/11 | 2200/10 | 1800/01 | 0900/24 | 0200/26 | 2200/26 | 1800/15 | 1945/05 | 0300/04 | 2300/12 |
| MIN. | 578.22  | 578.72  | 578.47  | 578.81  | 579.07  | 579.18  | 579.34  | 579.40  | 579.19  | 579.55  | 579.07  | 578.93  |
|      | 0900/25 | 1100/20 | 0300/19 | 0100/01 | 0300/16 | 0500/01 | 1200/17 | 0700/23 | 1500/10 | 1100/31 | 0900/20 | 1000/02 |

\* Indicates Less than 90% of the Hourly Data Available.

/ Indicates No Data.

ANNUAL MEAN: 579.59

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 4090: Mouth of Black River, Port Huron, Michigan on St. Clair River

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST  
 Monthly mean elevation: 580.56 Oct  
 Daily mean elevation: 581.05 6 Oct  
 Instant/hourly Elevation: 581.76 0400/6 Oct

LOWEST  
 Monthly mean elevation: 579.43 Feb  
 Daily mean elevation: 578.89 25 Jan  
 Instant/hourly Elevation: 578.43 0700/25 Jan

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 580.08 | 6 Jan  |
| 579.66 | 21 Feb |
| 580.00 | 20 Mar |
| 580.13 | 9 Apr  |
| 580.21 | 19 May |
| 580.28 | 29 Jun |
| 580.51 | 29 Jul |
| 580.48 | 27 Aug |
| 580.63 | 30 Sep |
| 581.05 | 6 Oct  |
| 580.59 | 4 Nov  |
| 580.17 | 4 Dec  |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 578.89 | 25 Jan |
| 579.17 | 26 Feb |
| 579.09 | 10 Mar |
| 579.48 | 6 Apr  |
| 579.66 | 6 May  |
| 579.89 | 3 Jun  |
| 580.05 | 4 Jul  |
| 580.07 | 31 Aug |
| 579.80 | 10 Sep |
| 580.18 | 31 Oct |
| 579.77 | 23 Nov |
| 579.47 | 2 Dec  |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(ft.) | No. of days
above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 581.00 | | | | | | | | | | 1 | | | 581.00 | 1 |
| 580.80 | | | | | | | | | | 2 | | | 580.80 | 3 |
| 580.60 | | | | | | | | | 1 | 7 | | | 580.60 | 11 |
| 580.40 | | | | | | | 4 | 4 | 4 | 17 | 6 | | 580.40 | 46 |
| 580.20 | | | | | 1 | 5 | 18 | 21 | 10 | 3 | 8 | | 580.20 | 112 |
| 580.00 | 3 | | | 2 | 3 | 17 | 9 | 6 | 8 | 1 | 7 | 3 | 580.00 | 171 |
| 579.80 | 10 | | 2 | 9 | 17 | 8 | | | 4 | | 8 | 10 | 579.80 | 239 |
| 579.60 | 10 | 1 | 7 | 16 | 10 | | | | 1 | | 1 | 15 | 579.60 | 300 |
| 579.40 | 4 | 18 | 12 | 3 | | | | | | | | 3 | 579.40 | 340 |
| 579.20 | 3 | 8 | 9 | | | | | | | | | | 579.20 | 360 |
| 579.00 | | 1 | 1 | | | | | | | | | | 579.00 | 362 |
| 578.80 | 1 | | | | | | | | | | | | 578.80 | 363 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 4090: Mouth of Black River, Port Huron, Michigan on St. Clair River

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 579.95 | 579.44 | 579.35 | 579.49 | 579.92 | 580.02 | 580.22 | 580.39 | 580.05 | 580.68 | 580.50 | 579.62 |
| 2 | 579.95 | 579.52 | 579.23 | 579.68 | 580.20 | 580.00 | 580.27 | 580.36 | 580.07 | 580.65 | 580.51 | 579.47 |
| 3 | 579.94 | 579.49 | 579.22 | 579.63 | 579.95 | 579.89 | 580.25 | 580.39 | 579.93 | 580.66 | 580.37 | 579.78 |
| 4 | 579.69 | 579.38 | 579.24 | 579.63 | 579.77 | 579.92 | 580.05 | 580.32 | 579.97 | 580.83 | 580.59 | 580.17 |
| 5 | 579.65 | 579.46 | 579.33 | 579.55 | 579.81 | 580.03 | 580.11 | 580.30 | 580.14 | 580.86 | 580.30 | 580.02 |
| 6 | 580.08 | 579.44 | 579.39 | 579.48 | 579.66 | 579.98 | 580.12 | 580.32 | 580.18 | 581.05* | 580.30 | 579.98 |
| 7 | 580.06 | 579.39 | 579.82 | 579.71 | 579.84 | 579.92 | 580.19 | 580.37 | 580.13 | 580.56 | 580.23 | 579.90 |
| 8 | 579.81 | 579.39 | 579.34 | 579.94 | 579.90 | 580.05 | 580.20 | 580.35 | 580.02 | 580.72 | 580.06 | 579.90 |
| 9 | 579.72 | 579.43 | 579.27 | 580.13 | 579.80 | 580.03 | 580.30 | 580.38 | 579.94 | 580.72 | 580.49 | 579.66 |
| 10 | 579.99* | 579.53 | 579.09 | 580.05 | 579.80 | 579.93 | 580.28 | 580.30 | 579.80 | 580.51 | 580.53 | 579.92 |
| 11 | 579.60 | 579.55 | 579.66 | 579.96 | 579.79 | 580.00 | 580.13 | 580.47 | 580.00 | 580.44 | 580.30 | 579.84 |
| 12 | 579.79 | 579.51 | 579.55 | 579.74 | 579.79 | 579.97 | 580.13 | 580.39 | 580.33 | 580.32 | 580.29 | 580.14 |
| 13 | 580.03* | 579.48 | 579.46 | 579.71 | 579.81 | 580.19 | 580.15 | 580.29 | 580.48 | 580.60 | 580.49 | 579.94 |
| 14 | 579.82 | 579.49 | 579.53 | 579.68 | 579.69 | 580.14 | 580.31 | 580.19 | 580.34 | 580.53 | 580.01 | 579.76 |
| 15 | 579.63 | 579.51 | 579.55 | 579.62 | 579.70 | 580.10 | 580.22 | 580.21 | 580.34* | 580.66 | 580.22 | 579.88 |
| 16 | 579.65 | 579.51 | 579.68 | 579.89 | 579.71 | 580.19 | 580.21 | 580.25 | 580.41* | 580.59 | 579.95 | 579.73 |
| 17 | 579.40 | 579.44 | 579.48 | 579.97 | 579.79 | 580.20 | 580.21 | 580.30 | 580.10* | 580.67 | 580.11 | 579.68 |
| 18 | 579.43 | 579.42 | 579.47 | 579.82 | 579.96 | 580.09 | 580.29 | 580.45 | 580.21* | 580.57 | 580.28 | 579.78 |
| 19 | 579.72 | 579.47 | 579.65 | 579.64 | 580.21 | 580.13 | 580.31 | 580.34 | 580.26* | 580.52 | 579.99 | 579.88 |
| 20 | 579.90 | 579.45 | 580.00 | 579.82 | 580.10 | 580.24 | 580.41 | 580.26 | / | 580.48 | 579.82 | 579.83 |
| 21 | 579.38 | 579.66 | 579.68 | 579.98 | 580.01 | 580.06 | 580.38 | 580.33 | / | 580.52 | 580.08 | 579.76 |
| 22 | 579.49 | 579.29 | 579.50 | 579.99 | 579.96 | 580.07 | 580.28 | 580.16 | 580.17* | 580.44 | 579.85 | 579.73 |
| 23 | 579.55 | 579.32 | 579.70 | 579.88 | 579.99 | 580.16 | 580.30 | 580.22 | 580.40 | 580.60 | 579.77 | 579.94 |
| 24 | 579.27 | 579.36 | 579.70 | 579.69 | 579.98 | 580.28 | 580.20 | 580.43 | 580.42 | 580.45 | 580.03 | 579.67 |
| 25 | 578.89 | 579.30 | 579.36 | 579.75 | 579.93 | 580.20 | 580.35 | 580.10 | 580.27 | 580.41 | 579.90 | 579.74 |
| 26 | 579.68 | 579.17 | 579.53 | 579.70 | 579.97 | 580.05 | 580.46 | 580.24 | 580.33 | 580.34 | 580.04 | 579.78 |
| 27 | 579.97 | 579.31 | 579.66 | 579.71 | 579.95 | 580.17 | 580.37 | 580.48 | 580.24 | 580.43 | 579.95 | 579.73 |
| 28 | 579.91 | 579.43 | 579.43 | 579.71 | 579.97 | 580.21 | 580.34 | 580.38 | 580.30 | 580.39 | 579.99 | 579.78 |
| 29 | 579.81 | | 579.56 | 579.78 | 579.98 | 580.28 | 580.51 | 580.17 | 580.41 | 580.52 | 580.07 | 579.56 |
| 30 | 579.68 | | 579.59 | 579.70 | 579.98 | 580.23 | 580.46 | 580.15 | 580.63 | 580.58 | 579.96 | 579.64 |
| 31 | 579.70 | | 579.56 | | 580.00 | | 580.35 | 580.07 | | 580.18 | | 579.59 |
| MEAN | 579.71 | 579.43 | 579.50 | 579.77 | 579.90 | 580.09 | 580.27 | 580.30 | 580.21 | 580.56 | 580.17 | 579.80 |
| MAX. | 580.54 | 580.01 | 580.33 | 580.35 | 580.48 | 580.82 | 580.77 | 580.97 | 580.93 | 581.76 | 580.95 | 580.38 |
| MIN. | 0200/13 | 2100/20 | 0400/11 | 1200/09 | 1700/01 | 1400/16 | 0200/26 | 2100/26 | 2200/26 | 0400/06 | 0300/04 | 1200/04 |
| | 578.43 | 579.04 | 578.87 | 579.18 | 579.51 | 579.54 | 579.71 | 579.77 | 579.29 | 580.03 | 579.45 | 579.26 |
| | 0700/25 | 1100/20 | 0700/10 | 0300/06 | 0200/01 | 0500/01 | 1200/17 | 0700/23 | 1000/10 | 1100/31 | 0900/20 | 1000/02 |

* Indicates Less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL MEAN: 579.98

ANNUAL SUMMARY OF LEVELS, 1986
 Station 4096: Dunn Paper Co., Port Huron, Michigan on St. Clair River

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

HIGHEST
 Monthly mean elevation: 581.01 Oct
 Daily mean elevation: 581.54 6 Oct
 Instant/hourly Elevation: 582.32 0430/6 Oct

LOWEST
 Monthly mean elevation: 579.76 Feb
 Daily mean elevation: 579.21 25 Jan
 Instant/hourly Elevation: 578.69 0700/25 Jan

HIGHEST DAILY MEAN
 FOR EACH MONTH

 Elev. Date
 580.50 13 Jan
 580.03 21 Feb
 580.31 20 Mar
 580.55 9 Apr
 580.66 19 May
 580.82 26 Jun
 580.92 26 Jul
 580.91 27 Aug
 581.05 30 Sep
 581.54 6 Oct
 581.07 4 Nov
 580.57 12 Dec

LOWEST DAILY MEAN
 FOR EACH MONTH

 Elev. Date
 579.21 25 Jan
 579.57 26 Feb
 579.42 10 Mar
 579.88 6 Apr
 580.05 6 May
 580.29 3 Jun
 580.45 4 Jul
 580.51 31 Aug
 580.30 10 Sep
 580.60 31 Oct
 580.23 23 Nov
 579.83 2 Dec

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(ft.) | No. of days<br>above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 581.40         |     |     |     |     |     |     |     |     |     | 1   |     |     | 581.40         | 1                          |
| 581.20         |     |     |     |     |     |     |     |     |     | 2   |     |     | 581.20         | 3                          |
| 581.00         |     |     |     |     |     |     |     |     | 1   | 12  | 2   |     | 581.00         | 18                         |
| 580.80         |     |     |     |     |     | 1   | 4   | 10  | 5   | 13  | 5   |     | 580.80         | 56                         |
| 580.60         |     |     |     |     | 2   | 9   | 16  | 15  | 12  | 2   | 7   |     | 580.60         | 119                        |
| 580.40         | 2   |     |     | 5   | 3   | 14  | 7   | 4   | 9   | 1   | 11  | 4   | 580.40         | 179                        |
| 580.20         | 6   |     | 1   | 6   | 21  | 6   |     |     | 3   |     | 5   | 12  | 580.20         | 239                        |
| 580.00         | 9   | 1   | 4   | 16  | 5   |     |     |     |     |     |     | 13  | 580.00         | 287                        |
| 579.80         | 9   | 4   | 11  | 3   |     |     |     |     |     |     |     | 2   | 579.80         | 316                        |
| 579.60         | 4   | 22  | 14  |     |     |     |     |     |     |     |     |     | 579.60         | 356                        |
| 579.40         |     | 1   | 1   |     |     |     |     |     |     |     |     |     | 579.40         | 358                        |
| 579.20         | 1   |     |     |     |     |     |     |     |     |     |     |     | 579.20         | 359                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 4096: Dunn Paper Co., Port Huron, Michigan on St. Clair River

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 580.20  | 579.73  | 579.73  | 579.88  | 580.32  | 580.44  | 580.67  | /       | 580.50* | 581.09  | 580.96  | 580.04  |
| 2    | 580.22  | 579.79  | 579.65  | 580.08  | 580.63  | 580.42  | 580.71  | 580.79* | 580.50  | 581.05  | 581.00  | 579.83  |
| 3    | 580.22  | 579.81  | 579.64  | 580.01  | 580.37  | 580.29  | 580.68  | 580.81  | 580.36  | 581.07  | 580.82  | 580.16  |
| 4    | 580.01  | 579.72  | 579.66  | 580.05  | 580.15  | 580.37  | 580.45  | 580.76  | 580.41  | 581.25  | 581.07  | 580.57  |
| 5    | 579.93  | 579.79  | 579.70  | 579.97  | 580.24  | 580.46  | 580.55  | 580.74  | 580.58  | 581.28  | 580.75  | 580.45  |
| 6    | 580.41  | 579.77  | 579.74  | 579.88  | 580.05  | 580.40  | 580.53  | 580.76  | 580.63  | 581.54  | 580.77  | 580.38  |
| 7    | 580.38  | 579.69  | 580.18  | 580.13  | 580.26  | 580.34  | 580.60  | 580.81  | 580.58  | 580.98  | 580.71  | 580.33  |
| 8    | 580.04  | 579.67  | 579.66  | 580.35  | 580.32  | 580.46  | 580.62  | 580.77  | 580.45  | 581.19  | 580.51  | 580.34  |
| 9    | 579.97  | 579.71  | 579.62  | 580.55  | 580.22  | 580.44  | 580.73  | 580.83  | 580.37  | 581.19  | 580.97  | 580.05  |
| 10   | 580.40  | 579.84  | 579.42  | 580.49  | 580.22  | 580.35  | 580.71  | 580.76  | 580.30  | 580.97  | 581.03  | 580.32  |
| 11   | 579.88  | 579.86  | 579.99  | 580.40  | 580.22  | 580.43  | 580.54  | 580.90  | 580.41  | 580.88  | 580.78  | 580.24  |
| 12   | 580.13  | 579.80  | 579.87  | 580.20  | 580.21  | 580.31  | 580.52  | 580.82  | 580.77  | 580.75  | 580.74  | 580.57  |
| 13   | 580.50  | 579.77  | 579.74  | 580.15  | 580.21  | 580.57  | 580.54  | 580.74  | 580.91  | 581.07  | 580.99  | 580.36  |
| 14   | 580.10  | 579.77  | 579.81  | 580.13  | 580.09  | 580.54  | 580.73  | 580.70* | 580.76  | 580.98  | 580.44  | 580.14  |
| 15   | 579.85  | 579.76  | 579.86  | 580.04  | 580.12  | 580.49  | 580.63  | /       | 580.84  | 581.10  | 580.68  | 580.27  |
| 16   | 579.90  | 579.78  | 579.97  | 580.32  | 580.09  | 580.64  | 580.61  | 580.74* | 580.85  | 581.03  | 580.38  | 580.16  |
| 17   | 579.68  | 579.71  | 579.75  | 580.41  | 580.23  | 580.64  | 580.63  | 580.74  | 580.58  | 581.14  | 580.60  | 580.12  |
| 18   | 579.79  | 579.73  | 579.75  | 580.25  | 580.39  | 580.52  | 580.69  | 580.91  | 580.68  | 581.05  | 580.79  | 580.22  |
| 19   | 580.10  | 579.79  | 579.90  | 580.05  | 580.66  | 580.54  | 580.76  | 580.81  | 580.74  | 580.97  | 580.47  | 580.35  |
| 20   | 580.29  | 579.80  | 580.31  | 580.26  | 580.55  | 580.66  | 580.83  | 580.71  | 580.69  | 580.94  | 580.28  | 580.30  |
| 21   | 579.75  | 580.03  | 579.95  | 580.43  | 580.43  | 580.46  | 580.81  | 580.78  | 580.74  | 581.00  | 580.54  | 580.24  |
| 22   | 579.87  | 579.65  | 579.75  | 580.42  | 580.36  | 580.48  | 580.71  | 580.57  | 580.52  | 580.91  | 580.32  | 580.16  |
| 23   | 579.94  | 579.69  | 580.05  | 580.28  | 580.40  | 580.60  | 580.75  | 580.67  | 580.78  | 581.09  | 580.23  | 580.41  |
| 24   | 579.66  | 579.73  | 580.07  | 580.09  | 580.39  | 580.73  | 580.61  | 580.89  | 580.81  | 580.94  | 580.47  | 580.13  |
| 25   | 579.21  | 579.68  | 579.65  | 580.17  | 580.34  | 580.63  | 580.75  | 580.55  | 580.69  | 580.87  | 580.39  | 580.18  |
| 26   | 580.08  | 579.57  | 579.87  | 580.09  | 580.37  | 580.82  | 580.92  | 580.67  | 580.74  | 580.78  | 580.54  | 580.26  |
| 27   | 580.34  | 579.72  | 580.04  | 580.07  | 580.36  | 580.76  | 580.85* | 580.91  | 580.64  | 580.87  | 580.41  | 580.18  |
| 28   | 580.14  | 579.82  | 579.75  | 580.10  | 580.38  | 580.69  | /       | 580.85  | 580.72  | 580.83  | 580.46  | 580.20  |
| 29   | 580.04  |         | 579.92  | 580.18  | 580.38  | 580.76  | /       | 580.62  | 580.82  | 581.00  | 580.55  | 579.96  |
| 30   | 579.95* |         | 579.94  | 580.10  | 580.39  | 580.69  | /       | 580.59  | 581.05  | 581.05  | 580.46  | 580.08  |
| 31   | 579.95* |         | 579.90  |         | 580.41  |         | /       | 580.51  |         | 580.60  |         | 580.02  |
| MEAN | 580.03  | 579.76  | 579.83  | 580.18  | 580.31  | 580.53  | 580.67  | 580.75  | 580.65  | 581.01  | 580.64  | 580.23  |
| MAX. | 581.26  | 580.46  | 580.64  | 580.81  | 580.94  | 581.49  | 581.19  | 581.36  | 581.44  | 582.32  | 581.38  | 580.81  |
| MIN. | 0200/13 | 0400/21 | 0400/11 | 2200/10 | 0900/19 | 1600/16 | 0230/26 | 1700/28 | 1800/15 | 0430/06 | 0300/10 | 0100/13 |
|      | 578.69  | 579.34  | 579.22  | 579.47  | 579.84  | 579.86  | 579.99  | 580.21  | 579.45  | 580.45  | 579.84  | 579.59  |
|      | 0700/25 | 1100/20 | 0200/19 | 0300/06 | 0200/01 | 0500/01 | 1400/04 | 0600/23 | 1000/22 | 1000/31 | 0900/20 | 1000/02 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 580.38

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 4098: Fort Gratiot, Port Huron, Michigan on St. Clair River

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST  
 Monthly mean elevation: 581.49 Oct  
 Daily mean elevation: 582.06 6 Oct  
 Instant/hourly Elevation: 583.04 0408/6 Oct

LOWEST  
 Monthly mean elevation: 580.10 Feb  
 Daily mean elevation: 579.52 25 Jan  
 Instant/hourly Elevation: 578.89 0700/25 Jan

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 580.97 | 13 Jan |
| 580.46 | 21 Feb |
| 580.75 | 20 Mar |
| 581.11 | 9 Apr  |
| 581.18 | 19 May |
| 581.22 | 29 Jun |
| 581.46 | 29 Jul |
| 581.49 | 27 Aug |
| 581.50 | 30 Sep |
| 582.06 | 6 Oct  |
| 581.64 | 4 Nov  |
| 581.07 | 12 Dec |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 579.52 | 25 Jan |
| 579.95 | 26 Feb |
| 579.73 | 10 Mar |
| 580.31 | 6 Apr  |
| 580.47 | 6 May  |
| 580.71 | 12 Jun |
| 580.87 | 4 Jul  |
| 581.00 | 31 Aug |
| 580.68 | 10 Sep |
| 581.05 | 31 Oct |
| 580.67 | 23 Nov |
| 580.23 | 2 Dec  |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(ft.) | No. of days
above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 582.00 | | | | | | | | | | 1 | | | 582.00 | 1 |
| 581.80 | | | | | | | | | | | | | 581.80 | 1 |
| 581.60 | | | | | | | | | | 5 | 1 | | 581.60 | 7 |
| 581.40 | | | | | | | 1 | 4 | 2 | 15 | 5 | | 581.40 | 34 |
| 581.20 | | | | | | 2 | 9 | 16 | 9 | 8 | 6 | | 581.20 | 84 |
| 581.00 | | | | 2 | 3 | 9 | 15 | 10 | 10 | 2 | 6 | 2 | 581.00 | 143 |
| 580.80 | 3 | | | 5 | 14 | 15 | 6 | 1 | 8 | | 9 | 5 | 580.80 | 209 |
| 580.60 | 4 | | 2 | 8 | 9 | 4 | | | 1 | | 3 | 14 | 580.60 | 254 |
| 580.40 | 7 | 1 | 4 | 13 | 5 | | | | | | | 8 | 580.40 | 292 |
| 580.20 | 9 | 1 | 9 | 2 | | | | | | | | 2 | 580.20 | 315 |
| 580.00 | 6 | 22 | 13 | | | | | | | | | | 580.00 | 356 |
| 579.80 | 1 | 4 | 2 | | | | | | | | | | 579.80 | 363 |
| 579.60 | | | 1 | | | | | | | | | | 579.60 | 364 |
| 579.40 | 1 | | | | | | | | | | | | 579.40 | 365 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 4098: Fort Gratiot, Port Huron, Michigan on St. Clair River

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 580.51 | 580.07 | 580.11 | 580.34 | 580.79 | 580.96 | 581.12 | 581.30 | 580.99 | 581.55 | 581.46 | 580.48 |
| 2 | 580.53 | 580.17 | 580.02 | 580.58 | 581.17 | 580.96 | 581.20 | 581.25 | 580.99 | 581.50 | 581.50 | 580.23 |
| 3 | 580.57 | 580.19 | 580.04 | 580.51 | 580.87 | 580.79 | 581.16 | 581.31 | 580.83 | 581.46 | 581.27 | 580.55 |
| 4 | 580.33 | 580.06 | 580.07 | 580.51 | 580.59 | 580.82 | 580.87 | 581.23 | 580.89 | 581.70 | 581.64 | 581.03 |
| 5 | 580.28 | 580.10 | 580.11 | 580.42 | 580.66 | 580.94 | 580.99 | 581.22 | 581.09 | 581.73 | 581.26 | 580.91 |
| 6 | 580.87 | 580.09 | 580.13 | 580.31 | 580.47 | 580.88 | 580.99 | 581.24 | 581.15 | 582.06 | 581.25 | 580.86 |
| 7 | 580.76 | 579.99 | 580.63 | 580.59 | 580.74 | 580.79 | 581.07 | 581.29 | 581.11 | 581.39 | 581.18 | 580.80 |
| 8 | 580.30 | 579.96 | 580.00 | 580.86 | 580.84 | 580.94 | 581.07 | 581.25 | 580.97 | 581.64 | 580.92 | 580.84 |
| 9 | 580.24 | 580.02 | 579.99 | 581.11 | 580.70 | 580.90 | 581.20 | 581.31 | 580.88 | 581.71 | 581.45 | 580.48 |
| 10 | 580.76 | 580.15 | 579.73 | 581.01 | 580.69 | 580.78 | 581.18 | 581.20 | 580.68 | 581.46 | 581.57 | 580.76 |
| 11 | 580.20 | 580.17 | 580.42 | 580.91 | 580.68 | 580.83 | 580.99 | 581.43 | 580.85 | 581.36 | 581.28 | 580.63 |
| 12 | 580.52 | 580.12 | 580.28 | 580.66 | 580.67 | 580.71 | 580.96 | 581.32 | 581.30 | 581.17 | 581.23 | 581.07 |
| 13 | 580.97 | 580.05 | 580.12 | 580.62 | 580.67 | 581.01 | 580.99 | 581.22 | 581.47 | 581.54 | 581.53 | 580.85 |
| 14 | 580.40 | 580.05 | 580.18 | 580.58 | 580.52 | 580.98 | 581.20 | 581.09 | 581.29 | 581.40 | 580.87 | 580.55 |
| 15 | 580.06 | 580.07 | 580.22 | 580.46 | 580.54 | 580.93 | 581.09 | 581.08 | 581.33 | 581.60 | 581.17 | 580.79 |
| 16 | 580.15 | 580.10 | 580.37 | 580.80 | 580.51 | 581.07 | 581.05 | 581.19 | 581.36 | 581.51 | 580.85 | 580.63 |
| 17 | 579.96 | 580.01 | 580.10 | 580.92 | 580.68 | 581.12 | 581.08 | 581.25 | 581.02 | 581.65 | 581.08 | 580.56 |
| 18 | 580.18 | 580.06 | 580.09 | 580.70 | 580.89 | 580.95 | 581.20 | 581.45 | 581.15 | 581.51 | 581.36 | 580.67 |
| 19 | 580.61 | 580.14 | 580.26 | 580.47 | 581.18 | 580.98 | 581.22 | 581.32 | 581.25 | 581.43 | 580.97 | 580.80 |
| 20 | 580.79 | 580.17 | 580.75 | 580.74 | 581.05 | 581.14 | 581.35 | 581.21 | 581.18 | 581.41 | 580.74 | 580.76 |
| 21 | 580.13 | 580.46 | 580.36 | 580.94 | 580.91 | 580.88 | 581.31 | 581.31 | 581.23 | 581.45 | 581.04 | 580.70 |
| 22 | 580.30 | 579.99 | 580.11 | 580.92 | 580.83 | 580.90 | 581.16 | 581.04 | 580.95 | 581.38 | 580.73 | 580.58 |
| 23 | 580.41 | 580.07 | 580.47 | 580.76 | 580.86 | 581.04 | 581.17 | 581.14 | 581.25 | 581.59 | 580.67 | 580.91 |
| 24 | 580.06 | 580.14 | 580.53 | 580.51 | 580.86 | 581.22 | 581.03 | 581.42 | 581.29 | 581.42 | 580.93 | 580.61 |
| 25 | 579.52 | 580.07 | 580.02 | 580.62 | 580.81 | 581.09 | 581.22 | 581.01 | 581.13 | 581.38 | 580.84 | 580.66 |
| 26 | 580.59 | 579.95 | 580.29 | 580.53 | 580.86 | 580.87 | 581.40 | 581.17 | 581.20 | 581.27 | 581.05 | 580.71 |
| 27 | 580.82 | 580.12 | 580.51 | 580.54 | 580.82 | 581.02 | 581.28 | 581.49 | 581.08 | 581.37 | 580.87 | 580.64 |
| 28 | 580.43 | 580.22 | 580.15 | 580.53 | 580.85 | 581.10 | 581.24 | 581.36 | 581.16 | 581.28 | 580.91 | 580.63 |
| 29 | 580.35 | | 580.35 | 580.62 | 580.82 | 581.22 | 581.46 | 581.12 | 581.28 | 581.47 | 581.03 | 580.36 |
| 30 | 580.25 | | 580.37 | 580.52 | 580.84 | 581.16 | 581.40 | 581.08 | 581.50 | 581.60 | 580.94 | 580.54 |
| 31 | 580.33 | | 580.36 | | 580.88 | | 581.23 | 581.00 | | 581.05 | | 580.46 |
| MEAN | 580.39 | 580.10 | 580.23 | 580.65 | 580.78 | 580.97 | 581.16 | 581.24 | 581.13 | 581.49 | 581.12 | 580.68 |
| MAX. | 581.88 | 580.94 | 581.23 | 581.40 | 581.46 | 581.95 | 581.80 | 582.22 | 581.99 | 583.04 | 582.07 | 581.37 |
| MIN. | 0200/13 | 0900/21 | 0400/11 | 2200/10 | 2200/01 | 2200/23 | 0800/17 | 2100/26 | 2000/15 | 0408/06 | 0300/04 | 1500/06 |
| | 578.89 | 579.64 | 579.48 | 579.85 | 580.22 | 580.18 | 580.20 | 580.56 | 579.68 | 580.84 | 580.28 | 579.93 |
| | 0700/25 | 1100/20 | 0200/19 | 0300/06 | 0200/01 | 0500/01 | 1400/04 | 0700/23 | 1000/22 | 1100/31 | 0900/20 | 0400/14 |

* Indicates Less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL MEAN: 580.83

ANNUAL SUMMARY OF LEVELS, 1986
 Station 5002: Lakeport, Michigan on Lake Huron

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

HIGHEST
 Monthly mean elevation: 581.65 Oct
 Daily mean elevation: 582.18 6 Oct
 Instant/hourly Elevation: 583.04 0438/6 Oct

LOWEST
 Monthly mean elevation: 580.39 Feb
 Daily mean elevation: 579.70 25 Jan
 Instant/hourly Elevation: 579.18 0700/25 Jan

HIGHEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 580.99 | 13 Jan |
| 580.83 | 21 Feb |
| 580.92 | 7 Mar |
| 581.21 | 9 Apr |
| 581.35 | 2 May |
| 581.35 | 24 Jun |
| 581.54 | 30 Jul |
| 581.60 | 27 Aug |
| 581.67 | 30 Sep |
| 582.18 | 6 Oct |
| 581.76 | 10 Nov |
| 581.21 | 12 Dec |

LOWEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 579.70 | 25 Jan |
| 580.25 | 17 Feb |
| 579.96 | 10 Mar |
| 580.45 | 6 Apr |
| 580.66 | 16 May |
| 580.86 | 12 Jun |
| 581.00 | 4 Jul |
| 581.14 | 31 Aug |
| 580.82 | 10 Sep |
| 581.23 | 31 Oct |
| 580.84 | 23 Nov |
| 580.38 | 2 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(ft.) | No. of days<br>above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 582.00         |     |     |     |     |     |     |     |     |     | 1   |     |     | 582.00         | 1                          |
| 581.80         |     |     |     |     |     |     |     |     |     | 3   |     |     | 581.80         | 4                          |
| 581.60         |     |     |     |     |     |     |     |     | 2   | 13  | 6   |     | 581.60         | 25                         |
| 581.40         |     |     |     |     |     |     | 7   | 14  | 5   | 12  | 5   |     | 581.40         | 68                         |
| 581.20         |     |     |     | 1   | 2   | 7   | 16  | 15  | 12  | 2   | 5   | 1   | 581.20         | 129                        |
| 581.00         |     |     |     | 6   | 7   | 16  | 7   | 2   | 9   |     | 10  | 4   | 581.00         | 190                        |
| 580.80         | 6   | 1   | 2   | 5   | 16  | 7   | 1   |     | 2   |     | 4   | 10  | 580.80         | 244                        |
| 580.60         | 3   |     | 1   | 15  | 6   |     |     |     |     |     |     | 14  | 580.60         | 283                        |
| 580.40         | 11  | 9   | 10  | 3   |     |     |     |     |     |     |     | 1   | 580.40         | 317                        |
| 580.20         | 9   | 18  | 15  |     |     |     |     |     |     |     |     | 1   | 580.20         | 360                        |
| 580.00         | 1   |     | 2   |     |     |     |     |     |     |     |     |     | 580.00         | 363                        |
| 579.80         |     |     | 1   |     |     |     |     |     |     |     |     |     | 579.80         | 364                        |
| 579.60         | 1   |     |     |     |     |     |     |     |     |     |     |     | 579.60         | 365                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 5002: Lakeport, Michigan on Lake Huron

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 580.58  | 580.26  | 580.36  | 580.50  | 580.91  | 581.13  | 581.24  | 581.45  | 581.13  | 581.70  | 581.62  | 580.69  |
| 2    | 580.59  | 580.31  | 580.27  | 580.73  | 581.35  | 581.09  | 581.33  | 581.43  | 581.11  | 581.63  | 581.65  | 580.38  |
| 3    | 580.60  | 580.37  | 580.28  | 580.62  | 581.02  | 580.93  | 581.30  | 581.45  | 580.97  | 581.58  | 581.50  | 580.69  |
| 4    | 580.48  | 580.33  | 580.30  | 580.63  | 580.74  | 580.96  | 581.00  | 581.39  | 581.01  | 581.86  | 581.76  | 581.19  |
| 5    | 580.38  | 580.48  | 580.32  | 580.55  | 580.83  | 581.06  | 581.09  | 581.37  | 581.25  | 581.87  | 581.41  | 581.10  |
| 6    | 580.97  | 580.45  | 580.38  | 580.45  | 580.68  | 581.01  | 581.15  | 581.38  | 581.31  | 582.18  | 581.41  | 581.00  |
| 7    | 580.82  | 580.31  | 580.92  | 580.72  | 580.87  | 580.93  | 581.23  | 581.43  | 581.25  | 581.54  | 581.36  | 580.98  |
| 8    | 580.37  | 580.30  | 580.24  | 581.01  | 580.96  | 581.08  | 581.25  | 581.35  | 581.11  | 581.80  | 581.07  | 581.01  |
| 9    | 580.31  | 580.34  | 580.16  | 581.21  | 580.84  | 581.03  | 581.34  | 581.44  | 581.02  | 581.84  | 581.62  | 580.65  |
| 10   | 580.81  | 580.47  | 579.96  | 581.14  | 580.83  | 580.91  | 581.32  | 581.35  | 580.82  | 581.64  | 581.76  | 580.91  |
| 11   | 580.31  | 580.50  | 580.56  | 581.08  | 580.81  | 580.99  | 581.19  | 581.59  | 581.06  | 581.49  | 581.44  | 580.83  |
| 12   | 580.62  | 580.42  | 580.41  | 580.81  | 580.80  | 580.86  | 581.12  | 581.46  | 581.43  | 581.33  | 581.38  | 581.21  |
| 13   | 580.99  | 580.32  | 580.25  | 580.77  | 580.82  | 581.14  | 581.09  | 581.37  | 581.62  | 581.73  | 581.70  | 581.00  |
| 14   | 580.53  | 580.32  | 580.30  | 580.74  | 580.67  | 581.10  | 581.36  | 581.23  | 581.44  | 581.56  | 581.06  | 580.72  |
| 15   | 580.24  | 580.33  | 580.38  | 580.63  | 580.71  | 581.04  | 581.25  | 581.21  | 581.52  | 581.78  | 581.35  | 580.91  |
| 16   | 580.31  | 580.37  | 580.54  | 580.96  | 580.66  | 581.13  | 581.19  | 581.33  | 581.49  | 581.69  | 581.00  | 580.80  |
| 17   | 580.13  | 580.25  | 580.36  | 581.05  | 580.83  | 581.23  | 581.21  | 581.41  | 581.20  | 581.80  | 581.24  | 580.72  |
| 18   | 580.37  | 580.29  | 580.28  | 580.86  | 581.02  | 581.10  | 581.31  | 581.56  | 581.27  | 581.68  | 581.48  | 580.80  |
| 19   | 580.71  | 580.39  | 580.38  | 580.65  | 581.31  | 581.12  | 581.34  | 581.44  | 581.33  | 581.60  | 581.11  | 580.97  |
| 20   | 580.92  | 580.45  | 580.81  | 580.89  | 581.20  | 581.23  | 581.47  | 581.34  | 581.32  | 581.59  | 580.96  | 580.90  |
| 21   | 580.34  | 580.83  | 580.47  | 581.04  | 581.10  | 581.00  | 581.43  | 581.44  | 581.37  | 581.63  | 581.20  | 580.84  |
| 22   | 580.44  | 580.32  | 580.28  | 581.03  | 580.99  | 581.02  | 581.29  | 581.21  | 581.12  | 581.55  | 580.92  | 580.75  |
| 23   | 580.58  | 580.39  | 580.58  | 580.91  | 581.03  | 581.15  | 581.32  | 581.27  | 581.39  | 581.76  | 580.84  | 581.06  |
| 24   | 580.24  | 580.46  | 580.60  | 580.67  | 581.00  | 581.35  | 581.17  | 581.57  | 581.42  | 581.60  | 581.10  | 580.78  |
| 25   | 579.70  | 580.38  | 580.18  | 580.79  | 580.97  | 581.23  | 581.38  | 581.20  | 581.31  | 581.56  | 581.03  | 580.80  |
| 26   | 580.72  | 580.26  | 580.44  | 580.68  | 581.02  | 581.07  | 581.51  | 581.31  | 581.40  | 581.43  | 581.21  | 580.87  |
| 27   | 580.85  | 580.42  | 580.64  | 580.68  | 580.97  | 581.18  | 581.42  | 581.60  | 581.20  | 581.53  | 581.04  | 580.79  |
| 28   | 580.54  | 580.52  | 580.30  | 580.70  | 580.99  | 581.25  | 581.39  | 581.48  | 581.30  | 581.45  | 581.05  | 580.78  |
| 29   | 580.49  |         | 580.49  | 580.80  | 580.99  | 581.34  | 581.54  | 581.24  | 581.34  | 581.66  | 581.15  | 580.55  |
| 30   | 580.43  |         | 580.50  | 580.69  | 581.00  | 581.30  | 581.54  | 581.23  | 581.67  | 581.74  | 581.12  | 580.68  |
| 31   | 580.50  |         | 580.49  |         | 581.09  |         | 581.41  | 581.14  |         | 581.23  |         | 580.64  |
| MEAN | 580.51  | 580.39  | 580.40  | 580.80  | 580.94  | 581.10  | 581.30  | 581.38  | 581.27  | 581.65  | 581.28  | 580.84  |
| MAX. | 581.96  | 581.37  | 581.34  | 581.42  | 581.58  | 581.97  | 581.75  | 582.16  | 582.06  | 583.04  | 582.26  | 581.51  |
| MIN. | 0200/13 | 2100/20 | 0400/11 | 1100/11 | 0900/19 | 2200/16 | 0100/26 | 1400/28 | 1900/26 | 0438/06 | 0300/10 | 1400/06 |
|      | 579.18  | 579.94  | 579.59  | 580.01  | 580.37  | 580.53  | 579.77  | 580.79  | 580.16  | 580.97  | 580.49  | 580.11  |
|      | 0700/25 | 1100/20 | 0200/19 | 0700/01 | 0200/01 | 0500/01 | 1400/04 | 0700/23 | 1000/10 | 1300/31 | 1600/27 | 0900/02 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 580.99

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 5014: Harbor Beach, Michigan on Lake Huron

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST  
 Monthly mean elevation: 581.62 Oct  
 Daily mean elevation: 582.08 6 Oct  
 Instant/hourly Elevation: 582.40 0500/6 Oct

LOWEST  
 Monthly mean elevation: 580.36 Feb  
 Daily mean elevation: 579.86 25 Jan  
 Instant/hourly Elevation: 579.46 0700/25 Jan

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 580.88 | 6 Jan  |
| 580.66 | 21 Feb |
| 580.78 | 7 Mar  |
| 581.02 | 9 Apr  |
| 581.23 | 2 May  |
| 581.32 | 29 Jun |
| 581.50 | 30 Jul |
| 581.58 | 11 Aug |
| 581.69 | 30 Sep |
| 582.08 | 6 Oct  |
| 581.77 | 10 Nov |
| 581.25 | 4 Dec  |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 579.86 | 25 Jan |
| 580.22 | 26 Feb |
| 580.06 | 10 Mar |
| 580.45 | 6 Apr  |
| 580.64 | 14 May |
| 580.86 | 12 Jun |
| 581.05 | 12 Jul |
| 581.11 | 31 Aug |
| 580.95 | 3 Sep  |
| 581.31 | 31 Oct |
| 580.92 | 23 Nov |
| 580.52 | 2 Dec  |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(ft.) | No. of days
above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 582.00 | | | | | | | | | | 1 | | | 582.00 | 1 |
| 581.80 | | | | | | | | | | 1 | | | 581.80 | 2 |
| 581.60 | | | | | | | | | 1 | 16 | | | 581.60 | 24 |
| 581.40 | | | | | | | 4 | 9 | 5 | 11 | | | 581.40 | 57 |
| 581.20 | | | | | 1 | 6 | 19 | 18 | 12 | 2 | | | 581.20 | 123 |
| 581.00 | | | | 2 | 5 | 12 | 8 | 4 | 9 | | 1 | | 581.00 | 180 |
| 580.80 | 1 | | | 9 | 16 | 12 | | | 3 | | 1 | | 580.80 | 235 |
| 580.60 | 7 | 1 | 3 | 14 | 9 | | | | | | 1 | 12 | 580.60 | 281 |
| 580.40 | 15 | 5 | 10 | 5 | | | | | | | | 1 | 580.40 | 317 |
| 580.20 | 6 | 22 | 16 | | | | | | | | | | 580.20 | 361 |
| 580.00 | 1 | | 2 | | | | | | | | | | 580.00 | 364 |
| 579.80 | 1 | | | | | | | | | | | | 579.80 | 365 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 5014: Harbor Beach, Michigan on Lake Huron

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 580.61 | 580.30 | 580.36 | 580.49 | 580.88 | 580.97 | 581.19 | 581.43 | 581.08 | 581.63 | 581.60 | 580.76 |
| 2 | 580.56 | 580.28 | 580.26 | 580.68 | 581.23 | 580.97 | 581.22 | 581.43 | 581.06 | 581.60 | 581.64 | 580.52 |
| 3 | 580.52 | 580.35 | 580.25 | 580.59 | 580.99 | 580.90 | 581.24 | 581.46 | 580.95 | 581.54 | 581.54 | 580.79 |
| 4 | 580.50 | 580.28 | 580.30 | 580.57 | 580.81 | 580.96 | 581.05 | 581.40 | 581.00 | 581.74 | 581.64 | 581.25 |
| 5 | 580.42 | 580.40 | 580.31 | 580.49 | 580.84 | 580.99 | 581.17 | 581.39 | 581.21 | 581.82 | 581.39 | 581.17 |
| 6 | 580.88 | 580.44 | 580.29 | 580.45 | 580.72 | 580.94 | 581.20 | 581.36 | 581.26 | 582.08 | 581.43 | 581.12 |
| 7 | 580.74 | 580.22 | 580.78 | 580.72 | 580.89 | 580.90 | 581.25 | 581.37 | 581.20 | 581.62 | 581.35 | 581.01 |
| 8 | 580.42 | 580.27 | 580.33 | 580.94 | 580.86 | 581.02 | 581.26 | 581.34 | 581.11 | 581.77 | 581.13 | 580.98 |
| 9 | 580.48 | 580.33 | 580.20 | 581.02 | 580.76 | 580.99 | 581.28 | 581.46 | 581.07 | 581.73 | 581.63 | 580.68 |
| 10 | 580.79 | 580.46 | 580.06 | 581.01 | 580.75 | 580.87 | 581.27 | 581.38 | 580.96 | 581.62 | 581.77 | 580.94 |
| 11 | 580.44 | 580.49 | 580.47 | 580.98 | 580.77 | 580.91 | 581.13 | 581.58 | 581.09 | 581.52 | 581.42 | 580.98 |
| 12 | 580.66 | 580.39 | 580.34 | 580.74 | 580.73 | 580.86 | 581.05 | 581.42 | 581.43 | 581.39 | 581.38 | 581.17 |
| 13 | 580.78 | 580.37 | 580.21 | 580.72 | 580.77 | 581.13 | 581.13 | 581.31 | 581.55 | 581.68 | 581.64 | 580.99 |
| 14 | 580.47 | 580.34 | 580.25 | 580.67 | 580.64 | 581.10 | 581.33 | 581.24 | 581.38 | 581.61 | 581.25 | 580.89 |
| 15 | 580.31 | 580.36 | 580.38 | 580.63 | 580.73 | 581.03 | 581.25 | 581.28 | 581.39 | 581.78 | 581.37 | 580.91 |
| 16 | 580.32 | 580.36 | 580.49 | 580.90 | 580.70 | 581.14 | 581.15 | 581.34 | 581.38 | 581.70 | 581.06 | 580.80 |
| 17 | 580.19 | 580.23 | 580.36 | 580.89 | 580.81 | 581.22 | 581.21 | 581.35 | 581.19 | 581.68 | 581.27 | 580.76 |
| 18 | 580.42 | 580.28 | 580.28 | 580.81 | 580.96 | 581.10 | 581.30 | 581.44 | 581.24 | 581.63 | 581.34 | 580.80 |
| 19 | 580.53 | 580.35 | 580.36 | 580.65 | 581.09 | 581.10 | 581.34 | 581.34 | 581.30 | 581.59 | 581.13 | 580.97 |
| 20 | 580.72 | 580.37 | 580.66 | 580.85 | 581.06 | 581.15 | 581.44 | 581.29 | 581.27 | 581.61 | 580.98 | 580.86 |
| 21 | 580.38 | 580.66 | 580.48 | 580.94 | 581.03 | 581.00 | 581.35 | 581.35 | 581.33 | 581.60 | 581.12 | 580.83 |
| 22 | 580.38 | 580.30 | 580.40 | 580.90 | 580.96 | 581.03 | 581.25 | 581.19 | 581.17 | 581.55 | 581.04 | 580.88 |
| 23 | 580.52 | 580.36 | 580.55 | 580.87 | 581.00 | 581.20 | 581.30 | 581.20 | 581.42 | 581.69 | 580.92 | 581.03 |
| 24 | 580.26 | 580.44 | 580.58 | 580.68 | 580.97 | 581.26 | 581.21 | 581.50 | 581.42 | 581.54 | 581.14 | 580.75 |
| 25 | 579.86 | 580.37 | 580.28 | 580.75 | 580.91 | 581.21 | 581.38 | 581.18 | 581.32 | 581.52 | 581.10 | 580.78 |
| 26 | 580.59 | 580.22 | 580.47 | 580.69 | 580.95 | 581.05 | 581.44 | 581.23 | 581.39 | 581.41 | 581.12 | 580.87 |
| 27 | 580.63 | 580.34 | 580.65 | 580.69 | 580.92 | 581.20 | 581.37 | 581.47 | 581.20 | 581.54 | 581.09 | 580.77 |
| 28 | 580.50 | 580.53 | 580.41 | 580.69 | 580.98 | 581.26 | 581.31 | 581.40 | 581.29 | 581.53 | 581.14 | 580.82 |
| 29 | 580.45 | | 580.53 | 580.80 | 580.98 | 581.32 | 581.50 | 581.22 | 581.44 | 581.64 | 581.11 | 580.63 |
| 30 | 580.39 | | 580.49 | 580.72 | 581.02 | 581.25 | 581.50 | 581.21 | 581.69 | 581.69 | 581.03 | 580.67 |
| 31 | 580.47 | | 580.49 | | 581.01 | | 581.37 | 581.11 | | 581.31 | | 580.68 |
| MEAN | 580.49 | 580.36 | 580.40 | 580.75 | 580.89 | 581.07 | 581.27 | 581.34 | 581.26 | 581.62 | 581.29 | 580.87 |
| MAX. | 581.31 | 580.97 | 580.99 | 581.19 | 581.41 | 581.62 | 581.67 | 581.74 | 581.98 | 582.40 | 582.08 | 581.48 |
| | 0200/13 | 0800/21 | 1000/07 | 0900/11 | 0800/19 | 1000/24 | 2200/18 | 0200/24 | 2200/29 | 0500/06 | 0200/10 | 0500/05 |
| MIN. | 579.46 | 580.02 | 579.93 | 580.18 | 580.51 | 580.72 | 580.58 | 580.76 | 580.72 | 581.09 | 580.70 | 580.40 |
| | 0700/25 | 0100/05 | 2200/18 | 0500/01 | 0200/01 | 1300/01 | 1500/04 | 0600/23 | 1600/10 | 1200/31 | 1500/27 | 1800/02 |

* Indicates Less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL MEAN: 580.97

ANNUAL SUMMARY OF LEVELS, 1986
 Station 5035: Essexville, Michigan on Lake Huron (Saginaw Bay)

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

HIGHEST
 Monthly mean elevation: 581.59 Oct
 Daily mean elevation: 582.68 19 May
 Instant/hourly Elevation: 583.15 0100/20 May

LOWEST
 Monthly mean elevation: 580.35 Feb
 Daily mean elevation: 579.72 25 Jan
 Instant/hourly Elevation: 578.93 0300/6 Dec

HIGHEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 580.79 | 13 Jan |
| 580.67 | 21 Feb |
| 580.73 | 24 Mar |
| 581.34 | 16 Apr |
| 582.68 | 19 May |
| 581.48 | 20 Jun |
| 581.63 | 20 Jul |
| 581.63 | 18 Aug |
| 581.64 | 15 Sep |
| 582.04 | 9 Oct |
| 581.77 | 4 Nov |
| 581.39 | 8 Dec |

LOWEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 579.72 | 25 Jan |
| 580.22 | 13 Feb |
| 580.14 | 25 Mar |
| 580.31 | 6 Apr |
| 580.52 | 4 May |
| 580.72 | 12 Jun |
| 580.75 | 4 Jul |
| 580.98 | 23 Aug |
| 580.63 | 10 Sep |
| 581.06 | 7 Oct |
| 580.06 | 14 Nov |
| 580.18 | 10 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(ft.) | No. of days<br>above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 582.60         |     |     |     |     | 1   |     |     |     |     |     |     |     | 582.60         | 1                          |
| 582.40         |     |     |     |     |     |     |     |     |     |     |     |     | 582.40         | 1                          |
| 582.20         |     |     |     |     |     |     |     |     |     |     |     |     | 582.20         | 1                          |
| 582.00         |     |     |     |     |     |     |     |     |     | 2   |     |     | 582.00         | 3                          |
| 581.80         |     |     |     |     |     |     |     |     |     | 2   |     |     | 581.80         | 5                          |
| 581.60         |     |     |     |     | 1   |     | 1   | 1   | 1   | 11  | 2   |     | 581.60         | 22                         |
| 581.40         |     |     |     |     |     | 1   | 5   | 10  | 6   | 12  | 4   |     | 581.40         | 60                         |
| 581.20         |     |     |     | 3   | 1   | 6   | 16  | 13  | 11  | 1   | 5   | 1   | 581.20         | 117                        |
| 581.00         |     |     |     | 4   | 10  | 10  | 8   | 6   | 6   | 3   | 8   | 2   | 581.00         | 174                        |
| 580.80         |     |     |     | 8   | 11  | 12  |     | 1   | 4   |     | 5   | 8   | 580.80         | 223                        |
| 580.60         | 4   | 1   | 2   | 11  | 3   | 1   | 1   |     | 2   |     | 5   | 11  | 580.60         | 264                        |
| 580.40         | 14  | 6   | 7   | 3   | 4   |     |     |     |     |     |     | 4   | 580.40         | 302                        |
| 580.20         | 8   | 21  | 19  | 1   |     |     |     |     |     |     |     | 4   | 580.20         | 355                        |
| 580.00         | 4   |     | 3   |     |     |     |     |     |     |     | 1   | 1   | 580.00         | 364                        |
| 579.80         |     |     |     |     |     |     |     |     |     |     |     |     | 579.80         | 364                        |
| 579.60         | 1   |     |     |     |     |     |     |     |     |     |     |     | 579.60         | 365                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 5035: Essexville, Michigan on Lake Huron (Saginaw Bay)

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 580.48  | 580.41  | 580.29  | 580.45  | 580.60  | 581.18  | 581.22  | 581.42  | 581.04  | 581.68  | 581.59  | 581.11  |
| 2    | 580.60  | 580.24  | 580.26  | 580.73  | 581.27  | 581.17  | 581.25  | 581.36  | 581.17  | 581.61  | 581.56  | 580.62  |
| 3    | 580.66  | 580.39  | 580.24  | 580.78  | 580.98  | 580.85  | 581.35  | 581.38  | 580.97  | 581.54  | 581.12  | 580.21  |
| 4    | 580.52  | 580.32  | 580.27  | 581.00  | 580.52  | 580.88  | 580.75  | 581.29  | 580.86  | 582.03  | 581.77  | 580.67  |
| 5    | 580.09  | 580.36  | 580.40  | 580.68  | 580.66  | 581.36  | 581.02  | 581.22  | 581.01  | 581.42  | 581.40  | 580.71  |
| 6    | 580.71  | 580.59  | 580.29  | 580.31  | 580.59  | 581.20  | 581.03  | 581.41  | 581.27  | 581.94  | 581.32  | 580.59  |
| 7    | 580.60  | 580.43  | 580.48  | 580.65  | 580.93  | 580.91  | 581.20  | 581.53  | 581.18  | 581.06  | 581.32  | 580.89  |
| 8    | 580.18  | 580.29  | 580.35  | 580.89  | 581.06  | 580.99  | 581.20  | 581.34  | 580.78  | 581.63  | 580.81  | 581.39  |
| 9    | 580.05  | 580.28  | 580.30  | 581.22  | 581.05  | 581.12  | 581.36  | 581.35  | 580.88  | 582.04  | 580.61  | 580.62  |
| 10   | 580.69  | 580.38  | 580.14  | 581.08  | 580.93  | 580.89  | 581.34  | 581.25  | 580.63  | 581.67  | 581.53  | 580.18  |
| 11   | 580.29  | 580.43  | 580.45  | 581.04  | 580.93  | 581.13  | 581.23  | 581.48  | 580.88  | 581.53  | 581.29  | 580.22  |
| 12   | 580.42  | 580.31  | 580.47  | 580.83  | 580.93  | 580.72  | 581.23  | 581.44  | 581.30  | 581.35  | 580.93  | 581.05  |
| 13   | 580.79  | 580.22  | 580.36  | 580.77  | 580.94  | 580.98  | 581.03  | 581.30  | 581.46  | 581.58  | 581.36  | 580.72  |
| 14   | 580.46  | 580.25  | 580.29  | 580.87  | 580.71  | 580.99  | 581.32  | 581.17  | 581.41  | 581.11  | 580.06  | 580.32  |
| 15   | 580.25  | 580.23  | 580.34  | 580.63  | 580.76  | 581.07  | 581.27  | 581.17  | 581.64  | 581.69  | 581.02  | 580.85  |
| 16   | 580.38  | 580.40  | 580.46  | 581.34  | 580.60  | 580.91  | 581.21  | 581.32  | 581.45  | 581.62  | 580.76  | 580.81  |
| 17   | 580.09  | 580.25  | 580.36  | 581.30  | 580.88  | 581.28  | 581.19  | 581.42  | 581.15  | 581.99  | 581.09  | 580.77  |
| 18   | 580.42  | 580.28  | 580.37  | 580.88  | 581.13  | 581.07  | 581.27  | 581.63  | 581.24  | 581.66  | 581.76  | 580.68  |
| 19   | 580.47  | 580.35  | 580.24  | 580.51  | 582.68  | 581.00  | 581.32  | 581.58  | 581.45  | 581.53  | 581.19  | 580.86  |
| 20   | 580.57  | 580.36  | 580.64  | 580.84  | 581.72  | 581.48  | 581.63  | 581.34  | 581.35  | 581.49  | 581.11  | 580.85  |
| 21   | 580.44  | 580.67  | 580.36  | 581.08  | 581.17  | 580.98  | 581.49  | 581.51  | 581.44  | 581.59  | 581.08  | 580.72  |
| 22   | 580.22  | 580.34  | 580.19  | 581.10  | 581.12  | 580.92  | 581.18  | 581.33  | 581.10  | 581.45  | 580.82  | 580.24  |
| 23   | 580.51  | 580.25  | 580.35  | 580.84  | 581.02  | 581.10  | 581.30  | 580.98  | 581.40  | 581.80  | 580.72  | 580.98  |
| 24   | 580.32  | 580.42  | 580.73  | 580.62  | 581.04  | 581.25  | 581.02  | 581.46  | 581.33  | 581.69  | 580.83  | 580.85  |
| 25   | 579.72  | 580.37  | 580.14  | 580.86  | 580.99  | 581.20  | 581.50  | 581.09  | 581.35  | 581.69  | 580.89  | 580.72  |
| 26   | 580.50  | 580.34  | 580.36  | 580.74  | 581.11  | 580.87  | 581.45  | 581.34  | 581.37  | 581.58  | 581.09  | 580.84  |
| 27   | 580.45  | 580.26  | 580.60  | 580.73  | 581.06  | 581.06  | 581.36  | 581.52  | 581.32  | 581.51  | 580.72  | 580.70  |
| 28   | 580.37  | 580.41  | 580.26  | 580.58  | 580.97  | 581.21  | 581.21  | 581.39  | 581.32  | 581.41  | 580.76  | 580.54  |
| 29   | 580.39  |         | 580.44  | 580.68  | 580.94  | 581.29  | 581.52  | 581.11  | 581.38  | 581.57  | 581.11  | 580.56  |
| 30   | 580.28  |         | 580.40  | 580.66  | 580.92  | 581.37  | 581.49  | 581.13  | 581.56  | 581.71  | 581.57  | 580.71  |
| 31   | 580.42  |         | 580.57  |         | 581.19  |         | 581.35  | 581.10  |         | 581.14  |         | 580.58  |
| MEAN | 580.40  | 580.35  | 580.37  | 580.82  | 581.01  | 581.08  | 581.27  | 581.33  | 581.22  | 581.59  | 581.11  | 580.70  |
| MAX. | 581.52  | 581.03  | 581.01  | 582.27  | 583.15  | 581.96  | 582.50  | 582.16  | 582.56  | 582.86  | 582.25  | 581.83  |
|      | 0400/13 | 1200/21 | 0100/24 | 1400/16 | 0100/20 | 1800/01 | 1900/18 | 2100/26 | 1800/15 | 0900/04 | 1600/18 | 0500/08 |
| MIN. | 579.27  | 579.99  | 579.79  | 579.78  | 579.91  | 580.32  | 580.52  | 580.42  | 579.88  | 580.51  | 579.39  | 578.93  |
|      | 1700/25 | 0100/02 | 1400/25 | 0900/06 | 1300/01 | 0700/01 | 0900/13 | 0200/23 | 1000/10 | 1600/14 | 1400/14 | 0300/06 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 580.94

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 5059: Harrisville, Michigan on Lake Huron

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST  
 Monthly mean elevation: 581.54 Oct  
 Daily mean elevation: 581.84 6 Oct  
 Instant/hourly Elevation: 582.05 0600/6 Oct

LOWEST  
 Monthly mean elevation: 580.25 Feb  
 Daily mean elevation: 580.02 25 Jan  
 Instant/hourly Elevation: 579.90 1400/25 Jan

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 580.64 | 10 Jan |
| 580.36 | 21 Feb |
| 580.59 | 24 Mar |
| 580.87 | 11 Apr |
| 581.01 | 2 May  |
| 581.19 | 29 Jun |
| 581.40 | 29 Jul |
| 581.45 | 11 Aug |
| 581.52 | 30 Sep |
| 581.84 | 6 Oct  |
| 581.57 | 10 Nov |
| 581.10 | 4 Dec  |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 580.02 | 25 Jan |
| 580.12 | 27 Feb |
| 580.04 | 6 Mar  |
| 580.39 | 1 Apr  |
| 580.59 | 14 May |
| 580.83 | 10 Jun |
| 581.04 | 12 Jul |
| 581.02 | 31 Aug |
| 580.92 | 3 Sep  |
| 581.35 | 31 Oct |
| 580.88 | 30 Nov |
| 580.59 | 2 Dec  |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(ft.) | No. of days
above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 581.80 | | | | | | | | | | 1 | | | 581.80 | 1 |
| 581.60 | | | | | | | | | | 6 | | | 581.60 | 7 |
| 581.40 | | | | | | | | 1 | 2 | 22 | 7 | | 581.40 | 39 |
| 581.20 | | | | | | | 15 | 21 | 11 | 2 | 7 | | 581.20 | 95 |
| 581.00 | | | | | 1 | 14 | 16 | 9 | 11 | | 8 | 3 | 581.00 | 157 |
| 580.80 | | | | 1 | 17 | 16 | | | 6 | | 8 | 11 | 580.80 | 216 |
| 580.60 | 3 | | | 20 | 12 | | | | | | 8 | 13 | 580.60 | 264 |
| 580.40 | 8 | | 8 | 8 | 1 | | | | | | | 4 | 580.40 | 293 |
| 580.20 | 19 | 21 | 12 | 1 | | | | | | | | | 580.20 | 346 |
| 580.00 | 1 | 7 | 8 | | | | | | | | | | 580.00 | 362 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 5059: Harrisville, Michigan on Lake Huron

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 580.51 | 580.28 | 580.28 | 580.39 | 580.69 | 580.91 | 581.08 | 581.33 | 580.99 | 581.51 | 581.47 | 580.70 |
| 2 | 580.48 | 580.20 | 580.18 | 580.56 | 581.01 | 580.88 | 581.13 | 581.34 | 580.98 | 581.49 | 581.51 | 580.59 |
| 3 | 580.38 | 580.28 | 580.17 | 580.46 | 580.86 | 580.87 | 581.18 | 581.36 | 580.92 | 581.48 | 581.44 | 580.76 |
| 4 | 580.41 | 580.13 | 580.21 | 580.46 | 580.81 | 580.95 | 581.13 | 581.36 | 581.00 | 581.53 | 581.45 | 581.10 |
| 5 | 580.32 | 580.24 | 580.25 | 580.41 | 580.82 | 580.88 | 581.17 | 581.32 | 581.07 | 581.61 | 581.32 | 581.05 |
| 6 | 580.62 | 580.36 | 580.04 | 580.42 | 580.70 | 580.84 | 581.15 | 581.27 | 581.09 | 581.84 | 581.37 | 581.03 |
| 7 | 580.52 | 580.22 | 580.34 | 580.69 | 580.80 | 580.85 | 581.19 | 581.28 | 581.05 | 581.63 | 581.26 | 580.89 |
| 8 | 580.38 | 580.19 | 580.29 | 580.80 | 580.70 | 580.97 | 581.18 | 581.30 | 581.07 | 581.72 | 581.12 | 580.92 |
| 9 | 580.61 | 580.25 | 580.15 | 580.79 | 580.61 | 580.94 | 581.18 | 581.38 | 580.99 | 581.60 | 581.45 | 580.63 |
| 10 | 580.64 | 580.35 | 580.06 | 580.78 | 580.63 | 580.83 | 581.21 | 581.28 | 580.95 | 581.55 | 581.57 | 580.83 |
| 11 | 580.46 | 580.31 | 580.27 | 580.87 | 580.64 | 580.91 | 581.07 | 581.45 | 581.17 | 581.48 | 581.27 | 580.90 |
| 12 | 580.59 | 580.28 | 580.26 | 580.66 | 580.62 | 580.86 | 581.04 | 581.35 | 581.28 | 581.44 | 581.22 | 580.93 |
| 13 | 580.53 | 580.34 | 580.11 | 580.66 | 580.64 | 581.08 | 581.11 | 581.29 | 581.39 | 581.64 | 581.42 | 580.81 |
| 14 | 580.33 | 580.25 | 580.20 | 580.56 | 580.59 | 581.03 | 581.26 | 581.22 | 581.26 | 581.56 | 581.26 | 580.89 |
| 15 | 580.27 | 580.27 | 580.33 | 580.56 | 580.66 | 580.96 | 581.20 | 581.24 | 581.20 | 581.62 | 581.30 | 580.86 |
| 16 | 580.26 | 580.25 | 580.37 | 580.73 | 580.65 | 581.01 | 581.11 | 581.26 | 581.21 | 581.62 | 581.00 | 580.70 |
| 17 | 580.26 | 580.12 | 580.28 | 580.73 | 580.80 | 581.12 | 581.18 | 581.25 | 581.12 | 581.51 | 581.17 | 580.72 |
| 18 | 580.39 | 580.19 | 580.30 | 580.69 | 580.81 | 581.00 | 581.27 | 581.28 | 581.14 | 581.54 | 581.08 | 580.69 |
| 19 | 580.34 | 580.24 | 580.19 | 580.64 | 580.83 | 581.02 | 581.29 | 581.23 | 581.22 | 581.53 | 581.05 | 580.85 |
| 20 | 580.43 | 580.23 | 580.42 | 580.76 | 580.89 | 581.02 | 581.31 | 581.20 | 581.12 | 581.57 | 580.92 | 580.70 |
| 21 | 580.35 | 580.36 | 580.43 | 580.76 | 580.94 | 580.93 | 581.25 | 581.20 | 581.20 | 581.54 | 580.99 | 580.71 |
| 22 | 580.21 | 580.21 | 580.43 | 580.77 | 580.84 | 581.00 | 581.22 | 581.10 | 581.17 | 581.54 | 581.03 | 580.85 |
| 23 | 580.40 | 580.23 | 580.47 | 580.79 | 580.92 | 581.12 | 581.25 | 581.09 | 581.32 | 581.59 | 580.88 | 580.92 |
| 24 | 580.27 | 580.29 | 580.59* | 580.66 | 580.87 | 581.08 | 581.19 | 581.33 | 581.31 | 581.44 | 581.07 | 580.60 |
| 25 | 580.02 | 580.27 | / | 580.66 | 580.82 | 581.11 | 581.27 | 581.17 | 581.27 | 581.45 | 580.99 | 580.63 |
| 26 | 580.37 | 580.17 | / | 580.59 | 580.82 | 581.06 | 581.28 | 581.11 | 581.33 | 581.36 | 580.91 | 580.74 |
| 27 | 580.30 | 580.12 | / | 580.61 | 580.83 | 581.16 | 581.28 | 581.25 | 581.24 | 581.46 | 581.04 | 580.64 |
| 28 | 580.36 | 580.33 | 580.40* | 580.61 | 580.90 | 581.18 | 581.30 | 581.27 | 581.32 | 581.50 | 581.11 | 580.79 |
| 29 | 580.32 | | 580.52 | 580.76 | 580.90 | 581.19 | 581.40 | 581.16 | 581.42 | 581.49 | 580.98 | 580.60 |
| 30 | 580.30 | | 580.48 | 580.69 | 580.94 | 581.11 | 581.36 | 581.13 | 581.52 | 581.55 | 580.88 | 580.60 |
| 31 | 580.35 | | 580.49 | | 580.87 | | 581.34 | 581.02 | | 581.35 | | 580.65 |
| MEAN | 580.39 | 580.25 | 580.30 | 580.65 | 580.79 | 581.00 | 581.21 | 581.25 | 581.18 | 581.54 | 581.18 | 580.78 |
| MAX. | 580.85 | 580.53 | 580.67 | 580.97 | 581.11 | 581.31 | 581.48 | 581.55 | 581.66 | 582.05 | 581.75 | 581.27 |
| MIN. | 1900/09 | 0800/21 | 0700/24 | 1500/11 | 0300/02 | 1400/27 | 2100/18 | 1800/11 | 2300/29 | 0600/06 | 0500/10 | 0300/05 |
| | 579.90 | 579.93 | 579.92 | 580.12 | 580.45 | 580.69 | 580.91 | 580.88 | 580.12 | 581.24 | 580.73 | 580.42 |
| | 1400/25 | 1800/20 | 2200/06 | 0600/06 | 1300/16 | 2100/11 | 1300/12 | 2300/22 | 1100/17 | 1000/31 | 2200/23 | 0500/10 |

* Indicates Less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL MEAN: 580.88

ANNUAL SUMMARY OF LEVELS, 1986
 Station 5080: Mackinaw City, Michigan on Straits of Mackinac

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

HIGHEST
 Monthly mean elevation: 581.54 Oct
 Daily mean elevation: 581.84 7 Oct
 Instant/hourly Elevation: 582.09 1700/7 Oct

LOWEST
 Monthly mean elevation: 580.22 Feb
 Daily mean elevation: 579.90 7 Mar
 Instant/hourly Elevation: 579.42 2200/6 Mar

HIGHEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 580.70 | 9 Jan |
| 580.34 | 13 Feb |
| 580.70 | 22 Mar |
| 580.84 | 19 Apr |
| 580.94 | 30 May |
| 581.23 | 26 Jun |
| 581.36 | 24 Jul |
| 581.33 | 4 Aug |
| 581.56 | 29 Sep |
| 581.84 | 7 Oct |
| 581.64 | 8 Nov |
| 581.06 | 11 Dec |

LOWEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 579.99 | 27 Jan |
| 579.97 | 27 Feb |
| 579.90 | 7 Mar |
| 580.45 | 4 Apr |
| 580.63 | 2 May |
| 580.79 | 5 Jun |
| 581.05 | 2 Jul |
| 580.95 | 27 Aug |
| 580.90 | 6 Sep |
| 581.36 | 29 Oct |
| 580.80 | 30 Nov |
| 580.63 | 30 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(ft.) | No. of days<br>above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 581.80         |     |     |     |     |     |     |     |     |     | 1   |     |     | 581.80         | 1                          |
| 581.60         |     |     |     |     |     |     |     |     |     | 4   | 1   |     | 581.60         | 6                          |
| 581.40         |     |     |     |     |     | 1   | 17  | 16  | 3   | 24  | 6   |     | 581.40         | 39                         |
| 581.20         |     |     |     |     |     | 12  | 14  | 14  | 7   | 2   | 7   |     | 581.20         | 89                         |
| 581.00         |     |     |     | 6   | 13  | 16  |     | 1   | 16  |     | 12  | 3   | 581.00         | 160                        |
| 580.80         | 2   |     | 2   | 13  | 18  | 1   |     |     | 4   |     | 3   | 12  | 580.80         | 215                        |
| 580.60         | 8   |     | 8   | 11  |     |     |     |     |     |     | 1   | 16  | 580.60         | 268                        |
| 580.40         | 18  | 19  | 10  |     |     |     |     |     |     |     |     |     | 580.40         | 295                        |
| 580.20         | 2   | 8   | 9   |     |     |     |     |     |     |     |     |     | 580.20         | 342                        |
| 580.00         | 1   | 1   | 2   |     |     |     |     |     |     |     |     |     | 580.00         | 361                        |
| 579.80         |     |     |     |     |     |     |     |     |     |     |     |     | 579.80         | 365                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986  
Station 5080: Mackinaw City, Michigan on Straits of Mackinac

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 580.45  | 580.30  | 580.21  | 580.51  | 580.67  | 580.83  | 581.08  | 581.31  | 581.07  | 581.51  | 581.35  | 580.89  |
| 2    | 580.34  | 580.26  | 580.21  | 580.50  | 580.63  | 580.85  | 581.05  | 581.29  | 580.95  | 581.55  | 581.42  | 580.96  |
| 3    | 580.28  | 580.29  | 580.19  | 580.46  | 580.72  | 580.98  | 581.09  | 581.30  | 581.03  | 581.51  | 581.45  | 581.03  |
| 4    | 580.40  | 580.21  | 580.19  | 580.45  | 580.91  | 580.91  | 581.24  | 581.33  | 581.12  | 581.50  | 581.31  | 580.91  |
| 5    | 580.41  | 580.18  | 580.16  | 580.50  | 580.86  | 580.79  | 581.21  | 581.31  | 581.03  | 581.58  | 581.45  | 581.05  |
| 6    | 580.33  | 580.26  | 579.93  | 580.66  | 580.79  | 580.83  | 581.20  | 581.23  | 580.90  | 581.51  | 581.42  | 580.84  |
| 7    | 580.31  | 580.21  | 579.90  | 580.72  | 580.69  | 580.91  | 581.18  | 581.24  | 580.95  | 581.84  | 581.34  | 580.79  |
| 8    | 580.53  | 580.28  | 580.31  | 580.57  | 580.64  | 580.86  | 581.13  | 581.32  | 581.06  | 581.52  | 581.64  | 580.85  |
| 9    | 580.70  | 580.33  | 580.20  | 580.49  | 580.64  | 580.86  | 581.09  | 581.32  | 580.96  | 581.48  | 581.46  | 580.90  |
| 10   | 580.38  | 580.26  | 580.11  | 580.54  | 580.68  | 580.90  | 581.09  | 581.27  | 581.05  | 581.60  | 581.30  | 580.90  |
| 11   | 580.62  | 580.23  | 580.15  | 580.64  | 580.67  | 580.85  | 581.06  | 581.25  | 581.12  | 581.61  | 581.22  | 581.06  |
| 12   | 580.30  | 580.23  | 580.18  | 580.58  | 580.71  | 580.97  | 581.09  | 581.25  | 581.15  | 581.65  | 581.20  | 580.71  |
| 13   | 580.26  | 580.34  | 580.16  | 580.62  | 580.68  | 581.01  | 581.20  | 581.27  | 581.09  | 581.59  | 581.24  | 580.91  |
| 14   | 580.28  | 580.25  | 580.31  | 580.57  | 580.70  | 581.01  | 581.15  | 581.31  | 581.11  | 581.61  | 581.54  | 580.95  |
| 15   | 580.47  | 580.28  | 580.34  | 580.69  | 580.71  | 581.01  | 581.16  | 581.26  | 581.02  | 581.54  | 581.14  | 580.78  |
| 16   | 580.42  | 580.25  | 580.27  | 580.64  | 580.75  | 581.00  | 581.21  | 581.26  | 581.10  | 581.53  | 581.17  | 580.79  |
| 17   | 580.49  | 580.24  | 580.36  | 580.65  | 580.70  | 580.99  | 581.27  | 581.17  | 581.23  | 581.45  | 581.06  | 580.81  |
| 18   | 580.40  | 580.25  | 580.37  | 580.71  | 580.74  | 581.00  | 581.31  | 581.14  | 581.15  | 581.54  | 580.89  | 580.76  |
| 19   | 580.22  | 580.20  | 580.17  | 580.84  | 580.68  | 581.02  | 581.28  | 581.14  | 581.09  | 581.57  | 581.11  | 580.72  |
| 20   | 580.23  | 580.11  | 580.26  | 580.79  | 580.76  | 580.94  | 581.20  | 581.19  | 581.12  | 581.59  | 581.06  | 580.65  |
| 21   | 580.38  | 580.11  | 580.48  | 580.56  | 580.83  | 581.08  | 581.23  | 581.05  | 581.14  | 581.52  | 581.09  | 580.78  |
| 22   | 580.16  | 580.31  | 580.70  | 580.66  | 580.82  | 581.09  | 581.29  | 581.16  | 581.26  | 581.60  | 581.22  | 580.98  |
| 23   | 580.30  | 580.16  | 580.36  | 580.80  | 580.87  | 581.09  | 581.28  | 581.07  | 581.32  | 581.43  | 581.07  | 580.67  |
| 24   | 580.41  | 580.18  | 580.44  | 580.81  | 580.87  | 580.96  | 581.36  | 581.06  | 581.29  | 581.44  | 581.11  | 580.67  |
| 25   | 580.50  | 580.23  | 580.57  | 580.68  | 580.85  | 581.08  | 581.26  | 581.15  | 581.29  | 581.40  | 581.11  | 580.67  |
| 26   | 580.15  | 580.19  | 580.48  | 580.68  | 580.82  | 581.23  | 581.26  | 581.03  | 581.32  | 581.41  | 580.84  | 580.63  |
| 27   | 579.99  | 579.97  | 580.41  | 580.81  | 580.85  | 581.13  | 581.30  | 580.95  | 581.39  | 581.49  | 581.20  | 580.75  |
| 28   | 580.25  | 580.12  | 580.62  | 580.82  | 580.89  | 581.12  | 581.34  | 581.04  | 581.43  | 581.58  | 581.08  | 580.77  |
| 29   | 580.23  |         | 580.52  | 580.83  | 580.91  | 581.07  | 581.27  | 581.12  | 581.56  | 581.36  | 580.84  | 580.69  |
| 30   | 580.24  |         | 580.51  | 580.83  | 580.94  | 581.04  | 581.28  | 581.07  | 581.53  | 581.43  | 580.80  | 580.63  |
| 31   | 580.22  |         | 580.60  |         | 580.84  |         | 581.32  | 581.07  |         | 581.66  |         | 580.82  |
| MEAN | 580.34  | 580.22  | 580.31  | 580.65  | 580.77  | 580.98  | 581.21  | 581.19  | 581.16  | 581.54  | 581.20  | 580.82  |
| MAX. | 581.04  | 580.58  | 581.04  | 581.12  | 581.16  | 581.39  | 581.56  | 581.54  | 581.83  | 582.09  | 581.98  | 581.67  |
| MIN. | 0600/09 | 0100/14 | 1700/22 | 2400/28 | 0100/01 | 2200/26 | 2100/24 | 1300/10 | 0700/30 | 1700/07 | 1200/08 | 2400/05 |
|      | 579.81  | 579.64  | 579.42  | 580.19  | 580.27  | 580.31  | 580.87  | 580.67  | 580.74  | 581.03  | 580.57  | 580.53  |
|      | 0300/27 | 2100/20 | 2200/06 | 0500/26 | 2000/01 | 1000/01 | 1700/11 | 0100/27 | 2400/06 | 0200/06 | 1200/26 | 1400/30 |

ANNUAL MEAN: 580.87

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 5099: DeTour Village, Michigan on Lake Huron

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST  
 Monthly mean elevation: 581.48 Oct  
 Daily mean elevation: 581.72 7 Oct  
 Instant/hourly Elevation: 581.88 1000/6 Oct

LOWEST  
 Monthly mean elevation: 580.16 Feb  
 Daily mean elevation: 579.76 6 Mar  
 Instant/hourly Elevation: 579.26 2200/6 Mar

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 580.77 | 9 Jan  |
| 580.36 | 13 Feb |
| 580.65 | 22 Mar |
| 580.79 | 30 Apr |
| 580.90 | 30 May |
| 581.12 | 26 Jun |
| 581.27 | 24 Jul |
| 581.27 | 9 Aug  |
| 581.48 | 30 Sep |
| 581.72 | 7 Oct  |
| 581.56 | 10 Nov |
| 581.09 | 11 Dec |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 579.95 | 27 Jan |
| 579.83 | 27 Feb |
| 579.76 | 6 Mar  |
| 580.35 | 4 Apr  |
| 580.51 | 1 May  |
| 580.75 | 6 Jun  |
| 580.98 | 12 Jul |
| 580.92 | 27 Aug |
| 580.87 | 7 Sep  |
| 581.30 | 29 Oct |
| 580.74 | 30 Nov |
| 580.55 | 30 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(ft.) | No. of days
above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 581.60 | | | | | | | | | | 1 | | | 581.60 | 1 |
| 581.40 | | | | | | | 10 | 11 | 2 | 22 | 3 | | 581.40 | 28 |
| 581.20 | | | | | | 7 | 17 | 15 | 6 | 8 | 11 | | 581.20 | 74 |
| 581.00 | | | | | 8 | 16 | 4 | 5 | 12 | | 9 | 2 | 581.00 | 136 |
| 580.80 | 1 | | 1 | 13 | 17 | 7 | | | 10 | | 5 | 9 | 580.80 | 193 |
| 580.60 | 7 | | 9 | 14 | 6 | | | | | | 2 | 17 | 580.60 | 251 |
| 580.40 | 15 | 10 | 7 | 3 | | | | | | | | 3 | 580.40 | 290 |
| 580.20 | 6 | 17 | 12 | | | | | | | | | | 580.20 | 325 |
| 579.80 | 2 | 1 | 1 | | | | | | | | | | 580.00 | 360 |
| 579.60 | | | 1 | | | | | | | | | | 579.80 | 364 |
| | | | | | | | | | | | | | 579.60 | 365 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 5099: DeTour Village, Michigan on Lake Huron

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 580.51 | 580.24 | 580.23 | 580.43 | 580.51 | 580.78 | 580.99 | 581.24 | 580.99 | 581.46 | 581.33 | 580.71 |
| 2 | 580.37 | 580.15 | 580.17 | 580.51 | 580.69 | 580.80 | 580.99 | 581.25 | 580.90 | 581.46 | 581.35 | 580.74 |
| 3 | 580.12 | 580.25 | 580.10 | 580.39 | 580.69 | 580.91 | 581.09 | 581.23 | 580.91 | 581.43 | 581.44 | 580.83 |
| 4 | 580.32 | 580.11 | 580.15 | 580.35 | 580.86 | 580.91 | 581.16 | 581.27 | 581.03 | 581.39 | 581.29 | 580.97 |
| 5 | 580.20 | 580.09 | 580.15 | 580.40 | 580.89 | 580.76 | 581.20 | 581.25 | 580.99 | 581.46 | 581.34 | 581.08 |
| 6 | 580.38 | 580.19 | 579.76 | 580.44 | 580.73 | 580.75 | 581.14 | 581.18 | 580.89 | 581.60 | 581.40 | 580.92 |
| 7 | 580.30 | 580.02 | 579.86 | 580.67 | 580.66 | 580.83 | 581.14 | 581.15 | 580.87 | 581.72 | 581.31 | 580.76 |
| 8 | 580.48 | 580.15 | 580.34 | 580.60 | 580.64 | 580.80 | 581.12 | 581.25 | 581.01 | 581.60 | 581.33 | 580.83 |
| 9 | 580.77 | 580.26 | 580.16 | 580.51 | 580.56 | 580.87 | 581.02 | 581.27 | 580.94 | 581.39 | 581.36 | 580.61 |
| 10 | 580.52 | 580.26 | 580.01 | 580.52 | 580.59 | 580.79 | 581.10 | 581.23 | 580.97 | 581.56 | 581.56 | 580.77 |
| 11 | 580.56 | 580.19 | 580.08 | 580.68 | 580.60 | 580.81 | 580.98 | 581.23 | 581.05 | 581.52 | 581.18 | 581.09 |
| 12 | 580.40 | 580.21 | 580.18 | 580.57 | 580.59 | 580.80 | 580.98 | 581.21 | 581.06 | 581.52 | 581.12 | 580.72 |
| 13 | 580.31 | 580.36 | 580.02 | 580.57 | 580.61 | 580.96 | 581.08 | 581.20 | 581.08 | 581.56 | 581.32 | 580.82 |
| 14 | 580.18 | 580.26 | 580.15 | 580.56 | 580.60 | 581.00 | 581.13 | 581.22 | 581.09 | 581.54 | 581.45 | 580.96 |
| 15 | 580.36 | 580.25 | 580.29 | 580.50 | 580.67 | 580.93 | 581.15 | 581.19 | 580.98 | 581.51 | 581.32 | 580.83 |
| 16 | 580.42 | 580.25 | 580.26 | 580.57 | 580.65 | 580.89 | 581.11 | 581.20 | 581.05 | 581.50 | 581.09 | 580.71 |
| 17 | 580.36 | 580.12 | 580.30 | 580.61 | 580.72 | 581.00 | 581.19 | 581.11 | 581.17 | 581.33 | 581.04 | 580.79 |
| 18 | 580.43 | 580.15 | 580.35 | 580.66 | 580.68 | 580.97 | 581.23 | 581.10 | 581.07 | 581.48 | 580.89 | 580.64 |
| 19 | 580.18 | 580.15 | 580.04 | 580.70 | 580.63 | 580.95 | 581.23 | 581.09 | 581.09 | 581.50 | 581.04 | 580.78 |
| 20 | 580.17 | 580.08 | 580.20 | 580.79 | 580.73 | 580.91 | 581.15 | 581.12 | 580.99 | 581.56 | 580.97 | 580.60 |
| 21 | 580.41 | 580.05 | 580.45 | 580.54 | 580.82 | 581.00 | 581.17 | 581.04 | 581.12 | 581.47 | 580.95 | 580.70 |
| 22 | 580.00 | 580.24 | 580.65 | 580.58 | 580.76 | 581.00 | 581.20 | 581.10 | 581.14 | 581.54 | 581.21 | 580.95 |
| 23 | 580.34 | 580.11 | 580.37 | 580.78 | 580.83 | 581.09 | 581.23 | 580.97 | 581.26 | 581.46 | 581.00 | 580.85 |
| 24 | 580.35 | 580.17 | 580.48 | 580.74 | 580.84 | 580.92 | 581.27 | 581.07 | 581.30 | 581.35 | 581.03 | 580.63 |
| 25 | 580.29 | 580.19 | 580.46 | 580.63 | 580.78 | 581.04 | 581.23 | 581.08 | 581.22 | 581.36 | 581.14 | 580.57 |
| 26 | 580.18 | 580.13 | 580.43 | 580.60 | 580.78 | 581.12 | 581.20 | 580.97 | 581.22 | 581.30 | 580.78 | 580.65 |
| 27 | 579.95 | 579.83 | 580.42 | 580.69 | 580.77 | 581.11 | 581.24 | 580.92 | 581.28 | 581.37 | 581.08 | 580.62 |
| 28 | 580.21 | 580.09 | 580.58 | 580.69 | 580.84 | 581.09 | 581.26 | 581.00 | 581.30 | 581.55 | 581.16 | 580.79 |
| 29 | 580.22 | | 580.50 | 580.77 | 580.87 | 581.03 | 581.24 | 581.05 | 581.47 | 581.30 | 580.87 | 580.68 |
| 30 | 580.23 | | 580.44 | 580.79 | 580.90 | 581.03 | 581.25 | 581.05 | 581.48 | 581.45 | 580.74 | 580.55 |
| 31 | 580.24 | | 580.57 | | 580.80 | | 581.25 | 580.99 | | 581.55 | | 580.74 |
| MEAN | 580.31 | 580.16 | 580.26 | 580.59 | 580.72 | 580.93 | 581.15 | 581.14 | 581.10 | 581.48 | 581.17 | 580.77 |
| MAX. | 580.92 | 580.50 | 580.83 | 580.94 | 580.99 | 581.38 | 581.41 | 581.39 | 581.58 | 581.88 | 581.75 | 581.29 |
| MIN. | 0700/09 | 2200/13 | 1700/22 | 0400/20 | 0400/02 | 2300/26 | 2200/24 | 1300/11 | 0700/30 | 1000/06 | 0700/03 | 1300/11 |
| | 579.55 | 579.64 | 579.26 | 580.21 | 579.99 | 580.57 | 580.86 | 580.64 | 580.76 | 581.02 | 580.52 | 580.39 |
| | 1100/22 | 2200/20 | 2200/06 | 2300/05 | 1800/01 | 0900/01 | 0300/12 | 1400/23 | 2400/06 | 2200/05 | 1900/26 | 0600/25 |

ANNUAL MEAN: 580.82

* Indicates Less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL SUMMARY OF LEVELS, 1986
 Station 6060: US Slip below locks, Sault St Marie, Michigan on St Marys River

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

HIGHEST
 Monthly mean elevation: 582.41 Aug
 Daily mean elevation: 582.60 1 Oct
 Instant/hourly Elevation: 582.87 1200/31 Oct

LOWEST
 Monthly mean elevation: 581.39 Dec
 Daily mean elevation: 581.03 22 Apr
 Instant/hourly Elevation: 580.42 2100/1 May

HIGHEST DAILY MEAN
 FOR EACH MONTH

 Elev. Date
 582.33 9 Jan
 581.96 14 Feb
 582.05 22 Mar
 581.72 2 Apr
 582.25 30 May
 582.36 26 Jun
 582.54 27 Jul
 582.58 14 Aug
 582.60 30 Sep
 582.60 1 Oct
 582.15 3 Nov
 581.83 11 Dec

LOWEST DAILY MEAN
 FOR EACH MONTH

 Elev. Date
 581.56 27 Jan
 581.58 27 Feb
 581.40 7 Mar
 581.03 22 Apr
 581.09 2 May
 581.84 8 Jun
 582.15 2 Jul
 582.05 27 Aug
 582.11 7 Sep
 581.96 29 Oct
 581.13 29 Nov
 581.11 12 Dec

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(ft.) | No. of days<br>above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 582.40         |     |     |     |     |     |     | 14  | 17  | 10  | 7   |     |     | 582.40         | 48                         |
| 582.20         | 4   |     |     |     | 2   | 12  | 15  | 12  | 16  | 12  |     |     | 582.20         | 121                        |
| 582.00         | 8   |     | 2   |     | 5   | 16  | 2   | 2   | 4   | 11  | 3   |     | 582.00         | 174                        |
| 581.80         | 14  | 20  | 10  |     | 9   | 2   |     |     |     | 1   | 5   | 1   | 581.80         | 236                        |
| 581.60         | 4   | 7   | 18  | 5   | 12  |     |     |     |     |     | 8   | 2   | 581.60         | 292                        |
| 581.40         | 1   | 1   |     | 12  |     |     |     |     |     |     | 9   | 10  | 581.40         | 325                        |
| 581.20         |     |     | 1   | 9   |     |     |     |     |     |     | 3   | 14  | 581.20         | 352                        |
| 581.00         |     |     |     | 4   | 3   |     |     |     |     |     | 2   | 4   | 581.00         | 365                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 6060: US Slip below locks, Sault St Marie, Michigan on St Marys River

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 582.27  | 581.93  | 581.77  | 581.68  | 581.10  | 582.01  | 582.31  | 582.38  | 582.34  | 582.60  | 581.98  | 581.26  |
| 2    | 582.22  | 581.85  | 581.77  | 581.72  | 581.09  | 582.07  | 582.15  | 582.43  | 582.31  | 582.48  | 582.06  | 581.46  |
| 3    | 581.97  | 581.93  | 581.66  | 581.67  | 581.20  | 582.29  | 582.25  | 582.39  | 582.29  | 582.30  | 582.15  | 581.33  |
| 4    | 582.02  | 581.87  | 581.68  | 581.52  | 581.66  | 582.23  | 582.43  | 582.52  | 582.44  | 582.18  | 581.77  | 581.40  |
| 5    | 582.02  | 581.81  | 581.74  | 581.53  | 581.74  | 582.06  | 582.41  | 582.53  | 582.25  | 582.20  | 581.92  | 581.77  |
| 6    | 582.08  | 581.84  | 581.61  | 581.42  | 581.91  | 582.05  | 582.37  | 582.46  | 582.13  | 582.19  | 581.81  | 581.54  |
| 7    | 582.05  | 581.74  | 581.40  | 581.49  | 581.69  | 582.09  | 582.32  | 582.44  | 582.11  | 582.58  | 581.70  | 581.29  |
| 8    | 582.08  | 581.75  | 581.74  | 581.30  | 581.78  | 581.84  | 582.34  | 582.54  | 582.30  | 582.37  | 582.06  | 581.65  |
| 9    | 582.33  | 581.89  | 581.73  | 581.15  | 581.82  | 582.08  | 582.32  | 582.51  | 582.34  | 582.47  | 581.87  | 581.40  |
| 10   | 582.24  | 581.91  | 581.68  | 581.13  | 581.82  | 582.08  | 582.32  | 582.34  | 582.37  | 582.49  | 581.51  | 581.83  |
| 11   | 582.19  | 581.85  | 581.67  | 581.26  | 581.83  | 582.11  | 582.32  | 582.34  | 582.37  | 582.49  | 581.51  | 581.83  |
| 12   | 582.19  | 581.85  | 581.86  | 581.34  | 581.74  | 582.20  | 582.32  | 582.54  | 582.21  | 582.46  | 581.44  | 581.11  |
| 13   | 581.94  | 581.93  | 581.77  | 581.33  | 581.65  | 582.02  | 582.39  | 582.51  | 582.18  | 582.32  | 581.72  | 581.24  |
| 14   | 581.85  | 581.96  | 581.82  | 581.49  | 581.70  | 582.22  | 582.30  | 582.58  | 582.30  | 582.33  | 581.96  | 581.54  |
| 15   | 581.88  | 581.90  | 581.95  | 581.38  | 581.76  | 582.24  | 582.38  | 582.50  | 582.25  | 582.18  | 581.67  | 581.45  |
| 16   | 581.94  | 581.92  | 581.89  | 581.33  | 581.88  | 582.01  | 582.38  | 582.48  | 582.26  | 582.26  | 581.41  | 581.38  |
| 17   | 581.99  | 581.83  | 581.89  | 581.37  | 581.91  | 582.14  | 582.45  | 582.44  | 582.51  | 582.07  | 581.28  | 581.28  |
| 18   | 582.04  | 581.84  | 581.88  | 581.51  | 581.88  | 582.21  | 582.47  | 582.38  | 582.24  | 582.21  | 581.37  | 581.12  |
| 19   | 581.88  | 581.83  | 581.81  | 581.62  | 581.86  | 582.17  | 582.47  | 582.40  | 582.28  | 582.27  | 581.64  | 581.43  |
| 20   | 581.78  | 581.89  | 581.71  | 581.62  | 581.73  | 582.15  | 582.36  | 582.46  | 582.20  | 582.29  | 581.80  | 581.24  |
| 21   | 581.75  | 581.74  | 581.93  | 581.03  | 581.77  | 582.29  | 582.45  | 582.34  | 582.32  | 582.22  | 581.48  | 581.30  |
| 22   | 581.74  | 581.85  | 582.05  | 581.03  | 581.75  | 582.26  | 582.45  | 582.46  | 582.44  | 582.28  | 581.60  | 581.52  |
| 23   | 581.86  | 581.80  | 582.01  | 581.38  | 581.80  | 582.25  | 582.51  | 582.24  | 582.44  | 582.23  | 581.49  | 581.46  |
| 24   | 581.79  | 581.81  | 581.89  | 581.48  | 582.02  | 581.97  | 582.45  | 582.28  | 582.50  | 582.16  | 581.42  | 581.41  |
| 25   | 581.92  | 581.75  | 581.87  | 581.47  | 582.00  | 582.20  | 582.37  | 582.43  | 582.51  | 582.13  | 581.78  | 581.18  |
| 26   | 581.90  | 581.79  | 581.76  | 581.50  | 582.17  | 582.36  | 582.43  | 582.31  | 582.43  | 582.13  | 581.21  | 581.34  |
| 27   | 581.56  | 581.58  | 581.70  | 581.55  | 582.16  | 582.32  | 582.54  | 582.05  | 582.55  | 582.07  | 581.50  | 581.24  |
| 28   | 581.84  | 581.63  | 581.80  | 581.48  | 582.16  | 582.27  | 582.52  | 582.17  | 582.36  | 582.30  | 581.57  | 581.38  |
| 29   | 581.95  |         | 581.71  | 581.30  | 582.22  | 582.17  | 582.22  | 582.30  | 582.58  | 581.96  | 581.13  | 581.42  |
| 30   | 581.92  |         | 581.65  | 581.49  | 582.25  | 582.25  | 582.47  | 582.37  | 582.60  | 582.16  | 581.20  | 581.18  |
| 31   | 581.90  |         | 581.77  |         | 582.09  |         | 582.48  | 582.35  |         | 582.58  |         | 581.47  |
| MEAN | 581.97  | 581.83  | 581.78  | 581.42  | 581.81  | 582.15  | 582.38  | 582.41  | 582.34  | 582.28  | 581.64  | 581.39  |
| MAX. | 582.46  | 582.04  | 582.18  | 581.88  | 582.54  | 582.61  | 582.76  | 582.77  | 582.86  | 582.87  | 582.63  | 582.30  |
|      | 2300/09 | 0200/14 | 2000/22 | 2400/27 | 1600/30 | 0400/27 | 0300/23 | 0200/23 | 1000/27 | 1200/31 | 1000/08 | 1100/11 |
| MIN. | 581.34  | 581.52  | 581.26  | 580.76  | 580.42  | 581.48  | 581.97  | 581.70  | 581.86  | 581.58  | 580.70  | 580.82  |
|      | 0700/27 | 2000/27 | 0900/07 | 1300/21 | 2100/01 | 1500/08 | 0700/29 | 1900/23 | 1400/13 | 2400/05 | 2200/26 | 2000/07 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 581.95

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 6070: SW Pier above locks, Sault St Marie, Michigan on St Marys River

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST

Monthly mean elevation: 601.72 Aug  
 Daily mean elevation: 602.24 9 Nov  
 Instant/hourly Elevation: 603.35 0500/9 Nov

LOWEST

Monthly mean elevation: 600.84 Mar  
 Daily mean elevation: 600.53 24 Jan  
 Instant/hourly Elevation: 599.44 0500/26 Apr

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 601.52 | 12 Jan |
| 601.03 | 27 Feb |
| 601.23 | 19 Mar |
| 601.62 | 21 Apr |
| 601.86 | 1 May  |
| 601.69 | 16 Jun |
| 601.82 | 28 Jul |
| 602.06 | 23 Aug |
| 602.00 | 5 Sep  |
| 602.11 | 5 Oct  |
| 602.24 | 9 Nov  |
| 601.99 | 4 Dec  |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 600.53 | 24 Jan |
| 600.62 | 17 Feb |
| 600.63 | 8 Mar  |
| 600.80 | 5 Apr  |
| 601.19 | 9 May  |
| 601.13 | 3 Jun  |
| 601.32 | 12 Jul |
| 601.43 | 31 Aug |
| 601.14 | 27 Sep |
| 601.27 | 10 Oct |
| 601.01 | 19 Nov |
| 600.86 | 8 Dec  |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(ft.) | No. of days
above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 602.20 | | | | | | | | | | | 1 | | 602.20 | 1 |
| 602.00 | | | | | | | | 1 | | 1 | 1 | | 602.00 | 4 |
| 601.80 | | | | | 1 | | 2 | 8 | 3 | 3 | 5 | 1 | 601.80 | 27 |
| 601.60 | | | | 1 | 1 | 3 | 7 | 15 | 7 | 13 | 7 | 4 | 601.60 | 85 |
| 601.40 | 3 | | | | 10 | 13 | 18 | 7 | 13 | 12 | 8 | 3 | 601.40 | 172 |
| 601.20 | 8 | | 1 | 12 | 18 | 12 | 4 | | 6 | 2 | 7 | 10 | 601.20 | 252 |
| 601.00 | 16 | 4 | 3 | 12 | 1 | 2 | | | 1 | | 1 | 10 | 601.00 | 302 |
| 600.80 | 2 | 16 | 13 | 4 | | | | | | | | 3 | 600.80 | 340 |
| 600.60 | 1 | 8 | 14 | 1 | | | | | | | | | 600.60 | 364 |
| 600.40 | 1 | | | | | | | | | | | | 600.40 | 365 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 6070: SW Pier above locks, Sault St Marie, Michigan on St Marys River

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 601.35 | 600.92 | 600.83 | 601.11 | 601.86 | 601.43 | 601.44 | 601.71 | 601.60 | 601.53 | 601.82 | 601.04 |
| 2 | 601.26 | 600.99 | 600.81 | 601.03 | 601.76 | 601.30 | 601.67 | 601.84 | 601.48 | 601.53 | 601.74 | 601.13 |
| 3 | 601.18 | 600.90 | 600.87 | 600.98 | 601.54 | 601.13 | 601.43 | 601.76 | 601.33 | 601.67 | 601.74 | 601.68 |
| 4 | 601.09 | 600.93 | 600.87 | 600.99 | 601.34 | 601.41 | 601.33 | 601.67 | 601.67 | 601.60 | 601.53 | 601.99 |
| 5 | 601.42 | 601.02 | 600.74 | 600.80 | 601.29 | 601.35 | 601.32 | 601.71 | 602.00 | 602.11 | 601.39 | 601.33 |
| 6 | 601.43 | 600.79 | 601.05 | 601.16 | 601.34 | 601.22 | 601.46 | 601.70 | 601.94 | 601.70 | 601.51 | 601.67 |
| 7 | 601.33 | 600.86 | 600.97 | 601.25 | 601.47 | 601.20 | 601.48 | 601.62 | 601.68 | 601.57 | 601.44 | 601.55 |
| 8 | 601.16 | 600.83 | 600.63 | 601.39 | 601.40 | 601.47 | 601.50 | 601.71 | 601.73 | 601.82 | 601.34 | 600.86 |
| 9 | 601.28 | 601.00 | 600.64 | 601.22 | 601.19 | 601.27 | 601.54 | 601.65 | 601.54 | 601.54 | 601.27 | 601.83 |
| 10 | 601.19 | 601.01 | 600.90 | 601.23 | 601.28 | 601.21 | 601.45 | 601.94 | 601.54 | 601.27 | 601.83 | 601.68 |
| 11 | 601.01 | 600.96 | 600.79 | 601.26 | 601.23 | 601.31 | 601.34 | 601.90 | 601.57 | 601.42 | 601.81 | 601.49 |
| 12 | 601.52 | 600.98 | 600.66 | 601.12 | 601.24 | 601.44 | 601.32 | 601.68 | 601.71 | 601.61 | 602.06 | 601.73 |
| 13 | 601.04 | 600.88 | 600.70 | 601.00 | 601.27 | 601.47 | 601.53 | 601.59 | 601.94 | 601.78 | 601.83 | 601.35 |
| 14 | 601.11 | 600.95 | 600.76 | 600.85 | 601.30 | 601.42 | 601.63 | 601.52 | 601.66 | 601.81 | 601.67 | 601.46 |
| 15 | 600.96 | 600.90 | 600.96 | 601.18 | 601.33 | 601.25 | 601.46 | 601.72 | 601.68 | 601.75 | 601.69 | 601.24 |
| 16 | 600.78 | 600.73 | 600.80 | 601.30 | 601.43 | 601.69 | 601.44 | 601.60 | 601.57 | 601.75 | 601.49 | 601.17 |
| 17 | 601.12 | 600.62 | 600.75 | 601.22 | 601.44 | 601.51 | 601.46 | 601.82 | 601.27 | 601.65 | 601.81 | 601.12 |
| 18 | 601.14 | 600.77 | 600.71 | 601.04 | 601.52 | 601.44 | 601.56 | 601.77 | 601.61 | 601.56 | 601.61 | 601.33 |
| 19 | 601.22 | 600.83 | 601.23 | 601.03 | 601.44 | 601.47 | 601.60 | 601.68 | 601.52 | 601.56 | 601.01 | 601.30 |
| 20 | 601.09 | 601.02 | 600.92 | 601.27 | 601.55 | 601.35 | 601.73 | 601.61 | 601.55 | 601.64 | 601.34 | 601.27 |
| 21 | 600.99 | 600.80 | 600.86 | 601.62 | 601.52 | 601.22 | 601.50 | 601.82 | 601.40 | 601.61 | 601.26 | 601.25 |
| 22 | 601.37 | 600.75 | 600.69 | 601.32 | 601.47 | 601.40 | 601.57 | 601.45 | 601.35 | 601.63 | 601.34 | 601.31 |
| 23 | 601.10 | 600.96 | 601.12 | 601.03 | 601.46 | 601.58 | 601.48 | 602.06 | 601.51 | 601.69 | 601.62 | 601.20 |
| 24 | 600.53 | 600.88 | 600.73 | 601.12 | 601.33 | 601.65 | 601.60 | 601.78 | 601.51 | 601.54 | 601.52 | 600.94 |
| 25 | 601.05 | 600.73 | 600.70 | 601.27 | 601.36 | 601.37 | 601.74 | 601.58 | 601.27 | 601.59 | 601.21 | 601.32 |
| 26 | 601.40 | 600.70 | 601.00 | 601.04 | 601.33 | 601.31 | 601.71 | 601.94 | 601.35 | 601.52 | 601.74 | 601.15 |
| 27 | 601.21 | 601.03 | 600.94 | 601.13 | 601.34 | 601.50 | 601.58 | 601.96 | 601.14 | 601.61 | 601.41 | 601.03 |
| 28 | 601.05 | 600.94 | 600.83 | 601.10 | 601.32 | 601.52 | 601.82 | 601.85 | 601.52 | 601.50 | 601.56 | 601.12 |
| 29 | 601.17 | | 600.82 | 601.32 | 601.27 | 601.65 | 601.81 | 601.69 | 601.50 | 601.84 | 601.58 | 601.05 |
| 30 | 601.18 | | 601.03 | 601.25 | 601.28 | 601.51 | 601.68 | 601.60 | 601.58 | 601.49 | 601.29 | 601.05 |
| 31 | 601.12 | | 600.64 | | 601.22 | | 601.69 | 601.43 | | 601.29 | | 600.88 |
| MEAN | 601.16 | 600.88 | 600.84 | 601.15 | 601.39 | 601.40 | 601.54 | 601.72 | 601.56 | 601.62 | 601.58 | 601.29 |
| MAX. | 602.33 | 601.44 | 601.81 | 601.95 | 603.01 | 602.60 | 602.32 | 602.79 | 602.73 | 603.01 | 603.35 | 602.78 |
| | 1200/12 | 1900/20 | 0700/30 | 1600/21 | 1500/01 | 1100/16 | 1200/04 | 1100/23 | 0700/22 | 2200/05 | 0500/09 | 0600/06 |
| MIN. | 600.11 | 600.30 | 599.63 | 599.44 | 600.16 | 600.25 | 600.33 | 600.91 | 600.23 | 600.31 | 599.92 | 600.23 |
| | 1700/24 | 0300/17 | 1800/29 | 0500/26 | 2200/31 | 0100/27 | 1100/04 | 2100/22 | 0900/22 | 0800/31 | 1000/08 | 1700/08 |

ANNUAL MEAN: 601.34

* Indicates Less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL SUMMARY OF LEVELS, 1986
 Station 7023: Ludington, Michigan on Lake Michigan

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

HIGHEST
 Monthly mean elevation: 581.86 Oct
 Daily mean elevation: 582.05 12 Oct
 Instant/hourly Elevation: 582.35 0600/14 Oct

LOWEST
 Monthly mean elevation: 580.65 Feb
 Daily mean elevation: 580.31 7 Mar
 Instant/hourly Elevation: 580.02 2400/12 Jan

HIGHEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 580.94 | 3 Jan |
| 580.95 | 7 Feb |
| 580.89 | 13 Mar |
| 581.23 | 15 Apr |
| 581.30 | 27 May |
| 581.56 | 12 Jun |
| 581.70 | 13 Jul |
| 581.57 | 15 Aug |
| 582.00 | 27 Sep |
| 582.05 | 12 Oct |
| 581.85 | 8 Nov |
| 581.59 | 2 Dec |

LOWEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 580.39 | 9 Jan |
| 580.45 | 28 Feb |
| 580.31 | 7 Mar |
| 580.77 | 9 Apr |
| 580.79 | 2 May |
| 581.16 | 8 Jun |
| 581.33 | 3 Jul |
| 581.23 | 30 Aug |
| 581.05 | 8 Sep |
| 581.61 | 6 Oct |
| 581.10 | 10 Nov |
| 580.73 | 23 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(ft.) | No. of days<br>above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 582.00         |     |     |     |     |     |     |     |     |     | 1   |     |     | 582.00         | 1                          |
| 581.80         |     |     |     |     |     |     |     |     | 4   | 22  | 1   |     | 581.80         | 28                         |
| 581.60         |     |     |     |     |     |     | 8   |     | 4   | 8   | 7   |     | 581.60         | 55                         |
| 581.40         |     |     |     |     |     | 6   | 20  | 22  | 11  |     | 3   | 3   | 581.40         | 120                        |
| 581.20         |     |     |     | 2   | 9   | 22  | 3   | 9   | 7   |     | 13  | 2   | 581.20         | 187                        |
| 581.00         |     |     |     | 19  | 18  | 2   |     |     | 4   |     | 6   | 13  | 581.00         | 249                        |
| 580.80         | 5   | 3   | 8   | 7   | 3   |     |     |     |     |     |     | 11  | 580.80         | 286                        |
| 580.60         | 14  | 15  | 16  | 2   | 1   |     |     |     |     |     |     | 2   | 580.60         | 336                        |
| 580.40         | 11  | 10  | 6   |     |     |     |     |     |     |     |     |     | 580.40         | 363                        |
| 580.20         | 1   |     | 1   |     |     |     |     |     |     |     |     |     | 580.20         | 365                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 7023: Ludington, Michigan on Lake Michigan

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 580.57  | 580.76  | 580.47  | 580.93  | 581.06  | 581.24  | 581.48  | 581.57  | 581.27  | 581.88  | 581.78  | 581.50  |
| 2    | 580.76  | 580.75  | 580.53  | 580.83  | 580.79  | 581.21  | 581.37  | 581.50  | 581.33  | 581.87  | 581.63  | 581.59  |
| 3    | 580.94  | 580.68  | 580.60  | 581.02  | 580.93  | 581.22  | 581.33  | 581.48  | 581.42  | 582.00  | 581.66  | 581.38  |
| 4    | 580.88  | 580.74  | 580.52  | 581.06  | 580.98  | 581.19  | 581.40  | 581.49  | 581.35  | 581.94  | 581.62  | 580.86  |
| 5    | 580.93  | 580.81  | 580.61  | 581.16  | 580.90  | 581.29  | 581.41  | 581.49  | 581.24  | 581.82  | 581.71  | 581.00  |
| 6    | 580.51  | 580.78  | 580.69  | 581.19  | 581.10  | 581.34  | 581.45  | 581.52  | 581.14  | 581.61  | 581.61  | 580.97  |
| 7    | 580.64  | 580.95  | 580.31  | 580.94  | 581.03  | 581.27  | 581.41  | 581.56  | 581.17  | 581.79  | 581.76  | 581.16  |
| 8    | 580.63  | 580.81  | 580.42  | 580.80  | 581.07  | 581.16  | 581.46  | 581.55  | 581.05  | 581.77  | 581.85  | 581.25  |
| 9    | 580.39  | 580.65  | 580.61  | 580.77  | 581.18  | 581.21  | 581.47  | 581.49  | 581.14  | 581.86  | 581.29  | 581.52  |
| 10   | 580.45  | 580.51  | 580.88  | 580.81  | 581.11  | 581.32  | 581.42  | 581.54  | 581.37  | 581.84  | 581.10  | 581.04  |
| 11   | 580.62  | 580.58  | 580.60  | 580.83  | 581.13  | 581.43  | 581.58  | 581.37  | 581.56  | 581.94  | 581.39  | 581.05  |
| 12   | 580.46  | 580.61  | 580.63  | 581.03  | 581.16  | 581.56  | 581.70  | 581.47  | 581.47  | 582.05  | 581.38  | 580.91  |
| 13   | 580.52  | 580.56  | 580.89  | 581.04  | 581.12  | 581.26  | 581.70  | 581.51  | 581.37  | 581.92  | 581.12  | 581.01  |
| 14   | 580.81  | 580.61  | 580.88  | 581.14  | 581.19  | 581.32  | 581.47  | 581.55  | 581.40  | 581.97  | 581.24  | 580.94  |
| 15   | 580.77  | 580.57  | 580.63  | 581.23  | 581.13  | 581.37  | 581.53  | 581.57  | 581.56  | 581.74  | 581.20  | 581.01  |
| 16   | 580.74  | 580.60  | 580.61  | 581.07  | 581.17  | 581.28  | 581.56  | 581.51  | 581.52  | 581.52  | 581.93  | 581.29  |
| 17   | 580.72  | 580.72  | 580.70  | 581.07  | 581.12  | 581.23  | 581.57  | 581.52  | 581.52  | 581.93  | 581.29  | 581.08  |
| 18   | 580.70  | 580.63  | 580.73  | 581.13  | 581.17  | 581.32  | 581.64  | 581.46  | 581.59  | 581.85  | 581.35  | 581.11  |
| 19   | 580.68  | 580.68  | 580.78  | 581.18  | 581.22  | 581.29  | 581.63  | 581.46  | 581.53  | 581.84  | 581.37  | 580.88  |
| 20   | 580.54  | 580.61  | 580.65  | 581.05  | 581.17  | 581.39  | 581.58  | 581.43  | 581.66  | 581.80  | 581.54  | 581.06  |
| 21   | 580.69  | 580.49  | 580.68  | 580.98  | 581.19  | 581.46  | 581.59  | 581.42  | 581.57  | 581.84  | 581.40  | 580.97  |
| 22   | 580.69  | 580.69  | 580.65  | 581.01  | 581.27  | 581.42  | 581.55  | 581.50  | 581.72  | 581.80  | 581.33  | 580.77  |
| 23   | 580.59  | 580.53  | 580.61  | 580.98  | 581.20  | 581.29  | 581.50  | 581.41  | 581.58  | 581.79  | 581.43  | 580.73  |
| 24   | 580.73  | 580.57  | 580.61  | 581.12  | 581.22  | 581.27  | 581.54  | 581.26  | 581.56  | 581.94  | 581.21  | 581.07  |
| 25   | 580.92  | 580.56  | 580.88  | 581.14  | 581.26  | 581.29  | 581.61  | 581.34  | 581.78  | 581.89  | 581.20  | 580.99  |
| 26   | 580.50  | 580.67  | 580.81  | 581.21  | 581.29  | 581.31  | 581.58  | 581.35  | 581.83  | 582.00  | 581.34  | 580.94  |
| 27   | 580.62  | 580.67  | 580.72  | 581.19  | 581.30  | 581.41  | 581.61  | 581.31  | 582.00  | 581.85  | 581.18  | 581.01  |
| 28   | 580.59  | 580.45  | 580.75  | 581.19  | 581.23  | 581.39  | 581.61  | 581.25  | 581.90  | 581.81  | 581.12  | 580.86  |
| 29   | 580.65  |         | 580.87  | 581.04  | 581.17  | 581.35  | 581.49  | 581.25  | 581.86  | 581.82  | 581.24  | 581.05  |
| 30   | 580.59  |         | 580.82  | 581.14  | 581.21  | 581.42  | 581.51  | 581.23  | 581.79  | 581.73  | 581.39  | 581.07  |
| 31   | 580.51  |         | 580.88  |         | 581.28  |         | 581.62  | 581.29  |         | 581.84  |         | 580.98  |
| MEAN | 580.66  | 580.65  | 580.68  | 581.04  | 581.14  | 581.32  | 581.53  | 581.44  | 581.51  | 581.86  | 581.41  | 581.06  |
| MAX. | 581.31  | 581.10  | 581.33  | 581.64  | 581.50  | 581.81  | 582.04  | 581.79  | 582.31  | 582.35  | 582.05  | 581.76  |
| MIN. | 1200/25 | 2400/06 | 2000/13 | 1900/14 | 1100/16 | 1300/12 | 1000/25 | 0500/15 | 1600/27 | 0600/14 | 1000/08 | 0800/02 |
|      | 580.02  | 580.21  | 580.13  | 580.54  | 580.63  | 580.92  | 581.10  | 580.90  | 580.93  | 581.31  | 580.77  | 580.40  |
|      | 2400/12 | 1700/20 | 1000/09 | 0200/02 | 1600/05 | 1400/27 | 0600/10 | 1300/26 | 1000/08 | 1500/13 | 0300/28 | 0500/23 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 581.19

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 7031: Holland, Michigan on Lake Michigan

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST  
 Monthly mean elevation: 581.74 Oct  
 Daily mean elevation: 581.98 4 Oct  
 Instant/hourly Elevation: 582.08 1300/3 Oct

LOWEST  
 Monthly mean elevation: 580.54 Feb  
 Daily mean elevation: 580.16 8 Mar  
 Instant/hourly Elevation: 580.01 0800/8 Mar

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 580.95 | 3 Jan  |
| 580.82 | 7 Feb  |
| 580.89 | 19 Mar |
| 581.15 | 15 Apr |
| 581.22 | 27 May |
| 581.46 | 12 Jun |
| 581.58 | 12 Jul |
| 581.46 | 10 Aug |
| 581.83 | 27 Sep |
| 581.98 | 4 Oct  |
| 581.62 | 3 Nov  |
| 581.49 | 2 Dec  |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 580.18 | 9 Jan  |
| 580.33 | 13 Feb |
| 580.16 | 8 Mar  |
| 580.71 | 2 Apr  |
| 580.69 | 4 May  |
| 581.04 | 4 Jun  |
| 581.13 | 4 Jul  |
| 581.08 | 30 Aug |
| 580.94 | 8 Sep  |
| 581.50 | 7 Oct  |
| 580.86 | 28 Nov |
| 580.44 | 22 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(ft.) | No. of days
above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 581.80 | | | | | | | | | 1 | 5 | | | 581.80 | 6 |
| 581.60 | | | | | | 1 | 16 | 6 | 5 | 9 | 1 | | 581.60 | 21 |
| 581.40 | | | | | 2 | 16 | 12 | 19 | 6 | 2 | 5 | 2 | 581.40 | 59 |
| 581.20 | | | | 9 | 18 | 13 | 3 | 6 | 7 | | 8 | 2 | 581.20 | 128 |
| 581.00 | | | | 14 | 7 | | | | 1 | | 9 | 3 | 581.00 | 196 |
| 580.80 | 3 | 1 | 4 | 7 | 4 | | | | | | 5 | 13 | 580.80 | 244 |
| 580.60 | 8 | 6 | 6 | | | | | | | | | 6 | 580.60 | 281 |
| 580.40 | 15 | 17 | 14 | | | | | | | | | 1 | 580.40 | 328 |
| 580.20 | 4 | 4 | 4 | | | | | | | | | | 580.20 | 340 |
| 580.00 | 1 | | 1 | | | | | | | | | | 580.00 | 342 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 7031: Holland, Michigan on Lake Michigan

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 580.44 | 580.62 | 580.32 | 580.77 | 580.94 | 581.29 | 581.36 | 581.41 | 581.14 | 581.71 | / | 581.35 |
| 2 | 580.61 | 580.55 | 580.46 | 580.71 | 580.71 | 581.17 | 581.29 | 581.34 | 581.23 | 581.73 | / | 581.49 |
| 3 | 580.95 | 580.51 | 580.49 | 580.90 | 580.75 | 581.06 | 581.17 | 581.33 | 581.24 | 581.92 | 581.62* | 581.34 |
| 4 | 580.83 | 580.76 | 580.38 | 580.98 | 580.69 | 581.04 | 581.13 | 581.33 | 581.16 | 581.98 | 581.55 | 580.92 |
| 5 | 580.84 | 580.77 | 580.48 | 581.06 | 580.70 | 581.26 | 581.18 | 581.34 | 581.07 | 581.75 | 581.54 | 580.80 |
| 6 | 580.55 | 580.66 | 580.81 | 581.01 | 580.89 | 581.24 | 581.28 | 581.41 | 581.07 | 581.50 | 581.42 | 580.88 |
| 7 | 580.62 | 580.82 | 580.35 | 580.75 | 580.91 | 581.21 | 581.28 | 581.44 | 581.08 | 581.50 | 581.54 | 581.07 |
| 8 | 580.45 | 580.65 | 580.16 | 580.73 | 580.99 | 581.11 | 581.33 | 581.40 | 580.94 | 581.73 | 581.49 | 581.16 |
| 9 | 580.18 | 580.55 | 580.53 | 580.76 | 581.06 | 581.11 | 581.40 | 581.33 | 581.02 | 581.81 | 581.13 | 581.43 |
| 10 | 580.36 | 580.45 | 580.84 | 580.77 | 581.02 | 581.23 | 581.33 | 581.46 | 581.19 | 581.68 | 581.02 | 580.98 |
| 11 | 580.34 | 580.50 | 580.58 | 580.72 | 581.01 | 581.30 | 581.46 | 581.25 | 581.49 | 581.73 | 581.34 | 580.80 |
| 12 | 580.53 | 580.49 | 580.61 | 580.93 | 581.01 | 581.46 | 581.58 | 581.38 | 581.37 | 581.81 | 581.36 | 580.97 |
| 13 | 580.51 | 580.33 | 580.84 | 580.91 | 580.99 | 581.17 | 581.54 | 581.37 | 581.29 | 581.72 | 581.04 | 580.80 |
| 14 | 580.76 | 580.50 | 580.64 | 580.98 | 581.07 | 581.22 | 581.42 | 581.32 | 581.32 | 581.82 | 580.87 | 580.70 |
| 15 | 580.52 | 580.40 | 580.55 | 581.15 | 580.99 | 581.31 | 581.45 | 581.36 | 581.54 | 581.74 | 581.05 | 580.86 |
| 16 | 580.48 | 580.42 | 580.54 | 581.10 | 581.07 | 581.20 | 581.56 | 581.35 | 581.36 | 581.76* | 581.28 | 580.94 |
| 17 | 580.47 | 580.56 | 580.54 | 580.99 | 581.10 | 581.06 | 581.45 | 581.43 | 581.26 | / | 581.16 | 580.91 |
| 18 | 580.48 | 580.50 | 580.59 | 581.00 | 581.18 | 581.13 | 581.44 | 581.38 | 581.40 | / | 581.28 | 581.04 |
| 19 | 580.62 | 580.52 | 580.89 | 580.97 | 581.21 | 581.23 | 581.49 | 581.37 | 581.39 | / | 581.07 | 580.81 |
| 20 | 580.43 | 580.60 | 580.62 | 580.88 | 581.11 | 581.26 | 581.50 | 581.32 | 581.54 | / | 581.31* | 580.97* |
| 21 | 580.46 | 580.53 | 580.47 | 581.07 | 581.08 | 581.21 | 581.45 | 581.41 | 581.38 | / | 581.10* | / |
| 22 | 580.71 | 580.48 | 580.32 | 580.96 | 581.18 | 581.22 | 581.40 | 581.35 | 581.53 | / | 580.93 | 580.44* |
| 23 | 580.36 | 580.50 | 580.52 | 580.81 | 581.08 | 581.13 | 581.35 | 581.33 | 581.44 | / | 581.25 | 580.63 |
| 24 | 580.44 | 580.44 | 580.43 | 580.91 | 581.11 | 581.25 | 581.32 | 581.12 | 581.43 | / | 580.94 | 580.96 |
| 25 | 580.74 | 580.38 | 580.56 | 581.04 | 581.18 | 581.11 | 581.43 | 581.19 | 581.64 | / | 581.01 | 580.87 |
| 26 | 580.66 | 580.58 | / | 581.09 | 581.20 | 581.11 | 581.42 | 581.38 | 581.69 | / | 581.30 | / |
| 27 | 580.68 | 580.67 | / | 581.03 | 581.22 | 581.19 | 581.41 | 581.26 | 581.83 | / | 580.92 | / |
| 28 | 580.45 | 580.36 | 580.50* | 581.03 | 581.12 | 581.25 | 581.47 | 581.08 | 581.74 | / | 580.86 | / |
| 29 | 580.60 | | 580.63 | 580.90 | 581.05 | 581.27 | 581.40 | 581.09 | 581.70 | / | 581.17 | 580.97* |
| 30 | 580.42 | | 580.65 | 580.94 | 580.99 | 581.31 | 581.36 | 581.08 | 581.73 | / | 581.25 | 581.00 |
| 31 | 580.39 | | 580.64 | | 581.13 | | 581.44 | 581.14 | | / | | 580.71* |
| MEAN | 580.54 | 580.54 | 580.55 | 580.93 | 581.02 | 581.20 | 581.39 | 581.31 | 581.37 | 581.74 | 581.21 | 580.96 |
| MAX. | 581.24 | 580.97 | 581.31 | 581.32 | 581.46 | 581.65 | 581.67 | 581.71 | 581.95 | 582.08 | 581.78 | 581.61 |
| | 0700/03 | 2200/04 | 1000/19 | 1000/15 | 2100/17 | 0700/12 | 0800/16 | 1900/26 | 2400/27 | 1300/03 | 2400/03 | 1300/02 |
| MIN. | 580.04 | 580.19 | 580.01 | 580.52 | 580.55 | 580.89 | 580.97 | 580.96 | 580.85 | 581.34 | 580.66 | 580.38 |
| | 0600/09 | 2200/28 | 0800/08 | 0200/02 | 1500/05 | 0300/17 | 0800/04 | 1700/28 | 2200/08 | 1800/07 | 1600/28 | 1400/22 |

ANNUAL MEAN: 581.06

* Indicates Less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL SUMMARY OF LEVELS, 1986
 Station 7044: Calumet Harbor, Illinois on Lake Michigan

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

HIGHEST
 Monthly mean elevation: 581.80 Oct
 Daily mean elevation: 582.21 4 Oct
 Instant/hourly Elevation: 582.91 1700/26 Aug

LOWEST
 Monthly mean elevation: 580.56 Jan
 Daily mean elevation: 579.61 8 Jan
 Instant/hourly Elevation: 579.08 1700/8 Jan

HIGHEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 581.08 | 3 Jan |
| 581.14 | 6 Feb |
| 581.05 | 19 Mar |
| 581.42 | 21 Apr |
| 581.58 | 19 May |
| 581.52 | 1 Jun |
| 581.69 | 16 Jul |
| 581.66 | 27 Aug |
| 581.80 | 15 Sep |
| 582.21 | 4 Oct |
| 581.76 | 4 Nov |
| 581.76 | 1 Dec |

LOWEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 579.61 | 8 Jan |
| 580.19 | 13 Feb |
| 580.01 | 22 Mar |
| 580.73 | 1 Apr |
| 580.60 | 4 May |
| 581.11 | 4 Jun |
| 581.01 | 4 Jul |
| 581.17 | 30 Aug |
| 580.93 | 8 Sep |
| 581.44 | 31 Oct |
| 580.44 | 14 Nov |
| 580.32 | 22 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(ft.) | No. of days<br>above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 582.20         |     |     |     |     |     |     |     |     |     | 1   |     |     | 582.20         | 1                          |
| 582.00         |     |     |     |     |     |     |     |     |     | 4   |     |     | 582.00         | 5                          |
| 581.80         |     |     |     |     |     |     | 2   | 3   | 7   | 6   |     |     | 581.80         | 11                         |
| 581.60         |     |     |     |     |     | 8   | 21  | 16  | 10  | 12  | 5   | 1   | 581.60         | 41                         |
| 581.40         |     |     |     | 1   | 2   | 8   | 6   | 11  | 8   | 4   | 4   | 1   | 581.40         | 108                        |
| 581.20         |     |     |     | 5   | 13  | 17  | 6   | 11  | 8   | 4   | 6   | 2   | 581.20         | 176                        |
| 581.00         |     |     |     | 10  | 10  | 5   | 2   | 1   | 3   | 2   | 8   | 4   | 581.00         | 227                        |
| 580.80         |     |     |     | 11  | 4   |     |     |     | 2   |     | 5   | 10  | 580.80         | 268                        |
| 580.60         |     |     |     | 3   | 1   |     |     |     |     |     | 1   | 8   | 580.60         | 310                        |
| 580.40         |     |     |     |     | 1   |     |     |     |     |     | 1   | 2   | 580.40         | 349                        |
| 580.20         |     |     |     |     |     |     |     |     |     |     |     | 3   | 580.20         | 356                        |
| 580.00         |     |     |     |     |     |     |     |     |     |     |     |     | 580.00         | 359                        |
| 579.80         |     |     |     |     |     |     |     |     |     |     |     |     | 579.80         | 359                        |
| 579.60         |     |     |     |     |     |     |     |     |     |     |     |     | 579.60         | 361                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 7044: Calumet Harbor, Illinois on Lake Michigan

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 580.46  | 580.66  | 580.38  | 580.73  | 580.91  | 581.52  | 581.44  | 581.45  | 581.24  | 581.86  | 581.73  | 581.76  |
| 2    | 580.74  | 580.67  | 580.48  | 580.87  | 580.84  | 581.47  | 581.42  | 581.54  | 581.37  | 581.79  | 581.57  | 581.50  |
| 3    | 581.08  | 580.73  | 580.63  | 581.07  | 580.86  | 581.16  | 581.29  | 581.46  | 581.27  | /       | 581.38  | 580.93  |
| 4    | 581.00  | 580.98  | 580.47  | 581.17  | 580.60  | 581.11  | 581.01  | 581.40  | 581.19  | 582.21* | 581.76  | 580.66  |
| 5    | 580.55  | 581.00  | 580.42  | 581.15  | 580.62  | 581.44  | 581.11  | 581.40* | 581.16  | 581.77  | 581.61  | 580.57  |
| 6    | 580.61  | 581.14  | 580.96  | 581.02  | 580.93  | 581.47  | 581.23  | 581.60  | 581.25  | 581.62  | 581.36  | 580.77  |
| 7    | 580.63  | 581.07  | 580.70  | 580.76  | 581.01  | 581.30  | 581.31  | 581.52  | 581.23  | /       | 581.53  | 581.08  |
| 8    | 579.61  | 580.74  | 580.07  | 580.83  | 581.25  | 581.19  | 581.33  | 581.44  | 580.93  | /       | 581.10  | 581.35  |
| 9    | 579.67  | 580.55  | 580.49  | 580.93  | 581.24  | 581.27  | 581.47  | 581.37  | 581.01  | /       | 580.85  | 581.38  |
| 10   | 580.38  | 580.58  | 580.67  | 580.86  | 581.22  | 581.36  | 581.49  | 581.58  | 580.95  | 581.88* | 581.09  | 580.72  |
| 11   | 580.26  | 580.65  | 580.71  | 580.77  | 581.17  | 581.29  | 581.54  | 581.46  | 581.29  | 581.78  | 581.38  | 580.38  |
| 12   | 580.41  | 580.45  | 580.88  | 581.12  | 581.20  | 581.41  | 581.51  | 581.44  | 581.48  | 581.75  | 581.24  | 580.88  |
| 13   | 580.72  | 580.19  | 580.87  | 581.13  | 581.17  | 581.22  | 581.46  | 581.37  | 581.39  | 581.74  | 581.02  | 580.75  |
| 14   | 580.90  | 580.41  | 580.68  | 581.14  | 581.13  | 581.30  | 581.48  | 581.21  | 581.50  | 581.64  | 580.44  | 580.34  |
| 15   | 580.50  | 580.36  | 580.58  | 581.21  | 581.09  | 581.40  | 581.47  | 581.33  | 581.80  | 581.80  | 580.82  | 580.79  |
| 16   | 580.51  | 580.59  | 580.63  | 581.34  | 581.04  | 581.24  | 581.69  | 581.36  | 581.67  | 581.83  | 581.13  | 580.97  |
| 17   | 580.45  | 580.69  | 580.64  | 581.25  | 581.27  | 581.24  | 581.43  | 581.52  | 581.38  | 582.12  | 581.14  | 580.93  |
| 18   | 580.48  | 580.59  | 580.70  | 581.16  | 581.49  | 581.25  | 581.36  | 581.63  | 581.52  | 581.85  | 581.69  | 580.94  |
| 19   | 580.79  | 580.70  | 581.05  | 580.93  | 581.58  | 581.27  | 581.43  | 581.60  | 581.50  | 581.72  | 581.16  | 580.76  |
| 20   | 580.58  | 581.05  | 580.92  | 580.95  | 581.38  | 581.46  | 581.58  | 581.50  | 581.65  | 581.58  | 581.46  | 581.09  |
| 21   | 580.44  | 581.01  | 580.45  | 581.42  | 581.22  | 581.30  | 581.62  | 581.65  | 581.60  | 581.68  | 581.15  | 580.93  |
| 22   | 580.75  | 580.58  | 580.01  | 581.24  | 581.28  | 581.24  | 581.49  | 581.54  | 581.52  | 581.60  | 580.85  | 580.32  |
| 23   | 580.57  | 580.64  | 580.50  | 580.88  | 581.23  | 581.20  | 581.44  | 581.51  | 581.43  | 581.78  | 581.21  | 580.64  |
| 24   | 580.52  | 580.62  | 580.61  | 580.90  | 581.25  | 581.41  | 581.32  | 581.32  | 581.48  | 582.04  | 580.85  | 581.09  |
| 25   | 580.49  | 580.48  | 580.41  | 581.19  | 581.32  | 581.28  | 581.46  | 581.29  | 581.61  | 582.19  | 581.03  | 580.95  |
| 26   | 580.95  | 580.75  | 580.55  | 581.22  | 581.37  | 581.16  | 581.54  | 581.55  | 581.56  | 582.05  | 581.52  | 580.93  |
| 27   | 581.03  | 581.11  | 580.64  | 581.10  | 581.37  | 581.25  | 581.48  | 581.66  | 581.78  | 581.84  | 580.85  | 580.83  |
| 28   | 580.46  | 580.57  | 580.43  | 580.97  | 581.25  | 581.26  | 581.56  | 581.44  | 581.68  | 581.52  | 580.65  | 580.47  |
| 29   | 580.66  |         | 580.52  | 580.93  | 581.13  | 581.39  | 581.50  | 581.21  | 581.56  | 581.89  | 581.25  | 580.81  |
| 30   | 580.50  |         | 580.67  | 580.99  | 581.05  | 581.46  | 581.46  | 581.17  | 581.64  | 581.75  | 581.62  | 581.11  |
| 31   | 580.58  |         | 580.67  |         | 581.16  |         | 581.53  | 581.23  |         | 581.44  |         | 580.65  |
| MEAN | 580.56  | 580.70  | 580.59  | 581.04  | 581.15  | 581.31  | 581.43  | 581.44  | 581.42  | 581.80  | 581.21  | 580.88  |
| MAX. | 581.94  | 581.95  | 581.71  | 581.86  | 581.76  | 582.09  | 582.38  | 582.91  | 582.28  | 582.76  | 582.28  | 581.97  |
|      | 2300/04 | 2100/20 | 1000/19 | 1000/21 | 0600/19 | 1200/01 | 2000/15 | 1700/26 | 1800/15 | 0800/04 | 1500/18 | 1500/01 |
| MIN. | 579.08  | 579.50  | 579.49  | 580.27  | 580.28  | 580.68  | 580.71  | 580.89  | 580.39  | 581.16  | 580.05  | 579.66  |
|      | 1700/08 | 2300/13 | 1700/22 | 2300/01 | 1500/05 | 0200/27 | 1700/04 | 1300/14 | 2400/09 | 1700/31 | 0900/14 | 0400/14 |

ANNUAL MEAN: 581.13

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 7057: Milwaukee, Wisconsin on Lake Michigan

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST  
 Monthly mean elevation: 581.89 Oct  
 Daily mean elevation: 582.25 4 Oct  
 Instant/hourly Elevation: 582.78 0700/4 Oct

LOWEST  
 Monthly mean elevation: 580.62 Jan  
 Daily mean elevation: 579.98 9 Jan  
 Instant/hourly Elevation: 579.73 1700/9 Jan

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 580.98 | 3 Jan  |
| 581.03 | 7 Feb  |
| 581.00 | 19 Mar |
| 581.30 | 21 Apr |
| 581.43 | 19 May |
| 581.57 | 30 Jun |
| 581.71 | 11 Jul |
| 581.65 | 26 Aug |
| 581.97 | 27 Sep |
| 582.25 | 4 Oct  |
| 581.76 | 30 Nov |
| 581.99 | 1 Dec  |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 579.98 | 9 Jan  |
| 580.34 | 13 Feb |
| 580.38 | 8 Mar  |
| 580.79 | 8 Apr  |
| 580.85 | 4 May  |
| 581.17 | 8 Jun  |
| 581.29 | 4 Jul  |
| 581.28 | 30 Aug |
| 580.96 | 8 Sep  |
| 581.67 | 22 Oct |
| 580.86 | 14 Nov |
| 580.51 | 22 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(ft.) | No. of days
above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 582.20 | | | | | | | | | | 1 | | | 582.20 | 1 |
| 582.00 | | | | | | | | | | 6 | | | 582.00 | 7 |
| 581.80 | | | | | | | | | 7 | 12 | | 1 | 581.80 | 27 |
| 581.60 | | | | | | | 3 | 3 | 5 | 12 | 5 | 1 | 581.60 | 56 |
| 581.40 | | | | | 1 | 5 | 22 | 22 | 7 | | 7 | 2 | 581.40 | 122 |
| 581.20 | | | | | 7 | 13 | 21 | 6 | 6 | | 8 | | 581.20 | 189 |
| 581.00 | | | | | 2 | 15 | 12 | 4 | 4 | | 6 | 6 | 581.00 | 238 |
| 580.80 | | | | | 5 | 7 | 5 | | 1 | | 4 | 14 | 580.80 | 284 |
| 580.60 | | | | | 14 | 10 | 16 | 1 | | | | 6 | 580.60 | 331 |
| 580.40 | | | | | 7 | 11 | 8 | | | | | 1 | 580.40 | 358 |
| 580.20 | | | | | 4 | 1 | 1 | | | | | | 580.20 | 364 |
| 580.00 | | | | | | | | | | | | | 580.00 | 364 |
| 579.80 | | | | | | | | | | | | | 579.80 | 365 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 7057: Milwaukee, Wisconsin on Lake Michigan

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 580.48 | 580.82 | 580.42 | 580.84 | 580.96 | 581.38 | 581.49 | 581.48 | 581.25 | 581.93 | 581.71 | 581.99 |
| 2 | 580.78 | 580.69 | 580.62 | 580.85 | 580.85 | 581.32 | 581.39 | 581.49 | 581.35 | 581.92 | 581.56 | 581.69 |
| 3 | 580.98 | 580.74 | 580.57 | 581.07 | 580.91 | 581.22 | 581.34 | 581.43 | 581.35 | 582.12 | 581.57 | 581.07 |
| 4 | 580.90 | 580.94 | 580.49 | 581.16 | 580.85 | 581.20 | 581.29 | 581.42 | 581.21 | 582.25 | 581.72 | 580.75 |
| 5 | 580.61 | 580.97 | 580.64 | 581.25 | 580.86 | 581.40 | 581.30 | 581.41 | 581.11 | 581.83 | 581.65 | 580.84 |
| 6 | 580.46 | 581.02 | 580.73 | 581.10 | 581.05 | 581.36 | 581.35 | 581.60 | 581.19 | 581.72 | 581.50 | 580.95 |
| 7 | 580.65 | 581.03 | 580.47 | 580.86 | 581.01 | 581.30 | 581.31 | 581.53 | 581.16 | 581.69 | 581.68 | 581.14 |
| 8 | 580.40 | 580.77 | 580.38 | 580.79 | 581.16 | 581.17 | 581.42 | 581.46 | 580.96 | 581.89 | 581.48 | 581.49 |
| 9 | 579.98 | 580.58 | 580.66 | 580.92 | 581.21 | 581.24 | 581.43 | 581.42 | 581.15 | 582.10 | 580.91 | 581.42 |
| 10 | 580.36 | 580.51 | 580.87 | 580.89 | 581.18 | 581.37 | 581.52 | 581.49 | 581.33 | 581.97 | 581.07 | 580.82 |
| 11 | 580.39 | 580.58 | 580.64 | 580.84 | 581.17 | 581.48 | 581.71 | 581.36 | 581.49 | 581.92 | 581.36 | 580.75 |
| 12 | 580.34 | 580.47 | 580.83 | 581.09 | 581.17 | 581.49 | 581.69 | 581.47 | 581.41 | 581.93 | 581.23 | 580.84 |
| 13 | 580.70 | 580.34 | 580.96 | 581.08 | 581.16 | 581.26 | 581.53 | 581.48 | 581.37 | 581.83 | 581.03 | 580.87 |
| 14 | 580.86 | 580.46 | 580.74 | 581.26 | 581.25 | 581.33 | 581.45 | 581.45 | 581.56 | 581.74 | 580.86 | 580.70 |
| 15 | 580.63 | 580.44 | 580.60 | 581.26 | 581.18 | 581.42 | 581.56 | 581.43 | 581.81 | 581.78 | 581.03 | 580.92 |
| 16 | 580.68 | 580.66 | 580.61 | 581.23 | 581.18 | 581.29 | 581.64 | 581.42 | 581.62 | 581.87 | 581.29 | 581.03 |
| 17 | 580.59 | 580.73 | 580.68 | 581.16 | 581.28 | 581.20 | 581.49 | 581.51 | 581.58 | 582.04 | 581.21 | 581.00 |
| 18 | 580.61 | 580.62 | 580.78 | 581.16 | 581.31 | 581.30 | 581.51 | 581.47 | 581.54 | 581.87 | 581.58 | 580.97 |
| 19 | 580.70 | 580.59 | 581.00 | 581.09 | 581.43 | 581.36 | 581.54 | 581.51 | 581.61 | 581.79 | 581.40 | 580.87 |
| 20 | 580.59 | 580.75 | 580.86 | 581.01 | 581.24 | 581.41 | 581.53 | 581.48 | 581.68 | 581.71 | 581.51 | 581.10 |
| 21 | 580.69 | 580.73 | 580.60 | 581.30 | 581.21 | 581.40 | 581.60 | 581.63 | 581.64 | 581.74 | 581.67 | 580.51 |
| 22 | 580.80 | 580.64 | 580.49 | 581.15 | 581.31 | 581.30 | 581.53 | 581.64 | 581.74 | 581.67 | 581.14 | 580.51 |
| 23 | 580.63 | 580.60 | 580.58 | 580.98 | 581.17 | 581.19 | 581.51 | 581.43 | 581.59 | 581.79 | 581.31 | 580.73 |
| 24 | 580.84 | 580.58 | 580.67 | 581.12 | 581.26 | 581.35 | 581.47 | 581.32 | 581.60 | 582.05 | 581.01 | 581.06 |
| 25 | 580.73 | 580.56 | 580.72* | 581.20 | 581.29 | 581.31 | 581.52 | 581.41 | 581.83 | 582.13 | 581.11 | 580.91 |
| 26 | 580.75 | 580.76 | 580.65 | 581.28 | 581.32 | 581.29 | 581.55 | 581.65 | 581.84 | 582.15 | 581.42 | 580.94 |
| 27 | 580.87 | 580.81 | 580.65 | 581.20 | 581.35 | 581.35 | 581.56 | 581.51 | 581.97 | 581.84 | 580.99 | 580.93 |
| 28 | 580.57 | 580.44 | 580.66 | 581.17 | 581.22 | 581.36 | 581.55 | 581.33 | 581.88 | 581.77 | 580.95 | 580.74 |
| 29 | 580.65 | | 580.76 | 581.01 | 581.18 | 581.35 | 581.47 | 581.31 | 581.82 | 581.89 | 581.32 | 580.98 |
| 30 | 580.55 | | 580.76 | 581.21 | 581.13 | 581.57 | 581.53 | 581.28 | 581.85 | 581.80 | 581.76 | 581.07 |
| 31 | 580.56 | | 580.81 | | 581.25 | | 581.58 | 581.31 | | 581.73 | | 580.79 |
| MEAN | 580.62 | 580.67 | 580.67 | 581.08 | 581.16 | 581.33 | 581.50 | 581.46 | 581.52 | 581.89 | 581.32 | 580.99 |
| MAX. | 581.23 | 581.28 | 581.30 | 581.56 | 581.68 | 581.91 | 581.95 | 582.04 | 582.23 | 582.78 | 582.06 | 582.18 |
| MIN. | 0200/03 | 1300/06 | 2300/19 | 0400/15 | 0900/19 | 2000/11 | 2000/15 | 1800/26 | 2200/22 | 0700/04 | 2400/30 | 0100/02 |
| | 579.73 | 580.05 | 580.23 | 580.42 | 580.68 | 581.01 | 581.02 | 581.17 | 580.89 | 581.50 | 580.62 | 580.32 |
| | 1700/09 | 0100/14 | 0500/08 | 1400/01 | 1400/07 | 0200/17 | 1800/04 | 0400/30 | 2000/08 | 0300/14 | 1700/14 | 1200/22 |

* Indicates Less than 90% of the Hourly Data Available.

ANNUAL MEAN: 581.18

/ Indicates No Data.

ANNUAL SUMMARY OF LEVELS, 1986
 Station 7068: Kewaunee, Wisconsin on Lake Michigan

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

HIGHEST
 Monthly mean elevation: 581.75 Oct
 Daily mean elevation: 582.02 27 Sep
 Instant/hourly Elevation: 582.27 1400/4 Oct

LOWEST
 Monthly mean elevation: 580.53 Jan
 Daily mean elevation: 580.17 9 Jan
 Instant/hourly Elevation: 579.93 1100/9 Jan

HIGHEST DAILY MEAN
 FOR EACH MONTH

 Elev. Date
 580.89 3 Jan
 580.87 7 Feb
 580.83 25 Mar
 581.24 26 Apr
 581.18 27 May
 581.43 12 Jun
 581.59 16 Jul
 581.57 22 Aug
 582.02 27 Sep
 581.94 4 Oct
 581.63 8 Nov
 581.55 2 Dec

LOWEST DAILY MEAN
 FOR EACH MONTH

 Elev. Date
 580.17 9 Jan
 580.36 14 Feb
 580.29 7 Mar
 580.70 8 Apr
 580.75 2 May
 581.01 8 Jun
 581.20 3 Jul
 581.18 30 Aug
 580.94 8 Sep
 581.60 6 Oct
 580.75 9 Nov
 580.59 23 Dec

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(ft.) | No. of days<br>above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 582.00         |     |     |     |     |     |     |     |     | 1   |     |     |     | 582.00         | 1                          |
| 581.80         |     |     |     |     |     |     |     |     | 1   | 10  |     |     | 581.80         | 12                         |
| 581.60         |     |     |     |     |     |     |     |     | 5   | 20  | 1   |     | 581.60         | 38                         |
| 581.40         |     |     |     |     |     | 1   | 5   | 13  | 10  | 1   | 8   | 2   | 581.40         | 78                         |
| 581.20         |     |     |     | 2   |     | 13  | 8   | 17  | 5   |     | 7   | 2   | 581.20         | 132                        |
| 581.00         |     |     |     | 13  | 19  | 16  | 1   | 1   | 7   |     | 9   | 2   | 581.00         | 200                        |
| 580.80         | 2   | 1   | 2   | 9   | 8   |     |     |     | 1   |     | 4   | 16  | 580.80         | 243                        |
| 580.60         | 8   | 9   | 13  | 6   | 1   |     |     |     |     |     | 1   | 7   | 580.60         | 288                        |
| 580.40         | 15  | 12  | 12  |     |     |     |     |     |     |     |     | 2   | 580.40         | 329                        |
| 580.20         | 4   | 4   | 2   |     |     |     |     |     |     |     |     |     | 580.20         | 339                        |
| 580.00         | 2   |     |     |     |     |     |     |     |     |     |     |     | 580.00         | 341                        |

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

Station 7068: Kewaunee, Wisconsin on Lake Michigan

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 580.43  | 580.71  | /       | 580.81  | 580.89  | 581.12  | 581.37  | 581.41* | 581.18  | 581.77  | 581.53  | 581.52  |
| 2    | 580.68  | 580.61  | /       | 580.76  | 580.75  | 581.15  | 581.28  | 581.43  | 581.23  | 581.84  | 581.48  | 581.55  |
| 3    | 580.89  | 580.56* | 580.49* | 580.94  | 580.88  | 581.09  | 581.20* | 581.42  | 581.34  | 581.91  | 581.45  | 581.04  |
| 4    | 580.80  | 580.66* | 580.47  | 581.01  | 580.95  | 581.02  | /       | 581.42  | 581.14  | 581.94  | 581.51  | 580.62  |
| 5    | 580.65  | 580.69  | 580.62  | 581.21  | 580.84  | 581.16  | /       | 581.40  | 581.03  | 581.69  | 581.60  | 580.89  |
| 6    | 580.31  | 580.79  | 580.56  | 581.06  | 580.98  | 581.22  | /       | 581.40  | 581.06  | 581.60  | 581.49  | 580.82  |
| 7    | 580.54  | 580.87  | 580.29  | 580.80  | 580.90  | 581.23  | 581.23* | 581.47  | 581.06  | 581.70  | 581.57  | 581.04  |
| 8    | 580.52  | /       | 580.36  | 580.70  | 581.00  | 581.01  | 581.24  | 581.44  | 580.94  | 581.62* | 581.63  | 581.25  |
| 9    | 580.17  | /       | 580.54  | 580.79  | 581.12  | 581.11  | 581.28  | 581.38  | 581.06  | 581.82  | 580.75  | 581.34  |
| 10   | 580.30  | 580.42* | 580.73  | 580.79  | 581.03  | 581.24  | 581.27  | 581.42  | 581.20  | 581.85  | 580.95  | 580.79  |
| 11   | 580.55  | 580.49  | 580.60  | 580.75  | 581.04  | 581.36  | 581.40  | 581.33  | 581.44  | 581.81  | 581.25  | 580.77  |
| 12   | 580.20  | 580.45  | 580.68  | 580.95  | 581.07  | 581.43  | 581.52  | 581.44  | 581.31  | 581.87  | 581.09  | 580.69  |
| 13   | 580.48  | 580.37  | 580.81  | 580.96  | 581.04  | 581.17  | 581.50  | 581.42  | 581.26  | 581.67  | 580.96  | 580.91  |
| 14   | 580.69  | 580.36  | 580.78  | 581.12  | 581.16  | 581.22  | 581.32  | 581.43  | 581.41  | 581.64  | 580.94  | 580.69  |
| 15   | 580.66  | 580.40  | 580.55  | 581.18  | 581.07  | 581.25  | 581.43  | 581.35  | 581.49  | 581.64  | 581.01  | 580.86  |
| 16   | 580.66  | 580.53  | 580.55  | 580.99  | 581.10  | 581.15  | 581.59  | 581.38  | 581.49  | 581.71  | 581.33  | 581.00  |
| 17   | 580.57  | 580.65  | 580.64  | 581.01  | 580.93  | 581.08  | 581.47  | 581.33  | 581.49  | 581.85  | 581.14  | 580.97  |
| 18   | 580.56  | 580.64  | 580.76  | 581.07  | 581.02  | 581.16  | /       | 581.36  | 581.40  | 581.76  | 581.27  | 580.91  |
| 19   | 580.51  | 580.60  | 580.71  | 581.11  | 581.13  | 581.22  | /       | 581.44  | 581.46  | 581.71  | 581.41  | 580.78  |
| 20   | 580.51  | 580.46  | 580.64  | 580.93  | 581.10  | 581.24  | /       | 581.43  | 581.53  | 581.69  | 581.27  | 580.86  |
| 21   | 580.65  | 580.58  | 580.59  | 580.93  | 581.11  | 581.30  | /       | 581.37  | 581.53  | 581.69  | 581.18  | 580.59  |
| 22   | 580.59  | 580.61  | 580.57  | 581.02  | 581.18  | 581.21  | /       | 581.57  | 581.70  | 581.66  | 581.21  | 580.59  |
| 23   | 580.54  | 580.48  | 580.45  | 580.97  | 581.17* | 581.12  | /       | 581.33  | 581.48  | 581.66  | 581.21  | 580.97  |
| 24   | 580.85  | 580.45  | 580.60  | 581.05  | /       | 581.16  | /       | 581.27  | 581.50  | 581.82  | 581.01  | 580.97  |
| 25   | 580.71  | 580.57  | 580.83  | 581.01  | /       | 581.18  | /       | 581.39  | 581.76  | 581.78  | 581.12  | 580.86  |
| 26   | 580.24  | 580.67  | 580.59  | 581.24  | /       | 581.24  | /       | 581.31  | 581.86  | 581.93  | 581.15  | 580.84  |
| 27   | 580.49  | 580.58  | 580.61  | 581.16  | 581.18* | 581.20  | /       | 581.26  | 582.02  | 581.78  | 581.06  | 580.92  |
| 28   | 580.51  | 580.40  | 580.73  | 581.15  | 581.11  | 581.24  | /       | 581.27  | 581.74  | 581.75  | 580.90  | 580.74  |
| 29   | 580.46  |         | 580.78  | 581.00  | 581.04  | 581.20  | /       | 581.26  | 581.75  | 581.66  | 581.10  | 580.88  |
| 30   | 580.44  |         | 580.71  | 581.05  | 581.05  | 581.30  | /       | 581.18  | 581.70  | 581.70  | 581.36  | 580.93  |
| 31   | 580.39  |         | 580.80  |         | 581.15  |         | /       | 581.21  |         | 581.71  |         | 580.85  |
| MEAN | 580.53  | 580.56  | 580.62  | 580.98  | 581.04  | 581.19  | 581.36  | 581.37  | 581.42  | 581.75  | 581.24  | 580.92  |
| MAX. | 581.20  | 581.09  | 581.15  | 581.73  | 581.42  | 581.80  | 581.82  | 581.80  | 582.22  | 582.27  | 582.06  | 581.75  |
|      | 2100/24 | 0800/20 | 0400/19 | 1600/28 | 2300/15 | 1700/19 | 0100/16 | 2000/22 | 1400/26 | 1400/04 | 0200/08 | 0900/02 |
| MIN. | 579.93  | 580.03  | 580.01  | 580.42  | 580.52  | 580.77  | 580.83  | 580.91  | 580.85  | 580.99  | 580.51  | 580.34  |
|      | 1100/09 | 1400/20 | 2300/08 | 1700/01 | 1800/05 | 2300/25 | 0500/08 | 1400/26 | 0600/07 | 0900/13 | 2000/09 | 0400/23 |

ANNUAL MEAN: 581.08

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 7072: Sturgeon Bay Canal, Wisconsin on Lake Michigan

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST  
 Monthly mean elevation: 581.71 Oct  
 Daily mean elevation: 581.93 27 Sep  
 Instant/hourly Elevation: 582.23 2300/29 Sep

LOWEST  
 Monthly mean elevation: 580.50 Jan  
 Daily mean elevation: 580.16 12 Jan  
 Instant/hourly Elevation: 579.82 1700/12 Jan

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 580.85 | 3 Jan  |
| 580.83 | 7 Feb  |
| 580.83 | 13 Mar |
| 581.16 | 26 Apr |
| 581.17 | 31 May |
| 581.47 | 12 Jun |
| 581.56 | 12 Jul |
| 581.50 | 22 Aug |
| 581.93 | 27 Sep |
| 581.91 | 26 Oct |
| 581.54 | 7 Nov  |
| 581.52 | 1 Dec  |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 580.16 | 12 Jan |
| 580.32 | 14 Feb |
| 580.18 | 7 Mar  |
| 580.66 | 8 Apr  |
| 580.71 | 2 May  |
| 581.00 | 8 Jun  |
| 581.23 | 3 Jul  |
| 581.16 | 30 Aug |
| 580.88 | 8 Sep  |
| 581.52 | 6 Oct  |
| 580.67 | 9 Nov  |
| 580.50 | 22 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(ft.) | No. of days
above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 581.80 | | | | | | | | | 3 | 7 | | | 581.80 | 10 |
| 581.60 | | | | | | | | | 3 | 21 | | | 581.60 | 34 |
| 581.40 | | | | | | 1 | 17 | 8 | 8 | 3 | 8 | 2 | 581.40 | 81 |
| 581.20 | | | | | | 11 | 14 | 21 | 8 | | 8 | 2 | 581.20 | 145 |
| 581.00 | | | | 10 | 20 | 17 | | 2 | 6 | | 6 | 1 | 581.00 | 207 |
| 580.80 | 2 | 1 | 1 | 13 | 10 | 1 | | | 2 | | 7 | 15 | 580.80 | 259 |
| 580.60 | 6 | 7 | 8 | 7 | 1 | | | | | | 1 | 8 | 580.60 | 297 |
| 580.40 | 16 | 15 | 19 | | | | | | | | | 3 | 580.40 | 350 |
| 580.20 | 4 | 5 | 2 | | | | | | | | | | 580.20 | 361 |
| 580.00 | 3 | | 1 | | | | | | | | | | 580.00 | 365 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 7072: Sturgeon Bay Canal, Wisconsin on Lake Michigan

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 580.39 | 580.63 | 580.37 | 580.75 | 580.86 | 581.14 | 581.35 | 581.44 | 581.16 | 581.68 | 581.52 | 581.52 |
| 2 | 580.61 | 580.58 | 580.45 | 580.67 | 580.71 | 581.17 | 581.30 | 581.43 | 581.23 | 581.75 | 581.47 | 581.50 |
| 3 | 580.85 | 580.55 | 580.46 | 580.88 | 580.83 | 581.07 | 581.23 | 581.41 | 581.32 | 581.83 | 581.41 | 581.02 |
| 4 | 580.78 | 580.68 | 580.43 | 580.96 | 580.86 | 581.02 | 581.24 | 581.39 | 581.17 | 581.91 | 581.49 | 580.58 |
| 5 | 580.60 | 580.61 | 580.56 | 581.11 | 580.85 | 581.16 | 581.25 | 581.38 | 581.04 | 581.60 | 581.53 | 580.81 |
| 6 | 580.26 | 580.68 | 580.48 | 581.08 | 580.96 | 581.20 | 581.30 | 581.40 | 581.00 | 581.52 | 581.46 | 580.75 |
| 7 | 580.49 | 580.83 | 580.18 | 580.80 | 580.84 | 581.20 | 581.26 | 581.49 | 581.04 | 581.63 | 581.54 | 580.99 |
| 8 | 580.52 | 580.66 | 580.38 | 580.66 | 580.93 | 581.00 | 581.27 | 581.46 | 580.88 | 581.56 | 581.42 | 581.24 |
| 9 | 580.19 | 580.47 | 580.47 | 580.74 | 581.02 | 581.07 | 581.29 | 581.41 | 581.02 | 581.81 | 580.67 | 581.28 |
| 10 | 580.24 | 580.37 | 580.64 | 580.76 | 581.03 | 581.22 | 581.31 | 581.35 | 581.16 | 581.78 | 580.90 | 580.76 |
| 11 | 580.50 | 580.44 | 580.53 | 580.72 | 581.02 | 581.28 | 581.49 | 581.34 | 581.32 | 581.78 | 581.21 | 580.74 |
| 12 | 580.16 | 580.43 | 580.58 | 580.89 | 581.03 | 581.47 | 581.56 | 581.39 | 581.32 | 581.86 | 581.05 | 580.67 |
| 13 | 580.46 | 580.39 | 580.83 | 580.90 | 580.97 | 581.15 | 581.54 | 581.35 | 581.22 | 581.68 | 580.91 | 580.86 |
| 14 | 580.66 | 580.32 | 580.68 | 581.07 | 581.14 | 581.23 | 581.38 | 581.38 | 581.34 | 581.64 | 580.81 | 580.63 |
| 15 | 580.58 | 580.41 | 580.53 | 581.12 | 581.00 | 581.27 | 581.46 | 581.37 | 581.43 | 581.63 | 580.96 | 580.83 |
| 16 | 580.64 | 580.47 | 580.49 | 580.98 | 581.12 | 581.13 | 581.51 | 581.37 | 581.44 | 581.67 | 581.28 | 580.96 |
| 17 | 580.57 | 580.63 | 580.59 | 580.98 | 580.93 | 581.05 | 581.51 | 581.29 | 581.40 | 581.83 | 581.10 | 580.93 |
| 18 | 580.51 | 580.52 | 580.71 | 581.02 | 581.04 | 581.15 | 581.50 | 581.36 | 581.35 | 581.70 | 581.22 | 580.94 |
| 19 | 580.48 | 580.48 | 580.57 | 581.05 | 581.09 | 581.19 | 581.49 | 581.43 | 581.47 | 581.67 | 581.33 | 580.77 |
| 20 | 580.50 | 580.36 | 580.54 | 580.88 | 581.03 | 581.23 | 581.42 | 581.38 | 581.58 | 581.66 | 581.36 | 580.95 |
| 21 | 580.65 | 580.50 | 580.55 | 580.90 | 581.07 | 581.31 | 581.53 | 581.35 | 581.52 | 581.67 | 581.26 | 580.81 |
| 22 | 580.53 | 580.58 | 580.56 | 580.95 | 581.13 | 581.21 | 581.44 | 581.50 | 581.58 | 581.64 | 581.15 | 580.50 |
| 23 | 580.49 | 580.43 | 580.41 | 580.87 | 581.06 | 581.13 | 581.40 | 581.28 | 581.52 | 581.63 | 581.22 | 580.57 |
| 24 | 580.83 | 580.41 | 580.56 | 580.96 | 581.12 | 581.17 | 581.39 | 581.22 | 581.41 | 581.82 | 580.96 | 580.94 |
| 25 | 580.72 | 580.50 | 580.79 | 580.99 | 581.14 | 581.18 | 581.39 | 581.32 | 581.71 | 581.75 | 581.02 | 580.86 |
| 26 | 580.20 | 580.62 | 580.59 | 581.16 | 581.12 | 581.17 | 581.42 | 581.29 | 581.71 | 581.91 | 581.06 | 580.82 |
| 27 | 580.44 | 580.53 | 580.56 | 581.09 | 581.16 | 581.24 | 581.50 | 581.22 | 581.93 | 581.76 | 580.93 | 580.86 |
| 28 | 580.45 | 580.34 | 580.70 | 581.15 | 581.09 | 581.25 | 581.48 | 581.21 | 581.82 | 581.74 | 580.92 | 580.71 |
| 29 | 580.41 | | 580.72 | 580.99 | 581.08 | 581.23 | 581.43 | 581.21 | 581.85 | 581.64 | 581.11 | 580.87 |
| 30 | 580.42 | | 580.66 | 581.10 | 581.11 | 581.31 | 581.49 | 581.16 | 581.66 | 581.64 | 581.30 | 580.92 |
| 31 | 580.34 | | 580.78 | | 581.17 | | 581.53 | 581.19 | | 581.63 | | 580.79 |
| MEAN | 580.50 | 580.52 | 580.56 | 580.94 | 581.02 | 581.19 | 581.41 | 581.35 | 581.39 | 581.71 | 581.19 | 580.88 |
| MAX. | 581.14 | 580.89 | 581.02 | 581.51 | 581.32 | 581.59 | 581.80 | 581.67 | 582.23 | 582.14 | 581.90 | 581.70 |
| MIN. | 2200/24 | 2000/07 | 2100/31 | 1700/28 | 2400/16 | 0100/27 | 0800/12 | 2100/07 | 2300/29 | 2000/04 | 0700/08 | 0500/02 |
| | 1700/12 | 1400/20 | 2400/08 | 1900/01 | 2300/01 | 0900/17 | 1400/04 | 1500/26 | 1800/08 | 1400/13 | 2400/09 | 1700/22 |

* Indicates Less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL MEAN: 581.06

ANNUAL SUMMARY OF LEVELS, 1986
 Station 7079: Green Bay, Wisconsin on Lake Michigan

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

HIGHEST
 Monthly mean elevation: 581.67 Oct
 Daily mean elevation: 582.18 26 Oct
 Instant/hourly Elevation: 583.77 1642/18 Jul

LOWEST
 Monthly mean elevation: 580.44 Jan
 Daily mean elevation: 579.79 9 Nov
 Instant/hourly Elevation: 577.89 0200/9 Nov

HIGHEST DAILY MEAN
 FOR EACH MONTH

 Elev. Date
 580.89 24 Jan
 580.71 7 Feb
 580.88 25 Mar
 581.27 14 Apr
 581.50 19 May
 581.86 11 Jun
 581.66 12 Jul
 581.54 21 Aug
 581.94 27 Sep
 582.18 26 Oct
 581.69 30 Nov
 581.74 1 Dec

LOWEST DAILY MEAN
 FOR EACH MONTH

 Elev. Date
 580.05 26 Jan
 580.24 28 Feb
 580.03 7 Mar
 580.66 7 Apr
 580.65 4 May
 580.85 3 Jun
 581.10 4 Jul
 581.01 30 Aug
 580.60 8 Sep
 581.18 7 Oct
 579.79 9 Nov
 580.04 22 Dec

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(ft.) | No. of days<br>above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 582.00         |     |     |     |     |     |     |     |     |     | 4   |     |     | 582.00         | 4                          |
| 581.80         |     |     |     |     |     | 1   |     |     | 2   | 4   |     |     | 581.80         | 11                         |
| 581.60         |     |     |     |     | 1   | 3   | 1   |     | 5   | 11  | 1   | 1   | 581.60         | 31                         |
| 581.40         |     |     |     |     | 6   | 9   | 11  | 4   | 6   | 7   | 4   | 1   | 581.40         | 68                         |
| 581.20         |     |     |     | 4   | 6   | 9   | 14  | 18  | 10  | 4   | 7   | 1   | 581.20         | 141                        |
| 581.00         |     |     |     | 6   | 14  | 12  | 5   | 9   | 2   | 1   | 7   | 2   | 581.00         | 199                        |
| 580.80         | 1   |     | 2   | 11  | 5   | 4   |     |     | 4   |     | 2   | 6   | 580.80         | 234                        |
| 580.60         | 5   | 4   | 7   | 9   | 5   |     |     |     |     |     | 4   | 9   | 580.60         | 277                        |
| 580.40         | 10  | 12  | 15  |     |     |     |     |     | 1   |     | 2   | 6   | 580.40         | 323                        |
| 580.20         | 11  | 12  | 6   |     |     |     |     |     |     |     | 1   | 4   | 580.20         | 357                        |
| 580.00         | 4   |     | 1   |     |     |     |     |     |     |     |     | 1   | 580.00         | 363                        |
| 579.80         |     |     |     |     |     |     |     |     |     |     | 1   |     | 579.80         | 364                        |
| 579.60         |     |     |     |     |     |     |     |     |     |     | 1   |     | 579.60         | 365                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 7079: Green Bay, Wisconsin on Lake Michigan

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 580.40  | 580.59  | 580.28  | 580.66  | 580.75  | 581.59  | 581.37  | 581.35  | 581.09  | 581.69  | 581.53  | 581.74  |
| 2    | 580.59  | 580.54  | 580.40  | 580.76  | 580.66  | 581.20  | 581.38  | 581.33  | 581.29  | 581.67  | 581.23  | 581.54  |
| 3    | 580.75  | 580.51  | 580.41  | 580.95  | 580.71  | 580.85  | 581.11  | 581.32  | 581.23  | 582.13  | 581.27  | 580.51  |
| 4    | 580.71  | 580.57  | 580.35  | 581.06  | 580.65  | 581.21  | 581.10  | 581.19  | 580.98  | 582.03  | 581.44  | 580.22  |
| 5    | 580.51  | 580.50  | 580.54  | 581.18  | 580.69  | 581.48  | 581.12  | 581.26  | 580.84  | 581.34  | 581.31  | 580.42  |
| 6    | 580.16  | 580.63  | 580.40  | 580.98  | 580.87  | 581.33  | 581.23  | 581.38  | 581.05  | 581.31  | 581.29  | 580.72  |
| 7    | 580.32  | 580.71  | 580.03  | 580.66  | 580.93  | 581.19  | 581.18  | 581.43  | 580.91  | 581.18  | 581.50  | 581.03  |
| 8    | 580.50  | 580.64  | 580.41  | 580.69  | 581.14  | 581.02  | 581.38  | 581.35  | 580.60  | 581.80  | 580.25  | 581.32  |
| 9    | 580.19  | 580.41  | 580.51  | 580.79  | 581.11  | 581.09  | 581.30  | 581.25  | 580.88  | 581.82  | 579.79  | 581.07  |
| 10   | 580.24  | 580.28  | 580.54  | 580.72  | 581.06  | 581.21  | 581.36  | 581.32  | 581.21  | 581.61  | 580.72  | 580.28  |
| 11   | 580.45  | 580.39  | 580.47  | 580.68  | 581.05  | 581.86  | 581.60  | 581.18  | 581.57  | 581.63  | 581.02  | 580.37  |
| 12   | 580.08  | 580.38  | 580.53  | 581.03  | 581.04  | 581.61  | 581.66  | 581.24  | 581.21  | 581.77  | 580.70  | 580.47  |
| 13   | 580.37  | 580.31  | 580.81  | 580.99  | 580.99  | 581.09  | 581.50  | 581.18  | 581.24  | 581.58  | 580.48  | 580.61  |
| 14   | 580.57  | 580.32  | 580.67  | 581.27  | 581.16  | 581.14  | 581.37  | 581.28  | 581.32  | 581.37  | 579.90  | 580.33  |
| 15   | 580.55  | 580.34  | 580.42  | 581.23  | 581.12  | 581.19  | 581.43  | 581.30  | 581.74  | 581.52  | 580.85  | 580.78  |
| 16   | 580.66  | 580.47  | 580.42  | 581.12  | 581.05  | 581.19  | 581.56  | 581.31  | 581.46  | 581.77  | 581.11  | 580.86  |
| 17   | 580.54  | 580.59  | 580.53  | 581.00  | 581.20  | 580.98  | 581.42  | 581.38  | 581.22  | 581.88  | 581.06  | 580.87  |
| 18   | 580.49  | 580.50  | 580.71  | 580.99  | 581.35  | 581.15  | 581.37  | 581.39  | 581.40  | 581.62  | 581.47  | 580.70  |
| 19   | 580.39  | 580.38  | 580.39  | 580.76  | 581.50  | 581.34  | 581.40  | 581.44  | 581.59  | 581.55  | 581.22  | 580.66  |
| 20   | 580.39  | 580.30  | 580.52  | 580.90  | 581.20  | 581.43  | 581.60  | 581.33  | 581.62  | 581.53  | 581.37  | 580.92  |
| 21   | 580.61  | 580.41  | 580.48  | 581.21  | 581.23  | 581.24  | 581.49  | 581.54  | 581.52  | 581.60  | 581.09  | 580.66  |
| 22   | 580.43  | 580.51  | 580.62  | 580.89  | 581.25  | 581.16  | 581.33  | 581.45  | 581.58  | 581.48  | 581.04  | 580.04  |
| 23   | 580.46  | 580.37  | 580.38  | 580.70  | 581.04  | 581.02  | 581.26  | 581.28  | 581.36  | 581.81  | 581.09  | 580.50  |
| 24   | 580.89  | 580.36  | 580.57  | 580.96  | 581.15  | 581.36  | 581.17  | 581.14  | 581.37  | 581.91  | 580.66  | 580.91  |
| 25   | 580.62  | 580.47  | 580.88  | 581.17  | 581.18  | 580.96  | 581.39  | 581.19  | 581.73  | 582.02  | 580.85  | 580.79  |
| 26   | 580.05  | 580.63  | 580.55  | 581.23  | 581.24  | 581.00  | 581.44  | 581.40  | 581.84  | 582.18  | 581.05  | 580.79  |
| 27   | 580.30  | 580.40  | 580.58  | 581.02  | 581.21  | 581.21  | 581.36  | 581.26  | 581.94  | 581.63  | 580.54  | 580.63  |
| 28   | 580.39  | 580.24  | 580.65  | 580.98  | 581.07  | 581.20  | 581.51  | 581.06  | 581.77  | 581.64  | 580.73  | 580.52  |
| 29   | 580.32  |         | 580.71  | 580.84  | 580.98  | 581.33  | 581.36  | 581.03  | 581.62  | 581.73  | 581.22  | 580.87  |
| 30   | 580.38  |         | 580.66  | 580.96  | 580.98  | 581.38  | 581.41  | 581.01  | 581.57  | 581.60  | 581.69  | 580.87  |
| 31   | 580.27  |         | 580.73  |         | 581.28  |         | 581.48  | 581.08  |         | 581.38  |         | 580.48  |
| MEAN | 580.44  | 580.46  | 580.52  | 580.95  | 581.06  | 581.23  | 581.38  | 581.28  | 581.36  | 581.67  | 580.98  | 580.73  |
| MAX. | 581.44  | 581.24  | 581.64  | 582.22  | 582.25  | 582.90  | 583.77  | 582.33  | 582.51  | 583.08  | 582.44  | 582.05  |
| MIN. | 2200/24 | 0500/06 | 0500/20 | 1600/15 | 1900/21 | 2200/11 | 1642/18 | 1100/10 | 0700/22 | 1700/03 | 0200/01 | 0900/02 |
|      | 579.30  | 579.43  | 579.25  | 579.73  | 580.03  | 580.28  | 580.16  | 580.56  | 580.17  | 580.49  | 577.89  | 579.62  |
|      | 1900/12 | 0900/14 | 2300/19 | 2300/01 | 0800/01 | 0800/19 | 1000/04 | 0300/10 | 0500/08 | 1100/31 | 0200/09 | 2300/10 |

ANNUAL MEAN: 581.00

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 7096: Port Inland, Michigan on Lake Michigan

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST  
 Monthly mean elevation: 581.63 Oct  
 Daily mean elevation: 582.18 8 Nov  
 Instant/hourly Elevation: 582.70 2100/8 Nov

LOWEST  
 Monthly mean elevation: 580.35 Feb  
 Daily mean elevation: 579.95 7 Mar  
 Instant/hourly Elevation: 579.60 2200/12 Jan

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 580.79 | 25 Jan |
| 580.53 | 7 Feb  |
| 580.87 | 22 Mar |
| 581.12 | 19 Apr |
| 581.01 | 31 May |
| 581.29 | 12 Jun |
| 581.47 | 12 Jul |
| 581.44 | 14 Aug |
| 581.84 | 27 Sep |
| 581.97 | 12 Oct |
| 582.18 | 8 Nov  |
| 581.34 | 2 Dec  |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 580.00 | 26 Jan |
| 580.17 | 20 Feb |
| 579.95 | 7 Mar  |
| 580.46 | 9 Apr  |
| 580.53 | 2 May  |
| 580.88 | 8 Jun  |
| 580.97 | 2 Jul  |
| 580.93 | 27 Aug |
| 580.87 | 6 Sep  |
| 581.37 | 29 Oct |
| 580.88 | 13 Nov |
| 580.55 | 23 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(ft.) | No. of days
above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 582.00 | | | | | | | | | | | 1 | | 582.00 | 1 |
| 581.80 | | | | | | | | | 1 | 5 | | | 581.80 | 7 |
| 581.60 | | | | | | | | | 2 | 11 | | | 581.60 | 20 |
| 581.40 | | | | | | | 7 | 1 | 5 | 14 | 3 | | 581.40 | 50 |
| 581.20 | | | | | | 4 | 17 | 19 | 8 | 1 | 10 | 3 | 581.20 | 112 |
| 581.00 | | | | 3 | 1 | 17 | 3 | 9 | 8 | | 7 | 3 | 581.00 | 163 |
| 580.80 | | | 2 | 12 | 24 | 9 | 1 | 2 | 5 | | 9 | 15 | 580.80 | 242 |
| 580.60 | 4 | | 4 | 9 | 5 | | | | | | | 8 | 580.60 | 272 |
| 580.40 | 10 | 7 | 8 | 6 | 1 | | | | | | | 2 | 580.40 | 306 |
| 580.20 | 13 | 18 | 15 | | | | | | | | | | 580.20 | 352 |
| 580.00 | 3 | 3 | 1 | | | | | | | | | | 580.00 | 359 |
| 579.80 | 1 | | 1 | | | | | | | | | | 579.80 | 361 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 7096: Port Inland, Michigan on Lake Michigan

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 580.38 | 580.40 | 580.28 | 580.67 | 580.73 | 580.94 | 581.23* | 581.36 | 581.13 | 581.64 | 581.37 | 581.26 |
| 2 | 580.36 | 580.48 | 580.32 | 580.54 | 580.53 | 580.97 | 580.97* | 581.27 | 581.16 | 581.73 | 581.38 | 581.34 |
| 3 | 580.58 | 580.36 | 580.31 | 580.70 | 580.75 | 581.06 | 581.11* | 581.27 | 581.26 | 581.72 | 581.40 | 581.11 |
| 4 | 580.52 | 580.37 | 580.26 | 580.67 | 581.00 | 580.91 | 581.40* | 581.32 | 581.20 | 581.71 | 581.36 | 580.61 |
| 5 | 580.57* | 580.30 | 580.23 | 580.92 | 580.85 | 580.96 | / | 581.32 | 580.96 | 581.59 | 581.60 | 581.08 |
| 6 | 580.17 | 580.36 | 580.30* | 580.99 | 580.97 | 581.01 | / | 581.31 | 580.87 | 581.49 | 581.44 | 580.72 |
| 7 | 580.35 | 580.53 | 579.95 | 580.73 | 580.71 | 581.08 | / | 581.38 | 580.96 | 581.96 | 581.44 | 580.85 |
| 8 | 580.75 | 580.50 | 580.38 | 580.49 | 580.78 | 580.88 | 581.23* | 581.37 | 580.94 | 581.52 | 582.18 | 581.05 |
| 9 | 580.56 | 580.46 | 580.31 | 580.46 | 580.91 | 580.96 | 581.20 | 581.32 | 581.05 | 581.67 | 581.06 | 581.27 |
| 10 | 580.22 | 580.30 | 580.33 | 580.58 | 580.86 | 581.09 | 581.20 | 581.31 | 581.18 | 581.81 | 580.93 | 580.82 |
| 11 | 580.68 | 580.31 | 580.33 | 580.57 | 580.85 | 581.10 | 581.35 | 581.17 | / | 581.82 | 581.19 | 580.95 |
| 12 | 580.10 | 580.36 | 580.30 | 580.73 | 580.92 | 581.29 | 581.47 | 581.31 | 581.21 | 581.97 | 581.04 | 580.56 |
| 13 | 580.30 | 580.41 | 580.51 | 580.73 | 580.87 | 581.02 | 581.46 | 581.35 | 580.97 | 581.68 | 580.88 | 580.94 |
| 14 | 580.47 | 580.34 | 580.58 | 580.85 | 580.98 | 581.11 | 581.24 | 581.44 | 581.14 | 581.69 | 581.27 | 580.83 |
| 15 | 580.60 | 580.40 | 580.40 | 580.98 | 580.85 | 581.16 | 581.31 | 581.32 | 581.19 | 581.49 | 580.94 | 580.81 |
| 16 | 580.55 | 580.25 | 580.36 | 580.72 | 580.94 | 580.99 | 581.40 | 581.31 | 581.20 | 581.51 | 581.26 | 580.91 |
| 17 | 580.67 | 580.45 | 580.50* | 580.78 | 580.75 | 581.00 | 581.42 | 581.19 | 581.40 | 581.60 | 580.94 | 580.93 |
| 18 | 580.46 | 580.38 | 580.43* | 580.89 | 580.82 | 581.03 | 581.36 | 581.21 | 581.25 | 581.60 | 580.95 | 580.93 |
| 19 | 580.27 | 580.30 | 580.19* | 581.12 | 580.83 | 581.10 | 581.36 | 581.26 | 581.22 | 581.59 | 581.24 | 580.66 |
| 20 | 580.31 | 580.17 | 580.30* | 580.84 | 580.83 | 581.07 | 581.29 | 581.32 | 581.34 | 581.59 | 581.29 | 580.79 |
| 21 | 580.45 | 580.20 | 580.53* | 580.57 | 580.90 | 581.28 | 581.37 | 581.11 | 581.34 | 581.58 | 581.23 | 580.82 |
| 22 | 580.34 | 580.43 | 580.87* | 580.80 | 580.96 | 581.20 | 581.42 | 581.37 | 581.53 | 581.65 | 581.24 | 580.84 |
| 23 | 580.32 | 580.27 | 580.36 | 580.87 | 580.94 | 581.11 | 581.36 | 581.12 | 581.41 | 581.43 | 581.17 | 580.55 |
| 24 | 580.54* | 580.26 | 580.46 | 580.97 | 580.98 | 580.99 | 581.46 | 581.02 | 581.39 | 581.61 | 581.04 | 580.88 |
| 25 | 580.79* | 580.34* | 580.84 | 580.85 | 580.98 | 581.10 | 581.29 | 581.30 | 581.59 | 581.51 | 581.08 | 580.77 |
| 26 | 580.00 | 580.35 | 580.56 | 580.97 | 580.92 | 581.22 | 581.36 | 581.10 | 581.59 | 581.63 | 580.91 | 580.63 |
| 27 | 580.15 | 580.25 | 580.48 | 580.97 | 580.98 | 581.14 | 581.44 | 580.93 | 581.84 | 581.59 | 581.18 | 580.88 |
| 28 | 580.36 | 580.19 | 580.71 | 581.06 | 580.98 | 581.22 | 581.37 | 580.98 | 581.69 | 581.64 | 580.94 | 580.73 |
| 29 | 580.29 | | 580.64 | 580.93 | 580.99 | 581.07 | 581.28 | 581.11 | 581.76 | 581.37 | 580.89 | 580.83 |
| 30 | 580.35 | | 580.63 | 581.01 | 581.00 | 581.09 | 581.36 | 581.07 | 581.58 | 581.42 | 580.97 | 580.76 |
| 31 | 580.21 | | 580.72 | | 581.01 | | 581.44 | 581.16 | | 581.86 | | 580.91 |
| MEAN | 580.41 | 580.35 | 580.43 | 580.80 | 580.88 | 581.07 | 581.33 | 581.24 | 581.29 | 581.63 | 581.19 | 580.87 |
| MAX. | 581.19 | 580.84 | 581.22 | 581.38 | 581.31 | 581.51 | 581.73 | 581.75 | 582.20 | 582.26 | 582.70 | 581.97 |
| MIN. | 2000/08 | 0600/20 | 1600/22 | 1900/26 | 0200/18 | 1300/12 | 1000/12 | 2200/22 | 0500/29 | 1800/07 | 2100/08 | 2300/05 |
| | 579.60 | 579.80 | 579.71 | 580.22 | 580.14 | 580.57 | 580.95 | 580.70 | 580.72 | 580.95 | 580.51 | 580.24 |
| | 2200/12 | 1800/20 | 0100/07 | 1300/08 | 1400/01 | 1100/01 | 2400/02 | 1200/27 | 1000/13 | 0100/06 | 1100/26 | 1300/06 |

* Indicates Less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL MEAN: 580.96

ANNUAL SUMMARY OF LEVELS, 1986
 Station 9004: Pt. Iroquois, Brimley, Michigan on Lake Superior (Whitefish Bay)

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

HIGHEST
 Monthly mean elevation: 601.95 Aug
 Daily mean elevation: 602.20 23 Aug
 Instant/hourly Elevation: 602.84 2100/5 Oct

LOWEST
 Monthly mean elevation: 601.18 Mar
 Daily mean elevation: 600.90 24 Jan
 Instant/hourly Elevation: 600.43 1900/31 Mar

HIGHEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 601.93 | 12 Jan |
| 601.43 | 20 Feb |
| 601.54 | 19 Mar |
| 601.70 | 21 Apr |
| 601.88 | 1 May |
| 601.89 | 16 Jun |
| 602.02 | 28 Jul |
| 602.20 | 23 Aug |
| 602.16 | 5 Sep |
| 602.13 | 5 Oct |
| 602.10 | 9 Nov |
| 601.95 | 4 Dec |

LOWEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 600.90 | 24 Jan |
| 601.05 | 17 Feb |
| 600.94 | 31 Mar |
| 601.08 | 5 Apr |
| 601.47 | 4 May |
| 601.42 | 3 Jun |
| 601.58 | 5 Jul |
| 601.73 | 31 Aug |
| 601.49 | 27 Sep |
| 601.52 | 31 Oct |
| 601.26 | 19 Nov |
| 601.07 | 31 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(ft.) | No. of days<br>above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 602.00         |     |     |     |     |     |     | 1   | 10  | 3   | 1   | 2   |     | 602.00         | 17                         |
| 601.80         | 3   |     |     |     | 1   | 4   | 11  | 19  | 14  | 15  | 7   | 1   | 601.80         | 92                         |
| 601.60         | 7   |     |     | 2   | 12  | 18  | 18  | 2   | 10  | 13  | 10  | 5   | 601.60         | 189                        |
| 601.40         | 16  | 1   | 3   | 10  | 18  | 8   | 1   |     | 3   | 2   | 10  | 8   | 601.40         | 269                        |
| 601.20         | 3   | 19  | 8   | 15  |     |     |     |     |     |     | 1   | 13  | 601.20         | 328                        |
| 601.00         | 1   | 8   | 18  | 3   |     |     |     |     |     |     |     | 4   | 601.00         | 362                        |
| 600.80         | 1   |     | 2   |     |     |     |     |     |     |     |     |     | 600.80         | 365                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 9004: Pt. Iroquois, Brimley, Michigan on Lake Superior (Whitefish Bay)

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 601.79  | 601.28  | 601.18  | 601.34  | 601.88  | 601.75  | 601.71  | 601.92  | 601.85  | 601.82  | 601.93  | 601.29  |
| 2    | 601.70  | 601.35  | 601.18  | 601.24  | 601.80  | 601.57  | 601.85  | 602.03  | 601.78  | 601.76  | 601.82  | 601.34  |
| 3    | 601.61  | 601.27  | 601.22  | 601.22  | 601.66  | 601.42  | 601.66  | 601.99  | 601.61  | 601.88  | 601.85  | 601.78  |
| 4    | 601.54  | 601.30  | 601.21  | 601.21  | 601.47  | 601.67  | 601.61  | 601.92  | 601.91  | 601.80  | 601.68  | 601.95  |
| 5    | 601.84  | 601.38  | 601.11  | 601.08  | 601.49  | 601.61  | 601.58  | 601.95  | 602.16  | 602.13  | 601.52  | 601.49  |
| 6    | 601.86  | 601.17  | 601.41  | 601.33  | 601.56  | 601.51  | 601.73  | 601.95  | 602.11  | 601.85  | 601.63  | 601.75  |
| 7    | 601.72  | 601.24  | 601.30  | 601.43  | 601.72  | 601.49  | 601.73  | 601.87  | 601.93  | 601.72  | 601.56  | 601.63  |
| 8    | 601.57  | 601.22  | 600.98  | 601.64  | 601.65  | 601.68  | 601.76  | 601.93  | 601.95  | 601.98  | 601.42  | 601.20  |
| 9    | 601.67  | 601.37  | 601.03  | 601.58  | 601.51  | 601.51  | 601.78  | 601.89  | 601.82  | 601.84  | 602.10  | 601.46  |
| 10   | 601.60  | 601.39  | 601.28  | 601.55  | 601.53  | 601.50  | 601.71  | 602.10  | 601.82  | 601.53  | 601.86  | 601.70  |
| 11   | 601.43  | 601.34  | 601.17  | 601.56  | 601.51  | 601.64  | 601.64  | 602.08  | 601.88  | 601.63  | 601.86  | 601.59  |
| 12   | 601.93  | 601.37  | 601.07  | 601.39  | 601.51  | 601.72  | 601.64  | 601.92  | 601.92  | 601.81  | 602.04  | 601.76  |
| 13   | 601.44  | 601.30  | 601.11  | 601.34  | 601.51  | 601.70  | 601.81  | 601.83  | 602.10  | 601.93  | 601.89  | 601.45  |
| 14   | 601.47  | 601.33  | 601.17  | 601.23  | 601.53  | 601.69  | 601.83  | 601.81  | 601.89  | 601.96  | 601.74  | 601.56  |
| 15   | 601.34  | 601.29  | 601.32  | 601.43  | 601.58  | 601.55  | 601.73  | 601.95  | 601.89  | 601.93  | 601.75  | 601.38  |
| 16   | 601.18  | 601.13  | 601.15  | 601.46  | 601.66  | 601.89  | 601.71  | 601.85  | 601.81  | 601.94  | 601.61  | 601.32  |
| 17   | 601.48  | 601.05  | 601.11  | 601.40  | 601.68  | 601.74  | 601.70  | 602.03  | 601.57  | 601.83  | 601.81  | 601.26  |
| 18   | 601.51  | 601.18  | 601.08  | 601.25  | 601.75  | 601.69  | 601.78  | 602.01  | 601.82  | 601.75  | 601.73  | 601.46  |
| 19   | 601.58  | 601.23  | 601.54  | 601.18  | 601.71  | 601.72  | 601.84  | 601.90  | 601.81  | 601.77  | 601.26  | 601.44  |
| 20   | 601.44  | 601.43  | 601.24  | 601.44  | 601.74  | 601.63  | 601.93  | 601.85  | 601.79  | 601.81  | 601.53  | 601.40  |
| 21   | 601.37  | 601.16  | 601.20  | 601.70  | 601.70  | 601.54  | 601.75  | 602.06  | 601.67  | 601.79  | 601.44  | 601.36  |
| 22   | 601.71  | 601.15  | 601.06  | 601.39  | 601.67  | 601.65  | 601.79  | 601.75  | 601.71  | 601.81  | 601.46  | 601.39  |
| 23   | 601.45  | 601.32  | 601.45  | 601.18  | 601.65  | 601.81  | 601.73  | 602.20  | 601.76  | 601.85  | 601.71  | 601.34  |
| 24   | 600.90  | 601.24  | 601.08  | 601.31  | 601.58  | 601.86  | 601.79  | 602.00  | 601.76  | 601.75  | 601.60  | 601.16  |
| 25   | 601.44  | 601.10  | 601.07  | 601.46  | 601.60  | 601.64  | 601.96  | 601.85  | 601.59  | 601.77  | 601.42  | 601.45  |
| 26   | 601.72  | 601.08  | 601.29  | 601.30  | 601.60  | 601.61  | 601.91  | 602.13  | 601.62  | 601.75  | 601.77  | 601.32  |
| 27   | 601.51  | 601.38  | 601.19  | 601.36  | 601.59  | 601.76  | 601.85  | 602.18  | 601.49  | 601.78  | 601.48  | 601.18  |
| 28   | 601.40  | 601.29  | 601.11  | 601.28  | 601.56  | 601.79  | 602.02  | 602.04  | 601.76  | 601.69  | 601.63  | 601.24  |
| 29   | 601.50  |         | 601.09  | 601.46  | 601.56  | 601.88  | 601.97  | 601.90  | 601.74  | 601.98  | 601.65  | 601.25  |
| 30   | 601.52  |         | 601.30  | 601.41  | 601.57  | 601.76  | 601.91  | 601.84  | 601.83  | 601.67  | 601.46  | 601.23  |
| 31   | 601.44  |         | 600.94  |         | 601.54  |         | 601.91  | 601.73  |         | 601.52  |         | 601.07  |
| MEAN | 601.54  | 601.26  | 601.18  | 601.37  | 601.62  | 601.67  | 601.78  | 601.95  | 601.81  | 601.81  | 601.67  | 601.43  |
| MAX. | 602.55  | 601.77  | 601.96  | 601.87  | 602.44  | 602.38  | 602.28  | 602.72  | 602.48  | 602.84  | 602.76  | 602.32  |
|      | 1100/12 | 1800/20 | 0600/19 | 0900/21 | 1400/01 | 1000/16 | 1800/04 | 1000/23 | 0300/13 | 2100/05 | 0400/09 | 0500/06 |
| MIN. | 600.62  | 600.78  | 600.43  | 600.69  | 601.19  | 601.14  | 601.08  | 601.42  | 601.02  | 600.82  | 600.47  | 600.84  |
|      | 1600/24 | 0200/17 | 1900/31 | 0400/26 | 1800/31 | 1900/20 | 1500/04 | 2400/22 | 0800/27 | 0700/31 | 0900/08 | 0600/31 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 601.59

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 9018: Marquette Coast Guard, Marquette, Michigan on Lake Superior

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST  
 Monthly mean elevation: 602.04 Aug  
 Daily mean elevation: 602.15 23 Aug  
 Instant/hourly Elevation: 602.35 0800/23 Aug

LOWEST  
 Monthly mean elevation: 601.31 Mar  
 Daily mean elevation: 601.17 8 Mar  
 Instant/hourly Elevation: 600.95 1800/30 Mar

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 601.86 | 6 Jan  |
| 601.46 | 5 Feb  |
| 601.55 | 19 Mar |
| 601.69 | 30 Apr |
| 601.79 | 19 May |
| 601.87 | 29 Jun |
| 602.11 | 28 Jul |
| 602.15 | 23 Aug |
| 602.08 | 6 Sep  |
| 602.08 | 12 Oct |
| 601.88 | 12 Nov |
| 601.76 | 4 Dec  |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 601.34 | 24 Jan |
| 601.29 | 25 Feb |
| 601.17 | 8 Mar  |
| 601.34 | 1 Apr  |
| 601.66 | 29 May |
| 601.62 | 3 Jun  |
| 601.75 | 4 Jul  |
| 601.91 | 31 Aug |
| 601.81 | 17 Sep |
| 601.72 | 31 Oct |
| 601.55 | 19 Nov |
| 601.25 | 31 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(ft.) | No. of days
above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 602.00 | | | | | | | 7 | 24 | 3 | 2 | | | 602.00 | 36 |
| 601.80 | 3 | | | | | 11 | 22 | 7 | 27 | 26 | 3 | | 601.80 | 135 |
| 601.60 | 16 | | | 4 | 31 | 19 | 2 | | | 3 | | | 601.60 | 240 |
| 601.40 | 11 | 8 | 1 | 20 | | | | | | | 25 | 5 | 601.40 | 299 |
| 601.20 | 1 | 20 | 29 | 6 | | | | | | | 2 | 17 | 601.20 | 364 |
| 601.00 | | | 1 | | | | | | | | | 9 | 601.00 | 365 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 9018: Marquette Coast Guard, Marquette, Michigan on Lake Superior

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 601.78 | 601.45 | 601.28 | 601.34 | 601.76 | 601.75 | 601.85 | 602.04 | 601.98 | 601.94 | 601.83 | 601.57 |
| 2 | 601.79 | 601.44 | 601.30 | 601.36 | 601.78 | 601.68 | 601.85 | 602.08 | 601.99 | 601.92 | 601.80 | 601.57 |
| 3 | 601.77 | 601.44 | 601.29 | 601.38 | 601.68 | 601.62 | 601.80 | 602.07 | 601.88 | 601.97 | 601.85 | 601.64 |
| 4 | 601.75 | 601.43 | 601.28 | 601.39 | 601.66 | 601.70 | 601.75 | 602.03 | 601.94 | 601.92 | 601.80 | 601.76 |
| 5 | 601.77 | 601.46 | 601.34 | 601.37 | 601.73 | 601.69 | 601.84 | 602.04 | 602.03 | 601.96 | 601.69 | 601.58 |
| 6 | 601.86 | 601.40 | 601.36 | 601.40 | 601.72 | 601.66 | 601.82 | 602.05 | 602.08 | 601.92 | 601.78 | 601.65 |
| 7 | 601.77 | 601.39 | 601.30 | 601.42 | 601.75 | 601.64 | 601.82 | 602.02 | 601.97 | 601.82 | 601.80 | 601.63 |
| 8 | 601.61 | 601.39 | 601.17 | 601.53 | 601.72 | 601.68 | 601.84 | 602.02 | 601.94 | 601.92 | 601.69 | 601.55 |
| 9 | 601.65 | 601.40 | 601.27 | 601.54 | 601.69 | 601.67 | 601.86 | 602.04 | 601.98 | 601.90 | 601.74 | 601.56 |
| 10 | 601.65 | 601.45 | 601.39 | 601.51 | 601.71 | 601.69 | 601.84 | 602.14 | 602.00 | 601.72 | 601.80 | 601.53 |
| 11 | 601.62 | 601.43 | 601.28 | 601.50 | 601.70 | 601.81 | 601.83 | 602.10 | 602.03 | 601.84 | 601.80 | 601.57 |
| 12 | 601.82 | 601.37 | 601.29 | 601.45 | 601.68 | 601.82 | 601.87 | 602.03 | 601.97 | 602.08 | 601.88 | 601.67 |
| 13 | 601.67 | 601.35 | 601.30 | 601.43 | 601.70 | 601.78 | 601.93 | 601.98 | 601.99 | 601.98 | 601.80 | 601.49 |
| 14 | 601.65 | 601.38 | 601.33 | 601.45 | 601.75 | 601.79 | 601.90 | 602.01 | 601.94 | 602.03 | 601.66 | 601.46 |
| 15 | 601.52 | 601.34 | 601.33 | 601.55 | 601.76 | 601.74 | 601.88 | 602.04 | 601.90 | 601.98 | 601.70 | 601.49 |
| 16 | 601.48 | 601.33 | 601.26 | 601.52 | 601.74 | 601.87 | 601.88 | 602.04 | 601.90 | 601.98 | 601.70 | 601.49 |
| 17 | 601.55 | 601.29 | 601.25 | 601.47 | 601.75 | 601.81 | 601.91 | 602.04 | 601.81 | 601.91 | 601.78 | 601.46 |
| 18 | 601.63 | 601.31 | 601.31 | 601.44 | 601.79 | 601.78 | 601.95 | 602.06 | 601.90 | 601.87 | 601.74 | 601.51 |
| 19 | 601.62 | 601.33 | 601.55 | 601.41 | 601.79 | 601.82 | 601.94 | 602.03 | 601.92 | 601.86 | 601.55 | 601.48 |
| 20 | 601.56 | 601.45 | 601.36 | 601.50 | 601.76 | 601.79 | 601.97 | 601.95 | 601.90 | 601.87 | 601.69 | 601.46 |
| 21 | 601.56 | 601.39 | 601.27 | 601.68 | 601.74 | 601.78 | 601.92 | 602.09 | 601.85 | 601.87 | 601.65 | 601.40 |
| 22 | 601.64 | 601.31 | 601.23 | 601.52 | 601.74 | 601.79 | 601.91 | 602.03 | 601.87 | 601.88 | 601.66 | 601.37 |
| 23 | 601.53 | 601.36 | 601.38 | 601.42 | 601.72 | 601.82 | 601.92 | 602.15 | 601.83 | 601.92 | 601.74 | 601.38 |
| 24 | 601.34 | 601.32 | 601.26 | 601.49 | 601.70 | 601.87 | 601.94 | 602.07 | 601.85 | 601.89 | 601.64 | 601.36 |
| 25 | 601.50 | 601.29 | 601.31 | 601.55 | 601.69 | 601.77 | 602.02 | 602.00 | 601.87 | 601.88 | 601.61 | 601.45 |
| 26 | 601.83 | 601.37 | 601.35 | 601.57 | 601.68 | 601.80 | 602.02 | 602.07 | 601.89 | 601.86 | 601.71 | 601.42 |
| 27 | 601.77 | 601.39 | 601.32 | 601.61 | 601.67 | 601.85 | 602.03 | 602.11 | 601.89 | 601.86 | 601.60 | 601.32 |
| 28 | 601.52 | 601.32 | 601.29 | 601.59 | 601.66 | 601.87 | 602.11 | 602.00 | 601.92 | 601.84 | 601.63 | 601.32 |
| 29 | 601.55 | | 601.30 | 601.62 | 601.66 | 601.87 | 602.06 | 601.94 | 601.91 | 601.93 | 601.70 | 601.39 |
| 30 | 601.51 | | 601.33 | 601.69 | 601.68 | 601.85 | 602.03 | 601.93 | 601.92 | 601.80 | 601.66 | 601.34 |
| 31 | 601.49 | | 601.27 | | 601.74 | | 602.02 | 601.91 | | 601.72 | | 601.25 |
| MEAN | 601.64 | 601.38 | 601.31 | 601.49 | 601.72 | 601.77 | 601.91 | 602.04 | 601.93 | 601.90 | 601.72 | 601.49 |
| MAX. | 602.19 | 601.81 | 601.70 | 601.93 | 602.15 | 602.33 | 602.27 | 602.35 | 602.28 | 602.29 | 602.09 | 601.90 |
| | 1000/08 | 0800/20 | 0900/19 | 0800/26 | 1600/31 | 0900/27 | 0300/25 | 0800/23 | 1300/22 | 1000/03 | 1100/12 | 1900/04 |
| MIN. | 601.05 | 601.00 | 600.95 | 601.13 | 601.43 | 601.11 | 601.41 | 601.79 | 601.48 | 601.45 | 601.32 | 601.12 |
| | 1000/09 | 2400/19 | 1800/30 | 0900/01 | 0200/01 | 0500/01 | 1400/05 | 1000/20 | 0600/23 | 0100/31 | 1700/08 | 0400/31 |

* Indicates Less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL MEAN: 601.69

ANNUAL SUMMARY OF LEVELS, 1986
 Station 9044: Ontonagon, Michigan on Lake Superior

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

HIGHEST
 Monthly mean elevation: 602.08 Aug
 Daily mean elevation: 602.17 14 Aug
 Instant/hourly Elevation: 602.42 1600/4 Jul

LOWEST
 Monthly mean elevation: 601.36 Mar
 Daily mean elevation: 601.20 7 Mar
 Instant/hourly Elevation: 601.03 0800/9 Jan

HIGHEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 601.83 | 2 Jan |
| 601.54 | 1 Feb |
| 601.63 | 31 Mar |
| 601.82 | 3 Apr |
| 601.87 | 9 May |
| 601.94 | 20 Jun |
| 602.12 | 30 Jul |
| 602.17 | 14 Aug |
| 602.09 | 2 Sep |
| 602.00 | 14 Oct |
| 601.92 | 7 Nov |
| 601.76 | 2 Dec |

LOWEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 601.50 | 31 Jan |
| 601.25 | 28 Feb |
| 601.20 | 7 Mar |
| 601.45 | 11 Apr |
| 601.71 | 29 May |
| 601.66 | 1 Jun |
| 601.84 | 2 Jul |
| 601.98 | 27 Aug |
| 601.85 | 22 Sep |
| 601.85 | 29 Oct |
| 601.70 | 27 Nov |
| 601.38 | 22 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(ft.) | No. of days<br>above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 602.00         |     |     |     |     |     |     | 12  | 29  | 14  |     |     |     | 602.00         | 55                         |
| 601.80         | 2   |     |     | 1   | 9   | 20  | 19  | 2   | 16  | 31  | 10  |     | 601.80         | 165                        |
| 601.60         | 16  |     | 1   | 10  | 22  | 10  |     |     |     |     | 20  | 10  | 601.60         | 254                        |
| 601.40         | 13  | 12  | 7   | 19  |     |     |     |     |     |     |     | 17  | 601.40         | 322                        |
| 601.20         |     | 16  | 22  |     |     |     |     |     |     |     |     | 4   | 601.20         | 364                        |
| 601.00         |     |     | 1   |     |     |     |     |     |     |     |     |     | 601.00         | 365                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 9044: Ontonagon, Michigan on Lake Superior

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 601.81  | 601.54  | 601.30  | 601.58  | 601.74  | 601.66  | 601.89  | 602.10  | 602.08  | 601.98  | 601.85  | 601.76  |
| 2    | 601.83  | 601.47  | 601.33  | 601.69  | 601.72  | 601.73  | 601.84  | 602.08  | 602.09  | 602.00  | 601.84  | 601.76  |
| 3    | 601.78  | 601.52  | 601.31  | 601.82  | 601.73  | 601.76  | 601.91  | 602.10  | 602.06  | 601.95  | 601.87  | 601.68  |
| 4    | 601.78  | 601.48  | 601.32  | 601.67  | 601.77  | 601.72  | 601.91  | 602.12  | 602.01  | 601.85  | 601.84  | 601.69  |
| 5    | 601.76  | 601.46  | 601.45  | 601.66  | 601.86  | 601.77  | 601.98  | 602.15  | 602.05  | 601.87  | 601.76  | 601.66  |
| 6    | 601.72  | 601.52  | 601.23  | 601.55  | 601.77  | 601.77  | 601.86  | 602.13  | 602.05  | 601.91  | 601.86  | 601.65  |
| 7    | 601.68  | 601.44  | 601.20  | 601.51  | 601.75  | 601.74  | 601.89  | 602.08  | 602.02  | 601.93  | 601.92  | 601.62  |
| 8    | 601.50  | 601.43  | 601.30  | 601.53  | 601.81  | 601.70  | 601.90  | 602.08  | 602.03  | 601.87  | 601.78  | 601.68  |
| 9    | 601.56  | 601.38  | 601.37  | 601.49  | 601.87  | 601.77  | 601.88  | 602.10  | 602.07  | 601.87  | 601.81  | 601.61  |
| 10   | 601.60  | 601.40  | 601.32  | 601.46  | 601.82  | 601.82  | 601.98  | 602.05  | 602.07  | 601.89  | 601.85  | 601.60  |
| 11   | 601.61  | 601.37  | 601.31  | 601.45  | 601.82  | 601.84  | 601.96  | 602.09  | 601.99  | 601.96  | 601.84  | 601.63  |
| 12   | 601.70  | 601.33  | 601.40  | 601.53  | 601.83  | 601.81  | 601.96  | 602.12  | 601.89  | 601.99  | 601.85  | 601.59  |
| 13   | 601.68  | 601.30  | 601.43  | 601.53  | 601.83  | 601.80  | 601.99  | 602.12  | 601.89  | 601.93  | 601.76  | 601.51  |
| 14   | 601.71  | 601.35  | 601.36  | 601.63  | 601.83  | 601.82  | 601.96  | 602.17  | 601.94  | 602.00  | 601.71  | 601.54  |
| 15   | 601.64  | 601.31  | 601.27  | 601.53  | 601.86  | 601.88  | 602.00  | 602.11  | 601.93  | 601.92  | 601.76  | 601.58  |
| 16   | 601.67  | 601.46  | 601.33  | 601.49  | 601.75  | 601.83  | 601.99  | 602.10  | 601.92  | 601.96  | 601.70  | 601.55  |
| 17   | 601.53  | 601.43  | 601.30  | 601.52  | 601.76  | 601.85  | 601.98  | 602.07  | 601.97  | 601.95  | 601.77  | 601.59  |
| 18   | 601.60  | 601.40  | 601.42  | 601.59  | 601.76  | 601.93  | 601.96  | 602.06  | 601.95  | 601.94  | 601.70  | 601.49  |
| 19   | 601.55  | 601.37  | 601.32  | 601.54  | 601.77  | 601.88  | 602.01  | 602.08  | 601.98  | 601.93  | 601.76  | 601.53  |
| 20   | 601.61  | 601.33  | 601.30  | 601.54  | 601.74  | 601.94  | 601.98  | 602.05  | 601.97  | 601.92  | 601.74  | 601.51  |
| 21   | 601.64  | 601.39  | 601.27  | 601.51  | 601.74  | 601.89  | 602.01  | 602.08  | 602.02  | 601.92  | 601.74  | 601.45  |
| 22   | 601.50  | 601.36  | 601.34  | 601.53  | 601.78  | 601.87  | 602.01  | 602.08  | 601.85  | 601.93  | 601.74  | 601.38  |
| 23   | 601.56  | 601.31  | 601.32  | 601.60  | 601.75  | 601.86  | 602.07  | 602.02  | 601.87  | 601.93  | 601.73  | 601.47  |
| 24   | 601.70  | 601.33  | 601.38  | 601.60  | 601.76  | 601.82  | 602.08  | 602.09  | 601.94  | 601.91  | 601.75  | 601.52  |
| 25   | 601.56  | 601.42  | 601.46  | 601.62  | 601.77  | 601.87  | 602.09  | 602.11  | 602.04  | 601.91  | 601.80  | 601.46  |
| 26   | 601.67  | 601.51  | 601.39  | 601.69  | 601.76  | 601.93  | 602.09  | 602.08  | 602.06  | 601.90  | 601.76  | 601.47  |
| 27   | 601.64  | 601.29  | 601.42  | 601.74  | 601.73  | 601.92  | 602.11  | 601.98  | 602.04  | 601.89  | 601.70  | 601.44  |
| 28   | 601.57  | 601.25  | 601.43  | 601.78  | 601.71  | 601.92  | 602.05  | 602.00  | 601.96  | 601.91  | 601.73  | 601.39  |
| 29   | 601.54  |         | 601.51  | 601.68  | 601.71  | 601.90  | 602.11  | 602.02  | 601.97  | 601.85  | 601.75  | 601.45  |
| 30   | 601.50  |         | 601.39  | 601.79  | 601.75  | 601.93  | 602.12  | 602.05  | 601.94  | 601.90  | 601.74  | 601.40  |
| 31   | 601.50  |         | 601.63  |         | 601.73  |         | 602.07  | 602.05  |         | 601.87  |         | 601.40  |
| MEAN | 601.64  | 601.40  | 601.36  | 601.60  | 601.77  | 601.83  | 601.99  | 602.08  | 601.99  | 601.92  | 601.78  | 601.55  |
| MAX. | 602.01  | 601.70  | 601.79  | 602.03  | 602.07  | 602.40  | 602.42  | 602.31  | 602.34  | 602.17  | 602.15  | 601.91  |
|      | 1800/13 | 1000/01 | 1800/31 | 1900/27 | 2200/15 | 2000/25 | 1600/04 | 1800/22 | 2100/28 | 0400/12 | 0900/09 | 1000/06 |
| MIN. | 601.03  | 601.13  | 601.08  | 601.22  | 601.53  | 601.29  | 601.39  | 601.70  | 601.57  | 601.67  | 601.31  | 601.29  |
|      | 0800/09 | 1200/28 | 2200/10 | 2400/25 | 1300/01 | 1500/25 | 1200/04 | 1100/20 | 1400/22 | 2000/04 | 2100/08 | 1500/22 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 601.74

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 9064: Duluth, Minnesota on Lake Superior

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

|                           |        |             |                           |        |             |
|---------------------------|--------|-------------|---------------------------|--------|-------------|
| HIGHEST                   |        |             | LOWEST                    |        |             |
| Monthly mean elevation:   | 602.18 | Aug         | Monthly mean elevation:   | 601.47 | Mar         |
| Daily mean elevation:     | 602.56 | 26 Sep      | Daily mean elevation:     | 601.19 | 6 Mar       |
| Instant/hourly Elevation: | 602.85 | 0900/25 Sep | Instant/hourly Elevation: | 600.61 | 2200/11 Jan |

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 602.12 | 24 Jan |
| 601.74 | 6 Feb  |
| 601.69 | 13 Mar |
| 602.11 | 14 Apr |
| 602.18 | 9 May  |
| 602.21 | 20 Jun |
| 602.42 | 11 Jul |
| 602.37 | 22 Aug |
| 602.56 | 26 Sep |
| 602.20 | 2 Oct  |
| 602.39 | 7 Nov  |
| 601.98 | 1 Dec  |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 601.37 | 8 Jan  |
| 601.32 | 28 Feb |
| 601.19 | 6 Mar  |
| 601.40 | 1 Apr  |
| 601.70 | 1 May  |
| 601.84 | 8 Jun  |
| 601.95 | 6 Jul  |
| 602.02 | 28 Aug |
| 601.96 | 5 Sep  |
| 601.79 | 5 Oct  |
| 601.59 | 12 Nov |
| 601.23 | 22 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(ft.) | No. of days
above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 602.40 | | | | | | | 1 | | 2 | | | | 602.40 | 3 |
| 602.20 | | | | | | 1 | 6 | 13 | 10 | | 1 | | 602.20 | 34 |
| 602.00 | | | | 2 | 6 | 10 | 19 | 18 | 15 | 24 | 2 | | 602.00 | 132 |
| 601.80 | | | | 10 | 22 | 19 | 5 | | 3 | 6 | 13 | 3 | 601.80 | 218 |
| 601.60 | 13 | 7 | 6 | 10 | 3 | | | | | 1 | 11 | 7 | 601.60 | 276 |
| 601.40 | 9 | 15 | 16 | 7 | | | | | | | 3 | 16 | 601.40 | 342 |
| 601.20 | 2 | 6 | 8 | 1 | | | | | | | | 5 | 601.20 | 364 |
| 601.00 | | | 1 | | | | | | | | | | 601.00 | 365 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 9064: Duluth, Minnesota on Lake Superior

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 601.82 | 601.71 | 601.45 | 601.40 | 601.70 | 601.86 | 602.06 | 602.14 | 602.31 | 602.18 | 601.79 | 601.98 |
| 2 | 602.06 | 601.60 | 601.45 | 601.72 | 601.80 | 601.94 | 602.00 | 602.08 | 602.40 | 602.20 | 601.86 | 601.82 |
| 3 | 601.98 | 601.70 | 601.40 | 601.76 | 601.89 | 601.90 | 602.09 | 602.10 | 602.31 | 602.14 | 601.88 | 601.40 |
| 4 | 601.84 | 601.60 | 601.46 | 601.88 | 601.95 | 601.88 | 602.13 | 602.18 | 602.01 | 602.11 | 601.94 | 601.56 |
| 5 | 601.62 | 601.62 | 601.65 | 601.83 | 602.12 | 601.94 | 602.15 | 602.24 | 601.96 | 601.79 | 601.79 | 601.66 |
| 6 | 601.66 | 601.74 | 601.19 | 601.55 | 601.80 | 601.95 | 601.95 | 602.27 | 602.03 | 602.02 | 602.03 | 601.67 |
| 7 | 601.66 | 601.60 | 601.30 | 601.44 | 601.92 | 601.84 | 601.96 | 602.28 | 601.98 | 602.01 | 602.39 | 601.74 |
| 8 | 601.37 | 601.49 | 601.54 | 601.44 | 602.10 | 601.84 | 602.00 | 602.13 | 602.01 | 601.97 | 601.63 | 601.88 |
| 9 | 601.46 | 601.41 | 601.65 | 601.54 | 602.18 | 601.94 | 602.00 | 602.20 | 602.21 | 602.03 | 601.59 | 601.47 |
| 10 | 601.64 | 601.49 | 601.43 | 601.54 | 602.03 | 602.01 | 602.16 | 602.10 | 602.26 | 602.09 | 601.79 | 601.53 |
| 11 | 601.52 | 601.46 | 601.49 | 601.59 | 601.99 | 602.06 | 602.42 | 602.12 | 602.18 | 602.08 | 601.82 | 601.55 |
| 12 | 601.49 | 601.34 | 601.61 | 601.81 | 602.01 | 601.90 | 602.30 | 602.21 | 601.98 | 602.10 | 601.59 | 601.54 |
| 13 | 601.74 | 601.37 | 601.69 | 601.78 | 602.03 | 601.94 | 602.10 | 602.26 | 602.01 | 602.02 | 601.68 | 601.48 |
| 14 | 601.81 | 601.38 | 601.48 | 602.11 | 601.98 | 601.98 | 602.17 | 602.28 | 602.10 | 602.03 | 601.61 | 601.53 |
| 15 | 601.70 | 601.42 | 601.41 | 601.72 | 602.00 | 602.09 | 602.19 | 602.21 | 602.07 | 601.93 | 601.88 | 601.68 |
| 16 | 601.86 | 601.68 | 601.50 | 601.68 | 601.87 | 601.86 | 602.19 | 602.18 | 602.18 | 602.16 | 601.73 | 601.62 |
| 17 | 601.55 | 601.60 | 601.46 | 601.78 | 601.90 | 602.00 | 602.20 | 602.16 | 602.23 | 602.08 | 602.11 | 601.39 |
| 18 | 601.73 | 601.50 | 601.60 | 601.89 | 601.90 | 602.07 | 602.16 | 602.23 | 602.08 | 602.11 | 601.81 | 601.39 |
| 19 | 601.70 | 601.51 | 601.38 | 601.67 | 601.94 | 602.08 | 602.14 | 602.27 | 602.29 | 602.07 | 601.99 | 601.58 |
| 20 | 601.78 | 601.35 | 601.39 | 601.58 | 601.88 | 602.21 | 602.15 | 602.16 | 602.22 | 602.03 | 601.81 | 601.56 |
| 21 | 601.76 | 601.55 | 601.39 | 601.62 | 601.88 | 602.08 | 602.15 | 602.21 | 602.38 | 602.04 | 601.88 | 601.37 |
| 22 | 601.57 | 601.47 | 601.43 | 601.74 | 601.96 | 601.92 | 602.14 | 602.37 | 602.09 | 602.00 | 601.89 | 601.23 |
| 23 | 601.77 | 601.46 | 601.28 | 601.88 | 601.90 | 601.95 | 602.23 | 602.09 | 602.02 | 602.17 | 601.70 | 601.61 |
| 24 | 602.12 | 601.50 | 601.61 | 601.73 | 601.93 | 601.98 | 602.14 | 602.29 | 602.17 | 602.10 | 601.83 | 601.59 |
| 25 | 601.39 | 601.62 | 601.58 | 602.07 | 601.93 | 602.12 | 602.14 | 602.22 | 602.45 | 602.08 | 601.81 | 601.45 |
| 26 | 601.52 | 601.68 | 601.38 | 601.91 | 601.90 | 602.06 | 602.26 | 602.12 | 602.56 | 602.05 | 601.72 | 601.53 |
| 27 | 601.58 | 601.39 | 601.56 | 601.96 | 601.89 | 601.94 | 602.29 | 602.04 | 602.31 | 602.02 | 601.60 | 601.37 |
| 28 | 601.62 | 601.32 | 601.45 | 601.95 | 601.87 | 601.96 | 602.19 | 602.02 | 602.22 | 601.97 | 601.79 | 601.46 |
| 29 | 601.52 | | 601.54 | 601.83 | 601.82 | 602.02 | 602.25 | 602.07 | 602.13 | 601.93 | 601.88 | 601.52 |
| 30 | 601.51 | | 601.33 | 601.91 | 601.85 | 602.10 | 602.29 | 602.19 | 602.11 | 602.19 | 602.03 | 601.52 |
| 31 | 601.66 | | 601.63 | | 601.93 | | 602.11 | 602.19 | | 601.88 | | 601.47 |
| MEAN | 601.68 | 601.52 | 601.47 | 601.74 | 601.93 | 601.98 | 602.15 | 602.18 | 602.17 | 602.05 | 601.82 | 601.56 |
| MAX. | 602.37 | 602.02 | 602.05 | 602.50 | 602.56 | 602.54 | 602.82 | 602.66 | 602.85 | 602.52 | 602.77 | 602.31 |
| | 1600/02 | 0100/06 | 1000/31 | 0200/26 | 1500/09 | 1700/25 | 1900/11 | 1500/22 | 0900/25 | 1500/02 | 0200/08 | 0800/08 |
| MIN. | 600.61 | 600.98 | 600.76 | 600.99 | 601.44 | 601.47 | 601.39 | 601.79 | 601.63 | 601.46 | 600.74 | 600.77 |
| | 2200/11 | 0900/20 | 0600/30 | 1200/01 | 0300/01 | 1300/22 | 0200/06 | 1000/20 | 0300/13 | 1000/05 | 2000/08 | 1300/22 |

* Indicates Less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL MEAN: 601.85

ANNUAL SUMMARY OF LEVELS, 1986
 Station 9070: Two Harbors, Minnesota on Lake Superior

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

HIGHEST
 Monthly mean elevation: 602.09 Aug
 Daily mean elevation: 602.33 26 Sep
 Instant/hourly Elevation: 602.61 0200/8 Nov

LOWEST
 Monthly mean elevation: 601.41 Mar
 Daily mean elevation: 601.15 6 Mar
 Instant/hourly Elevation: 600.84 0500/30 Mar

HIGHEST DAILY MEAN
 FOR EACH MONTH

 Elev. Date
 602.03 24 Jan
 601.67 6 Feb
 601.57 13 Mar
 601.88 25 Apr
 602.01 9 May
 602.03 20 Jun
 602.18 27 Jul
 602.25 22 Aug
 602.33 26 Sep
 602.12 2 Oct
 602.20 7 Nov
 601.88 1 Dec

LOWEST DAILY MEAN
 FOR EACH MONTH

 Elev. Date
 601.38 8 Jan
 601.30 20 Feb
 601.15 6 Mar
 601.32 1 Apr
 601.64 1 May
 601.72 1 Jun
 601.87 7 Jul
 601.96 28 Aug
 601.89 13 Sep
 601.74 5 Oct
 601.58 27 Nov
 601.23 22 Dec

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(ft.) | No. of days<br>above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 602.20         |     |     |     |     |     |     |     | 1   | 3   |     |     |     | 602.20         | 4                          |
| 602.00         | 1   |     |     |     | 1   | 1   | 22  | 26  | 15  | 13  | 1   |     | 602.00         | 84                         |
| 601.80         | 2   |     |     | 5   | 12  | 22  | 9   | 4   | 12  | 17  | 9   | 2   | 601.80         | 178                        |
| 601.60         | 13  | 3   |     | 12  | 13  | 7   |     |     |     | 1   | 16  | 5   | 601.60         | 248                        |
| 601.40         | 13  | 16  | 15  | 10  |     |     |     |     |     |     | 4   | 17  | 601.40         | 323                        |
| 601.20         | 2   | 7   | 13  | 3   |     |     |     |     |     |     |     | 7   | 601.20         | 355                        |
| 601.00         |     |     | 1   |     |     |     |     |     |     |     |     |     | 601.00         | 356                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 9070: Two Harbors, Minnesota on Lake Superior

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 601.77  | 601.64  | /       | 601.32  | 601.64  | 601.72  | 601.95  | 602.06  | 602.16  | 602.08  | 601.76  | 601.88  |
| 2    | 601.95  | 601.55  | /       | 601.56  | 601.74  | 601.80  | 601.89  | 602.00  | 602.21  | 602.12  | 601.81  | 601.77  |
| 3    | 601.92  | 601.62  | 601.36* | 601.60  | 601.81  | 601.81  | 601.98  | 602.03  | 602.18  | 602.04  | 601.85* | 601.40  |
| 4    | 601.78  | 601.54  | 601.40  | 601.69  | 601.87  | 601.77  | 601.98  | 602.10  | 601.94  | 602.05  | 601.89  | 601.53  |
| 5    | 601.59  | 601.55  | 601.56  | 601.67  | 601.98  | 601.81  | 602.04  | 602.12  | 601.90  | 601.74  | 601.76  | 601.63  |
| 6    | 601.63  | 601.67  | 601.15  | 601.47  | 601.77  | 601.84  | 601.88  | 602.15  | 601.98  | 601.96  | 601.93  | 601.63  |
| 7    | 601.64  | 601.54  | 601.25  | 601.40  | 601.83  | 601.75  | 601.87  | 602.16  | 601.92  | 601.95  | 602.20  | 601.68  |
| 8    | 601.38  | 601.45  | 601.50  | 601.37  | 601.94  | 601.73  | 601.88  | 602.06  | 601.94  | 601.91  | 601.73  | 601.83  |
| 9    | 601.44  | 601.38  | 601.55  | 601.47  | 602.01  | 601.84  | 601.93  | 602.11  | 602.08  | 601.97  | 601.58  | 601.45  |
| 10   | 601.60  | 601.44  | 601.35  | 601.46  | 601.94  | 601.88  | 602.03  | 602.03  | 602.11  | 602.03  | 601.74  | 601.49  |
| 11   | 601.55  | 601.42  | 601.44  | 601.52  | 601.91  | 601.90  | 602.15  | 602.05  | 602.04  | 601.99  | 601.79  | 601.50  |
| 12   | 601.44  | 601.31  | 601.52  | 601.65  | 601.88* | 601.79  | 602.09  | 602.11  | 601.90  | 602.05  | 601.58  | 601.48  |
| 13   | 601.69  | 601.32  | 601.57  | 601.66  | 601.97* | 601.84  | 601.98  | 602.16  | 601.89  | 601.96  | 601.66  | 601.47  |
| 14   | 601.73  | 601.34  | 601.41  | 601.85  | 601.89  | 601.88  | 602.02  | 602.16  | 601.98  | 601.97  | 601.59  | 601.47  |
| 15   | 601.64  | 601.38  | 601.39  | 601.59  | 601.91  | 601.99  | 602.06  | 602.12  | 601.95  | 601.91  | 601.83  | 601.61  |
| 16   | 601.80  | 601.60  | 601.43  | 601.57  | 601.81* | 601.80  | 602.06  | 602.10  | 602.06  | 602.07  | 601.69  | 601.58  |
| 17   | 601.51  | 601.52  | 601.44  | 601.65  | /       | 601.90  | 602.10  | 602.07  | 602.08  | 602.06  | 601.71  | 601.56  |
| 18   | 601.66  | 601.46  | 601.51* | 601.76  | /       | 601.94  | 602.05  | 602.13  | 601.98  | 602.05  | 601.74  | 601.36  |
| 19   | 601.62  | 601.46  | 601.35* | 601.63  | /       | 601.96  | 602.04  | 602.19  | 602.10  | 602.01  | 601.91  | 601.52  |
| 20   | 601.70  | 601.30  | 601.34  | 601.54  | /       | 602.03  | 602.03  | 602.07  | 602.06  | 601.98  | 601.76  | 601.50  |
| 21   | 601.67  | 601.50  | 601.34  | 601.56  | /       | 601.97  | 602.05  | 602.10  | 602.17  | 602.00  | 601.83  | 601.33  |
| 22   | 601.51  | 601.42  | 601.37  | 601.67  | 601.80* | 601.86  | 602.05  | 602.25  | 601.98  | 601.96  | 601.82  | 601.23  |
| 23   | 601.70  | 601.40  | 601.24  | 601.79  | 601.78  | 601.87  | 602.12  | 602.01  | 601.96  | 602.05  | 601.66  | 601.55  |
| 24   | 602.03  | 601.44  | 601.52  | 601.68  | 601.79  | 601.87  | 602.08  | 602.19  | 602.07  | 602.02  | 601.78  | 601.53  |
| 25   | 601.39  | 601.55  | 601.51  | 601.88  | 601.80  | 602.00  | 602.07  | 602.15  | 602.26  | 602.00  | 601.79  | 601.39  |
| 26   | 601.45  | 601.60  | 601.33  | 601.79  | 601.78  | 601.98  | 602.15  | 602.04  | 602.33  | 601.98  | 601.67  | 601.47  |
| 27   | 601.53  | /       | 601.49  | 601.86  | 601.76  | 601.88  | 602.18  | 601.97  | 602.18  | 601.97  | 601.58  | 601.33  |
| 28   | 601.57  | /       | 601.39  | 601.87  | 601.74  | 601.88  | 602.09  | 601.96  | 602.10  | 601.93  | 601.72  | 601.40  |
| 29   | 601.47  | /       | 601.48  | 601.73  | 601.71  | 601.92  | 602.14  | 602.00  | 602.05  | 601.88  | 601.80  | 601.46  |
| 30   | 601.46  | /       | 601.28  | 601.83  | 601.73  | 601.97  | 602.17  | 602.08  | 602.03  | 602.10  | 601.90  | 601.46  |
| 31   | 601.59  | /       | 601.55  | /       | 601.77  | /       | 602.04  | 602.09  | /       | 601.86  | /       | 601.43  |
| MEAN | 601.63  | 601.48  | 601.41  | 601.64  | 601.83  | 601.87  | 602.04  | 602.09  | 602.05  | 601.99  | 601.77  | 601.51  |
| MAX. | 602.19  | 601.91  | 601.85  | 602.17  | 602.28  | 602.38  | 602.59  | 602.49  | 602.55  | 602.39  | 602.61  | 602.17  |
| MIN. | 1100/24 | 0100/06 | 0200/05 | 1900/25 | 1500/09 | 1700/25 | 1400/04 | 1400/22 | 2400/26 | 0200/31 | 0200/08 | 0800/08 |
|      | 600.88  | 601.03  | 600.84  | 600.94  | 601.46  | 601.48  | 601.41  | 601.76  | 601.54  | 601.50  | 600.87  | 600.87  |
|      | 2200/11 | 0900/20 | 0500/30 | 1100/01 | 1700/06 | 0300/01 | 0900/06 | 0200/23 | 1300/22 | 1000/05 | 2000/08 | 1300/22 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 601.78

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 9090: Grand Marais, Minnesota on Lake Superior

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST  
 Monthly mean elevation: 601.96 Aug  
 Daily mean elevation: 602.05 26 Sep  
 Instant/hourly Elevation: 602.54 0700/8 Nov

LOWEST  
 Monthly mean elevation: 601.29 Mar  
 Daily mean elevation: 601.12 6 Mar  
 Instant/hourly Elevation: 600.97 1500/6 Mar

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 601.84 | 24 Jan |
| 601.50 | 1 Feb  |
| 601.39 | 31 Mar |
| 601.74 | 30 Apr |
| 601.79 | 9 May  |
| 601.86 | 21 Jun |
| 602.03 | 30 Jul |
| 602.03 | 22 Aug |
| 602.05 | 26 Sep |
| 601.95 | 2 Oct  |
| 601.88 | 7 Nov  |
| 601.69 | 8 Dec  |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 601.37 | 26 Jan |
| 601.23 | 27 Feb |
| 601.12 | 6 Mar  |
| 601.27 | 1 Apr  |
| 601.59 | 1 May  |
| 601.63 | 4 Jun  |
| 601.77 | 2 Jul  |
| 601.87 | 27 Aug |
| 601.78 | 15 Sep |
| 601.69 | 5 Oct  |
| 601.56 | 14 Nov |
| 601.27 | 22 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(ft.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(ft.) | No. of days
above elev. |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------------------|
| 602.00 | | | | | | | 3 | 5 | 4 | | | | 602.00 | 12 |
| 601.80 | 1 | | | | | 8 | 25 | 26 | 25 | 27 | 2 | | 601.80 | 126 |
| 601.60 | 5 | | | 6 | 30 | 22 | 3 | | 1 | 4 | 20 | 3 | 601.60 | 220 |
| 601.40 | 23 | 9 | | 15 | 1 | | | | | | 8 | 15 | 601.40 | 291 |
| 601.20 | 2 | 19 | 28 | 9 | | | | | | | | 13 | 601.20 | 362 |
| 601.00 | | | 3 | | | | | | | | | | 601.00 | 365 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 9090: Grand Marais, Minnesota on Lake Superior

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 601.66 | 601.50 | 601.30 | 601.27 | 601.59 | 601.64 | 601.82 | 601.98 | 601.97 | 601.91 | 601.69 | 601.66 |
| 2 | 601.72 | 601.43 | 601.28 | 601.36 | 601.65 | 601.71 | 601.77 | 601.92 | 602.02 | 601.95 | 601.72 | 601.63 |
| 3 | 601.71 | 601.47 | 601.26 | 601.39 | 601.67 | 601.69 | 601.83 | 601.95 | 602.04 | 601.90 | 601.70 | 601.44 |
| 4 | 601.68 | 601.43 | 601.27 | 601.42 | 601.75 | 601.63 | 601.85 | 601.99 | 601.93 | 601.91 | 601.76 | 601.51 |
| 5 | 601.54 | 601.41 | 601.33 | 601.46 | 601.79 | 601.67 | 601.90 | 601.97 | 601.84 | 601.69 | 601.72 | 601.60 |
| 6 | 601.55 | 601.48 | 601.12 | 601.37 | 601.73 | 601.69 | 601.81 | 601.98 | 601.86 | 601.83 | 601.75 | 601.52 |
| 7 | 601.57 | 601.42 | 601.18 | 601.35 | 601.70 | 601.69 | 601.80 | 602.02 | 601.84 | 601.85 | 601.88 | 601.51 |
| 8 | 601.52 | 601.40 | 601.31 | 601.31 | 601.74 | 601.65 | 601.81 | 601.97 | 601.85 | 601.75 | 601.82 | 601.69 |
| 9 | 601.49 | 601.33 | 601.36 | 601.38 | 601.79 | 601.71 | 601.79* | 601.98 | 601.91 | 601.79 | 601.60 | 601.47 |
| 10 | 601.54 | 601.34 | 601.23 | 601.35 | 601.74 | 601.74 | 601.85 | 601.93 | 601.93 | 601.90 | 601.69 | 601.43 |
| 11 | 601.55 | 601.33 | 601.31 | 601.38 | 601.75 | 601.77 | 601.86 | 601.95 | 601.91 | 601.82 | 601.70 | 601.44 |
| 12 | 601.44 | 601.29 | 601.33 | 601.46 | 601.78 | 601.72 | 601.88 | 601.99 | 601.85 | 601.86 | 601.59 | 601.41 |
| 13 | 601.58 | 601.29 | 601.34 | 601.48 | 601.78 | 601.76 | 601.86 | 602.01 | 601.81 | 601.86 | 601.62 | 601.45 |
| 14 | 601.56 | 601.28 | 601.29 | 601.54 | 601.76 | 601.78 | 601.90 | 602.00 | 601.84 | 601.85 | 601.56 | 601.38 |
| 15 | 601.54 | 601.30 | 601.23 | 601.43 | 601.77 | 601.84 | 601.89 | 601.99 | 601.78 | 601.84 | 601.70 | 601.48 |
| 16 | 601.66 | 601.41 | 601.31 | 601.43 | 601.73 | 601.71 | 601.87 | 601.99 | 601.87 | 601.88 | 601.63 | 601.48 |
| 17 | 601.48 | 601.37 | 601.29 | 601.47 | 601.69 | 601.79 | 601.92 | 601.96 | 601.89 | 601.91 | 601.58 | 601.47 |
| 18 | 601.50 | 601.32 | 601.33 | 601.56 | 601.68 | 601.80 | 601.91 | 601.97 | 601.83 | 601.91 | 601.60 | 601.35 |
| 19 | 601.50 | 601.29 | 601.21 | 601.56 | 601.70 | 601.78 | 601.92 | 602.00 | 601.85 | 601.89 | 601.78 | 601.40 |
| 20 | 601.55 | 601.25 | 601.28 | 601.46 | 601.68 | 601.83 | 601.91 | 601.95 | 601.85 | 601.87 | 601.63 | 601.40 |
| 21 | 601.51 | 601.35 | 601.28 | 601.43 | 601.67 | 601.86 | 601.94 | 601.93 | 601.94 | 601.87 | 601.73 | 601.31 |
| 22 | 601.41 | 601.31 | 601.33 | 601.52 | 601.69 | 601.79 | 601.92 | 602.03 | 601.87 | 601.85 | 601.67 | 601.27 |
| 23 | 601.53 | 601.28 | 601.19 | 601.61 | 601.69 | 601.76 | 601.94 | 601.92 | 601.86 | 601.86 | 601.59 | 601.41 |
| 24 | 601.84 | 601.30 | 601.36 | 601.56 | 601.71 | 601.76 | 601.94 | 602.02 | 601.87 | 601.85 | 601.70 | 601.43 |
| 25 | 601.42 | 601.39 | 601.35 | 601.57 | 601.71 | 601.81 | 601.94 | 602.01 | 601.96 | 601.85 | 601.67 | 601.29 |
| 26 | 601.37 | 601.43 | 601.26 | 601.62 | 601.69 | 601.85 | 601.96 | 601.91 | 602.05 | 601.82 | 601.57 | 601.37 |
| 27 | 601.42 | 601.23 | 601.35 | 601.69 | 601.68 | 601.81 | 602.02 | 601.87 | 602.02 | 601.82 | 601.58 | 601.32 |
| 28 | 601.49 | 601.24 | 601.31 | 601.67 | 601.68 | 601.81 | 601.95 | 601.88 | 601.95 | 601.83 | 601.62 | 601.31 |
| 29 | 601.41 | | 601.37 | 601.64 | 601.69 | 601.79 | 602.01 | 601.90 | 601.94 | 601.73 | 601.62 | 601.30 |
| 30 | 601.38 | | 601.22 | 601.74 | 601.69 | 601.82 | 602.03 | 601.94 | 601.91 | 601.86 | 601.65 | 601.33 |
| 31 | 601.43 | | 601.39 | | 601.68 | | 601.96 | 601.96 | | 601.82 | | 601.36 |
| MEAN | 601.53 | 601.35 | 601.29 | 601.48 | 601.71 | 601.76 | 601.90 | 601.96 | 601.90 | 601.85 | 601.67 | 601.43 |
| MAX. | 602.14 | 601.70 | 601.64 | 602.07 | 602.03 | 602.08 | 602.28 | 602.25 | 602.31 | 602.18 | 602.54 | 601.94 |
| | 1700/24 | 0900/01 | 1600/29 | 2000/25 | 1600/09 | 1600/25 | 1300/04 | 1300/22 | 2300/26 | 2400/02 | 0700/08 | 0800/08 |
| MIN. | 601.07 | 601.07 | 600.97 | 601.06 | 601.40 | 601.44 | 601.53 | 601.72 | 601.49 | 601.45 | 601.17 | 600.98 |
| | 0500/12 | 0900/20 | 1500/06 | 1200/01 | 0400/01 | 1500/25 | 0900/06 | 0200/17 | 1600/28 | 1900/05 | 2100/08 | 1300/22 |

ANNUAL MEAN: 601.65

* Indicates Less than 90% of the Hourly Data Available.
/ Indicates No Data.

Water Level Stages for Lake Ontario at Oswego

1900 thru Dec 1986

NOAA/NOS
 WSC-1 N/OMA12
 Great Lakes Water Levels
 Rockville, Maryland 20852

Levels in Feet above
 IGLD (1955)
 ~~~~~  
 Chart Datum 242.80

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	1946	1952	1952	1973	1952	1952	1947	1947	1947	1945	1945	1945
HIGH	246.10	246.46	246.77	247.69	247.95	248.06	247.74	247.45	246.91	246.33	246.18	246.19
MEAN	244.06	244.14	244.42	245.10	245.50	245.62	245.52	245.18	244.75	244.36	244.10	244.03
	1935	1936	1935	1935	1935	1935	1934	1934	1934	1934	1934	1934
LOW	241.67	241.59	242.08	242.38	242.67	242.91	242.75	242.26	241.94	241.72	241.45	241.48

1900 thru 1986 mean 244.73

# Water Level Stages for Lake Erie at Cleveland

1900 thru Dec 1986

NOAA/NOS  
 WSC-1 N/OMA12  
 Great Lakes Water Levels  
 Rockville, Maryland 20852

Levels in Feet above  
 IGLD (1955)  
 ~~~~~  
 Chart Datum 568.60

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | 1973 | 1986 | 1986 | 1985 | 1986 | 1986 | 1986 | 1986 | 1986 | 1986 | 1986 | 1986 |
| HIGH | 572.39 | 572.85 | 573.11 | 573.46 | 573.43 | 573.70 | 573.66 | 573.37 | 572.96 | 573.31 | 573.01 | 573.11 |
| MEAN | 569.94 | 569.92 | 570.19 | 570.74 | 571.04 | 571.16 | 571.12 | 570.93 | 570.63 | 570.32 | 570.05 | 569.99 |
| | 1935 | 1936 | 1934 | 1934 | 1934 | 1934 | 1934 | 1934 | 1934 | 1934 | 1934 | 1934 |
| LOW | 567.62 | 567.49 | 567.65 | 568.20 | 568.43 | 568.46 | 568.46 | 568.36 | 568.23 | 567.95 | 567.60 | 567.53 |

1900 thru 1986 mean 570.49

Water Level Stages for Lake St. Clair at St. Clair Shores

1900 thru Dec 1986

NOAA/NOS
 WSC-1 N/OMA12
 Great Lakes Water Levels
 Rockville, Maryland 20852

Levels in Feet above
 IGLD (1955)
 ~~~~~  
 Chart Datum 571.70

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	1986	1986	1986	1986	1986	1986	1986	1986	1986	1986	1986	1986
HIGH	576.13	576.17	576.17	576.21	576.25	576.51	576.56	576.45	576.31	576.69	576.20	576.14
MEAN	572.77	572.52	572.95	573.49	573.79	573.96	574.03	573.91	573.70	573.43	573.14	573.15
	1936	1926	1934	1901	1934	1934	1934	1934	1934	1934	1934	1925
LOW	569.86	569.88	570.41	571.09	571.64	571.74	571.88	571.60	571.36	571.13	570.83	571.05

1900 thru 1986 mean 573.40

# Water Level Stages for Lake Huron-Michigan at Harbor Beach

1900 thru Dec 1986

Levels in Feet above  
IGLD (1955)  
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Chart Datum 576.80

NOAA/NOS
WSC-1 N/OMA12
Great Lakes Water Levels
Rockville, Maryland 20852

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | 1986 | 1986 | 1986 | 1986 | 1986 | 1986 | 1986 | 1986 | 1986 | 1986 | 1986 | 1986 |
| HIGH | 580.49 | 580.36 | 580.40 | 580.75 | 580.89 | 581.07 | 581.27 | 581.34 | 581.26 | 581.62 | 581.29 | 580.87 |
| MEAN | 577.88 | 577.84 | 577.90 | 578.16 | 578.48 | 578.70 | 578.83 | 578.79 | 578.63 | 578.43 | 578.21 | 578.05 |
| | 1965 | 1964 | 1964 | 1964 | 1964 | 1964 | 1964 | 1964 | 1964 | 1964 | 1964 | 1964 |
| LOW | 575.39 | 575.44 | 575.35 | 575.36 | 575.79 | 575.90 | 575.96 | 575.97 | 575.94 | 575.77 | 575.57 | 575.40 |

1900 thru 1986 mean 578.33

Water Level Stages for Lake Superior at Marquette

1900 thru Dec 1986

NOAA/NOS
WSC-1 N/OMA12
Great Lakes Water Levels
Rockville, Maryland 20852

Levels in Feet above
IGLD (1955)
~~~~~  
Chart Datum 600.00

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	1986	1986	1986	1986	1986	1986	1986	1986	1985	1985	1985	1985
HIGH	601.64	601.38	601.31	601.49	601.72	601.77	601.91	602.04	602.06	602.24	602.24	601.99
MEAN	600.38	600.17	600.04	600.09	600.43	600.71	600.93	601.03	601.06	601.00	600.87	600.64
	1926	1926	1926	1926	1926	1926	1926	1926	1926	1925	1925	1925
LOW	598.58	598.37	598.32	598.23	598.30	598.63	598.99	599.15	599.46	599.49	599.17	598.94

1900 thru 1986 mean 600.61

WATER LEVELS  
IN  
METERS

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 1030: Ogdensburg, New York on St. Lawrence River

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST  
 Monthly mean elevation: 74.82 Jun  
 Daily mean elevation: 74.90 23 Jun  
 Instant/hourly elevation: 75.00 1500/21 Apr

LOWEST  
 Monthly mean elevation: 74.39 Feb  
 Daily mean elevation: 74.28 3 Jan  
 Instant/hourly elevation: 74.23 0500/9 Dec

HIGHEST DAILY MEAN  
 FOR EACH MONTH

Elev.	Date
74.55	9 Jan
74.45	13 Feb
74.75	30 Mar
74.87	13 Apr
74.86	2 May
74.90	23 Jun
74.86	8 Jul
74.84	11 Aug
74.67	13 Sep
74.76	8 Oct
74.67	9 Nov
74.68	4 Dec

LOWEST DAILY MEAN  
 FOR EACH MONTH

Elev.	Date
74.28	3 Jan
74.34	17 Feb
74.31	6 Mar
74.66	5 Apr
74.62	12 May
74.72	6 Jun
74.68	31 Jul
74.62	22 Aug
74.43	27 Sep
74.56	31 Oct
74.35	20 Nov
74.31	2 Dec

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(m.) | No. of days
above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 74.85 | | | | 4 | 1 | 11 | 3 | | | | | | 74.85 | 19 |
| 74.80 | | | | 5 | 5 | 10 | 8 | 1 | | | | | 74.80 | 48 |
| 74.75 | | | | 16 | 9 | 4 | 9 | 10 | | 1 | | | 74.75 | 97 |
| 74.70 | | | 4 | 3 | 7 | 5 | 7 | 9 | | 2 | | | 74.70 | 134 |
| 74.65 | | | 4 | 2 | 6 | | 4 | 8 | 2 | 6 | 2 | 1 | 74.65 | 169 |
| 74.60 | | | 4 | | 3 | | | 3 | 3 | 12 | 3 | 1 | 74.60 | 198 |
| 74.55 | | | 1 | | | | | | 13 | 10 | 4 | 7 | 74.55 | 233 |
| 74.50 | 4 | | | | | | | | 9 | | 7 | 5 | 74.50 | 258 |
| 74.45 | 13 | | 3 | | | | | | 2 | | 4 | 8 | 74.45 | 288 |
| 74.40 | 9 | 10 | 4 | | | | | | 1 | | 5 | 4 | 74.40 | 321 |
| 74.35 | 3 | 14 | 4 | | | | | | | | 4 | 1 | 74.35 | 347 |
| 74.30 | 1 | 4 | 7 | | | | | | | | 1 | 4 | 74.30 | 364 |
| 74.25 | 1 | | | | | | | | | | | | 74.25 | 365 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 1030: Ogdensburg, New York on St. Lawrence River

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 74.47 | 74.39 | 74.41 | 74.76 | 74.81 | 74.77 | 74.83 | 74.72 | 74.62 | 74.60 | 74.66 | 74.32 |
| 2 | 74.42 | 74.44 | 74.38 | 74.77 | 74.86 | 74.75 | 74.83 | 74.75 | 74.59 | 74.60 | 74.61 | 74.31 |
| 3 | 74.28 | 74.40 | 74.35 | 74.72 | 74.78 | 74.78 | 74.83 | 74.77 | 74.53 | 74.62 | 74.62 | 74.48 |
| 4 | 74.31 | 74.37 | 74.35 | 74.69 | 74.78 | 74.81 | 74.86 | 74.77 | 74.57 | 74.61 | 74.58 | 74.68 |
| 5 | 74.42 | 74.41 | 74.34 | 74.66 | 74.80 | 74.74 | 74.86 | 74.77 | 74.60 | 74.65 | 74.50 | 74.57 |
| 6 | 74.51 | 74.37 | 74.31 | 74.75 | 74.75 | 74.72 | 74.84 | 74.76 | 74.58 | 74.71 | 74.53 | 74.60 |
| 7 | 74.47 | 74.35 | 74.44 | 74.80 | 74.80 | 74.74 | 74.85 | 74.72 | 74.55 | 74.69 | 74.53 | 74.51 |
| 8 | 74.49* | 74.41 | 74.39 | 74.87 | 74.73 | 74.83 | 74.86 | 74.73 | 74.55 | 74.76 | 74.53 | 74.33 |
| 9 | 74.55 | 74.42 | 74.35 | 74.84 | 74.69 | 74.81 | 74.82 | 74.77 | 74.58 | 74.65 | 74.67 | 74.35 |
| 10 | 74.48 | 74.45 | 74.33 | 74.85 | 74.72 | 74.79 | 74.78 | 74.76 | 74.53 | 74.61 | 74.61 | 74.60 |
| 11 | 74.44 | 74.43 | 74.41 | 74.84 | 74.69 | 74.76 | 74.76 | 74.84 | 74.60 | 74.65 | 74.56 | 74.52 |
| 12 | 74.48 | 74.43 | 74.36 | 74.86 | 74.62 | 74.73 | 74.72 | 74.79 | 74.67 | 74.63 | 74.55 | 74.57 |
| 13 | 74.44 | 74.45 | 74.33 | 74.87 | 74.65 | 74.86 | 74.75 | 74.77 | 74.67 | 74.63 | 74.55 | 74.52 |
| 14 | 74.43 | 74.42 | 74.37 | 74.81 | 74.68 | 74.84 | 74.82 | 74.74 | 74.62 | 74.70 | 74.59 | 74.63 |
| 15 | 74.43 | 74.41 | 74.43 | 74.76 | 74.68 | 74.83 | 74.81 | 74.76 | 74.59 | 74.72 | 74.59 | 74.56 |
| 16 | 74.40 | 74.38 | 74.47 | 74.76 | 74.70 | 74.88 | 74.79 | 74.77 | 74.57 | 74.65 | 74.50 | 74.49 |
| 17 | 74.41 | 74.34 | 74.49 | 74.73 | 74.73 | 74.86 | 74.78 | 74.74 | 74.55 | 74.58 | 74.52 | 74.44 |
| 18 | 74.40 | 74.36 | 74.49 | 74.76 | 74.71 | 74.89 | 74.78 | 74.69 | 74.57 | 74.61 | 74.41 | 74.47 |
| 19 | 74.37 | 74.35 | 74.65 | 74.78 | 74.65 | 74.87 | 74.77 | 74.64 | 74.56 | 74.66 | 74.37 | 74.51 |
| 20 | 74.43 | 74.36 | 74.59 | 74.80 | 74.66 | 74.83 | 74.77 | 74.65 | 74.50 | 74.65 | 74.35 | 74.48 |
| 21 | 74.48 | 74.37 | 74.61 | 74.86 | 74.74 | 74.83 | 74.74 | 74.68 | 74.53 | 74.67 | 74.38 | 74.48 |
| 22 | 74.52 | 74.35 | 74.67 | 74.80 | 74.75 | 74.84 | 74.75 | 74.62 | 74.54 | 74.67 | 74.41 | 74.60 |
| 23 | 74.47 | 74.39 | 74.68 | 74.76 | 74.77 | 74.90 | 74.76 | 74.68 | 74.59 | 74.66 | 74.44 | 74.60 |
| 24 | 74.44 | 74.39 | 74.65 | 74.79 | 74.79 | 74.87 | 74.75 | 74.69 | 74.60 | 74.60 | 74.52 | 74.40 |
| 25 | 74.46 | 74.39 | 74.65 | 74.78 | 74.80 | 74.86 | 74.76 | 74.66 | 74.56 | 74.59 | 74.44 | 74.45 |
| 26 | 74.47 | 74.39 | 74.70 | 74.76 | 74.79 | 74.85 | 74.73 | 74.66 | 74.54 | 74.57 | 74.40 | 74.50 |
| 27 | 74.47 | 74.39 | 74.67 | 74.76 | 74.81 | 74.87 | 74.68 | 74.72 | 74.43 | 74.58 | 74.43 | 74.47 |
| 28 | 74.51 | 74.39 | 74.71 | 74.76 | 74.81 | 74.87 | 74.70 | 74.69 | 74.49 | 74.60 | 74.50 | 74.51 |
| 29 | 74.48 | | 74.73 | 74.81 | 74.84 | 74.87 | 74.72 | 74.72 | 74.55 | 74.65 | 74.46 | 74.49 |
| 30 | 74.47 | | 74.75 | 74.80 | 74.81 | 74.85 | 74.68 | 74.72 | 74.62 | 74.58 | 74.37 | 74.43 |
| 31 | 74.46 | | 74.74 | | 74.77 | | 74.68 | 74.66 | | 74.56 | | 74.42 |
| MEAN | 74.45 | 74.39 | 74.51 | 74.79 | 74.75 | 74.82 | 74.78 | 74.72 | 74.57 | 74.64 | 74.51 | 74.49 |
| MAX. | 74.61 | 74.48 | 74.83 | 75.00 | 74.96 | 74.97 | 74.90 | 74.89 | 74.81 | 74.83 | 74.82 | 74.78 |
| | 2000/22 | 1200/10 | 1800/19 | 1500/21 | 0400/02 | 1300/24 | 1200/05 | 0600/11 | 1300/12 | 2100/14 | 2000/09 | 0200/04 |
| MIN. | 74.23 | 74.31 | 74.25 | 74.63 | 74.59 | 74.66 | 74.65 | 74.58 | 74.38 | 74.52 | 74.31 | 74.23 |
| | 0700/03 | 0500/07 | 1400/06 | 1100/05 | 1700/12 | 2100/01 | 0800/27 | 0400/22 | 0600/27 | 0700/31 | 0700/21 | 0500/09 |

* Indicates Less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL MEAN: 74.62

ANNUAL SUMMARY OF LEVELS, 1986
 Station 1062: Alexandria Bay C.G., New York on St. Lawrence River

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

HIGHEST
 Monthly mean elevation: 75.01 Jun
 Daily mean elevation: 75.07 29 Jun
 Instant/hourly elevation: 75.16 1300/24 Jun

LOWEST
 Monthly mean elevation: 74.65 Feb
 Daily mean elevation: 74.56 2 Dec
 Instant/hourly elevation: 74.51 0300/9 Dec

HIGHEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|-------|--------|
| 74.72 | 28 Jan |
| 74.70 | 13 Feb |
| 74.90 | 31 Mar |
| 75.03 | 21 Apr |
| 75.05 | 2 May |
| 75.07 | 29 Jun |
| 75.05 | 5 Jul |
| 75.02 | 11 Aug |
| 74.86 | 12 Sep |
| 74.91 | 8 Oct |
| 74.84 | 9 Nov |
| 74.82 | 4 Dec |

LOWEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|-------|--------|
| 74.62 | 24 Jan |
| 74.59 | 7 Feb |
| 74.62 | 6 Mar |
| 74.86 | 5 Apr |
| 74.87 | 12 May |
| 74.94 | 6 Jun |
| 74.92 | 31 Jul |
| 74.85 | 22 Aug |
| 74.69 | 27 Sep |
| 74.79 | 31 Oct |
| 74.60 | 30 Nov |
| 74.56 | 2 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(m.) | No. of days<br>above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 75.05         |     |     |     |     |     | 7   |     |     |     |     |     |     | 75.05         | 7                          |
| 75.00         |     |     |     | 8   | 3   | 12  | 11  | 1   |     |     |     |     | 75.00         | 42                         |
| 74.95         |     |     |     | 15  | 14  | 7   | 14  | 12  |     |     |     |     | 74.95         | 104                        |
| 74.90         |     |     |     | 4   | 9   | 4   | 6   | 6   |     | 1   |     |     | 74.90         | 134                        |
| 74.85         |     |     | 6   | 3   | 5   |     |     | 11  | 1   | 5   |     |     | 74.85         | 165                        |
| 74.80         |     |     | 6   |     |     |     |     | 1   | 7   | 19  | 4   | 1   | 74.80         | 203                        |
| 74.75         |     |     | 2   |     |     |     |     |     | 16  | 6   | 7   | 6   | 74.75         | 240                        |
| 74.70         | 1   |     | 5   |     |     |     |     |     | 5   |     | 7   | 8   | 74.70         | 266                        |
| 74.65         | 6   | 15  | 3   |     |     |     |     |     | 1   |     | 3   | 11  | 74.65         | 305                        |
| 74.60         | 1   | 12  | 9   |     |     |     |     |     |     |     | 7   | 2   | 74.60         | 336                        |
| 74.55         |     | 1   |     |     |     |     |     |     |     |     | 2   | 3   | 74.55         | 342                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 1062: Alexandria Bay C.G., New York on St. Lawrence River

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | /       | 74.62   | 74.69   | 74.91   | 75.01   | 74.96   | 75.03   | 74.94   | 74.83   | 74.82   | 74.84   | 74.56   |
| 2    | /       | 74.68   | 74.66   | 74.93   | 75.05   | 74.96   | 75.04   | 74.96   | 74.82   | 74.81   | 74.81   | 74.56   |
| 3    | /       | 74.64   | 74.65   | 74.90   | 74.98   | 74.97   | 75.04   | 74.97   | 74.78   | 74.83   | 74.81   | 74.70   |
| 4    | /       | 74.62   | 74.65   | 74.89   | 74.97   | 74.98   | 75.04   | 74.96   | 74.80   | 74.82   | 74.79   | 74.82   |
| 5    | /       | 74.66   | 74.65   | 74.86   | 74.99   | 74.95   | 75.05   | 74.97   | 74.82   | 74.86   | 74.73   | 74.74   |
| 6    | /       | 74.61   | 74.62   | 74.93   | 74.96   | 74.94   | 75.03   | 74.96   | 74.80   | 74.89   | 74.76   | 74.77   |
| 7    | /       | 74.59   | 74.72   | 74.96   | 75.00   | 74.95   | 75.04   | 74.94   | 74.77   | 74.87   | 74.75   | 74.72   |
| 8    | /       | 74.65   | 74.65   | 75.01   | 74.95   | 75.01   | 75.04   | 74.96   | 74.76   | 74.91   | 74.75   | 74.58   |
| 9    | /       | 74.67   | 74.63   | 74.99   | 74.93   | 74.99   | 75.03   | 74.98   | 74.78   | 74.85   | 74.84   | 74.63   |
| 10   | /       | 74.69   | 74.63   | 75.01   | 74.94   | 74.97   | 75.00   | 74.97   | 74.75   | 74.82   | 74.79   | 74.79   |
| 11   | /       | 74.67   | 74.71   | 74.99   | 74.92   | 74.97   | 74.98   | 75.02   | 74.81   | 74.85   | 74.76   | 74.72   |
| 12   | /       | 74.67*  | 74.65   | 75.01   | 74.87   | 74.95   | 74.96   | 74.98   | 74.86   | 74.84   | 74.76   | 74.76   |
| 13   | /       | 74.70   | 74.65   | 75.01   | 74.89   | 75.04   | 74.98   | 74.97   | 74.85   | 74.84   | 74.75   | 74.70   |
| 14   | /       | 74.67   | 74.69   | 74.97   | 74.90   | 75.02   | 75.03   | 74.94   | 74.81   | 74.89   | 74.79   | 74.78   |
| 15   | /       | 74.67   | 74.73   | 74.94   | 74.90   | 75.01   | 75.01   | 74.96   | 74.78   | 74.89   | 74.77   | 74.73   |
| 16   | /       | 74.64   | 74.75   | 74.96   | 74.92   | 75.04   | 75.00   | 74.96   | 74.78   | 74.84   | 74.71   | 74.69   |
| 17   | /       | 74.61   | 74.76   | 74.96   | 74.93   | 75.04   | 74.99   | 74.95   | 74.76   | 74.81   | 74.72   | 74.66   |
| 18   | /       | 74.62   | 74.75   | 74.97   | 74.91   | 75.06   | 74.98   | 74.91   | 74.78   | 74.82   | 74.64   | 74.69   |
| 19   | /       | 74.62   | 74.83   | 74.98   | 74.88   | 75.04   | 74.98   | 74.88   | 74.76   | 74.85   | 74.62   | 74.72   |
| 20   | /       | 74.64   | 74.80   | 74.99   | 74.91   | 75.03   | 74.99   | 74.88   | 74.72   | 74.84   | 74.60   | 74.69   |
| 21   | /       | 74.65   | 74.82   | 75.03   | 74.95   | 75.03   | 74.97   | 74.90   | 74.74   | 74.85   | 74.63   | 74.69   |
| 22   | /       | 74.63   | 74.83   | 75.01   | 74.96   | 75.03   | 74.97   | 74.85   | 74.74   | 74.85   | 74.63   | 74.76   |
| 23   | /       | 74.67   | 74.84   | 74.98   | 74.98   | 75.07   | 74.97   | 74.90   | 74.79   | 74.85   | 74.67   | 74.76   |
| 24   | 74.62*  | 74.67   | 74.83   | 75.01   | 74.98   | 75.06   | 74.96   | 74.89   | 74.79   | 74.80   | 74.72   | 74.63   |
| 25   | 74.68   | 74.67   | 74.83   | 75.00   | 74.99   | 75.06   | 74.97   | 74.86   | 74.77   | 74.80   | 74.64   | 74.70   |
| 26   | 74.68   | 74.66   | 74.87   | 74.98   | 74.97   | 75.04   | 74.95   | 74.87   | 74.76   | 74.79   | 74.63   | 74.72   |
| 27   | 74.68   | 74.67   | 74.87   | 74.98   | 74.99   | 75.06   | 74.93   | 74.93   | 74.69   | 74.80   | 74.65   | 74.69   |
| 28   | 74.72   | 74.67   | 74.88   | 74.97   | 75.00   | 75.06   | 74.94   | 74.90   | 74.73   | 74.82   | 74.68   | 74.72   |
| 29   | 74.69   |         | 74.88   | 75.01   | 75.01   | 75.07   | 74.95   | 74.90   | 74.78   | 74.84   | 74.67   | 74.71   |
| 30   | 74.69   |         | 74.90   | 74.99   | 74.99   | 75.05   | 74.92   | 74.90   | 74.82   | 74.79   | 74.60   | 74.68   |
| 31   | 74.69   |         | 74.90   |         | 74.96   |         | 74.92   | 74.86   |         | 74.79   |         | 74.68   |
| MEAN | 74.68   | 74.65   | 74.75   | 74.97   | 74.95   | 75.01   | 74.99   | 74.93   | 74.78   | 74.84   | 74.72   | 74.70   |
| MAX. | 74.76   | 74.73   | 74.94   | 75.11   | 75.13   | 75.16   | 75.08   | 75.08   | 74.96   | 74.99   | 74.97   | 74.93   |
|      | 2100/28 | 0900/23 | 2300/30 | 1400/21 | 0400/02 | 1300/24 | 0200/05 | 0500/11 | 1200/12 | 2000/14 | 1900/09 | 0100/04 |
| MIN. | 74.59   | 74.57   | 74.57   | 74.85   | 74.85   | 74.89   | 74.90   | 74.82   | 74.66   | 74.75   | 74.57   | 74.51   |
|      | 0200/25 | 0200/07 | 0200/10 | 1200/05 | 0700/12 | 2000/01 | 1500/30 | 0800/22 | 0800/27 | 0500/31 | 2100/18 | 0300/09 |

ANNUAL MEAN: 74.83

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 2000: Cape Vincent, New York on Lake Ontario

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST  
 Monthly mean elevation: 75.18 Jun  
 Daily mean elevation: 75.23 24 Jun  
 Instant/hourly elevation: 75.34 1100/24 Jun

LOWEST  
 Monthly mean elevation: 74.71 Jan  
 Daily mean elevation: 74.45 1 Jan  
 Instant/hourly elevation: 74.40 1700/2 Jan

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev. | Date   |
|-------|--------|
| 74.84 | 28 Jan |
|       | Feb    |
| 74.98 | 27 Mar |
| 75.17 | 21 Apr |
| 75.19 | 2 May  |
| 75.23 | 24 Jun |
| 75.21 | 7 Jul  |
| 75.18 | 11 Aug |
| 74.99 | 13 Sep |
|       | Oct    |
|       | Nov    |
| 74.88 | 28 Dec |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev. | Date   |
|-------|--------|
| 74.45 | 1 Jan  |
|       | Feb    |
| 74.79 | 13 Mar |
| 75.08 | 15 Apr |
| 75.05 | 19 May |
| 75.12 | 7 Jun  |
| 75.10 | 27 Jul |
| 75.01 | 31 Aug |
| 74.87 | 19 Sep |
|       | Oct    |
|       | Nov    |
| 74.85 | 31 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(m.) | No. of days
above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 75.20 | | | | | | 8 | 4 | | | | | | 75.20 | 12 |
| 75.15 | | | | 5 | 3 | 11 | 15 | 2 | | | | | 75.15 | 48 |
| 75.10 | | | | 12 | 16 | 11 | 11 | 15 | | | | | 75.10 | 113 |
| 75.05 | | | | 4 | 11 | | 1 | 7 | | | | | 75.05 | 136 |
| 75.00 | | | | | 1 | | | 7 | | | | | 75.00 | 144 |
| 74.95 | | | 2 | | | | | | 9 | | | | 74.95 | 155 |
| 74.90 | | | 7 | | | | | | 9 | | | | 74.90 | 171 |
| 74.85 | | | 4 | | | | | | 7 | | | 2 | 74.85 | 184 |
| 74.80 | 3 | | 2 | | | | | | | | | 2 | 74.80 | 191 |
| 74.75 | 6 | | 2 | | | | | | | | | | 74.75 | 199 |
| 74.70 | 7 | | | | | | | | | | | | 74.70 | 206 |
| 74.65 | 9 | | | | | | | | | | | | 74.65 | 215 |
| 74.60 | 1 | | | | | | | | | | | | 74.60 | 216 |
| 74.55 | 1 | | | | | | | | | | | | 74.55 | 217 |
| 74.50 | | | | | | | | | | | | | 74.50 | 217 |
| 74.45 | 1 | | | | | | | | | | | | 74.45 | 218 |
| 74.40 | 1 | | | | | | | | | | | | 74.40 | 219 |

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

INTERNATIONAL
GREAT LAKES
DATUM (1955)

Station 2000: Cape Vincent, New York on Lake Ontario

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|-----|---------|---------|---------|---------|---------|---------|---------|-----|-----|---------|
| 1 | 74.45 | / | / | / | 75.17 | 75.12 | 75.19 | 75.13 | 74.99 | / | / | / |
| 2 | 74.49 | / | / | / | 75.19 | 75.14 | 75.21 | 75.14 | 74.98 | / | / | / |
| 3 | 74.60 | / | / | / | 75.15 | 75.13 | 75.21 | 75.15 | 74.96 | / | / | / |
| 4 | 74.62 | / | / | / | 75.13 | 75.14 | 75.20 | 75.14 | 74.98 | / | / | / |
| 5 | 74.72 | / | / | / | 75.13 | 75.12 | 75.21 | 75.14 | 74.98 | / | / | / |
| 6 | 74.72 | / | / | / | 75.12 | 75.12 | 75.20 | 75.13 | 74.96 | / | / | / |
| 7 | 74.68* | / | / | / | 75.15 | 75.12 | 75.21 | 75.12 | 74.94 | / | / | / |
| 8 | 74.71* | / | / | / | 75.11 | 75.16 | 75.20 | 75.14 | 74.92 | / | / | / |
| 9 | 74.75 | / | / | / | 75.10 | 75.15 | 75.20 | 75.16 | / | / | / | / |
| 10 | 74.70 | / | / | 75.12* | 75.10 | 75.13 | 75.18 | 75.15 | / | / | / | / |
| 11 | 74.67 | / | 74.85 | 75.10 | 75.09 | 75.13 | 75.16 | 75.18 | / | / | / | / |
| 12 | 74.71 | / | 74.80 | 75.13 | 75.06 | 75.14 | 75.15 | 75.15 | / | / | / | / |
| 13 | 74.66 | / | 74.79 | 75.12 | 75.06 | 75.19 | 75.17 | 75.14 | 74.99* | / | / | / |
| 14 | 74.68 | / | 74.83 | 75.09 | 75.06 | 75.18 | 75.20 | 75.12 | 74.96* | / | / | / |
| 15 | 74.69* | / | 74.86 | 75.08 | 75.06 | 75.17 | 75.19 | 75.13 | / | / | / | / |
| 16 | 74.69* | / | 74.87 | 75.10 | 75.08 | 75.19 | 75.18 | 75.13 | 74.94* | / | / | / |
| 17 | 74.71 | / | 74.87 | 75.12 | 75.08 | 75.20 | 75.17 | 75.12 | 74.90 | / | / | / |
| 18 | 74.70 | / | 74.87 | 75.13 | 75.07 | 75.21 | 75.17 | 75.10 | 74.89 | / | / | / |
| 19 | 74.70 | / | 74.95 | 75.13 | 75.05 | 75.19 | 75.17 | 75.07 | 74.87 | / | / | / |
| 20 | 74.76 | / | 74.93 | 75.14 | 75.09 | 75.20 | 75.18 | 75.06 | 74.88 | / | / | / |
| 21 | 74.77 | / | 74.95 | 75.17 | 75.11 | 75.20 | 75.15 | 75.06 | 74.89 | / | / | / |
| 22 | 74.81 | / | 74.95 | 75.16 | 75.12 | 75.20 | 75.15 | 75.03 | 74.89 | / | / | / |
| 23 | 74.76 | / | 74.95 | 75.15 | 75.13 | 75.22 | 75.14 | 75.06 | 74.94 | / | / | / |
| 24 | 74.74 | / | 74.95 | 75.16 | 75.14 | 75.23 | 75.12 | 75.04 | 74.93 | / | / | / |
| 25 | 74.79 | / | 74.95 | 75.16 | 75.14 | 75.22 | 75.12 | 75.01 | 74.92 | / | / | / |
| 26 | 74.79 | / | 74.97 | 75.15 | 75.13 | 75.20 | 75.11 | 75.02 | 74.92 | / | / | / |
| 27 | 74.79 | / | 74.98* | 75.15 | 75.14 | 75.22 | 75.10 | 75.09 | 74.88 | / | / | / |
| 28 | 74.84* | / | / | 75.13 | 75.15 | 75.21 | 75.11 | 75.06 | 74.91 | / | / | 74.88* |
| 29 | 74.81* | / | / | 75.16 | 75.16 | 75.22 | 75.14 | 75.05 | 74.94 | / | / | 74.86 |
| 30 | / | / | / | 75.15 | 75.16 | 75.22 | 75.12 | 75.04 | 74.97 | / | / | 74.85 |
| 31 | / | / | / | / | 75.14 | 75.22 | 75.12 | 75.04 | 74.97 | / | / | 74.85 |
| | / | / | / | / | 75.13 | 75.11 | 75.01 | 75.01 | 74.93 | / | / | 74.86 |
| MEAN | 74.71 | / | 74.90 | 75.13 | 75.11 | 75.18 | 75.17 | 75.10 | 74.93 | / | / | 74.86 |
| | | | | | | | | | | | | |
| MAX. | 74.90 | | 75.04 | 75.26 | 75.32 | 75.34 | 75.25 | 75.26 | 75.07 | | | 74.90 |
| | 1700/22 | | 1500/19 | 1200/21 | 1400/01 | 1100/24 | 2400/04 | 0100/09 | 0800/30 | | | 1600/28 |
| MIN. | 74.40 | | 74.74 | 75.04 | 75.02 | 75.05 | 75.08 | 74.99 | 74.83 | | | 74.83 |
| | 1700/02 | | 0100/11 | 0800/15 | 0100/19 | 1800/01 | 0500/27 | 1400/31 | 1300/22 | | | 1500/31 |

ANNUAL MEAN: 75.01

* Indicates Less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL SUMMARY OF LEVELS, 1986
 Station 2030: Oswego, New York on Lake Ontario

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

HIGHEST
 Monthly mean elevation: 75.18 Jun
 Daily mean elevation: 75.24 24 Jun
 Instant/hourly elevation: 75.36 2200/4 Jul

LOWEST
 Monthly mean elevation: 74.76 Jan
 Daily mean elevation: 74.69 16 Jan
 Instant/hourly elevation: 74.64 2200/4 Jan

HIGHEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|-------|--------|
| 74.88 | 28 Jan |
| 74.86 | 13 Feb |
| 75.04 | 31 Mar |
| 75.20 | 23 Apr |
| 75.20 | 2 May |
| 75.24 | 24 Jun |
| 75.23 | 3 Jul |
| 75.17 | 11 Aug |
| 75.01 | 12 Sep |
| 75.09 | 6 Oct |
| 74.99 | 2 Nov |
| 74.93 | 10 Dec |

LOWEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|-------|--------|
| 74.69 | 16 Jan |
| 74.77 | 7 Feb |
| 74.80 | 10 Mar |
| 75.04 | 6 Apr |
| 75.07 | 14 May |
| 75.13 | 7 Jun |
| 75.14 | 31 Jul |
| 75.02 | 31 Aug |
| 74.88 | 22 Sep |
| 74.95 | 31 Oct |
| 74.79 | 23 Nov |
| 74.78 | 2 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(m.) | No. of days<br>above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 75.20         |     |     |     |     |     | 9   | 3   |     |     |     |     |     | 75.20         | 12                         |
| 75.15         |     |     |     | 14  | 3   | 12  | 18  | 1   |     |     |     |     | 75.15         | 60                         |
| 75.10         |     |     |     | 8   | 22  | 9   | 10  | 17  |     |     |     |     | 75.10         | 126                        |
| 75.05         |     |     |     | 5   | 6   |     |     | 7   |     |     |     |     | 75.05         | 145                        |
| 75.00         |     |     | 5   | 3   |     |     |     | 6   | 2   | 15  |     |     | 75.00         | 176                        |
| 74.95         |     |     | 7   |     |     |     |     |     | 10  | 14  | 6   |     | 74.95         | 213                        |
| 74.90         |     |     | 2   |     |     |     |     |     | 15  | 1   | 7   | 2   | 74.90         | 240                        |
| 74.85         | 1   | 1   | 6   |     |     |     |     |     | 3   |     | 6   | 22  | 74.85         | 279                        |
| 74.80         | 6   | 21  | 9   |     |     |     |     |     |     |     | 9   | 5   | 74.80         | 329                        |
| 74.75         | 5   | 6   | 2   |     |     |     |     |     |     |     | 2   | 2   | 74.75         | 346                        |
| 74.70         | 14  |     |     |     |     |     |     |     |     |     |     |     | 74.70         | 360                        |
| 74.65         | 5   |     |     |     |     |     |     |     |     |     |     |     | 74.65         | 365                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 2030: Oswego, New York on Lake Ontario

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 74.72   | 74.79   | 74.84   | 75.04   | 75.17   | 75.16   | 75.20   | 75.14   | 75.01   | 74.99   | 74.96   | 74.79   |
| 2    | 74.69   | 74.84   | 74.82   | 75.06   | 75.20   | 75.17   | 75.21   | 75.13   | 75.00   | 75.00   | 74.99   | 74.78   |
| 3    | 74.71   | 74.81   | 74.81   | 75.06   | 75.18   | 75.15   | 75.23   | 75.14   | 74.98   | 74.98   | 74.97   | 74.86   |
| 4    | 74.69   | 74.79   | 74.81   | 75.07   | 75.15   | 75.14   | 75.21   | 75.14   | 74.94   | 75.01   | 74.98   | 74.91   |
| 5    | 74.75   | 74.83   | 74.81   | 75.04   | 75.14   | 75.15   | 75.20   | 75.13   | 74.97   | 75.03   | 74.92   | 74.88   |
| 6    | 74.79   | 74.82   | 74.83   | 75.04   | 75.14   | 75.15   | 75.20   | 75.13   | 74.98   | 75.09   | 74.93   | 74.86   |
| 7    | 74.75   | 74.77   | 74.93   | 75.09   | 75.15   | 75.13   | 75.20   | 75.12   | 74.97   | 75.02   | 74.92   | 74.86   |
| 8    | 74.75   | 74.82   | 74.83   | 75.11   | 75.14   | 75.15   | 75.20   | 75.13   | 74.95   | 75.01   | 74.91   | 74.85   |
| 9    | 74.75   | 74.82   | 74.80   | 75.13   | 75.14   | 75.15   | 75.20   | 75.15   | 74.93   | 75.04   | 74.97   | 74.84   |
| 10   | 74.74   | 74.84   | 74.80   | 75.14   | 75.12   | 75.14   | 75.19   | 75.13   | 74.91   | 75.01   | 74.95   | 74.93   |
| 11   | 74.71   | 74.83   | 74.87   | 75.12   | 75.12   | 75.16   | 75.17   | 75.17   | 74.95   | 74.97   | 74.91   | 74.87   |
| 12   | 74.72   | 74.85   | 74.83   | 75.13   | 75.11   | 75.14   | 75.16   | 75.14   | 75.01   | 74.97   | 74.92   | 74.90   |
| 13   | 74.74   | 74.86   | 74.83   | 75.13   | 75.09   | 75.18   | 75.16   | 75.13   | 75.00   | 74.99   | 74.96   | 74.88   |
| 14   | 74.72   | 74.81   | 74.86   | 75.11   | 75.07   | 75.17   | 75.20   | 75.10   | 74.97   | 75.02   | 74.90   | 74.86   |
| 15   | 74.72   | 74.83   | 74.88   | 75.10   | 75.08   | 75.18   | 75.19   | 75.11   | 74.96   | 75.04   | 74.86   | 74.87   |
| 16   | 74.69   | 74.81   | 74.90   | 75.14   | 75.08   | 75.19   | 75.18   | 75.11   | 74.98   | 75.02   | 74.87   | 74.86   |
| 17   | 74.70   | 74.78   | 74.90   | 75.17   | 75.09   | 75.21   | 75.17   | 75.11   | 74.94   | 75.03   | 74.87   | 74.83   |
| 18   | 74.70   | 74.79   | 74.90   | 75.17   | 75.08   | 75.21   | 75.17   | 75.11   | 74.91   | 75.02   | 74.86   | 74.84   |
| 19   | 74.71   | 74.81   | 74.94   | 75.16   | 75.11   | 75.19   | 75.17   | 75.08   | 74.91   | 75.02   | 74.84   | 74.89   |
| 20   | 74.78   | 74.80   | 74.98   | 75.16   | 75.13   | 75.22   | 75.17   | 75.05   | 74.90   | 75.01   | 74.79   | 74.88   |
| 21   | 74.79   | 74.83   | 74.97   | 75.18   | 75.13   | 75.20   | 75.16   | 75.06   | 74.90   | 75.01   | 74.87   | 74.87   |
| 22   | 74.81   | 74.81   | 74.96   | 75.19   | 75.14   | 75.19   | 75.15   | 75.05   | 74.88   | 75.00   | 74.82   | 74.87   |
| 23   | 74.80   | 74.84   | 74.97   | 75.20   | 75.14   | 75.22   | 75.15   | 75.04   | 74.93   | 75.01   | 74.79   | 74.87   |
| 24   | 74.78   | 74.84   | 75.00   | 75.18   | 75.15   | 75.24   | 75.14   | 75.11   | 74.94   | 74.99   | 74.85   | 74.83   |
| 25   | 74.75   | 74.85   | 74.97   | 75.18   | 75.15   | 75.23   | 75.14   | 75.06   | 74.94   | 74.98   | 74.81   | 74.89   |
| 26   | 74.81   | 74.84   | 74.98   | 75.18   | 75.15   | 75.20   | 75.15   | 75.04   | 74.94   | 74.97   | 74.81   | 74.90   |
| 27   | 74.85   | 74.84   | 75.02   | 75.18   | 75.15   | 75.20   | 75.14   | 75.10   | 74.93   | 74.97   | 74.83   | 74.89   |
| 28   | 74.88   | 74.84   | 75.01   | 75.16   | 75.15   | 75.21   | 75.14   | 75.09   | 74.92   | 75.00   | 74.83   | 74.89   |
| 29   | 74.82   |         | 75.01   | 75.16   | 75.15   | 75.23   | 75.14   | 75.07   | 74.92   | 74.98   | 74.85   | 74.88   |
| 30   | 74.83   |         | 75.02   | 75.16   | 75.15   | 75.22   | 75.15   | 75.04   | 74.97   | 75.00   | 74.82   | 74.89   |
| 31   | 74.85   |         | 75.04   |         | 75.15   |         | 75.14   | 75.02   |         | 74.95   |         | 74.88   |
| MEAN | 74.76   | 74.82   | 74.91   | 75.13   | 75.13   | 75.18   | 75.17   | 75.10   | 74.95   | 75.00   | 74.89   | 74.87   |
| MAX. | 74.93   | 74.90   | 75.08   | 75.22   | 75.26   | 75.32   | 75.36   | 75.21   | 75.10   | 75.17   | 75.08   | 74.99   |
| MIN. | 1000/28 | 0800/21 | 0300/24 | 0900/23 | 1900/01 | 2000/16 | 2200/04 | 0300/11 | 2000/15 | 0700/06 | 1900/09 | 0500/04 |
|      | 74.64   | 74.70   | 74.69   | 75.00   | 75.01   | 75.08   | 75.02   | 74.98   | 74.82   | 74.81   | 74.73   | 74.72   |
|      | 2200/04 | 1900/01 | 2200/09 | 2400/01 | 0800/16 | 0800/01 | 2000/04 | 1400/26 | 0600/23 | 1600/04 | 0400/20 | 0900/02 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 74.99

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 2058: Rochester, New York on Lake Ontario

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST  
 Monthly mean elevation: 75.19 Jun  
 Daily mean elevation: 75.23 29 Jun  
 Instant/hourly elevation: 75.31 2000/18 Jul

LOWEST  
 Monthly mean elevation: 74.76 Jan  
 Daily mean elevation: 74.70 17 Jan  
 Instant/hourly elevation: 74.61 0500/12 Jan

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev. | Date   |
|-------|--------|
| 74.84 | 28 Jan |
| 74.85 | 25 Feb |
| 75.05 | 31 Mar |
| 75.20 | 23 Apr |
| 75.18 | 31 May |
| 75.23 | 29 Jun |
| 75.22 | 3 Jul  |
| 75.16 | 11 Aug |
| 75.02 | 1 Sep  |
| 75.06 | 9 Oct  |
| 74.99 | 2 Nov  |
| 74.90 | 30 Dec |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev. | Date   |
|-------|--------|
| 74.70 | 17 Jan |
| 74.79 | 16 Feb |
| 74.80 | 10 Mar |
| 75.05 | 1 Apr  |
| 75.09 | 14 May |
| 75.15 | 9 Jun  |
| 75.15 | 31 Jul |
| 75.04 | 31 Aug |
| 74.92 | 22 Sep |
| 74.98 | 31 Oct |
| 74.82 | 25 Nov |
| 74.80 | 2 Dec  |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(m.) | No. of days
above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 75.20 | | | | | | 14 | 8 | | | | | | 75.20 | 22 |
| 75.15 | | | | 14 | 10 | 11 | 18 | 2 | | | | | 75.15 | 77 |
| 75.10 | | | | 8 | 17 | 5 | 5 | 14 | | | | | 75.10 | 126 |
| 75.05 | | | | 7 | 4 | | | 11 | | 2 | | | 75.05 | 150 |
| 75.00 | | | 6 | 1 | | | | 4 | 1 | 21 | | | 75.00 | 183 |
| 74.95 | | | 6 | | | | | | 15 | 8 | 4 | | 74.95 | 216 |
| 74.90 | | | 3 | | | | | | 14 | | 9 | | 74.90 | 242 |
| 74.85 | | | 3 | | | | | | | | 6 | 26 | 74.85 | 277 |
| 74.80 | 8 | 24 | 12 | | | | | | | | 11 | 4 | 74.80 | 336 |
| 74.75 | 5 | 4 | 1 | | | | | | | | | 1 | 74.75 | 347 |
| 74.70 | 16 | | | | | | | | | | | | 74.70 | 363 |
| 74.65 | 2 | | | | | | | | | | | | 74.65 | 365 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 2058: Rochester, New York on Lake Ontario

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 74.71 | 74.83 | 74.82 | 75.05 | 75.16 | 75.16 | 75.21 | 75.14 | 75.02 | 75.02 | 74.97 | 74.81 |
| 2 | 74.71 | 74.83 | 74.83 | 75.06 | 75.18 | 75.17 | 75.21 | 75.15 | 75.00 | 75.01 | 74.99 | 74.80 |
| 3 | 74.72 | 74.83 | 74.82 | 75.07 | 75.18 | 75.16 | 75.22 | 75.16 | 74.99 | 75.01 | 74.97 | 74.84 |
| 4 | 74.72 | 74.83 | 74.82 | 75.07 | 75.15 | 75.15 | 75.21 | 75.15 | 74.96 | 75.02 | 74.97 | 74.84 |
| 5 | 74.72 | 74.84 | 74.82 | 75.08 | 75.15 | 75.15 | 75.21 | 75.14 | 74.97 | 75.04 | 74.95 | 74.86 |
| 6 | 74.74 | 74.83 | 74.82 | 75.08 | 75.15 | 75.16 | 75.21 | 75.14 | 74.98 | 75.06 | 74.94 | 74.85 |
| 7 | 74.76 | 74.80 | 74.85 | 75.09 | 75.15 | 75.15 | 75.21 | 75.14 | 74.98 | 75.04 | 74.94 | 74.86 |
| 8 | 74.74 | 74.82 | 74.84 | 75.10 | 75.15 | 75.15 | 75.21 | 75.13 | 74.96 | 75.03 | 74.93 | 74.87 |
| 9 | 74.71 | 74.82 | 74.83 | 75.12 | 75.14 | 75.15 | 75.20 | 75.14 | 74.94 | 75.06 | 74.94 | 74.87 |
| 10 | 74.72 | 74.82 | 74.80 | 75.13 | 75.13 | 75.16 | 75.20 | 75.15 | 74.94 | 75.03 | 74.94 | 74.88 |
| 11 | 74.72 | 74.84 | 74.83 | 75.13 | 75.12 | 75.16 | 75.18 | 75.16 | 74.97 | 74.99 | 74.93 | 74.87 |
| 12 | 74.70 | 74.83 | 74.85 | 75.13 | 75.11 | 75.17 | 75.18 | 75.15 | 74.99 | 74.99 | 74.91 | 74.89 |
| 13 | 74.74 | 74.83 | 74.85 | 75.13 | 75.11 | 75.19 | 75.17 | 75.12 | 74.99 | 75.01 | 74.93 | 74.88 |
| 14 | 74.74 | 74.81 | 74.88 | 75.13 | 75.09 | 75.19 | 75.19 | 75.10 | 74.97 | 75.01 | 74.89 | 74.86 |
| 15 | 74.72 | 74.80 | 74.88 | 75.13 | 75.10 | 75.19 | 75.19 | 75.09 | 74.97 | 75.02 | 74.86 | 74.86 |
| 16 | 74.72 | 74.79 | 74.89 | 75.15 | 75.11 | 75.19 | 75.18 | 75.12 | 74.97 | 75.03 | 74.87 | 74.87 |
| 17 | 74.70 | 74.80 | 74.91 | 75.17 | 75.10 | 75.21 | 75.18 | 75.12 | 74.95 | 75.04 | 74.86 | 74.86 |
| 18 | 74.72 | 74.81 | 74.92 | 75.17 | 75.10 | 75.21 | 75.19 | 75.12 | 74.92 | 75.02 | 74.87 | 74.86 |
| 19 | 74.73 | 74.82 | 74.94 | 75.17 | 75.11 | 75.22 | 75.17 | 75.10 | 74.92 | 75.01 | 74.86 | 74.88 |
| 20 | 74.76 | 74.81 | 74.98 | 75.17 | 75.13 | 75.22 | 75.18 | 75.08 | 74.94 | 75.01 | 74.83 | 74.88 |
| 21 | 74.79 | 74.83 | 74.97 | 75.19 | 75.14 | 75.22 | 75.19 | 75.07 | 74.93 | 75.01 | 74.85 | 74.88 |
| 22 | 74.80 | 74.83 | 74.98 | 75.20 | 75.14 | 75.21 | 75.16 | 75.06 | 74.92 | 75.01 | 74.84 | 74.86 |
| 23 | 74.81 | 74.83 | 74.98 | 75.20 | 75.15 | 75.22 | 75.15 | 75.04 | 74.95 | 75.01 | 74.82 | 74.86 |
| 24 | 74.81 | 74.84 | 75.01 | 75.19 | 75.15 | 75.23 | 75.15 | 75.10 | 74.95 | 75.01 | 74.82 | 74.86 |
| 25 | 74.78 | 74.85 | 75.00 | 75.19 | 75.16 | 75.23 | 75.16 | 75.08 | 74.94 | 74.99 | 74.82 | 74.88 |
| 26 | 74.81 | 74.84 | 75.00 | 75.19 | 75.16 | 75.22 | 75.17 | 75.05 | 74.95 | 74.99 | 74.83 | 74.90 |
| 27 | 74.83 | 74.84 | 75.02 | 75.18 | 75.16 | 75.22 | 75.16 | 75.09 | 74.96 | 74.98 | 74.84 | 74.90 |
| 28 | 74.84 | 74.83 | 75.02 | 75.18 | 75.16 | 75.23 | 75.15 | 75.08 | 74.94 | 74.99 | 74.84 | 74.90 |
| 29 | 74.83 | | 75.03 | 75.17 | 75.16 | 75.23 | 75.15 | 75.06 | 74.95 | 74.99 | 74.83 | 74.89 |
| 30 | 74.83 | | 75.04 | 75.17 | 75.16 | 75.22 | 75.18 | 75.04 | 74.98 | 75.01 | 74.84 | 74.90 |
| 31 | 74.83 | | 75.05 | | 75.18 | | 75.15 | 75.04 | | 74.98 | | 74.89 |
| MEAN | 74.76 | 74.82 | 74.91 | 75.14 | 75.14 | 75.19 | 75.18 | 75.11 | 74.96 | 75.01 | 74.89 | 74.87 |
| MAX. | 74.87 | 74.90 | 75.08 | 75.23 | 75.25 | 75.29 | 75.31 | 75.22 | 75.20 | 75.22 | 75.04 | 74.93 |
| MIN. | 2300/27 | 0300/06 | 1800/30 | 0800/23 | 0900/31 | 0800/24 | 2000/18 | 2200/15 | 2200/15 | 1700/04 | 2300/01 | 2400/12 |
| | 74.61 | 74.74 | 74.69 | 75.00 | 75.00 | 75.10 | 75.09 | 74.98 | 74.85 | 74.88 | 74.75 | 74.76 |
| | 0500/12 | 2100/20 | 2300/10 | 0100/02 | 2300/18 | 1600/01 | 2100/18 | 1600/23 | 0500/22 | 1500/04 | 2000/27 | 2100/02 |

* Indicates Less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL MEAN: 75.00

ANNUAL SUMMARY OF LEVELS, 1986
 Station 2076: Olcott, New York on Lake Ontario

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

HIGHEST
 Monthly mean elevation: 75.21 Jun
 Daily mean elevation: 75.26 27 Jun
 Instant/hourly elevation: 75.31 1600/27 Jun

LOWEST
 Monthly mean elevation: 74.76 Jan
 Daily mean elevation: 74.68 9 Jan
 Instant/hourly elevation: 74.63 1800/9 Jan

HIGHEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|-------|--------|
| 74.84 | 24 Jan |
| 74.88 | 7 Feb |
| 75.06 | 31 Mar |
| 75.20 | 28 Apr |
| 75.18 | 26 May |
| 75.26 | 27 Jun |
| 75.23 | 6 Jul |
| 75.17 | 3 Aug |
| 75.03 | 30 Sep |
| 75.04 | 17 Oct |
| 74.98 | 5 Nov |
| 74.91 | 27 Dec |

LOWEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|-------|--------|
| 74.68 | 9 Jan |
| 74.80 | 13 Feb |
| 74.79 | 7 Mar |
| 75.05 | 1 Apr |
| 75.11 | 18 May |
| 75.15 | 8 Jun |
| 75.16 | 31 Jul |
| 75.05 | 31 Aug |
| 74.93 | 19 Sep |
| 74.99 | 27 Oct |
| 74.81 | 24 Nov |
| 74.82 | 4 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(m.) | No. of days<br>above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 75.25         |     |     |     |     |     | 2   |     |     |     |     |     |     | 75.25         | 2                          |
| 75.20         |     |     |     |     |     | 14  | 12  |     |     |     |     |     | 75.20         | 28                         |
| 75.15         |     |     |     | 16  | 13  | 13  | 19  | 6   |     |     |     |     | 75.15         | 95                         |
| 75.10         |     |     |     | 9   | 18  | 1   |     | 14  |     |     |     |     | 75.10         | 137                        |
| 75.05         |     |     | 1   | 4   |     |     |     | 10  |     |     |     |     | 75.05         | 152                        |
| 75.00         |     |     | 6   | 1   |     |     |     | 1   | 4   | 24  |     |     | 75.00         | 188                        |
| 74.95         |     |     | 5   |     |     |     |     |     | 15  | 7   |     |     | 74.95         | 222                        |
| 74.90         |     |     | 3   |     |     |     |     |     | 11  |     |     |     | 74.90         | 243                        |
| 74.85         |     | 6   | 5   |     |     |     |     |     |     |     |     |     | 74.85         | 282                        |
| 74.80         | 9   | 21  | 10  |     |     |     |     |     |     |     |     |     | 74.80         | 341                        |
| 74.75         | 4   | 1   | 1   |     |     |     |     |     |     |     |     |     | 74.75         | 347                        |
| 74.70         | 17  |     |     |     |     |     |     |     |     |     |     |     | 74.70         | 364                        |
| 74.65         | 1   |     |     |     |     |     |     |     |     |     |     |     | 74.65         | 365                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 2076: Olcott, New York on Lake Ontario

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 74.71   | 74.87   | 74.82   | 75.05   | 75.17   | 75.17   | 75.23   | 75.17   | 75.02   | 75.03   | 74.97   | 74.84   |
| 2    | 74.74   | 74.83   | 74.83   | 75.06   | 75.15   | 75.17   | 75.21   | 75.17   | 75.02   | 75.02   | 74.97   | 74.86   |
| 3    | 74.75   | 74.86   | 74.83   | 75.08   | 75.16   | 75.17   | 75.21   | 75.17   | 75.01*  | 75.03   | 74.97   | 74.83   |
| 4    | 74.76   | 74.87   | 74.83   | 75.09   | 75.17   | 75.16   | 75.23   | 75.16   | 74.99   | 75.04   | 74.97   | 74.82   |
| 5    | 74.73   | 74.85   | 74.83   | 75.11   | 75.15   | 75.17   | 75.23   | 75.16   | 74.98   | 75.04   | 74.98   | 74.85   |
| 6    | 74.75   | 74.88   | 74.84   | 75.11   | 75.16   | 75.17   | 75.23   | 75.15   | 74.99   | 75.04   | 74.95   | 74.84   |
| 7    | 74.76   | 74.88   | 74.79   | 75.11   | 75.14   | 75.17   | 75.22   | 75.15   | 74.97   | 75.04   | 74.96   | 74.86   |
| 8    | 74.73   | 74.85   | 74.83   | 75.10   | 75.15   | 75.15   | 75.21   | 75.15   | 74.96   | 75.03   | 74.96   | 74.91   |
| 9    | 74.68   | 74.84   | 74.85   | 75.11   | 75.15   | 75.17   | 75.20   | 75.15   | 74.95   | 75.04   | 74.92   | 74.89   |
| 10   | 74.72   | 74.83   | 74.85   | 75.12   | 75.13   | 75.18   | 75.20   | 75.16   | 74.95   | 75.03   | 74.93   | 74.85   |
| 11   | 74.74   | 74.85   | 74.83   | 75.13   | 75.14   | 75.17   | 75.19   | 75.15   | 74.97   | 75.01   | 74.93   | 74.89   |
| 12   | 74.72   | 74.83   | 74.88   | 75.12   | 75.13   | 75.20   | 75.20   | 75.15   | 74.97   | 75.02   | 74.91   | 74.86   |
| 13   | 74.74   | 74.80   | 74.90   | 75.13   | 75.13   | 75.19   | 75.20   | 75.13   | 74.96   | 75.03   | 74.90   | 74.87   |
| 14   | 74.74   | 74.82   | 74.89   | 75.14   | 75.12   | 75.20   | 75.19   | 75.11   | 74.95   | 75.02   | 74.87   | 74.85   |
| 15   | 74.72   | 74.82   | 74.89   | 75.17   | 75.12   | 75.22   | 75.20   | 75.13   | 74.96   | 75.03   | 74.87   | 74.87   |
| 16   | 74.74   | 74.82   | 74.90   | 75.18   | 75.12   | 75.21   | 75.21   | 75.14   | 74.94   | 75.03   | 74.87   | 74.88   |
| 17   | 74.73   | 74.84   | 74.92   | 75.18   | 75.12   | 75.23   | 75.21   | 75.13   | 74.95   | 75.04   | 74.87   | 74.88   |
| 18   | 74.74   | 74.83   | 74.94   | 75.18   | 75.11   | 75.22   | 75.21   | 75.12   | 74.94   | 75.01   | 74.87   | 74.88   |
| 19   | 74.75   | 74.83   | 74.94   | 75.19   | 75.12   | 75.23   | 75.21   | 75.11   | 74.93   | 75.01   | 74.86   | 74.87   |
| 20   | 74.75   | 74.84   | 74.97   | 75.20   | 75.14   | 75.24   | 75.19   | 75.10   | 74.94   | 75.01   | 74.86   | 74.88   |
| 21   | 74.79   | 74.84   | 74.97   | 75.20   | 75.15   | 75.25   | 75.19   | 75.10   | 74.94   | 75.01   | 74.84   | 74.87   |
| 22   | 74.79   | 74.86   | 74.99   | 75.20   | 75.15   | 75.24   | 75.19   | 75.11   | 74.94   | 75.01   | 74.85   | 74.85   |
| 23   | 74.81   | 74.83   | 74.99   | 75.19   | 75.17   | 75.24   | 75.19   | 75.09   | 74.95   | 75.01   | 74.85   | 74.85   |
| 24   | 74.84   | 74.85   | 75.00   | 75.20   | 75.16   | 75.24   | 75.19   | 75.10   | 74.97   | 75.01   | 74.81   | 74.90   |
| 25   | 74.83   | 74.85   | 75.02   | 75.20   | 75.16   | 75.24   | 75.19   | 75.09   | 74.99   | 75.00   | 74.83   | 74.88   |
| 26   | 74.82   | 74.84   | 75.01   | 75.20   | 75.18   | 75.26   | 75.19   | 75.08   | 74.99   | 75.00   | 74.84   | 74.90   |
| 27   | 74.83   | 74.83   | 75.02   | 75.19   | 75.16   | 75.26   | 75.17   | 75.09   | 74.99   | 74.99   | 74.83   | 74.91   |
| 28   | 74.81   | 74.82   | 75.04   | 75.20   | 75.16   | 75.25   | 75.16   | 75.08   | 74.96   | 75.00   | 74.83   | 74.90   |
| 29   | 74.83   |         | 75.04   | 75.18   | 75.16   | 75.22   | 75.16   | 75.06   | 74.99   | 75.00   | 74.83   | 74.90   |
| 30   | 74.83   |         | 75.05   | 75.19   | 75.17   | 75.22   | 75.17   | 75.06   | 75.03   | 75.00   | 74.85   | 74.90   |
| 31   | 74.83   |         | 75.06   |         | 75.17   |         | 75.16   | 75.05   |         | 75.00   |         | 74.89   |
| MEAN | 74.76   | 74.84   | 74.92   | 75.15   | 75.15   | 75.21   | 75.20   | 75.12   | 74.97   | 75.02   | 74.89   | 74.87   |
| MAX. | 74.90   | 74.94   | 75.10   | 75.26   | 75.23   | 75.31   | 75.31   | 75.23   | 75.09   | 75.13   | 75.02   | 74.96   |
|      | 0400/27 | 1800/01 | 2300/31 | 0200/21 | 2400/06 | 1600/27 | 2100/04 | 1800/01 | 2100/30 | 1700/04 | 0700/05 | 0100/09 |
| MIN. | 74.63   | 74.78   | 74.75   | 74.96   | 75.08   | 75.10   | 75.13   | 75.02   | 74.89   | 74.95   | 74.78   | 74.75   |
|      | 1800/09 | 1700/13 | 1000/11 | 2300/01 | 1900/17 | 0300/02 | 2000/31 | 2000/23 | 2100/19 | 0500/06 | 1500/24 | 2300/03 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 75.01

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 3007: Ashland Avenue, Niagara Falls, New York on Niagara River

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST

Monthly mean elevation: 99.60 Jun  
 Daily mean elevation: 100.59 4 Dec  
 Instant/hourly elevation: 102.47 2400/5 Jan

LOWEST

Monthly mean elevation: 97.75 Feb  
 Daily mean elevation: 96.52 1 Dec  
 Instant/hourly elevation: 95.76 0500/7 Feb

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 100.35 | 6 Jan  |
| 98.91  | 23 Feb |
| 99.62  | 11 Mar |
| 99.98  | 22 Apr |
| 99.96  | 21 May |
| 100.07 | 13 Jun |
| 99.78  | 18 Jul |
| 99.67  | 4 Aug  |
| 99.36  | 12 Sep |
| 99.99  | 15 Oct |
| 99.51  | 9 Nov  |
| 100.59 | 4 Dec  |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev. | Date   |
|-------|--------|
| 96.83 | 15 Jan |
| 96.75 | 7 Feb  |
| 98.17 | 5 Mar  |
| 98.48 | 15 Apr |
| 99.23 | 13 May |
| 99.31 | 2 Jun  |
| 99.23 | 12 Jul |
| 98.80 | 31 Aug |
| 98.41 | 21 Sep |
| 98.43 | 25 Oct |
| 97.45 | 30 Nov |
| 96.52 | 1 Dec  |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(m.) | No. of days
above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 100.50 | | | | | | | | | | | | 1 | 100.50 | 1 |
| 100.35 | | | | | | | | | | | | | 100.35 | 1 |
| 100.20 | 1 | | | | | | | | | | | | 100.20 | 2 |
| 100.05 | | | | | | 1 | | | | | | | 100.05 | 3 |
| 99.90 | | | | 1 | 1 | | | | | 1 | | | 99.90 | 6 |
| 99.75 | | | | 1 | 1 | 5 | 1 | | | | | | 99.75 | 14 |
| 99.60 | | | 1 | 2 | 7 | 9 | 7 | 1 | | 3 | | 1 | 99.60 | 45 |
| 99.45 | | | 2 | 3 | 6 | 7 | 16 | 6 | | 2 | 1 | 2 | 99.45 | 90 |
| 99.30 | | | 3 | 5 | 13 | 8 | 6 | 4 | 1 | 2 | | 1 | 99.30 | 133 |
| 99.15 | 1 | | 5 | 6 | 3 | | 1 | 5 | 2 | | | 5 | 99.15 | 161 |
| 99.00 | | | 4 | 4 | | | | 9 | 5 | 12 | | 3 | 99.00 | 198 |
| 98.85 | | 1 | 3 | 4 | | | | 3 | 3 | 6 | | 2 | 98.85 | 220 |
| 98.70 | | | 1 | 2 | | | | 3 | 3 | 6 | | 2 | 98.70 | 246 |
| 98.55 | | 1 | 4 | 1 | | | | 3 | 10 | 1 | 3 | 6 | 98.55 | 264 |
| 98.40 | 2 | | 2 | 1 | | | | | 9 | 1 | 6 | 3 | 98.40 | 285 |
| 98.25 | 1 | 2 | 3 | | | | | | | | 3 | | 98.25 | 294 |
| 98.10 | 2 | 2 | 3 | | | | | | | | 4 | 2 | 98.10 | 307 |
| 97.95 | | 2 | | | | | | | | | 4 | | 97.95 | 310 |
| 97.80 | 2 | 6 | | | | | | | | | 3 | 2 | 97.80 | 323 |
| 97.65 | 5 | 4 | | | | | | | | | 3 | | 97.65 | 332 |
| 97.50 | 4 | 2 | | | | | | | | | 3 | 1 | 97.50 | 342 |
| 97.35 | 4 | 2 | | | | | | | | | 1 | | 97.35 | 349 |
| 97.20 | 4 | 2 | | | | | | | | | | | 97.20 | 355 |
| 97.05 | 1 | | | | | | | | | | | | 97.05 | 356 |
| 96.90 | 2 | 2 | | | | | | | | | | | 96.90 | 360 |
| 96.75 | 2 | 1 | | | | | | | | | | | 96.75 | 363 |
| 96.60 | | 1 | | | | | | | | | | | 96.60 | 364 |
| 96.45 | | | | | | | | | | | | 1 | 96.45 | 365 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 3007: Ashland Avenue, Niagara Falls, New York on Niagara River

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 98.55 | 96.93 | 98.22 | 99.31 | 99.71 | 99.58 | 99.54 | 99.59 | 98.76 | 98.92 | 98.71 | 96.52 |
| 2 | 97.91 | 97.88 | 98.29 | 99.18 | 99.83 | 99.31 | 99.63 | 99.58 | 98.81 | 98.91 | 98.74 | 97.51 |
| 3 | 97.65 | 97.43 | 98.19 | 99.01 | 99.73 | 99.39 | 99.58 | 99.58 | 98.78 | 99.13 | 98.63 | 99.49 |
| 4 | 97.42 | 97.31 | 98.29 | 98.93 | 99.58 | 99.42 | 99.63 | 99.67 | 98.88 | 99.01 | 98.43 | 100.59 |
| 5 | 99.22 | 97.83 | 98.17 | 98.65 | 99.64 | 99.41 | 99.52 | 99.54 | 99.14 | 99.58 | 98.22 | 98.96 |
| 6 | 100.35 | 97.04 | 98.67 | 98.98 | 99.52 | 99.33 | 99.36 | 99.40 | 99.08 | 99.72 | 98.39 | 99.15 |
| 7 | 97.78 | 96.75 | 98.64 | 99.37 | 99.74 | 99.40 | 99.66 | 99.53 | 98.81 | 99.50 | 98.13 | 98.80 |
| 8 | 97.08 | 97.95 | 98.44 | 99.18 | 99.55 | 99.55 | 99.56 | 99.34 | 99.01 | 99.44 | 98.27 | 97.83 |
| 9 | 97.78 | 97.96 | 98.31 | 99.10 | 99.34 | 99.43 | 99.53 | 99.43 | 99.06 | 99.11 | 99.51 | 98.14 |
| 10 | 97.62 | 97.85 | 98.54 | 99.11 | 99.32 | 99.37 | 99.42 | 99.24 | 98.85 | 98.58 | 98.65 | 99.63 |
| 11 | 97.04 | 97.51 | 99.62 | 99.10 | 99.40 | 99.64 | 99.36 | 99.38 | 99.26 | 99.74 | 98.29 | 98.76 |
| 12 | 98.39 | 97.80 | 98.60 | 99.00 | 99.26 | 99.63 | 99.23 | 99.22 | 99.36 | 98.94 | 98.54 | 99.23 |
| 13 | 97.69 | 97.33 | 98.88 | 98.73 | 99.23 | 100.07 | 99.53 | 99.14 | 98.95 | 99.04 | 98.77 | 98.58 |
| 14 | 97.03 | 96.90 | 99.22 | 98.85 | 99.32 | 99.59 | 99.75 | 99.13 | 98.81 | 99.62 | 98.47 | 99.17 |
| 15 | 96.83 | 97.49 | 99.40 | 98.48 | 99.45 | 99.51 | 99.58 | 99.22 | 98.79 | 99.99 | 98.66 | 98.76 |
| 16 | 96.85 | 97.68 | 99.33 | 98.91 | 99.44 | 99.82 | 99.56 | 99.22 | 98.47 | 99.38 | 98.50 | 98.16 |
| 17 | 97.32 | 97.51 | 99.09 | 99.18 | 99.39 | 99.67 | 99.55 | 98.96 | 98.44 | 99.09 | 98.51 | 98.06 |
| 18 | 97.49 | 97.67 | 98.82 | 99.19 | 99.26 | 99.54 | 99.78 | 99.01 | 98.53 | 99.01 | 97.59 | 98.74 |
| 19 | 97.26 | 97.80 | 99.58 | 99.40 | 99.43 | 99.69 | 99.52 | 98.86 | 98.44 | 99.01 | 97.51 | 99.49 |
| 20 | 98.22 | 97.99 | 99.52 | 99.23 | 99.43 | 99.76 | 99.63 | 98.82 | 98.43 | 99.15 | 97.62 | 98.85 |
| 21 | 97.75 | 98.37 | 99.40 | 99.77 | 99.96 | 99.60 | 99.48 | 99.01 | 98.41 | 99.07 | 98.15 | 98.79 |
| 22 | 98.22 | 97.81 | 99.26 | 99.98 | 99.44 | 99.62 | 99.59 | 98.82 | 98.49 | 99.01 | 97.85 | 99.10 |
| 23 | 97.62 | 98.91 | 99.27 | 99.72 | 99.64 | 99.78 | 99.49 | 99.02 | 98.94 | 99.04 | 97.93 | 99.30 |
| 24 | 97.29 | 98.18 | 98.96 | 99.60 | 99.49 | 99.75 | 99.55 | 99.11 | 98.74 | 98.65 | 98.49 | 97.83 |
| 25 | 97.50 | 98.36 | 99.02 | 99.57 | 99.45 | 99.61 | 99.53 | 99.16 | 98.71 | 98.43 | 98.12 | 99.17 |
| 26 | 97.54 | 98.21 | 99.06 | 99.57 | 99.43 | 99.81 | 99.66 | 99.05 | 98.73 | 98.63 | 97.90 | 99.35 |
| 27 | 97.87 | 97.83 | 99.19 | 99.21 | 99.36 | 99.71 | 99.40 | 99.57 | 98.44 | 98.91 | 98.59 | 99.04 |
| 28 | 98.41 | 98.59 | 98.94 | 99.41 | 99.49 | 99.78 | 99.44 | 98.99 | 98.45 | 98.93 | 98.58 | 99.21 |
| 29 | 97.44 | | 99.13 | 99.72 | 99.66 | 99.68 | 99.61 | 99.11 | 99.11 | 99.03 | 98.56 | 98.91 |
| 30 | 97.31 | | 99.18 | 99.41 | 99.69 | 99.59 | 99.52 | 99.06 | 99.29 | 98.87 | 97.45 | 98.67 |
| 31 | 97.71 | | 98.69 | | 99.49 | | 99.33 | 98.80 | | 98.83 | | 98.63 |
| MEAN | 97.75 | 97.75 | 98.90 | 99.23 | 99.51 | 99.60 | 99.53 | 99.21 | 98.80 | 99.11 | 98.33 | 98.79 |
| MAX. | 102.47 | 99.62 | 101.48 | 100.97 | 100.93 | 100.66 | 100.81 | 100.64 | 100.62 | 101.09 | 101.34 | 101.77 |
| | 2400/05 | 0600/23 | 0900/11 | 1400/22 | 0900/02 | 1200/26 | 1600/18 | 1600/05 | 1200/12 | 1400/11 | 1800/09 | 2100/03 |
| MIN. | 96.48 | 95.76 | 97.67 | 96.05 | 97.74 | 97.93 | 97.45 | 96.98 | 96.71 | 97.03 | 97.13 | 95.81 |
| | 0600/16 | 0500/07 | 0700/06 | 0300/15 | 2300/12 | 2300/05 | 2300/11 | 2400/31 | 2200/21 | 0300/25 | 2400/30 | 1000/01 |

* Indicates Less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL MEAN: 98.88

ANNUAL SUMMARY OF LEVELS, 1986
 Station 3009: American Falls, Niagara Falls, New York on Niagara River

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

HIGHEST
 Monthly mean elevation: 170.38 Dec
 Daily mean elevation: 170.60 10 Dec
 Instant/hourly elevation: 170.65 1400/9 Nov

LOWEST
 Monthly mean elevation: 170.13 Apr
 Daily mean elevation: 169.85 5 Apr
 Instant/hourly elevation: 169.55 2200/8 Apr

HIGHEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 170.35 | 9 Jan |
| 170.22 | 21 Feb |
| 170.35 | 11 Mar |
| 170.34 | 22 Apr |
| 170.40 | 28 May |
| 170.52 | 19 Jun |
| 170.40 | 18 Jul |
| 170.36 | 1 Aug |
| 170.30 | 11 Sep |
| 170.53 | 14 Oct |
| 170.53 | 15 Nov |
| 170.60 | 10 Dec |

LOWEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 169.96 | 23 Jan |
| 170.04 | 6 Feb |
| 169.90 | 20 Mar |
| 169.85 | 5 Apr |
| 170.20 | 13 May |
| 170.22 | 6 Jun |
| 170.24 | 6 Jul |
| 170.15 | 19 Aug |
| 170.09 | 16 Sep |
| 170.15 | 10 Oct |
| 170.24 | 20 Nov |
| 170.05 | 1 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(m.) | No. of days<br>above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 170.55        |     |     |     |     |     |     |     |     |     |     |     | 5   | 170.55        | 5                          |
| 170.50        |     |     |     |     |     | 3   |     |     |     | 1   | 1   | 3   | 170.50        | 13                         |
| 170.45        |     |     |     |     |     | 6   |     |     |     |     | 2   | 1   | 170.45        | 22                         |
| 170.40        |     |     |     |     |     | 4   |     |     |     | 3   | 1   | 3   | 170.40        | 33                         |
| 170.35        |     |     |     |     | 5   | 3   | 8   | 1   |     | 1   | 3   | 5   | 170.35        | 59                         |
| 170.30        | 3   |     | 2   | 2   | 13  | 9   | 7   | 2   |     | 2   | 9   | 1   | 170.30        | 109                        |
| 170.25        | 3   |     | 2   | 5   | 11  | 3   | 13  | 9   | 7   | 9   | 10  | 10  | 170.25        | 191                        |
| 170.20        | 4   | 3   | 12  | 4   | 1   | 2   | 3   | 13  | 9   | 9   | 4   | 1   | 170.20        | 256                        |
| 170.15        | 4   | 6   | 4   | 1   | 1   |     |     | 5   | 11  | 5   |     | 1   | 170.15        | 294                        |
| 170.10        | 7   | 14  | 4   | 4   |     |     |     | 1   | 2   | 1   |     |     | 170.10        | 327                        |
| 170.05        |     | 4   | 4   | 7   |     |     |     |     | 1   |     |     |     | 170.05        | 343                        |
| 170.00        | 2   | 1   | 1   | 1   |     |     |     |     |     |     |     | 1   | 170.00        | 349                        |
| 169.95        | 8   |     |     | 3   |     |     |     |     |     |     |     |     | 169.95        | 360                        |
| 169.90        |     |     | 1   | 1   |     |     |     |     |     |     |     |     | 169.90        | 362                        |
| 169.85        |     |     | 1   | 1   |     |     |     |     |     |     |     |     | 169.85        | 364                        |
| 169.80        |     |     |     | 1   |     |     |     |     |     |     |     |     | 169.80        | 365                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 3009: American Falls, Niagara Falls, New York on Niagara River

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 169.99  | 170.21  | 170.16  | 170.04  | 170.35  | 170.42  | 170.30  | 170.36  | 170.20  | 170.17  | 170.29  | 170.05  |
| 2    | 169.99  | 170.11  | 170.12  | 169.94  | 170.35  | 170.25  | 170.34  | 170.33  | 170.20  | 170.24  | 170.28  | 170.19  |
| 3    | 170.18  | 170.12  | 170.16  | 169.98  | 170.36  | 170.29  | 170.40  | 170.29  | 170.28  | 170.28  | 170.39  | 170.51  |
| 4    | 170.21  | 170.10  | 170.21  | 170.06  | 170.29  | 170.32  | 170.28  | 170.27  | 170.30  | 170.22  | 170.26  | 170.59  |
| 5    | 170.29  | 170.10  | 170.24  | 169.85  | 170.32  | 170.32  | 170.32  | 170.28  | 170.27  | 170.29  | 170.33  | 170.55  |
| 6    | 170.34  | 170.04  | 170.24  | 170.11  | 170.31  | 170.22  | 170.24  | 170.26  | 170.20  | 170.41  | 170.29  | 170.56  |
| 7    | 170.33  | 170.07  | 170.12  | 170.06  | 170.30  | 170.32  | 170.38  | 170.27  | 170.20  | 170.28  | 170.30  | 170.42  |
| 8    | 170.30  | 170.19  | 170.07  | 169.90  | 170.31  | 170.31  | 170.27  | 170.22  | 170.22  | 170.29  | 170.29  | 170.26  |
| 9    | 170.35  | 170.14  | 170.06  | 170.06  | 170.28  | 170.35  | 170.28  | 170.26  | 170.18  | 170.17  | 170.46  | 170.36  |
| 10   | 170.24  | 170.11  | 170.15  | 170.19  | 170.27  | 170.31  | 170.27  | 170.20  | 170.18  | 170.15  | 170.28  | 170.60  |
| 11   | 170.11  | 170.13  | 170.35  | 170.12  | 170.28  | 170.31  | 170.25  | 170.35  | 170.30  | 170.27  | 170.29  | 170.57  |
| 12   | 170.12  | 170.12  | 170.07  | 170.08  | 170.24  | 170.36  | 170.30  | 170.23  | 170.28  | 170.26  | 170.35  | 170.58  |
| 13   | 170.12  | 170.15  | 170.19  | 170.06  | 170.20  | 170.35  | 170.37  | 170.22  | 170.21  | 170.26  | 170.38  | 170.39  |
| 14   | 170.14  | 170.15  | 170.21  | 170.08  | 170.29  | 170.28  | 170.37  | 170.26  | 170.13  | 170.53  | 170.38  | 170.46  |
| 15   | 170.13  | 170.12  | 170.24  | 170.00  | 170.28  | 170.29  | 170.33  | 170.29  | 170.12  | 170.45  | 170.53  | 170.34  |
| 16   | 170.16  | 170.14  | 170.22  | 170.15  | 170.39  | 170.44  | 170.28  | 170.24  | 170.09  | 170.25  | 170.29  | 170.38  |
| 17   | 170.16  | 170.09  | 170.26  | 170.22  | 170.32  | 170.34  | 170.30  | 170.26  | 170.20  | 170.20  | 170.29  | 170.37  |
| 18   | 170.15  | 170.13  | 170.23  | 170.11  | 170.30  | 170.47  | 170.40  | 170.19  | 170.23  | 170.23  | 170.24  | 170.43  |
| 19   | 170.14  | 170.15  | 170.33  | 170.08  | 170.33  | 170.52  | 170.36  | 170.15  | 170.20  | 170.27  | 170.25  | 170.25  |
| 20   | 170.03  | 170.21  | 169.90  | 169.98  | 170.38  | 170.46  | 170.38  | 170.19  | 170.21  | 170.25  | 170.24  | 170.29  |
| 21   | 170.05  | 170.22  | 169.95  | 170.25  | 170.35  | 170.46  | 170.27  | 170.23  | 170.20  | 170.25  | 170.33  | 170.27  |
| 22   | 170.00  | 170.18  | 170.05  | 170.34  | 170.30  | 170.43  | 170.28  | 170.18  | 170.18  | 170.23  | 170.34  | 170.36  |
| 23   | 169.96  | 170.15  | 170.12  | 170.26  | 170.36  | 170.51  | 170.27  | 170.24  | 170.22  | 170.26  | 170.34  | 170.54  |
| 24   | 169.98  | 170.19  | 170.25  | 170.25  | 170.31  | 170.51  | 170.27  | 170.24  | 170.21  | 170.18  | 170.45  | 170.30  |
| 25   | 170.00  | 170.15  | 170.24  | 170.26  | 170.30  | 170.49  | 170.36  | 170.21  | 170.19  | 170.19  | 170.33  | 170.45  |
| 26   | 169.97  | 170.16  | 170.22  | 170.26  | 170.28  | 170.39  | 170.33  | 170.23  | 170.25  | 170.25  | 170.31  | 170.28  |
| 27   | 169.99  | 170.16  | 170.10  | 170.22  | 170.35  | 170.48  | 170.31  | 170.22  | 170.21  | 170.32  | 170.33  | 170.26  |
| 28   | 170.21  | 170.19  | 170.20  | 170.28  | 170.40  | 170.46  | 170.25  | 170.23  | 170.25  | 170.38  | 170.47  | 170.28  |
| 29   | 170.25  |         | 170.22  | 170.31  | 170.33  | 170.44  | 170.31  | 170.24  | 170.26  | 170.41  | 170.31  | 170.26  |
| 30   | 170.27  |         | 170.25  | 170.29  | 170.31  | 170.38  | 170.29  | 170.21  | 170.27  | 170.31  | 170.25  | 170.27  |
| 31   | 170.20  |         | 170.28  |         | 170.33  |         | 170.31  | 170.20  |         | 170.24  |         | 170.30  |
| MEAN | 170.14  | 170.14  | 170.17  | 170.13  | 170.32  | 170.38  | 170.31  | 170.24  | 170.21  | 170.27  | 170.33  | 170.38  |
| MAX. | 170.46  | 170.28  | 170.60  | 170.53  | 170.52  | 170.60  | 170.63  | 170.55  | 170.54  | 170.63  | 170.65  | 170.63  |
| MIN. | 0800/09 | 0800/01 | 1600/19 | 1000/22 | 0600/24 | 0600/25 | 0600/26 | 0600/11 | 0700/30 | 0600/15 | 1400/09 | 0700/06 |
|      | 169.88  | 169.90  | 169.82  | 169.55  | 169.97  | 170.00  | 170.02  | 169.94  | 169.89  | 169.90  | 170.06  | 169.97  |
|      | 1100/02 | 2300/06 | 1000/20 | 2200/08 | 2100/12 | 2000/06 | 2100/11 | 2100/19 | 1800/16 | 1900/01 | 2300/18 | 0600/01 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 170.25

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 3012: Niagara Intake, Niagara Falls, New York on Niagara River

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST

Monthly mean elevation: 171.32 Jun  
 Daily mean elevation: 171.67 6 Jan  
 Instant/hourly elevation: 171.97 1700/6 Jan

LOWEST

Monthly mean elevation: 171.10 Sep  
 Daily mean elevation: 170.78 8 Jan  
 Instant/hourly elevation: 170.66 1000/8 Jan

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 171.67 | 6 Jan  |
| 171.24 | 28 Feb |
| 171.46 | 11 Mar |
| 171.50 | 22 Apr |
| 171.33 | 28 May |
| 171.49 | 19 Jun |
| 171.35 | 18 Jul |
| 171.28 | 11 Aug |
| 171.21 | 11 Sep |
| 171.47 | 14 Oct |
| 171.42 | 15 Nov |
| 171.60 | 4 Dec  |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 170.78 | 8 Jan  |
| 170.95 | 7 Feb  |
| 171.08 | 9 Mar  |
| 171.02 | 12 Apr |
| 171.09 | 13 May |
| 171.14 | 6 Jun  |
| 171.08 | 8 Jul  |
| 171.04 | 19 Aug |
| 170.96 | 16 Sep |
| 171.01 | 10 Oct |
| 171.04 | 18 Nov |
| 170.79 | 1 Dec  |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(m.) | No. of days
above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 171.65 | 1 | | | | | | | | | | | | 171.65 | 1 |
| 171.60 | | | | | | | | | | | | | 171.60 | 1 |
| 171.55 | | | | | | | | | | | | 2 | 171.55 | 3 |
| 171.50 | | | | | | | | | | | | 1 | 171.50 | 4 |
| 171.45 | 1 | | 1 | 2 | | 1 | | | | 1 | | 5 | 171.45 | 15 |
| 171.40 | 1 | | | | | 6 | | | | | 1 | 2 | 171.40 | 23 |
| 171.35 | | | 1 | | | 5 | | | | 1 | 2 | 2 | 171.35 | 34 |
| 171.30 | 2 | | | | 3 | 1 | 3 | | | 2 | 1 | 2 | 171.30 | 48 |
| 171.25 | 1 | | | 3 | 8 | 6 | 6 | 2 | | 1 | 2 | 2 | 171.25 | 79 |
| 171.20 | 7 | 2 | 1 | 2 | 12 | 9 | 10 | 3 | 1 | | 2 | 3 | 171.20 | 131 |
| 171.15 | 7 | 12 | 8 | 9 | 6 | 1 | 10 | 6 | 5 | 7 | 7 | 6 | 171.15 | 215 |
| 171.10 | 4 | 11 | 17 | 3 | 1 | 1 | 1 | 15 | 6 | 12 | 11 | 5 | 171.10 | 302 |
| 171.05 | 3 | 1 | 1 | 5 | 1 | | 1 | 4 | 14 | 3 | 2 | 1 | 171.05 | 338 |
| 171.00 | 1 | | | 6 | | | | 1 | 2 | 4 | 2 | | 171.00 | 354 |
| 170.95 | 1 | 1 | | | | | | | 2 | | | 1 | 170.95 | 359 |
| 170.90 | | 1 | | | | | | | | | | | 170.90 | 360 |
| 170.85 | 1 | | | | | | | | | | | | 170.85 | 361 |
| 170.80 | | | | | | | | | | | | | 170.80 | 361 |
| 170.75 | 1 | | | | | | | | | | | 1 | 170.75 | 363 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986
Station 3012: Niagara Intake, Niagara Falls, New York on Niagara River

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 171.25 | 171.22 | 171.14 | 171.10* | 171.30 | 171.35 | 171.22 | 171.28 | 171.08 | 171.05 | 171.15 | 170.79 |
| 2 | 171.16 | 171.14 | 171.15 | 171.09 | 171.30 | 171.19* | 171.27 | 171.25 | 171.09 | 171.12 | 171.14 | 171.00 |
| 3 | 171.16 | 171.11 | 171.14 | 171.04 | 171.29 | 171.24 | 171.33 | 171.22 | 171.16 | 171.18 | 171.26 | 171.47 |
| 4 | 171.21 | 171.08 | 171.15 | 171.09 | 171.22 | 171.25 | 171.19 | 171.21 | 171.18 | 171.10 | 171.11 | 171.60 |
| 5 | 171.43 | 171.14 | 171.16 | 171.04 | 171.25 | 171.25 | 171.22 | 171.20 | 171.18 | 171.20 | 171.17 | 171.47 |
| 6 | 171.67 | 170.97 | 171.20 | 171.19 | 171.24 | 171.14 | 171.12 | 171.18 | 171.11 | 171.34 | 171.14 | 171.49 |
| 7 | 170.96 | 170.95 | 171.22 | 171.11 | 171.23 | 171.24 | 171.27* | 171.20 | 171.09 | 171.18 | 171.13 | 171.31 |
| 8 | 170.78 | 171.18 | 171.14 | 171.04 | 171.22 | 171.25 | 171.08* | 171.14 | 171.11 | 171.20 | 171.14 | 171.07 |
| 9 | 171.19 | 171.20 | 171.08 | 171.10 | 171.19 | 171.27 | 171.19 | 171.18 | 171.08 | 171.06 | 171.40 | 171.19 |
| 10 | 171.08 | 171.17 | 171.14 | 171.15 | 171.18 | 171.23 | 171.20 | 171.11 | 171.07 | 171.01 | 171.14 | 171.56 |
| 11 | 170.89 | 171.15 | 171.46 | 171.17 | 171.19 | 171.24 | 171.17 | 171.28 | 171.21 | 171.13 | 171.13 | 171.49 |
| 12 | 171.24 | 171.15 | 171.15 | 171.02 | 171.13 | 171.29 | 171.21 | 171.14 | 171.19 | 171.14 | 171.22 | 171.54 |
| 13 | 171.18 | 171.18 | 171.13 | 171.03 | 171.09 | 171.30 | 171.29 | 171.13* | 171.10 | 171.14 | 171.27 | 171.28 |
| 14 | 171.10 | 171.18 | 171.14 | 171.05 | 171.19 | 171.21 | 171.30 | 171.16 | 171.02 | 171.47 | 171.25 | 171.39 |
| 15 | 171.03 | 171.18 | 171.16 | 171.07 | 171.20 | 171.22 | 171.25 | 171.19 | 171.00 | 171.39 | 171.42 | 171.23 |
| 16 | 171.23* | 171.19 | 171.14 | 171.29 | 171.32 | 171.41 | 171.20 | 171.13 | 170.96 | 171.16 | 171.14 | 171.25 |
| 17 | 171.28 | 171.14 | 171.16 | 171.18 | 171.25 | 171.29 | 171.23 | 171.15 | 171.06 | 171.09 | 171.15 | 171.23 |
| 18 | 171.25 | 171.15 | 171.12 | 171.29 | 171.23 | 171.43 | 171.35 | 171.08 | 171.10 | 171.12 | 171.04 | 171.34 |
| 19 | 171.20 | 171.15 | 171.36 | 171.30 | 171.26 | 171.49 | 171.29 | 171.04 | 171.06 | 171.15 | 171.07 | 171.17 |
| 20 | 171.11 | 171.14 | 171.19 | 171.22 | 171.31 | 171.40 | 171.32 | 171.07 | 171.07 | 171.14 | 171.05 | 171.17 |
| 21 | 171.10 | 171.18 | 171.15 | 171.47 | 171.30 | 171.40 | 171.20 | 171.12 | 171.06 | 171.14 | 171.18 | 171.15 |
| 22 | 171.16 | 171.14 | 171.18 | 171.50 | 171.23 | 171.36 | 171.21 | 171.06 | 171.05 | 171.11 | 171.17 | 171.27 |
| 23 | 171.15 | 171.18 | 171.15 | 171.19 | 171.30 | 171.44 | 171.19 | 171.13 | 171.11 | 171.15 | 171.18 | 171.48 |
| 24 | 171.11 | 171.19 | 171.15 | 171.17 | 171.24 | 171.43 | 171.19 | 171.14 | 171.09 | 171.04 | 171.33 | 171.13 |
| 25 | 171.19 | 171.18 | 171.13 | 171.18 | 171.23 | 171.39 | 171.27 | 171.12 | 171.06 | 171.04 | 171.18 | 171.36 |
| 26 | 171.15 | 171.18 | 171.17 | 171.18 | 171.20 | 171.29 | 171.25 | 171.13 | 171.12 | 171.11 | 171.15 | 171.17 |
| 27 | 171.21 | 171.13 | 171.13 | 171.12 | 171.28 | 171.42 | 171.22 | 171.15 | 171.06 | 171.20 | 171.20 | 171.13 |
| 28 | 171.50 | 171.24* | 171.16 | 171.20 | 171.33 | 171.41 | 171.16 | 171.13 | 171.11 | 171.27 | 171.36 | 171.18 |
| 29 | 171.35 | | 171.15* | 171.24 | 171.27 | 171.39 | 171.23 | 171.14 | 171.15 | 171.31 | 171.17 | 171.14 |
| 30 | 171.35 | | / | 171.20 | 171.24 | 171.30 | 171.20 | 171.11 | 171.17 | 171.18 | 171.06 | 171.14 |
| 31 | 171.24 | | / | | 171.25 | | 171.21 | 171.08 | | 171.11 | | 171.16 |
| MEAN | 171.19 | 171.15 | 171.17 | 171.17 | 171.24 | 171.32 | 171.23 | 171.15 | 171.10 | 171.16 | 171.18 | 171.27 |
| MAX. | 171.97 | 171.29 | 171.66 | 171.73 | 171.47 | 171.56 | 171.57 | 171.47 | 171.47 | 171.61 | 171.64 | 171.66 |
| MIN. | 170.66 | 170.70 | 171.04 | 170.73 | 170.86 | 170.96 | 170.90 | 170.84 | 170.81 | 170.77 | 170.83 | 170.69 |
| | 1000/08 | 0200/07 | 0200/10 | 2200/12 | 2100/13 | 2000/15 | 2100/06 | 2100/22 | 1900/21 | 1900/10 | 2200/18 | 0600/01 |

* Indicates Less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL MEAN: 171.19

ANNUAL SUMMARY OF LEVELS, 1986
 Station 3020: Buffalo Harbor, Buffalo, New York on Lake Erie

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

HIGHEST
 Monthly mean elevation: 174.83 Jul
 Daily mean elevation: 175.23 4 Dec
 Instant/hourly elevation: 175.69 0100/4 Dec

LOWEST
 Monthly mean elevation: 174.50 Feb
 Daily mean elevation: 174.11 6 Feb
 Instant/hourly elevation: 173.60 2400/6 Feb

HIGHEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 174.90 | 5 Jan |
| 174.66 | 23 Feb |
| 174.85 | 19 Mar |
| 174.87 | 21 Apr |
| 174.85 | 1 May |
| 174.94 | 24 Jun |
| 174.94 | 14 Jul |
| 174.88 | 9 Aug |
| 174.80 | 12 Sep |
| 175.11 | 14 Oct |
| 175.09 | 9 Nov |
| 175.23 | 4 Dec |

LOWEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 174.38 | 24 Jan |
| 174.11 | 6 Feb |
| 174.48 | 12 Mar |
| 174.57 | 4 Apr |
| 174.62 | 12 May |
| 174.67 | 6 Jun |
| 174.73 | 11 Jul |
| 174.60 | 22 Aug |
| 174.49 | 17 Sep |
| 174.56 | 10 Oct |
| 174.38 | 18 Nov |
| 174.28 | 1 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(m.) | No. of days<br>above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 175.20        |     |     |     |     |     |     |     |     |     |     |     | 1   | 175.20        | 1                          |
| 175.15        |     |     |     |     |     |     |     |     |     |     |     |     | 175.15        | 1                          |
| 175.10        |     |     |     |     |     |     |     |     |     | 1   |     |     | 175.10        | 2                          |
| 175.05        |     |     |     |     |     |     |     |     |     |     | 1   | 1   | 175.05        | 4                          |
| 175.00        |     |     |     |     |     |     |     |     |     |     |     | 1   | 175.00        | 5                          |
| 174.95        |     |     |     |     |     |     |     |     |     |     |     |     | 174.95        | 5                          |
| 174.90        |     |     |     |     |     | 5   | 2   |     |     | 1   |     | 1   | 174.90        | 14                         |
| 174.85        | 1   |     |     | 1   |     | 9   | 5   | 1   |     | 3   |     | 2   | 174.85        | 36                         |
| 174.80        |     |     | 1   |     | 4   | 7   | 16  | 7   |     | 2   | 2   | 5   | 174.80        | 80                         |
| 174.75        |     |     | 1   | 5   | 13  | 1   | 7   | 6   | 2   | 6   | 4   | 4   | 174.75        | 129                        |
| 174.70        | 2   |     | 10  | 15  | 7   | 4   | 1   | 7   | 2   | 5   | 3   | 4   | 174.70        | 189                        |
| 174.65        | 1   | 1   | 7   | 5   | 4   | 4   |     | 6   | 6   | 7   | 8   | 6   | 174.65        | 244                        |
| 174.60        | 3   | 1   | 2   | 1   | 3   |     |     | 3   | 7   | 4   | 5   | 2   | 174.60        | 275                        |
| 174.55        | 2   | 7   | 6   | 3   |     |     |     | 1   | 8   | 2   | 3   |     | 174.55        | 307                        |
| 174.50        | 3   | 8   | 3   |     |     |     |     |     | 3   |     | 2   | 1   | 174.50        | 327                        |
| 174.45        | 9   | 5   | 1   |     |     |     |     |     | 2   |     |     | 2   | 174.45        | 346                        |
| 174.40        | 6   | 3   |     |     |     |     |     |     |     |     |     |     | 174.40        | 355                        |
| 174.35        | 4   | 1   |     |     |     |     |     |     |     |     | 2   |     | 174.35        | 362                        |
| 174.30        |     | 1   |     |     |     |     |     |     |     |     |     |     | 174.30        | 363                        |
| 174.25        |     |     |     |     |     |     |     |     |     |     |     | 1   | 174.25        | 364                        |
| 174.20        |     |     |     |     |     |     |     |     |     |     |     |     | 174.20        | 364                        |
| 174.15        |     |     |     |     |     |     |     |     |     |     |     |     | 174.15        | 364                        |
| 174.10        |     | 1   |     |     |     |     |     |     |     |     |     |     | 174.10        | 365                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986  
Station 3020: Buffalo Harbor, Buffalo, New York on Lake Erie

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 174.64  | 174.41  | 174.59  | 174.71  | 174.85  | 174.79  | 174.77  | 174.85  | 174.62  | 174.61  | 174.75  | 174.28  |
| 2    | 174.45  | 174.49  | 174.56  | 174.67  | 174.84  | 174.68  | 174.85  | 174.83  | 174.60  | 174.67  | 174.70  | 174.51  |
| 3    | 174.47  | 174.41  | 174.55  | 174.61  | 174.82  | 174.69  | 174.84  | 174.83  | 174.59  | 174.78  | 174.81  | 175.09  |
| 4    | 174.39  | 174.37  | 174.58  | 174.57  | 174.75  | 174.75  | 174.86  | 174.80  | 174.66  | 174.68  | 174.64  | 175.23  |
| 5    | 174.90  | 174.49  | 174.55  | 174.58  | 174.78  | 174.70  | 174.85  | 174.76  | 174.73  | 174.93  | 174.60  | 174.80  |
| 6    | 174.73  | 174.11  | 174.69  | 174.70  | 174.77  | 174.67  | 174.83  | 174.73  | 174.64  | 174.87  | 174.68  | 174.85  |
| 7    | 174.50  | 174.32  | 174.71  | 174.71  | 174.77  | 174.74  | 174.85  | 174.80  | 174.64  | 174.85  | 174.64  | 174.83  |
| 8    | 174.53  | 174.57  | 174.57  | 174.74  | 174.73  | 174.82  | 174.81  | 174.85  | 174.69  | 174.88  | 174.66  | 174.46  |
| 9    | 174.75  | 174.56  | 174.53  | 174.78  | 174.64  | 174.75  | 174.84  | 174.88  | 174.62  | 174.64  | 175.09  | 174.73  |
| 10   | 174.55  | 174.53  | 174.60  | 174.77  | 174.68  | 174.75  | 174.80  | 174.79  | 174.64  | 174.56  | 174.69  | 175.04  |
| 11   | 174.47  | 174.52  | 174.78  | 174.75  | 174.68  | 174.84  | 174.73  | 174.85  | 174.75  | 174.69  | 174.68  | 174.82  |
| 12   | 174.68  | 174.56  | 174.48  | 174.71  | 174.62  | 174.91  | 174.82  | 174.78  | 174.80  | 174.72  | 174.82  | 174.90  |
| 13   | 174.47  | 174.59  | 174.58  | 174.70  | 174.65  | 174.91  | 174.92  | 174.69  | 174.68  | 174.73  | 174.78  | 174.73  |
| 14   | 174.40  | 174.51  | 174.64  | 174.59  | 174.66  | 174.85  | 174.94  | 174.73  | 174.59  | 175.11  | 174.80  | 174.93  |
| 15   | 174.41  | 174.56  | 174.69  | 174.72  | 174.71  | 174.85  | 174.84  | 174.79  | 174.49  | 174.86  | 174.80  | 174.74  |
| 16   | 174.40  | 174.45  | 174.69  | 174.71  | 174.76  | 174.93  | 174.83  | 174.75  | 174.52  | 174.77  | 174.70  | 174.67  |
| 17   | 174.45  | 174.47  | 174.67  | 174.68  | 174.72  | 174.88  | 174.83  | 174.74  | 174.49  | 174.64  | 174.71  | 174.64  |
| 18   | 174.41  | 174.51  | 174.63  | 174.71  | 174.74  | 174.89  | 174.87  | 174.68  | 174.57  | 174.68  | 174.38  | 174.88  |
| 19   | 174.41  | 174.52  | 174.85  | 174.72  | 174.67  | 174.92  | 174.85  | 174.61  | 174.54  | 174.72  | 174.53  | 174.80  |
| 20   | 174.58  | 174.51  | 174.74  | 174.69  | 174.77  | 174.86  | 174.86  | 174.64  | 174.56  | 174.77  | 174.52  | 174.69  |
| 21   | 174.47  | 174.55  | 174.72  | 174.87  | 174.77  | 174.82  | 174.79  | 174.69  | 174.51  | 174.77  | 174.64  | 174.67  |
| 22   | 174.59  | 174.50  | 174.73  | 174.76  | 174.77  | 174.89  | 174.81  | 174.60  | 174.56  | 174.73  | 174.60  | 174.84  |
| 23   | 174.45  | 174.66  | 174.74  | 174.78  | 174.80  | 174.90  | 174.80  | 174.81  | 174.66  | 174.74  | 174.64  | 174.78  |
| 24   | 174.38  | 174.57  | 174.69  | 174.74  | 174.77  | 174.94  | 174.81  | 174.74  | 174.62  | 174.59  | 174.76  | 174.47  |
| 25   | 174.51  | 174.58  | 174.70  | 174.74  | 174.76  | 174.87  | 174.82  | 174.68  | 174.56  | 174.62  | 174.61  | 174.81  |
| 26   | 174.49  | 174.47  | 174.73  | 174.73  | 174.72  | 174.84  | 174.87  | 174.75  | 174.66  | 174.66  | 174.56  | 174.71  |
| 27   | 174.62  | 174.55  | 174.75  | 174.71  | 174.74  | 174.89  | 174.80  | 174.81  | 174.59  | 174.78  | 174.70  | 174.69  |
| 28   | 174.63  | 174.63  | 174.71  | 174.74  | 174.78  | 174.89  | 174.79  | 174.73  | 174.64  | 174.77  | 174.75  | 174.76  |
| 29   | 174.46  |         | 174.71  | 174.79  | 174.79  | 174.86  | 174.88  | 174.68  | 174.68  | 174.81  | 174.70  | 174.69  |
| 30   | 174.48  |         | 174.73  | 174.74  | 174.81  | 174.83  | 174.81  | 174.66  | 174.78  | 174.67  | 174.39  | 174.65  |
| 31   | 174.46  |         | 174.66  |         | 174.80  |         | 174.78  | 174.61  |         | 174.66  |         | 174.66  |
| MEAN | 174.52  | 174.50  | 174.66  | 174.71  | 174.75  | 174.83  | 174.83  | 174.75  | 174.62  | 174.74  | 174.68  | 174.75  |
| MAX. | 175.61  | 174.99  | 175.46  | 175.34  | 175.24  | 175.24  | 175.26  | 175.66  | 175.21  | 175.35  | 175.63  | 175.69  |
|      | 2300/05 | 1900/07 | 0700/11 | 2200/28 | 2100/18 | 2000/12 | 0200/26 | 0200/27 | 0900/12 | 1100/14 | 1700/09 | 0100/04 |
| MIN. | 174.25  | 173.60  | 174.26  | 174.35  | 174.49  | 174.42  | 174.60  | 174.39  | 174.28  | 174.37  | 174.03  | 174.13  |
|      | 1700/24 | 2400/06 | 1300/11 | 0500/05 | 0200/13 | 2300/01 | 2100/11 | 0800/27 | 0100/16 | 1100/09 | 2000/18 | 0400/01 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 174.70

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 3028: Sturgeon Point, New York on Lake Erie

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST  
 Monthly mean elevation: 174.83 Jun  
 Daily mean elevation: 175.15 4 Dec  
 Instant/hourly elevation: 175.50 2300/5 Jan

LOWEST  
 Monthly mean elevation: 174.52 Feb  
 Daily mean elevation: 174.14 6 Feb  
 Instant/hourly elevation: 173.72 2400/6 Feb

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 174.89 | 5 Jan  |
| 174.68 | 23 Feb |
| 174.86 | 19 Mar |
| 174.86 | 21 Apr |
| 174.85 | 1 May  |
| 174.93 | 24 Jun |
| 174.92 | 14 Jul |
| 174.86 | 9 Aug  |
| 174.77 | 30 Sep |
| 175.06 | 14 Oct |
| 175.03 | 9 Nov  |
| 175.15 | 4 Dec  |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 174.40 | 24 Jan |
| 174.14 | 6 Feb  |
| 174.49 | 12 Mar |
| 174.62 | 14 Apr |
| 174.64 | 12 May |
| 174.69 | 6 Jun  |
| 174.73 | 11 Jul |
| 174.60 | 22 Aug |
| 174.49 | 17 Sep |
| 174.58 | 10 Oct |
| 174.41 | 18 Nov |
| 174.32 | 1 Dec  |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(m.) | No. of days
above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 175.10 | | | | | | | | | | | | 1 | 175.10 | 1 |
| 175.05 | | | | | | | | | | 1 | | | 175.05 | 2 |
| 175.00 | | | | | | | | | | | 1 | 2 | 175.00 | 5 |
| 174.95 | | | | | | | | | | | | | 174.95 | 5 |
| 174.90 | | | | | | 4 | 2 | | | 1 | | | 174.90 | 12 |
| 174.85 | 1 | | 1 | 1 | | 12 | 3 | 1 | | 1 | | 2 | 174.85 | 34 |
| 174.80 | | | | 1 | 4 | 5 | 16 | 6 | | 3 | 1 | 3 | 174.80 | 73 |
| 174.75 | 1 | | 6 | 6 | 12 | 2 | 9 | 6 | 2 | 7 | 4 | 5 | 174.75 | 133 |
| 174.70 | 1 | | 9 | 17 | 8 | 5 | 1 | 8 | 2 | 5 | 3 | 6 | 174.70 | 198 |
| 174.65 | 1 | 1 | 4 | 2 | 5 | 2 | | 5 | 4 | 7 | 8 | 7 | 174.65 | 244 |
| 174.60 | 4 | 1 | 3 | 3 | 2 | | | 4 | 9 | 4 | 7 | 1 | 174.60 | 282 |
| 174.55 | 2 | 10 | 6 | | | | | 1 | 8 | 2 | 2 | | 174.55 | 313 |
| 174.50 | 4 | 7 | 1 | | | | | | 3 | | 2 | 1 | 174.50 | 331 |
| 174.45 | 10 | 4 | 1 | | | | | | 2 | | | 2 | 174.45 | 350 |
| 174.40 | 6 | 2 | | | | | | | | | 2 | | 174.40 | 360 |
| 174.35 | 1 | 2 | | | | | | | | | | | 174.35 | 363 |
| 174.30 | | | | | | | | | | | | | 174.30 | 364 |
| 174.25 | | | | | | | | | | | | 1 | 174.25 | 364 |
| 174.20 | | | | | | | | | | | | | 174.20 | 364 |
| 174.15 | | | | | | | | | | | | | 174.15 | 364 |
| 174.10 | | 1 | | | | | | | | | | | 174.10 | 365 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 3028: Sturgeon Point, New York on Lake Erie

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 174.64 | 174.44 | 174.61 | 174.74 | 174.85 | 174.80 | 174.78 | 174.85 | 174.62 | 174.62 | 174.74 | 174.32 |
| 2 | 174.47 | 174.51 | 174.58 | 174.71 | 174.82 | 174.71 | 174.85 | 174.81 | 174.60 | 174.67 | 174.70 | 174.53 |
| 3 | 174.50 | 174.43 | 174.58 | 174.66 | 174.81 | 174.70 | 174.83 | 174.83 | 174.59 | 174.77 | 174.80 | 175.03 |
| 4 | 174.42 | 174.39 | 174.59 | 174.62 | 174.74 | 174.75 | 174.85 | 174.79 | 174.64 | 174.69 | 174.65 | 175.15 |
| 5 | 174.89 | 174.50 | 174.57 | 174.62 | 174.77 | 174.72 | 174.84 | 174.75 | 174.71 | 174.92 | 174.61 | 174.78 |
| 6 | 174.71 | 174.14 | 174.72 | 174.72 | 174.75 | 174.69 | 174.83 | 174.72 | 174.63 | 174.85 | 174.68 | 174.82 |
| 7 | 174.51 | 174.37 | 174.72 | 174.74 | 174.76 | 174.74 | 174.83 | 174.81 | 174.63 | 174.83 | 174.64 | 174.80 |
| 8 | 174.55 | 174.59 | 174.59 | 174.77 | 174.74 | 174.81 | 174.80 | 174.84 | 174.68 | 174.85 | 174.65 | 174.49 |
| 9 | 174.77 | 174.59 | 174.55 | 174.81 | 174.65 | 174.75 | 174.83 | 174.86 | 174.61 | 174.65 | 175.03 | 174.74 |
| 10 | 174.56 | 174.56 | 174.62 | 174.80 | 174.69 | 174.76 | 174.80 | 174.78 | 174.62 | 174.58 | 174.69 | 175.02 |
| 11 | 174.49 | 174.54 | 174.79 | 174.79 | 174.70 | 174.83 | 174.73 | 174.83 | 174.72 | 174.68 | 174.68 | 174.80 |
| 12 | 174.70 | 174.58 | 174.49 | 174.74 | 174.64 | 174.92 | 174.83 | 174.77 | 174.77 | 174.72 | 174.81 | 174.87 |
| 13 | 174.49 | 174.60 | 174.60 | 174.72 | 174.66 | 174.89 | 174.91 | 174.69 | 174.66 | 174.73 | 174.78 | 174.74 |
| 14 | 174.42 | 174.53 | 174.66 | 174.62 | 174.66 | 174.86 | 174.92 | 174.73 | 174.59 | 175.06 | 174.77 | 174.88 |
| 15 | 174.43 | 174.57 | 174.71 | 174.74 | 174.72 | 174.86 | 174.83 | 174.78 | 174.50 | 174.86 | 174.77 | 174.74 |
| 16 | 174.42 | 174.47 | 174.70 | 174.74 | 174.76 | 174.93 | 174.83 | 174.75 | 174.53 | 174.77 | 174.70 | 174.68 |
| 17 | 174.46 | 174.50 | 174.69 | 174.71 | 174.72 | 174.88 | 174.82 | 174.73 | 174.49 | 174.66 | 174.69 | 174.64 |
| 18 | 174.42 | 174.53 | 174.64 | 174.73 | 174.74* | 174.89 | 174.86 | 174.69 | 174.57 | 174.68 | 174.41 | 174.85 |
| 19 | 174.43 | 174.54 | 174.86 | 174.74 | 174.69* | 174.92 | 174.84 | 174.62 | 174.54 | 174.72 | 174.54 | 174.80 |
| 20 | 174.59 | 174.54 | 174.76 | 174.70 | 174.77 | 174.86 | 174.87 | 174.64 | 174.56 | 174.76 | 174.53 | 174.70 |
| 21 | 174.49 | 174.57 | 174.74 | 174.86 | 174.78 | 174.83 | 174.80 | 174.68 | 174.52 | 174.76 | 174.64 | 174.68 |
| 22 | 174.61 | 174.53 | 174.76 | 174.77 | 174.78 | 174.89 | 174.80 | 174.60 | 174.57 | 174.73 | 174.61 | 174.81 |
| 23 | 174.47 | 174.68 | 174.77 | 174.78 | 174.79 | 174.90 | 174.80 | 174.80 | 174.64 | 174.74 | 174.63 | 174.75 |
| 24 | 174.40 | 174.59 | 174.71 | 174.75 | 174.77 | 174.93 | 174.81 | 174.74 | 174.62 | 174.60 | 174.75 | 174.49 |
| 25 | 174.53 | 174.60 | 174.72 | 174.74 | 174.77 | 174.87 | 174.81 | 174.67 | 174.57 | 174.62 | 174.60 | 174.79 |
| 26 | 174.51 | 174.49 | 174.75 | 174.74 | 174.73 | 174.84 | 174.85 | 174.72 | 174.66 | 174.66 | 174.57 | 174.72 |
| 27 | 174.64 | 174.57 | 174.78 | 174.72 | 174.75 | 174.88 | 174.79 | 174.78 | 174.60 | 174.78 | 174.69 | 174.70 |
| 28 | 174.65 | 174.65 | 174.74 | 174.74 | 174.78 | 174.88 | 174.79 | 174.72 | 174.64 | 174.76 | 174.73 | 174.75 |
| 29 | 174.48 | | 174.74 | 174.79 | 174.79 | 174.86 | 174.86 | 174.67 | 174.67 | 174.80 | 174.69 | 174.69 |
| 30 | 174.50 | | 174.76 | 174.74 | 174.81 | 174.82 | 174.81 | 174.65 | 174.77 | 174.68 | 174.42 | 174.66 |
| 31 | 174.48 | | 174.69 | | 174.80 | | 174.77 | 174.61 | | 174.65 | | 174.67 |
| MEAN | 174.54 | 174.52 | 174.68 | 174.74 | 174.75 | 174.83 | 174.82 | 174.74 | 174.62 | 174.74 | 174.67 | 174.74 |
| MAX. | 175.50 | 175.01 | 175.42 | 175.11 | 175.02 | 175.23 | 175.12 | 175.19 | 175.14 | 175.27 | 175.45 | 175.49 |
| | 2300/05 | 1900/07 | 0600/11 | 0600/21 | 1900/01 | 2000/12 | 0200/26 | 0300/27 | 0900/12 | 2300/14 | 1700/09 | 2000/03 |
| MIN. | 174.29 | 173.72 | 174.28 | 174.49 | 174.50 | 174.56 | 174.61 | 174.46 | 174.35 | 174.39 | 174.09 | 174.16 |
| | 1800/04 | 2400/06 | 1200/11 | 2300/14 | 0200/13 | 2300/01 | 2100/11 | 0800/27 | 2000/17 | 1100/09 | 1900/18 | 0300/01 |

* Indicates Less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL MEAN: 174.70

ANNUAL SUMMARY OF LEVELS, 1986
 Station 3032: Barcelona, New York on Lake Erie

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

HIGHEST
 Monthly mean elevation: 174.83 Jun
 Daily mean elevation: 175.00 4 Dec
 Instant/hourly elevation: 175.32 0600/11 Mar

LOWEST
 Monthly mean elevation: 174.51 Jan
 Daily mean elevation: 174.23 6 Feb
 Instant/hourly elevation: 173.89 0100/7 Feb

HIGHEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 174.77 | 5 Jan |
| 174.65 | 23 Feb |
| 174.82 | 19 Mar |
| 174.82 | 21 Apr |
| 174.80 | 1 May |
| 174.93 | 16 Jun |
| 174.90 | 14 Jul |
| 174.82 | 9 Aug |
| 174.73 | 30 Sep |
| 174.98 | 14 Oct |
| 174.92 | 9 Nov |
| 175.00 | 4 Dec |

LOWEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 174.41 | 24 Jan |
| 174.23 | 6 Feb |
| 174.51 | 12 Mar |
| 174.63 | 14 Apr |
| 174.66 | 12 May |
| 174.71 | 6 Jun |
| 174.74 | 11 Jul |
| 174.61 | 31 Aug |
| 174.53 | 21 Sep |
| 174.61 | 10 Oct |
| 174.46 | 30 Nov |
| 174.38 | 1 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(m.) | No. of days<br>above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 174.95        |     |     |     |     |     |     |     |     |     | 1   |     | 1   | 174.95        | 2                          |
| 174.90        |     |     |     |     |     | 2   |     |     |     |     | 1   | 2   | 174.90        | 7                          |
| 174.85        |     |     |     |     |     | 13  | 3   |     |     | 1   |     |     | 174.85        | 24                         |
| 174.80        |     |     | 1   | 1   |     | 5   | 21  | 5   |     | 3   |     | 3   | 174.80        | 63                         |
| 174.75        | 1   |     | 2   | 6   | 12  | 3   | 6   | 8   |     | 4   | 2   | 3   | 174.75        | 110                        |
| 174.70        |     |     | 10  | 18  | 12  | 7   | 1   | 8   | 2   | 10  | 5   | 10  | 174.70        | 193                        |
| 174.65        |     |     | 7   | 2   | 7   |     |     | 5   | 3   | 7   | 10  | 7   | 174.65        | 241                        |
| 174.60        | 4   | 2   | 3   | 3   |     |     |     | 5   | 11  | 5   | 6   | 1   | 174.60        | 281                        |
| 174.55        | 4   | 9   | 7   |     |     |     |     |     | 8   |     | 3   |     | 174.55        | 312                        |
| 174.50        | 3   | 7   | 1   |     |     |     |     |     | 6   |     | 1   | 3   | 174.50        | 333                        |
| 174.45        | 11  | 5   |     |     |     |     |     |     |     |     | 2   |     | 174.45        | 351                        |
| 174.40        | 8   | 4   |     |     |     |     |     |     |     |     |     |     | 174.40        | 363                        |
| 174.35        |     |     |     |     |     |     |     |     |     |     |     |     | 174.35        | 364                        |
| 174.30        |     |     |     |     |     |     |     |     |     |     |     | 1   | 174.30        | 364                        |
| 174.25        |     |     |     |     |     |     |     |     |     |     |     |     | 174.25        | 364                        |
| 174.20        |     | 1   |     |     |     |     |     |     |     |     |     |     | 174.20        | 365                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 3032: Barcelona, New York on Lake Erie

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 174.57  | 174.45  | 174.60  | 174.72  | 174.80  | 174.79  | 174.79  | 174.82  | 174.61  | 174.62  | 174.72  | 174.38  |
| 2    | 174.46  | 174.50  | 174.58  | 174.70  | 174.79  | 174.72  | 174.85  | 174.80  | 174.60  | 174.66  | 174.70  | 174.53  |
| 3    | 174.49  | 174.44  | 174.57  | 174.66  | 174.77  | 174.71  | 174.83  | 174.81  | 174.59  | 174.75  | 174.77  | 174.95  |
| 4    | 174.43  | 174.41  | 174.59  | 174.63  | 174.73  | 174.74  | 174.83  | 174.78  | 174.64  | 174.71  | 174.66  | 175.00  |
| 5    | 174.77  | 174.50  | 174.57  | 174.63  | 174.73  | 174.73  | 174.82  | 174.75  | 174.68  | 174.88  | 174.62  | 174.75  |
| 6    | 174.64  | 174.23  | 174.71  | 174.72  | 174.73  | 174.71  | 174.81  | 174.72  | 174.63  | 174.84  | 174.67  | 174.75  |
| 7    | 174.51  | 174.41  | 174.69  | 174.73  | 174.73  | 174.74  | 174.81  | 174.80  | 174.63  | 174.80  | 174.64  | 174.77  |
| 8    | 174.51  | 174.56  | 174.58  | 174.74  | 174.73  | 174.80  | 174.79  | 174.82  | 174.65  | 174.81  | 174.66  | 174.55  |
| 9    | 174.61  | 174.58  | 174.56  | 174.79  | 174.66  | 174.75  | 174.83  | 174.82  | 174.60  | 174.67  | 174.92  | 174.71  |
| 10   | 174.52  | 174.55  | 174.61  | 174.78  | 174.69  | 174.76  | 174.80  | 174.78  | 174.61  | 174.61  | 174.67  | 174.92  |
| 11   | 174.47  | 174.53  | 174.75  | 174.77  | 174.70  | 174.84  | 174.74  | 174.81  | 174.69  | 174.67  | 174.67  | 174.76  |
| 12   | 174.60  | 174.57  | 174.51  | 174.72  | 174.66  | 174.90  | 174.83  | 174.76  | 174.71  | 174.71  | 174.78  | 174.82  |
| 13   | 174.49  | 174.58  | 174.61  | 174.71  | 174.67  | 174.88  | 174.88  | 174.70  | 174.65  | 174.72  | 174.75  | 174.72  |
| 14   | 174.42  | 174.53  | 174.66  | 174.63  | 174.67  | 174.86  | 174.90  | 174.73  | 174.59  | 174.98  | 174.71  | 174.82  |
| 15   | 174.42  | 174.57  | 174.70  | 174.74  | 174.71  | 174.86  | 174.82  | 174.76  | 174.53  | 174.83  | 174.72  | 174.71  |
| 16   | 174.42  | 174.48  | 174.69  | 174.74  | 174.74  | 174.93  | 174.82  | 174.74  | 174.54  | 174.76  | 174.67  | 174.67  |
| 17   | 174.45  | 174.50  | 174.68  | 174.71  | 174.70  | 174.87  | 174.83  | 174.73  | 174.55  | 174.67  | 174.65  | 174.64  |
| 18   | 174.42  | 174.53  | 174.64  | 174.73  | 174.73  | 174.87  | 174.85  | 174.70  | 174.55  | 174.69  | 174.46  | 174.81  |
| 19   | 174.43  | 174.53  | 174.82  | 174.73  | 174.72  | 174.90  | 174.84  | 174.64  | 174.54  | 174.71  | 174.56  | 174.77  |
| 20   | 174.57  | 174.54  | 174.75  | 174.71  | 174.76  | 174.86  | 174.86  | 174.65  | 174.56  | 174.74  | 174.55  | 174.69  |
| 21   | 174.48  | 174.57  | 174.73  | 174.82  | 174.78  | 174.82  | 174.81  | 174.70  | 174.53  | 174.74  | 174.65  | 174.67  |
| 22   | 174.57  | 174.54  | 174.75  | 174.77  | 174.77  | 174.87  | 174.81  | 174.64  | 174.58  | 174.72  | 174.61  | 174.75  |
| 23   | 174.47  | 174.65  | 174.76  | 174.77  | 174.78  | 174.88  | 174.81  | 174.77  | 174.64  | 174.73  | 174.62  | 174.71  |
| 24   | 174.41  | 174.59  | 174.70  | 174.74  | 174.76  | 174.91  | 174.81  | 174.73  | 174.61  | 174.63  | 174.71  | 174.53  |
| 25   | 174.49  | 174.59  | 174.71  | 174.74  | 174.74  | 174.86  | 174.81  | 174.67  | 174.57  | 174.63  | 174.60  | 174.75  |
| 26   | 174.50  | 174.50  | 174.74  | 174.74  | 174.72  | 174.83  | 174.84  | 174.71  | 174.64  | 174.67  | 174.59  | 174.71  |
| 27   | 174.64  | 174.57  | 174.76  | 174.72  | 174.74  | 174.86  | 174.79  | 174.77  | 174.60  | 174.77  | 174.67  | 174.69  |
| 28   | 174.61  | 174.63  | 174.73  | 174.74  | 174.77  | 174.87  | 174.78  | 174.71  | 174.64  | 174.74  | 174.70  | 174.73  |
| 29   | 174.48  |         | 174.73  | 174.76  | 174.78  | 174.85  | 174.85  | 174.66  | 174.66  | 174.77  | 174.67  | 174.68  |
| 30   | 174.49  |         | 174.74  | 174.74  | 174.78  | 174.82  | 174.81  | 174.65  | 174.73  | 174.69  | 174.46  | 174.67  |
| 31   | 174.47  |         | 174.67  |         | 174.78  |         | 174.77  | 174.61  |         | 174.65  |         | 174.67  |
| MEAN | 174.51  | 174.52  | 174.67  | 174.73  | 174.74  | 174.83  | 174.82  | 174.73  | 174.61  | 174.73  | 174.66  | 174.72  |
| MAX. | 175.21  | 174.92  | 175.32  | 175.01  | 174.90  | 175.14  | 175.09  | 175.13  | 175.01  | 175.15  | 175.24  | 175.25  |
|      | 2300/05 | 2000/07 | 0600/11 | 2300/07 | 2200/18 | 2100/12 | 0100/26 | 0300/27 | 0900/12 | 2300/05 | 1800/09 | 1600/03 |
| MIN. | 174.33  | 173.89  | 174.32  | 174.50  | 174.55  | 174.56  | 174.66  | 174.53  | 174.41  | 174.44  | 174.16  | 174.23  |
|      | 1500/24 | 0100/07 | 1300/11 | 2200/14 | 0100/13 | 2100/01 | 2200/11 | 0300/29 | 0600/15 | 1800/01 | 1900/18 | 0300/01 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 174.69

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 303B: Erie, Pennsylvania on Lake Erie

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST  
 Monthly mean elevation: 174.85 Jul  
 Daily mean elevation: 174.95 4 Dec  
 Instant/hourly elevation: 175.21 1900/9 Nov

LOWEST  
 Monthly mean elevation: 174.52 Jan  
 Daily mean elevation: 174.32 6 Feb  
 Instant/hourly elevation: 173.98 0200/7 Feb

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 174.74 | 5 Jan  |
| 174.67 | 23 Feb |
| 174.81 | 19 Mar |
| 174.83 | 21 Apr |
| 174.81 | 31 May |
| 174.92 | 24 Jun |
| 174.91 | 14 Jul |
| 174.84 | 8 Aug  |
| 174.73 | 30 Sep |
| 174.94 | 14 Oct |
| 174.90 | 9 Nov  |
| 174.95 | 4 Dec  |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 174.45 | 24 Jan |
| 174.32 | 6 Feb  |
| 174.56 | 12 Mar |
| 174.67 | 14 Apr |
| 174.71 | 14 May |
| 174.74 | 3 Jun  |
| 174.78 | 11 Jul |
| 174.65 | 31 Aug |
| 174.54 | 17 Sep |
| 174.66 | 1 Oct  |
| 174.52 | 30 Nov |
| 174.45 | 1 Dec  |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(m.) | No. of days
above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 174.90 | | | | | | 3 | 1 | | | 1 | | 1 | 174.90 | 6 |
| 174.85 | | | | | | 14 | 9 | | | 2 | 1 | 2 | 174.85 | 34 |
| 174.80 | | | 1 | 4 | 6 | 5 | 19 | 7 | | 1 | | 2 | 174.80 | 79 |
| 174.75 | | | 6 | 14 | 11 | 5 | 2 | 10 | | 7 | 3 | 4 | 174.75 | 141 |
| 174.70 | 1 | | 11 | 9 | 14 | 3 | | 7 | 2 | 15 | 3 | 13 | 174.70 | 219 |
| 174.65 | | 1 | 3 | 3 | | | | 6 | 8 | | | | 174.65 | 264 |
| 174.60 | 2 | 3 | 6 | | | | | 1 | 10 | 5 | 14 | 5 | 174.60 | 290 |
| 174.55 | 6 | 14 | 4 | | | | | | 9 | | | | 174.55 | 329 |
| 174.50 | 7 | 5 | | | | | | | 1 | | 3 | 3 | 174.50 | 344 |
| 174.45 | 10 | 4 | | | | | | | | | 2 | | 174.45 | 358 |
| 174.40 | 5 | | | | | | | | | | | | 174.40 | 364 |
| 174.35 | | | | | | | | | | | | 1 | 174.35 | 364 |
| 174.30 | | 1 | | | | | | | | | | | 174.30 | 365 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 3038: Erie, Pennsylvania on Lake Erie

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 174.57 | 174.48 | 174.63 | 174.75 | 174.81 | 174.81 | 174.82 | 174.84 | 174.65 | 174.66 | 174.72 | 174.45 |
| 2 | 174.47 | 174.52 | 174.61 | 174.73 | 174.81 | 174.75 | 174.88 | 174.82 | 174.64 | 174.71 | 174.73 | 174.57 |
| 3 | 174.52 | 174.47 | 174.60 | 174.71 | 174.79 | 174.74 | 174.86 | 174.84 | 174.63 | 174.78 | 174.78 | 174.90 |
| 4 | 174.46 | 174.46 | 174.62 | 174.67 | 174.75 | 174.78 | 174.85 | 174.80 | 174.66 | 174.75 | 174.68 | 174.95 |
| 5 | 174.74 | 174.53 | 174.60 | 174.69 | 174.75 | 174.77 | 174.83 | 174.78 | 174.70 | 174.89 | 174.66 | 174.75 |
| 6 | 174.61 | 174.32 | 174.72 | 174.74 | 174.75 | 174.75 | 174.84 | 174.76 | 174.65 | 174.86 | 174.70 | 174.74 |
| 7 | 174.53 | 174.46 | 174.70 | 174.75 | 174.75 | 174.79 | 174.84 | 174.81 | 174.66 | 174.80 | 174.67 | 174.75 |
| 8 | 174.52 | 174.58 | 174.61 | 174.76 | 174.76 | 174.82 | 174.83 | 174.84 | 174.67 | 174.80 | 174.68 | 174.60 |
| 9 | 174.58 | 174.60 | 174.59 | 174.81 | 174.71 | 174.79 | 174.86 | 174.82 | 174.61 | 174.71 | 174.90 | 174.74 |
| 10 | 174.52 | 174.57 | 174.64 | 174.81 | 174.73 | 174.80 | 174.84 | 174.79 | 174.61 | 174.67 | 174.70 | 174.89 |
| 11 | 174.47 | 174.56 | 174.75 | 174.79 | 174.74 | 174.84 | 174.78 | 174.82 | 174.66 | 174.71 | 174.68 | 174.76 |
| 12 | 174.57 | 174.59 | 174.56 | 174.74 | 174.71 | 174.92 | 174.87 | 174.78 | 174.71 | 174.73 | 174.78 | 174.82 |
| 13 | 174.51 | 174.60 | 174.64 | 174.74 | 174.71 | 174.90 | 174.90 | 174.74 | 174.64 | 174.75 | 174.77 | 174.74 |
| 14 | 174.45 | 174.56 | 174.69 | 174.67 | 174.71 | 174.89 | 174.91 | 174.76 | 174.60 | 174.94 | 174.70 | 174.78 |
| 15 | 174.45 | 174.59 | 174.72 | 174.75 | 174.73 | 174.88 | 174.85 | 174.78 | 174.57 | 174.83 | 174.70 | 174.72 |
| 16 | 174.45 | 174.51 | 174.72 | 174.77 | 174.78 | 174.91 | 174.85 | 174.76 | 174.58 | 174.78 | 174.67 | 174.69 |
| 17 | 174.46 | 174.54 | 174.71 | 174.76 | 174.74 | 174.89 | 174.85 | 174.75 | 174.54 | 174.72 | 174.64 | 174.67 |
| 18 | 174.45 | 174.56 | 174.68 | 174.76 | 174.75 | 174.89 | 174.88 | 174.74 | 174.59 | 174.72 | 174.52 | 174.81 |
| 19 | 174.47 | 174.56 | 174.81 | 174.77 | 174.74 | 174.90 | 174.87 | 174.69 | 174.58 | 174.74 | 174.59 | 174.77 |
| 20 | 174.59 | 174.57 | 174.78 | 174.74 | 174.81 | 174.89 | 174.88 | 174.70 | 174.60 | 174.75 | 174.58 | 174.71 |
| 21 | 174.49 | 174.60 | 174.76 | 174.83 | 174.81 | 174.86 | 174.85 | 174.73 | 174.57 | 174.75 | 174.67 | 174.70 |
| 22 | 174.57 | 174.58 | 174.77 | 174.81 | 174.80 | 174.89 | 174.85 | 174.68 | 174.60 | 174.74 | 174.63 | 174.75 |
| 23 | 174.50 | 174.67 | 174.78 | 174.80 | 174.81 | 174.90 | 174.84 | 174.79 | 174.65 | 174.74 | 174.63 | 174.71 |
| 24 | 174.45 | 174.62 | 174.73 | 174.77 | 174.80 | 174.92 | 174.84 | 174.75 | 174.64 | 174.67 | 174.71 | 174.58 |
| 25 | 174.50 | 174.62 | 174.74 | 174.77 | 174.79 | 174.88 | 174.84 | 174.69 | 174.60 | 174.67 | 174.61 | 174.77 |
| 26 | 174.53 | 174.54 | 174.75 | 174.77 | 174.77 | 174.85 | 174.85 | 174.72 | 174.67 | 174.71 | 174.60 | 174.73 |
| 27 | 174.64 | 174.60 | 174.77 | 174.76 | 174.78 | 174.88 | 174.83 | 174.78 | 174.65 | 174.78 | 174.69 | 174.71 |
| 28 | 174.59 | 174.65 | 174.75 | 174.76 | 174.80 | 174.89 | 174.82 | 174.72 | 174.67 | 174.76 | 174.70 | 174.74 |
| 29 | 174.50 | | 174.75 | 174.79 | 174.80 | 174.87 | 174.87 | 174.68 | 174.68 | 174.77 | 174.68 | 174.71 |
| 30 | 174.51 | | 174.76 | 174.77 | 174.80 | 174.85 | 174.84 | 174.67 | 174.73 | 174.72 | 174.52 | 174.70 |
| 31 | 174.49 | | 174.72 | | 174.81 | | 174.80 | 174.65 | | 174.67 | | 174.69 |
| MEAN | 174.52 | 174.55 | 174.70 | 174.76 | 174.77 | 174.85 | 174.85 | 174.76 | 174.63 | 174.75 | 174.68 | 174.73 |
| MAX. | 175.10 | 174.89 | 175.17 | 174.95 | 174.89 | 175.10 | 175.02 | 175.09 | 174.98 | 175.11 | 175.21 | 175.17 |
| | 2200/05 | 1900/07 | 0600/11 | 0400/21 | 1900/01 | 0800/24 | 0300/26 | 0400/27 | 1000/12 | 2200/14 | 1900/09 | 1000/10 |
| MIN. | 174.39 | 173.98 | 174.40 | 174.56 | 174.60 | 174.66 | 174.71 | 174.56 | 174.46 | 174.54 | 174.33 | 174.34 |
| | 1800/24 | 0200/07 | 1200/11 | 2100/14 | 0100/13 | 2100/01 | 1000/26 | 1000/27 | 1800/17 | 1700/01 | 1900/18 | 0500/01 |

* Indicates Less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL MEAN: 174.71

ANNUAL SUMMARY OF LEVELS, 1986
 Station 3053: Fairport Harbor, Ohio on Lake Erie

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

HIGHEST
 Monthly mean elevation: 174.87 Jun
 Daily mean elevation: 174.92 24 Jun
 Instant/hourly elevation: 175.20 2104/5 Oct

LOWEST
 Monthly mean elevation: 174.50 Jan
 Daily mean elevation: 174.42 9 Jan
 Instant/hourly elevation: 174.32 2200/5 Jan

HIGHEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 174.60 | 27 Jan |
| 174.66 | 22 Feb |
| 174.79 | 20 Mar |
| 174.84 | 22 Apr |
| 174.84 | 20 May |
| 174.92 | 24 Jun |
| 174.89 | 21 Jul |
| 174.82 | 8 Aug |
| 174.71 | 30 Sep |
| 174.83 | 5 Oct |
| 174.74 | 2 Nov |
| 174.75 | 13 Dec |

LOWEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 174.42 | 9 Jan |
| 174.53 | 3 Feb |
| 174.63 | 8 Mar |
| 174.75 | 1 Apr |
| 174.75 | 6 May |
| 174.79 | 4 Jun |
| 174.83 | 31 Jul |
| 174.69 | 31 Aug |
| 174.59 | 11 Sep |
| 174.73 | 31 Oct |
| 174.62 | 17 Nov |
| 174.67 | 14 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(m.) | No. of days<br>above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 174.90        |     |     |     |     |     | 8   |     |     |     |     |     |     | 174.90        | 8                          |
| 174.85        |     |     |     |     |     | 12  | 17  |     |     |     |     |     | 174.85        | 37                         |
| 174.80        |     |     |     | 5   | 13  | 8   | 14  | 9   |     | 3   |     |     | 174.80        | 89                         |
| 174.75        |     |     | 8   | 24  | 16  | 2   |     | 12  |     | 14  |     |     | 174.75        | 165                        |
| 174.70        |     |     | 11  | 1   | 2   |     |     | 8   | 3   | 14  | 9   | 21  | 174.70        | 234                        |
| 174.65        |     | 1   | 3   |     |     |     |     | 2   | 11  |     | 11  | 10  | 174.65        | 272                        |
| 174.60        |     | 8   | 9   |     |     |     |     |     | 14  |     | 10  |     | 174.60        | 313                        |
| 174.55        | 1   | 16  |     |     |     |     |     |     | 2   |     |     |     | 174.55        | 332                        |
| 174.50        | 14  | 3   |     |     |     |     |     |     |     |     |     |     | 174.50        | 349                        |
| 174.45        | 14  |     |     |     |     |     |     |     |     |     |     |     | 174.45        | 363                        |
| 174.40        | 2   |     |     |     |     |     |     |     |     |     |     |     | 174.40        | 365                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 3053: Fairport Harbor, Ohio on Lake Erie

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 174.49  | 174.53  | 174.64  | 174.75  | 174.78  | 174.82  | 174.87  | 174.82  | 174.69  | 174.74  | 174.72  | 174.67  |
| 2    | 174.50  | 174.53  | 174.64  | 174.76  | 174.79  | 174.84  | 174.88  | 174.82  | 174.68  | 174.75  | 174.74  | 174.67  |
| 3    | 174.52  | 174.53  | 174.64  | 174.76  | 174.77  | 174.80  | 174.87  | 174.82  | 174.68  | 174.76  | 174.71  | 174.69  |
| 4    | 174.52  | 174.56  | 174.64  | 174.76  | 174.77  | 174.79  | 174.85  | 174.81  | 174.67  | 174.82  | 174.73  | 174.67  |
| 5    | 174.48  | 174.56  | 174.64  | 174.77  | 174.75  | 174.82  | 174.83  | 174.80  | 174.68  | 174.83  | 174.73  | 174.70  |
| 6    | 174.48  | 174.60  | 174.67  | 174.77  | 174.75  | 174.83  | 174.84  | 174.80  | 174.68  | 174.82  | 174.71  | 174.67  |
| 7    | 174.49  | 174.64  | 174.63  | 174.76  | 174.78  | 174.82  | 174.84  | 174.81  | 174.68  | 174.77  | 174.71  | 174.68  |
| 8    | 174.46  | 174.59  | 174.63  | 174.76  | 174.78  | 174.83  | 174.85  | 174.82  | 174.64  | 174.74  | 174.71  | 174.75  |
| 9    | 174.42  | 174.59  | 174.66  | 174.78  | 174.79  | 174.84  | 174.87  | 174.81  | 174.62  | 174.80  | 174.69  | 174.75  |
| 10   | 174.47  | 174.58  | 174.64  | 174.78  | 174.78  | 174.83  | 174.85  | 174.81  | 174.60  | 174.79  | 174.70  | 174.73  |
| 11   | 174.46  | 174.59  | 174.65  | 174.77  | 174.77  | 174.87  | 174.85  | 174.81  | 174.59  | 174.75  | 174.70  | 174.71  |
| 12   | 174.43  | 174.59  | 174.68  | 174.76  | 174.77  | 174.92  | 174.89  | 174.80  | 174.64  | 174.75  | 174.69  | 174.74  |
| 13   | 174.52  | 174.57  | 174.71  | 174.76  | 174.77  | 174.90  | 174.87  | 174.80  | 174.63  | 174.77  | 174.71  | 174.75  |
| 14   | 174.48  | 174.58  | 174.72  | 174.76  | 174.77  | 174.91  | 174.88  | 174.78  | 174.63  | 174.78  | 174.62  | 174.67  |
| 15   | 174.47  | 174.59  | 174.72  | 174.76  | 174.76  | 174.92  | 174.87  | 174.77  | 174.66  | 174.78  | 174.62  | 174.71  |
| 16   | 174.47  | 174.58  | 174.73  | 174.79  | 174.77  | 174.92  | 174.89  | 174.76  | 174.63  | 174.78  | 174.63  | 174.71  |
| 17   | 174.46  | 174.60  | 174.73  | 174.80  | 174.78  | 174.92  | 174.89  | 174.78  | 174.61  | 174.80  | 174.62  | 174.71  |
| 18   | 174.47  | 174.58  | 174.74  | 174.78  | 174.78  | 174.90  | 174.88  | 174.78  | 174.61  | 174.77  | 174.69  | 174.74  |
| 19   | 174.52  | 174.60  | 174.75  | 174.78  | 174.84  | 174.90  | 174.89  | 174.78  | 174.62  | 174.76  | 174.64  | 174.73  |
| 20   | 174.55  | 174.60  | 174.79  | 174.80  | 174.84  | 174.92  | 174.89  | 174.76  | 174.63  | 174.74  | 174.64  | 174.73  |
| 21   | 174.51  | 174.65  | 174.77  | 174.82  | 174.83  | 174.91  | 174.89  | 174.75  | 174.62  | 174.74  | 174.68  | 174.73  |
| 22   | 174.51  | 174.66  | 174.76  | 174.84  | 174.83  | 174.90  | 174.87  | 174.76  | 174.63  | 174.75  | 174.64  | 174.69  |
| 23   | 174.53  | 174.63  | 174.75  | 174.81  | 174.82  | 174.89  | 174.86  | 174.75  | 174.64  | 174.74  | 174.63  | 174.70  |
| 24   | 174.53  | 174.64  | 174.77  | 174.81  | 174.82  | 174.92  | 174.85  | 174.75  | 174.65  | 174.76  | 174.64  | 174.74  |
| 25   | 174.50  | 174.64  | 174.76  | 174.80  | 174.82  | 174.88  | 174.85  | 174.72  | 174.68  | 174.74  | 174.63  | 174.74  |
| 26   | 174.54  | 174.65  | 174.75  | 174.79  | 174.82  | 174.88  | 174.84  | 174.71  | 174.66  | 174.75  | 174.69  | 174.74  |
| 27   | 174.60  | 174.65  | 174.77  | 174.80  | 174.82  | 174.87  | 174.85  | 174.74  | 174.71  | 174.76  | 174.67  | 174.74  |
| 28   | 174.51  | 174.62  | 174.76  | 174.81  | 174.82  | 174.88  | 174.84  | 174.74  | 174.70  | 174.75  | 174.66  | 174.73  |
| 29   | 174.53  |         | 174.75  | 174.79  | 174.81  | 174.88  | 174.86  | 174.71  | 174.71  | 174.73  | 174.67  | 174.71  |
| 30   | 174.52  |         | 174.75  | 174.79  | 174.81  | 174.88  | 174.85  | 174.69  | 174.71  | 174.76  | 174.68  | 174.73  |
| 31   | 174.52  |         | 174.76  |         | 174.81  |         | 174.83  | 174.69  |         | 174.73  |         | 174.72  |
| MEAN | 174.50  | 174.60  | 174.71  | 174.78  | 174.79  | 174.87  | 174.86  | 174.77  | 174.65  | 174.76  | 174.68  | 174.71  |
| MAX. | 174.70  | 174.72  | 174.87  | 174.97  | 174.91  | 175.13  | 174.96  | 174.96  | 174.83  | 175.20  | 174.87  | 174.84  |
|      | 0400/27 | 1400/07 | 0500/20 | 1200/25 | 0500/19 | 2000/15 | 0100/26 | 2400/02 | 0400/29 | 2104/05 | 2000/18 | 0600/10 |
| MIN. | 174.32  | 174.49  | 174.49  | 174.64  | 174.64  | 174.75  | 174.74  | 174.54  | 174.50  | 174.65  | 174.54  | 174.57  |
|      | 2200/05 | 2000/07 | 0800/11 | 1600/08 | 1900/06 | 1400/04 | 0500/26 | 2100/26 | 0100/16 | 0100/01 | 0300/18 | 0200/02 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 174.72

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 3063: Cleveland, Ohio on Lake Erie

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST  
 Monthly mean elevation: 174.86 Jun  
 Daily mean elevation: 174.92 20 Jun  
 Instant/hourly elevation: 175.17 2118/5 Oct

LOWEST  
 Monthly mean elevation: 174.46 Jan  
 Daily mean elevation: 174.31 9 Jan  
 Instant/hourly elevation: 174.05 2300/5 Jan

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 174.63 | 27 Jan |
| 174.69 | 6 Feb  |
| 174.78 | 20 Mar |
| 174.83 | 22 Apr |
| 174.84 | 19 May |
| 174.92 | 20 Jun |
| 174.88 | 21 Jul |
| 174.82 | 2 Aug  |
| 174.70 | 27 Sep |
| 174.82 | 4 Oct  |
| 174.74 | 18 Nov |
| 174.77 | 24 Dec |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 174.31 | 9 Jan  |
| 174.53 | 13 Feb |
| 174.59 | 11 Mar |
| 174.71 | 8 Apr  |
| 174.72 | 6 May  |
| 174.78 | 4 Jun  |
| 174.82 | 31 Jul |
| 174.67 | 30 Aug |
| 174.52 | 11 Sep |
| 174.68 | 8 Oct  |
| 174.55 | 15 Nov |
| 174.55 | 4 Dec  |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(m.) | No. of days
above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 174.90 | | | | | | 3 | | | | | | | 174.90 | 3 |
| 174.85 | | | | | | 16 | 15 | | | | | | 174.85 | 34 |
| 174.80 | | | | 1 | 10 | 10 | 16 | 3 | | 2 | | | 174.80 | 76 |
| 174.75 | | | 1 | 15 | 14 | 1 | | 16 | | 7 | | | 174.75 | 132 |
| 174.70 | | | 15 | 14 | 7 | | | 8 | | 19 | 5 | 2 | 174.70 | 210 |
| 174.65 | | 6 | 4 | | | | | 4 | | 3 | 10 | 10 | 174.65 | 264 |
| 174.60 | 1 | 2 | 9 | | | | | | 13 | | 8 | 3 | 174.60 | 300 |
| 174.55 | | 15 | 2 | | | | | | 2 | | 6 | 2 | 174.55 | 327 |
| 174.50 | 3 | 1 | | | | | | | 1 | | 1 | 1 | 174.50 | 334 |
| 174.45 | 9 | | | | | | | | | | | | 174.45 | 343 |
| 174.40 | 10 | | | | | | | | | | | | 174.40 | 353 |
| 174.35 | 2 | | | | | | | | | | | | 174.35 | 355 |
| 174.30 | 2 | | | | | | | | | | | | 174.30 | 357 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 3063: Cleveland, Ohio on Lake Erie

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 174.45 | / | 174.61 | 174.71 | 174.75 | 174.81 | 174.87 | 174.81 | 174.68 | 174.75 | 174.68 | 174.74 |
| 2 | 174.48 | / | 174.61 | 174.72 | 174.78 | 174.85 | 174.86 | 174.82 | 174.68 | 174.74 | 174.73 | 174.67 |
| 3 | 174.48 | / | 174.63 | 174.75 | 174.75 | 174.81 | 174.86 | 174.81 | 174.68 | 174.73 | 174.67 | 174.58 |
| 4 | 174.49 | / | 174.62 | 174.74 | 174.76 | 174.78 | 174.83 | 174.80 | 174.66 | 174.82 | 174.73 | 174.55 |
| 5 | 174.36 | 174.58* | 174.62 | 174.74 | 174.74 | 174.83 | 174.82 | 174.79 | 174.66 | 174.79 | 174.72 | 174.67 |
| 6 | 174.40 | 174.69 | 174.62 | 174.73 | 174.72 | 174.85 | 174.83 | 174.79 | 174.67 | 174.79 | 174.70 | 174.61 |
| 7 | 174.46 | 174.66 | 174.62 | 174.73 | 174.76 | 174.83 | 174.83 | 174.79 | 174.66 | 174.73 | 174.69 | 174.62 |
| 8 | 174.43 | 174.59 | 174.62 | 174.71 | 174.77 | 174.83 | 174.83 | 174.79 | 174.61 | 174.68 | 174.70 | 174.77 |
| 9 | 174.31 | 174.56 | 174.64 | 174.75 | 174.79 | 174.84 | 174.87 | 174.78 | 174.61 | 174.81 | 174.63 | 174.72 |
| 10 | 174.42 | 174.57 | 174.59 | 174.76 | 174.77 | 174.82 | 174.85 | 174.79 | 174.57 | 174.80 | 174.69 | 174.67 |
| 11 | 174.42 | 174.58 | 174.59 | 174.75 | 174.77 | 174.86 | 174.86 | 174.80 | 174.52 | 174.73 | 174.69 | 174.67 |
| 12 | 174.35 | 174.56 | 174.70 | 174.74 | 174.78 | 174.89 | 174.88 | 174.78 | 174.62 | 174.72 | 174.64 | 174.69 |
| 13 | 174.50 | 174.53 | 174.70 | 174.75 | 174.77 | 174.90 | 174.85 | 174.80 | 174.61 | 174.77 | 174.67 | 174.72 |
| 14 | 174.47 | 174.56 | 174.71 | 174.77 | 174.75 | 174.90 | 174.86 | 174.77 | 174.62 | 174.69 | 174.57 | 174.59 |
| 15 | 174.44 | 174.56 | 174.69 | 174.73 | 174.75 | 174.90 | 174.86 | 174.75 | 174.67 | 174.73 | 174.55 | 174.67 |
| 16 | 174.45 | 174.59 | 174.71 | 174.76 | 174.75 | 174.88 | 174.86 | 174.75 | 174.64 | 174.74 | 174.58 | 174.70 |
| 17 | 174.42 | 174.60 | 174.72 | 174.78 | 174.76 | 174.91 | 174.87 | 174.77 | 174.61 | 174.80 | 174.58 | 174.71 |
| 18 | 174.45 | 174.58 | 174.72 | 174.77 | 174.76 | 174.89 | 174.86 | 174.78 | 174.59 | 174.76 | 174.74 | 174.70 |
| 19 | 174.50 | 174.59 | 174.67 | 174.76 | 174.84 | 174.89 | 174.87 | 174.79 | 174.62 | 174.75 | 174.64 | 174.69 |
| 20 | 174.50 | 174.60 | 174.78 | 174.78 | 174.82 | 174.92 | 174.87 | 174.77 | 174.61 | 174.72 | 174.62 | 174.71 |
| 21 | 174.46 | 174.66 | 174.74 | 174.78 | 174.82 | 174.91 | 174.88 | 174.75 | 174.63 | 174.71 | 174.67 | 174.71 |
| 22 | 174.45 | 174.67 | 174.72 | 174.83 | 174.82 | 174.87 | 174.86 | 174.78 | 174.61 | 174.72 | 174.61 | 174.64 |
| 23 | 174.52 | 174.60 | 174.71 | 174.80 | 174.81 | 174.88 | 174.85 | 174.74 | 174.62 | 174.73 | 174.59 | 174.66 |
| 24 | 174.53 | 174.64 | 174.75 | 174.78 | 174.81 | 174.90 | 174.84 | 174.74 | 174.64 | 174.78 | 174.59 | 174.77 |
| 25 | 174.43 | 174.64 | 174.73 | 174.77 | 174.81 | 174.88 | 174.83 | 174.71 | 174.67 | 174.75 | 174.60 | 174.71 |
| 26 | 174.51 | 174.67 | 174.72 | 174.78 | 174.82 | 174.86 | 174.83 | 174.69 | 174.66 | 174.75 | 174.68 | 174.72 |
| 27 | 174.63* | 174.66 | 174.74 | 174.79 | 174.82 | 174.84 | 174.85 | 174.73 | 174.70 | 174.72 | 174.64 | 174.72 |
| 28 | / | 174.60 | 174.73 | 174.79 | 174.81 | 174.86 | 174.83 | 174.73 | 174.69 | 174.72 | 174.61 | 174.69 |
| 29 | / | | 174.72 | 174.75 | 174.80 | 174.87 | 174.85 | 174.70 | 174.68 | 174.70 | 174.64 | 174.69 |
| 30 | / | | 174.71 | 174.77 | 174.79 | 174.87 | 174.84 | 174.67 | 174.67 | 174.75 | 174.72 | 174.72 |
| 31 | / | | 174.74 | | 174.80 | | 174.82 | 174.69 | | 174.72 | | 174.70 |
| MEAN | 174.46 | 174.61 | 174.68 | 174.76 | 174.78 | 174.86 | 174.85 | 174.76 | 174.64 | 174.75 | 174.65 | 174.68 |
| MAX. | 174.70 | 174.86 | 174.83 | 174.88 | 174.92 | 175.08 | 174.96 | 174.97 | 174.82 | 175.17 | 174.95 | 174.91 |
| MIN. | 0500/27 | 0300/07 | 1400/20 | 0500/22 | 0100/02 | 0300/24 | 0100/12 | 1600/01 | 1100/29 | 2118/05 | 2000/18 | 1800/08 |
| | 174.05 | 174.40 | 174.38 | 174.56 | 174.52 | 174.74 | 174.67 | 174.54 | 174.42 | 174.55 | 174.46 | 174.40 |
| | 2300/05 | 1900/07 | 0600/11 | 0400/08 | 1800/06 | 1700/01 | 0800/08 | 0500/27 | 0600/11 | 2300/14 | 0100/15 | 1800/03 |

* Indicates Less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL MEAN: 174.71

ANNUAL SUMMARY OF LEVELS, 1986
 Station 3079: Marblehead, Ohio on Lake Erie

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

HIGHEST
 Monthly mean elevation: 174.87 Jun
 Daily mean elevation: 174.96 1 Dec
 Instant/hourly elevation: 175.20 2400/6 Feb

LOWEST
 Monthly mean elevation: 174.44 Jan
 Daily mean elevation: 174.16 5 Jan
 Instant/hourly elevation: 173.66 2300/5 Jan

HIGHEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 174.60 | 24 Jan |
| 174.85 | 6 Feb |
| 174.81 | 12 Mar |
| 174.85 | 14 Apr |
| 174.87 | 9 May |
| 174.93 | 21 Jun |
| 174.92 | 21 Jul |
| 174.85 | 19 Aug |
| 174.72 | 27 Sep |
| 174.88 | 10 Oct |
| 174.89 | 30 Nov |
| 174.96 | 1 Dec |

LOWEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 174.16 | 5 Jan |
| 174.47 | 13 Feb |
| 174.50 | 6 Mar |
| 174.73 | 15 Apr |
| 174.73 | 6 May |
| 174.79 | 4 Jun |
| 174.81 | 29 Jul |
| 174.64 | 26 Aug |
| 174.46 | 11 Sep |
| 174.50 | 14 Oct |
| 174.43 | 9 Nov |
| 174.31 | 4 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(m.) | No. of days<br>above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 174.95        |     |     |     |     |     |     |     |     |     |     |     |     | 174.95        | 1                          |
| 174.90        |     |     |     |     |     | 5   | 2   |     |     |     |     | 1   | 174.90        | 8                          |
| 174.85        |     |     |     |     | 3   | 14  | 13  |     |     | 2   | 1   | 1   | 174.85        | 42                         |
| 174.80        |     | 1   | 1   | 11  | 12  | 10  | 16  | 7   |     | 4   | 1   | 1   | 174.80        | 106                        |
| 174.75        |     | 1   | 5   | 12  | 12  | 1   |     | 12  |     | 5   | 1   | 1   | 174.75        | 156                        |
| 174.70        |     | 1   | 11  | 7   | 4   |     |     | 9   | 4   | 12  | 4   | 6   | 174.70        | 214                        |
| 174.65        |     | 4   | 3   |     |     |     |     | 2   | 6   | 5   | 6   | 5   | 174.65        | 245                        |
| 174.60        |     | 4   | 6   |     |     |     |     | 1   | 11  | 2   | 5   | 6   | 174.60        | 280                        |
| 174.55        | 1   | 10  | 3   |     |     |     |     |     | 6   |     | 5   | 3   | 174.55        | 308                        |
| 174.50        | 6   | 5   | 1   |     |     |     |     |     | 2   |     | 5   | 3   | 174.50        | 330                        |
| 174.45        | 9   | 2   | 1   |     |     |     |     |     | 1   | 1   | 1   |     | 174.45        | 345                        |
| 174.40        | 10  |     |     |     |     |     |     |     |     |     | 1   |     | 174.40        | 356                        |
| 174.35        | 1   |     |     |     |     |     |     |     |     |     |     | 1   | 174.35        | 358                        |
| 174.30        | 1   |     |     |     |     |     |     |     |     |     |     | 1   | 174.30        | 360                        |
| 174.25        |     |     |     |     |     |     |     |     |     |     |     |     | 174.25        | 360                        |
| 174.20        | 1   |     |     |     |     |     |     |     |     |     |     |     | 174.20        | 361                        |
| 174.15        | 2   |     |     |     |     |     |     |     |     |     |     |     | 174.15        | 363                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 3079: Marblehead, Ohio on Lake Erie

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 174.41  | 174.55  | 174.60  | 174.74  | 174.73  | 174.82  | 174.90  | 174.77  | 174.70  | 174.80  | 174.69  | 174.96  |
| 2    | 174.50  | 174.52  | 174.62  | 174.77  | 174.76  | 174.90  | 174.86  | 174.81  | 174.71  | 174.75  | 174.72  | 174.77  |
| 3    | 174.47  | 174.57  | 174.65  | 174.80  | 174.75  | 174.86  | 174.88  | 174.79  | 174.68  | 174.71  | 174.61  | 174.39  |
| 4    | 174.54  | 174.60  | 174.63  | 174.85  | 174.76  | 174.79  | 174.82  | 174.80  | 174.61  | 174.85  | 174.75  | 174.31  |
| 5    | 174.16  | 174.56  | 174.64  | 174.82  | 174.73  | 174.86  | 174.82  | 174.79  | 174.59  | 174.68  | 174.76  | 174.61  |
| 6    | 174.32  | 174.85  | 174.50  | 174.76  | 174.73  | 174.89  | 174.82  | 174.81  | 174.63  | 174.74  | 174.71  | 174.55  |
| 7    | 174.46* | 174.68  | 174.57  | 174.75  | 174.78  | 174.85  | 174.83  | 174.75  | 174.62  | 174.71  | 174.72  | 174.58  |
| 8    | 174.41  | 174.58  | 174.65  | 174.76  | 174.79  | 174.82  | 174.85  | 174.74  | 174.56  | 174.63  | 174.70  | 174.83  |
| 9    | 174.20  | 174.51  | 174.67  | 174.73  | 174.87  | 174.89  | 174.86  | 174.76  | 174.60  | 174.86  | 174.43  | 174.71  |
| 10   | 174.39  | 174.57  | 174.58  | 174.74  | 174.81  | 174.85  | 174.87  | 174.78  | 174.54  | 174.88  | 174.69  | 174.51  |
| 11   | 174.41  | 174.59  | 174.52  | 174.74  | 174.79  | 174.85  | 174.92  | 174.78  | 174.46  | 174.77  | 174.66  | 174.61  |
| 12   | 174.24  | 174.51  | 174.81  | 174.76  | 174.83  | 174.82  | 174.85  | 174.78  | 174.52  | 174.73  | 174.54  | 174.58  |
| 13   | 174.43  | 174.47  | 174.76  | 174.77  | 174.81  | 174.89  | 174.82  | 174.82  | 174.60  | 174.77  | 174.58  | 174.68  |
| 14   | 174.50* | 174.53  | 174.72  | 174.85  | 174.79  | 174.91  | 174.83  | 174.78  | 174.65  | 174.50  | 174.52  | 174.52  |
| 15   | 174.47  | 174.49  | 174.71  | 174.73  | 174.76  | 174.93  | 174.89  | 174.72  | 174.70  | 174.65  | 174.46  | 174.66  |
| 16   | 174.47  | 174.64  | 174.72  | 174.77  | 174.76  | 174.85  | 174.85  | 174.77  | 174.69  | 174.71  | 174.55  | 174.70  |
| 17   | 174.42  | 174.61  | 174.74  | 174.82  | 174.79  | 174.93  | 174.87  | 174.77  | 174.68  | 174.83  | 174.55  | 174.73  |
| 18   | 174.47  | 174.59  | 174.76  | 174.79  | 174.77  | 174.89  | 174.85  | 174.82  | 174.60  | 174.79  | 174.83  | 174.59  |
| 19   | 174.51  | 174.60  | 174.62  | 174.77  | 174.86  | 174.85  | 174.89  | 174.85  | 174.65  | 174.75  | 174.68  | 174.64  |
| 20   | 174.41  | 174.62  | 174.76  | 174.82  | 174.81  | 174.93  | 174.89  | 174.82  | 174.61  | 174.71  | 174.65  | 174.71  |
| 21   | 174.41  | 174.71  | 174.74  | 174.77  | 174.83  | 174.93  | 174.92  | 174.78  | 174.65  | 174.70  | 174.62  | 174.72  |
| 22   | 174.42  | 174.69  | 174.69  | 174.84  | 174.83  | 174.87  | 174.89  | 174.82  | 174.64  | 174.72  | 174.60  | 174.61  |
| 23   | 174.53  | 174.57  | 174.70  | 174.81  | 174.82  | 174.89  | 174.88  | 174.67  | 174.59* | 174.72  | 174.58  | 174.64  |
| 24   | 174.60  | 174.66  | 174.80  | 174.81  | 174.83  | 174.90  | 174.86  | 174.73  | 174.64  | 174.83  | 174.52  | 174.86  |
| 25   | 174.46  | 174.65  | 174.75  | 174.81  | 174.84  | 174.90  | 174.81  | 174.73  | 174.71  | 174.82  | 174.61  | 174.67  |
| 26   | 174.53  | 174.76  | 174.71  | 174.81  | 174.86  | 174.87  | 174.83  | 174.64  | 174.64  | 174.77  | 174.70  | /       |
| 27   | 174.42* | 174.69  | 174.73  | 174.82  | 174.84  | 174.82  | 174.86  | 174.71  | 174.72  | 174.67  | 174.60  | /       |
| 28   | 174.41  | 174.59  | 174.74  | 174.80  | 174.82  | 174.85  | 174.84  | 174.71  | 174.71  | 174.69  | 174.57  | 174.64* |
| 29   | 174.53  |         | 174.73  | 174.75  | 174.82  | 174.89  | 174.81  | 174.71  | 174.67  | 174.66  | 174.62  | 174.68  |
| 30   | 174.50  |         | 174.72  | 174.79  | 174.80  | 174.90  | 174.82  | 174.69  | 174.64  | 174.75  | 174.89  | 174.71  |
| 31   | 174.52  |         | 174.79  |         | 174.79  |         | 174.84  | 174.71  |         | 174.74  |         | 174.71  |
| MEAN | 174.44  | 174.61  | 174.69  | 174.78  | 174.80  | 174.87  | 174.86  | 174.76  | 174.63  | 174.74  | 174.64  | 174.65  |
| MAX. | 174.68  | 175.20  | 174.98  | 174.97  | 174.96  | 175.11  | 175.04  | 174.98  | 174.92  | 175.05  | 175.14  | 175.11  |
|      | 2400/26 | 2400/06 | 1300/11 | 2100/14 | 2000/19 | 0200/17 | 2100/11 | 0900/27 | 0200/16 | 0200/10 | 1700/18 | 0200/01 |
| MIN. | 173.66  | 174.22  | 174.09  | 174.59  | 174.58  | 174.62  | 174.67  | 174.49  | 174.27  | 174.34  | 174.14  | 174.03  |
|      | 2300/05 | 1800/07 | 0400/11 | 1000/11 | 0100/07 | 2300/12 | 0200/26 | 2300/26 | 0500/11 | 2300/14 | 1800/09 | 1800/03 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 174.71

ANNUAL SUMMARY OF LEVELS, 1986  
Station 3085: Toledo, Ohio on Lake Erie

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

HIGHEST  
Monthly mean elevation: 174.87 Jun  
Daily mean elevation: 175.29 1 Dec  
Instant/hourly elevation: 175.63 0200/7 Feb

LOWEST  
Monthly mean elevation: 174.45 Jan  
Daily mean elevation: 174.08 5 Jan  
Instant/hourly elevation: 173.44 0100/6 Jan

HIGHEST DAILY MEAN  
FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 174.69 | 24 Jan |
| 174.99 | 6 Feb  |
| 174.96 | 12 Mar |
| 174.98 | 4 Apr  |
| 174.98 | 9 May  |
| 174.97 | 21 Jun |
| 174.99 | 11 Jul |
| 174.89 | 19 Aug |
| 174.75 | 17 Sep |
| 174.99 | 10 Oct |
| 175.07 | 30 Nov |
| 175.29 | 1 Dec  |

LOWEST DAILY MEAN  
FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 174.08 | 5 Jan  |
| 174.49 | 13 Feb |
| 174.41 | 6 Mar  |
| 174.64 | 9 Apr  |
| 174.59 | 1 May  |
| 174.73 | 12 Jun |
| 174.74 | 29 Jul |
| 174.59 | 23 Aug |
| 174.40 | 12 Sep |
| 174.32 | 14 Oct |
| 174.21 | 9 Nov  |
| 174.11 | 4 Dec  |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(m.) | No. of days
above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 175.25 | | | | | | | | | | | | 1 | 175.25 | 1 |
| 175.20 | | | | | | | | | | | | | 175.20 | 1 |
| 175.15 | | | | | | | | | | | | | 175.15 | 1 |
| 175.10 | | | | | | | | | | | | | 175.10 | 1 |
| 175.05 | | | | | | | | | | | 1 | | 175.05 | 2 |
| 175.00 | | | | | | | | | | | | | 175.00 | 2 |
| 174.95 | | 1 | 1 | 2 | 1 | 3 | 1 | | | 1 | | | 174.95 | 12 |
| 174.90 | | | | | 1 | 7 | 3 | | | 2 | 1 | 2 | 174.90 | 28 |
| 174.85 | | 1 | | 2 | 6 | 7 | 6 | 1 | | 4 | | 1 | 174.85 | 56 |
| 174.80 | | 1 | 4 | 10 | 11 | 9 | 14 | 5 | | 2 | | | 174.80 | 112 |
| 174.75 | | | 1 | 6 | 5 | 3 | 6 | 8 | | 6 | 2 | 1 | 174.75 | 150 |
| 174.70 | | 2 | 8 | 6 | 5 | 1 | 1 | 10 | 8 | 4 | 7 | 8 | 174.70 | 210 |
| 174.65 | 1 | 4 | 9 | 3 | 1 | | | 5 | 5 | 6 | 2 | 3 | 174.65 | 249 |
| 174.60 | | 5 | 3 | 1 | | | | 1 | 9 | 2 | 4 | 3 | 174.60 | 277 |
| 174.55 | 2 | 9 | 1 | | 1 | | | 1 | 4 | 3 | 4 | 5 | 174.55 | 307 |
| 174.50 | 8 | 4 | 2 | | | | | | 2 | | 3 | 2 | 174.50 | 328 |
| 174.45 | 4 | 1 | | | | | | | | | 3 | 2 | 174.45 | 338 |
| 174.40 | 8 | | 2 | | | | | | | | 1 | | 174.40 | 349 |
| 174.35 | 3 | | | | | | | | 2 | | 1 | 1 | 174.35 | 356 |
| 174.30 | 1 | | | | | | | | | 1 | | | 174.30 | 358 |
| 174.25 | | | | | | | | | | | | | 174.25 | 358 |
| 174.20 | 3 | | | | | | | | | | 1 | 1 | 174.20 | 363 |
| 174.15 | | | | | | | | | | | | | 174.15 | 363 |
| 174.10 | | | | | | | | | | | | 1 | 174.10 | 364 |
| 174.05 | 1 | | | | | | | | | | | | 174.05 | 365 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 3085: Toledo, Ohio on Lake Erie

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 174.42 | 174.58 | 174.61 | 174.73 | 174.59 | 174.82 | 174.93 | 174.74 | 174.71 | 174.89 | 174.71 | 175.29 |
| 2 | 174.53 | 174.53 | 174.64 | 174.81 | 174.72 | 174.96 | 174.83 | 174.76 | 174.74 | 174.76 | 174.71 | 174.88 |
| 3 | 174.47 | 174.60 | 174.67 | 174.85 | 174.73 | 174.91 | 174.87 | 174.74 | 174.75 | 174.68 | 174.56 | 174.21 |
| 4 | 174.57 | 174.64 | 174.64 | 174.98 | 174.74 | 174.79 | 174.79 | 174.78 | 174.62 | 174.90 | 174.78 | 174.11 |
| 5 | 174.08 | 174.58 | 174.66 | 174.88 | 174.69 | 174.89 | 174.81 | 174.78 | 174.55 | 174.57 | 174.80 | 174.58 |
| 6 | 174.23 | 174.99 | 174.41 | 174.74 | 174.71 | 174.96 | 174.80 | 174.83 | 174.64 | 174.68 | 174.72 | 174.52 |
| 7 | 174.45 | 174.87 | 174.52 | 174.74 | 174.80 | 174.87 | 174.81 | 174.73 | 174.62 | 174.69 | 174.75 | 174.58 |
| 8 | 174.44 | 174.64 | 174.67 | 174.71 | 174.84 | 174.82 | 174.85 | 174.71 | 174.56 | 174.59 | 174.69 | 174.91 |
| 9 | 174.25 | 174.55 | 174.69 | 174.64 | 174.98 | 174.95 | 174.85 | 174.74 | 174.62 | 174.91 | 174.21 | 174.71 |
| 10 | 174.41 | 174.59 | 174.59 | 174.69 | 174.86 | 174.86 | 174.88 | 174.75 | 174.51 | 174.99 | 174.71 | 174.37 |
| 11 | 174.44 | 174.60 | 174.45 | 174.70 | 174.82 | 174.84 | 174.99 | 174.74 | 174.40 | 174.83 | 174.64 | 174.58 |
| 12 | 174.23 | 174.53 | 174.96 | 174.80 | 174.89 | 174.73 | 174.82 | 174.79 | 174.40 | 174.75 | 174.43 | 174.47 |
| 13 | 174.40 | 174.49 | 174.81 | 174.80 | 174.86 | 174.85 | 174.76 | 174.85 | 174.59 | 174.76 | 174.47 | 174.66 |
| 14 | 174.52 | 174.57 | 174.74 | 174.97 | 174.82 | 174.91 | 174.80 | 174.78 | 174.69 | 174.32 | 174.49 | 174.46 |
| 15 | 174.50 | 174.51 | 174.70 | 174.71 | 174.78 | 174.93 | 174.92 | 174.68 | 174.71 | 174.60 | 174.39 | 174.67 |
| 16 | 174.50 | 174.67 | 174.74 | 174.77 | 174.71 | 174.80 | 174.85 | 174.77 | 174.74 | 174.70 | 174.55 | 174.71 |
| 17 | 174.45 | 174.63 | 174.76 | 174.85 | 174.81 | 174.94 | 174.86 | 174.79 | 174.75 | 174.86 | 174.55 | 174.76 |
| 18 | 174.50 | 174.60 | 174.83 | 174.82 | 174.79 | 174.89 | 174.83 | 174.84 | 174.60 | 174.82 | 174.92 | 174.53 |
| 19 | 174.51 | 174.62 | 174.51 | 174.77 | 174.89 | 174.82 | 174.85 | 174.89 | 174.68 | 174.77 | 174.74 | 174.60 |
| 20 | 174.37 | 174.65 | 174.75 | 174.84 | 174.81 | 174.93 | 174.89 | 174.85 | 174.61 | 174.71 | 174.67 | 174.73 |
| 21 | 174.55 | 174.70 | 174.73 | 174.71 | 174.81 | 174.97 | 174.94 | 174.80 | 174.68 | 174.70 | 174.58 | 174.74 |
| 22 | 174.38 | 174.74 | 174.67 | 174.82 | 174.83 | 174.83 | 174.90 | 174.85 | 174.65 | 174.73 | 174.62 | 174.58 |
| 23 | 174.56 | 174.57 | 174.67 | 174.82 | 174.83 | 174.86 | 174.88 | 174.59 | 174.58 | 174.72 | 174.59 | 174.62 |
| 24 | 174.69 | 174.67 | 174.83 | 174.82 | 174.84 | 174.83 | 174.85 | 174.71 | 174.65 | 174.90 | 174.47 | 174.94 |
| 25 | 174.45 | 174.66 | 174.74 | 174.85 | 174.87 | 174.89 | 174.78 | 174.73 | 174.74 | 174.91 | 174.64 | 174.64 |
| 26 | 174.52 | 174.82 | 174.69 | 174.85 | 174.93 | 174.85 | 174.82 | 174.62 | 174.62 | 174.80 | 174.71 | 174.72 |
| 27 | 174.34 | 174.71 | 174.72 | 174.86 | 174.87 | 174.78 | 174.85 | 174.66 | 174.70 | 174.64 | 174.59 | 174.74 |
| 28 | 174.43 | 174.59 | 174.72 | 174.79 | 174.83 | 174.81 | 174.81 | 174.66 | 174.71 | 174.68 | 174.55 | 174.64 |
| 29 | 174.55 | | 174.71 | 174.69 | 174.82 | 174.86 | 174.74 | 174.70 | 174.66 | 174.63 | 174.63 | 174.70 |
| 30 | 174.52 | | 174.70 | 174.79 | 174.79 | 174.92 | 174.80 | 174.70 | 174.61 | 174.76 | 175.07 | 174.73 |
| 31 | 174.54 | | 174.83 | | 174.77 | | 174.84 | 174.73 | | 174.80 | | 174.73 |
| MEAN | 174.45 | 174.64 | 174.69 | 174.79 | 174.81 | 174.87 | 174.85 | 174.75 | 174.64 | 174.74 | 174.63 | 174.65 |
| MAX. | 174.84 | 175.63 | 175.21 | 175.25 | 175.20 | 175.23 | 175.14 | 175.20 | 175.00 | 175.26 | 175.46 | 175.51 |
| | 2000/24 | 0200/07 | 1400/11 | 1900/14 | 0900/09 | 0500/17 | 2200/11 | 1100/27 | 2300/13 | 1600/10 | 2400/30 | 0400/01 |
| MIN. | 173.44 | 174.19 | 173.85 | 174.37 | 174.33 | 174.45 | 174.53 | 174.29 | 173.95 | 174.03 | 173.79 | 173.72 |
| | 0100/06 | 2100/07 | 0300/11 | 0900/11 | 1400/01 | 0100/13 | 0700/14 | 0200/27 | 1200/12 | 2300/14 | 1600/09 | 2000/03 |

* Indicates Less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL MEAN: 174.71

ANNUAL SUMMARY OF LEVELS, 1986
 Station 3087: Monroe, Michigan on Lake Erie

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

| HIGHEST | | | LOWEST | | |
|---------------------------|--------|------------|---------------------------|--------|------------|
| Monthly mean elevation: | 174.87 | Jun | Monthly mean elevation: | 174.42 | Jan |
| Daily mean elevation: | 175.18 | 1 Dec | Daily mean elevation: | 174.10 | 5 Jan |
| Instant/hourly elevation: | 175.34 | 0900/1 Dec | Instant/hourly elevation: | 173.55 | 0100/6 Jan |

HIGHEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 174.56 | 4 Jan |
| 174.81 | 26 Feb |
| 174.91 | 12 Mar |
| 174.96 | 14 Apr |
| 174.93 | 9 May |
| 174.97 | 21 Jun |
| 174.99 | 11 Jul |
| 174.88 | 19 Aug |
| 174.75 | 25 Sep |
| 174.95 | 10 Oct |
| 174.97 | 30 Nov |
| 175.18 | 1 Dec |

LOWEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 174.10 | 5 Jan |
| 174.49 | 13 Feb |
| 174.41 | 6 Mar |
| 174.61 | 9 Apr |
| 174.63 | 1 May |
| 174.77 | 12 Jun |
| 174.75 | 29 Jul |
| 174.61 | 23 Aug |
| 174.42 | 12 Sep |
| 174.39 | 14 Oct |
| 174.48 | 24 Nov |
| 174.19 | 4 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(m.) | No. of days<br>above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 175.15        |     |     |     |     |     |     |     |     |     |     |     | 1   | 175.15        | 1                          |
| 175.10        |     |     |     |     |     |     |     |     |     |     |     |     | 175.10        | 1                          |
| 175.05        |     |     |     |     |     |     |     |     |     |     |     |     | 175.05        | 1                          |
| 175.00        |     |     |     |     |     |     |     |     |     |     |     |     | 175.00        | 1                          |
| 174.95        |     |     |     | 1   |     | 1   | 1   |     |     |     | 1   |     | 174.95        | 5                          |
| 174.90        |     |     | 1   | 1   | 1   | 8   | 4   |     |     | 1   |     |     | 174.90        | 21                         |
| 174.85        |     |     | 1   | 1   | 5   | 12  | 10  | 1   |     | 2   |     | 3   | 174.85        | 55                         |
| 174.80        |     | 1   | 1   | 10  | 12  | 6   | 12  | 5   |     | 2   | 1   |     | 174.80        | 105                        |
| 174.75        |     |     | 6   | 7   | 7   | 3   | 3   | 9   |     | 3   |     |     | 174.75        | 143                        |
| 174.70        |     | 2   | 9   | 6   | 4   |     | 1   | 11  | 7   | 3   | 1   | 10  | 174.70        | 197                        |
| 174.65        |     | 3   | 5   | 3   | 1   |     |     | 1   | 8   | 2   | 2   | 3   | 174.65        | 225                        |
| 174.60        |     | 5   | 3   | 1   | 1   |     |     | 4   | 6   | 2   | 3   | 4   | 174.60        | 254                        |
| 174.55        | 1   | 9   | 1   |     |     |     |     |     | 7   | 1   | 5   | 3   | 174.55        | 281                        |
| 174.50        | 2   | 3   |     |     |     |     |     |     |     |     |     | 3   | 174.50        | 289                        |
| 174.45        | 2   | 1   | 2   |     |     |     |     |     | 1   |     | 1   | 1   | 174.45        | 297                        |
| 174.40        | 1   |     | 1   |     |     |     |     |     | 1   |     |     |     | 174.40        | 300                        |
| 174.35        |     |     |     |     |     |     |     |     |     | 1   |     | 1   | 174.35        | 302                        |
| 174.30        |     |     |     |     |     |     |     |     |     |     |     |     | 174.30        | 302                        |
| 174.25        |     |     |     |     |     |     |     |     |     |     |     | 1   | 174.25        | 303                        |
| 174.20        | 1   |     |     |     |     |     |     |     |     |     |     |     | 174.20        | 304                        |
| 174.15        |     |     |     |     |     |     |     |     |     |     |     | 1   | 174.15        | 305                        |
| 174.10        |     |     |     |     |     |     |     |     |     |     |     |     | 174.10        | 305                        |
| 174.05        | 1   |     |     |     |     |     |     |     |     |     |     |     | 174.05        | 306                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 3087: Monroe, Michigan on Lake Erie

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 174.43  | 174.57  | /       | 174.71* | 174.63  | 174.80  | 174.94  | 174.74  | 174.71  | 174.86  | /       | 175.18  |
| 2    | 174.51  | 174.53  | /       | 174.78  | 174.70  | 174.90  | 174.83  | 174.79  | 174.74  | 174.76  | /       | 174.87  |
| 3    | 174.47  | 174.56* | 174.63* | 174.84  | 174.72  | 174.91  | 174.88  | 174.75  | 174.75  | 174.71  | /       | 174.29  |
| 4    | 174.56  | /       | 174.63  | 174.92  | 174.77  | 174.80  | 174.84  | 174.80  | 174.64  | 174.87  | /       | 174.19  |
| 5    | 174.10  | 174.56* | 174.66  | 174.86  | 174.73  | 174.88  | 174.84  | 174.80  | 174.56  | 174.57  | /       | 174.60  |
| 6    | 174.23  | 174.71* | 174.41  | 174.76  | 174.74  | 174.93  | 174.82  | 174.83  | 174.64  | 174.68  | /       | 174.55  |
| 7    | /       | /       | 174.48  | 174.75  | 174.79  | 174.88  | 174.82  | 174.75  | 174.62  | 174.71  | /       | 174.58  |
| 8    | /       | /       | 174.67  | 174.71  | 174.81  | 174.81  | 174.86  | 174.72  | 174.57  | 174.63  | /       | 174.88  |
| 9    | /       | /       | 174.69  | 174.61  | 174.93  | 174.92  | 174.85  | 174.75  | 174.64  | 174.85  | /       | 174.71  |
| 10   | /       | 174.61* | 174.62  | 174.67  | 174.84  | 174.88  | 174.89  | 174.77  | 174.57  | 174.95  | /       | 174.40  |
| 11   | /       | 174.59  | 174.46  | 174.70  | 174.81  | 174.86  | 174.99  | 174.74  | 174.47  | 174.82  | /       | 174.62  |
| 12   | /       | 174.53  | 174.91  | 174.78  | 174.87  | 174.77  | 174.85  | 174.79  | 174.42  | 174.76  | /       | 174.48  |
| 13   | /       | 174.49  | 174.79  | 174.78  | 174.85  | 174.87  | 174.78  | 174.85  | 174.59  | 174.75  | /       | 174.66  |
| 14   | /       | 174.56  | 174.73  | 174.96* | 174.83  | 174.91  | 174.80  | 174.79  | 174.67  | 174.39  | /       | 174.51  |
| 15   | /       | 174.51  | 174.70  | 174.73  | 174.79  | 174.94  | 174.92  | 174.72  | 174.68  | 174.61  | /       | 174.67  |
| 16   | /       | 174.66  | 174.73  | 174.75  | 174.74  | 174.82  | 174.87  | 174.78  | 174.68  | 174.70  | /       | 174.72  |
| 17   | /       | 174.62  | 174.76  | 174.81  | 174.82  | 174.93  | 174.87  | 174.78  | 174.75  | 174.79* | 174.56* | 174.75  |
| 18   | /       | 174.59  | 174.82  | 174.81  | 174.78  | 174.90  | 174.85  | 174.81  | 174.60  | /       | 174.81  | 174.55  |
| 19   | /       | 174.60  | 174.57  | 174.79  | 174.86  | 174.85  | 174.88  | 174.88  | 174.66  | /       | 174.73  | 174.62  |
| 20   | /       | 174.63  | 174.71  | 174.82  | 174.80  | 174.92  | 174.88  | 174.83  | 174.60  | /       | 174.67  | 174.73  |
| 21   | /       | 174.66  | 174.73* | 174.70  | 174.81  | 174.97  | 174.93  | 174.78  | 174.66  | /       | 174.58  | 174.73  |
| 22   | /       | 174.71  | 174.71  | 174.79  | 174.83  | 174.86  | 174.91  | 174.84  | 174.67  | /       | 174.62  | 174.60  |
| 23   | /       | 174.56  | 174.68  | 174.81  | 174.83  | 174.88  | 174.89  | 174.61  | 174.60  | /       | 174.60  | 174.63  |
| 24   | /       | 174.65  | 174.80  | 174.83  | 174.84  | 174.83  | 174.87  | 174.71  | 174.65  | /       | 174.48  | 174.89  |
| 25   | /       | 174.65  | 174.77  | 174.84  | 174.86  | 174.90  | 174.81  | 174.75  | 174.75  | /       | 174.63  | 174.64  |
| 26   | /       | 174.81  | 174.72  | 174.84  | 174.90  | 174.87  | 174.81  | 174.64  | 174.65  | /       | 174.69  | 174.71  |
| 27   | /       | 174.69  | 174.72  | 174.85  | 174.87  | 174.81  | 174.86  | 174.65  | 174.71  | /       | 174.60  | 174.73  |
| 28   | /       | 174.60* | 174.76  | 174.81  | 174.83  | 174.82  | 174.83  | 174.65  | 174.72  | /       | 174.57  | 174.66  |
| 29   | /       | /       | 174.74  | 174.72  | 174.82  | 174.86  | 174.75  | 174.70  | 174.70  | /       | 174.62  | 174.71  |
| 30   | 174.50* | /       | 174.72  | 174.80  | 174.80  | 174.92  | 174.80  | 174.71  | 174.66  | /       | 174.97  | 174.73  |
| 31   | 174.53  | /       | 174.79* | /       | 174.79  | /       | 174.85  | 174.73  | /       | /       | /       | 174.73  |
| MEAN | 174.42  | 174.61  | 174.69  | 174.78  | 174.81  | 174.87  | 174.86  | 174.76  | 174.64  | 174.73  | 174.65  | 174.66  |
| MAX. | 174.65  | 175.04  | 175.14  | 175.18  | 175.11  | 175.21  | 175.13  | 175.13  | 174.99  | 175.21  | 175.26  | 175.34  |
|      | 1300/04 | 2200/26 | 1400/11 | 1900/14 | 0800/09 | 0400/17 | 2100/11 | 1100/27 | 1200/30 | 1600/10 | 2400/30 | 0900/01 |
| MIN. | 173.55  | 174.33  | 173.86  | 174.42  | 174.42  | 174.47  | 174.50  | 174.30  | 173.98  | 174.11  | 174.31  | 173.82  |
|      | 0100/06 | 0300/23 | 0600/11 | 0900/11 | 1600/01 | 2200/12 | 0300/26 | 0100/27 | 1100/12 | 2200/14 | 2300/20 | 1900/03 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 174.71

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 3090: Fermi Power Plant, Stony Point, Michigan on Lake Erie

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST  
 Monthly mean elevation: 174.85 Jun  
 Daily mean elevation: 175.13 1 Dec  
 Instant/hourly elevation: 175.48 0200/7 Feb

LOWEST  
 Monthly mean elevation: 174.43 Jan  
 Daily mean elevation: 174.14 5 Jan  
 Instant/hourly elevation: 173.60 0100/6 Jan

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 174.64 | 24 Jan |
| 174.90 | 6 Feb  |
| 174.88 | 12 Mar |
| 174.90 | 14 Apr |
| 174.89 | 9 May  |
| 174.95 | 21 Jun |
| 174.95 | 11 Jul |
| 174.91 | 10 Aug |
| 174.77 | 25 Sep |
| 174.99 | 10 Oct |
| 174.91 | 30 Nov |
| 175.13 | 1 Dec  |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 174.14 | 5 Jan  |
| 174.49 | 13 Feb |
| 174.42 | 6 Mar  |
| 174.60 | 9 Apr  |
| 174.62 | 1 May  |
| 174.77 | 1 Jun  |
| 174.74 | 29 Jul |
| 174.60 | 23 Aug |
| 174.43 | 12 Sep |
| 174.50 | 14 Oct |
| 174.36 | 9 Nov  |
| 174.22 | 4 Dec  |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(m.) | No. of days
above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 175.10 | | | | | | | | | | | | | 175.10 | 1 |
| 175.05 | | | | | | | | | | | | 1 | 175.05 | 1 |
| 175.00 | | | | | | | | | | | | | 175.00 | 1 |
| 174.95 | | | | | | | | | | 1 | | | 174.95 | 2 |
| 174.90 | | | | | | 3 | 2 | 1 | | 1 | 1 | | 174.90 | 10 |
| 174.85 | | 1 | 1 | 2 | 2 | 11 | 7 | 1 | | 3 | | 3 | 174.85 | 41 |
| 174.80 | | | 1 | 6 | 12 | 11 | 16 | 5 | | 5 | | | 174.80 | 97 |
| 174.75 | | 1 | 4 | 11 | 11 | 5 | 5 | 9 | 3 | 6 | 2 | | 174.75 | 154 |
| 174.70 | | 1 | 10 | 6 | 3 | | 1 | 8 | 6 | 8 | 8 | 9 | 174.70 | 214 |
| 174.65 | | | 2 | 6 | 3 | 2 | | 3 | 8 | 4 | 2 | 4 | 174.65 | 248 |
| 174.60 | 1 | 6 | 4 | 1 | 1 | | | 3 | 6 | 2 | 6 | 4 | 174.60 | 282 |
| 174.55 | | 9 | 2 | 1 | | | | 1 | 4 | | 6 | 4 | 174.55 | 309 |
| 174.50 | 7 | 6 | | | | | | | | | 6 | 4 | 174.50 | 325 |
| 174.45 | 8 | 2 | 1 | | | | | 1 | | | 1 | 2 | 174.50 | 325 |
| 174.40 | 6 | | 2 | | | | | 1 | | 1 | 4 | 1 | 174.45 | 343 |
| 174.35 | 4 | | | | | | | 1 | | | | 1 | 174.40 | 353 |
| 174.30 | | | | | | | | | | | 1 | | 174.35 | 358 |
| 174.25 | 3 | | | | | | | | | | | | 174.30 | 358 |
| 174.20 | 1 | | | | | | | | | | | 1 | 174.25 | 362 |
| 174.15 | | | | | | | | | | | | 1 | 174.20 | 364 |
| 174.10 | 1 | | | | | | | | | | | | 174.15 | 364 |
| | | | | | | | | | | | | | 174.10 | 365 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 3090: Fermi Power Plant, Stony Point, Michigan on Lake Erie

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 174.42 | 174.56 | 174.60 | 174.73 | 174.62 | 174.77 | 174.92 | 174.73 | 174.69 | 174.88 | 174.71 | 175.13 |
| 2 | 174.51 | 174.51 | 174.63 | 174.77 | 174.69 | 174.86 | 174.81 | 174.77 | 174.71 | 174.79 | 174.71 | 174.86 |
| 3 | 174.46 | 174.56 | 174.64 | 174.81 | 174.70 | 174.88 | 174.85 | 174.74 | 174.73 | 174.76 | 174.61 | 174.30 |
| 4 | 174.55 | 174.61 | 174.62 | 174.88 | 174.76 | 174.79 | 174.83 | 174.78 | 174.63 | 174.92 | 174.74 | 174.22 |
| 5 | 174.14 | 174.55 | 174.66 | 174.83 | 174.73 | 174.85 | 174.81 | 174.78 | 174.55 | 174.69 | 174.78 | 174.60 |
| 6 | 174.25 | 174.90 | 174.42 | 174.75 | 174.74 | 174.89 | 174.81 | 174.81 | 174.62 | 174.69 | 174.71 | 174.56 |
| 7 | 174.43 | 174.75 | 174.46 | 174.74 | 174.78 | 174.85 | 174.80 | 174.75 | 174.60 | 174.73 | 174.74 | 174.59 |
| 8 | 174.42 | 174.59 | 174.66 | 174.70 | 174.78 | 174.80 | 174.83 | 174.79 | 174.56 | 174.67 | 174.72 | 174.86 |
| 9 | 174.26 | 174.52 | 174.67 | 174.60 | 174.89 | 174.90 | 174.83 | 174.89 | 174.62 | 174.88 | 174.36 | 174.70 |
| 10 | 174.40 | 174.56 | 174.62 | 174.65 | 174.81 | 174.85 | 174.86 | 174.91 | 174.57 | 174.99 | 174.74 | 174.43 |
| 11 | 174.44 | 174.58 | 174.45 | 174.70 | 174.79 | 174.84 | 174.95 | 174.76 | 174.48 | 174.83 | 174.65 | 174.63 |
| 12 | 174.26 | 174.52 | 174.88 | 174.77 | 174.84 | 174.78 | 174.84 | 174.77 | 174.43 | 174.78 | 174.49 | 174.49 |
| 13 | 174.37 | 174.49 | 174.77 | 174.76 | 174.82 | 174.85 | 174.78 | 174.83 | 174.58 | 174.78 | 174.47 | 174.66 |
| 14 | 174.49 | 174.55 | 174.71 | 174.90 | 174.81 | 174.89 | 174.78 | 174.77 | 174.65 | 174.50 | 174.58 | 174.53 |
| 15 | 174.48 | 174.50 | 174.69 | 174.71 | 174.78 | 174.92 | 174.89 | 174.71 | 174.69 | 174.62 | 174.47 | 174.67 |
| 16 | 174.48 | 174.64 | 174.71 | 174.74 | 174.74 | 174.81 | 174.85 | 174.75 | 174.71 | 174.71 | 174.58 | 174.71 |
| 17 | 174.44 | 174.60 | 174.74 | 174.79 | 174.79 | 174.91 | 174.85 | 174.76 | 174.76 | 174.81 | 174.56 | 174.74 |
| 18 | 174.48 | 174.58 | 174.81 | 174.79 | 174.76 | 174.88 | 174.83 | 174.77 | 174.64 | 174.80 | 174.80 | 174.55 |
| 19 | 174.46 | 174.59 | 174.58 | 174.78 | 174.82 | 174.83 | 174.86 | 174.84 | 174.66 | 174.76 | 174.72 | 174.62 |
| 20 | 174.36 | 174.61 | 174.69 | 174.80 | 174.78 | 174.90 | 174.86 | 174.81 | 174.62 | 174.72 | 174.69 | 174.72 |
| 21 | 174.55 | 174.64 | 174.73 | 174.69 | 174.80 | 174.95 | 174.89 | 174.75 | 174.66 | 174.72 | 174.59 | 174.72 |
| 22 | 174.40 | 174.69 | 174.71 | 174.78 | 174.82 | 174.84 | 174.88 | 174.82 | 174.68 | 174.74 | 174.63 | 174.60 |
| 23 | 174.53 | 174.55 | 174.68 | 174.80 | 174.81 | 174.86 | 174.87 | 174.60 | 174.66 | 174.73 | 174.60 | 174.62 |
| 24 | 174.64 | 174.64 | 174.79 | 174.82 | 174.82 | 174.80 | 174.84 | 174.69 | 174.70 | 174.85 | 174.50 | 174.87 |
| 25 | 174.51 | 174.64 | 174.77 | 174.82 | 174.83 | 174.87 | 174.80 | 174.74 | 174.77 | 174.87 | 174.63 | 174.64 |
| 26 | 174.47 | 174.79 | 174.72 | 174.82 | 174.88 | 174.86 | 174.81 | 174.64 | 174.67 | 174.81 | 174.68 | 174.71 |
| 27 | 174.29 | 174.67 | 174.71 | 174.84 | 174.84 | 174.81 | 174.84 | 174.62 | 174.76 | 174.68 | 174.61 | 174.72 |
| 28 | 174.42 | 174.58 | 174.75 | 174.79 | 174.81 | 174.81 | 174.82 | 174.64 | 174.74 | 174.71 | 174.58 | 174.66 |
| 29 | 174.53 | | 174.74 | 174.72 | 174.81 | 174.84 | 174.74 | 174.69 | 174.74 | 174.65 | 174.63 | 174.71 |
| 30 | 174.50 | | 174.71 | 174.80 | 174.78 | 174.89 | 174.79 | 174.69 | 174.75 | 174.75 | 174.91 | 174.72 |
| 31 | 174.52 | | 174.79 | | 174.78 | | 174.83 | 174.71 | | 174.81 | | 174.72 |
| MEAN | 174.43 | 174.61 | 174.68 | 174.77 | 174.79 | 174.85 | 174.84 | 174.75 | 174.65 | 174.76 | 174.64 | 174.65 |
| MAX. | 174.74 | 175.48 | 175.12 | 175.14 | 175.06 | 175.15 | 175.08 | 175.08 | 174.95 | 175.16 | 175.20 | 175.28 |
| | 2000/24 | 0200/07 | 1400/11 | 1900/14 | 0800/09 | 0400/17 | 1900/11 | 1100/27 | 1300/30 | 1700/10 | 2400/30 | 0900/01 |
| MIN. | 173.60 | 174.10 | 173.88 | 174.43 | 174.46 | 174.46 | 174.56 | 174.31 | 174.00 | 174.30 | 173.95 | 173.85 |
| | 0100/06 | 2000/07 | 0600/11 | 0900/11 | 1600/01 | 2400/12 | 0600/14 | 0100/27 | 1100/12 | 2400/14 | 2000/09 | 2000/03 |

* Indicates Less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL MEAN: 174.70

ANNUAL SUMMARY OF LEVELS, 1986
 Station 4020: Gibraltar, Michigan on Detroit River

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

HIGHEST
 Monthly mean elevation: 174.91 Jun
 Daily mean elevation: 175.14 1 Dec
 Instant/hourly elevation: 175.50 0200/7 Feb

LOWEST
 Monthly mean elevation: 174.52 Jan
 Daily mean elevation: 174.29 5 Jan
 Instant/hourly elevation: 173.85 0200/6 Jan

HIGHEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 174.70 | 24 Jan |
| 174.92 | 6 Feb |
| 174.90 | 12 Mar |
| 174.94 | 14 Apr |
| 174.92 | 26 May |
| 175.00 | 21 Jun |
| 175.01 | 11 Jul |
| 174.91 | 19 Aug |
| 174.84 | 25 Sep |
| 174.97 | 10 Oct |
| 174.93 | 30 Nov |
| 175.14 | 1 Dec |

LOWEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 174.29 | 5 Jan |
| 174.58 | 13 Feb |
| 174.46 | 6 Mar |
| 174.64 | 9 Apr |
| 174.67 | 1 May |
| 174.81 | 1 Jun |
| 174.80 | 29 Jul |
| 174.69 | 23 Aug |
| 174.52 | 12 Sep |
| 174.53 | 14 Oct |
| 174.39 | 9 Nov |
| 174.34 | 4 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(m.) | No. of days<br>above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 175.10        |     |     |     |     |     |     |     |     |     |     |     | 1   | 175.10        | 1                          |
| 175.05        |     |     |     |     |     |     |     |     |     |     |     |     | 175.05        | 1                          |
| 175.00        |     |     |     |     |     |     | 1   |     |     |     |     |     | 175.00        | 2                          |
| 174.95        |     |     |     |     |     | 4   | 3   |     |     | 1   |     |     | 174.95        | 10                         |
| 174.90        |     | 1   |     | 2   | 2   | 11  | 13  | 1   |     | 1   | 1   | 2   | 174.90        | 44                         |
| 174.85        |     |     | 2   | 5   | 11  | 10  | 10  | 4   |     | 6   |     | 1   | 174.85        | 93                         |
| 174.80        |     | 1   | 5   | 11  | 12  | 5   | 3   | 16  | 2   | 8   | 1   |     | 174.80        | 157                        |
| 174.75        |     | 1   | 9   | 7   | 3   |     | 1   | 6   | 6   | 8   | 6   | 7   | 174.75        | 211                        |
| 174.70        |     | 2   | 6   | 3   | 2   |     |     | 3   | 11  | 4   | 5   | 7   | 174.70        | 254                        |
| 174.65        | 1   | 8   | 5   | 1   | 1   |     |     | 1   | 7   | 2   | 6   | 4   | 174.65        | 290                        |
| 174.60        | 5   | 8   | 1   | 1   |     |     |     |     | 3   |     | 6   | 4   | 174.60        | 318                        |
| 174.55        | 8   | 7   |     |     |     |     |     |     |     |     | 1   | 1   | 174.55        | 334                        |
| 174.50        | 6   |     | 1   |     |     |     |     |     | 1   | 1   | 4   | 1   | 174.50        | 348                        |
| 174.45        | 4   |     | 2   |     |     |     |     |     |     |     |     | 1   | 174.45        | 355                        |
| 174.40        | 2   |     |     |     |     |     |     |     |     |     |     | 1   | 174.40        | 358                        |
| 174.35        | 3   |     |     |     |     |     |     |     |     |     | 1   |     | 174.35        | 362                        |
| 174.30        | 1   |     |     |     |     |     |     |     |     |     |     | 1   | 174.30        | 364                        |
| 174.25        | 1   |     |     |     |     |     |     |     |     |     |     |     | 174.25        | 365                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 4020: Gibraltar, Michigan on Detroit River

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 174.57  | 174.65  | 174.65  | 174.78  | 174.67  | 174.81  | 174.97  | 174.81  | 174.77  | 174.89  | 174.76  | 175.14  |
| 2    | 174.63  | 174.58  | 174.68  | 174.80  | 174.73  | 174.88  | 174.87  | 174.85  | 174.79  | 174.82  | 174.75  | 174.92  |
| 3    | 174.57  | 174.62  | 174.69  | 174.85  | 174.75  | 174.93  | 174.91  | 174.81  | 174.80  | 174.80  | 174.67  | 174.42  |
| 4    | 174.65  | 174.67  | 174.66  | 174.92  | 174.82  | 174.84  | 174.91  | 174.85  | 174.72  | 174.91  | 174.77  | 174.34  |
| 5    | 174.29  | 174.60  | 174.71  | 174.87  | 174.79  | 174.90  | 174.89  | 174.85  | 174.64  | 174.67  | 174.81  | 174.65  |
| 6    | 174.36  | 174.92  | 174.46  | 174.80  | 174.80  | 174.93  | 174.88  | 174.89  | 174.70  | 174.74  | 174.76  | 174.63  |
| 7    | 174.50  | 174.79  | 174.49  | 174.79  | 174.82  | 174.90  | 174.86  | 174.82  | 174.67  | 174.81  | 174.78  | 174.64  |
| 8    | 174.53  | 174.66  | 174.73  | 174.74  | 174.81  | 174.85  | 174.89  | 174.81  | 174.65  | 174.74  | 174.77  | 174.91  |
| 9    | 174.39  | 174.60  | 174.74  | 174.64  | 174.92  | 174.94  | 174.90  | 174.82  | 174.71  | 174.88  | 174.39  | 174.74  |
| 10   | 174.48  | 174.63  | 174.69  | 174.70  | 174.85  | 174.90  | 174.92  | 174.84  | 174.69  | 174.97  | 174.74  | 174.50  |
| 11   | 174.52  | 174.64  | 174.53  | 174.74  | 174.84  | 174.90  | 175.01  | 174.80  | 174.61  | 174.88  | 174.69  | 174.71  |
| 12   | 174.36  | 174.59  | 174.90  | 174.81  | 174.88  | 174.85  | 174.91  | 174.85  | 174.52  | 174.83  | 174.53  | 174.55  |
| 13   | 174.44  | 174.58  | 174.81  | 174.81  | 174.87  | 174.91  | 174.85  | 174.90  | 174.66  | 174.81  | 174.52  | 174.71  |
| 14   | 174.56  | 174.64  | 174.76  | 174.94  | 174.87  | 174.94  | 174.85  | 174.85  | 174.72  | 174.53  | 174.64  | 174.63  |
| 15   | 174.56  | 174.59  | 174.74  | 174.78  | 174.84  | 174.98  | 174.96  | 174.80  | 174.74  | 174.69  | 174.52  | 174.72  |
| 16   | 174.56  | 174.72  | 174.76  | 174.79  | 174.80  | 174.88  | 174.92  | 174.83  | 174.75  | 174.77  | 174.62  | 174.75  |
| 17   | 174.52  | 174.68  | 174.79  | 174.82  | 174.85  | 174.96  | 174.92  | 174.83  | 174.81  | 174.85  | 174.61  | 174.78  |
| 18   | 174.55  | 174.65  | 174.86  | 174.84  | 174.81  | 174.94  | 174.89  | 174.83  | 174.68  | 174.84  | 174.79  | 174.60  |
| 19   | 174.50  | 174.66  | 174.66  | 174.83  | 174.86  | 174.90  | 174.93  | 174.91  | 174.73  | 174.82  | 174.75  | 174.67  |
| 20   | 174.41  | 174.67  | 174.73  | 174.84  | 174.83  | 174.96  | 174.92  | 174.87  | 174.68  | 174.78  | 174.74  | 174.76  |
| 21   | 174.62  | 174.65  | 174.79  | 174.73  | 174.85  | 175.00  | 174.96  | 174.82  | 174.73  | 174.77  | 174.63  | 174.76  |
| 22   | 174.47  | 174.74  | 174.79  | 174.81  | 174.87  | 174.91  | 174.95  | 174.89  | 174.74  | 174.79  | 174.68  | 174.66  |
| 23   | 174.58  | 174.60  | 174.74  | 174.85  | 174.86  | 174.92  | 174.93  | 174.69  | 174.68  | 174.78  | 174.66  | 174.68  |
| 24   | 174.70  | 174.68  | 174.83  | 174.88  | 174.87  | 174.85  | 174.92  | 174.77  | 174.72  | 174.88  | 174.55  | 174.89  |
| 25   | 174.60  | 174.68  | 174.83  | 174.87  | 174.88  | 174.93  | 174.88  | 174.82  | 174.84  | 174.90  | 174.68  | 174.69  |
| 26   | 174.52  | 174.83  | 174.78  | 174.86  | 174.92  | 174.93  | 174.87  | 174.74  | 174.72  | 174.85  | 174.71  | 174.75  |
| 27   | 174.35  | 174.70  | 174.76  | 174.88  | 174.89  | 174.88  | 174.91  | 174.71  | 174.79  | 174.72  | 174.65  | 174.77  |
| 28   | 174.52  | 174.62  | 174.81  | 174.85  | 174.86  | 174.87  | 174.89  | 174.72  | 174.78  | 174.77  | 174.63  | 174.72  |
| 29   | 174.62  |         | 174.80  | 174.78  | 174.86  | 174.89  | 174.80  | 174.78  | 174.78  | 174.71  | 174.67  | 174.77  |
| 30   | 174.60  |         | 174.76  | 174.85  | 174.83  | 174.94  | 174.85  | 174.77  | 174.71  | 174.78  | 174.93  | 174.76  |
| 31   | 174.61  |         | 174.84  |         | 174.83  |         | 174.91  | 174.78  |         | 174.86  |         | 174.77  |
| MEAN | 174.52  | 174.67  | 174.73  | 174.82  | 174.84  | 174.91  | 174.90  | 174.82  | 174.72  | 174.80  | 174.68  | 174.71  |
| MAX. | 174.81  | 175.50  | 175.15  | 175.17  | 175.10  | 175.21  | 175.14  | 175.20  | 175.26  | 175.20  | 175.17  | 175.27  |
|      | 0800/25 | 0200/07 | 1400/11 | 1900/14 | 0800/09 | 0400/17 | 2000/11 | 2000/06 | 0700/25 | 1600/10 | 2400/30 | 0900/01 |
| MIN. | 173.85  | 174.21  | 173.96  | 174.47  | 174.46  | 174.56  | 174.64  | 174.44  | 174.17  | 174.31  | 173.97  | 174.02  |
|      | 0200/06 | 2000/07 | 0500/11 | 1000/11 | 1700/01 | 2400/12 | 0600/14 | 0100/27 | 1100/12 | 2200/14 | 1900/09 | 2100/03 |

\* Indicates less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 174.76

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 4030: Wyandotte, Michigan on Detroit River

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST  
 Monthly mean elevation: 175.27 Jul  
 Daily mean elevation: 175.40 1 Dec  
 Instant/hourly elevation: 175.57 0300/7 Feb

LOWEST  
 Monthly mean elevation: 175.04 Jan  
 Daily mean elevation: 174.87 27 Jan  
 Instant/hourly elevation: 174.72 1600/9 Nov

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 175.22 | 4 Jan  |
| 175.35 | 7 Feb  |
| 175.21 | 18 Mar |
| 175.24 | 14 Apr |
| 175.25 | 26 May |
| 175.34 | 21 Jun |
| 175.34 | 11 Jul |
| 175.27 | 19 Aug |
| 175.23 | 27 Sep |
| 175.37 | 10 Oct |
| 175.25 | 30 Nov |
| 175.40 | 1 Dec  |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 174.87 | 27 Jan |
| 175.02 | 28 Feb |
| 174.93 | 7 Mar  |
| 175.07 | 9 Apr  |
| 175.06 | 1 May  |
| 175.19 | 1 Jun  |
| 175.21 | 29 Jul |
| 175.13 | 23 Aug |
| 175.00 | 12 Sep |
| 175.08 | 14 Oct |
| 174.92 | 9 Nov  |
| 174.89 | 4 Dec  |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(m.) | No. of days
above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 175.35 | | | | | | | | | | 1 | | 1 | 175.35 | 2 |
| 175.30 | | 1 | | | | 5 | 3 | | | 2 | | | 175.30 | 13 |
| 175.25 | | 3 | | | | 12 | 18 | 4 | | 10 | | 1 | 175.25 | 61 |
| 175.20 | 2 | 3 | 1 | 8 | 13 | 11 | 10 | 16 | 5 | 11 | 2 | 2 | 175.20 | 145 |
| 175.15 | 2 | 9 | 11 | 11 | 12 | 2 | | 8 | 9 | 4 | 7 | | 175.15 | 220 |
| 175.10 | 1 | 6 | 7 | 9 | 5 | | | 3 | 8 | 2 | 5 | 10 | 175.10 | 276 |
| 175.05 | 7 | 4 | 4 | 2 | 1 | | | | 6 | 1 | 7 | 10 | 175.05 | 318 |
| 175.00 | 7 | 2 | 5 | | | | | | 1 | | 5 | 4 | 175.00 | 342 |
| 174.95 | 9 | | 1 | | | | | | 1 | | 3 | 1 | 174.95 | 357 |
| 174.90 | 2 | | 2 | | | | | | | | 1 | 1 | 174.90 | 363 |
| 174.85 | 1 | | | | | | | | | | | 1 | 174.85 | 365 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 4030: Wyandotte, Michigan on Detroit River

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 175.19 | 175.17 | 175.03 | 175.13 | 175.06 | 175.19 | 175.31 | 175.22 | 175.17 | 175.30 | 175.18 | 175.40 |
| 2 | 175.22 | 175.14 | 175.04 | 175.16 | 175.12 | 175.24 | 175.26 | 175.23 | 175.17 | 175.26 | 175.18 | 175.26 |
| 3 | 175.18 | 175.15 | 175.06 | 175.18 | 175.13 | 175.25 | 175.28 | 175.21 | 175.18 | 175.27 | 175.12 | 174.95 |
| 4 | 175.22 | 175.17 | 175.02 | 175.22 | 175.16 | 175.20 | 175.25 | 175.23 | 175.12 | 175.35 | 175.18 | 174.89 |
| 5 | 175.07 | 175.16 | 175.04 | 175.21 | 175.14 | 175.25 | 175.24 | 175.23 | 175.07 | 175.21 | 175.22 | 175.06 |
| 6 | 175.03 | 175.28 | 174.93 | 175.15 | 175.15 | 175.27 | 175.24 | 175.26 | 175.11 | 175.23 | 175.17 | 175.05 |
| 7 | 175.09 | 175.35 | 174.93 | 175.14 | 175.18 | 175.25 | 175.24 | 175.23 | 175.10 | 175.26 | 175.18 | 175.07 |
| 8 | 175.06 | 175.30 | 175.06 | 175.12 | 175.17 | 175.22 | 175.25 | 175.21 | 175.07 | 175.22 | 175.16 | 175.24 |
| 9 | 174.94 | 175.26 | 175.07 | 175.07 | 175.24 | 175.27 | 175.28 | 175.21 | 175.10 | 175.31 | 174.92 | 175.15 |
| 10 | 174.99 | 175.25 | 175.05 | 175.09 | 175.20 | 175.25 | 175.29 | 175.22 | 175.09 | 175.37 | 175.14 | 174.99 |
| 11 | 175.02 | 175.25 | 175.00 | 175.12 | 175.19 | 175.26 | 175.34 | 175.20 | 175.03 | 175.29 | 175.12 | 175.10 |
| 12 | 175.00 | 175.23 | 175.18 | 175.17 | 175.21 | 175.25 | 175.28 | 175.23 | 175.00 | 175.26 | 175.02 | 175.02 |
| 13 | 175.02 | 175.18 | 175.18 | 175.17 | 175.21 | 175.28 | 175.23 | 175.26 | 175.08 | 175.24 | 175.00 | 175.10 |
| 14 | 175.02 | 175.18 | 175.17 | 175.24 | 175.20 | 175.31 | 175.23 | 175.23 | 175.14 | 175.08 | 175.04 | 175.04 |
| 15 | 175.00 | 175.15 | 175.14 | 175.14 | 175.17 | 175.33 | 175.30 | 175.20 | 175.16 | 175.15 | 174.99 | 175.10 |
| 16 | 174.99 | 175.19 | 175.17 | 175.15 | 175.15 | 175.25 | 175.28 | 175.21 | 175.18 | 175.20 | 175.04 | 175.12 |
| 17 | 175.00 | 175.17 | 175.17 | 175.18 | 175.18 | 175.31 | 175.28 | 175.22 | 175.21 | 175.26 | 175.04 | 175.14 |
| 18 | 175.05 | 175.18 | 175.21 | 175.19 | 175.17 | 175.29 | 175.26 | 175.23 | 175.13 | 175.26 | 175.17 | 175.03 |
| 19 | 175.05 | 175.18 | 175.10 | 175.18 | 175.21 | 175.28 | 175.28 | 175.27 | 175.15 | 175.24 | 175.13 | 175.06 |
| 20 | 175.00 | 175.12 | 175.17 | 175.19 | 175.20 | 175.31 | 175.29 | 175.25 | 175.12 | 175.21 | 175.14 | 175.13 |
| 21 | 175.08 | 175.07 | 175.18 | 175.14 | 175.21 | 175.34 | 175.31 | 175.22 | 175.14 | 175.21 | 175.06 | 175.13 |
| 22 | 174.97 | 175.12 | 175.16 | 175.20 | 175.23* | 175.27 | 175.29 | 175.26 | 175.16 | 175.21 | 175.08 | 175.06 |
| 23 | 175.02 | 175.02 | 175.13 | 175.21 | 175.22 | 175.28 | 175.29 | 175.13 | 175.14 | 175.21 | 175.07 | 175.08 |
| 24 | 175.06 | 175.06 | 175.19 | 175.22 | 175.23 | 175.24 | 175.27 | 175.17 | 175.16 | 175.27 | 174.99 | 175.21 |
| 25 | 175.00 | 175.06 | 175.17 | 175.22 | 175.23 | 175.28 | 175.25 | 175.20 | 175.22 | 175.28 | 175.07 | 175.10 |
| 26 | 174.96 | 175.13 | 175.14 | 175.21 | 175.25 | 175.27 | 175.26 | 175.16 | 175.17 | 175.25 | 175.10 | 175.13 |
| 27 | 174.87 | 175.07 | 175.13 | 175.22 | 175.24 | 175.24 | 175.28 | 175.14 | 175.23 | 175.17 | 175.07 | 175.14 |
| 28 | 174.94 | 175.02 | 175.15 | 175.19 | 175.22 | 175.24 | 175.26 | 175.15 | 175.22 | 175.18 | 175.05 | 175.10 |
| 29 | 175.09 | | 175.14 | 175.14 | 175.21 | 175.26 | 175.21 | 175.17 | 175.21 | 175.15 | 175.09 | 175.13 |
| 30 | 175.10 | | 175.12 | 175.19 | 175.20 | 175.29 | 175.25 | 175.17 | 175.18 | 175.20 | 175.25 | 175.13 |
| 31 | 175.13 | | 175.17 | | 175.20 | | 175.27 | 175.18 | | 175.24 | | 175.13 |
| MEAN | 175.04 | 175.16 | 175.11 | 175.17 | 175.19 | 175.27 | 175.27 | 175.21 | 175.14 | 175.24 | 175.10 | 175.10 |
| MAX. | 175.25 | 175.57 | 175.34 | 175.37 | 175.33 | 175.44 | 175.42 | 175.37 | 175.34 | 175.48 | 175.41 | 175.50 |
| MIN. | 1400/04 | 0300/07 | 1500/11 | 2000/14 | 2400/26 | 0500/17 | 2100/11 | 2000/06 | 1300/30 | 1700/10 | 2400/30 | 1000/01 |
| | 174.83 | 174.95 | 174.76 | 174.98 | 174.90 | 175.08 | 175.12 | 175.02 | 174.85 | 174.96 | 174.72 | 174.73 |
| | 0200/27 | 0400/23 | 0600/11 | 1000/11 | 1700/01 | 0100/13 | 0700/14 | 0300/27 | 1200/12 | 2300/14 | 1600/09 | 2200/03 |

* Indicates Less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL MEAN: 175.17

ANNUAL SUMMARY OF LEVELS, 1986
 Station 4036: Fort Wayne, Detroit, Michigan on Detroit River

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

HIGHEST
 Monthly mean elevation: 175.41 Jul
 Daily mean elevation: 175.52 10 Oct
 Instant/hourly elevation: 175.60 0500/4 Oct

LOWEST
 Monthly mean elevation: 175.25 Dec
 Daily mean elevation: 175.05 27 Jan
 Instant/hourly elevation: 174.92 2200/3 Dec

HIGHEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 175.49 | 2 Jan |
| 175.43 | 8 Feb |
| 175.35 | 18 Mar |
| 175.35 | 25 Apr |
| 175.38 | 27 May |
| 175.46 | 21 Jun |
| 175.47 | 11 Jul |
| 175.40 | 19 Aug |
| 175.39 | 27 Sep |
| 175.52 | 10 Oct |
| 175.37 | 5 Nov |
| 175.49 | 1 Dec |

LOWEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 175.05 | 27 Jan |
| 175.16 | 28 Feb |
| 175.10 | 7 Mar |
| 175.22 | 9 Apr |
| 175.21 | 1 May |
| 175.32 | 4 Jun |
| 175.36 | 29 Jul |
| 175.29 | 23 Aug |
| 175.17 | 12 Sep |
| 175.28 | 14 Oct |
| 175.12 | 9 Nov |
| 175.08 | 4 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(m.) | No. of days<br>above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 175.50        |     |     |     |     |     |     |     |     |     | 2   |     |     | 175.50        | 2                          |
| 175.45        | 6   |     |     |     |     | 2   | 1   |     |     | 1   |     | 1   | 175.45        | 13                         |
| 175.40        | 1   | 1   |     |     |     | 10  | 15  |     |     | 12  |     |     | 175.40        | 52                         |
| 175.35        | 3   | 10  |     |     | 6   | 16  | 15  | 20  | 5   | 11  | 1   | 2   | 175.35        | 141                        |
| 175.30        | 3   | 3   | 8   | 16  | 17  | 2   |     | 10  | 11  | 4   | 7   | 1   | 175.30        | 223                        |
| 175.25        | 3   | 6   | 12  | 11  | 7   |     |     | 1   | 6   | 1   | 6   | 10  | 175.25        | 286                        |
| 175.20        | 5   | 3   |     | 3   | 1   |     |     |     | 6   |     | 7   | 10  | 175.20        | 321                        |
| 175.15        | 5   | 5   | 8   |     |     |     |     |     | 2   |     | 7   | 4   | 175.15        | 352                        |
| 175.10        | 3   |     | 1   |     |     |     |     |     |     |     | 2   | 2   | 175.10        | 360                        |
| 175.05        | 1   |     | 2   |     |     |     |     |     |     |     |     | 1   | 175.05        | 364                        |
| 175.00        | 1   |     |     |     |     |     |     |     |     |     |     |     | 175.00        | 365                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986  
Station 4036: Fort Wayne, Detroit, Michigan on Detroit River

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 175.47  | 175.28  | 175.17  | 175.26  | 175.21  | 175.33  | 175.43  | 175.37  | 175.31  | 175.45  | 175.34  | 175.49  |
| 2    | 175.49  | 175.26  | 175.17  | 175.29  | 175.26  | 175.37  | 175.40  | 175.37  | 175.32  | 175.42  | 175.34  | 175.37  |
| 3    | 175.46* | 175.28  | 175.19  | 175.31  | 175.27  | 175.37  | 175.41  | 175.37  | 175.32  | 175.44  | 175.28  | 175.14  |
| 4    | 175.48  | 175.30  | 175.15  | 175.34  | 175.28  | 175.32  | 175.38  | 175.37  | 175.28  | 175.51  | 175.34  | 175.08  |
| 5    | 175.38  | 175.29  | 175.17  | 175.33  | 175.27  | 175.37  | 175.38  | 175.38  | 175.23  | 175.41  | 175.37  | 175.21  |
| 6    | 175.41  | 175.38  | 175.10  | 175.28  | 175.28  | 175.40  | 175.38  | 175.40  | 175.26  | 175.42  | 175.32  | 175.20  |
| 7    | 175.47  | 175.40* | 175.10  | 175.28  | 175.31  | 175.38  | 175.38  | 175.38  | 175.25  | 175.44  | 175.33  | 175.23  |
| 8    | 175.46  | 175.43  | 175.20  | 175.25  | 175.31  | 175.36  | 175.39  | 175.37  | 175.23  | 175.40  | 175.31  | 175.37  |
| 9    | 175.33  | 175.40  | 175.20  | 175.22  | 175.35  | 175.39  | 175.42  | 175.36  | 175.25  | 175.47  | 175.12  | 175.29  |
| 10   | 175.40  | 175.39  | 175.19  | 175.24  | 175.32  | 175.38  | 175.43  | 175.37  | 175.24  | 175.52  | 175.29  | 175.15  |
| 11   | 175.40  | 175.38  | 175.17  | 175.26  | 175.31  | 175.39  | 175.47  | 175.35  | 175.19  | 175.45  | 175.28  | 175.24  |
| 12   | 175.30  | 175.37  | 175.30  | 175.30  | 175.33  | 175.39  | 175.42  | 175.38  | 175.17  | 175.42  | 175.19  | 175.18  |
| 13   | 175.34  | 175.36  | 175.31  | 175.30  | 175.33  | 175.41  | 175.37  | 175.40  | 175.24  | 175.40  | 175.17  | 175.24  |
| 14   | 175.35  | 175.36  | 175.31  | 175.35  | 175.32  | 175.44  | 175.38  | 175.37  | 175.30  | 175.28  | 175.19  | 175.19  |
| 15   | 175.30  | 175.32  | 175.29  | 175.28  | 175.30  | 175.46  | 175.43  | 175.34  | 175.32  | 175.33  | 175.16  | 175.24  |
| 16   | 175.27  | 175.38  | 175.32  | 175.29  | 175.28  | 175.39  | 175.42  | 175.36  | 175.33  | 175.37  | 175.20  | 175.26  |
| 17   | 175.21  | 175.39  | 175.33  | 175.31  | 175.31  | 175.44  | 175.42  | 175.37  | 175.35  | 175.42  | 175.20  | 175.27  |
| 18   | 175.20  | 175.35  | 175.35  | 175.31  | 175.31  | 175.42  | 175.40  | 175.38  | 175.29  | 175.42  | 175.30  | 175.18  |
| 19   | 175.19  | 175.33  | 175.26  | 175.31  | 175.34  | 175.41  | 175.42  | 175.40  | 175.31  | 175.40  | 175.27  | 175.21  |
| 20   | 175.17  | 175.26  | 175.33  | 175.31  | 175.34  | 175.45  | 175.43  | 175.39  | 175.29  | 175.38  | 175.28  | 175.26  |
| 21   | 175.24  | 175.21  | 175.33  | 175.28  | 175.35  | 175.46  | 175.44  | 175.37  | 175.30  | 175.37  | 175.22  | 175.27  |
| 22   | 175.14  | 175.25  | 175.30  | 175.33  | 175.36  | 175.41  | 175.43  | 175.39  | 175.31  | 175.37  | 175.23  | 175.21  |
| 23   | 175.17  | 175.17  | 175.28  | 175.34  | 175.35  | 175.41  | 175.42  | 175.29  | 175.31  | 175.38  | 175.21  | 175.22  |
| 24   | 175.21  | 175.19  | 175.33  | 175.35  | 175.36  | 175.38  | 175.41  | 175.32  | 175.33  | 175.42  | 175.15  | 175.33  |
| 25   | 175.15  | 175.19  | 175.30  | 175.35  | 175.36  | 175.42  | 175.39  | 175.34  | 175.37  | 175.43  | 175.21  | 175.24  |
| 26   | 175.12  | 175.24  | 175.27  | 175.34  | 175.38  | 175.40  | 175.40  | 175.31  | 175.34  | 175.40  | 175.24  | 175.27  |
| 27   | 175.05  | 175.20  | 175.27  | 175.34  | 175.38  | 175.38  | 175.42  | 175.31  | 175.39  | 175.34  | 175.21  | 175.28  |
| 28   | 175.10  | 175.16  | 175.28  | 175.31  | 175.36  | 175.39  | 175.40  | 175.31  | 175.38  | 175.34  | 175.20  | 175.24  |
| 29   | 175.20  |         | 175.27  | 175.27  | 175.35  | 175.40  | 175.36  | 175.32  | 175.38  | 175.31  | 175.23  | 175.26  |
| 30   | 175.21  |         | 175.26  | 175.31  | 175.33  | 175.42  | 175.39  | 175.32  | 175.36  | 175.36  | 175.35  | 175.27  |
| 31   | 175.25  |         | 175.30  |         | 175.33  |         | 175.40  | 175.33  |         | 175.38  |         | 175.26  |
| MEAN | 175.29  | 175.30  | 175.25  | 175.30  | 175.32  | 175.40  | 175.41  | 175.36  | 175.30  | 175.40  | 175.25  | 175.25  |
| MAX. | 175.49  | 175.50  | 175.42  | 175.46  | 175.45  | 175.53  | 175.53  | 175.52  | 175.46  | 175.60  | 175.48  | 175.56  |
|      | 0100/04 | 2400/06 | 1500/11 | 2000/14 | 2400/26 | 0500/17 | 2100/11 | 2100/06 | 1400/30 | 0500/04 | 2400/30 | 1000/01 |
| MIN. | 175.02  | 175.12  | 174.99  | 175.14  | 175.06  | 175.27  | 175.29  | 175.21  | 175.06  | 175.16  | 174.97  | 174.92  |
|      | 0200/27 | 0400/23 | 1600/06 | 1100/11 | 1700/01 | 1100/24 | 0700/14 | 0800/27 | 1200/12 | 2300/14 | 1500/09 | 2200/03 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 175.32

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 4049: Windmill Point, Detroit, Michigan on Detroit River

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST  
 Monthly mean elevation: 175.71 Oct  
 Daily mean elevation: 175.82 4 Oct  
 Instant/hourly elevation: 175.87 1342/4 Oct

LOWEST  
 Monthly mean elevation: 175.53 Jan  
 Daily mean elevation: 175.39 27 Jan  
 Instant/hourly elevation: 175.33 2200/3 Dec

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 175.68 | 7 Jan  |
| 175.64 | 7 Feb  |
| 175.65 | 20 Mar |
| 175.62 | 23 Apr |
| 175.63 | 28 May |
| 175.72 | 20 Jun |
| 175.73 | 11 Jul |
| 175.67 | 19 Aug |
| 175.69 | 27 Sep |
| 175.82 | 4 Oct  |
| 175.67 | 5 Nov  |
| 175.70 | 1 Dec  |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 175.39 | 27 Jan |
| 175.46 | 28 Feb |
| 175.42 | 7 Mar  |
| 175.53 | 1 Apr  |
| 175.50 | 1 May  |
| 175.59 | 4 Jun  |
| 175.63 | 4 Jul  |
| 175.59 | 23 Aug |
| 175.48 | 11 Sep |
| 175.63 | 29 Oct |
| 175.47 | 24 Nov |
| 175.45 | 4 Dec  |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(m.) | No. of days
above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 175.80 | | | | | | | | | | 1 | | | 175.80 | 1 |
| 175.75 | | | | | | | | | | 4 | | | 175.75 | 5 |
| 175.70 | | | | | | 5 | 2 | | | 10 | | | 175.70 | 22 |
| 175.65 | 4 | | | | | 13 | 24 | 13 | 4 | 13 | 3 | 1 | 175.65 | 97 |
| 175.60 | 4 | 5 | 8 | 5 | 13 | 10 | 5 | 13 | 8 | 3 | 4 | 2 | 175.60 | 177 |
| 175.55 | 6 | 10 | 8 | 17 | 12 | 2 | | 2 | 10 | | 7 | 3 | 175.55 | 254 |
| 175.50 | 2 | 4 | 4 | 8 | 5 | | | | 5 | | 11 | 17 | 175.50 | 310 |
| 175.45 | 6 | 9 | 1 | | 1 | | | | 3 | | 5 | 7 | 175.45 | 342 |
| 175.40 | 6 | | 10 | | | | | | | | | 1 | 175.40 | 359 |
| 175.35 | 3 | | | | | | | | | | | | 175.35 | 362 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 4049: Windmill Point, Detroit, Michigan on Detroit River

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 175.64 | 175.48 | 175.45 | 175.53 | 175.50 | 175.63 | 175.69 | 175.67 | 175.60 | 175.74 | 175.64 | 175.70 |
| 2 | 175.65 | 175.49 | 175.45 | 175.56 | 175.56 | 175.63 | 175.68 | 175.65 | 175.60 | 175.73 | 175.66 | 175.63 |
| 3 | 175.66 | 175.50 | 175.45 | 175.56 | 175.56 | 175.60 | 175.69 | 175.67 | 175.60 | 175.75 | 175.60 | 175.49 |
| 4 | 175.67 | 175.52 | 175.43 | 175.58 | 175.54 | 175.59 | 175.63 | 175.65 | 175.56 | 175.82 | 175.66 | 175.45 |
| 5 | 175.62 | 175.54 | 175.44 | 175.59 | 175.54 | 175.63 | 175.64 | 175.65 | 175.54 | 175.76 | 175.67 | 175.51 |
| 6 | 175.64 | 175.57 | 175.43 | 175.55 | 175.55 | 175.65 | 175.65 | 175.67 | 175.56 | 175.78 | 175.63 | 175.50 |
| 7 | 175.68 | 175.64 | 175.42 | 175.54 | 175.57 | 175.64 | 175.65 | 175.67 | 175.55 | 175.75 | 175.63 | 175.53 |
| 8 | 175.67 | 175.63 | 175.45 | 175.54 | 175.59 | 175.64 | 175.66 | 175.65 | 175.53 | 175.73 | 175.60 | 175.63 |
| 9 | 175.60 | 175.63 | 175.45 | 175.54 | 175.60 | 175.65 | 175.70 | 175.65 | 175.53 | 175.79 | 175.48 | 175.57 |
| 10 | 175.59 | 175.62 | 175.45 | 175.54 | 175.59 | 175.63 | 175.70 | 175.65 | 175.50 | 175.80 | 175.59 | 175.48 |
| 11 | 175.60 | 175.62 | 175.49 | 175.55 | 175.57 | 175.65 | 175.73 | 175.64 | 175.48 | 175.74 | 175.59 | 175.52 |
| 12 | 175.56 | 175.60 | 175.57 | 175.57 | 175.58 | 175.67 | 175.69 | 175.66 | 175.49 | 175.71 | 175.53 | 175.52 |
| 13 | 175.59 | 175.59 | 175.60 | 175.57 | 175.58 | 175.70 | 175.65 | 175.67 | 175.55 | 175.70 | 175.52 | 175.53 |
| 14 | 175.58 | 175.58 | 175.61 | 175.60 | 175.57 | 175.72 | 175.67 | 175.66 | 175.60 | 175.63 | 175.48 | 175.48 |
| 15 | 175.53 | 175.57 | 175.63 | 175.56 | 175.55 | 175.72 | 175.69 | 175.63 | 175.63 | 175.66 | 175.50 | 175.53 |
| 16 | 175.49 | 175.59 | 175.64 | 175.57 | 175.54 | 175.67 | 175.69 | 175.64 | 175.63 | 175.68 | 175.51 | 175.54 |
| 17 | 175.45 | 175.60 | 175.64 | 175.59 | 175.56 | 175.71 | 175.68 | 175.66 | 175.63 | 175.73 | 175.51 | 175.54 |
| 18 | 175.45 | 175.59 | 175.63 | 175.59 | 175.58 | 175.69 | 175.68 | 175.67 | 175.60 | 175.72 | 175.59 | 175.49 |
| 19 | 175.47 | 175.58 | 175.59 | 175.57 | 175.62 | 175.68 | 175.69 | 175.67 | 175.61 | 175.70 | 175.57 | 175.49 |
| 20 | 175.48 | 175.56 | 175.65 | 175.59 | 175.62 | 175.72 | 175.70 | 175.66 | 175.60 | 175.69 | 175.56 | 175.54 |
| 21 | 175.51 | 175.54 | 175.63 | 175.59 | 175.62 | 175.71 | 175.71 | 175.66 | 175.60 | 175.68 | 175.54 | 175.55 |
| 22 | 175.48 | 175.53 | 175.58 | 175.62 | 175.63 | 175.67 | 175.69 | 175.66 | 175.60 | 175.68 | 175.52 | 175.50 |
| 23 | 175.49 | 175.48 | 175.58 | 175.62 | 175.62 | 175.68 | 175.69 | 175.59 | 175.63 | 175.69 | 175.51 | 175.52 |
| 24 | 175.50 | 175.48 | 175.61 | 175.61 | 175.63 | 175.67 | 175.68 | 175.62 | 175.63 | 175.70 | 175.47 | 175.58 |
| 25 | 175.44 | 175.46 | 175.57 | 175.61 | 175.63 | 175.68 | 175.66 | 175.62* | 175.65 | 175.71 | 175.50 | 175.54 |
| 26 | 175.42 | 175.47 | 175.55 | 175.61 | 175.63 | 175.66 | 175.69 | / | 175.64 | 175.69 | 175.54 | 175.55 |
| 27 | 175.39 | 175.46 | 175.56 | 175.60 | 175.63 | 175.65 | 175.69 | / | 175.69 | 175.66 | 175.53 | 175.56 |
| 28 | 175.40 | 175.46 | 175.54 | 175.58 | 175.63 | 175.67 | 175.67 | / | 175.68 | 175.64 | 175.51 | 175.53 |
| 29 | 175.40 | | 175.53 | 175.55 | 175.62 | 175.68 | 175.66 | 175.60* | 175.67 | 175.63 | 175.55 | 175.53 |
| 30 | 175.42 | | 175.54 | 175.58 | 175.61 | 175.68 | 175.68 | 175.61 | 175.68 | 175.67 | 175.63 | 175.54 |
| 31 | 175.45 | | 175.56 | | 175.61 | | 175.67 | 175.61 | | 175.66 | | 175.53 |
| MEAN | 175.53 | 175.55 | 175.54 | 175.58 | 175.59 | 175.67 | 175.68 | 175.65 | 175.60 | 175.71 | 175.56 | 175.54 |
| MAX. | 175.69 | 175.66 | 175.68 | 175.67 | 175.66 | 175.78 | 175.77 | 175.75 | 175.74 | 175.87 | 175.70 | 175.74 |
| | 0500/08 | 0900/07 | 1700/20 | 2200/14 | 1200/27 | 2000/29 | 1900/20 | 2000/17 | 0400/29 | 1342/04 | 0500/05 | 0800/01 |
| MIN. | 175.38 | 175.45 | 175.38 | 175.46 | 175.38 | 175.56 | 175.57 | 175.55 | 175.41 | 175.56 | 175.36 | 175.33 |
| | 0500/27 | 2400/28 | 0100/11 | 1400/01 | 1500/01 | 1200/01 | 1600/04 | 1300/23 | 0300/11 | 2300/14 | 1500/09 | 2200/03 |

* Indicates Less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL MEAN: 175.60

ANNUAL SUMMARY OF LEVELS, 1986
 Station 4052: St. Clair Shores, Michigan on Lake St. Clair

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

| HIGHEST | | | LOWEST | | |
|---------------------------|--------|------------|---------------------------|--------|------------|
| Monthly mean elevation: | 175.78 | Oct | Monthly mean elevation: | 175.60 | Jan |
| Daily mean elevation: | 175.87 | 4 Oct | Daily mean elevation: | 175.47 | 29 Jan |
| Instant/hourly elevation: | 175.91 | 1244/4 Oct | Instant/hourly elevation: | 175.46 | 1500/1 May |

HIGHEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 175.73 | 7 Jan |
| 175.70 | 9 Feb |
| 175.72 | 16 Mar |
| 175.68 | 24 Apr |
| 175.69 | 27 May |
| 175.78 | 20 Jun |
| 175.77 | 11 Jul |
| 175.74 | 7 Aug |
| 175.75 | 30 Sep |
| 175.87 | 4 Oct |
| 175.72 | 5 Nov |
| 175.72 | 1 Dec |

LOWEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 175.47 | 29 Jan |
| 175.53 | 26 Feb |
| 175.51 | 7 Mar |
| 175.59 | 9 Apr |
| 175.56 | 1 May |
| 175.64 | 4 Jun |
| 175.70 | 7 Jul |
| 175.66 | 23 Aug |
| 175.57 | 12 Sep |
| 175.70 | 29 Oct |
| 175.55 | 24 Nov |
| 175.56 | 18 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(m.) | No. of days<br>above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 175.85        |     |     |     |     |     |     |     |     |     | 1   |     |     | 175.85        | 1                          |
| 175.80        |     |     |     |     |     |     |     |     |     | 8   |     |     | 175.80        | 9                          |
| 175.75        |     |     |     |     |     | 5   | 1   |     |     | 10  |     |     | 175.75        | 25                         |
| 175.70        | 4   |     | 4   |     |     | 15  | 29  | 17  | 6   | 11  | 4   | 1   | 175.70        | 116                        |
| 175.65        | 6   | 7   | 7   | 5   | 13  | 9   | 1   | 14  | 11  | 1   | 5   | 2   | 175.65        | 197                        |
| 175.60        | 4   | 10  | 7   | 21  | 16  | 1   |     |     | 6   |     | 7   | 8   | 175.60        | 277                        |
| 175.55        | 7   | 5   | 3   | 4   | 2   |     |     |     | 7   |     | 13  | 20  | 175.55        | 338                        |
| 175.50        | 7   | 6   | 10  |     |     |     |     |     |     |     | 1   |     | 175.50        | 362                        |
| 175.45        | 3   |     |     |     |     |     |     |     |     |     |     |     | 175.45        | 365                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 4052: St. Clair Shores, Michigan on Lake St. Clair

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 175.69  | 175.54  | 175.54  | 175.60  | 175.56  | 175.66  | 175.74  | 175.72  | 175.66  | 175.79  | 175.71  | 175.72  |
| 2    | 175.69  | 175.56  | 175.53  | 175.61  | 175.61  | 175.66  | 175.74  | 175.72  | 175.65  | 175.79  | 175.71  | 175.69  |
| 3    | 175.70  | 175.56  | 175.53  | 175.61  | 175.62  | 175.66  | 175.74  | 175.72  | 175.65  | 175.82  | 175.68  | 175.59  |
| 4    | 175.72  | 175.58  | 175.53  | 175.62  | 175.61  | 175.64  | 175.71  | 175.71  | 175.63  | 175.87  | 175.71  | 175.56  |
| 5    | 175.71  | 175.61  | 175.53  | 175.63  | 175.61  | 175.68  | 175.71  | 175.71  | 175.60  | 175.84  | 175.72  | 175.59  |
| 6    | 175.70  | 175.63  | 175.54  | 175.61  | 175.61  | 175.70  | 175.71  | 175.72  | 175.61  | 175.85  | 175.70  | 175.59  |
| 7    | 175.73  | 175.69  | 175.51  | 175.61  | 175.62  | 175.69  | 175.70  | 175.74  | 175.60  | 175.84  | 175.69  | 175.61  |
| 8    | 175.72  | 175.70  | 175.52  | 175.60  | 175.63  | 175.69  | 175.71  | 175.72  | 175.60  | 175.81  | 175.67  | 175.68  |
| 9    | 175.67  | 175.70  | 175.52  | 175.59  | 175.64  | 175.69  | 175.75  | 175.72  | 175.60  | 175.84  | 175.58  | 175.64  |
| 10   | 175.64  | 175.69  | 175.53  | 175.60  | 175.63  | 175.69  | 175.75  | 175.72  | 175.58  | 175.85  | 175.65  | 175.58  |
| 11   | 175.66  | 175.68  | 175.58  | 175.61  | 175.63  | 175.71  | 175.77  | 175.70  | 175.58  | 175.81  | 175.65  | 175.61  |
| 12   | 175.64  | 175.67  | 175.65  | 175.63  | 175.63  | 175.74  | 175.75  | 175.72  | 175.57  | 175.79  | 175.61  | 175.59  |
| 13   | 175.65  | 175.66  | 175.70  | 175.62  | 175.63  | 175.75  | 175.72  | 175.73  | 175.61  | 175.77  | 175.59  | 175.60  |
| 14   | 175.65  | 175.64  | 175.71  | 175.64  | 175.63  | 175.77  | 175.73  | 175.72  | 175.66  | 175.73  | 175.58  | 175.58  |
| 15   | 175.60  | 175.63  | 175.72  | 175.62  | 175.62  | 175.78  | 175.74  | 175.70  | 175.68  | 175.73  | 175.59  | 175.60  |
| 16   | 175.55  | 175.63  | 175.72  | 175.62  | 175.60  | 175.74  | 175.74  | 175.70  | 175.69  | 175.75  | 175.59  | 175.60  |
| 17   | 175.52  | 175.65  | 175.71  | 175.63  | 175.62  | 175.76  | 175.74  | 175.70  | 175.70  | 175.77  | 175.57  | 175.60  |
| 18   | 175.52  | 175.65  | 175.70  | 175.64  | 175.63  | 175.74  | 175.73  | 175.70  | 175.67  | 175.78  | 175.61  | 175.56  |
| 19   | 175.54  | 175.64  | 175.67  | 175.63  | 175.66  | 175.75  | 175.74  | 175.72  | 175.67  | 175.77  | 175.62  | 175.57  |
| 20   | 175.57  | 175.63  | 175.70  | 175.63  | 175.67  | 175.78  | 175.75  | 175.71  | 175.66  | 175.76  | 175.62  | 175.60  |
| 21   | 175.60  | 175.63  | 175.70  | 175.63  | 175.67  | 175.77  | 175.75  | 175.71  | 175.65  | 175.75  | 175.60  | 175.60  |
| 22   | 175.56  | 175.60  | 175.67  | 175.66  | 175.68  | 175.74  | 175.74  | 175.71  | 175.67  | 175.74  | 175.60  | 175.58  |
| 23   | 175.58  | 175.57  | 175.64  | 175.68  | 175.68  | 175.74  | 175.74  | 175.66  | 175.69  | 175.74  | 175.58  | 175.59  |
| 24   | 175.59  | 175.55  | 175.67  | 175.68  | 175.69  | 175.73  | 175.74  | 175.67  | 175.70  | 175.75  | 175.55  | 175.62  |
| 25   | 175.56  | 175.53  | 175.64  | 175.67  | 175.68  | 175.74  | 175.73  | 175.68  | 175.71  | 175.77  | 175.57  | 175.61  |
| 26   | 175.52  | 175.53  | 175.62  | 175.66  | 175.68  | 175.72  | 175.74  | 175.67  | 175.71  | 175.76  | 175.59  | 175.62  |
| 27   | 175.52  | 175.55  | 175.61  | 175.65  | 175.69  | 175.71  | 175.74  | 175.67  | 175.75  | 175.73  | 175.60  | 175.62  |
| 28   | 175.49  | 175.55  | 175.61  | 175.64  | 175.68  | 175.73  | 175.74  | 175.67  | 175.75  | 175.72  | 175.59  | 175.60  |
| 29   | 175.47  |         | 175.60  | 175.62  | 175.67  | 175.73  | 175.71  | 175.67  | 175.74  | 175.70  | 175.61  | 175.61  |
| 30   | 175.48  |         | 175.60  | 175.64  | 175.67  | 175.73  | 175.73  | 175.67  | 175.75  | 175.72  | 175.66  | 175.60  |
| 31   | 175.51  |         | 175.61  |         | 175.66  |         | 175.73  | 175.67  |         | 175.73  |         | 175.59  |
| MEAN | 175.60  | 175.62  | 175.62  | 175.63  | 175.64  | 175.72  | 175.73  | 175.70  | 175.66  | 175.78  | 175.63  | 175.61  |
| MAX. | 175.74  | 175.71  | 175.73  | 175.72  | 175.71  | 175.79  | 175.80  | 175.80  | 175.77  | 175.91  | 175.76  | 175.76  |
| MIN. | 0200/08 | 1700/07 | 1900/20 | 2200/14 | 1200/27 | 1200/20 | 2100/08 | 1700/02 | 2200/30 | 1244/04 | 0400/05 | 0100/02 |
|      | 175.47  | 175.52  | 175.51  | 175.54  | 175.46  | 175.63  | 175.67  | 175.61  | 175.53  | 175.67  | 175.50  | 175.48  |
|      | 1000/29 | 1300/26 | 1700/07 | 1400/01 | 1500/01 | 1200/01 | 2000/13 | 2100/26 | 0700/12 | 2300/14 | 1700/09 | 2100/03 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 175.66

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 4070: Algonac, Michigan on St. Clair River

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST  
 Monthly mean elevation: 175.94 Oct  
 Daily mean elevation: 176.05 5 Oct  
 Instant/hourly elevation: 176.13 1945/5 Oct

LOWEST  
 Monthly mean elevation: 175.77 Apr  
 Daily mean elevation: 175.67 5 Mar  
 Instant/hourly elevation: 175.66 1200/10 Mar

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 176.00 | 28 Jan |
| 175.90 | 17 Feb |
| 175.87 | 19 Mar |
| 175.82 | 23 Apr |
| 175.82 | 28 May |
| 175.92 | 16 Jun |
| 175.90 | 25 Jul |
| 175.89 | 9 Aug  |
| 175.92 | 30 Sep |
| 176.05 | 5 Oct  |
| 175.90 | 3 Nov  |
| 175.85 | 4 Dec  |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 175.70 | 26 Jan |
| 175.67 | 26 Feb |
| 175.67 | 5 Mar  |
| 175.74 | 4 Apr  |
| 175.75 | 9 May  |
| 175.77 | 2 Jun  |
| 175.86 | 8 Jul  |
| 175.82 | 31 Aug |
| 175.77 | 9 Sep  |
| 175.87 | 31 Oct |
| 175.73 | 18 Nov |
| 175.74 | 24 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(m.) | No. of days
above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 176.00 | | | | | | | | | | 5 | | | 176.00 | 5 |
| 175.95 | 9 | | | | | | | | | 4 | | | 175.95 | 18 |
| 175.90 | 4 | | | | | 3 | | | 2 | 12 | | | 175.90 | 39 |
| 175.85 | 5 | 11 | 1 | | | 16 | 31 | 16 | 5 | 10 | 4 | | 175.85 | 138 |
| 175.80 | 4 | 8 | 10 | 2 | 11 | 7 | | 15 | 12 | | 11 | 7 | 175.80 | 225 |
| 175.75 | 2 | 3 | 8 | 21 | 18 | 4 | | | 11 | | 12 | 19 | 175.75 | 323 |
| 175.70 | 5 | 4 | 7 | 7 | 2 | | | | | | 3 | 5 | 175.70 | 356 |
| 175.65 | 2 | 2 | 5 | | | | | | | | | | 175.65 | 365 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 4070: Algonac, Michigan on St. Clair River

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 175.96 | 175.86 | 175.71 | 175.74 | 175.79 | 175.78 | 175.87 | 175.88 | 175.81 | 175.92 | 175.87 | 175.77 |
| 2 | 175.95 | 175.85 | 175.69 | 175.74 | 175.78 | 175.77 | 175.88 | 175.88 | 175.80 | 175.94 | 175.88 | 175.80 |
| 3 | 175.99 | 175.83 | 175.68 | 175.74 | 175.77 | 175.79 | 175.87 | 175.88 | 175.80 | 175.98 | 175.90 | 175.85 |
| 4 | 175.99 | 175.81 | 175.68 | 175.74 | 175.78 | 175.79 | 175.88 | 175.88 | 175.80 | 176.01 | 175.85 | 175.85 |
| 5 | 175.98 | 175.83 | 175.67 | 175.76 | 175.78 | 175.81 | 175.87 | 175.88 | 175.79 | 176.05 | 175.84 | 175.81 |
| 6 | 176.00 | 175.82 | 175.71 | 175.75 | 175.77 | 175.83 | 175.86 | 175.87 | 175.78 | 176.03 | 175.85 | 175.81 |
| 7 | 175.99 | 175.86 | 175.72 | 175.76 | 175.76 | 175.82 | 175.86 | 175.89 | 175.78 | 176.03 | 175.84 | 175.80 |
| 8 | 175.89 | 175.88 | 175.72 | 175.77 | 175.75 | 175.83 | 175.86 | 175.89 | 175.78 | 176.01 | 175.84 | 175.77 |
| 9 | 175.82 | 175.87 | 175.72 | 175.76 | 175.75 | 175.82 | 175.88 | 175.89 | 175.77 | 175.96 | 175.89 | 175.78 |
| 10 | 175.88 | 175.86 | 175.68 | 175.76 | 175.76 | 175.82 | 175.89 | 175.88 | 175.78 | 175.96 | 175.83 | 175.84 |
| 11 | 175.89 | 175.87 | 175.75 | 175.76 | 175.76 | 175.85 | 175.88 | 175.88 | 175.82 | 175.95 | 175.83 | 175.84 |
| 12 | 175.93 | 175.87 | 175.78 | 175.76 | 175.76 | 175.91 | 175.89 | 175.88 | 175.80 | 175.93 | 175.84 | 175.80 |
| 13 | 175.98 | 175.85 | 175.82 | 175.75 | 175.76 | 175.90 | 175.90 | 175.87 | 175.80 | 175.93 | 175.81 | 175.78 |
| 14 | 175.97 | 175.88 | 175.84 | 175.75 | 175.76 | 175.90 | 175.88 | 175.87 | 175.81 | 175.97 | 175.85 | 175.82 |
| 15 | 175.86 | 175.89 | 175.85 | 175.76 | 175.76 | 175.91 | 175.88 | 175.87 | 175.82 | 175.94 | 175.81 | 175.76 |
| 16 | 175.85 | 175.88 | 175.85 | 175.76 | 175.78 | 175.92 | 175.89 | 175.86 | 175.83 | 175.93 | 175.78 | 175.74 |
| 17 | 175.85 | 175.90 | 175.83 | 175.77 | 175.76 | 175.89 | 175.89 | 175.85 | 175.83 | 175.92 | 175.76 | 175.74 |
| 18 | 175.77 | 175.85 | 175.81 | 175.78 | 175.77 | 175.88 | 175.88 | 175.85 | 175.82 | 175.93 | 175.73 | 175.77 |
| 19 | 175.73 | 175.81 | 175.87 | 175.77 | 175.78 | 175.90 | 175.89 | 175.85 | 175.81 | 175.93 | 175.76 | 175.76 |
| 20 | 175.77 | 175.79 | 175.84 | 175.76 | 175.81 | 175.90 | 175.88 | 175.85 | 175.81 | 175.93 | 175.76 | 175.76 |
| 21 | 175.74 | 175.80 | 175.85 | 175.79 | 175.81 | 175.90 | 175.88 | 175.85 | 175.81 | 175.91 | 175.77 | 175.76 |
| 22 | 175.74 | 175.76 | 175.85 | 175.79 | 175.81 | 175.90 | 175.89 | 175.85 | 175.83 | 175.90 | 175.78 | 175.80 |
| 23 | 175.73 | 175.74 | 175.82 | 175.82 | 175.81 | 175.89 | 175.89 | 175.85 | 175.86 | 175.90 | 175.76 | 175.77 |
| 24 | 175.71 | 175.71 | 175.80 | 175.81 | 175.81 | 175.88 | 175.88 | 175.84 | 175.85 | 175.89 | 175.76 | 175.74 |
| 25 | 175.70 | 175.70 | 175.78 | 175.80 | 175.81 | 175.88 | 175.90 | 175.84 | 175.86 | 175.88 | 175.74 | 175.77 |
| 26 | 175.70 | 175.67 | 175.78 | 175.78 | 175.81 | 175.88 | 175.89 | 175.85 | 175.88 | 175.89 | 175.74 | 175.77 |
| 27 | 175.82 | 175.71 | 175.76 | 175.78 | 175.81 | 175.88 | 175.89 | 175.85 | 175.90 | 175.89 | 175.79 | 175.77 |
| 28 | 176.00 | 175.73 | 175.77 | 175.78 | 175.82 | 175.87 | 175.89 | 175.84 | 175.89 | 175.90 | 175.80 | 175.79 |
| 29 | 175.95 | | 175.77 | 175.79 | 175.81 | 175.86 | 175.89 | 175.84 | 175.92 | 175.89 | 175.78 | 175.78 |
| 30 | 175.91 | | 175.76 | 175.78 | 175.81 | 175.87 | 175.88 | 175.83 | 175.92 | 175.87 | 175.77 | 175.75 |
| 31 | 175.88 | | 175.74 | | 175.80 | | 175.89 | 175.82 | | 175.87 | | 175.75 |
| MEAN | 175.87 | 175.82 | 175.77 | 175.77 | 175.78 | 175.86 | 175.88 | 175.86 | 175.83 | 175.94 | 175.81 | 175.78 |
| MAX. | 176.10 | 175.92 | 175.95 | 175.83 | 175.87 | 176.01 | 175.94 | 175.96 | 175.99 | 176.13 | 175.97 | 175.91 |
| | 0600/28 | 0800/17 | 1000/19 | 2200/23 | 1500/01 | 1600/16 | 1700/04 | 1600/08 | 2100/26 | 1945/05 | 1500/09 | 2200/03 |
| MIN. | 175.68 | 175.66 | 175.66 | 175.70 | 175.71 | 175.71 | 175.83 | 175.80 | 175.71 | 175.85 | 175.69 | 175.71 |
| | 2400/26 | 1700/26 | 1200/10 | 2300/07 | 1300/06 | 2200/01 | 0200/08 | 1700/28 | 1200/10 | 0300/31 | 1600/18 | 0700/24 |

* Indicates less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL MEAN: 175.83

ANNUAL SUMMARY OF LEVELS, 1986
 Station 40B0: St. Clair S.P., St. Clair, Michigan on St. Clair River

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

HIGHEST

Monthly mean elevation: 176.43 Oct
 Daily mean elevation: 176.56 6 Oct
 Instant/hourly elevation: 176.75 2020/5 Oct

LOWEST

Monthly mean elevation: 176.18 Mar
 Daily mean elevation: 176.06 25 Jan
 Instant/hourly elevation: 175.99 0800/25 Jan

HIGHEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 176.46 | 2 Jan |
| 176.25 | 1 Feb |
| 176.29 | 20 Mar |
| 176.27 | 23 Apr |
| 176.30 | 19 May |
| 176.36 | 20 Jun |
| 176.39 | 29 Jul |
| 176.39 | 11 Aug |
| 176.44 | 30 Sep |
| 176.56 | 6 Oct |
| 176.40 | 9 Nov |
| 176.31 | 4 Dec |

LOWEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 176.06 | 25 Jan |
| 176.08 | 26 Feb |
| 176.07 | 10 Mar |
| 176.17 | 1 Apr |
| 176.20 | 15 May |
| 176.25 | 3 Jun |
| 176.31 | 4 Jul |
| 176.30 | 31 Aug |
| 176.25 | 10 Sep |
| 176.34 | 31 Oct |
| 176.23 | 23 Nov |
| 176.18 | 2 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(m.) | No. of days<br>above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 176.55        |     |     |     |     |     |     |     |     |     | 1   |     |     | 176.55        | 1                          |
| 176.50        |     |     |     |     |     |     |     |     |     | 1   |     |     | 176.50        | 2                          |
| 176.45        | 1   |     |     |     |     |     |     |     |     | 5   |     |     | 176.45        | 8                          |
| 176.40        | 7   |     |     |     |     |     |     |     | 1   | 14  |     |     | 176.40        | 30                         |
| 176.35        | 6   |     |     |     |     | 1   | 17  | 16  | 7   | 9   | 7   |     | 176.35        | 93                         |
| 176.30        | 6   |     |     |     |     | 18  | 14  | 14  | 12  | 1   |     | 1   | 176.30        | 165                        |
| 176.25        | 1   |     | 1   | 5   | 14  | 10  |     | 1   | 9   |     | 6   | 8   | 176.25        | 223                        |
| 176.20        | 2   | 15  | 11  | 15  | 15  | 1   |     |     | 1   |     | 8   | 14  | 176.20        | 305                        |
| 176.15        | 5   | 6   | 10  | 10  | 2   |     |     |     |     |     |     | 8   | 176.15        | 346                        |
| 176.10        | 2   | 6   | 5   |     |     |     |     |     |     |     |     |     | 176.10        | 359                        |
| 176.05        | 1   | 1   | 4   |     |     |     |     |     |     |     |     |     | 176.05        | 365                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 4080: St. Clair S.P., St. Clair, Michigan on St. Clair River

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 176.43  | 176.25  | 176.13  | 176.17  | 176.24  | 176.27  | 176.33  | 176.38  | 176.29  | 176.44  | 176.39  | 176.19  |
| 2    | 176.46  | 176.24  | 176.11  | 176.19  | 176.28  | 176.26  | 176.34  | 176.37  | 176.28  | 176.44  | 176.39  | 176.18  |
| 3    | 176.43  | 176.22  | 176.10  | 176.18  | 176.25  | 176.25  | 176.35  | 176.37  | 176.26  | 176.46  | 176.39  | 176.26  |
| 4    | 176.35  | 176.19  | 176.10  | 176.19  | 176.22  | 176.26  | 176.31  | 176.37  | 176.27  | 176.50  | 176.39  | 176.31  |
| 5    | 176.33  | 176.20  | 176.10  | 176.18  | 176.23  | 176.28  | 176.33  | 176.36  | 176.30  | 176.53  | 176.34  | 176.29  |
| 6    | 176.39  | 176.19  | 176.13  | 176.18  | 176.21  | 176.28  | 176.32  | 176.36  | 176.30  | 176.56  | 176.35  | 176.27  |
| 7    | 176.44  | 176.21  | 176.19  | 176.21  | 176.22  | 176.27  | 176.33  | 176.38  | 176.29  | 176.48  | 176.33  | 176.26  |
| 8    | 176.45  | 176.22  | 176.12  | 176.25  | 176.22  | 176.29  | 176.33  | 176.38  | 176.27  | 176.50  | 176.29  | 176.24  |
| 9    | 176.37  | 176.22  | 176.11  | 176.27  | 176.21  | 176.29  | 176.36  | 176.38  | 176.26  | 176.47  | 176.40  | 176.21  |
| 10   | 176.45  | 176.23  | 176.07  | 176.27  | 176.22  | 176.27  | 176.36  | 176.37  | 176.25  | 176.44  | 176.38  | 176.28  |
| 11   | 176.32  | 176.24  | 176.20  | 176.25  | 176.21  | 176.30  | 176.33  | 176.39  | 176.31  | 176.42  | 176.35  | 176.27  |
| 12   | 176.33  | 176.23  | 176.19  | 176.24  | 176.21  | 176.32  | 176.34  | 176.37  | 176.34  | 176.39  | 176.34  | 176.29  |
| 13   | 176.40  | 176.22  | 176.21  | 176.20  | 176.22  | 176.35  | 176.34  | 176.36  | 176.35  | 176.44  | 176.36  | 176.26  |
| 14   | 176.42  | 176.24  | 176.22  | 176.20  | 176.20  | 176.35  | 176.36  | 176.34  | 176.34  | 176.45  | 176.30  | 176.24  |
| 15   | 176.39  | 176.24  | 176.23  | 176.20  | 176.20  | 176.34  | 176.35  | 176.34  | 176.35  | 176.45  | 176.32  | 176.23  |
| 16   | 176.36  | 176.24  | 176.25  | 176.24  | 176.21  | 176.35  | 176.35  | 176.35  | 176.36  | 176.44  | 176.26  | 176.20  |
| 17   | 176.24  | 176.24  | 176.21  | 176.25  | 176.22  | 176.35  | 176.36  | 176.35  | 176.31  | 176.44  | 176.27  | 176.19  |
| 18   | 176.17  | 176.20  | 176.19  | 176.24  | 176.24  | 176.33  | 176.36  | 176.37  | 176.32  | 176.42  | 176.29  | 176.22  |
| 19   | 176.20  | 176.19  | 176.25  | 176.20  | 176.30  | 176.33  | 176.37  | 176.35  | 176.32  | 176.42  | 176.25  | 176.24  |
| 20   | 176.25  | 176.19  | 176.29  | 176.22  | 176.29  | 176.36  | 176.38  | 176.35  | 176.32  | 176.42  | 176.24  | 176.23  |
| 21   | 176.15  | 176.21  | 176.24  | 176.27  | 176.29  | 176.32  | 176.37  | 176.35  | 176.33  | 176.41  | 176.28  | 176.22  |
| 22   | 176.16  | 176.14  | 176.22  | 176.27  | 176.28  | 176.32  | 176.36  | 176.33  | 176.31  | 176.40  | 176.25  | 176.22  |
| 23   | 176.18  | 176.13  | 176.24  | 176.27  | 176.27  | 176.34  | 176.36  | 176.34  | 176.36  | 176.42  | 176.23  | 176.25  |
| 24   | 176.13  | 176.13  | 176.22  | 176.24  | 176.27  | 176.35  | 176.34  | 176.37  | 176.36  | 176.39  | 176.25  | 176.19  |
| 25   | 176.06  | 176.11  | 176.17  | 176.24  | 176.27  | 176.34  | 176.37  | 176.32  | 176.35  | 176.38  | 176.24  | 176.22  |
| 26   | 176.17  | 176.08  | 176.20  | 176.21  | 176.27  | 176.32  | 176.39  | 176.34  | 176.37  | 176.37  | 176.26  | 176.23  |
| 27   | 176.28  | 176.12  | 176.21  | 176.21  | 176.27  | 176.34  | 176.38  | 176.37  | 176.37  | 176.39  | 176.25  | 176.22  |
| 28   | 176.42  | 176.15  | 176.17  | 176.22  | 176.28  | 176.35  | 176.38  | 176.35  | 176.37  | 176.38  | 176.28  | 176.24  |
| 29   | 176.39  |         | 176.19  | 176.24  | 176.27  | 176.35  | 176.39  | 176.33  | 176.38  | 176.40  | 176.27  | 176.20  |
| 30   | 176.33  |         | 176.18  | 176.21  | 176.27  | 176.34  | 176.38  | 176.32  | 176.44  | 176.40  | 176.25  | 176.19  |
| 31   | 176.31  |         | 176.17  |         | 176.28  |         | 176.37  | 176.30  |         | 176.34  |         | 176.19  |
| MEAN | 176.31  | 176.20  | 176.18  | 176.22  | 176.25  | 176.32  | 176.35  | 176.36  | 176.32  | 176.43  | 176.31  | 176.23  |
| MAX. | 176.57  | 176.31  | 176.39  | 176.36  | 176.35  | 176.50  | 176.45  | 176.53  | 176.52  | 176.75  | 176.51  | 176.38  |
|      | 0700/10 | 2200/20 | 1400/19 | 2100/07 | 1800/01 | 1700/16 | 0200/26 | 2200/26 | 2000/26 | 2020/05 | 1500/09 | 1200/04 |
| MIN. | 175.99  | 176.06  | 176.02  | 176.10  | 176.14  | 176.16  | 176.06  | 176.24  | 176.17  | 176.31  | 176.13  | 176.14  |
|      | 0800/25 | 0800/26 | 0800/10 | 0200/01 | 0100/01 | 2400/02 | 1500/04 | 2200/28 | 1100/10 | 1800/31 | 0900/20 | 1700/17 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 176.29

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 4084: Marysville, Michigan on St. Clair River

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

|                           |        |            |                           |        |             |
|---------------------------|--------|------------|---------------------------|--------|-------------|
| HIGHEST                   |        |            | LOWEST                    |        |             |
| Monthly mean elevation:   | 176.68 | Oct        | Monthly mean elevation:   | 176.39 | Mar         |
| Daily mean elevation:     | 176.83 | 6 Oct      | Daily mean elevation:     | 176.23 | 25 Jan      |
| Instant/hourly elevation: | 177.02 | 2010/5 Oct | Instant/hourly elevation: | 176.13 | 0800/25 Jan |

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 176.61 | 10 Jan |
| 176.42 | 21 Feb |
| 176.50 | 20 Mar |
| 176.53 | 9 Apr  |
| 176.56 | 19 May |
| 176.60 | 29 Jun |
| 176.66 | 29 Jul |
| 176.65 | 18 Aug |
| 176.70 | 30 Sep |
| 176.83 | 6 Oct  |
| 176.67 | 4 Nov  |
| 176.57 | 4 Dec  |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 176.23 | 25 Jan |
| 176.29 | 26 Feb |
| 176.27 | 10 Mar |
| 176.38 | 1 Apr  |
| 176.43 | 14 May |
| 176.49 | 4 Jun  |
| 176.54 | 4 Jul  |
| 176.54 | 31 Aug |
| 176.51 | 9 Sep  |
| 176.57 | 31 Oct |
| 176.46 | 23 Nov |
| 176.39 | 2 Dec  |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(m.) | No. of days
above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 176.80 | | | | | | | | | | 1 | | | 176.80 | 1 |
| 176.75 | | | | | | | | | | 1 | | | 176.75 | 2 |
| 176.70 | | | | | | | | | | 4 | | | 176.70 | 6 |
| 176.65 | | | | | | | 1 | | 1 | 17 | 3 | | 176.65 | 28 |
| 176.60 | 2 | | | | | | 13 | 20 | 6 | 7 | 3 | | 176.60 | 79 |
| 176.55 | 8 | | | | 1 | 16 | 15 | 10 | 11 | 1 | 6 | 1 | 176.55 | 148 |
| 176.50 | 4 | | | 3 | 12 | 10 | 2 | 1 | 7 | | 9 | 6 | 176.50 | 202 |
| 176.45 | 8 | | 1 | 4 | 13 | 4 | | | | | 4 | 14 | 176.45 | 250 |
| 176.40 | 2 | 11 | 11 | 10 | 5 | | | | | | | 9 | 176.40 | 298 |
| 176.35 | 5 | 11 | 10 | 2 | | | | | | | | 1 | 176.35 | 327 |
| 176.30 | 1 | 5 | 8 | | | | | | | | | | 176.30 | 341 |
| 176.25 | | 1 | 1 | | | | | | | | | | 176.25 | 343 |
| 176.20 | 1 | | | | | | | | | | | | 176.20 | 344 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 4084: Marysville, Michigan on St. Clair River

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 176.59 | 176.41 | 176.35 | 176.38 | 176.49 | 176.52 | 176.58 | 176.63 | 176.54 | 176.70 | 176.65 | 176.42 |
| 2 | 176.60 | 176.41 | 176.32 | 176.42 | 176.55 | 176.51 | 176.59 | 176.63 | 176.54 | 176.70 | 176.67 | 176.39 |
| 3 | 176.57 | 176.40 | 176.31 | 176.41 | 176.50 | 176.49 | 176.59 | 176.63 | 176.51 | 176.70 | 176.64 | 176.48 |
| 4 | 176.50 | 176.38 | 176.32 | 176.42 | 176.46 | 176.49 | 176.54 | 176.62 | 176.52 | 176.75 | 176.67 | 176.57 |
| 5 | 176.48 | 176.39 | 176.33 | 176.41 | 176.47 | 176.52 | 176.55 | 176.62 | 176.56 | 176.77 | 176.60 | 176.53 |
| 6 | 176.58 | 176.39 | 176.35 | 176.39 | 176.44 | 176.52 | 176.56 | 176.61 | 176.56 | 176.83 | 176.60 | 176.52 |
| 7 | 176.61 | 176.39 | 176.45 | 176.44 | 176.46 | 176.50 | 176.57 | 176.63 | 176.55 | 176.70 | 176.59 | 176.51 |
| 8 | 176.57 | 176.40 | 176.33* | 176.49 | 176.48 | 176.53 | 176.57 | 176.63 | 176.53 | 176.75 | 176.54 | 176.49 |
| 9 | 176.52 | 176.40 | 176.32 | 176.53 | 176.46 | 176.52 | 176.61* | 176.64 | 176.51* | 176.73 | 176.66 | 176.44 |
| 10 | 176.61 | 176.42 | 176.27* | 176.52* | 176.46 | 176.50 | 176.59* | 176.62 | / | 176.68 | 176.65 | 176.51 |
| 11 | 176.48 | 176.42* | 176.42 | / | 176.46 | 176.52 | 176.57 | 176.65 | / | 176.66 | 176.60 | 176.49 |
| 12 | 176.51 | 176.42 | 176.40* | / | 176.45 | 176.53 | 176.56 | 176.63 | 176.60 | 176.63 | 176.57* | 176.55 |
| 13 | 176.60 | 176.42 | 176.40 | / | 176.46 | 176.58 | 176.57 | 176.61 | 176.63 | 176.69 | / | 176.51 |
| 14 | 176.56 | 176.42 | 176.42 | / | 176.43 | 176.57 | 176.61 | 176.59 | 176.60 | 176.68 | / | 176.46 |
| 15 | 176.51 | 176.42 | 176.42 | / | 176.44 | 176.56 | 176.58 | 176.59 | 176.62 | 176.71 | / | 176.48 |
| 16 | 176.50 | 176.41 | 176.44 | / | 176.44 | 176.59 | 176.59* | 176.60 | 176.63 | 176.68 | / | 176.44 |
| 17 | 176.40 | 176.41 | 176.38* | / | 176.46 | 176.59 | 176.60* | 176.61 | 176.56 | 176.70 | / | 176.43 |
| 18 | 176.37 | 176.39 | 176.38 | / | 176.49 | 176.56 | 176.61 | 176.65 | 176.58 | 176.68 | 176.58* | 176.46 |
| 19 | 176.42 | 176.39 | 176.44 | / | 176.56 | 176.57 | 176.62 | 176.62 | 176.59 | 176.67 | 176.51 | 176.49 |
| 20 | 176.48 | 176.38 | 176.50 | / | 176.54 | 176.60 | 176.64 | 176.60 | 176.57 | 176.67 | 176.48 | 176.47 |
| 21 | 176.36 | 176.42 | 176.44 | / | 176.52 | 176.55 | 176.63 | 176.62 | 176.60* | 176.67 | 176.54 | 176.46 |
| 22 | 176.38 | 176.35 | 176.41 | 176.51 | 176.51 | 176.55 | 176.60 | 176.57 | / | 176.65 | 176.49 | 176.46 |
| 23 | 176.39 | 176.34 | 176.45 | 176.49 | 176.52 | 176.58 | 176.61 | 176.59 | / | 176.69 | 176.46 | 176.50 |
| 24 | 176.32 | 176.35 | 176.44 | 176.45 | 176.51 | 176.60 | 176.59 | 176.64 | / | 176.64 | 176.51 | 176.43 |
| 25 | 176.23 | 176.33 | 176.36 | 176.46 | 176.50 | 176.58 | 176.63 | 176.56 | 176.59 | 176.63 | 176.49 | 176.45 |
| 26 | 176.41 | 176.29 | 176.40 | 176.44 | 176.51 | 176.56 | 176.65 | 176.59 | 176.62 | 176.62 | 176.52 | 176.47 |
| 27 | 176.50 | 176.34 | 176.43 | 176.44 | 176.51 | 176.57 | 176.63 | 176.64 | 176.60 | 176.64 | 176.51 | 176.46 |
| 28 | 176.56 | 176.37 | 176.37 | 176.44 | 176.51 | 176.59 | 176.62 | 176.62 | 176.61 | 176.63 | 176.52 | 176.46 |
| 29 | 176.54 | | 176.40 | 176.46 | 176.51 | 176.60 | 176.66* | 176.57 | 176.65 | 176.67 | 176.52 | 176.42 |
| 30 | 176.49 | | 176.40 | 176.44 | 176.52 | 176.59 | 176.65 | 176.56 | 176.70 | 176.67 | 176.51 | 176.43 |
| 31 | 176.49 | | 176.39 | | 176.52 | | 176.63 | 176.54 | | 176.57 | | 176.42 |
| MEAN | 176.49 | 176.39 | 176.39 | 176.45 | 176.49 | 176.55 | 176.60 | 176.61 | 176.58 | 176.68 | 176.56 | 176.47 |
| MAX. | 176.76 | 176.51 | 176.61 | 176.57 | 176.62 | 176.76 | 176.74 | 176.77 | 176.77 | 177.02 | 176.77 | 176.63 |
| | 0200/13 | 2200/20 | 1500/19 | 1000/09 | 1800/01 | 0900/24 | 0200/26 | 2200/26 | 2300/30 | 2010/05 | 0400/04 | 1200/04 |
| MIN. | 176.13 | 176.27 | 176.21 | 176.30 | 176.38 | 176.40 | 176.33 | 176.49 | 176.47 | 176.53 | 176.38 | 176.33 |
| | 0800/25 | 0800/26 | 0800/10 | 0700/01 | 0300/01 | 0500/01 | 1500/04 | 0700/23 | 1000/04 | 1100/31 | 0900/20 | 1000/02 |

* Indicates Less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL MEAN: 176.52

ANNUAL SUMMARY OF LEVELS, 1986
 Station 4087: Dry Dock, Port Huron, Michigan on St. Clair River

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

HIGHEST
 Monthly mean elevation: 176.82 Oct
 Daily mean elevation: 176.97 6 Oct
 Instant/hourly elevation: 177.19 1945/5 Oct

LOWEST
 Monthly mean elevation: 176.51 Feb
 Daily mean elevation: 176.35 25 Jan
 Instant/hourly elevation: 176.24 0900/25 Jan

HIGHEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 176.73 | 13 Jan |
| 176.56 | 21 Feb |
| 176.64 | 20 Mar |
| 176.69 | 9 Apr |
| 176.71 | 19 May |
| 176.75 | 24 Jun |
| 176.81 | 29 Jul |
| 176.80 | 27 Aug |
| 176.84 | 30 Sep |
| 176.97 | 6 Oct |
| 176.83 | 4 Nov |
| 176.71 | 4 Dec |

LOWEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 176.35 | 25 Jan |
| 176.43 | 26 Feb |
| 176.39 | 10 Mar |
| 176.52 | 6 Apr |
| 176.56 | 14 May |
| 176.63 | 4 Jun |
| 176.68 | 4 Jul |
| 176.69 | 31 Aug |
| 176.62 | 10 Sep |
| 176.70 | 31 Oct |
| 176.60 | 23 Nov |
| 176.51 | 2 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(m.) | No. of days<br>above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 176.95        |     |     |     |     |     |     |     |     |     | 1   |     |     | 176.95        | 1                          |
| 176.90        |     |     |     |     |     |     |     |     |     | 1   |     |     | 176.90        | 2                          |
| 176.85        |     |     |     |     |     |     |     |     |     | 4   |     |     | 176.85        | 6                          |
| 176.80        |     |     |     |     |     |     | 1   |     | 1   | 16  | 4   |     | 176.80        | 28                         |
| 176.75        |     |     |     |     |     |     | 8   | 16  | 6   | 8   | 3   |     | 176.75        | 69                         |
| 176.70        | 3   |     |     |     | 1   | 10  | 17  | 13  | 9   | 7   | 1   |     | 176.70        | 130                        |
| 176.65        | 5   |     |     | 4   | 4   | 13  | 5   | 2   | 8   | 1   | 11  | 3   | 176.65        | 186                        |
| 176.60        | 8   |     | 1   | 7   | 14  | 7   |     |     | 3   |     | 4   | 12  | 176.60        | 242                        |
| 176.55        | 8   | 1   | 8   | 16  | 12  |     |     |     |     |     | 1   | 12  | 176.55        | 300                        |
| 176.50        | 4   | 17  | 11  | 3   |     |     |     |     |     |     |     | 3   | 176.50        | 338                        |
| 176.45        | 1   | 9   | 6   |     |     |     |     |     |     |     |     |     | 176.45        | 354                        |
| 176.40        | 1   | 1   | 4   |     |     |     |     |     |     |     |     |     | 176.40        | 360                        |
| 176.35        |     |     | 1   |     |     |     |     |     |     |     |     |     | 176.35        | 361                        |
| 176.30        | 1   |     |     |     |     |     |     |     |     |     |     |     | 176.30        | 362                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 4087: Dry Dock, Port Huron, Michigan on St. Clair River

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 176.68  | 176.52  | 176.48  | 176.52  | 176.63  | 176.66  | 176.72  | 176.77  | 176.68  | 176.84  | 176.80  | 176.56  |
| 2    | 176.69  | 176.53  | 176.45  | 176.57  | 176.70  | 176.65  | 176.74  | 176.77  | 176.68  | 176.83  | 176.81  | 176.51  |
| 3    | 176.68  | 176.53  | 176.45  | 176.56  | 176.64  | 176.63  | 176.73  | 176.77  | 176.64  | 176.84  | 176.77  | 176.61  |
| 4    | 176.61  | 176.50  | 176.45  | 176.56  | 176.59  | 176.63  | 176.68  | 176.76  | 176.66  | 176.89  | 176.83  | 176.71  |
| 5    | 176.59  | 176.52  | 176.46  | 176.54  | 176.60  | 176.67  | 176.69  | 176.75  | 176.70  | 176.91  | 176.74  | 176.67  |
| 6    | 176.70  | 176.51  | 176.48  | 176.52  | 176.57* | 176.66  | 176.70  | 176.75  | 176.71  | 176.97  | 176.75  | 176.66  |
| 7    | 176.71  | 176.50  | 176.60  | 176.57  | 176.61* | 176.64  | 176.71  | 176.77  | 176.70  | 176.84  | 176.73  | 176.64  |
| 8    | 176.65  | 176.50  | 176.47  | 176.63  | 176.62  | 176.67  | 176.72  | 176.77  | 176.67  | 176.88  | 176.68  | 176.63  |
| 9    | 176.61  | 176.51  | 176.45  | 176.69  | 176.60  | 176.67  | 176.74  | 176.77  | 176.65  | 176.87  | 176.81  | 176.56  |
| 10   | 176.71  | 176.55  | 176.39  | 176.67  | 176.60  | 176.64  | 176.74  | 176.76  | 176.62  | 176.82  | 176.81  | 176.64  |
| 11   | 176.58  | 176.55  | 176.56  | 176.65  | 176.59  | 176.65  | 176.70  | 176.79  | 176.66  | 176.80  | 176.74  | 176.63  |
| 12   | 176.63  | 176.53  | 176.53  | 176.60  | 176.59  | 176.65  | 176.70  | 176.77  | 176.75  | 176.76  | 176.74  | 176.70  |
| 13   | 176.73  | 176.53  | 176.51  | 176.58  | 176.60  | 176.71  | 176.71  | 176.75  | 176.79  | 176.84  | 176.80  | 176.65  |
| 14   | 176.65  | 176.53  | 176.53  | 176.57  | 176.56  | 176.70  | 176.75  | 176.72  | 176.75  | 176.82  | 176.67  | 176.59  |
| 15   | 176.60  | 176.53  | 176.54  | 176.56  | 176.57  | 176.69  | 176.73  | 176.72  | 176.77  | 176.86  | 176.72  | 176.62  |
| 16   | 176.60  | 176.53  | 176.57  | 176.63  | 176.57  | 176.72  | 176.72  | 176.74  | 176.77  | 176.84  | 176.64  | 176.59  |
| 17   | 176.51  | 176.52  | 176.51  | 176.65  | 176.59  | 176.72  | 176.73  | 176.75  | 176.70  | 176.85  | 176.69  | 176.57  |
| 18   | 176.51  | 176.51  | 176.51  | 176.61  | 176.64  | 176.69  | 176.74  | 176.79  | 176.72  | 176.83  | 176.73  | 176.60  |
| 19   | 176.57  | 176.52  | 176.56  | 176.56  | 176.71  | 176.70  | 176.75  | 176.76  | 176.75* | 176.81  | 176.66  | 176.63  |
| 20   | 176.63  | 176.51  | 176.64  | 176.61  | 176.69  | 176.73  | 176.77  | 176.74  | /       | 176.81  | 176.61  | 176.62  |
| 21   | 176.49  | 176.56  | 176.57  | 176.67  | 176.66  | 176.68  | 176.77  | 176.76  | /       | 176.81  | 176.69  | 176.61  |
| 22   | 176.52  | 176.47  | 176.52  | 176.66  | 176.65  | 176.68  | 176.74  | 176.71  | /       | 176.79  | 176.63  | 176.60  |
| 23   | 176.53  | 176.47  | 176.58  | 176.63  | 176.66  | 176.71  | 176.74  | 176.73  | 176.76* | 176.84  | 176.60  | 176.65  |
| 24   | 176.45  | 176.48  | 176.58  | 176.58  | 176.65  | 176.75  | 176.72  | 176.79  | 176.77  | 176.80  | 176.66  | 176.58  |
| 25   | 176.35  | 176.47  | 176.49  | 176.59  | 176.64  | 176.72  | 176.76  | 176.70  | 176.73  | 176.78  | 176.63  | 176.60  |
| 26   | 176.56  | 176.43  | 176.53  | 176.57  | 176.65  | 176.68  | 176.80  | 176.74  | 176.75  | 176.76  | 176.68  | 176.62  |
| 27   | 176.65  | 176.47  | 176.56  | 176.58  | 176.64  | 176.70  | 176.77  | 176.80  | 176.72  | 176.78  | 176.66  | 176.60  |
| 28   | 176.66  | 176.50  | 176.50  | 176.58  | 176.65  | 176.72  | 176.76  | 176.77  | 176.74  | 176.77  | 176.67  | 176.60  |
| 29   | 176.63  |         | 176.54  | 176.60  | 176.64  | 176.74  | 176.81  | 176.71  | 176.78  | 176.81  | 176.68  | 176.54  |
| 30   | 176.60  |         | 176.53  | 176.57  | 176.65  | 176.73  | 176.79  | 176.71  | 176.84  | 176.82  | 176.66  | 176.56  |
| 31   | 176.60  |         | 176.53  |         | 176.65  |         | 176.76  | 176.69  |         | 176.70  |         | 176.55  |
| MEAN | 176.60  | 176.51  | 176.52  | 176.60  | 176.63  | 176.69  | 176.74  | 176.75  | 176.72  | 176.82  | 176.71  | 176.61  |
| MAX. | 176.92  | 176.68  | 176.75  | 176.75  | 176.77  | 176.92  | 176.89  | 176.94  | 176.92  | 177.19  | 176.93  | 176.76  |
| MIN. | 176.24  | 176.39  | 176.32  | 176.42  | 176.50  | 176.53  | 176.58  | 176.60  | 176.54  | 176.65  | 176.50  | 176.46  |
|      | 0900/25 | 1100/20 | 0300/19 | 0100/01 | 0300/16 | 0500/01 | 1200/17 | 0700/23 | 1500/10 | 1100/31 | 0900/20 | 1000/02 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 176.66

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 4090: Mouth of Black River, Port Huron, Michigan on St. Clair River

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST  
 Monthly mean elevation: 176.96 Oct  
 Daily mean elevation: 177.10 6 Oct  
 Instant/hourly elevation: 177.32 0400/6 Oct

LOWEST  
 Monthly mean elevation: 176.61 Feb  
 Daily mean elevation: 176.45 25 Jan  
 Instant/hourly elevation: 176.31 0700/25 Jan

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 176.81 | 6 Jan  |
| 176.68 | 21 Feb |
| 176.78 | 20 Mar |
| 176.82 | 9 Apr  |
| 176.85 | 19 May |
| 176.87 | 29 Jun |
| 176.94 | 29 Jul |
| 176.93 | 27 Aug |
| 176.98 | 30 Sep |
| 177.10 | 6 Oct  |
| 176.96 | 4 Nov  |
| 176.84 | 4 Dec  |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 176.45 | 25 Jan |
| 176.53 | 26 Feb |
| 176.51 | 10 Mar |
| 176.63 | 6 Apr  |
| 176.68 | 6 May  |
| 176.75 | 3 Jun  |
| 176.80 | 4 Jul  |
| 176.81 | 31 Aug |
| 176.72 | 10 Sep |
| 176.84 | 31 Oct |
| 176.71 | 23 Nov |
| 176.62 | 2 Dec  |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(m.) | No. of days
above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 177.05 | | | | | | | | | | 1 | | | 177.05 | 1 |
| 177.00 | | | | | | | | | | 2 | | | 177.00 | 3 |
| 176.95 | | | | | | | | | 1 | 12 | 1 | | 176.95 | 17 |
| 176.90 | | | | | | | 4 | 4 | 5 | 12 | 5 | | 176.90 | 47 |
| 176.85 | | | | | | 3 | 14 | 19 | 8 | 3 | 6 | | 176.85 | 100 |
| 176.80 | 1 | | | 1 | 3 | 13 | 12 | 8 | 7 | 1 | 5 | 2 | 176.80 | 153 |
| 176.75 | 8 | | 1 | 6 | 14 | 13 | 1 | | 6 | | 9 | 5 | 176.75 | 216 |
| 176.70 | 5 | | 1 | 6 | 10 | 1 | | | 1 | | 4 | 12 | 176.70 | 256 |
| 176.65 | 10 | 1 | 8 | 14 | 4 | | | | | | | 10 | 176.65 | 303 |
| 176.60 | 3 | 18 | 11 | 3 | | | | | | | | 2 | 176.60 | 340 |
| 176.55 | 3 | 8 | 6 | | | | | | | | | | 176.55 | 357 |
| 176.50 | | 1 | 4 | | | | | | | | | | 176.50 | 362 |
| 176.45 | | | | | | | | | | | | | 176.45 | 362 |
| 176.40 | 1 | | | | | | | | | | | | 176.40 | 363 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 4090: Mouth of Black River, Port Huron, Michigan on St. Clair River

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 176.77 | 176.61 | 176.59 | 176.63 | 176.76 | 176.79 | 176.85 | 176.90 | 176.80 | 176.99 | 176.94 | 176.67 |
| 2 | 176.77 | 176.64 | 176.55 | 176.69 | 176.84 | 176.78 | 176.87 | 176.89 | 176.81 | 176.98 | 176.94 | 176.62 |
| 3 | 176.77 | 176.63 | 176.55 | 176.67 | 176.77 | 176.75 | 176.86 | 176.90 | 176.76 | 176.99 | 176.90 | 176.72 |
| 4 | 176.69 | 176.60 | 176.55 | 176.67 | 176.71 | 176.76 | 176.80 | 176.88 | 176.77 | 177.04 | 176.96 | 176.84 |
| 5 | 176.68 | 176.62 | 176.58 | 176.65 | 176.73 | 176.79 | 176.82 | 176.88 | 176.83 | 177.05 | 176.88 | 176.79 |
| 6 | 176.81 | 176.61 | 176.60 | 176.63 | 176.68 | 176.78 | 176.82 | 176.88 | 176.84 | 177.10* | 176.88 | 176.78 |
| 7 | 176.80 | 176.60 | 176.73 | 176.70 | 176.74 | 176.76 | 176.84 | 176.90 | 176.82 | 176.95 | 176.85 | 176.75 |
| 8 | 176.73 | 176.60 | 176.58 | 176.77 | 176.75 | 176.80 | 176.84 | 176.89 | 176.79 | 177.00 | 176.80 | 176.75 |
| 9 | 176.70 | 176.61 | 176.56 | 176.82 | 176.72 | 176.79 | 176.88 | 176.90 | 176.77 | 177.00 | 176.93 | 176.68 |
| 10 | 176.78* | 176.64 | 176.51 | 176.80 | 176.72 | 176.76 | 176.87 | 176.88 | 176.72 | 176.94 | 176.95 | 176.76 |
| 11 | 176.66 | 176.65 | 176.68 | 176.77 | 176.72 | 176.78 | 176.82 | 176.93 | 176.78 | 176.92 | 176.88 | 176.74 |
| 12 | 176.72 | 176.63 | 176.65 | 176.70 | 176.72 | 176.77 | 176.82 | 176.90 | 176.88 | 176.88 | 176.87 | 176.83 |
| 13 | 176.79* | 176.63 | 176.62 | 176.70 | 176.73 | 176.84 | 176.83 | 176.87 | 176.93 | 176.97 | 176.93 | 176.77 |
| 14 | 176.73 | 176.63 | 176.64 | 176.69 | 176.69 | 176.83 | 176.88 | 176.84 | 176.89 | 176.95 | 176.79 | 176.71 |
| 15 | 176.67 | 176.63 | 176.65 | 176.67 | 176.69 | 176.81 | 176.85 | 176.85 | 176.89* | 176.99 | 176.85 | 176.75 |
| 16 | 176.68 | 176.63 | 176.69 | 176.75 | 176.70 | 176.84 | 176.85 | 176.86 | 176.91* | 176.96 | 176.77 | 176.70 |
| 17 | 176.60 | 176.61 | 176.63 | 176.77 | 176.72 | 176.84 | 176.85 | 176.88 | 176.81* | 176.99 | 176.82 | 176.69 |
| 18 | 176.61 | 176.61 | 176.62 | 176.73 | 176.77 | 176.81 | 176.87 | 176.92 | 176.85* | 176.96 | 176.87 | 176.72 |
| 19 | 176.70 | 176.62 | 176.68 | 176.67 | 176.85 | 176.82 | 176.88 | 176.89 | 176.86* | 176.94 | 176.78 | 176.75 |
| 20 | 176.75 | 176.62 | 176.78 | 176.73 | 176.81 | 176.86 | 176.91 | 176.86 | / | 176.93 | 176.73 | 176.73 |
| 21 | 176.60 | 176.68 | 176.69 | 176.78 | 176.79 | 176.80 | 176.90 | 176.88 | / | 176.94 | 176.81 | 176.71 |
| 22 | 176.63 | 176.57 | 176.63 | 176.78 | 176.77 | 176.81 | 176.87 | 176.83 | 176.84* | 176.92 | 176.74 | 176.70 |
| 23 | 176.65 | 176.58 | 176.69 | 176.75 | 176.78 | 176.83 | 176.88 | 176.85 | 176.91 | 176.97 | 176.71 | 176.77 |
| 24 | 176.56 | 176.59 | 176.69 | 176.69 | 176.78 | 176.87 | 176.84 | 176.92 | 176.91 | 176.92 | 176.79 | 176.68 |
| 25 | 176.45 | 176.57 | 176.59 | 176.71 | 176.76 | 176.84 | 176.89 | 176.81 | 176.87 | 176.91 | 176.75 | 176.70 |
| 26 | 176.69 | 176.53 | 176.64 | 176.69 | 176.77 | 176.80 | 176.92 | 176.86 | 176.88 | 176.89 | 176.80 | 176.72 |
| 27 | 176.77 | 176.57 | 176.68 | 176.70 | 176.77 | 176.84 | 176.90 | 176.93 | 176.86 | 176.92 | 176.77 | 176.70 |
| 28 | 176.76 | 176.61 | 176.61 | 176.70 | 176.77 | 176.85 | 176.89 | 176.90 | 176.88 | 176.90 | 176.78 | 176.72 |
| 29 | 176.73 | | 176.65 | 176.72 | 176.78 | 176.87 | 176.94 | 176.84 | 176.91 | 176.94 | 176.81 | 176.65 |
| 30 | 176.69 | | 176.66 | 176.69 | 176.78 | 176.85 | 176.92 | 176.83 | 176.98 | 176.96 | 176.77 | 176.67 |
| 31 | 176.69 | | 176.65 | | 176.78 | | 176.89 | 176.81 | | 176.84 | | 176.66 |
| MEAN | 176.70 | 176.61 | 176.63 | 176.71 | 176.75 | 176.81 | 176.87 | 176.88 | 176.85 | 176.96 | 176.84 | 176.72 |
| MAX. | 176.95 | 176.79 | 176.88 | 176.89 | 176.93 | 177.03 | 177.02 | 177.08 | 177.07 | 177.32 | 177.07 | 176.90 |
| | 0200/13 | 2100/20 | 0400/11 | 1200/09 | 1700/01 | 1600/16 | 0200/26 | 2100/26 | 2200/26 | 0400/06 | 0300/04 | 1200/04 |
| MIN. | 176.31 | 176.49 | 176.44 | 176.53 | 176.63 | 176.64 | 176.70 | 176.71 | 176.57 | 176.79 | 176.62 | 176.56 |
| | 0700/25 | 1100/20 | 0700/10 | 0300/06 | 0200/01 | 0500/01 | 1200/17 | 0700/23 | 1000/10 | 1100/31 | 0900/20 | 1000/02 |

* Indicates Less than 90% of the Hourly Data Available.

ANNUAL MEAN: 176.78

/ Indicates No Data.

ANNUAL SUMMARY OF LEVELS, 1986
 Station 4096: Dunn Paper Co., Port Huron, Michigan on St. Clair River

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

HIGHEST
 Monthly mean elevation: 177.09 Oct
 Daily mean elevation: 177.25 6 Oct
 Instant/hourly elevation: 177.49 0430/6 Oct

LOWEST
 Monthly mean elevation: 176.71 Feb
 Daily mean elevation: 176.54 25 Jan
 Instant/hourly elevation: 176.38 0700/25 Jan

HIGHEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 176.94 | 13 Jan |
| 176.79 | 21 Feb |
| 176.88 | 20 Mar |
| 176.95 | 9 Apr |
| 176.99 | 19 May |
| 177.03 | 26 Jun |
| 177.06 | 26 Jul |
| 177.06 | 27 Aug |
| 177.10 | 30 Sep |
| 177.25 | 6 Oct |
| 177.11 | 4 Nov |
| 176.96 | 12 Dec |

LOWEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 176.54 | 25 Jan |
| 176.65 | 26 Feb |
| 176.61 | 10 Mar |
| 176.75 | 6 Apr |
| 176.80 | 6 May |
| 176.87 | 3 Jun |
| 176.92 | 4 Jul |
| 176.94 | 31 Aug |
| 176.88 | 10 Sep |
| 176.97 | 31 Oct |
| 176.85 | 23 Nov |
| 176.73 | 2 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(m.) | No. of days<br>above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 177.20        |     |     |     |     |     |     |     |     |     | 1   |     |     | 177.20        | 1                          |
| 177.15        |     |     |     |     |     |     |     |     |     | 2   |     |     | 177.15        | 3                          |
| 177.10        |     |     |     |     |     |     |     |     |     | 8   | 1   |     | 177.10        | 12                         |
| 177.05        |     |     |     |     |     |     | 1   | 4   | 2   | 13  | 5   |     | 177.05        | 37                         |
| 177.00        |     |     |     |     |     | 4   | 8   | 16  | 10  | 6   | 6   |     | 177.00        | 87                         |
| 176.95        |     |     |     |     | 2   | 8   | 12  | 7   | 9   | 1   | 3   | 2   | 176.95        | 131                        |
| 176.90        | 3   |     |     | 6   | 4   | 13  | 6   | 2   | 6   |     | 10  | 2   | 176.90        | 183                        |
| 176.85        | 3   |     | 1   | 5   | 14  | 5   |     |     | 3   |     | 4   | 11  | 176.85        | 229                        |
| 176.80        | 8   |     | 2   | 12  | 10  |     |     |     |     |     | 1   | 11  | 176.80        | 273                        |
| 176.75        | 8   | 1   | 7   | 5   | 1   |     |     |     |     |     |     | 4   | 176.75        | 299                        |
| 176.70        | 6   | 14  | 10  | 2   |     |     |     |     |     |     |     | 1   | 176.70        | 332                        |
| 176.65        | 2   | 12  | 10  |     |     |     |     |     |     |     |     |     | 176.65        | 356                        |
| 176.60        |     | 1   | 1   |     |     |     |     |     |     |     |     |     | 176.60        | 358                        |
| 176.55        |     |     |     |     |     |     |     |     |     |     |     |     | 176.55        | 358                        |
| 176.50        | 1   |     |     |     |     |     |     |     |     |     |     |     | 176.50        | 359                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 4096: Dunn Paper Co., Port Huron, Michigan on St. Clair River

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 176.84  | 176.70  | 176.70  | 176.75  | 176.88  | 176.92  | 176.99  | /       | 176.94* | 177.12  | 177.08  | 176.80  |
| 2    | 176.85  | 176.72  | 176.68  | 176.81  | 176.98  | 176.91  | 177.00  | 177.02* | 176.94  | 177.10  | 177.09  | 176.73  |
| 3    | 176.85  | 176.73  | 176.67  | 176.79  | 176.90  | 176.87  | 176.99  | 177.03  | 176.89  | 177.11  | 177.03  | 176.83  |
| 4    | 176.79  | 176.70  | 176.68  | 176.80  | 176.83  | 176.90  | 176.92  | 177.02  | 176.91  | 177.16  | 177.11  | 176.96  |
| 5    | 176.76  | 176.72  | 176.69  | 176.77  | 176.86  | 176.92  | 176.95  | 177.01  | 176.96  | 177.17  | 177.01  | 176.92  |
| 6    | 176.91  | 176.71  | 176.70  | 176.75  | 176.80  | 176.91  | 176.95  | 177.02  | 176.98  | 177.25  | 177.02  | 176.90  |
| 7    | 176.90  | 176.69  | 176.84  | 176.82  | 176.86  | 176.89  | 176.97  | 177.03  | 176.96  | 177.08  | 177.00  | 176.88  |
| 8    | 176.80  | 176.68  | 176.68  | 176.89  | 176.88  | 176.92  | 176.97  | 177.02  | 176.92  | 177.15  | 176.94  | 176.89  |
| 9    | 176.77  | 176.70  | 176.67  | 176.95  | 176.85  | 176.92  | 177.01  | 177.04  | 176.90  | 177.15  | 177.08  | 176.80  |
| 10   | 176.91  | 176.74  | 176.61  | 176.93  | 176.85  | 176.89  | 177.00  | 177.02  | 176.88  | 177.08  | 177.10  | 176.88  |
| 11   | 176.75  | 176.74  | 176.78  | 176.91  | 176.85  | 176.92  | 176.95  | 177.06  | 176.91  | 177.05  | 177.02  | 176.86  |
| 12   | 176.82  | 176.72  | 176.74  | 176.84  | 176.85  | 176.88  | 176.94  | 177.03  | 177.02  | 177.01  | 177.01  | 176.96  |
| 13   | 176.94  | 176.71  | 176.70  | 176.83  | 176.85  | 176.96  | 176.95  | 177.01  | 177.06  | 177.11  | 177.09  | 176.89  |
| 14   | 176.81  | 176.71  | 176.73  | 176.82  | 176.81  | 176.95  | 177.01  | 177.00* | 177.02  | 177.08  | 176.92  | 176.83  |
| 15   | 176.74  | 176.71  | 176.74  | 176.80  | 176.82  | 176.93  | 176.98  | /       | 177.04  | 177.12  | 176.99  | 176.87  |
| 16   | 176.75  | 176.72  | 176.77  | 176.88  | 176.81  | 176.98  | 176.97  | 177.01* | 177.04  | 177.10  | 176.90  | 176.83  |
| 17   | 176.69  | 176.70  | 176.71  | 176.91  | 176.85  | 176.98  | 176.98  | 177.01  | 176.96  | 177.13  | 176.97  | 176.82  |
| 18   | 176.72  | 176.70  | 176.71  | 176.86  | 176.90  | 176.94  | 176.99  | 177.06  | 176.99  | 177.10  | 177.02  | 176.85  |
| 19   | 176.81  | 176.72  | 176.75  | 176.80  | 176.99  | 176.95  | 177.02  | 177.03  | 177.01  | 177.08  | 176.93  | 176.89  |
| 20   | 176.87  | 176.72  | 176.88  | 176.86  | 176.95  | 176.99  | 177.04  | 177.00  | 176.99  | 177.07  | 176.87  | 176.88  |
| 21   | 176.71  | 176.79  | 176.77  | 176.92  | 176.92  | 176.92  | 177.03  | 177.02  | 177.01  | 177.09  | 176.95  | 176.86  |
| 22   | 176.74  | 176.68  | 176.71  | 176.91  | 176.89  | 176.93  | 177.00  | 176.96  | 176.94  | 177.06  | 176.88  | 176.83  |
| 23   | 176.77  | 176.69  | 176.80  | 176.87  | 176.91  | 176.97  | 177.01  | 176.99  | 177.02  | 177.12  | 176.85  | 176.91  |
| 24   | 176.68  | 176.70  | 176.81  | 176.81  | 176.90  | 177.01  | 176.97  | 177.06  | 177.03  | 177.07  | 176.93  | 176.82  |
| 25   | 176.54  | 176.69  | 176.68  | 176.84  | 176.89  | 176.98  | 177.01  | 176.95  | 176.99  | 177.05  | 176.90  | 176.84  |
| 26   | 176.81  | 176.65  | 176.74  | 176.81  | 176.90  | 177.03  | 177.06  | 176.99  | 177.01  | 177.02  | 176.95  | 176.86  |
| 27   | 176.89  | 176.70  | 176.80  | 176.81  | 176.89  | 177.02  | 177.04* | 177.06  | 176.98  | 177.05  | 176.91  | 176.84  |
| 28   | 176.83  | 176.73  | 176.71  | 176.81  | 176.90  | 176.99  | /       | 177.04  | 177.00  | 177.04  | 176.92  | 176.84  |
| 29   | 176.80  |         | 176.76  | 176.84  | 176.90  | 177.02  | /       | 176.97  | 177.03  | 177.09  | 176.95  | 176.77  |
| 30   | 176.77* |         | 176.77  | 176.81  | 176.90  | 176.99  | /       | 176.96  | 177.10  | 177.10  | 176.92  | 176.81  |
| 31   | 176.77* |         | 176.75  |         | 176.91  |         | /       | 176.94  |         | 176.97  |         | 176.79  |
| MEAN | 176.79  | 176.71  | 176.73  | 176.84  | 176.88  | 176.95  | 176.99  | 177.01  | 176.98  | 177.09  | 176.98  | 176.85  |
| MAX. | 177.17  | 176.92  | 176.98  | 177.03  | 177.07  | 177.24  | 177.15  | 177.20  | 177.22  | 177.49  | 177.20  | 177.03  |
| MIN. | 0200/13 | 0400/21 | 0400/11 | 2200/10 | 0900/19 | 1600/16 | 0200/26 | 1700/28 | 1800/15 | 0430/06 | 0300/10 | 0100/13 |
|      | 176.38  | 176.58  | 176.55  | 176.62  | 176.74  | 176.74  | 176.78  | 176.85  | 176.62  | 176.92  | 176.74  | 176.66  |
|      | 0700/25 | 1100/20 | 0200/19 | 0300/06 | 0200/01 | 0500/01 | 1400/04 | 0600/23 | 1000/22 | 1000/31 | 0900/20 | 1000/02 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 176.90

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 4098: Fort Gratiot, Port Huron, Michigan on St. Clair River

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST  
 Monthly mean elevation: 177.24 Oct  
 Daily mean elevation: 177.41 6 Oct  
 Instant/hourly elevation: 177.71 0408/6 Oct

LOWEST  
 Monthly mean elevation: 176.81 Feb  
 Daily mean elevation: 176.64 25 Jan  
 Instant/hourly elevation: 176.45 0700/25 Jan

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 177.08 | 13 Jan |
| 176.92 | 21 Feb |
| 177.01 | 20 Mar |
| 177.12 | 9 Apr  |
| 177.14 | 19 May |
| 177.16 | 29 Jun |
| 177.23 | 29 Jul |
| 177.24 | 27 Aug |
| 177.24 | 30 Sep |
| 177.41 | 6 Oct  |
| 177.28 | 4 Nov  |
| 177.11 | 12 Dec |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 176.64 | 25 Jan |
| 176.77 | 26 Feb |
| 176.70 | 10 Mar |
| 176.88 | 6 Apr  |
| 176.93 | 6 May  |
| 177.00 | 12 Jun |
| 177.05 | 4 Jul  |
| 177.09 | 31 Aug |
| 176.99 | 10 Sep |
| 177.10 | 31 Oct |
| 176.99 | 23 Nov |
| 176.85 | 2 Dec  |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(m.) | No. of days
above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 177.40 | | | | | | | | | | 1 | | | 177.40 | 1 |
| 177.35 | | | | | | | | | | | | | 177.35 | 1 |
| 177.30 | | | | | | | | | | 2 | | | 177.30 | 3 |
| 177.25 | | | | | | | | | | 7 | 2 | | 177.25 | 12 |
| 177.20 | | | | | | | 3 | 4 | 2 | 13 | 4 | | 177.20 | 38 |
| 177.15 | | | | | | 2 | 7 | 15 | 9 | 6 | 6 | | 177.15 | 83 |
| 177.10 | | | | 1 | 2 | 6 | 13 | 9 | 9 | 1 | 3 | 1 | 177.10 | 128 |
| 177.05 | 1 | | | 5 | 3 | 13 | 7 | 3 | 6 | 1 | 8 | 3 | 177.05 | 178 |
| 177.00 | 5 | | 1 | 4 | 14 | 8 | 1 | | 3 | | 6 | 8 | 177.00 | 228 |
| 176.95 | 3 | | 1 | 8 | 8 | 1 | | | 1 | | 1 | 10 | 176.95 | 261 |
| 176.90 | 6 | 1 | 4 | 10 | 4 | | | | | | | 7 | 176.90 | 293 |
| 176.85 | 8 | | 8 | 2 | | | | | | | | 1 | 176.85 | 312 |
| 176.80 | 4 | 17 | 11 | | | | | | | | | 1 | 176.80 | 345 |
| 176.75 | 3 | 10 | 5 | | | | | | | | | | 176.75 | 363 |
| 176.70 | | | | | | | | | | | | | 176.70 | 363 |
| 176.65 | | | 1 | | | | | | | | | | 176.65 | 364 |
| 176.60 | 1 | | | | | | | | | | | | 176.60 | 365 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 4098: Fort Gratiot, Port Huron, Michigan on St. Clair River

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 176.94 | 176.81 | 176.82 | 176.89 | 177.02 | 177.08 | 177.13 | 177.18 | 177.09 | 177.26 | 177.23 | 176.93 |
| 2 | 176.95 | 176.84 | 176.79 | 176.96 | 177.14 | 177.08 | 177.15 | 177.16 | 177.09 | 177.24 | 177.24 | 176.85 |
| 3 | 176.96 | 176.84 | 176.80 | 176.94 | 177.05 | 177.02 | 177.14 | 177.18 | 177.04 | 177.23 | 177.17 | 176.95 |
| 4 | 176.88 | 176.80 | 176.81 | 176.94 | 176.96 | 177.03 | 177.05 | 177.16 | 177.06 | 177.30 | 177.28 | 177.10 |
| 5 | 176.87 | 176.81 | 176.82 | 176.91 | 176.99 | 177.07 | 177.09 | 177.16 | 177.12 | 177.31 | 177.17 | 177.06 |
| 6 | 177.05 | 176.81 | 176.82 | 176.88 | 176.93 | 177.05 | 177.09 | 177.16 | 177.13 | 177.41 | 177.16 | 177.05 |
| 7 | 177.02 | 176.78 | 176.98 | 176.96 | 177.01 | 177.02 | 177.11 | 177.18 | 177.12 | 177.21 | 177.14 | 177.03 |
| 8 | 176.88 | 176.77 | 176.78 | 177.05 | 177.04 | 177.07 | 177.11 | 177.16 | 177.08 | 177.28 | 177.06 | 177.04 |
| 9 | 176.86 | 176.79 | 176.78 | 177.12 | 177.00 | 177.06 | 177.15 | 177.18 | 177.05 | 177.31 | 177.23 | 176.93 |
| 10 | 177.02 | 176.83 | 176.70 | 177.09 | 176.99 | 177.02 | 177.14 | 177.15 | 176.99 | 177.23 | 177.26 | 177.02 |
| 11 | 176.84 | 176.84 | 176.91 | 177.06 | 176.99 | 177.04 | 177.09 | 177.22 | 177.04 | 177.20 | 177.17 | 176.98 |
| 12 | 176.94 | 176.82 | 176.87 | 176.99 | 176.99 | 177.00 | 177.08 | 177.19 | 177.18 | 177.14 | 177.16 | 177.11 |
| 13 | 177.08 | 176.80 | 176.82 | 176.97 | 176.99 | 177.09 | 177.09 | 177.16 | 177.23 | 177.25 | 177.25 | 177.04 |
| 14 | 176.91 | 176.80 | 176.84 | 176.96 | 176.94 | 177.08 | 177.15 | 177.12 | 177.18 | 177.21 | 177.05 | 176.95 |
| 15 | 176.80 | 176.81 | 176.85 | 176.92 | 176.95 | 177.07 | 177.12 | 177.11 | 177.19 | 177.27 | 177.14 | 177.02 |
| 16 | 176.83 | 176.81 | 176.90 | 177.03 | 176.94 | 177.11 | 177.10 | 177.15 | 177.20 | 177.24 | 177.04 | 176.98 |
| 17 | 176.77 | 176.79 | 176.81 | 177.06 | 176.99 | 177.13 | 177.11 | 177.16 | 177.09 | 177.29 | 177.11 | 176.95 |
| 18 | 176.84 | 176.80 | 176.81 | 177.00 | 177.06 | 177.07 | 177.15 | 177.23 | 177.13 | 177.24 | 177.20 | 176.99 |
| 19 | 176.97 | 176.83 | 176.86 | 176.93 | 177.14 | 177.08 | 177.16 | 177.19 | 177.16 | 177.22 | 177.08 | 177.03 |
| 20 | 177.02 | 176.84 | 177.01 | 177.01 | 177.10 | 177.13 | 177.20 | 177.15 | 177.14 | 177.21 | 177.01 | 177.02 |
| 21 | 176.82 | 176.92 | 176.89 | 177.07 | 177.06 | 177.05 | 177.18 | 177.18 | 177.16 | 177.23 | 177.10 | 177.00 |
| 22 | 176.88 | 176.78 | 176.82 | 177.06 | 177.04 | 177.06 | 177.14 | 177.10 | 177.07 | 177.20 | 177.01 | 176.96 |
| 23 | 176.91 | 176.81 | 176.93 | 177.02 | 177.05 | 177.10 | 177.14 | 177.13 | 177.16 | 177.27 | 176.99 | 177.06 |
| 24 | 176.80 | 176.83 | 176.95 | 176.94 | 177.05 | 177.16 | 177.10 | 177.22 | 177.18 | 177.22 | 177.07 | 176.97 |
| 25 | 176.64 | 176.81 | 176.79 | 176.97 | 177.03 | 177.12 | 177.16 | 177.09 | 177.13 | 177.20 | 177.04 | 176.99 |
| 26 | 176.96 | 176.77 | 176.87 | 176.95 | 177.05 | 177.05 | 177.21 | 177.14 | 177.15 | 177.17 | 177.10 | 177.00 |
| 27 | 177.03 | 176.82 | 176.94 | 176.95 | 177.03 | 177.09 | 177.17 | 177.24 | 177.11 | 177.20 | 177.05 | 176.98 |
| 28 | 176.92 | 176.85 | 176.83 | 176.95 | 177.04 | 177.12 | 177.16 | 177.20 | 177.14 | 177.17 | 177.06 | 176.98 |
| 29 | 176.89 | | 176.89 | 176.97 | 177.03 | 177.16 | 177.23 | 177.13 | 177.17 | 177.23 | 177.10 | 176.89 |
| 30 | 176.86 | | 176.90 | 176.94 | 177.04 | 177.14 | 177.21 | 177.11 | 177.24 | 177.27 | 177.07 | 176.95 |
| 31 | 176.88 | | 176.89 | | 177.05 | | 177.16 | 177.09 | | 177.10 | | 176.92 |
| MEAN | 176.90 | 176.81 | 176.85 | 176.98 | 177.02 | 177.08 | 177.14 | 177.16 | 177.13 | 177.24 | 177.12 | 176.99 |
| MAX. | 177.36 | 177.07 | 177.16 | 177.21 | 177.23 | 177.38 | 177.33 | 177.46 | 177.39 | 177.71 | 177.41 | 177.20 |
| | 0200/13 | 0900/21 | 0400/11 | 2200/10 | 2200/01 | 2200/23 | 0800/17 | 2100/26 | 2000/15 | 0408/06 | 0300/04 | 1500/06 |
| MIN. | 176.45 | 176.67 | 176.63 | 176.74 | 176.85 | 176.84 | 176.84 | 176.95 | 176.69 | 177.04 | 176.87 | 176.76 |
| | 0700/25 | 1100/20 | 0200/19 | 0300/06 | 0200/01 | 0500/01 | 1400/04 | 0700/23 | 1000/22 | 1100/31 | 0900/20 | 0400/14 |

* Indicates Less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL MEAN: 177.04

ANNUAL SUMMARY OF LEVELS, 1986
 Station 5002: Lakeport, Michigan on Lake Huron

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

HIGHEST
 Monthly mean elevation: 177.29 Oct
 Daily mean elevation: 177.45 6 Oct
 Instant/hourly elevation: 177.71 0438/6 Oct

LOWEST
 Monthly mean elevation: 176.90 Feb
 Daily mean elevation: 176.69 25 Jan
 Instant/hourly elevation: 176.53 0700/25 Jan

HIGHEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 177.09 | 13 Jan |
| 177.04 | 21 Feb |
| 177.06 | 7 Mar |
| 177.15 | 9 Apr |
| 177.20 | 2 May |
| 177.20 | 24 Jun |
| 177.25 | 30 Jul |
| 177.27 | 27 Aug |
| 177.29 | 30 Sep |
| 177.45 | 6 Oct |
| 177.32 | 10 Nov |
| 177.15 | 12 Dec |

LOWEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 176.69 | 25 Jan |
| 176.86 | 26 Feb |
| 176.77 | 10 Mar |
| 176.92 | 6 Apr |
| 176.99 | 16 May |
| 177.05 | 12 Jun |
| 177.09 | 4 Jul |
| 177.13 | 31 Aug |
| 177.03 | 10 Sep |
| 177.16 | 31 Oct |
| 177.04 | 23 Nov |
| 176.90 | 2 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(m.) | No. of days<br>above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 177.40        |     |     |     |     |     |     |     |     |     | 1   |     |     | 177.40        | 1                          |
| 177.35        |     |     |     |     |     |     |     |     |     |     |     |     | 177.35        | 1                          |
| 177.30        |     |     |     |     |     |     |     |     |     | 9   | 2   |     | 177.30        | 12                         |
| 177.25        |     |     |     |     |     |     |     | 4   | 2   | 14  | 4   |     | 177.25        | 36                         |
| 177.20        |     |     |     |     |     |     | 8   | 11  | 7   | 5   | 5   |     | 177.20        | 72                         |
| 177.15        |     |     |     |     | 2   | 7   | 14  | 12  | 10  | 2   | 4   |     | 177.15        | 123                        |
| 177.10        |     |     |     | 3   | 3   | 12  | 8   | 4   | 7   |     | 8   | 4   | 177.10        | 172                        |
| 177.05        | 3   |     | 1   | 7   | 13  | 10  | 1   |     | 3   |     | 6   | 8   | 177.05        | 224                        |
| 177.00        | 3   | 1   | 1   | 7   | 9   | 1   |     |     | 1   |     | 1   | 10  | 177.00        | 258                        |
| 176.95        | 7   |     | 3   | 10  | 4   |     |     |     |     |     |     | 7   | 176.95        | 289                        |
| 176.90        | 7   | 9   | 8   | 3   |     |     |     |     |     |     |     | 1   | 176.90        | 317                        |
| 176.85        | 9   | 18  | 15  |     |     |     |     |     |     |     |     | 1   | 176.85        | 360                        |
| 176.80        | 1   |     | 2   |     |     |     |     |     |     |     |     |     | 176.80        | 363                        |
| 176.75        |     |     | 1   |     |     |     |     |     |     |     |     |     | 176.75        | 364                        |
| 176.70        |     |     |     |     |     |     |     |     |     |     |     |     | 176.70        | 364                        |
| 176.65        | 1   |     |     |     |     |     |     |     |     |     |     |     | 176.65        | 365                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 5002: Lakeport, Michigan on Lake Huron

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 176.96  | 176.86  | 176.89  | 176.94  | 177.06  | 177.13  | 177.16  | 177.23  | 177.13  | 177.30  | 177.28  | 176.99  |
| 2    | 176.96  | 176.88  | 176.87  | 177.01  | 177.20  | 177.12  | 177.19  | 177.22  | 177.12  | 177.28  | 177.29  | 176.90  |
| 3    | 176.97  | 176.90  | 176.87  | 176.97  | 177.09  | 177.07  | 177.18  | 177.23  | 177.08  | 177.27  | 177.24  | 176.99  |
| 4    | 176.93  | 176.88  | 176.88  | 176.98  | 177.01  | 177.08  | 177.09  | 177.21  | 177.09  | 177.35  | 177.32  | 177.15  |
| 5    | 176.90  | 176.93  | 176.88  | 176.95  | 177.04  | 177.11  | 177.12  | 177.20  | 177.16  | 177.35  | 177.21  | 177.12  |
| 6    | 177.08  | 176.92  | 176.90  | 176.92  | 176.99  | 177.09  | 177.13  | 177.20  | 177.18  | 177.45  | 177.21  | 177.09  |
| 7    | 177.03  | 176.88  | 177.06  | 177.00  | 177.05  | 177.07  | 177.16  | 177.22  | 177.16  | 177.25  | 177.20  | 177.08  |
| 8    | 176.90  | 176.88  | 176.86  | 177.09  | 177.08  | 177.11  | 177.16  | 177.20  | 177.12  | 177.33  | 177.11  | 177.09  |
| 9    | 176.88  | 176.89  | 176.83  | 177.15  | 177.04  | 177.10  | 177.19  | 177.22  | 177.09  | 177.34  | 177.28  | 176.98  |
| 10   | 177.03  | 176.93  | 176.77  | 177.13  | 177.04  | 177.06  | 177.19  | 177.20  | 177.03  | 177.28  | 177.32  | 177.06  |
| 11   | 176.88  | 176.94  | 176.95  | 177.11  | 177.03  | 177.09  | 177.15  | 177.27  | 177.11  | 177.24  | 177.22  | 177.04  |
| 12   | 176.97  | 176.91  | 176.91  | 177.03  | 177.03  | 177.05  | 177.13  | 177.23  | 177.22  | 177.19  | 177.20  | 177.15  |
| 13   | 177.09  | 176.88  | 176.86  | 177.02  | 177.03  | 177.13  | 177.12  | 177.20  | 177.28  | 177.31  | 177.30  | 177.09  |
| 14   | 176.95  | 176.88  | 176.88  | 177.01  | 176.99  | 177.12  | 177.20  | 177.16  | 177.22  | 177.26  | 177.11  | 177.00  |
| 15   | 176.86  | 176.88  | 176.90  | 176.98  | 177.00  | 177.10  | 177.16  | 177.15  | 177.25  | 177.33  | 177.20  | 177.06  |
| 16   | 176.88  | 176.90  | 176.95  | 177.08  | 176.99  | 177.13  | 177.15  | 177.19  | 177.24  | 177.30  | 177.09  | 177.03  |
| 17   | 176.82  | 176.86  | 176.89  | 177.10  | 177.04  | 177.16  | 177.15  | 177.21  | 177.15  | 177.33  | 177.16  | 177.00  |
| 18   | 176.90  | 176.87  | 176.87  | 177.05  | 177.09  | 177.12  | 177.18  | 177.26  | 177.17  | 177.30  | 177.24  | 177.03  |
| 19   | 177.00  | 176.90  | 176.90  | 176.98  | 177.18  | 177.13  | 177.19  | 177.22  | 177.19  | 177.27  | 177.12  | 177.08  |
| 20   | 177.06  | 176.92  | 177.03  | 177.06  | 177.15  | 177.16  | 177.23  | 177.19  | 177.19  | 177.27  | 177.08  | 177.06  |
| 21   | 176.89  | 177.04  | 176.93  | 177.10  | 177.12  | 177.09  | 177.22  | 177.22  | 177.20  | 177.28  | 177.15  | 177.04  |
| 22   | 176.92  | 176.88  | 176.87  | 177.10  | 177.09  | 177.09  | 177.18  | 177.15  | 177.13  | 177.26  | 177.06  | 177.01  |
| 23   | 176.96  | 176.90  | 176.96  | 177.06  | 177.10  | 177.13  | 177.19  | 177.17  | 177.21  | 177.32  | 177.04  | 177.11  |
| 24   | 176.86  | 176.92  | 176.97  | 176.99  | 177.09  | 177.20  | 177.14  | 177.26  | 177.22  | 177.27  | 177.12  | 177.02  |
| 25   | 176.69  | 176.90  | 176.84  | 177.02  | 177.08  | 177.16  | 177.20  | 177.15  | 177.18  | 177.26  | 177.10  | 177.03  |
| 26   | 177.00  | 176.86  | 176.92  | 176.99  | 177.09  | 177.11  | 177.24  | 177.18  | 177.21  | 177.22  | 177.15  | 177.05  |
| 27   | 177.04  | 176.91  | 176.98  | 176.99  | 177.08  | 177.14  | 177.22  | 177.27  | 177.15  | 177.25  | 177.10  | 177.02  |
| 28   | 176.95  | 176.94  | 176.88  | 177.00  | 177.09  | 177.16  | 177.21  | 177.24  | 177.18  | 177.23  | 177.10  | 177.02  |
| 29   | 176.93  |         | 176.93  | 177.03  | 177.09  | 177.19  | 177.25  | 177.16  | 177.19  | 177.29  | 177.13  | 176.95  |
| 30   | 176.92  |         | 176.94  | 176.99  | 177.09  | 177.18  | 177.25  | 177.16  | 177.29  | 177.31  | 177.13  | 176.99  |
| 31   | 176.94  |         | 176.93  |         | 177.12  |         | 177.21  | 177.13  |         | 177.16  |         | 176.98  |
| MEAN | 176.94  | 176.90  | 176.91  | 177.03  | 177.07  | 177.12  | 177.18  | 177.20  | 177.17  | 177.29  | 177.18  | 177.04  |
| MAX. | 177.38  | 177.20  | 177.19  | 177.22  | 177.27  | 177.38  | 177.32  | 177.44  | 177.41  | 177.71  | 177.47  | 177.24  |
|      | 0200/13 | 2100/20 | 0400/11 | 1100/11 | 0900/19 | 2200/16 | 0100/26 | 1400/28 | 1900/26 | 0438/06 | 0300/10 | 1400/06 |
| MIN. | 176.53  | 176.77  | 176.66  | 176.79  | 176.90  | 176.95  | 176.71  | 177.02  | 176.83  | 177.08  | 176.93  | 176.82  |
|      | 0700/25 | 1100/20 | 0200/19 | 0700/01 | 0200/01 | 0500/01 | 1400/04 | 0700/23 | 1000/10 | 1300/31 | 1600/27 | 0900/02 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 177.09

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 5014: Harbor Beach, Michigan on Lake Huron

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST  
 Monthly mean elevation: 177.28 Oct  
 Daily mean elevation: 177.42 6 Oct  
 Instant/hourly elevation: 177.52 0500/6 Oct

LOWEST  
 Monthly mean elevation: 176.89 Feb  
 Daily mean elevation: 176.74 25 Jan  
 Instant/hourly elevation: 176.62 0700/25 Jan

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 177.05 | 6 Jan  |
| 176.99 | 21 Feb |
| 177.02 | 7 Mar  |
| 177.09 | 10 Apr |
| 177.16 | 2 May  |
| 177.19 | 29 Jun |
| 177.24 | 30 Jul |
| 177.27 | 11 Aug |
| 177.30 | 30 Sep |
| 177.42 | 6 Oct  |
| 177.32 | 10 Nov |
| 177.16 | 4 Dec  |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 176.74 | 25 Jan |
| 176.85 | 26 Feb |
| 176.80 | 10 Mar |
| 176.92 | 6 Apr  |
| 176.98 | 14 May |
| 177.05 | 12 Jun |
| 177.10 | 12 Jul |
| 177.12 | 31 Aug |
| 177.07 | 3 Sep  |
| 177.18 | 31 Oct |
| 177.06 | 23 Nov |
| 176.94 | 2 Dec  |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(m.) | No. of days
above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 177.40 | | | | | | | | | | 1 | | | 177.40 | 1 |
| 177.35 | | | | | | | | | | | | | 177.35 | 1 |
| 177.30 | | | | | | | | | | 5 | 1 | | 177.30 | 7 |
| 177.25 | | | | | | | | 1 | 2 | 16 | 5 | | 177.25 | 31 |
| 177.20 | | | | | | | 4 | 11 | 6 | 8 | 4 | | 177.20 | 64 |
| 177.15 | | | | | 1 | 5 | 17 | 14 | 9 | 1 | 6 | 1 | 177.15 | 118 |
| 177.10 | | | | | 2 | 9 | 8 | 5 | 10 | | 10 | 3 | 177.10 | 165 |
| 177.05 | | | | 8 | 14 | 14 | 2 | | 3 | | 4 | 9 | 177.05 | 219 |
| 177.00 | 4 | | 1 | 6 | 11 | 2 | | | | | | 13 | 177.00 | 256 |
| 176.95 | 5 | 1 | 3 | 13 | 3 | | | | | | | 4 | 176.95 | 285 |
| 176.90 | 14 | 6 | 10 | 3 | | | | | | | | 1 | 176.90 | 319 |
| 176.85 | 6 | 18 | 14 | | | | | | | | | | 176.85 | 357 |
| 176.80 | 1 | 3 | 2 | | | | | | | | | | 176.80 | 363 |
| 176.75 | | | 1 | | | | | | | | | | 176.75 | 364 |
| 176.70 | 1 | | | | | | | | | | | | 176.70 | 365 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 5014: Harbor Beach, Michigan on Lake Huron

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 176.97 | 176.88 | 176.89 | 176.93 | 177.05 | 177.08 | 177.15 | 177.22 | 177.11 | 177.28 | 177.27 | 177.02 |
| 2 | 176.95 | 176.87 | 176.86 | 176.99 | 177.16 | 177.08 | 177.16 | 177.22 | 177.11 | 177.27 | 177.28 | 176.94 |
| 3 | 176.94 | 176.89 | 176.86 | 176.96 | 177.09 | 177.06 | 177.16 | 177.23 | 177.07 | 177.25 | 177.25 | 177.02 |
| 4 | 176.94 | 176.87 | 176.88 | 176.96 | 177.03 | 177.08 | 177.10 | 177.21 | 177.09 | 177.31 | 177.28 | 177.16 |
| 5 | 176.91 | 176.91 | 176.88 | 176.93 | 177.04 | 177.09 | 177.14 | 177.21 | 177.15 | 177.34 | 177.21 | 177.14 |
| 6 | 177.05 | 176.92 | 176.87 | 176.92 | 177.00 | 177.07 | 177.15 | 177.20 | 177.17 | 177.42 | 177.22 | 177.13 |
| 7 | 177.01 | 176.85 | 177.02 | 177.00 | 177.06 | 177.06 | 177.16 | 177.20 | 177.15 | 177.28 | 177.20 | 177.09 |
| 8 | 176.91 | 176.87 | 176.88 | 177.07 | 177.05 | 177.09 | 177.17 | 177.19 | 177.12 | 177.32 | 177.13 | 177.08 |
| 9 | 176.93 | 176.88 | 176.84 | 177.09 | 177.02 | 177.09 | 177.17 | 177.23 | 177.11 | 177.31 | 177.28 | 176.99 |
| 10 | 177.02 | 176.92 | 176.80 | 177.09 | 177.01 | 177.05 | 177.17 | 177.20 | 177.08 | 177.28 | 177.32 | 177.07 |
| 11 | 176.92 | 176.93 | 176.93 | 177.08 | 177.02 | 177.06 | 177.13 | 177.27 | 177.12 | 177.25 | 177.22 | 177.08 |
| 12 | 176.99 | 176.90 | 176.89 | 177.01 | 177.01 | 177.05 | 177.10 | 177.22 | 177.22 | 177.21 | 177.20 | 177.14 |
| 13 | 177.02 | 176.90 | 176.85 | 177.00 | 177.02 | 177.13 | 177.13 | 177.18 | 177.26 | 177.30 | 177.28 | 177.09 |
| 14 | 176.93 | 176.89 | 176.86 | 176.99 | 176.98 | 177.12 | 177.19 | 177.16 | 177.20 | 177.27 | 177.16 | 177.06 |
| 15 | 176.88 | 176.89 | 176.90 | 176.98 | 177.01 | 177.10 | 177.16 | 177.17 | 177.21 | 177.33 | 177.20 | 177.06 |
| 16 | 176.88 | 176.89 | 176.93 | 177.06 | 177.00 | 177.13 | 177.13 | 177.19 | 177.20 | 177.30 | 177.11 | 177.03 |
| 17 | 176.84 | 176.85 | 176.89 | 177.06 | 177.03 | 177.16 | 177.15 | 177.20 | 177.15 | 177.30 | 177.17 | 177.02 |
| 18 | 176.91 | 176.87 | 176.87 | 177.03 | 177.08 | 177.12 | 177.18 | 177.22 | 177.16 | 177.28 | 177.19 | 177.03 |
| 19 | 176.95 | 176.89 | 176.89 | 176.98 | 177.12 | 177.12 | 177.19 | 177.19 | 177.18 | 177.27 | 177.13 | 177.08 |
| 20 | 177.00 | 176.90 | 176.99 | 177.04 | 177.11 | 177.13 | 177.22 | 177.18 | 177.17 | 177.27 | 177.08 | 177.05 |
| 21 | 176.90 | 176.99 | 176.93 | 177.07 | 177.10 | 177.09 | 177.20 | 177.20 | 177.19 | 177.27 | 177.13 | 177.04 |
| 22 | 176.90 | 176.88 | 176.91 | 177.06 | 177.08 | 177.10 | 177.16 | 177.15 | 177.14 | 177.26 | 177.10 | 177.05 |
| 23 | 176.94 | 176.89 | 176.95 | 177.05 | 177.09 | 177.15 | 177.18 | 177.15 | 177.22 | 177.30 | 177.06 | 177.10 |
| 24 | 176.86 | 176.92 | 176.96 | 176.99 | 177.08 | 177.17 | 177.15 | 177.24 | 177.22 | 177.25 | 177.13 | 177.01 |
| 25 | 176.74 | 176.90 | 176.87 | 177.01 | 177.06 | 177.15 | 177.20 | 177.14 | 177.19 | 177.25 | 177.12 | 177.02 |
| 26 | 176.96 | 176.85 | 176.93 | 176.99 | 177.07 | 177.10 | 177.22 | 177.16 | 177.21 | 177.21 | 177.13 | 177.05 |
| 27 | 176.98 | 176.89 | 176.98 | 176.99 | 177.06 | 177.15 | 177.20 | 177.23 | 177.15 | 177.25 | 177.12 | 177.02 |
| 28 | 176.94 | 176.95 | 176.91 | 176.99 | 177.08 | 177.17 | 177.18 | 177.21 | 177.18 | 177.25 | 177.13 | 177.03 |
| 29 | 176.92 | | 176.95 | 177.03 | 177.08 | 177.19 | 177.24 | 177.16 | 177.22 | 177.28 | 177.12 | 176.98 |
| 30 | 176.90 | | 176.93 | 177.00 | 177.09 | 177.16 | 177.24 | 177.15 | 177.30 | 177.30 | 177.10 | 176.99 |
| 31 | 176.93 | | 176.93 | | 177.09 | | 177.20 | 177.12 | | 177.18 | | 176.99 |
| MEAN | 176.93 | 176.89 | 176.90 | 177.01 | 177.06 | 177.11 | 177.17 | 177.19 | 177.17 | 177.28 | 177.18 | 177.05 |
| MAX. | 177.18 | 177.08 | 177.09 | 177.15 | 177.21 | 177.28 | 177.29 | 177.31 | 177.39 | 177.52 | 177.42 | 177.24 |
| MIN. | 0200/13 | 0800/21 | 1000/07 | 0900/11 | 0800/19 | 1000/24 | 2200/18 | 0200/24 | 2200/29 | 0500/06 | 0200/10 | 0500/05 |
| | 176.62 | 176.79 | 176.76 | 176.84 | 176.94 | 177.00 | 176.96 | 177.02 | 177.00 | 177.12 | 177.00 | 176.91 |
| | 0700/25 | 0100/05 | 2200/18 | 0500/01 | 0200/01 | 1300/01 | 1500/04 | 0600/23 | 1600/10 | 1200/31 | 1500/27 | 1800/02 |

* Indicates Less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL MEAN: 177.08

ANNUAL SUMMARY OF LEVELS, 1986
 Station 5035: Essexville, Michigan on Lake Huron (Saginaw Bay)

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

HIGHEST
 Monthly mean elevation: 177.27 Oct
 Daily mean elevation: 177.60 19 May
 Instant/hourly elevation: 177.74 0100/20 May

LOWEST
 Monthly mean elevation: 176.89 Feb
 Daily mean elevation: 176.70 25 Jan
 Instant/hourly elevation: 176.46 0300/6 Dec

HIGHEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 177.02 | 13 Jan |
| 176.99 | 21 Feb |
| 177.01 | 24 Mar |
| 177.19 | 16 Apr |
| 177.60 | 19 May |
| 177.24 | 20 Jun |
| 177.28 | 20 Jul |
| 177.28 | 18 Aug |
| 177.28 | 15 Sep |
| 177.41 | 9 Oct |
| 177.32 | 18 Nov |
| 177.21 | 8 Dec |

LOWEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 176.70 | 25 Jan |
| 176.85 | 15 Feb |
| 176.83 | 25 Mar |
| 176.88 | 6 Apr |
| 176.94 | 4 May |
| 177.00 | 12 Jun |
| 177.01 | 4 Jul |
| 177.08 | 23 Aug |
| 176.98 | 10 Sep |
| 177.11 | 7 Oct |
| 176.80 | 14 Nov |
| 176.84 | 10 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(m.) | No. of days<br>above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 177.55        |     |     |     |     | 1   |     |     |     |     |     |     |     | 177.55        | 1                          |
| 177.50        |     |     |     |     |     |     |     |     |     |     |     |     | 177.50        | 1                          |
| 177.45        |     |     |     |     |     |     |     |     |     |     |     |     | 177.45        | 1                          |
| 177.40        |     |     |     |     |     |     |     |     |     | 1   |     |     | 177.40        | 2                          |
| 177.35        |     |     |     |     |     |     |     |     |     | 3   |     |     | 177.35        | 5                          |
| 177.30        |     |     |     |     | 1   |     |     |     |     | 2   | 2   |     | 177.30        | 10                         |
| 177.25        |     |     |     |     |     | 1   | 1   | 2   | 2   | 13  | 3   |     | 177.25        | 31                         |
| 177.20        |     |     |     |     |     | 5   | 10  | 6   | 8   | 8   | 2   | 1   | 177.20        | 64                         |
| 177.15        |     |     |     | 3   | 1   | 5   | 14  | 12  | 10  | 1   | 4   |     | 177.15        | 114                        |
| 177.10        |     |     |     | 3   | 7   | 11  | 6   | 6   | 4   | 3   | 7   | 1   | 177.10        | 162                        |
| 177.05        |     |     |     | 3   | 13  | 9   | 4   | 1   | 3   |     | 3   | 1   | 177.05        | 201                        |
| 177.00        | 1   |     | 1   | 11  | 2   | 3   | 1   |     | 4   |     | 5   | 7   | 177.00        | 236                        |
| 176.95        | 6   | 2   | 3   | 7   | 5   | 1   |     | 1   |     |     | 3   | 12  | 176.95        | 276                        |
| 176.90        | 11  | 6   | 7   | 2   | 1   |     |     |     |     |     |     | 2   | 176.90        | 305                        |
| 176.85        | 7   | 18  | 17  | 1   |     |     |     |     |     |     |     | 2   | 176.85        | 350                        |
| 176.80        | 4   | 2   | 3   |     |     |     |     |     |     |     |     | 3   | 176.80        | 362                        |
| 176.75        | 1   |     |     |     |     |     |     |     |     |     | 1   |     | 176.75        | 364                        |
| 176.70        |     |     |     |     |     |     |     |     |     |     |     |     | 176.70        | 364                        |
| 176.65        | 1   |     |     |     |     |     |     |     |     |     |     |     | 176.65        | 365                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 5035: Essexville, Michigan on Lake Huron (Saginaw Bay)

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 176.93  | 176.91  | 176.87  | 176.92  | 176.97  | 177.14  | 177.16  | 177.22  | 177.10  | 177.30  | 177.27  | 177.12  |
| 2    | 176.97  | 176.86  | 176.86  | 177.01  | 177.17  | 177.14  | 177.16  | 177.20  | 177.14  | 177.27  | 177.26  | 176.97  |
| 3    | 176.99  | 176.90  | 176.86  | 177.02  | 177.08  | 177.04  | 177.20  | 177.20  | 177.08  | 177.25  | 177.13  | 176.85  |
| 4    | 176.94  | 176.88  | 176.87  | 177.09  | 176.94  | 177.05  | 177.01  | 177.18  | 177.05  | 177.40  | 177.32  | 176.99  |
| 5    | 176.81  | 176.89  | 176.91  | 176.99  | 176.99  | 177.20  | 177.09  | 177.16  | 177.09  | 177.22  | 177.21  | 177.00  |
| 6    | 177.00  | 176.96  | 176.87  | 176.88  | 176.96  | 177.15  | 177.10  | 177.21  | 177.17  | 177.38  | 177.19  | 176.96  |
| 7    | 176.97  | 176.92  | 176.93  | 176.98  | 177.07  | 177.06  | 177.15  | 177.25  | 177.14  | 177.11  | 177.19  | 177.06  |
| 8    | 176.84  | 176.87  | 176.89  | 177.06  | 177.11  | 177.09  | 177.15  | 177.19  | 177.02  | 177.28  | 177.03  | 177.21  |
| 9    | 176.80  | 176.87  | 176.88  | 177.16  | 177.10  | 177.13  | 177.20  | 177.20  | 177.05  | 177.41  | 176.97  | 176.97  |
| 10   | 176.99  | 176.90  | 176.83  | 177.11  | 177.07  | 177.06  | 177.19  | 177.16  | 176.98  | 177.29  | 177.25  | 176.84  |
| 11   | 176.87  | 176.92  | 176.92  | 177.10  | 177.07  | 177.13  | 177.16  | 177.24  | 177.05  | 177.25  | 177.18  | 176.85  |
| 12   | 176.91  | 176.88  | 176.93  | 177.04  | 177.07  | 177.00  | 177.16  | 177.22  | 177.18  | 177.20  | 177.07  | 177.10  |
| 13   | 177.02  | 176.85  | 176.89  | 177.02  | 177.07  | 177.08  | 177.10  | 177.18  | 177.23  | 177.27  | 177.20  | 177.00  |
| 14   | 176.92  | 176.86  | 176.87  | 177.05  | 177.00  | 177.09  | 177.19  | 177.14  | 177.21  | 177.12  | 176.80  | 176.88  |
| 15   | 176.86  | 176.85  | 176.89  | 176.98  | 177.02  | 177.11  | 177.17  | 177.14  | 177.28  | 177.30  | 177.09  | 177.04  |
| 16   | 176.90  | 176.91  | 176.92  | 177.19  | 176.97  | 177.06  | 177.15  | 177.19  | 177.23  | 177.28  | 177.02  | 177.03  |
| 17   | 176.81  | 176.86  | 176.89  | 177.18  | 177.05  | 177.17  | 177.15  | 177.22  | 177.13  | 177.39  | 177.12  | 177.02  |
| 18   | 176.91  | 176.87  | 176.90  | 177.05  | 177.13  | 177.11  | 177.17  | 177.28  | 177.16  | 177.29  | 177.32  | 176.99  |
| 19   | 176.93  | 176.89  | 176.86  | 176.94  | 177.60  | 177.09  | 177.19  | 177.27  | 177.23  | 177.25  | 177.15  | 177.05  |
| 20   | 176.96  | 176.89  | 176.98  | 177.04  | 177.31  | 177.24  | 177.28  | 177.19  | 177.20  | 177.24  | 177.12  | 177.04  |
| 21   | 176.92  | 176.99  | 176.89  | 177.11  | 177.14  | 177.08  | 177.24  | 177.24  | 177.22  | 177.27  | 177.11  | 177.00  |
| 22   | 176.85  | 176.89  | 176.84  | 177.12  | 177.13  | 177.06  | 177.14  | 177.19  | 177.12  | 177.23  | 177.03  | 176.86  |
| 23   | 176.94  | 176.86  | 176.89  | 177.04  | 177.09  | 177.12  | 177.18  | 177.08  | 177.21  | 177.33  | 177.00  | 177.08  |
| 24   | 176.88  | 176.91  | 177.01  | 176.97  | 177.10  | 177.16  | 177.09  | 177.23  | 177.19  | 177.30  | 177.04  | 177.04  |
| 25   | 176.70  | 176.90  | 176.83  | 177.05  | 177.09  | 177.15  | 177.24  | 177.12  | 177.20  | 177.30  | 177.06  | 177.00  |
| 26   | 176.94  | 176.89  | 176.89  | 177.01  | 177.12  | 177.05  | 177.23  | 177.19  | 177.20  | 177.27  | 177.12  | 177.04  |
| 27   | 176.92  | 176.86  | 176.97  | 177.01  | 177.11  | 177.11  | 177.20  | 177.25  | 177.19  | 177.24  | 177.00  | 177.00  |
| 28   | 176.90  | 176.91  | 176.86  | 176.96  | 177.08  | 177.15  | 177.15  | 177.21  | 177.19  | 177.21  | 177.02  | 176.95  |
| 29   | 176.90  |         | 176.92  | 176.99  | 177.07  | 177.18  | 177.25  | 177.12  | 177.20  | 177.26  | 177.12  | 176.95  |
| 30   | 176.87  |         | 176.91  | 176.99  | 177.06  | 177.20  | 177.24  | 177.13  | 177.26  | 177.31  | 177.26  | 177.00  |
| 31   | 176.91  |         | 176.96  |         | 177.15  |         | 177.20  | 177.12  |         | 177.13  |         | 176.96  |
| MEAN | 176.91  | 176.89  | 176.90  | 177.04  | 177.09  | 177.11  | 177.17  | 177.19  | 177.16  | 177.27  | 177.12  | 177.00  |
| MAX. | 177.25  | 177.10  | 177.09  | 177.48  | 177.74  | 177.38  | 177.55  | 177.44  | 177.56  | 177.66  | 177.47  | 177.34  |
|      | 0400/13 | 1200/21 | 0100/24 | 1400/16 | 0100/20 | 1800/01 | 1900/18 | 2100/26 | 1800/15 | 0900/04 | 1600/18 | 0500/08 |
| MIN. | 176.56  | 176.78  | 176.72  | 176.72  | 176.76  | 176.88  | 176.94  | 176.91  | 176.75  | 176.94  | 176.60  | 176.46  |
|      | 1700/25 | 0100/02 | 1400/25 | 0900/06 | 1300/01 | 0700/01 | 0900/13 | 0200/23 | 1000/10 | 1600/14 | 1400/14 | 0300/06 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 177.07

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 5059: Harrisville, Michigan on Lake Huron

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST  
 Monthly mean elevation: 177.25 Oct  
 Daily mean elevation: 177.34 6 Oct  
 Instant/hourly elevation: 177.41 0600/6 Oct

LOWEST  
 Monthly mean elevation: 176.86 Feb  
 Daily mean elevation: 176.79 25 Jan  
 Instant/hourly elevation: 176.75 1400/25 Jan

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 176.98 | 10 Jan |
| 176.89 | 21 Feb |
| 176.96 | 24 Mar |
| 177.05 | 11 Apr |
| 177.09 | 2 May  |
| 177.15 | 29 Jun |
| 177.21 | 29 Jul |
| 177.23 | 11 Aug |
| 177.25 | 30 Sep |
| 177.34 | 6 Oct  |
| 177.26 | 10 Nov |
| 177.12 | 4 Dec  |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 176.79 | 25 Jan |
| 176.82 | 27 Feb |
| 176.80 | 10 Mar |
| 176.90 | 1 Apr  |
| 176.96 | 14 May |
| 177.04 | 10 Jun |
| 177.10 | 12 Jul |
| 177.09 | 31 Aug |
| 177.06 | 3 Sep  |
| 177.20 | 31 Oct |
| 177.05 | 30 Nov |
| 176.96 | 2 Dec  |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(m.) | No. of days
above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 177.30 | | | | | | | | | | 2 | | | 177.30 | 2 |
| 177.25 | | | | | | | | | | 11 | 1 | | 177.25 | 14 |
| 177.20 | | | | | | | 1 | 1 | 3 | 16 | 6 | | 177.20 | 41 |
| 177.15 | | | | | | | 13 | 21 | 9 | 2 | 7 | | 177.15 | 93 |
| 177.10 | | | | | | | 10 | 16 | 8 | | 5 | 1 | 177.10 | 144 |
| 177.05 | | | | | 7 | | 13 | 1 | 1 | 7 | 9 | 8 | 177.05 | 190 |
| 177.00 | | | | 11 | 13 | 7 | | | | | 2 | 8 | 177.00 | 231 |
| 176.95 | 4 | | 1 | 11 | 11 | | | | | | | 14 | 176.95 | 272 |
| 176.90 | 8 | | 8 | 7 | | | | | | | | | 176.90 | 295 |
| 176.85 | 17 | 17 | 10 | 1 | | | | | | | | | 176.85 | 340 |
| 176.80 | 1 | 11 | 7 | | | | | | | | | | 176.80 | 359 |
| 176.75 | 1 | | 2 | | | | | | | | | | 176.75 | 362 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 5059: Harrisville, Michigan on Lake Huron

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 176.94 | 176.87 | 176.87 | 176.90 | 176.99 | 177.06 | 177.11 | 177.19 | 177.09 | 177.24 | 177.23 | 177.00 |
| 2 | 176.93 | 176.84 | 176.84 | 176.95 | 177.09 | 177.05 | 177.13 | 177.19 | 177.08 | 177.24 | 177.24 | 176.96 |
| 3 | 176.90 | 176.87 | 176.84 | 176.92 | 177.05 | 177.05 | 177.14 | 177.20 | 177.06 | 177.24 | 177.22 | 177.02 |
| 4 | 176.91 | 176.82 | 176.85 | 176.92 | 177.03 | 177.07 | 177.13 | 177.20 | 177.09 | 177.25 | 177.23 | 177.12 |
| 5 | 176.88 | 176.86 | 176.86 | 176.91 | 177.03 | 177.05 | 177.14 | 177.19 | 177.11 | 177.27 | 177.19 | 177.10 |
| 6 | 176.97 | 176.89 | 176.80 | 176.91 | 177.00 | 177.04 | 177.13 | 177.17 | 177.12 | 177.34 | 177.20 | 177.10 |
| 7 | 176.94 | 176.85 | 176.89 | 176.99 | 177.03 | 177.04 | 177.15 | 177.17 | 177.10 | 177.28 | 177.17 | 177.06 |
| 8 | 176.90 | 176.84 | 176.87 | 177.03 | 177.00 | 177.08 | 177.14 | 177.18 | 177.11 | 177.31 | 177.13 | 177.06 |
| 9 | 176.97 | 176.86 | 176.83 | 177.02 | 176.97 | 177.07 | 177.14 | 177.20 | 177.09 | 177.27 | 177.23 | 176.98 |
| 10 | 176.98 | 176.89 | 176.80 | 177.02 | 176.98 | 177.04 | 177.15 | 177.17 | 177.07 | 177.26 | 177.26 | 177.04 |
| 11 | 176.92 | 176.88 | 176.87 | 177.05 | 176.98 | 177.06 | 177.11 | 177.23 | 177.14 | 177.24 | 177.17 | 177.06 |
| 12 | 176.96 | 176.87 | 176.86 | 176.99 | 176.97 | 177.05 | 177.10 | 177.20 | 177.17 | 177.22 | 177.16 | 177.07 |
| 13 | 176.95 | 176.89 | 176.82 | 176.99 | 176.98 | 177.11 | 177.12 | 177.18 | 177.21 | 177.28 | 177.22 | 177.03 |
| 14 | 176.88 | 176.86 | 176.84 | 176.95 | 176.96 | 177.10 | 177.17 | 177.16 | 177.17 | 177.26 | 177.17 | 177.06 |
| 15 | 176.87 | 176.87 | 176.88 | 176.95 | 176.99 | 177.08 | 177.15 | 177.16 | 177.15 | 177.28 | 177.18 | 177.05 |
| 16 | 176.86 | 176.86 | 176.90 | 177.01 | 176.98 | 177.09 | 177.12 | 177.17 | 177.15 | 177.28 | 177.09 | 177.00 |
| 17 | 176.86 | 176.82 | 176.87 | 177.01 | 177.03 | 177.13 | 177.14 | 177.16 | 177.13 | 177.24 | 177.14 | 177.00 |
| 18 | 176.90 | 176.84 | 176.88 | 176.99 | 177.03 | 177.09 | 177.17 | 177.17 | 177.13 | 177.25 | 177.11 | 176.99 |
| 19 | 176.89 | 176.86 | 176.84 | 176.98 | 177.04 | 177.09 | 177.18 | 177.16 | 177.16 | 177.25 | 177.10 | 177.04 |
| 20 | 176.92 | 176.85 | 176.91 | 177.02 | 177.06 | 177.09 | 177.18 | 177.15 | 177.13 | 177.26 | 177.06 | 177.00 |
| 21 | 176.89 | 176.89 | 176.92 | 177.02 | 177.07 | 177.07 | 177.16 | 177.15 | 177.15 | 177.25 | 177.09 | 177.00 |
| 22 | 176.85 | 176.85 | 176.92 | 177.02 | 177.04 | 177.09 | 177.16 | 177.12 | 177.14 | 177.25 | 177.10 | 177.04 |
| 23 | 176.91 | 176.85 | 176.93 | 177.02 | 177.06 | 177.13 | 177.16 | 177.12 | 177.19 | 177.27 | 177.05 | 177.06 |
| 24 | 176.87 | 176.87 | 176.96* | 176.99 | 177.05 | 177.11 | 177.15 | 177.19 | 177.18 | 177.22 | 177.11 | 176.97 |
| 25 | 176.79 | 176.87 | / | 176.99 | 177.03 | 177.12 | 177.17 | 177.14 | 177.17 | 177.23 | 177.09 | 176.98 |
| 26 | 176.90 | 176.84 | / | 176.96 | 177.03 | 177.11 | 177.17 | 177.12 | 177.19 | 177.20 | 177.06 | 177.01 |
| 27 | 176.88 | 176.82 | / | 176.97 | 177.04 | 177.14 | 177.17 | 177.16 | 177.16 | 177.23 | 177.10 | 176.98 |
| 28 | 176.89 | 176.88 | 176.91* | 176.97 | 177.06 | 177.14 | 177.18 | 177.17 | 177.19 | 177.24 | 177.12 | 177.02 |
| 29 | 176.88 | | 176.94 | 177.02 | 177.06 | 177.15 | 177.21 | 177.14 | 177.22 | 177.24 | 177.08 | 176.97 |
| 30 | 176.88 | | 176.93 | 176.99 | 177.07 | 177.12 | 177.20 | 177.13 | 177.25 | 177.26 | 177.05 | 176.97 |
| 31 | 176.89 | | 176.93 | | 177.05 | | 177.19 | 177.09 | | 177.20 | | 176.98 |
| MEAN | 176.90 | 176.86 | 176.88 | 176.98 | 177.02 | 177.09 | 177.15 | 177.17 | 177.14 | 177.25 | 177.14 | 177.02 |
| MAX. | 177.04 | 176.95 | 176.99 | 177.08 | 177.12 | 177.18 | 177.24 | 177.26 | 177.29 | 177.41 | 177.32 | 177.17 |
| MIN. | 1900/09 | 0800/21 | 0700/24 | 1500/11 | 0300/02 | 1400/27 | 2100/18 | 1800/11 | 2300/29 | 0600/06 | 0500/10 | 0300/05 |
| | 176.75 | 176.76 | 176.76 | 176.82 | 176.92 | 176.99 | 177.06 | 177.05 | 176.82 | 177.16 | 177.01 | 176.91 |
| | 1400/25 | 1800/20 | 2200/06 | 0600/06 | 1300/16 | 2100/11 | 1300/12 | 2300/22 | 1100/17 | 1000/31 | 2200/23 | 0500/10 |

* Indicates Less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL MEAN: 177.05

ANNUAL SUMMARY OF LEVELS, 1986
 Station 5080: Mackinaw City, Michigan on Straits of Mackinac

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

HIGHEST
 Monthly mean elevation: 177.25 Oct
 Daily mean elevation: 177.34 7 Oct
 Instant/hourly elevation: 177.42 1700/7 Oct

LOWEST
 Monthly mean elevation: 176.85 Feb
 Daily mean elevation: 176.75 7 Mar
 Instant/hourly elevation: 176.61 2200/6 Mar

HIGHEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 177.00 | 9 Jan |
| 176.89 | 13 Feb |
| 177.00 | 22 Mar |
| 177.04 | 30 Apr |
| 177.07 | 30 May |
| 177.16 | 26 Jun |
| 177.20 | 24 Jul |
| 177.19 | 9 Aug |
| 177.26 | 29 Sep |
| 177.34 | 7 Oct |
| 177.28 | 8 Nov |
| 177.11 | 11 Dec |

LOWEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 176.78 | 27 Jan |
| 176.77 | 27 Feb |
| 176.75 | 7 Mar |
| 176.92 | 4 Apr |
| 176.98 | 9 May |
| 177.02 | 5 Jun |
| 177.10 | 2 Jul |
| 177.07 | 27 Aug |
| 177.06 | 6 Sep |
| 177.20 | 29 Oct |
| 177.03 | 30 Nov |
| 176.98 | 30 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(m.) | No. of days<br>above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 177.30        |     |     |     |     |     |     |     |     |     | 1   |     |     | 177.30        | 1                          |
| 177.25        |     |     |     |     |     |     |     |     | 1   | 12  | 1   |     | 177.25        | 15                         |
| 177.20        |     |     |     |     |     |     |     |     | 3   | 17  | 6   |     | 177.20        | 41                         |
| 177.15        |     |     |     |     |     | 1   | 15  | 16  | 6   | 1   | 7   |     | 177.15        | 87                         |
| 177.10        |     |     |     |     | 4   | 7   | 15  | 11  | 12  |     | 12  | 1   | 177.10        | 145                        |
| 177.05        |     |     |     | 8   | 13  | 15  | 1   | 4   | 8   |     | 1   | 10  | 177.05        | 188                        |
| 177.00        |     |     |     | 8   | 13  | 7   |     |     |     |     | 3   | 11  | 177.00        | 230                        |
| 176.95        |     |     | 4   | 14  | 14  |     |     |     |     |     |     | 9   | 176.95        | 273                        |
| 176.90        | 2   |     | 6   | 8   |     |     |     |     |     |     |     |     | 176.90        | 297                        |
| 176.85        | 10  |     | 6   |     |     |     |     |     |     |     |     |     | 176.85        | 331                        |
| 176.80        | 12  | 14  | 8   |     |     |     |     |     |     |     |     |     | 176.80        | 361                        |
| 176.75        | 6   | 13  | 11  |     |     |     |     |     |     |     |     |     | 176.75        | 364                        |
| 176.70        | 1   | 1   | 1   |     |     |     |     |     |     |     |     |     | 176.70        | 365                        |
|               |     |     | 1   |     |     |     |     |     |     |     |     |     |               |                            |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 5080: Mackinaw City, Michigan on Straits of Mackinac

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 176.92  | 176.88  | 176.85  | 176.94  | 176.99  | 177.04  | 177.11  | 177.18  | 177.11  | 177.24  | 177.20  | 177.06  |
| 2    | 176.89  | 176.86  | 176.85  | 176.94  | 176.98  | 177.04  | 177.10  | 177.18  | 177.07  | 177.26  | 177.22  | 177.08  |
| 3    | 176.87  | 176.87  | 176.84  | 176.92  | 177.00  | 177.08  | 177.12  | 177.18  | 177.10  | 177.24  | 177.23  | 177.10  |
| 4    | 176.91  | 176.85  | 176.84  | 176.92  | 177.06  | 177.06  | 177.16  | 177.19  | 177.13  | 177.24  | 177.18  | 177.06  |
| 5    | 176.91  | 176.84  | 176.83  | 176.94  | 177.05  | 177.02  | 177.15  | 177.18  | 177.10  | 177.27  | 177.23  | 177.10  |
| 6    | 176.88  | 176.86  | 176.76  | 176.99  | 177.02  | 177.04  | 177.15  | 177.16  | 177.06  | 177.24  | 177.22  | 177.04  |
| 7    | 176.88  | 176.85  | 176.75  | 177.00  | 176.99  | 177.06  | 177.14  | 177.16  | 177.07  | 177.34  | 177.19  | 177.02  |
| 8    | 176.95  | 176.87  | 176.88  | 176.96  | 176.98  | 177.05  | 177.13  | 177.19  | 177.11  | 177.25  | 177.28  | 177.04  |
| 9    | 177.00  | 176.88  | 176.84  | 176.93  | 176.98  | 177.05  | 177.12  | 177.19  | 177.08  | 177.24  | 177.23  | 177.06  |
| 10   | 176.90  | 176.86  | 176.82  | 176.95  | 176.99  | 177.06  | 177.12  | 177.17  | 177.10  | 177.27  | 177.18  | 177.06  |
| 11   | 176.97  | 176.85  | 176.83  | 176.98  | 176.99  | 177.04  | 177.11  | 177.16  | 177.13  | 177.27  | 177.16  | 177.11  |
| 12   | 176.88  | 176.85  | 176.84  | 176.96  | 177.00  | 177.08  | 177.12  | 177.16  | 177.13  | 177.29  | 177.15  | 177.00  |
| 13   | 176.86  | 176.89  | 176.83  | 176.97  | 176.99  | 177.09  | 177.15  | 177.17  | 177.12  | 177.27  | 177.16  | 177.06  |
| 14   | 176.87  | 176.86  | 176.88  | 176.96  | 177.00  | 177.09  | 177.13  | 177.18  | 177.12  | 177.27  | 177.25  | 177.07  |
| 15   | 176.93  | 176.87  | 176.89  | 176.99  | 177.00  | 177.09  | 177.14  | 177.17  | 177.09  | 177.25  | 177.13  | 177.02  |
| 16   | 176.91  | 176.86  | 176.87  | 176.98  | 177.01  | 177.09  | 177.15  | 177.17  | 177.12  | 177.25  | 177.14  | 177.02  |
| 17   | 176.93  | 176.86  | 176.89  | 176.98  | 177.00  | 177.09  | 177.17  | 177.14  | 177.16  | 177.23  | 177.11  | 177.03  |
| 18   | 176.91  | 176.86  | 176.90  | 177.00  | 177.01  | 177.09  | 177.18  | 177.13  | 177.13  | 177.25  | 177.06  | 177.02  |
| 19   | 176.85  | 176.84  | 176.84  | 177.04  | 176.99  | 177.09  | 177.17  | 177.13  | 177.12  | 177.26  | 177.12  | 177.00  |
| 20   | 176.85  | 176.82  | 176.86  | 177.02  | 177.02  | 177.07  | 177.15  | 177.15  | 177.13  | 177.27  | 177.11  | 176.98  |
| 21   | 176.90  | 176.82  | 176.93  | 176.95  | 177.04  | 177.11  | 177.16  | 177.10  | 177.13  | 177.25  | 177.12  | 177.02  |
| 22   | 176.83  | 176.88  | 177.00  | 176.99  | 177.03  | 177.12  | 177.18  | 177.14  | 177.17  | 177.27  | 177.16  | 177.08  |
| 23   | 176.88  | 176.83  | 176.89  | 177.03  | 177.05  | 177.12  | 177.17  | 177.11  | 177.19  | 177.22  | 177.11  | 176.99  |
| 24   | 176.91  | 176.84  | 176.92  | 177.03  | 177.05  | 177.08  | 177.20  | 177.11  | 177.18  | 177.22  | 177.12  | 176.99  |
| 25   | 176.94  | 176.85  | 176.96  | 176.99  | 177.04  | 177.11  | 177.17  | 177.13  | 177.18  | 177.21  | 177.12  | 176.99  |
| 26   | 176.83  | 176.84  | 176.93  | 176.99  | 177.03  | 177.16  | 177.17  | 177.10  | 177.19  | 177.21  | 177.04  | 176.98  |
| 27   | 176.78  | 176.77  | 176.91  | 177.03  | 177.04  | 177.13  | 177.18  | 177.07  | 177.21  | 177.24  | 177.15  | 177.01  |
| 28   | 176.86  | 176.82  | 176.97  | 177.03  | 177.06  | 177.13  | 177.19  | 177.10  | 177.22  | 177.27  | 177.11  | 177.02  |
| 29   | 176.85  |         | 176.94  | 177.04  | 177.06  | 177.11  | 177.17  | 177.13  | 177.26  | 177.20  | 177.04  | 176.99  |
| 30   | 176.86  |         | 176.94  | 177.04  | 177.07  | 177.10  | 177.17  | 177.11  | 177.25  | 177.22  | 177.03  | 176.98  |
| 31   | 176.85  |         | 176.97  |         | 177.04  |         | 177.19  | 177.11  |         | 177.29  |         | 177.03  |
| MEAN | 176.89  | 176.85  | 176.88  | 176.98  | 177.02  | 177.08  | 177.15  | 177.15  | 177.14  | 177.25  | 177.15  | 177.03  |
| MAX. | 177.10  | 176.96  | 177.10  | 177.13  | 177.14  | 177.21  | 177.26  | 177.25  | 177.34  | 177.42  | 177.39  | 177.29  |
| MIN. | 0600/09 | 0100/14 | 1700/22 | 2400/28 | 0100/01 | 2200/26 | 2100/24 | 1300/10 | 0700/30 | 1700/07 | 1200/08 | 2400/05 |
|      | 176.73  | 176.67  | 176.61  | 176.84  | 176.87  | 176.88  | 177.05  | 176.99  | 177.01  | 177.10  | 176.96  | 176.95  |
|      | 0300/27 | 2100/20 | 2200/06 | 0500/26 | 2000/01 | 1000/01 | 1700/11 | 0100/27 | 2400/06 | 0200/06 | 1200/26 | 1400/30 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 177.05

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 5099: DeTour Village, Michigan on Lake Huron

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST  
 Monthly mean elevation: 177.23 Oct  
 Daily mean elevation: 177.31 7 Oct  
 Instant/hourly elevation: 177.36 1000/6 Oct

LOWEST  
 Monthly mean elevation: 176.83 Feb  
 Daily mean elevation: 176.71 6 Mar  
 Instant/hourly elevation: 176.56 2200/6 Mar

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 177.02 | 9 Jan  |
| 176.89 | 13 Feb |
| 176.98 | 22 Mar |
| 177.02 | 30 Apr |
| 177.06 | 30 May |
| 177.13 | 26 Jun |
| 177.17 | 28 Jul |
| 177.17 | 9 Aug  |
| 177.24 | 30 Sep |
| 177.31 | 7 Oct  |
| 177.26 | 10 Nov |
| 177.12 | 11 Dec |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 176.77 | 27 Jan |
| 176.73 | 27 Feb |
| 176.71 | 6 Mar  |
| 176.89 | 4 Apr  |
| 176.94 | 1 May  |
| 177.01 | 6 Jun  |
| 177.08 | 12 Jul |
| 177.06 | 27 Aug |
| 177.05 | 7 Sep  |
| 177.18 | 29 Oct |
| 177.01 | 30 Nov |
| 176.95 | 30 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(m.) | No. of days
above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 177.30 | | | | | | | | | | 1 | | | 177.30 | 1 |
| 177.25 | | | | | | | | | | 7 | 1 | | 177.25 | 9 |
| 177.20 | | | | | | | | | 2 | 17 | 3 | | 177.20 | 31 |
| 177.15 | | | | | | | 10 | 10 | 6 | 6 | 9 | | 177.15 | 72 |
| 177.10 | | | | | | 4 | 16 | 13 | 8 | | 7 | 2 | 177.10 | 122 |
| 177.05 | | | | | 2 | 16 | 5 | 8 | 13 | | 7 | 4 | 177.05 | 177 |
| 177.00 | 1 | | | 5 | 13 | 10 | | | 1 | | 3 | 12 | 177.00 | 222 |
| 176.95 | | | 3 | 14 | 14 | | | | | | | 12 | 176.95 | 265 |
| 176.90 | 8 | | 7 | 9 | 2 | | | | | | | 1 | 176.90 | 292 |
| 176.85 | 11 | 9 | 6 | 2 | | | | | | | | | 176.85 | 320 |
| 176.80 | 9 | 16 | 10 | | | | | | | | | | 176.80 | 355 |
| 176.75 | 2 | 2 | 3 | | | | | | | | | | 176.75 | 362 |
| 176.70 | | 1 | 2 | | | | | | | | | | 176.70 | 365 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 5099: DeTour Village, Michigan on Lake Huron

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 176.94 | 176.86 | 176.85 | 176.92 | 176.94 | 177.02 | 177.09 | 177.16 | 177.09 | 177.23 | 177.19 | 177.00 |
| 2 | 176.90 | 176.83 | 176.84 | 176.94 | 176.99 | 177.03 | 177.09 | 177.16 | 177.06 | 177.23 | 177.20 | 177.01 |
| 3 | 176.82 | 176.86 | 176.81 | 176.90 | 176.99 | 177.06 | 177.12 | 177.16 | 177.06 | 177.22 | 177.22 | 177.04 |
| 4 | 176.88 | 176.82 | 176.83 | 176.89 | 177.05 | 177.06 | 177.14 | 177.17 | 177.10 | 177.21 | 177.18 | 177.08 |
| 5 | 176.84 | 176.81 | 176.83 | 176.91 | 177.06 | 177.02 | 177.15 | 177.16 | 177.09 | 177.23 | 177.19 | 177.11 |
| 6 | 176.90 | 176.84 | 176.71 | 176.92 | 177.01 | 177.01 | 177.13 | 177.14 | 177.06 | 177.27 | 177.21 | 177.06 |
| 7 | 176.88 | 176.79 | 176.74 | 176.99 | 176.99 | 177.04 | 177.13 | 177.13 | 177.05 | 177.31 | 177.18 | 177.02 |
| 8 | 176.93 | 176.83 | 176.89 | 176.97 | 176.98 | 177.03 | 177.13 | 177.16 | 177.09 | 177.27 | 177.19 | 177.04 |
| 9 | 177.02 | 176.86 | 176.83 | 176.94 | 176.95 | 177.05 | 177.09 | 177.17 | 177.07 | 177.21 | 177.20 | 176.97 |
| 10 | 176.94 | 176.86 | 176.79 | 176.94 | 176.96 | 177.02 | 177.12 | 177.16 | 177.08 | 177.26 | 177.26 | 177.02 |
| 11 | 176.95 | 176.84 | 176.81 | 176.99 | 176.97 | 177.03 | 177.08 | 177.16 | 177.10 | 177.25 | 177.14 | 177.12 |
| 12 | 176.91 | 176.85 | 176.84 | 176.96 | 176.96 | 177.03 | 177.08 | 177.15 | 177.11 | 177.25 | 177.13 | 177.00 |
| 13 | 176.88 | 176.89 | 176.79 | 176.96 | 176.97 | 177.08 | 177.11 | 177.15 | 177.11 | 177.26 | 177.19 | 177.03 |
| 14 | 176.84 | 176.86 | 176.83 | 176.95 | 176.97 | 177.09 | 177.13 | 177.16 | 177.12 | 177.25 | 177.23 | 177.08 |
| 15 | 176.89 | 176.86 | 176.87 | 176.94 | 176.99 | 177.07 | 177.13 | 177.15 | 177.08 | 177.24 | 177.19 | 177.04 |
| 16 | 176.91 | 176.86 | 176.86 | 176.96 | 176.98 | 177.06 | 177.12 | 177.15 | 177.10 | 177.24 | 177.12 | 177.00 |
| 17 | 176.89 | 176.82 | 176.88 | 176.97 | 177.00 | 177.09 | 177.15 | 177.12 | 177.14 | 177.19 | 177.10 | 177.02 |
| 18 | 176.92 | 176.83 | 176.89 | 176.99 | 176.99 | 177.08 | 177.16 | 177.12 | 177.11 | 177.24 | 177.06 | 176.98 |
| 19 | 176.84 | 176.83 | 176.80 | 177.00 | 176.98 | 177.07 | 177.16 | 177.12 | 177.12 | 177.24 | 177.10 | 177.02 |
| 20 | 176.84 | 176.81 | 176.84 | 177.02 | 177.01 | 177.06 | 177.13 | 177.13 | 177.09 | 177.26 | 177.08 | 176.97 |
| 21 | 176.91 | 176.80 | 176.92 | 176.95 | 177.03 | 177.09 | 177.14 | 177.10 | 177.13 | 177.23 | 177.07 | 177.00 |
| 22 | 176.78 | 176.86 | 176.98 | 176.96 | 177.02 | 177.09 | 177.15 | 177.12 | 177.13 | 177.25 | 177.15 | 177.07 |
| 23 | 176.89 | 176.82 | 176.90 | 177.02 | 177.04 | 177.12 | 177.16 | 177.08 | 177.17 | 177.23 | 177.09 | 177.04 |
| 24 | 176.89 | 176.84 | 176.93 | 177.01 | 177.04 | 177.06 | 177.17 | 177.11 | 177.18 | 177.20 | 177.10 | 176.98 |
| 25 | 176.87 | 176.84 | 176.92 | 176.98 | 177.02 | 177.10 | 177.16 | 177.11 | 177.16 | 177.20 | 177.13 | 176.96 |
| 26 | 176.84 | 176.82 | 176.92 | 176.97 | 177.02 | 177.13 | 177.15 | 177.08 | 177.16 | 177.18 | 177.02 | 176.98 |
| 27 | 176.77 | 176.73 | 176.91 | 176.99 | 177.02 | 177.12 | 177.16 | 177.06 | 177.17 | 177.20 | 177.11 | 176.97 |
| 28 | 176.85 | 176.81 | 176.96 | 176.99 | 177.04 | 177.12 | 177.17 | 177.09 | 177.18 | 177.26 | 177.14 | 177.02 |
| 29 | 176.85 | | 176.94 | 177.02 | 177.05 | 177.10 | 177.16 | 177.10 | 177.23 | 177.18 | 177.05 | 176.99 |
| 30 | 176.85 | | 176.92 | 177.02 | 177.06 | 177.10 | 177.16 | 177.10 | 177.24 | 177.23 | 177.01 | 176.95 |
| 31 | 176.86 | | 176.96 | | 177.03 | | 177.16 | 177.09 | | 177.26 | | 177.01 |
| MEAN | 176.88 | 176.83 | 176.86 | 176.97 | 177.00 | 177.07 | 177.13 | 177.13 | 177.12 | 177.23 | 177.14 | 177.02 |
| MAX. | 177.06 | 176.94 | 177.04 | 177.07 | 177.09 | 177.20 | 177.21 | 177.21 | 177.27 | 177.36 | 177.32 | 177.18 |
| | 0700/09 | 2200/13 | 1700/22 | 0600/20 | 0400/02 | 2300/26 | 2200/24 | 1300/11 | 0700/30 | 1000/06 | 0700/03 | 1300/11 |
| MIN. | 176.65 | 176.67 | 176.56 | 176.85 | 176.78 | 176.96 | 177.05 | 176.98 | 177.02 | 177.09 | 176.94 | 176.90 |
| | 1100/22 | 2200/20 | 2200/06 | 2300/05 | 1800/01 | 0900/01 | 0300/12 | 1400/23 | 2400/06 | 2200/05 | 1900/26 | 0600/25 |

* Indicates Less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL MEAN: 177.03

ANNUAL SUMMARY OF LEVELS, 1986
 Station 6060: US Slip below locks, Sault St Marie, Michigan on St Marys River

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

HIGHEST

Monthly mean elevation: 177.52 Aug
 Daily mean elevation: 177.58 1 Oct
 Instant/hourly elevation: 177.66 1200/31 Oct

LOWEST

Monthly mean elevation: 177.21 Dec
 Daily mean elevation: 177.10 22 Apr
 Instant/hourly elevation: 176.91 2100/1 May

HIGHEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 177.49 | 9 Jan |
| 177.38 | 14 Feb |
| 177.41 | 22 Mar |
| 177.31 | 2 Apr |
| 177.47 | 30 May |
| 177.50 | 26 Jun |
| 177.56 | 27 Jul |
| 177.57 | 14 Aug |
| 177.58 | 30 Sep |
| 177.58 | 1 Oct |
| 177.44 | 3 Nov |
| 177.34 | 11 Dec |

LOWEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 177.26 | 27 Jan |
| 177.27 | 27 Feb |
| 177.21 | 7 Mar |
| 177.10 | 22 Apr |
| 177.12 | 2 May |
| 177.34 | 8 Jun |
| 177.44 | 9 Jul |
| 177.41 | 27 Aug |
| 177.43 | 7 Sep |
| 177.38 | 29 Oct |
| 177.13 | 29 Nov |
| 177.12 | 12 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(m.) | No. of days<br>above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 177.55        |     |     |     |     |     |     | 1   | 4   | 3   | 3   |     |     | 177.55        | 11                         |
| 177.50        |     |     |     |     |     |     | 18  | 18  | 8   | 5   |     |     | 177.50        | 60                         |
| 177.45        | 4   |     |     |     | 2   | 12  | 10  | 7   | 15  | 11  |     |     | 177.45        | 121                        |
| 177.40        | 6   |     | 1   |     | 4   | 13  | 2   | 2   | 4   | 11  | 3   |     | 177.40        | 167                        |
| 177.35        | 13  | 9   | 7   |     | 6   | 4   |     |     |     | 1   | 3   |     | 177.35        | 210                        |
| 177.30        | 7   | 17  | 15  | 1   | 12  | 1   |     |     |     |     | 6   | 2   | 177.30        | 271                        |
| 177.25        | 1   | 2   | 7   | 5   | 4   |     |     |     |     |     | 6   | 1   | 177.25        | 297                        |
| 177.20        |     |     | 1   | 11  |     |     |     |     |     |     | 7   | 13  | 177.20        | 329                        |
| 177.15        |     |     |     | 9   |     |     |     |     |     |     | 2   | 11  | 177.15        | 351                        |
| 177.10        |     |     |     | 2   | 3   |     |     |     |     |     | 3   | 4   | 177.10        | 363                        |
| 177.05        |     |     |     | 2   |     |     |     |     |     |     |     |     | 177.05        | 365                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 6060: US Slip below locks, Sault St Marie, Michigan on St Marys River

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 177.48  | 177.37  | 177.32  | 177.30  | 177.12  | 177.40  | 177.49  | 177.51  | 177.50  | 177.58  | 177.39  | 177.17  |
| 2    | 177.46  | 177.35  | 177.32  | 177.31  | 177.12  | 177.41  | 177.44  | 177.52  | 177.49  | 177.54  | 177.41  | 177.23  |
| 3    | 177.38  | 177.37  | 177.29  | 177.29  | 177.15  | 177.48  | 177.47  | 177.51  | 177.48  | 177.49  | 177.44  | 177.19  |
| 4    | 177.40  | 177.35  | 177.30  | 177.25  | 177.29  | 177.46  | 177.52  | 177.55  | 177.53  | 177.45  | 177.32  | 177.21  |
| 5    | 177.40  | 177.34  | 177.31  | 177.25  | 177.31  | 177.41  | 177.52  | 177.56  | 177.47  | 177.45  | 177.37  | 177.32  |
| 6    | 177.42  | 177.34  | 177.27  | 177.22  | 177.37  | 177.41  | 177.51  | 177.53  | 177.43  | 177.45  | 177.34  | 177.25  |
| 7    | 177.41  | 177.31  | 177.21  | 177.24  | 177.30  | 177.42  | 177.49  | 177.53  | 177.43  | 177.57  | 177.30  | 177.18  |
| 8    | 177.42  | 177.32  | 177.31  | 177.18  | 177.33  | 177.34  | 177.50  | 177.56  | 177.49  | 177.51  | 177.41  | 177.29  |
| 9    | 177.49  | 177.36  | 177.31  | 177.13  | 177.34  | 177.42  | 177.44  | 177.55  | 177.48  | 177.43  | 177.28  | 177.21  |
| 10   | 177.47  | 177.37  | 177.30  | 177.13  | 177.34  | 177.42  | 177.49  | 177.55  | 177.50  | 177.54  | 177.35  | 177.21  |
| 11   | 177.45  | 177.35  | 177.29  | 177.17  | 177.34  | 177.43  | 177.49  | 177.50  | 177.51  | 177.54  | 177.24  | 177.34  |
| 12   | 177.45  | 177.35  | 177.35  | 177.19  | 177.31  | 177.45  | 177.49  | 177.56  | 177.46  | 177.53  | 177.22  | 177.12  |
| 13   | 177.38  | 177.37  | 177.32  | 177.19  | 177.29  | 177.40  | 177.51  | 177.55  | 177.45  | 177.49  | 177.31  | 177.16  |
| 14   | 177.35  | 177.38  | 177.34  | 177.24  | 177.30  | 177.46  | 177.49  | 177.57  | 177.49  | 177.49  | 177.38  | 177.25  |
| 15   | 177.36  | 177.36  | 177.38  | 177.20  | 177.32  | 177.47  | 177.51  | 177.55  | 177.47  | 177.45  | 177.29  | 177.23  |
| 16   | 177.38  | 177.37  | 177.36  | 177.19  | 177.36  | 177.40  | 177.51  | 177.54  | 177.47  | 177.47  | 177.21  | 177.20  |
| 17   | 177.39  | 177.34  | 177.36  | 177.20  | 177.37  | 177.44  | 177.53  | 177.53  | 177.55  | 177.41  | 177.17  | 177.17  |
| 18   | 177.41  | 177.34  | 177.36  | 177.24  | 177.36  | 177.46  | 177.54  | 177.51  | 177.47  | 177.46  | 177.20  | 177.13  |
| 19   | 177.36  | 177.34  | 177.34  | 177.28  | 177.35  | 177.45  | 177.54  | 177.52  | 177.48  | 177.48  | 177.28  | 177.22  |
| 20   | 177.33  | 177.36  | 177.31  | 177.28  | 177.31  | 177.44  | 177.50  | 177.53  | 177.45  | 177.48  | 177.33  | 177.16  |
| 21   | 177.32  | 177.31  | 177.37  | 177.10  | 177.32  | 177.48  | 177.53  | 177.50  | 177.49  | 177.46  | 177.24  | 177.18  |
| 22   | 177.31  | 177.35  | 177.41  | 177.10  | 177.32  | 177.47  | 177.53  | 177.53  | 177.53  | 177.48  | 177.27  | 177.25  |
| 23   | 177.35  | 177.33  | 177.40  | 177.20  | 177.33  | 177.47  | 177.55  | 177.47  | 177.53  | 177.46  | 177.24  | 177.23  |
| 24   | 177.33  | 177.34  | 177.36  | 177.24  | 177.40  | 177.38  | 177.53  | 177.48  | 177.55  | 177.44  | 177.22  | 177.21  |
| 25   | 177.37  | 177.32  | 177.35  | 177.23  | 177.39  | 177.45  | 177.51  | 177.52  | 177.55  | 177.43  | 177.33  | 177.14  |
| 26   | 177.36  | 177.33  | 177.32  | 177.24  | 177.45  | 177.50  | 177.52  | 177.49  | 177.52  | 177.43  | 177.15  | 177.19  |
| 27   | 177.26  | 177.27  | 177.30  | 177.26  | 177.44  | 177.49  | 177.56  | 177.41  | 177.56  | 177.41  | 177.24  | 177.16  |
| 28   | 177.34  | 177.28  | 177.33  | 177.24  | 177.44  | 177.48  | 177.55  | 177.45  | 177.50  | 177.49  | 177.26  | 177.20  |
| 29   | 177.38  |         | 177.31  | 177.18  | 177.46  | 177.45  | 177.46  | 177.49  | 177.57  | 177.38  | 177.13  | 177.22  |
| 30   | 177.37  |         | 177.29  | 177.24  | 177.47  | 177.47  | 177.54  | 177.51  | 177.58  | 177.44  | 177.15  | 177.14  |
| 31   | 177.36  |         | 177.32  |         | 177.42  |         | 177.54  | 177.50  |         | 177.57  |         | 177.23  |
| MEAN | 177.39  | 177.34  | 177.33  | 177.22  | 177.34  | 177.44  | 177.51  | 177.52  | 177.50  | 177.48  | 177.28  | 177.21  |
| MAX. | 177.53  | 177.41  | 177.45  | 177.36  | 177.56  | 177.58  | 177.63  | 177.63  | 177.66  | 177.66  | 177.59  | 177.49  |
|      | 2300/09 | 0200/14 | 2000/22 | 2400/27 | 1600/30 | 0400/27 | 0300/23 | 0200/23 | 1000/27 | 1200/31 | 1000/08 | 1100/11 |
| MIN. | 177.19  | 177.25  | 177.17  | 177.02  | 176.91  | 177.24  | 177.38  | 177.30  | 177.35  | 177.27  | 177.00  | 177.03  |
|      | 0700/27 | 2000/27 | 0900/07 | 1300/21 | 2100/01 | 1500/08 | 0700/29 | 1900/23 | 1400/13 | 2400/05 | 2200/26 | 2000/07 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 177.38

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 6070: SW Pier above locks, Sault St Marie, Michigan on St Marys River

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST  
 Monthly mean elevation: 183.40 Aug  
 Daily mean elevation: 183.56 9 Nov  
 Instant/hourly elevation: 183.90 0500/9 Nov

LOWEST  
 Monthly mean elevation: 183.13 Mar  
 Daily mean elevation: 183.04 24 Jan  
 Instant/hourly elevation: 182.71 0500/26 Apr

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 183.34 | 12 Jan |
| 183.19 | 27 Feb |
| 183.25 | 19 Mar |
| 183.37 | 21 Apr |
| 183.45 | 1 May  |
| 183.40 | 16 Jun |
| 183.43 | 29 Jul |
| 183.51 | 23 Aug |
| 183.49 | 5 Sep  |
| 183.52 | 5 Oct  |
| 183.56 | 9 Nov  |
| 183.49 | 4 Dec  |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 183.04 | 24 Jan |
| 183.07 | 17 Feb |
| 183.07 | 8 Mar  |
| 183.12 | 5 Apr  |
| 183.24 | 9 May  |
| 183.22 | 3 Jun  |
| 183.28 | 12 Jul |
| 183.32 | 31 Aug |
| 183.23 | 27 Sep |
| 183.27 | 31 Oct |
| 183.19 | 19 Nov |
| 183.14 | 8 Dec  |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(m.) | No. of days
above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 183.55 | | | | | | | | | | | 1 | | 183.55 | 1 |
| 183.50 | | | | | | | | 1 | | 1 | 1 | | 183.50 | 4 |
| 183.45 | | | | | | | | 4 | 3 | | | 1 | 183.45 | 12 |
| 183.40 | | | | | 2 | | 4 | 7 | 1 | 6 | 8 | 1 | 183.40 | 41 |
| 183.35 | | | | 1 | | 4 | 10 | 16 | 10 | 15 | 6 | 3 | 183.35 | 106 |
| 183.30 | 4 | | | | 11 | 13 | 13 | 3 | 10 | 7 | 6 | 3 | 183.30 | 176 |
| 183.25 | 5 | | | 9 | 15 | 8 | 4 | | 5 | 2 | 6 | 10 | 183.25 | 240 |
| 183.20 | 14 | | 2 | 10 | 3 | 5 | | | 1 | | 1 | 6 | 183.20 | 282 |
| 183.15 | 6 | 13 | 7 | 8 | | | | | | | 1 | 5 | 183.15 | 322 |
| 183.10 | 1 | 11 | 13 | 2 | | | | | | | | 2 | 183.10 | 351 |
| 183.05 | | 4 | 9 | | | | | | | | | | 183.05 | 364 |
| 183.00 | 1 | | | | | | | | | | | | 183.00 | 365 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 6070: SW Pier above locks, Sault St Marie, Michigan on St Marys River

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 183.29 | 183.16 | 183.13 | 183.22 | 183.45 | 183.32 | 183.32 | 183.40 | 183.37 | 183.35 | 183.43 | 183.20 |
| 2 | 183.26 | 183.18 | 183.13 | 183.19 | 183.42 | 183.28 | 183.39 | 183.44 | 183.33 | 183.35 | 183.41 | 183.22 |
| 3 | 183.24 | 183.15 | 183.15 | 183.18 | 183.35 | 183.22 | 183.32 | 183.42 | 183.29 | 183.39 | 183.41 | 183.39 |
| 4 | 183.21 | 183.16 | 183.15 | 183.18 | 183.29 | 183.31 | 183.29 | 183.39 | 183.39 | 183.37 | 183.35 | 183.49 |
| 5 | 183.31 | 183.19 | 183.11 | 183.12 | 183.27 | 183.29 | 183.28 | 183.40 | 183.49 | 183.52 | 183.30 | 183.29 |
| 6 | 183.32 | 183.12 | 183.20 | 183.23 | 183.29 | 183.25 | 183.32 | 183.40 | 183.47 | 183.40 | 183.34 | 183.39 |
| 7 | 183.29 | 183.14 | 183.18 | 183.26 | 183.33 | 183.25 | 183.33 | 183.37 | 183.39 | 183.36 | 183.32 | 183.35 |
| 8 | 183.23 | 183.13 | 183.07 | 183.30 | 183.31 | 183.33 | 183.34 | 183.40 | 183.41 | 183.43 | 183.29 | 183.14 |
| 9 | 183.27 | 183.18 | 183.08 | 183.25 | 183.24 | 183.27 | 183.35 | 183.38 | 183.35 | 183.38 | 183.56 | 183.26 |
| 10 | 183.24 | 183.19 | 183.15 | 183.25 | 183.27 | 183.25 | 183.32 | 183.47 | 183.35 | 183.27 | 183.44 | 183.39 |
| 11 | 183.19 | 183.17 | 183.12 | 183.26 | 183.25 | 183.28 | 183.29 | 183.46 | 183.36 | 183.31 | 183.43 | 183.33 |
| 12 | 183.34 | 183.18 | 183.08 | 183.22 | 183.26 | 183.32 | 183.28 | 183.39 | 183.40 | 183.37 | 183.51 | 183.41 |
| 13 | 183.20 | 183.15 | 183.09 | 183.18 | 183.27 | 183.33 | 183.35 | 183.36 | 183.47 | 183.42 | 183.44 | 183.29 |
| 14 | 183.22 | 183.17 | 183.11 | 183.14 | 183.28 | 183.31 | 183.38 | 183.34 | 183.39 | 183.43 | 183.39 | 183.32 |
| 15 | 183.17 | 183.15 | 183.17 | 183.24 | 183.29 | 183.26 | 183.32 | 183.40 | 183.39 | 183.41 | 183.40 | 183.26 |
| 16 | 183.12 | 183.10 | 183.12 | 183.28 | 183.32 | 183.40 | 183.32 | 183.37 | 183.36 | 183.41 | 183.33 | 183.24 |
| 17 | 183.22 | 183.07 | 183.11 | 183.25 | 183.32 | 183.34 | 183.32 | 183.43 | 183.27 | 183.38 | 183.43 | 183.22 |
| 18 | 183.23 | 183.11 | 183.10 | 183.20 | 183.34 | 183.32 | 183.36 | 183.42 | 183.37 | 183.36 | 183.37 | 183.29 |
| 19 | 183.25 | 183.13 | 183.25 | 183.19 | 183.32 | 183.33 | 183.37 | 183.39 | 183.34 | 183.36 | 183.19 | 183.28 |
| 20 | 183.21 | 183.19 | 183.16 | 183.27 | 183.35 | 183.29 | 183.41 | 183.37 | 183.35 | 183.38 | 183.29 | 183.27 |
| 21 | 183.18 | 183.12 | 183.14 | 183.37 | 183.34 | 183.25 | 183.34 | 183.43 | 183.31 | 183.37 | 183.26 | 183.26 |
| 22 | 183.30 | 183.11 | 183.09 | 183.28 | 183.33 | 183.31 | 183.36 | 183.32 | 183.29 | 183.38 | 183.29 | 183.28 |
| 23 | 183.22 | 183.17 | 183.22 | 183.19 | 183.32 | 183.36 | 183.33 | 183.51 | 183.34 | 183.40 | 183.37 | 183.25 |
| 24 | 183.04 | 183.15 | 183.10 | 183.22 | 183.29 | 183.38 | 183.37 | 183.42 | 183.34 | 183.35 | 183.34 | 183.17 |
| 25 | 183.20 | 183.10 | 183.09 | 183.27 | 183.29 | 183.30 | 183.41 | 183.36 | 183.27 | 183.36 | 183.25 | 183.28 |
| 26 | 183.31 | 183.09 | 183.18 | 183.20 | 183.29 | 183.28 | 183.40 | 183.47 | 183.29 | 183.34 | 183.41 | 183.23 |
| 27 | 183.25 | 183.19 | 183.17 | 183.22 | 183.29 | 183.34 | 183.36 | 183.48 | 183.23 | 183.37 | 183.31 | 183.19 |
| 28 | 183.20 | 183.17 | 183.13 | 183.22 | 183.28 | 183.34 | 183.43 | 183.44 | 183.34 | 183.34 | 183.36 | 183.22 |
| 29 | 183.24 | | 183.13 | 183.28 | 183.27 | 183.38 | 183.43 | 183.40 | 183.34 | 183.44 | 183.36 | 183.20 |
| 30 | 183.24 | | 183.19 | 183.26 | 183.27 | 183.34 | 183.39 | 183.37 | 183.36 | 183.33 | 183.27 | 183.20 |
| 31 | 183.22 | | 183.08 | | 183.25 | | 183.40 | 183.32 | | 183.27 | | 183.15 |
| MEAN | 183.23 | 183.15 | 183.13 | 183.23 | 183.30 | 183.31 | 183.35 | 183.40 | 183.36 | 183.37 | 183.36 | 183.27 |
| MAX. | 183.59 | 183.32 | 183.43 | 183.47 | 183.80 | 183.67 | 183.59 | 183.73 | 183.71 | 183.80 | 183.90 | 183.73 |
| | 1200/12 | 1900/20 | 0700/30 | 1600/21 | 1500/01 | 1100/16 | 1200/04 | 1100/23 | 0700/22 | 2200/05 | 0500/09 | 0600/06 |
| MIN. | 182.91 | 182.97 | 182.77 | 182.71 | 182.93 | 182.96 | 182.98 | 183.16 | 182.95 | 182.97 | 182.86 | 182.95 |
| | 1700/24 | 0300/17 | 1800/29 | 0500/26 | 2200/31 | 0100/27 | 1100/04 | 2100/22 | 0900/22 | 0800/31 | 1000/08 | 1700/08 |

* Indicates Less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL MEAN: 183.29

ANNUAL SUMMARY OF LEVELS, 1986
 Station 7023: Ludington, Michigan on Lake Michigan

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

HIGHEST
 Monthly mean elevation: 177.35 Oct
 Daily mean elevation: 177.41 12 Oct
 Instant/hourly elevation: 177.50 0600/14 Oct

LOWEST
 Monthly mean elevation: 176.98 Feb
 Daily mean elevation: 176.88 7 Mar
 Instant/hourly elevation: 176.79 2400/12 Jan

HIGHEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 177.07 | 5 Jan |
| 177.07 | 7 Feb |
| 177.06 | 13 Mar |
| 177.16 | 15 Apr |
| 177.18 | 27 May |
| 177.26 | 12 Jun |
| 177.30 | 13 Jul |
| 177.26 | 15 Aug |
| 177.39 | 27 Sep |
| 177.41 | 12 Oct |
| 177.35 | 8 Nov |
| 177.27 | 2 Dec |

LOWEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 176.90 | 9 Jan |
| 176.92 | 28 Feb |
| 176.88 | 7 Mar |
| 177.02 | 9 Apr |
| 177.02 | 2 May |
| 177.14 | 8 Jun |
| 177.19 | 3 Jul |
| 177.16 | 30 Aug |
| 177.10 | 8 Sep |
| 177.27 | 6 Oct |
| 177.12 | 10 Nov |
| 177.01 | 23 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(m.) | No. of days<br>above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 177.40        |     |     |     |     |     |     |     |     |     | 1   |     |     | 177.40        | 1                          |
| 177.35        |     |     |     |     |     |     |     |     | 2   | 10  |     |     | 177.35        | 13                         |
| 177.30        |     |     |     |     |     |     |     |     | 5   | 19  | 4   |     | 177.30        | 41                         |
| 177.25        |     |     |     |     |     | 1   | 15  | 5   | 8   | 1   | 4   | 1   | 177.25        | 76                         |
| 177.20        |     |     |     |     |     | 7   | 14  | 17  | 5   |     | 6   | 2   | 177.20        | 127                        |
| 177.15        |     |     |     | 1   | 8   | 18  | 2   | 9   | 6   |     | 9   | 2   | 177.15        | 182                        |
| 177.10        |     |     |     | 14  | 18  | 4   |     |     | 3   |     | 7   | 7   | 177.10        | 235                        |
| 177.05        | 3   | 1   | 1   | 10  | 4   |     |     |     | 1   |     |     | 14  | 177.05        | 269                        |
| 177.00        | 6   | 6   | 10  | 5   | 1   |     |     |     |     |     |     | 5   | 177.00        | 302                        |
| 176.95        | 14  | 15  | 15  |     |     |     |     |     |     |     |     |     | 176.95        | 346                        |
| 176.90        | 7   | 6   | 4   |     |     |     |     |     |     |     |     |     | 176.90        | 363                        |
| 176.85        | 1   |     | 1   |     |     |     |     |     |     |     |     |     | 176.85        | 365                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 7023: Ludington, Michigan on Lake Michigan

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 176.96  | 177.02  | 176.93  | 177.07  | 177.11  | 177.16  | 177.24  | 177.26  | 177.17  | 177.36  | 177.33  | 177.24  |
| 2    | 177.02  | 177.01  | 176.95  | 177.04  | 177.02  | 177.15  | 177.20  | 177.24  | 177.19  | 177.35  | 177.28  | 177.27  |
| 3    | 177.07  | 176.99  | 176.97  | 177.09  | 177.07  | 177.16  | 177.19  | 177.24  | 177.22  | 177.39  | 177.29  | 177.20  |
| 4    | 177.05  | 177.01  | 176.94  | 177.11  | 177.08  | 177.15  | 177.21  | 177.24  | 177.20  | 177.38  | 177.28  | 177.05  |
| 5    | 177.07  | 177.03  | 176.97  | 177.14  | 177.06  | 177.18  | 177.21  | 177.24  | 177.16  | 177.34  | 177.31  | 177.09  |
| 6    | 176.94  | 177.02  | 176.99  | 177.15  | 177.12  | 177.19  | 177.23  | 177.25  | 177.13  | 177.27  | 177.27  | 177.08  |
| 7    | 176.98  | 177.07  | 176.88  | 177.07  | 177.10  | 177.17  | 177.21  | 177.26  | 177.14  | 177.33  | 177.32  | 177.14  |
| 8    | 176.98  | 177.03  | 176.91  | 177.03  | 177.11  | 177.14  | 177.23  | 177.26  | 177.10  | 177.32  | 177.35  | 177.16  |
| 9    | 176.90  | 176.98  | 176.97  | 177.02  | 177.14  | 177.15  | 177.23  | 177.24  | 177.13  | 177.35  | 177.18  | 177.25  |
| 10   | 176.92  | 176.94  | 177.05  | 177.03  | 177.12  | 177.19  | 177.22  | 177.25  | 177.20  | 177.34  | 177.12  | 177.10  |
| 11   | 176.97  | 176.96  | 176.97  | 177.04  | 177.13  | 177.22  | 177.27  | 177.20  | 177.26  | 177.38  | 177.21  | 177.10  |
| 12   | 176.92  | 176.97  | 176.98  | 177.10  | 177.14  | 177.26  | 177.30  | 177.23  | 177.23  | 177.41  | 177.20  | 177.06  |
| 13   | 176.94  | 176.95  | 177.06  | 177.10  | 177.13  | 177.17  | 177.30  | 177.24  | 177.20  | 177.37  | 177.13  | 177.09  |
| 14   | 177.03  | 176.97  | 177.05  | 177.13  | 177.15  | 177.19  | 177.23  | 177.26  | 177.21  | 177.38  | 177.16  | 177.07  |
| 15   | 177.02  | 176.96  | 176.98  | 177.16  | 177.13  | 177.20  | 177.25  | 177.26  | 177.26  | 177.31  | 177.15  | 177.09  |
| 16   | 177.01  | 176.97  | 176.97  | 177.11  | 177.14  | 177.17  | 177.26  | 177.24  | 177.26  | 177.34  | 177.22  | 177.13  |
| 17   | 177.00  | 177.00  | 177.00  | 177.11  | 177.13  | 177.16  | 177.26  | 177.25  | 177.25  | 177.37  | 177.18  | 177.11  |
| 18   | 177.00  | 176.98  | 177.01  | 177.13  | 177.14  | 177.19  | 177.28  | 177.23  | 177.27  | 177.35  | 177.20  | 177.12  |
| 19   | 176.99  | 176.99  | 177.02  | 177.14  | 177.16  | 177.18  | 177.28  | 177.23  | 177.25  | 177.34  | 177.20  | 177.05  |
| 20   | 176.95  | 176.97  | 176.98  | 177.10  | 177.14  | 177.21  | 177.27  | 177.22  | 177.29  | 177.33  | 177.25  | 177.11  |
| 21   | 176.99  | 176.93  | 176.99  | 177.08  | 177.15  | 177.23  | 177.27  | 177.22  | 177.26  | 177.34  | 177.21  | 177.08  |
| 22   | 176.99  | 176.99  | 176.98  | 177.09  | 177.17  | 177.22  | 177.26  | 177.24  | 177.31  | 177.33  | 177.19  | 177.02  |
| 23   | 176.96  | 176.95  | 176.97  | 177.08  | 177.15  | 177.18  | 177.24  | 177.21  | 177.27  | 177.33  | 177.22  | 177.01  |
| 24   | 177.01  | 176.96  | 176.97  | 177.13  | 177.16  | 177.17  | 177.25  | 177.17  | 177.26  | 177.38  | 177.15  | 177.11  |
| 25   | 177.06  | 176.95  | 177.05  | 177.13  | 177.17  | 177.18  | 177.27  | 177.19  | 177.33  | 177.36  | 177.15  | 177.09  |
| 26   | 176.94  | 176.99  | 177.03  | 177.15  | 177.18  | 177.18  | 177.27  | 177.20  | 177.34  | 177.39  | 177.19  | 177.07  |
| 27   | 176.97  | 176.99  | 177.00  | 177.15  | 177.18  | 177.21  | 177.27  | 177.18  | 177.39  | 177.35  | 177.14  | 177.09  |
| 28   | 176.96  | 176.92  | 177.01  | 177.15  | 177.16  | 177.21  | 177.27  | 177.16  | 177.36  | 177.34  | 177.13  | 177.05  |
| 29   | 176.98  |         | 177.05  | 177.10  | 177.14  | 177.20  | 177.24  | 177.16  | 177.35  | 177.34  | 177.16  | 177.10  |
| 30   | 176.96  |         | 177.03  | 177.13  | 177.15  | 177.22  | 177.24  | 177.16  | 177.33  | 177.31  | 177.21  | 177.11  |
| 31   | 176.94  |         | 177.05  |         | 177.17  |         | 177.28  | 177.18  |         | 177.34  |         | 177.08  |
| MEAN | 176.98  | 176.98  | 176.99  | 177.10  | 177.13  | 177.19  | 177.25  | 177.22  | 177.24  | 177.35  | 177.21  | 177.11  |
| MAX. | 177.18  | 177.12  | 177.19  | 177.28  | 177.24  | 177.34  | 177.41  | 177.33  | 177.49  | 177.50  | 177.41  | 177.32  |
| MIN. | 176.79  | 176.85  | 176.82  | 176.95  | 176.98  | 177.06  | 177.12  | 177.06  | 177.07  | 177.18  | 177.02  | 176.91  |
|      | 2400/12 | 1700/20 | 1000/09 | 0200/02 | 1600/05 | 1400/27 | 0600/10 | 1300/26 | 1000/08 | 1500/13 | 0300/28 | 0500/23 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 177.15

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 7031: Holland, Michigan on Lake Michigan

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST  
 Monthly mean elevation: 177.32 Oct  
 Daily mean elevation: 177.39 4 Oct  
 Instant/hourly elevation: 177.42 1300/3 Oct

LOWEST  
 Monthly mean elevation: 176.95 Mar  
 Daily mean elevation: 176.83 8 Mar  
 Instant/hourly elevation: 176.79 0800/8 Mar

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 177.07 | 3 Jan  |
| 177.03 | 7 Feb  |
| 177.06 | 19 Mar |
| 177.13 | 15 Apr |
| 177.16 | 27 May |
| 177.23 | 12 Jun |
| 177.27 | 12 Jul |
| 177.23 | 10 Aug |
| 177.34 | 27 Sep |
| 177.39 | 4 Oct  |
| 177.28 | 3 Nov  |
| 177.24 | 2 Dec  |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 176.84 | 9 Jan  |
| 176.88 | 13 Feb |
| 176.83 | 8 Mar  |
| 177.00 | 11 Apr |
| 176.99 | 4 May  |
| 177.10 | 4 Jun  |
| 177.13 | 4 Jul  |
| 177.11 | 30 Aug |
| 177.07 | 8 Sep  |
| 177.24 | 7 Oct  |
| 177.05 | 28 Nov |
| 176.92 | 22 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(m.) | No. of days
above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 177.35 | | | | | | | | | | 2 | | | 177.35 | 2 |
| 177.30 | | | | | | | | | 3 | 11 | | | 177.30 | 16 |
| 177.25 | | | | | | | 2 | | 3 | 1 | 2 | | 177.25 | 24 |
| 177.20 | | | | | | 1 | 17 | 7 | 8 | 2 | 4 | 2 | 177.20 | 65 |
| 177.15 | | | | | 1 | 14 | 9 | 18 | 8 | | 8 | 2 | 177.15 | 125 |
| 177.10 | | | | 5 | 15 | 14 | 3 | 6 | 6 | | 5 | 2 | 177.10 | 181 |
| 177.05 | 1 | | 1 | 16 | 11 | 1 | | | 2 | | 7 | 10 | 177.05 | 230 |
| 177.00 | 4 | 3 | 3 | 7 | 1 | | | | | | 2 | 7 | 177.00 | 257 |
| 176.95 | 7 | 6 | 8 | 2 | 3 | | | | | | | 3 | 176.95 | 286 |
| 176.90 | 14 | 16 | 12 | | | | | | | | | 1 | 176.90 | 329 |
| 176.85 | 4 | 3 | 4 | | | | | | | | | | 176.85 | 340 |
| 176.80 | 1 | | 1 | | | | | | | | | | 176.80 | 342 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 7031: Holland, Michigan on Lake Michigan

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 176.92 | 176.97 | 176.88 | 177.02 | 177.07 | 177.18 | 177.20 | 177.21 | 177.13 | 177.31 | / | 177.20 |
| 2 | 176.97 | 176.95 | 176.92 | 177.00 | 177.00 | 177.14 | 177.18 | 177.19 | 177.16 | 177.31 | / | 177.24 |
| 3 | 177.07 | 176.94 | 176.93 | 177.06 | 177.01 | 177.11 | 177.14 | 177.19 | 177.16 | 177.37 | 177.28* | 177.19 |
| 4 | 177.04 | 177.02 | 176.90 | 177.08 | 176.99 | 177.10 | 177.13 | 177.19 | 177.14 | 177.39 | 177.26 | 177.06 |
| 5 | 177.04 | 177.02 | 176.93 | 177.11 | 177.00 | 177.17 | 177.14 | 177.19 | 177.11 | 177.32 | 177.25 | 177.03 |
| 6 | 176.95 | 176.99 | 177.03 | 177.09 | 177.06 | 177.16 | 177.17 | 177.21 | 177.11 | 177.24 | 177.22 | 177.05 |
| 7 | 176.97 | 177.03 | 176.89 | 177.01 | 177.06 | 177.15 | 177.17 | 177.22 | 177.11 | 177.24 | 177.25 | 177.11 |
| 8 | 176.92 | 176.98 | 176.83 | 177.01 | 177.09 | 177.12 | 177.19 | 177.21 | 177.07 | 177.31 | 177.24 | 177.14 |
| 9 | 176.84 | 176.95 | 176.95 | 177.02 | 177.11 | 177.12 | 177.21 | 177.19 | 177.09 | 177.34 | 177.13 | 177.22 |
| 10 | 176.89 | 176.92 | 177.04 | 177.02 | 177.09 | 177.16 | 177.19 | 177.23 | 177.15 | 177.30 | 177.09 | 177.08 |
| 11 | 176.89 | 176.94 | 176.96 | 177.00 | 177.09 | 177.18 | 177.23 | 177.16 | 177.24 | 177.31 | 177.19 | 177.03 |
| 12 | 176.95 | 176.93 | 176.97 | 177.07 | 177.09 | 177.23 | 177.27 | 177.20 | 177.20 | 177.34 | 177.20 | 177.08 |
| 13 | 176.94 | 176.88 | 177.04 | 177.06 | 177.09 | 177.14 | 177.25 | 177.20 | 177.18 | 177.31 | 177.10 | 177.03 |
| 14 | 177.02 | 176.94 | 176.98 | 177.08 | 177.11 | 177.16 | 177.22 | 177.19 | 177.19 | 177.34 | 177.05 | 177.00 |
| 15 | 176.94 | 176.91 | 176.95 | 177.13 | 177.09 | 177.18 | 177.23 | 177.20 | 177.25 | 177.31 | 177.10 | 177.05 |
| 16 | 176.93 | 176.91 | 176.95 | 177.12 | 177.11 | 177.15 | 177.26 | 177.20 | 177.20 | 177.32* | 177.17 | 177.07 |
| 17 | 176.93 | 176.95 | 176.95 | 177.09 | 177.12 | 177.11 | 177.23 | 177.22 | 177.17 | / | 177.14 | 177.06 |
| 18 | 176.93 | 176.94 | 176.96 | 177.09 | 177.14 | 177.13 | 177.22 | 177.20 | 177.21 | / | 177.17 | 177.10 |
| 19 | 176.97 | 176.94 | 177.06 | 177.08 | 177.15 | 177.16 | 177.24 | 177.20 | 177.21 | / | 177.11 | 177.03 |
| 20 | 176.92 | 176.97 | 176.97 | 177.05 | 177.12 | 177.17 | 177.24 | 177.19 | 177.25 | / | 177.18* | 177.08* |
| 21 | 176.92 | 176.95 | 176.93 | 177.11 | 177.11 | 177.15 | 177.23 | 177.21 | 177.20 | / | 177.12* | / |
| 22 | 177.00 | 176.93 | 176.88 | 177.08 | 177.14 | 177.16 | 177.21 | 177.20 | 177.25 | / | 177.07 | 176.92* |
| 23 | 176.89 | 176.94 | 176.94 | 177.03 | 177.11 | 177.13 | 177.20 | 177.19 | 177.22 | / | 177.16 | 176.98 |
| 24 | 176.92 | 176.92 | 176.92 | 177.06 | 177.12 | 177.16 | 177.19 | 177.13 | 177.22 | / | 177.07 | 177.08 |
| 25 | 177.01 | 176.90 | 176.95 | 177.10 | 177.14 | 177.12 | 177.22 | 177.15 | 177.28 | / | 177.09 | 177.05 |
| 26 | 176.99 | 176.96 | / | 177.12 | 177.15 | 177.12 | 177.22 | 177.20 | 177.30 | / | 177.18 | / |
| 27 | 176.99 | 176.99 | / | 177.10 | 177.16 | 177.15 | 177.21 | 177.17 | 177.34 | / | 177.06 | / |
| 28 | 176.92 | 176.89 | 176.94* | 177.10 | 177.13 | 177.16 | 177.23 | 177.11 | 177.31 | / | 177.05 | / |
| 29 | 176.97 | | 176.98 | 177.06 | 177.10 | 177.17 | 177.21 | 177.12 | 177.30 | / | 177.14 | 177.08* |
| 30 | 176.91 | | 176.98 | 177.07 | 177.09 | 177.18 | 177.20 | 177.11 | 177.31 | / | 177.16 | 177.09 |
| 31 | 176.90 | | 176.98 | | 177.13 | | 177.22 | 177.13 | | / | | 177.00* |
| MEAN | 176.95 | 176.95 | 176.95 | 177.07 | 177.10 | 177.15 | 177.21 | 177.18 | 177.20 | 177.32 | 177.15 | 177.08 |
| MAX. | 177.16 | 177.08 | 177.18 | 177.19 | 177.23 | 177.29 | 177.29 | 177.31 | 177.38 | 177.42 | 177.33 | 177.27 |
| MIN. | 0700/03 | 2200/04 | 1000/19 | 1000/15 | 2100/17 | 0700/12 | 0800/16 | 1900/26 | 2400/27 | 1300/03 | 2400/03 | 1300/02 |
| | 176.80 | 176.84 | 176.79 | 176.94 | 176.95 | 177.06 | 177.08 | 177.08 | 177.04 | 177.19 | 176.99 | 176.90 |
| | 0600/09 | 2200/28 | 0800/08 | 0200/02 | 1500/05 | 0300/17 | 0800/04 | 1700/28 | 2200/08 | 1800/07 | 1600/28 | 1400/22 |

* Indicates Less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL MEAN: 177.11

ANNUAL SUMMARY OF LEVELS, 1986
 Station 7044: Calumet Harbor, Illinois on Lake Michigan

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

HIGHEST
 Monthly mean elevation: 177.33 Oct
 Daily mean elevation: 177.46 4 Oct
 Instant/hourly elevation: 177.67 1700/26 Aug

LOWEST
 Monthly mean elevation: 176.95 Jan
 Daily mean elevation: 176.67 8 Jan
 Instant/hourly elevation: 176.50 1700/8 Jan

HIGHEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 177.11 | 3 Jan |
| 177.13 | 6 Feb |
| 177.10 | 19 Mar |
| 177.22 | 21 Apr |
| 177.27 | 19 May |
| 177.25 | 1 Jun |
| 177.30 | 16 Jul |
| 177.29 | 27 Aug |
| 177.33 | 27 Sep |
| 177.46 | 4 Oct |
| 177.32 | 4 Nov |
| 177.32 | 1 Dec |

LOWEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 176.67 | 8 Jan |
| 176.84 | 13 Feb |
| 176.79 | 22 Mar |
| 177.01 | 1 Apr |
| 176.97 | 5 May |
| 177.12 | 4 Jun |
| 177.09 | 4 Jul |
| 177.14 | 30 Aug |
| 177.07 | 10 Sep |
| 177.22 | 31 Oct |
| 176.92 | 14 Nov |
| 176.88 | 22 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(m.) | No. of days<br>above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 177.45        |     |     |     |     |     |     |     |     |     | 1   |     |     | 177.45        | 1                          |
| 177.40        |     |     |     |     |     |     |     |     |     | 4   |     |     | 177.40        | 5                          |
| 177.35        |     |     |     |     |     |     |     |     |     | 2   |     |     | 177.35        | 7                          |
| 177.30        |     |     |     |     |     |     |     |     | 2   | 13  | 2   | 1   | 177.30        | 25                         |
| 177.25        |     |     |     |     | 1   |     | 4   | 7   | 8   | 5   | 4   |     | 177.25        | 54                         |
| 177.20        |     |     |     | 1   | 1   | 10  | 19  | 14  | 8   | 2   | 3   | 1   | 177.20        | 113                        |
| 177.15        |     |     |     | 4   | 13  | 15  | 6   | 7   | 7   |     | 5   | 2   | 177.15        | 172                        |
| 177.10        | 1   | 3   |     | 10  | 7   | 5   | 1   | 3   | 2   |     | 7   | 4   | 177.10        | 215                        |
| 177.05        | 4   | 4   | 3   | 8   | 5   |     | 1   |     | 3   |     | 2   | 7   | 177.05        | 252                        |
| 177.00        | 3   | 3   | 2   | 7   | 2   |     |     |     |     |     | 5   | 7   | 177.00        | 281                        |
| 176.95        | 7   | 12  | 13  |     | 2   |     |     |     |     |     | 1   | 5   | 176.95        | 321                        |
| 176.90        | 12  | 4   | 10  |     |     |     |     |     |     |     | 1   | 1   | 176.90        | 349                        |
| 176.85        | 2   | 1   | 1   |     |     |     |     |     |     |     |     | 3   | 176.85        | 356                        |
| 176.80        |     | 1   | 1   |     |     |     |     |     |     |     |     |     | 176.80        | 358                        |
| 176.75        |     |     | 1   |     |     |     |     |     |     |     |     |     | 176.75        | 359                        |
| 176.70        |     |     |     |     |     |     |     |     |     |     |     |     | 176.70        | 359                        |
| 176.65        | 2   |     |     |     |     |     |     |     |     |     |     |     | 176.65        | 361                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 7044: Calumet Harbor, Illinois on Lake Michigan

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 176.92  | 176.99  | 176.90  | 177.01  | 177.06  | 177.25  | 177.22  | 177.23  | 177.16  | 177.35  | 177.31  | 177.32  |
| 2    | 177.01  | 176.99  | 176.93  | 177.05  | 177.04  | 177.23  | 177.22  | 177.25  | 177.20  | 177.33  | 177.26  | 177.24  |
| 3    | 177.11  | 177.01  | 176.98  | 177.11  | 177.05  | 177.14  | 177.18  | 177.23  | 177.17  | /       | 177.20  | 177.07  |
| 4    | 177.09  | 177.08  | 176.93  | 177.14  | 176.97  | 177.12  | 177.09  | 177.21  | 177.15  | 177.46* | 177.32  | 176.99  |
| 5    | 176.95  | 177.09  | 176.91  | 177.13  | 176.97  | 177.22  | 177.12  | 177.21* | 177.14  | 177.32  | 177.27  | 176.96  |
| 6    | 176.97  | 177.13  | 177.08  | 177.09  | 177.07  | 177.23  | 177.16  | 177.27  | 177.16  | 177.28  | 177.20  | 177.02  |
| 7    | 176.98  | 177.11  | 177.00  | 177.02  | 177.09  | 177.18  | 177.18  | 177.25  | 177.16  | /       | 177.25  | 177.11  |
| 8    | 176.67  | 177.01  | 176.81  | 177.04  | 177.16  | 177.15  | 177.19  | 177.22  | 177.07  | /       | 177.12  | 177.20  |
| 9    | 176.68  | 176.95  | 176.93  | 177.07  | 177.16  | 177.17  | 177.23  | 177.20  | 177.09  | /       | 177.04  | 177.20  |
| 10   | 176.90  | 176.96  | 176.99  | 177.05  | 177.16  | 177.20  | 177.24  | 177.27  | 177.07  | 177.36* | 177.12  | 177.00  |
| 11   | 176.86  | 176.98  | 177.00  | 177.02  | 177.14  | 177.18  | 177.25  | 177.23  | 177.18  | 177.33  | 177.20  | 176.90  |
| 12   | 176.91  | 176.92  | 177.05  | 177.13  | 177.15  | 177.21  | 177.24  | 177.22  | 177.24  | 177.32  | 177.16  | 177.05  |
| 13   | 177.00  | 176.84  | 177.05  | 177.13  | 177.14  | 177.16  | 177.23  | 177.20  | 177.21  | 177.31  | 177.09  | 177.01  |
| 14   | 177.06  | 176.91  | 176.99  | 177.13  | 177.13  | 177.18  | 177.24  | 177.15  | 177.24  | 177.28  | 176.92  | 176.89  |
| 15   | 176.94  | 176.89  | 176.96  | 177.15  | 177.12  | 177.21  | 177.23  | 177.19  | 177.33  | 177.33  | 177.03  | 177.02  |
| 16   | 176.94  | 176.96  | 176.98  | 177.19  | 177.10  | 177.16  | 177.30  | 177.20  | 177.29  | 177.34  | 177.13  | 177.08  |
| 17   | 176.92  | 176.99  | 176.98  | 177.16  | 177.17  | 177.16  | 177.22  | 177.25  | 177.20  | 177.43  | 177.13  | 177.07  |
| 18   | 176.93  | 176.96  | 177.00  | 177.14  | 177.24  | 177.16  | 177.20  | 177.28  | 177.25  | 177.35  | 177.30  | 177.07  |
| 19   | 177.02  | 177.00  | 177.10  | 177.07  | 177.27  | 177.17  | 177.22  | 177.27  | 177.24  | 177.31  | 177.14  | 177.02  |
| 20   | 176.96  | 177.10  | 177.06  | 177.07  | 177.20  | 177.23  | 177.27  | 177.24  | 177.29  | 177.27  | 177.23  | 177.12  |
| 21   | 176.92  | 177.09  | 176.92  | 177.22  | 177.16  | 177.18  | 177.28  | 177.29  | 177.27  | 177.30  | 177.13  | 177.07  |
| 22   | 177.01  | 176.96  | 176.79  | 177.16  | 177.17  | 177.16  | 177.24  | 177.25  | 177.25  | 177.27  | 177.04  | 176.88  |
| 23   | 176.96  | 176.98  | 176.94  | 177.05  | 177.16  | 177.15  | 177.22  | 177.24  | 177.22  | 177.33  | 177.15  | 176.98  |
| 24   | 176.94  | 176.97  | 176.97  | 177.06  | 177.16  | 177.21  | 177.19  | 177.19  | 177.24  | 177.41  | 177.04  | 177.12  |
| 25   | 176.93  | 176.93  | 176.91  | 177.15  | 177.19  | 177.17  | 177.23  | 177.18  | 177.27  | 177.45  | 177.10  | 177.07  |
| 26   | 177.07  | 177.01  | 176.95  | 177.16  | 177.20  | 177.14  | 177.25  | 177.26  | 177.26  | 177.41  | 177.25  | 177.07  |
| 27   | 177.10  | 177.12  | 176.98  | 177.12  | 177.20  | 177.16  | 177.24  | 177.29  | 177.33  | 177.34  | 177.04  | 177.04  |
| 28   | 176.92  | 176.96  | 176.92  | 177.08  | 177.16  | 177.17  | 177.26  | 177.22  | 177.30  | 177.25  | 176.98  | 176.93  |
| 29   | 176.99  |         | 176.94  | 177.07  | 177.13  | 177.21  | 177.24  | 177.15  | 177.26  | 177.36  | 177.16  | 177.03  |
| 30   | 176.94  |         | 176.99  | 177.09  | 177.10  | 177.23  | 177.23  | 177.14  | 177.28  | 177.32  | 177.28  | 177.12  |
| 31   | 176.96  |         | 176.99  |         | 177.14  |         | 177.25  | 177.16  |         | 177.22  |         | 176.98  |
| MEAN | 176.95  | 177.00  | 176.97  | 177.10  | 177.13  | 177.18  | 177.22  | 177.22  | 177.22  | 177.33  | 177.15  | 177.05  |
| MAX. | 177.38  | 177.38  | 177.31  | 177.35  | 177.32  | 177.42  | 177.51  | 177.67  | 177.48  | 177.63  | 177.48  | 177.38  |
| MIN. | 2300/04 | 2100/20 | 1000/19 | 1000/21 | 0600/19 | 1200/01 | 2000/15 | 1700/26 | 1800/15 | 0800/04 | 1500/18 | 1500/01 |
|      | 176.50  | 176.63  | 176.63  | 176.87  | 176.87  | 176.99  | 177.00  | 177.06  | 176.90  | 177.14  | 176.80  | 176.68  |
|      | 1700/08 | 2300/13 | 1700/22 | 2300/01 | 1500/05 | 0200/27 | 1700/04 | 1300/14 | 2400/09 | 1700/31 | 0900/14 | 0400/14 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 177.13

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 7057: Milwaukee, Wisconsin on Lake Michigan

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

|                           |        |            |                           |        |            |
|---------------------------|--------|------------|---------------------------|--------|------------|
| HIGHEST                   |        |            | LOWEST                    |        |            |
| Monthly mean elevation:   | 177.36 | Oct        | Monthly mean elevation:   | 176.97 | Jan        |
| Daily mean elevation:     | 177.47 | 4 Oct      | Daily mean elevation:     | 176.78 | 9 Jan      |
| Instant/hourly elevation: | 177.63 | 0700/4 Oct | Instant/hourly elevation: | 176.70 | 1700/9 Jan |

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 177.08 | 3 Jan  |
| 177.10 | 7 Feb  |
| 177.09 | 19 Mar |
| 177.18 | 21 Apr |
| 177.22 | 19 May |
| 177.26 | 30 Jun |
| 177.31 | 11 Jul |
| 177.29 | 26 Aug |
| 177.38 | 27 Sep |
| 177.47 | 4 Oct  |
| 177.32 | 30 Nov |
| 177.39 | 1 Dec  |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 176.78 | 9 Jan  |
| 176.89 | 13 Feb |
| 176.90 | 8 Mar  |
| 177.02 | 8 Apr  |
| 177.04 | 4 May  |
| 177.14 | 8 Jun  |
| 177.18 | 7 Jul  |
| 177.17 | 30 Aug |
| 177.08 | 8 Sep  |
| 177.29 | 22 Oct |
| 177.05 | 14 Nov |
| 176.94 | 22 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(m.) | No. of days
above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 177.45 | | | | | | | | | | 1 | | | 177.45 | 1 |
| 177.40 | | | | | | | | | | 6 | | | 177.40 | 7 |
| 177.35 | | | | | | | | | 2 | 7 | | 1 | 177.35 | 17 |
| 177.30 | | | | | | | 1 | | 6 | 15 | 3 | | 177.30 | 42 |
| 177.25 | | | | | | 1 | 8 | 4 | 8 | 2 | 5 | 1 | 177.25 | 71 |
| 177.20 | | | | | 1 | 6 | 17 | 21 | 3 | | 5 | 2 | 177.20 | 126 |
| 177.15 | | | | 6 | 11 | 19 | 5 | 6 | 5 | | 6 | | 177.15 | 184 |
| 177.10 | | | | 14 | 12 | 4 | | | 5 | | 4 | 5 | 177.10 | 228 |
| 177.05 | 2 | 4 | 2 | 5 | 4 | | | | 1 | | 6 | 10 | 177.05 | 262 |
| 177.00 | 7 | 8 | 9 | 5 | 3 | | | | | | 1 | 10 | 177.00 | 305 |
| 176.95 | 13 | 9 | 15 | | | | | | | | | 1 | 176.95 | 343 |
| 176.90 | 5 | 6 | 4 | | | | | | | | | | 176.90 | 359 |
| 176.85 | 3 | 1 | 1 | | | | | | | | | | 176.85 | 364 |
| 176.80 | | | | | | | | | | | | | 176.80 | 364 |
| 176.75 | 1 | | | | | | | | | | | | 176.75 | 365 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 7057: Milwaukee, Wisconsin on Lake Michigan

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 176.93 | 177.03 | 176.91 | 177.04 | 177.08 | 177.20 | 177.24 | 177.24 | 177.16 | 177.37 | 177.31 | 177.39 |
| 2 | 177.02 | 176.99 | 176.97 | 177.04 | 177.04 | 177.19 | 177.21 | 177.24 | 177.20 | 177.37 | 177.26 | 177.30 |
| 3 | 177.08 | 177.01 | 176.96 | 177.11 | 177.06 | 177.16 | 177.19 | 177.22 | 177.20 | 177.43 | 177.26 | 177.11 |
| 4 | 177.06 | 177.07 | 176.93 | 177.14 | 177.04 | 177.15 | 177.18 | 177.22 | 177.15 | 177.47 | 177.31 | 177.01 |
| 5 | 176.97 | 177.08 | 176.98 | 177.16 | 177.05 | 177.21 | 177.18 | 177.21 | 177.12 | 177.34 | 177.29 | 177.04 |
| 6 | 176.92 | 177.09 | 177.01 | 177.12 | 177.10 | 177.20 | 177.20 | 177.27 | 177.15 | 177.31 | 177.24 | 177.07 |
| 7 | 176.98 | 177.10 | 176.93 | 177.05 | 177.09 | 177.18 | 177.18 | 177.25 | 177.14 | 177.30 | 177.30 | 177.13 |
| 8 | 176.91 | 177.02 | 176.90 | 177.02 | 177.14 | 177.14 | 177.22 | 177.23 | 177.08 | 177.36 | 177.24 | 177.24 |
| 9 | 176.78 | 176.96 | 176.99 | 177.06 | 177.15 | 177.16 | 177.22 | 177.22 | 177.13 | 177.42 | 177.06 | 177.22 |
| 10 | 176.89 | 176.94 | 177.05 | 177.06 | 177.14 | 177.20 | 177.25 | 177.24 | 177.19 | 177.38 | 177.11 | 177.03 |
| 11 | 176.90 | 176.96 | 176.98 | 177.04 | 177.14 | 177.24 | 177.31 | 177.20 | 177.24 | 177.37 | 177.20 | 177.01 |
| 12 | 176.89 | 176.93 | 177.04 | 177.12 | 177.14 | 177.24 | 177.30 | 177.23 | 177.21 | 177.37 | 177.16 | 177.04 |
| 13 | 177.00 | 176.89 | 177.08 | 177.11 | 177.14 | 177.17 | 177.25 | 177.24 | 177.20 | 177.34 | 177.10 | 177.05 |
| 14 | 177.05 | 176.92 | 177.01 | 177.17 | 177.16 | 177.19 | 177.23 | 177.23 | 177.26 | 177.31 | 177.05 | 177.00 |
| 15 | 176.98 | 176.92 | 176.97 | 177.17 | 177.14 | 177.22 | 177.26 | 177.22 | 177.34 | 177.33 | 177.10 | 177.06 |
| 16 | 176.99 | 176.99 | 176.97 | 177.16 | 177.14 | 177.18 | 177.28 | 177.22 | 177.28 | 177.35 | 177.18 | 177.10 |
| 17 | 176.96 | 177.01 | 176.99 | 177.14 | 177.17 | 177.15 | 177.24 | 177.24 | 177.27 | 177.41 | 177.15 | 177.09 |
| 18 | 176.97 | 176.97 | 177.02 | 177.14 | 177.18 | 177.18 | 177.24 | 177.23 | 177.25 | 177.35 | 177.27 | 177.08 |
| 19 | 177.00 | 176.96 | 177.09 | 177.12 | 177.22 | 177.20 | 177.25 | 177.24 | 177.27 | 177.33 | 177.21 | 177.05 |
| 20 | 176.96 | 177.01 | 177.05 | 177.09 | 177.16 | 177.21 | 177.25 | 177.24 | 177.30 | 177.31 | 177.24 | 177.12 |
| 21 | 176.99 | 177.01 | 176.97 | 177.18 | 177.15 | 177.21 | 177.27 | 177.28 | 177.28 | 177.32 | 177.17 | 177.06 |
| 22 | 177.03 | 176.98 | 176.93 | 177.13 | 177.18 | 177.18 | 177.25 | 177.28 | 177.31 | 177.29 | 177.13 | 176.94 |
| 23 | 176.98 | 176.97 | 176.96 | 177.08 | 177.14 | 177.15 | 177.24 | 177.22 | 177.27 | 177.33 | 177.18 | 177.01 |
| 24 | 177.04 | 176.96 | 176.99 | 177.13 | 177.17 | 177.20 | 177.23 | 177.19 | 177.27 | 177.41 | 177.09 | 177.11 |
| 25 | 177.01 | 176.95 | 177.00* | 177.15 | 177.18 | 177.18 | 177.25 | 177.21 | 177.34 | 177.43 | 177.12 | 177.06 |
| 26 | 177.01 | 177.02 | 176.98 | 177.17 | 177.19 | 177.18 | 177.26 | 177.29 | 177.34 | 177.44 | 177.22 | 177.07 |
| 27 | 177.05 | 177.03 | 176.98 | 177.15 | 177.20 | 177.20 | 177.26 | 177.24 | 177.38 | 177.34 | 177.09 | 177.07 |
| 28 | 176.96 | 176.92 | 176.99 | 177.14 | 177.16 | 177.20 | 177.26 | 177.19 | 177.36 | 177.32 | 177.07 | 177.01 |
| 29 | 176.98 | | 177.02 | 177.09 | 177.14 | 177.20 | 177.23 | 177.18 | 177.34 | 177.36 | 177.19 | 177.08 |
| 30 | 176.95 | | 177.02 | 177.15 | 177.13 | 177.26 | 177.25 | 177.17 | 177.35 | 177.33 | 177.32 | 177.11 |
| 31 | 176.95 | | 177.03 | | 177.16 | | 177.27 | 177.18 | | 177.31 | | 177.02 |
| MEAN | 176.97 | 176.99 | 176.99 | 177.11 | 177.14 | 177.19 | 177.24 | 177.23 | 177.25 | 177.36 | 177.19 | 177.09 |
| MAX. | 177.16 | 177.17 | 177.18 | 177.26 | 177.30 | 177.37 | 177.38 | 177.41 | 177.46 | 177.63 | 177.41 | 177.45 |
| MIN. | 0200/03 | 1300/06 | 2300/19 | 0400/15 | 0900/19 | 2000/11 | 2000/15 | 1800/26 | 2200/22 | 0700/04 | 2400/30 | 0100/02 |
| | 176.70 | 176.80 | 176.85 | 176.91 | 176.99 | 177.09 | 177.09 | 177.14 | 177.06 | 177.24 | 176.97 | 176.88 |
| | 1700/09 | 0100/14 | 0500/08 | 1400/01 | 1400/07 | 0200/17 | 1800/04 | 0400/30 | 2000/08 | 0300/14 | 1700/14 | 1200/22 |

* Indicates Less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL MEAN: 177.15

ANNUAL SUMMARY OF LEVELS, 1986
 Station 7068: Kewaunee, Wisconsin on Lake Michigan

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

HIGHEST
 Monthly mean elevation: 177.32 Oct
 Daily mean elevation: 177.40 27 Sep
 Instant/hourly elevation: 177.48 1400/4 Oct

LOWEST
 Monthly mean elevation: 176.95 Jan
 Daily mean elevation: 176.84 12 Jan
 Instant/hourly elevation: 176.76 1100/9 Jan

HIGHEST DAILY MEAN
 FOR EACH MONTH

 Elev. Date
 177.06 3 Jan
 177.05 7 Feb
 177.04 25 Mar
 177.16 26 Apr
 177.14 27 May
 177.22 12 Jun
 177.27 16 Jul
 177.26 22 Aug
 177.40 27 Sep
 177.38 4 Oct
 177.28 8 Nov
 177.26 2 Dec

LOWEST DAILY MEAN
 FOR EACH MONTH

 Elev. Date
 176.84 12 Jan
 176.89 14 Feb
 176.87 7 Mar
 177.00 8 Apr
 177.01 2 May
 177.09 8 Jun
 177.15 3 Jul
 177.14 30 Aug
 177.07 8 Sep
 177.27 6 Oct
 177.01 9 Nov
 176.96 23 Dec

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(m.) | No. of days<br>above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 177.35        |     |     |     |     |     |     |     |     | 1   | 3   |     |     | 177.35        | 4                          |
| 177.30        |     |     |     |     |     |     |     |     | 4   | 15  |     |     | 177.30        | 23                         |
| 177.25        |     |     |     |     |     | 1   | 1   | 1   | 2   | 13  | 3   | 1   | 177.25        | 44                         |
| 177.20        |     |     |     |     |     | 1   | 5   | 15  | 11  |     | 6   | 1   | 177.20        | 83                         |
| 177.15        |     |     |     | 1   |     | 12  | 7   | 13  | 4   |     | 6   | 2   | 177.15        | 128                        |
| 177.10        |     |     |     | 8   | 13  | 15  | 1   | 2   | 6   |     | 8   |     | 177.10        | 181                        |
| 177.05        | 1   |     |     | 14  | 12  | 2   |     |     | 2   |     | 6   | 11  | 177.05        | 229                        |
| 177.00        | 2   | 2   | 8   | 6   | 3   |     |     |     |     |     | 1   | 11  | 177.00        | 262                        |
| 176.95        | 9   | 12  | 12  | 1   |     |     |     |     |     |     |     | 5   | 176.95        | 301                        |
| 176.90        | 13  | 10  | 7   |     |     |     |     |     |     |     |     |     | 176.90        | 331                        |
| 176.85        | 4   | 2   | 2   |     |     |     |     |     |     |     |     |     | 176.85        | 339                        |
| 176.80        | 2   |     |     |     |     |     |     |     |     |     |     |     | 176.80        | 341                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 7068: Kewaunee, Wisconsin on Lake Michigan

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 176.92  | 177.00  | /       | 177.03  | 177.06  | 177.13  | 177.20  | 177.21* | 177.14  | 177.32  | 177.25  | 177.25  |
| 2    | 176.99  | 176.97  | /       | 177.02  | 177.01  | 177.13  | 177.17  | 177.22  | 177.16  | 177.34  | 177.24  | 177.26  |
| 3    | 177.06  | 176.95* | 176.93* | 177.07  | 177.05  | 177.12  | 177.15* | 177.22  | 177.19  | 177.37  | 177.23  | 177.10  |
| 4    | 177.03  | 176.99* | 176.93  | 177.09  | 177.07  | 177.09  | /       | 177.22  | 177.13  | 177.38  | 177.24  | 176.97  |
| 5    | 176.98  | 176.99  | 176.97  | 177.15  | 177.04  | 177.14  | /       | 177.21  | 177.10  | 177.30  | 177.27  | 177.06  |
| 6    | 176.88  | 177.02  | 176.95  | 177.11  | 177.08  | 177.16  | /       | 177.21  | 177.11  | 177.27  | 177.24  | 177.03  |
| 7    | 176.95  | 177.05  | 176.87  | 177.03  | 177.06  | 177.16  | 177.16* | 177.23  | 177.11  | 177.30  | 177.26  | 177.10  |
| 8    | 176.94  | /       | 176.89  | 177.00  | 177.09  | 177.09  | 177.16  | 177.22  | 177.07  | 177.28* | 177.28  | 177.16  |
| 9    | 176.84  | /       | 176.95  | 177.02  | 177.13  | 177.12  | 177.17  | 177.20  | 177.11  | 177.34  | 177.01  | 177.19  |
| 10   | 176.88  | 176.91* | 177.01  | 177.02  | 177.10  | 177.16  | 177.17  | 177.22  | 177.15  | 177.35  | 177.07  | 177.02  |
| 11   | 176.95  | 176.93  | 176.97  | 177.01  | 177.10  | 177.20  | 177.21  | 177.19  | 177.22  | 177.34  | 177.16  | 177.02  |
| 12   | 176.84  | 176.92  | 176.99  | 177.07  | 177.11  | 177.22  | 177.25  | 177.22  | 177.18  | 177.35  | 177.12  | 176.99  |
| 13   | 176.93  | 176.90  | 177.03  | 177.08  | 177.10  | 177.14  | 177.24  | 177.22  | 177.17  | 177.29  | 177.08  | 177.06  |
| 14   | 176.99  | 176.89  | 177.02  | 177.13  | 177.14  | 177.16  | 177.19  | 177.22  | 177.21  | 177.28  | 177.07  | 176.99  |
| 15   | 176.99  | 176.91  | 176.95  | 177.14  | 177.11  | 177.16  | 177.22  | 177.20  | 177.24  | 177.28  | 177.09  | 177.05  |
| 16   | 176.99  | 176.95  | 176.95  | 177.09  | 177.12  | 177.13  | 177.27  | 177.20  | 177.24  | 177.31  | 177.19  | 177.09  |
| 17   | 176.96  | 176.98  | 176.98  | 177.09  | 177.07  | 177.11  | 177.23  | 177.19  | 177.24  | 177.35  | 177.13  | 177.08  |
| 18   | 176.95  | 176.98  | 177.02  | 177.11  | 177.09  | 177.14  | /       | 177.20  | 177.21  | 177.32  | 177.17  | 177.06  |
| 19   | 176.94  | 176.97  | 177.00  | 177.12  | 177.13  | 177.16  | /       | 177.22  | 177.23  | 177.31  | 177.21  | 177.02  |
| 20   | 176.94  | 176.92  | 176.98  | 177.07  | 177.12  | 177.16  | /       | 177.22  | 177.25  | 177.30  | 177.20  | 177.08  |
| 21   | 176.98  | 176.96  | 176.96  | 177.07  | 177.12  | 177.18  | /       | 177.20  | 177.25  | 177.30  | 177.17  | 177.05  |
| 22   | 176.96  | 176.97  | 176.96  | 177.09  | 177.14  | 177.15  | /       | 177.26  | 177.30  | 177.29  | 177.14  | 176.96  |
| 23   | 176.95  | 176.93  | 176.92  | 177.08  | 177.14* | 177.13  | /       | 177.19  | 177.24  | 177.29  | 177.15  | 176.96  |
| 24   | 177.04  | 176.92  | 176.97  | 177.10  | /       | 177.14  | /       | 177.17  | 177.24  | 177.34  | 177.09  | 177.08  |
| 25   | 177.00  | 176.96  | 177.04  | 177.09  | /       | 177.14  | /       | 177.21  | 177.32  | 177.33  | 177.13  | 177.05  |
| 26   | 176.86  | 176.99  | 176.96  | 177.16  | /       | 177.16  | /       | 177.18  | 177.35  | 177.37  | 177.13  | 177.04  |
| 27   | 176.93  | 176.96  | 176.97  | 177.14  | 177.14* | 177.15  | /       | 177.17  | 177.40  | 177.33  | 177.11  | 177.06  |
| 28   | 176.94  | 176.91  | 177.01  | 177.13  | 177.12  | 177.16  | /       | 177.17  | 177.31  | 177.32  | 177.06  | 177.01  |
| 29   | 176.92  | /       | 177.02  | 177.09  | 177.10  | 177.15  | /       | 177.17  | 177.32  | 177.29  | 177.12  | 177.05  |
| 30   | 176.92  | /       | 177.00  | 177.10  | 177.10  | 177.18  | /       | 177.14  | 177.30  | 177.30  | 177.20  | 177.07  |
| 31   | 176.90  | /       | 177.03  | /       | 177.13  | /       | 177.15  | /       | 177.31  | /       | 177.04  | /       |
| MEAN | 176.95  | 176.96  | 176.97  | 177.08  | 177.10  | 177.15  | 177.20  | 177.20  | 177.22  | 177.32  | 177.16  | 177.06  |
| MAX. | 177.15  | 177.12  | 177.13  | 177.31  | 177.22  | 177.33  | 177.34  | 177.33  | 177.46  | 177.48  | 177.41  | 177.32  |
| MIN. | 2100/24 | 0800/20 | 0400/19 | 1600/28 | 2300/15 | 1700/19 | 0100/16 | 2000/22 | 1400/26 | 1400/04 | 0200/08 | 0900/02 |
|      | 176.76  | 176.79  | 176.79  | 176.91  | 176.94  | 177.02  | 177.04  | 177.06  | 177.04  | 177.09  | 176.94  | 176.89  |
|      | 1100/09 | 1400/20 | 2300/08 | 1700/01 | 1800/05 | 2300/25 | 0500/08 | 1400/26 | 0600/07 | 0900/13 | 2000/09 | 0400/23 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 177.11

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 7072: Sturgeon Bay Canal, Wisconsin on Lake Michigan

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST  
 Monthly mean elevation: 177.31 Oct  
 Daily mean elevation: 177.37 26 Oct  
 Instant/hourly elevation: 177.46 2300/29 Sep

LOWEST  
 Monthly mean elevation: 176.94 Feb  
 Daily mean elevation: 176.83 12 Jan  
 Instant/hourly elevation: 176.73 1700/12 Jan

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 177.04 | 24 Jan |
| 177.04 | 7 Feb  |
| 177.04 | 13 Mar |
| 177.14 | 26 Apr |
| 177.14 | 31 May |
| 177.23 | 12 Jun |
| 177.26 | 12 Jul |
| 177.24 | 22 Aug |
| 177.37 | 27 Sep |
| 177.37 | 26 Oct |
| 177.25 | 7 Nov  |
| 177.25 | 1 Dec  |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 176.83 | 12 Jan |
| 176.88 | 14 Feb |
| 176.84 | 7 Mar  |
| 176.99 | 8 Apr  |
| 177.00 | 2 May  |
| 177.09 | 8 Jun  |
| 177.16 | 5 Jul  |
| 177.14 | 30 Aug |
| 177.05 | 8 Sep  |
| 177.25 | 6 Oct  |
| 176.99 | 9 Nov  |
| 176.94 | 22 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(m.) | No. of days
above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 177.35 | | | | | | | | | 1 | 2 | | | 177.35 | 3 |
| 177.30 | | | | | | | | | 4 | 11 | | | 177.30 | 18 |
| 177.25 | | | | | | | 1 | | 3 | 17 | | | 177.25 | 39 |
| 177.20 | | | | | | 1 | 19 | 11 | 7 | 1 | 8 | 2 | 177.20 | 88 |
| 177.15 | | | | | | 10 | 11 | 16 | 7 | | 7 | 2 | 177.15 | 141 |
| 177.10 | | | | 8 | 14 | 16 | | 4 | 3 | | 5 | | 177.10 | 191 |
| 177.05 | | | | 12 | 11 | 3 | | | 4 | | 8 | 8 | 177.05 | 237 |
| 177.00 | 3 | 1 | 3 | 7 | 5 | | | | 1 | | 1 | 13 | 177.00 | 271 |
| 176.95 | 8 | 9 | 10 | 3 | 1 | | | | | | 1 | 5 | 176.95 | 308 |
| 176.90 | 13 | 13 | 15 | | | | | | | | | 1 | 176.90 | 350 |
| 176.85 | 4 | 5 | 2 | | | | | | | | | | 176.85 | 361 |
| 176.80 | 3 | | 1 | | | | | | | | | | 176.80 | 365 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 7072: Sturgeon Bay Canal, Wisconsin on Lake Michigan

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 176.90 | 176.98 | 176.90 | 177.01 | 177.05 | 177.13 | 177.20 | 177.22 | 177.14 | 177.30 | 177.25 | 177.25 |
| 2 | 176.97 | 176.96 | 176.92 | 176.99 | 177.00 | 177.14 | 177.18 | 177.22 | 177.16 | 177.32 | 177.23 | 177.24 |
| 3 | 177.04 | 176.95 | 176.92 | 177.05 | 177.04 | 177.11 | 177.16 | 177.21 | 177.19 | 177.34 | 177.21 | 177.09 |
| 4 | 177.02 | 176.99 | 176.92 | 177.08 | 177.05 | 177.09 | 177.16 | 177.21 | 177.14 | 177.37 | 177.24 | 176.96 |
| 5 | 176.97 | 176.97 | 176.95 | 177.12 | 177.04 | 177.14 | 177.16 | 177.20 | 177.10 | 177.27 | 177.25 | 177.03 |
| 6 | 176.86 | 176.99 | 176.93 | 177.11 | 177.08 | 177.15 | 177.18 | 177.21 | 177.09 | 177.25 | 177.23 | 177.01 |
| 7 | 176.93 | 177.04 | 176.84 | 177.03 | 177.04 | 177.15 | 177.17 | 177.24 | 177.10 | 177.28 | 177.25 | 177.09 |
| 8 | 176.94 | 176.99 | 176.90 | 176.99 | 177.07 | 177.09 | 177.17 | 177.23 | 177.05 | 177.26 | 177.22 | 177.16 |
| 9 | 176.84 | 176.93 | 176.93 | 177.01 | 177.09 | 177.11 | 177.18 | 177.21 | 177.09 | 177.34 | 176.99 | 177.17 |
| 10 | 176.86 | 176.90 | 176.98 | 177.02 | 177.10 | 177.16 | 177.18 | 177.20 | 177.14 | 177.33 | 177.06 | 177.02 |
| 11 | 176.94 | 176.92 | 176.95 | 177.00 | 177.09 | 177.17 | 177.24 | 177.19 | 177.19 | 177.33 | 177.15 | 177.01 |
| 12 | 176.83 | 176.92 | 176.96 | 177.06 | 177.10 | 177.23 | 177.26 | 177.21 | 177.19 | 177.35 | 177.10 | 176.99 |
| 13 | 176.92 | 176.90 | 177.04 | 177.06 | 177.08 | 177.13 | 177.25 | 177.20 | 177.16 | 177.30 | 177.06 | 177.05 |
| 14 | 176.99 | 176.88 | 176.99 | 177.11 | 177.13 | 177.16 | 177.20 | 177.20 | 177.19 | 177.28 | 177.03 | 176.98 |
| 15 | 176.96 | 176.91 | 176.95 | 177.13 | 177.09 | 177.17 | 177.23 | 177.20 | 177.22 | 177.28 | 177.08 | 177.04 |
| 16 | 176.98 | 176.93 | 176.93 | 177.08 | 177.13 | 177.13 | 177.24 | 177.20 | 177.22 | 177.29 | 177.17 | 177.08 |
| 17 | 176.96 | 176.98 | 176.96 | 177.08 | 177.07 | 177.10 | 177.24 | 177.18 | 177.21 | 177.34 | 177.12 | 177.07 |
| 18 | 176.94 | 176.94 | 177.00 | 177.09 | 177.10 | 177.13 | 177.24 | 177.20 | 177.20 | 177.30 | 177.16 | 177.07 |
| 19 | 176.93 | 176.93 | 176.96 | 177.10 | 177.12 | 177.15 | 177.24 | 177.22 | 177.23 | 177.29 | 177.19 | 177.02 |
| 20 | 176.94 | 176.89 | 176.95 | 177.05 | 177.10 | 177.16 | 177.22 | 177.20 | 177.27 | 177.29 | 177.20 | 177.07 |
| 21 | 176.98 | 176.94 | 176.95 | 177.06 | 177.11 | 177.18 | 177.25 | 177.20 | 177.25 | 177.29 | 177.17 | 177.03 |
| 22 | 176.95 | 176.96 | 176.95 | 177.07 | 177.13 | 177.15 | 177.22 | 177.24 | 177.27 | 177.28 | 177.13 | 176.94 |
| 23 | 176.93 | 176.92 | 176.91 | 177.05 | 177.11 | 177.13 | 177.21 | 177.17 | 177.25 | 177.28 | 177.16 | 176.96 |
| 24 | 177.04 | 176.91 | 176.95 | 177.08 | 177.13 | 177.14 | 177.21 | 177.16 | 177.21 | 177.34 | 177.08 | 177.07 |
| 25 | 177.00 | 176.94 | 177.02 | 177.09 | 177.13 | 177.14 | 177.21 | 177.19 | 177.31 | 177.32 | 177.09 | 177.05 |
| 26 | 176.84 | 176.97 | 176.96 | 177.14 | 177.13 | 177.14 | 177.22 | 177.18 | 177.31 | 177.37 | 177.11 | 177.03 |
| 27 | 176.92 | 176.95 | 176.95 | 177.12 | 177.14 | 177.16 | 177.24 | 177.16 | 177.37 | 177.32 | 177.07 | 177.05 |
| 28 | 176.92 | 176.89 | 177.00 | 177.13 | 177.12 | 177.16 | 177.24 | 177.15 | 177.34 | 177.31 | 177.06 | 177.00 |
| 29 | 176.91 | | 177.00 | 177.09 | 177.11 | 177.16 | 177.22 | 177.15 | 177.35 | 177.28 | 177.12 | 177.05 |
| 30 | 176.91 | | 176.99 | 177.12 | 177.12 | 177.18 | 177.24 | 177.14 | 177.29 | 177.28 | 177.18 | 177.06 |
| 31 | 176.89 | | 177.02 | | 177.14 | | 177.25 | 177.15 | | 177.28 | | 177.02 |
| MEAN | 176.94 | 176.94 | 176.95 | 177.07 | 177.09 | 177.14 | 177.21 | 177.19 | 177.21 | 177.31 | 177.15 | 177.05 |
| MAX. | 177.13 | 177.06 | 177.09 | 177.24 | 177.19 | 177.27 | 177.33 | 177.29 | 177.46 | 177.44 | 177.36 | 177.30 |
| | 2200/24 | 2000/07 | 2100/31 | 1700/28 | 2400/16 | 0100/27 | 0800/12 | 2100/07 | 2300/29 | 2000/04 | 0700/08 | 0500/02 |
| MIN. | 176.73 | 176.78 | 176.80 | 176.90 | 176.95 | 177.03 | 177.09 | 177.08 | 176.99 | 177.15 | 176.93 | 176.87 |
| | 1700/12 | 1400/20 | 2400/08 | 1900/01 | 2300/01 | 0900/17 | 1400/04 | 1500/26 | 1800/08 | 1400/13 | 2400/09 | 1700/22 |

* Indicates Less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL MEAN: 177.10

ANNUAL SUMMARY OF LEVELS, 1986
 Station 7079: Green Bay, Wisconsin on Lake Michigan

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

HIGHEST
 Monthly mean elevation: 177.29 Oct
 Daily mean elevation: 177.45 26 Oct
 Instant/hourly elevation: 177.93 1642/18 Jul

LOWEST
 Monthly mean elevation: 176.92 Feb
 Daily mean elevation: 176.72 9 Nov
 Instant/hourly elevation: 176.14 0200/9 Nov

HIGHEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 177.06 | 24 Jan |
| 177.00 | 7 Feb |
| 177.05 | 25 Mar |
| 177.17 | 14 Apr |
| 177.24 | 19 May |
| 177.35 | 11 Jun |
| 177.29 | 12 Jul |
| 177.25 | 21 Aug |
| 177.38 | 27 Sep |
| 177.45 | 26 Oct |
| 177.30 | 30 Nov |
| 177.31 | 1 Dec |

LOWEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 176.80 | 26 Jan |
| 176.86 | 28 Feb |
| 176.79 | 7 Mar |
| 176.99 | 11 Apr |
| 176.98 | 4 May |
| 177.04 | 3 Jun |
| 177.12 | 4 Jul |
| 177.09 | 30 Aug |
| 176.97 | 8 Sep |
| 177.14 | 7 Oct |
| 176.72 | 9 Nov |
| 176.80 | 22 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(m.) | No. of days<br>above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 177.40        |     |     |     |     |     |     |     |     |     | 2   |     |     | 177.40        | 2                          |
| 177.35        |     |     |     |     |     |     |     |     | 1   | 4   |     |     | 177.35        | 7                          |
| 177.30        |     |     |     |     |     | 1   |     |     | 4   | 6   |     | 1   | 177.30        | 19                         |
| 177.25        |     |     |     |     | 1   | 2   | 4   |     | 6   | 11  | 1   |     | 177.25        | 43                         |
| 177.20        |     |     |     |     | 5   | 11  | 13  | 6   | 3   | 3   | 4   | 1   | 177.20        | 73                         |
| 177.15        |     |     |     | 3   | 5   | 6   | 12  | 16  | 7   | 4   | 7   | 1   | 177.15        | 134                        |
| 177.10        |     |     |     | 5   | 11  | 13  | 5   | 7   | 3   | 1   | 4   | 1   | 177.10        | 184                        |
| 177.05        | 1   |     |     | 12  | 8   | 5   |     | 2   | 3   |     | 3   | 3   | 177.05        | 221                        |
| 177.00        | 1   |     | 3   | 4   | 2   | 1   |     |     | 2   |     | 3   | 7   | 177.00        | 244                        |
| 176.95        | 6   | 7   | 8   | 6   | 4   |     |     |     | 1   |     | 3   | 6   | 176.95        | 285                        |
| 176.90        | 9   | 10  | 15  |     |     |     |     |     |     |     | 2   | 6   | 176.90        | 327                        |
| 176.85        | 10  | 11  | 4   |     |     |     |     |     |     |     | 1   | 3   | 176.85        | 356                        |
| 176.80        | 3   |     |     |     |     |     |     |     |     |     |     | 1   | 176.80        | 360                        |
| 176.75        | 1   |     | 1   |     |     |     |     |     |     |     |     | 1   | 176.75        | 363                        |
| 176.70        |     |     |     |     |     |     |     |     |     |     | 2   |     | 176.70        | 365                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 7079: Green Bay, Wisconsin on Lake Michigan

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 176.91  | 176.96  | 176.87  | 176.99  | 177.01  | 177.27  | 177.20  | 177.20  | 177.12  | 177.30  | 177.25  | 177.31  |
| 2    | 176.96  | 176.95  | 176.91  | 177.02  | 176.99  | 177.15  | 177.20  | 177.19  | 177.18  | 177.29  | 177.16  | 177.25  |
| 3    | 177.01  | 176.94  | 176.91  | 177.07  | 177.00  | 177.04  | 177.12  | 177.19  | 177.16  | 177.43  | 177.17  | 176.94  |
| 4    | 177.00  | 176.96  | 176.89  | 177.11  | 176.98  | 177.15  | 177.12  | 177.15  | 177.08  | 177.40  | 177.22  | 176.85  |
| 5    | 176.94  | 176.94  | 176.95  | 177.14  | 176.99  | 177.24  | 177.13  | 177.17  | 177.04  | 177.19  | 177.18  | 176.91  |
| 6    | 176.83  | 176.98  | 176.91  | 177.08  | 177.05  | 177.19  | 177.16  | 177.20  | 177.10  | 177.18  | 177.18  | 177.00  |
| 7    | 176.88  | 177.00  | 176.79  | 176.99  | 177.07  | 177.15  | 177.14  | 177.22  | 177.06  | 177.14  | 177.24  | 177.10  |
| 8    | 176.94  | 176.98  | 176.91  | 176.99  | 177.13  | 177.09  | 177.20  | 177.20  | 176.97  | 177.33  | 176.86  | 177.19  |
| 9    | 176.84  | 176.91  | 176.94  | 177.02  | 177.12  | 177.12  | 177.18  | 177.16  | 177.05  | 177.34  | 176.72  | 177.11  |
| 10   | 176.86  | 176.87  | 176.95  | 177.00  | 177.11  | 177.15  | 177.20  | 177.19  | 177.15  | 177.27  | 177.00  | 176.87  |
| 11   | 176.92  | 176.90  | 176.93  | 176.99  | 177.10  | 177.35  | 177.27  | 177.14  | 177.26  | 177.28  | 177.09  | 176.90  |
| 12   | 176.81  | 176.90  | 176.95  | 177.10  | 177.10  | 177.27  | 177.29  | 177.16  | 177.15  | 177.32  | 177.00  | 176.93  |
| 13   | 176.90  | 176.88  | 177.03  | 177.09  | 177.09  | 177.12  | 177.24  | 177.14  | 177.16  | 177.27  | 176.93  | 176.97  |
| 14   | 176.96  | 176.88  | 176.99  | 177.17  | 177.14  | 177.13  | 177.20  | 177.17  | 177.19  | 177.20  | 176.75  | 176.88  |
| 15   | 176.95  | 176.89  | 176.91  | 177.16  | 177.13  | 177.15  | 177.22  | 177.18  | 177.31  | 177.25  | 177.04  | 177.02  |
| 16   | 176.99  | 176.93  | 176.91  | 177.13  | 177.10  | 177.15  | 177.26  | 177.18  | 177.23  | 177.32  | 177.12  | 177.05  |
| 17   | 176.95  | 176.96  | 176.95  | 177.09  | 177.15  | 177.08  | 177.22  | 177.20  | 177.16  | 177.36  | 177.11  | 177.05  |
| 18   | 176.93  | 176.94  | 177.00  | 177.09  | 177.20  | 177.13  | 177.20  | 177.21  | 177.21  | 177.28  | 177.23  | 177.00  |
| 19   | 176.90  | 176.90  | 176.90  | 177.02  | 177.24  | 177.19  | 177.21  | 177.22  | 177.27  | 177.26  | 177.16  | 176.99  |
| 20   | 176.90  | 176.88  | 176.94  | 177.06  | 177.15  | 177.22  | 177.27  | 177.19  | 177.28  | 177.25  | 177.20  | 177.06  |
| 21   | 176.97  | 176.91  | 176.93  | 177.15  | 177.16  | 177.16  | 177.24  | 177.25  | 177.25  | 177.27  | 177.12  | 176.99  |
| 22   | 176.92  | 176.94  | 176.97  | 177.06  | 177.16  | 177.14  | 177.19  | 177.23  | 177.27  | 177.24  | 177.10  | 176.80  |
| 23   | 176.92  | 176.90  | 176.90  | 177.00  | 177.10  | 177.09  | 177.17  | 177.17  | 177.20  | 177.34  | 177.12  | 176.94  |
| 24   | 177.06  | 176.89  | 176.96  | 177.08  | 177.13  | 177.20  | 177.14  | 177.13  | 177.20  | 177.37  | 176.99  | 177.06  |
| 25   | 176.97  | 176.93  | 177.05  | 177.14  | 177.14  | 177.08  | 177.21  | 177.15  | 177.31  | 177.40  | 177.04  | 177.02  |
| 26   | 176.80  | 176.98  | 176.95  | 177.16  | 177.16  | 177.09  | 177.22  | 177.21  | 177.34  | 177.45  | 177.10  | 177.02  |
| 27   | 176.88  | 176.91  | 176.96  | 177.09  | 177.15  | 177.15  | 177.20  | 177.17  | 177.38  | 177.28  | 176.95  | 176.98  |
| 28   | 176.90  | 176.86  | 176.98  | 177.08  | 177.11  | 177.15  | 177.24  | 177.11  | 177.32  | 177.28  | 177.01  | 176.94  |
| 29   | 176.88  |         | 177.00  | 177.04  | 177.08  | 177.19  | 177.20  | 177.10  | 177.28  | 177.31  | 177.16  | 177.05  |
| 30   | 176.90  |         | 176.99  | 177.08  | 177.08  | 177.20  | 177.21  | 177.09  | 177.26  | 177.27  | 177.30  | 177.05  |
| 31   | 176.87  |         | 177.01  |         | 177.17  |         | 177.24  | 177.11  |         | 177.20  |         | 176.93  |
| MEAN | 176.92  | 176.92  | 176.94  | 177.07  | 177.11  | 177.16  | 177.20  | 177.17  | 177.20  | 177.29  | 177.08  | 177.01  |
| MAX. | 177.22  | 177.16  | 177.28  | 177.46  | 177.47  | 177.67  | 177.93  | 177.49  | 177.55  | 177.72  | 177.53  | 177.41  |
|      | 2200/24 | 0500/06 | 0500/20 | 1600/15 | 1900/21 | 2200/11 | 1642/18 | 1100/10 | 0700/22 | 1700/03 | 0200/01 | 0900/02 |
| MIN. | 176.57  | 176.61  | 176.56  | 176.70  | 176.79  | 176.87  | 176.83  | 176.95  | 176.84  | 176.93  | 176.14  | 176.67  |
|      | 1900/12 | 0900/14 | 2300/19 | 2300/01 | 0800/01 | 0800/19 | 1000/04 | 0300/10 | 0500/08 | 1100/31 | 0200/09 | 2300/10 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 177.09

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 7096: Port Inland, Michigan on Lake Michigan

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST  
 Monthly mean elevation: 177.28 Oct  
 Daily mean elevation: 177.45 8 Nov  
 Instant/hourly elevation: 177.61 2100/8 Nov

LOWEST  
 Monthly mean elevation: 176.89 Feb  
 Daily mean elevation: 176.77 7 Mar  
 Instant/hourly elevation: 176.66 2200/12 Jan

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 177.02 | 25 Jan |
| 176.95 | 7 Feb  |
| 177.05 | 22 Mar |
| 177.13 | 19 Apr |
| 177.09 | 31 May |
| 177.18 | 12 Jun |
| 177.23 | 24 Jul |
| 177.22 | 14 Aug |
| 177.34 | 27 Sep |
| 177.38 | 12 Oct |
| 177.45 | 8 Nov  |
| 177.19 | 2 Dec  |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 176.78 | 26 Jan |
| 176.84 | 28 Feb |
| 176.77 | 7 Mar  |
| 176.92 | 9 Apr  |
| 176.95 | 2 May  |
| 177.05 | 8 Jun  |
| 177.08 | 2 Jul  |
| 177.07 | 27 Aug |
| 177.05 | 6 Sep  |
| 177.20 | 29 Oct |
| 177.05 | 13 Nov |
| 176.95 | 23 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(m.) | No. of days
above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 177.40 | | | | | | | | | | | 1 | | 177.40 | 1 |
| 177.35 | | | | | | | | | | 2 | | | 177.35 | 3 |
| 177.30 | | | | | | | | | 2 | 6 | | | 177.30 | 11 |
| 177.25 | | | | | | | | | 4 | 15 | 1 | | 177.25 | 31 |
| 177.20 | | | | | | | 9 | 1 | 4 | 7 | 3 | | 177.20 | 55 |
| 177.15 | | | | | | 4 | 15 | 18 | 5 | 1 | 9 | 3 | 177.15 | 110 |
| 177.10 | | | | 2 | | 14 | 3 | 9 | 8 | | 5 | 2 | 177.10 | 153 |
| 177.05 | | | | 9 | 17 | 11 | 1 | 3 | 5 | | 10 | 7 | 177.05 | 216 |
| 177.00 | 2 | | 2 | 9 | 12 | 1 | | | 1 | | 1 | 13 | 177.00 | 257 |
| 176.95 | 5 | | 5 | 7 | 1 | | | | | | | 4 | 176.95 | 279 |
| 176.90 | 7 | 9 | 8 | 3 | 1 | | | | | | | 2 | 176.90 | 309 |
| 176.85 | 11 | 16 | 13 | | | | | | | | | | 176.85 | 349 |
| 176.80 | 5 | 3 | 2 | | | | | | | | | | 176.80 | 359 |
| 176.75 | 1 | | 1 | | | | | | | | | | 176.75 | 361 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 7096: Port Inland, Michigan on Lake Michigan

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 176.90 | 176.91 | 176.87 | 176.99 | 177.01 | 177.07 | 177.16* | 177.20 | 177.13 | 177.28 | 177.20 | 177.17 |
| 2 | 176.89 | 176.93 | 176.88 | 176.95 | 176.95 | 177.08 | 177.08* | 177.17 | 177.14 | 177.31 | 177.20 | 177.19 |
| 3 | 176.96 | 176.89 | 176.88 | 177.00 | 177.01 | 177.11 | 177.12* | 177.17 | 177.17 | 177.31 | 177.21 | 177.12 |
| 4 | 176.94 | 176.90 | 176.86 | 176.99 | 177.09 | 177.06 | 177.21* | 177.19 | 177.15 | 177.31 | 177.20 | 176.97 |
| 5 | 176.96* | 176.88 | 176.85 | 177.06 | 177.04 | 177.08 | / | 177.19 | 177.08 | 177.27 | 177.27 | 177.11 |
| 6 | 176.84 | 176.89 | 176.88* | 177.09 | 177.08 | 177.09 | / | 177.18 | 177.05 | 177.24 | 177.22 | 177.00 |
| 7 | 176.89 | 176.95 | 176.77 | 177.01 | 177.00 | 177.11 | / | 177.20 | 177.08 | 177.38 | 177.22 | 177.04 |
| 8 | 177.01 | 176.94 | 176.90 | 176.93 | 177.02 | 177.05 | 177.16* | 177.20 | 177.07 | 177.25 | 177.45 | 177.10 |
| 9 | 176.95 | 176.92 | 176.88 | 176.92 | 177.06 | 177.08 | 177.15 | 177.19 | 177.10 | 177.29 | 177.11 | 177.17 |
| 10 | 176.85 | 176.88 | 176.88 | 176.96 | 177.05 | 177.12 | 177.15 | 177.18 | 177.14 | 177.34 | 177.07 | 177.03 |
| 11 | 176.99 | 176.88 | 176.88 | 176.96 | 177.04 | 177.12 | 177.20 | 177.14 | / | 177.34 | 177.15 | 177.07 |
| 12 | 176.81 | 176.89 | 176.88 | 177.01 | 177.06 | 177.18 | 177.23 | 177.18 | 177.15 | 177.38 | 177.10 | 176.95 |
| 13 | 176.88 | 176.91 | 176.94 | 177.01 | 177.05 | 177.09 | 177.23 | 177.20 | 177.08 | 177.30 | 177.05 | 177.07 |
| 14 | 176.93 | 176.89 | 176.96 | 177.04 | 177.08 | 177.12 | 177.16 | 177.22 | 177.13 | 177.30 | 177.17 | 177.04 |
| 15 | 176.97 | 176.91 | 176.91 | 177.08 | 177.04 | 177.14 | 177.18 | 177.19 | 177.15 | 177.24 | 177.07 | 177.03 |
| 16 | 176.95 | 176.86 | 176.89 | 177.00 | 177.07 | 177.09 | 177.21 | 177.18 | 177.15 | 177.24 | 177.17 | 177.06 |
| 17 | 176.99 | 176.92 | 176.94* | 177.02 | 177.01 | 177.09 | 177.22 | 177.15 | 177.21 | 177.27 | 177.07 | 177.07 |
| 18 | 176.92 | 176.90 | 176.92* | 177.06 | 177.03 | 177.10 | 177.20 | 177.15 | 177.16 | 177.27 | 177.07 | 177.07 |
| 19 | 176.87 | 176.88 | 176.84* | 177.13 | 177.04 | 177.12 | 177.20 | 177.17 | 177.16 | 177.27 | 177.16 | 176.99 |
| 20 | 176.88 | 176.84 | 176.88* | 177.04 | 177.04 | 177.11 | 177.18 | 177.19 | 177.19 | 177.27 | 177.18 | 177.02 |
| 21 | 176.92 | 176.84 | 176.95* | 176.96 | 177.06 | 177.17 | 177.20 | 177.12 | 177.19 | 177.27 | 177.16 | 177.03 |
| 22 | 176.89 | 176.92 | 177.05* | 177.03 | 177.08 | 177.15 | 177.22 | 177.20 | 177.25 | 177.29 | 177.16 | 177.04 |
| 23 | 176.88 | 176.87 | 176.89 | 177.05 | 177.07 | 177.12 | 177.20 | 177.13 | 177.21 | 177.22 | 177.14 | 176.95 |
| 24 | 176.95* | 176.86 | 176.92 | 177.08 | 177.08 | 177.09 | 177.23 | 177.09 | 177.21 | 177.27 | 177.10 | 177.05 |
| 25 | 177.02* | 176.89* | 177.04 | 177.04 | 177.08 | 177.12 | 177.18 | 177.18 | 177.27 | 177.24 | 177.11 | 177.02 |
| 26 | 176.78 | 176.89 | 176.95 | 177.08 | 177.06 | 177.16 | 177.20 | 177.12 | 177.27 | 177.28 | 177.06 | 176.98 |
| 27 | 176.83 | 176.86 | 176.93 | 177.08 | 177.08 | 177.13 | 177.22 | 177.07 | 177.34 | 177.27 | 177.14 | 177.05 |
| 28 | 176.89 | 176.84 | 177.00 | 177.11 | 177.08 | 177.16 | 177.20 | 177.08 | 177.30 | 177.28 | 177.07 | 177.01 |
| 29 | 176.87 | | 176.98 | 177.07 | 177.09 | 177.11 | 177.17 | 177.12 | 177.32 | 177.20 | 177.06 | 177.04 |
| 30 | 176.89 | | 176.98 | 177.09 | 177.09 | 177.12 | 177.20 | 177.11 | 177.27 | 177.22 | 177.08 | 177.02 |
| 31 | 176.85 | | 177.00 | | 177.09 | | 177.22 | 177.14 | | 177.35 | | 177.06 |
| MEAN | 176.91 | 176.89 | 176.92 | 177.03 | 177.05 | 177.11 | 177.19 | 177.16 | 177.18 | 177.28 | 177.15 | 177.05 |
| MAX. | 177.15 | 177.04 | 177.16 | 177.20 | 177.18 | 177.24 | 177.31 | 177.32 | 177.45 | 177.47 | 177.61 | 177.38 |
| | 2000/08 | 0600/20 | 1600/22 | 1900/26 | 0200/18 | 1300/12 | 1000/12 | 2200/22 | 0500/29 | 1800/07 | 2100/08 | 2300/05 |
| MIN. | 176.66 | 176.72 | 176.70 | 176.85 | 176.83 | 176.96 | 177.07 | 177.00 | 177.00 | 177.07 | 176.94 | 176.86 |
| | 2200/12 | 1800/20 | 0100/07 | 1300/08 | 1400/01 | 1100/01 | 2400/02 | 1200/27 | 1000/13 | 0100/06 | 1100/26 | 1300/06 |

* Indicates Less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL MEAN: 177.08

ANNUAL SUMMARY OF LEVELS, 1986
 Station 9004: Pt. Iroquois, Brimley, Michigan on Lake Superior (Whitefish Bay

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

HIGHEST
 Monthly mean elevation: 183.47 Aug
 Daily mean elevation: 183.55 23 Aug
 Instant/hourly elevation: 183.75 2100/5 Oct

LOWEST
 Monthly mean elevation: 183.24 Mar
 Daily mean elevation: 183.15 24 Jan
 Instant/hourly elevation: 183.01 1900/31 Mar

HIGHEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 183.47 | 12 Jan |
| 183.32 | 20 Feb |
| 183.35 | 19 Mar |
| 183.40 | 21 Apr |
| 183.45 | 1 May |
| 183.46 | 16 Jun |
| 183.50 | 28 Jul |
| 183.55 | 23 Aug |
| 183.54 | 5 Sep |
| 183.53 | 5 Oct |
| 183.52 | 9 Nov |
| 183.47 | 4 Dec |

LOWEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 183.15 | 24 Jan |
| 183.20 | 17 Feb |
| 183.17 | 31 Mar |
| 183.21 | 5 Apr |
| 183.33 | 5 May |
| 183.31 | 3 Jun |
| 183.36 | 5 Jul |
| 183.41 | 31 Aug |
| 183.33 | 27 Sep |
| 183.34 | 31 Oct |
| 183.26 | 19 Nov |
| 183.21 | 31 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(m.) | No. of days<br>above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 183.50        |     |     |     |     |     |     |     | 6   | 3   | 1   | 1   |     | 183.50        | 11                         |
| 183.45        | 1   |     |     |     |     | 1   | 7   | 16  | 6   | 6   | 3   | 1   | 183.45        | 52                         |
| 183.40        | 3   |     |     |     | 4   | 8   | 15  | 9   | 14  | 18  | 9   | 3   | 183.40        | 135                        |
| 183.35        | 9   |     |     | 4   | 18  | 14  | 9   |     | 6   | 4   | 8   | 4   | 183.35        | 211                        |
| 183.30        | 14  | 1   | 3   | 9   | 9   | 7   |     |     | 1   | 2   | 8   | 7   | 183.30        | 272                        |
| 183.25        | 2   | 17  | 6   | 11  |     |     |     |     |     |     | 1   | 11  | 183.25        | 320                        |
| 183.20        | 1   | 9   | 18  | 6   |     |     |     |     |     |     |     | 5   | 183.20        | 359                        |
| 183.15        |     | 1   | 4   |     |     |     |     |     |     |     |     |     | 183.15        | 364                        |
| 183.10        | 1   |     |     |     |     |     |     |     |     |     |     |     | 183.10        | 365                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 9004: Pt. Iroquois, Brimley, Michigan on Lake Superior (Whitefish Bay)

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 183.43  | 183.27  | 183.24  | 183.29  | 183.45  | 183.41  | 183.40  | 183.47  | 183.44  | 183.43  | 183.47  | 183.27  |
| 2    | 183.40  | 183.29  | 183.24  | 183.26  | 183.43  | 183.36  | 183.44  | 183.50  | 183.42  | 183.42  | 183.43  | 183.29  |
| 3    | 183.37  | 183.27  | 183.25  | 183.25  | 183.39  | 183.31  | 183.39  | 183.49  | 183.37  | 183.45  | 183.44  | 183.42  |
| 4    | 183.35  | 183.28  | 183.25  | 183.25  | 183.33  | 183.39  | 183.37  | 183.47  | 183.46  | 183.43  | 183.39  | 183.47  |
| 5    | 183.44  | 183.30  | 183.22  | 183.21  | 183.33  | 183.37  | 183.36  | 183.47  | 183.54  | 183.53  | 183.34  | 183.33  |
| 6    | 183.45  | 183.24  | 183.31  | 183.29  | 183.36  | 183.34  | 183.41  | 183.47  | 183.52  | 183.44  | 183.38  | 183.41  |
| 7    | 183.40  | 183.26  | 183.28  | 183.32  | 183.40  | 183.33  | 183.41  | 183.45  | 183.47  | 183.40  | 183.36  | 183.38  |
| 8    | 183.36  | 183.25  | 183.18  | 183.38  | 183.38  | 183.39  | 183.42  | 183.47  | 183.47  | 183.48  | 183.31  | 183.25  |
| 9    | 183.39  | 183.30  | 183.19  | 183.36  | 183.34  | 183.34  | 183.42  | 183.46  | 183.43  | 183.44  | 183.52  | 183.32  |
| 10   | 183.37  | 183.30  | 183.27  | 183.35  | 183.35  | 183.34  | 183.40  | 183.52  | 183.43  | 183.35  | 183.45  | 183.40  |
| 11   | 183.32  | 183.29  | 183.24  | 183.36  | 183.34  | 183.38  | 183.38  | 183.51  | 183.45  | 183.38  | 183.45  | 183.36  |
| 12   | 183.47  | 183.30  | 183.21  | 183.30  | 183.34  | 183.40  | 183.38  | 183.47  | 183.47  | 183.43  | 183.50  | 183.42  |
| 13   | 183.32  | 183.28  | 183.22  | 183.29  | 183.34  | 183.40  | 183.43  | 183.44  | 183.52  | 183.47  | 183.46  | 183.32  |
| 14   | 183.33  | 183.29  | 183.24  | 183.25  | 183.35  | 183.40  | 183.44  | 183.43  | 183.46  | 183.48  | 183.41  | 183.36  |
| 15   | 183.29  | 183.27  | 183.28  | 183.32  | 183.36  | 183.35  | 183.41  | 183.47  | 183.46  | 183.47  | 183.41  | 183.30  |
| 16   | 183.24  | 183.22  | 183.23  | 183.32  | 183.39  | 183.46  | 183.40  | 183.44  | 183.43  | 183.47  | 183.37  | 183.28  |
| 17   | 183.33  | 183.20  | 183.22  | 183.31  | 183.39  | 183.41  | 183.40  | 183.50  | 183.36  | 183.44  | 183.43  | 183.26  |
| 18   | 183.34  | 183.24  | 183.21  | 183.26  | 183.41  | 183.40  | 183.42  | 183.49  | 183.43  | 183.41  | 183.41  | 183.32  |
| 19   | 183.36  | 183.25  | 183.35  | 183.24  | 183.40  | 183.40  | 183.44  | 183.46  | 183.43  | 183.42  | 183.26  | 183.32  |
| 20   | 183.32  | 183.32  | 183.26  | 183.32  | 183.41  | 183.38  | 183.47  | 183.44  | 183.43  | 183.43  | 183.35  | 183.31  |
| 21   | 183.30  | 183.23  | 183.25  | 183.40  | 183.40  | 183.35  | 183.41  | 183.51  | 183.39  | 183.43  | 183.32  | 183.29  |
| 22   | 183.40  | 183.23  | 183.20  | 183.30  | 183.39  | 183.38  | 183.43  | 183.41  | 183.40  | 183.43  | 183.32  | 183.30  |
| 23   | 183.32  | 183.28  | 183.32  | 183.24  | 183.38  | 183.43  | 183.41  | 183.55  | 183.42  | 183.44  | 183.40  | 183.29  |
| 24   | 183.15  | 183.26  | 183.21  | 183.28  | 183.36  | 183.45  | 183.43  | 183.49  | 183.42  | 183.41  | 183.37  | 183.23  |
| 25   | 183.32  | 183.22  | 183.21  | 183.32  | 183.37  | 183.38  | 183.48  | 183.44  | 183.36  | 183.42  | 183.31  | 183.32  |
| 26   | 183.40  | 183.21  | 183.27  | 183.28  | 183.37  | 183.37  | 183.46  | 183.53  | 183.37  | 183.41  | 183.42  | 183.28  |
| 27   | 183.34  | 183.30  | 183.24  | 183.29  | 183.36  | 183.42  | 183.44  | 183.54  | 183.33  | 183.42  | 183.33  | 183.24  |
| 28   | 183.31  | 183.27  | 183.22  | 183.27  | 183.36  | 183.43  | 183.50  | 183.50  | 183.42  | 183.40  | 183.38  | 183.26  |
| 29   | 183.34  |         | 183.21  | 183.32  | 183.36  | 183.45  | 183.48  | 183.46  | 183.41  | 183.48  | 183.38  | 183.26  |
| 30   | 183.34  |         | 183.28  | 183.31  | 183.36  | 183.42  | 183.46  | 183.44  | 183.44  | 183.39  | 183.32  | 183.25  |
| 31   | 183.32  |         | 183.17  |         | 183.35  |         | 183.46  | 183.41  |         | 183.34  |         | 183.21  |
| MEAN | 183.35  | 183.26  | 183.24  | 183.30  | 183.37  | 183.39  | 183.42  | 183.47  | 183.43  | 183.43  | 183.39  | 183.31  |
| MAX. | 183.66  | 183.42  | 183.48  | 183.45  | 183.62  | 183.61  | 183.57  | 183.71  | 183.64  | 183.75  | 183.72  | 183.59  |
|      | 1100/12 | 1800/20 | 0600/19 | 0900/21 | 1400/01 | 1000/16 | 1800/04 | 1000/23 | 0300/13 | 2100/05 | 0400/09 | 0500/06 |
| MIN. | 183.07  | 183.12  | 183.01  | 183.09  | 183.24  | 183.23  | 183.21  | 183.31  | 183.19  | 183.13  | 183.02  | 183.14  |
|      | 1600/24 | 0200/17 | 1900/31 | 0400/26 | 1800/31 | 1900/20 | 1500/04 | 2400/22 | 0800/27 | 0700/31 | 0900/08 | 0600/31 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 183.36

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 9018: Marquette Coast Guard, Marquette, Michigan on Lake Superior

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST  
 Monthly mean elevation: 183.50 Aug  
 Daily mean elevation: 183.54 23 Aug  
 Instant/hourly elevation: 183.60 0800/23 Aug

LOWEST  
 Monthly mean elevation: 183.28 Mar  
 Daily mean elevation: 183.24 8 Mar  
 Instant/hourly elevation: 183.17 1800/30 Mar

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 183.45 | 6 Jan  |
| 183.32 | 20 Feb |
| 183.35 | 19 Mar |
| 183.40 | 30 Apr |
| 183.43 | 19 May |
| 183.45 | 29 Jun |
| 183.52 | 28 Jul |
| 183.54 | 23 Aug |
| 183.51 | 6 Sep  |
| 183.51 | 12 Oct |
| 183.45 | 12 Nov |
| 183.42 | 4 Dec  |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 183.29 | 24 Jan |
| 183.27 | 25 Feb |
| 183.24 | 8 Mar  |
| 183.29 | 2 Apr  |
| 183.39 | 30 May |
| 183.37 | 3 Jun  |
| 183.41 | 4 Jul  |
| 183.46 | 31 Aug |
| 183.43 | 17 Sep |
| 183.40 | 31 Oct |
| 183.35 | 19 Nov |
| 183.26 | 31 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(m.) | No. of days
above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 183.50 | | | | | | | 2 | 10 | 1 | 1 | | | 183.50 | 14 |
| 183.45 | | | | | | | 15 | 21 | 22 | 16 | | | 183.45 | 88 |
| 183.40 | 10 | | | | 14 | 21 | 14 | | 7 | 12 | 15 | 1 | 183.40 | 182 |
| 183.35 | 11 | | | 6 | 17 | 9 | | | | 2 | 14 | 9 | 183.35 | 250 |
| 183.30 | 9 | 10 | 1 | 19 | | | | | | | 1 | 13 | 183.30 | 303 |
| 183.25 | 1 | 18 | 28 | 5 | | | | | | | | 8 | 183.25 | 363 |
| 183.20 | | | 2 | | | | | | | | | | 183.20 | 365 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 9018: Marquette Coast Guard, Marquette, Michigan on Lake Superior

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 183.42 | 183.32 | 183.27 | 183.29 | 183.42 | 183.41 | 183.44 | 183.50 | 183.48 | 183.47 | 183.44 | 183.36 |
| 2 | 183.43 | 183.32 | 183.28 | 183.29 | 183.42 | 183.39 | 183.44 | 183.51 | 183.49 | 183.47 | 183.43 | 183.36 |
| 3 | 183.42 | 183.32 | 183.27 | 183.30 | 183.39 | 183.37 | 183.43 | 183.51 | 183.45 | 183.48 | 183.44 | 183.38 |
| 4 | 183.41 | 183.32 | 183.27 | 183.30 | 183.39 | 183.40 | 183.41 | 183.50 | 183.47 | 183.47 | 183.43 | 183.42 |
| 5 | 183.42 | 183.32 | 183.29 | 183.30 | 183.41 | 183.40 | 183.44 | 183.50 | 183.50 | 183.48 | 183.40 | 183.36 |
| 6 | 183.45 | 183.31 | 183.29 | 183.31 | 183.40 | 183.39 | 183.43 | 183.50 | 183.51 | 183.47 | 183.42 | 183.38 |
| 7 | 183.42 | 183.30 | 183.28 | 183.31 | 183.41 | 183.38 | 183.43 | 183.50 | 183.48 | 183.43 | 183.43 | 183.38 |
| 8 | 183.37 | 183.30 | 183.24 | 183.35 | 183.40 | 183.39 | 183.44 | 183.50 | 183.47 | 183.47 | 183.40 | 183.35 |
| 9 | 183.38 | 183.31 | 183.27 | 183.35 | 183.40 | 183.39 | 183.45 | 183.50 | 183.48 | 183.46 | 183.41 | 183.36 |
| 10 | 183.38 | 183.32 | 183.30 | 183.34 | 183.40 | 183.40 | 183.44 | 183.53 | 183.49 | 183.40 | 183.43 | 183.35 |
| 11 | 183.37 | 183.32 | 183.27 | 183.34 | 183.40 | 183.43 | 183.44 | 183.52 | 183.50 | 183.44 | 183.43 | 183.36 |
| 12 | 183.43 | 183.30 | 183.27 | 183.32 | 183.39 | 183.43 | 183.45 | 183.50 | 183.48 | 183.51 | 183.45 | 183.39 |
| 13 | 183.39 | 183.29 | 183.28 | 183.32 | 183.40 | 183.42 | 183.47 | 183.48 | 183.49 | 183.48 | 183.43 | 183.33 |
| 14 | 183.38 | 183.30 | 183.29 | 183.32 | 183.41 | 183.43 | 183.46 | 183.49 | 183.47 | 183.50 | 183.39 | 183.32 |
| 15 | 183.34 | 183.29 | 183.29 | 183.35 | 183.42 | 183.41 | 183.45 | 183.50 | 183.47 | 183.48 | 183.41 | 183.33 |
| 16 | 183.33 | 183.29 | 183.26 | 183.34 | 183.41 | 183.45 | 183.45 | 183.50 | 183.46 | 183.48 | 183.40 | 183.33 |
| 17 | 183.35 | 183.27 | 183.26 | 183.33 | 183.41 | 183.43 | 183.46 | 183.50 | 183.43 | 183.46 | 183.42 | 183.32 |
| 18 | 183.38 | 183.28 | 183.28 | 183.32 | 183.43 | 183.42 | 183.47 | 183.51 | 183.46 | 183.45 | 183.41 | 183.34 |
| 19 | 183.37 | 183.29 | 183.35 | 183.31 | 183.43 | 183.43 | 183.47 | 183.50 | 183.47 | 183.45 | 183.35 | 183.33 |
| 20 | 183.36 | 183.32 | 183.29 | 183.34 | 183.42 | 183.43 | 183.48 | 183.47 | 183.46 | 183.45 | 183.40 | 183.32 |
| 21 | 183.36 | 183.30 | 183.27 | 183.39 | 183.41 | 183.42 | 183.47 | 183.52 | 183.44 | 183.45 | 183.38 | 183.31 |
| 22 | 183.38 | 183.28 | 183.25 | 183.34 | 183.41 | 183.43 | 183.46 | 183.50 | 183.45 | 183.45 | 183.39 | 183.30 |
| 23 | 183.35 | 183.29 | 183.30 | 183.31 | 183.40 | 183.43 | 183.47 | 183.54 | 183.44 | 183.47 | 183.41 | 183.30 |
| 24 | 183.29 | 183.28 | 183.26 | 183.33 | 183.40 | 183.45 | 183.47 | 183.51 | 183.44 | 183.46 | 183.38 | 183.29 |
| 25 | 183.34 | 183.27 | 183.28 | 183.35 | 183.40 | 183.42 | 183.50 | 183.49 | 183.45 | 183.45 | 183.37 | 183.32 |
| 26 | 183.44 | 183.30 | 183.29 | 183.36 | 183.39 | 183.43 | 183.50 | 183.51 | 183.46 | 183.45 | 183.40 | 183.31 |
| 27 | 183.42 | 183.30 | 183.28 | 183.37 | 183.39 | 183.44 | 183.50 | 183.52 | 183.46 | 183.45 | 183.37 | 183.28 |
| 28 | 183.34 | 183.28 | 183.27 | 183.36 | 183.39 | 183.45 | 183.52 | 183.49 | 183.47 | 183.44 | 183.38 | 183.28 |
| 29 | 183.35 | | 183.28 | 183.37 | 183.39 | 183.45 | 183.51 | 183.47 | 183.46 | 183.47 | 183.40 | 183.30 |
| 30 | 183.34 | | 183.29 | 183.40 | 183.39 | 183.44 | 183.50 | 183.47 | 183.47 | 183.43 | 183.39 | 183.29 |
| 31 | 183.33 | | 183.27 | | 183.41 | | 183.50 | 183.46 | | 183.40 | | 183.26 |
| MEAN | 183.38 | 183.30 | 183.28 | 183.33 | 183.40 | 183.42 | 183.46 | 183.50 | 183.47 | 183.46 | 183.41 | 183.33 |
| MAX. | 183.55 | 183.43 | 183.40 | 183.47 | 183.54 | 183.59 | 183.57 | 183.60 | 183.57 | 183.58 | 183.52 | 183.46 |
| | 1000/08 | 0800/20 | 0900/19 | 0800/26 | 1600/31 | 0900/27 | 0300/25 | 0800/23 | 1300/22 | 1000/03 | 1100/12 | 1900/04 |
| MIN. | 183.20 | 183.18 | 183.17 | 183.22 | 183.32 | 183.22 | 183.31 | 183.43 | 183.33 | 183.32 | 183.28 | 183.22 |
| | 1000/09 | 2400/19 | 1800/30 | 0900/01 | 0200/01 | 0500/01 | 1400/05 | 1000/20 | 0600/23 | 0100/31 | 1700/08 | 0400/31 |

* Indicates Less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL MEAN: 183.40

ANNUAL SUMMARY OF LEVELS, 1986
 Station 9044: Ontonagon, Michigan on Lake Superior

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

HIGHEST
 Monthly mean elevation: 183.51 Aug
 Daily mean elevation: 183.54 14 Aug
 Instant/hourly elevation: 183.62 1600/4 Jul

LOWEST
 Monthly mean elevation: 183.29 Mar
 Daily mean elevation: 183.25 7 Mar
 Instant/hourly elevation: 183.19 0800/9 Jan

HIGHEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 183.44 | 2 Jan |
| 183.35 | 1 Feb |
| 183.38 | 31 Mar |
| 183.43 | 30 Apr |
| 183.45 | 15 May |
| 183.47 | 30 Jun |
| 183.53 | 30 Jul |
| 183.54 | 14 Aug |
| 183.52 | 2 Sep |
| 183.49 | 14 Oct |
| 183.47 | 7 Nov |
| 183.42 | 2 Dec |

LOWEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 183.34 | 31 Jan |
| 183.26 | 28 Feb |
| 183.25 | 7 Mar |
| 183.32 | 11 Apr |
| 183.40 | 29 May |
| 183.39 | 1 Jun |
| 183.44 | 2 Jul |
| 183.48 | 27 Aug |
| 183.44 | 22 Sep |
| 183.44 | 29 Oct |
| 183.40 | 27 Nov |
| 183.30 | 28 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(m.) | No. of days<br>above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 183.50        |     |     |     |     |     |     | 8   | 23  | 6   |     |     |     | 183.50        | 37                         |
| 183.45        |     |     |     |     |     | 8   | 20  | 8   | 22  | 25  | 1   |     | 183.45        | 121                        |
| 183.40        | 5   |     |     | 4   | 28  | 19  | 3   |     | 2   | 6   | 25  | 2   | 183.40        | 215                        |
| 183.35        | 19  |     | 1   | 11  | 3   | 3   |     |     |     |     | 4   | 12  | 183.35        | 268                        |
| 183.30        | 7   | 14  | 8   | 15  |     |     |     |     |     |     |     | 15  | 183.30        | 327                        |
| 183.25        |     | 14  | 20  |     |     |     |     |     |     |     |     | 2   | 183.25        | 363                        |
| 183.20        |     |     | 2   |     |     |     |     |     |     |     |     |     | 183.20        | 365                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 9044: Ontonagon, Michigan on Lake Superior

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 183.43  | 183.35  | 183.28  | 183.36  | 183.41  | 183.39  | 183.46  | 183.52  | 183.51  | 183.48  | 183.44  | 183.42  |
| 2    | 183.44  | 183.33  | 183.29  | 183.40  | 183.40  | 183.41  | 183.44  | 183.51  | 183.52  | 183.49  | 183.44  | 183.42  |
| 3    | 183.42  | 183.34  | 183.28  | 183.43  | 183.41  | 183.42  | 183.46  | 183.52  | 183.51  | 183.47  | 183.45  | 183.39  |
| 4    | 183.42  | 183.33  | 183.28  | 183.39  | 183.42  | 183.40  | 183.46  | 183.53  | 183.49  | 183.44  | 183.44  | 183.40  |
| 5    | 183.42  | 183.32  | 183.32  | 183.39  | 183.45  | 183.42  | 183.48  | 183.54  | 183.50  | 183.45  | 183.42  | 183.39  |
| 6    | 183.40  | 183.34  | 183.25  | 183.35  | 183.42  | 183.42  | 183.45  | 183.53  | 183.50  | 183.46  | 183.45  | 183.38  |
| 7    | 183.39  | 183.32  | 183.25  | 183.34  | 183.41  | 183.41  | 183.46  | 183.51  | 183.50  | 183.47  | 183.47  | 183.37  |
| 8    | 183.34  | 183.32  | 183.28  | 183.35  | 183.43  | 183.40  | 183.46  | 183.51  | 183.50  | 183.45  | 183.42  | 183.39  |
| 9    | 183.36  | 183.30  | 183.30  | 183.33  | 183.45  | 183.42  | 183.45  | 183.52  | 183.51  | 183.45  | 183.43  | 183.37  |
| 10   | 183.37  | 183.31  | 183.28  | 183.32  | 183.43  | 183.43  | 183.48  | 183.50  | 183.51  | 183.46  | 183.44  | 183.37  |
| 11   | 183.37  | 183.30  | 183.28  | 183.32  | 183.43  | 183.44  | 183.48  | 183.52  | 183.49  | 183.48  | 183.44  | 183.38  |
| 12   | 183.40  | 183.29  | 183.31  | 183.35  | 183.44  | 183.43  | 183.48  | 183.53  | 183.46  | 183.49  | 183.44  | 183.36  |
| 13   | 183.39  | 183.28  | 183.32  | 183.35  | 183.44  | 183.43  | 183.49  | 183.53  | 183.46  | 183.47  | 183.42  | 183.34  |
| 14   | 183.40  | 183.29  | 183.29  | 183.38  | 183.44  | 183.43  | 183.48  | 183.54  | 183.47  | 183.49  | 183.40  | 183.35  |
| 15   | 183.38  | 183.28  | 183.27  | 183.35  | 183.45  | 183.45  | 183.49  | 183.52  | 183.47  | 183.47  | 183.42  | 183.36  |
| 16   | 183.39  | 183.32  | 183.29  | 183.33  | 183.41  | 183.44  | 183.49  | 183.52  | 183.47  | 183.48  | 183.40  | 183.35  |
| 17   | 183.35  | 183.32  | 183.28  | 183.34  | 183.42  | 183.44  | 183.48  | 183.51  | 183.48  | 183.47  | 183.42  | 183.36  |
| 18   | 183.37  | 183.31  | 183.31  | 183.36  | 183.42  | 183.47  | 183.48  | 183.51  | 183.47  | 183.47  | 183.40  | 183.33  |
| 19   | 183.35  | 183.30  | 183.28  | 183.35  | 183.42  | 183.45  | 183.49  | 183.51  | 183.48  | 183.47  | 183.42  | 183.35  |
| 20   | 183.37  | 183.29  | 183.28  | 183.35  | 183.41  | 183.47  | 183.48  | 183.50  | 183.48  | 183.47  | 183.41  | 183.34  |
| 21   | 183.38  | 183.30  | 183.27  | 183.34  | 183.41  | 183.46  | 183.49  | 183.51  | 183.50  | 183.47  | 183.41  | 183.32  |
| 22   | 183.34  | 183.29  | 183.29  | 183.35  | 183.42  | 183.45  | 183.49  | 183.51  | 183.44  | 183.47  | 183.41  | 183.30  |
| 23   | 183.36  | 183.28  | 183.28  | 183.37  | 183.41  | 183.45  | 183.51  | 183.50  | 183.45  | 183.47  | 183.41  | 183.33  |
| 24   | 183.40  | 183.29  | 183.30  | 183.37  | 183.42  | 183.43  | 183.51  | 183.52  | 183.47  | 183.46  | 183.41  | 183.34  |
| 25   | 183.36  | 183.31  | 183.32  | 183.37  | 183.42  | 183.45  | 183.52  | 183.52  | 183.50  | 183.46  | 183.43  | 183.32  |
| 26   | 183.39  | 183.34  | 183.30  | 183.40  | 183.42  | 183.47  | 183.52  | 183.51  | 183.51  | 183.46  | 183.42  | 183.33  |
| 27   | 183.38  | 183.27  | 183.31  | 183.41  | 183.41  | 183.47  | 183.52  | 183.48  | 183.50  | 183.46  | 183.40  | 183.32  |
| 28   | 183.36  | 183.26  | 183.32  | 183.42  | 183.40  | 183.47  | 183.50  | 183.49  | 183.48  | 183.46  | 183.41  | 183.30  |
| 29   | 183.35  |         | 183.34  | 183.39  | 183.40  | 183.46  | 183.52  | 183.50  | 183.48  | 183.44  | 183.41  | 183.32  |
| 30   | 183.34  |         | 183.30  | 183.43  | 183.41  | 183.47  | 183.53  | 183.50  | 183.47  | 183.46  | 183.41  | 183.31  |
| 31   | 183.34  |         | 183.38  |         | 183.41  |         | 183.51  | 183.50  |         | 183.45  |         | 183.31  |
| MEAN | 183.38  | 183.31  | 183.29  | 183.37  | 183.42  | 183.44  | 183.49  | 183.51  | 183.49  | 183.47  | 183.42  | 183.35  |
| MAX. | 183.49  | 183.40  | 183.43  | 183.50  | 183.51  | 183.61  | 183.62  | 183.58  | 183.59  | 183.54  | 183.54  | 183.46  |
|      | 1800/13 | 1000/01 | 1800/31 | 1900/27 | 2200/15 | 2000/25 | 1600/04 | 1800/22 | 2100/28 | 0400/12 | 0900/09 | 1000/06 |
| MIN. | 183.19  | 183.22  | 183.21  | 183.25  | 183.35  | 183.27  | 183.30  | 183.40  | 183.36  | 183.39  | 183.28  | 183.27  |
|      | 0800/09 | 1200/28 | 2200/10 | 2400/25 | 1300/01 | 1500/25 | 1200/04 | 1100/20 | 1400/22 | 2000/04 | 2100/08 | 1500/22 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 183.41

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 9064: Duluth, Minnesota on Lake Superior

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

HIGHEST  
 Monthly mean elevation: 183.54 Sep  
 Daily mean elevation: 183.66 26 Sep  
 Instant/hourly elevation: 183.75 0900/25 Sep

LOWEST  
 Monthly mean elevation: 183.33 Mar  
 Daily mean elevation: 183.24 6 Mar  
 Instant/hourly elevation: 183.07 2200/11 Jan

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 183.53 | 24 Jan |
| 183.41 | 6 Feb  |
| 183.40 | 13 Mar |
| 183.52 | 14 Apr |
| 183.54 | 9 May  |
| 183.55 | 20 Jun |
| 183.62 | 11 Jul |
| 183.60 | 22 Aug |
| 183.66 | 26 Sep |
| 183.55 | 30 Oct |
| 183.61 | 7 Nov  |
| 183.48 | 1 Dec  |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 183.30 | 25 Jan |
| 183.28 | 28 Feb |
| 183.24 | 6 Mar  |
| 183.31 | 1 Apr  |
| 183.40 | 1 May  |
| 183.44 | 8 Jun  |
| 183.47 | 6 Jul  |
| 183.50 | 28 Aug |
| 183.48 | 12 Sep |
| 183.43 | 5 Oct  |
| 183.36 | 12 Nov |
| 183.25 | 22 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.
(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.
(m.) | No. of days
above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 183.65 | | | | | | | | | 1 | | | | 183.65 | 1 |
| 183.60 | | | | | | | 1 | | 3 | | 1 | | 183.60 | 6 |
| 183.55 | | | | | | | 6 | 10 | 7 | | | | 183.55 | 29 |
| 183.50 | 2 | | | 2 | 3 | 9 | 19 | 19 | 11 | 15 | | | 183.50 | 109 |
| 183.45 | 1 | | | 5 | 19 | 16 | 5 | 2 | 8 | 14 | 5 | 1 | 183.45 | 185 |
| 183.40 | 9 | 1 | | 10 | 8 | 5 | | | | | 16 | 3 | 183.40 | 239 |
| 183.35 | 10 | 10 | 9 | 7 | 1 | | | | | 2 | 8 | 10 | 183.35 | 294 |
| 183.30 | 7 | 11 | 14 | 6 | | | | | | | | 13 | 183.30 | 345 |
| 183.25 | 2 | 6 | 7 | | | | | | | | | 3 | 183.25 | 363 |
| 183.20 | | | 1 | | | | | | | | | 1 | 183.20 | 365 |

INTERNATIONAL
GREAT LAKES
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 9064: Duluth, Minnesota on Lake Superior

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 183.43 | 183.40 | 183.32 | 183.31 | 183.40 | 183.45 | 183.51 | 183.53 | 183.58 | 183.54 | 183.43 | 183.48 |
| 2 | 183.51 | 183.37 | 183.32 | 183.40 | 183.43 | 183.47 | 183.49 | 183.51 | 183.61 | 183.55 | 183.45 | 183.43 |
| 3 | 183.48 | 183.40 | 183.31 | 183.42 | 183.46 | 183.46 | 183.52 | 183.52 | 183.58 | 183.53 | 183.45 | 183.31 |
| 4 | 183.44 | 183.37 | 183.32 | 183.45 | 183.47 | 183.45 | 183.53 | 183.54 | 183.49 | 183.52 | 183.47 | 183.36 |
| 5 | 183.37 | 183.37 | 183.38 | 183.44 | 183.53 | 183.47 | 183.54 | 183.56 | 183.48 | 183.43 | 183.43 | 183.39 |
| 6 | 183.39 | 183.41 | 183.24 | 183.35 | 183.43 | 183.47 | 183.47 | 183.57 | 183.50 | 183.50 | 183.50 | 183.39 |
| 7 | 183.39 | 183.37 | 183.28 | 183.32 | 183.47 | 183.44 | 183.48 | 183.57 | 183.48 | 183.49 | 183.61 | 183.41 |
| 8 | 183.30 | 183.33 | 183.35 | 183.32 | 183.52 | 183.44 | 183.49 | 183.53 | 183.49 | 183.48 | 183.38 | 183.45 |
| 9 | 183.32 | 183.31 | 183.38 | 183.35 | 183.54 | 183.47 | 183.49 | 183.55 | 183.55 | 183.50 | 183.36 | 183.33 |
| 10 | 183.38 | 183.33 | 183.32 | 183.35 | 183.50 | 183.49 | 183.54 | 183.52 | 183.57 | 183.52 | 183.43 | 183.35 |
| 11 | 183.34 | 183.32 | 183.33 | 183.36 | 183.49 | 183.51 | 183.62 | 183.53 | 183.54 | 183.51 | 183.43 | 183.35 |
| 12 | 183.33 | 183.29 | 183.37 | 183.43 | 183.49 | 183.46 | 183.58 | 183.55 | 183.48 | 183.52 | 183.36 | 183.35 |
| 13 | 183.41 | 183.30 | 183.40 | 183.42 | 183.50 | 183.47 | 183.52 | 183.57 | 183.49 | 183.50 | 183.39 | 183.33 |
| 14 | 183.43 | 183.30 | 183.33 | 183.52 | 183.48 | 183.48 | 183.54 | 183.57 | 183.52 | 183.50 | 183.37 | 183.35 |
| 15 | 183.40 | 183.31 | 183.31 | 183.40 | 183.49 | 183.52 | 183.55 | 183.55 | 183.51 | 183.47 | 183.45 | 183.39 |
| 16 | 183.45 | 183.39 | 183.34 | 183.39 | 183.45 | 183.45 | 183.55 | 183.54 | 183.54 | 183.54 | 183.41 | 183.37 |
| 17 | 183.35 | 183.37 | 183.32 | 183.42 | 183.46 | 183.49 | 183.55 | 183.54 | 183.54 | 183.54 | 183.42 | 183.37 |
| 18 | 183.41 | 183.34 | 183.37 | 183.46 | 183.46 | 183.51 | 183.54 | 183.56 | 183.51 | 183.52 | 183.43 | 183.30 |
| 19 | 183.40 | 183.34 | 183.30 | 183.39 | 183.47 | 183.51 | 183.53 | 183.57 | 183.58 | 183.51 | 183.49 | 183.36 |
| 20 | 183.42 | 183.29 | 183.30 | 183.36 | 183.45 | 183.55 | 183.54 | 183.54 | 183.56 | 183.50 | 183.43 | 183.36 |
| 21 | 183.42 | 183.35 | 183.30 | 183.37 | 183.45 | 183.51 | 183.54 | 183.55 | 183.61 | 183.50 | 183.45 | 183.30 |
| 22 | 183.36 | 183.33 | 183.32 | 183.41 | 183.48 | 183.47 | 183.53 | 183.60 | 183.52 | 183.49 | 183.46 | 183.25 |
| 23 | 183.42 | 183.32 | 183.27 | 183.45 | 183.46 | 183.47 | 183.56 | 183.52 | 183.50 | 183.54 | 183.40 | 183.37 |
| 24 | 183.53 | 183.34 | 183.37 | 183.41 | 183.47 | 183.48 | 183.53 | 183.58 | 183.54 | 183.52 | 183.44 | 183.36 |
| 25 | 183.30 | 183.37 | 183.36 | 183.51 | 183.47 | 183.53 | 183.53 | 183.56 | 183.63 | 183.51 | 183.43 | 183.32 |
| 26 | 183.34 | 183.39 | 183.30 | 183.46 | 183.46 | 183.51 | 183.57 | 183.53 | 183.66 | 183.50 | 183.40 | 183.35 |
| 27 | 183.36 | 183.30 | 183.36 | 183.48 | 183.46 | 183.47 | 183.58 | 183.50 | 183.58 | 183.50 | 183.37 | 183.30 |
| 28 | 183.37 | 183.28 | 183.32 | 183.47 | 183.45 | 183.48 | 183.55 | 183.50 | 183.56 | 183.48 | 183.43 | 183.32 |
| 29 | 183.34 | | 183.35 | 183.44 | 183.43 | 183.50 | 183.57 | 183.51 | 183.53 | 183.47 | 183.45 | 183.34 |
| 30 | 183.34 | | 183.29 | 183.46 | 183.44 | 183.52 | 183.58 | 183.55 | 183.52 | 183.55 | 183.50 | 183.34 |
| 31 | 183.39 | | 183.38 | | 183.47 | | 183.52 | 183.55 | | 183.45 | | 183.33 |
| MEAN | 183.39 | 183.34 | 183.33 | 183.41 | 183.47 | 183.48 | 183.54 | 183.54 | 183.54 | 183.51 | 183.43 | 183.36 |
| MAX. | 183.60 | 183.50 | 183.50 | 183.64 | 183.66 | 183.65 | 183.74 | 183.69 | 183.75 | 183.65 | 183.72 | 183.58 |
| MIN. | 1600/02 | 0100/06 | 1000/31 | 0200/26 | 1500/09 | 1700/25 | 1900/11 | 1500/22 | 0900/25 | 1500/02 | 0200/08 | 0800/08 |
| | 183.07 | 183.18 | 183.11 | 183.18 | 183.32 | 183.33 | 183.30 | 183.43 | 183.38 | 183.32 | 183.11 | 183.11 |
| | 2200/11 | 0900/20 | 0600/30 | 1200/01 | 0300/01 | 1300/22 | 0200/06 | 1000/20 | 0300/13 | 1000/05 | 2000/08 | 1300/22 |

* Indicates Less than 90% of the Hourly Data Available.
/ Indicates No Data.

ANNUAL MEAN: 183.44

ANNUAL SUMMARY OF LEVELS, 1986
 Station 9070: Two Harbors, Minnesota on Lake Superior

INTERNATIONAL
 GREAT LAKES
 DATUM (1955)

HIGHEST
 Monthly mean elevation: 183.52 Aug
 Daily mean elevation: 183.59 26 Sep
 Instant/hourly elevation: 183.68 0200/8 Nov

LOWEST
 Monthly mean elevation: 183.31 Mar
 Daily mean elevation: 183.23 6 Mar
 Instant/hourly elevation: 183.14 0500/30 Mar

HIGHEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 183.50 | 24 Jan |
| 183.39 | 6 Feb |
| 183.36 | 13 Mar |
| 183.45 | 28 Apr |
| 183.49 | 9 May |
| 183.50 | 20 Jun |
| 183.54 | 30 Jul |
| 183.57 | 22 Aug |
| 183.59 | 26 Sep |
| 183.53 | 2 Oct |
| 183.55 | 7 Nov |
| 183.45 | 1 Dec |

LOWEST DAILY MEAN
 FOR EACH MONTH

| Elev. | Date |
|--------|--------|
| 183.30 | 25 Jan |
| 183.28 | 20 Feb |
| 183.23 | 6 Mar |
| 183.28 | 1 Apr |
| 183.38 | 1 May |
| 183.40 | 1 Jun |
| 183.45 | 8 Jul |
| 183.48 | 28 Aug |
| 183.46 | 13 Sep |
| 183.41 | 5 Oct |
| 183.36 | 27 Nov |
| 183.25 | 22 Dec |

~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~

| Elev.<br>(m.) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Elev.<br>(m.) | No. of days<br>above elev. |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
| 183.55        |     |     |     |     |     |     |     | 1   | 2   |     |     |     | 183.55        | 3                          |
| 183.50        |     |     |     |     |     |     | 13  | 21  | 13  | 5   | 1   |     | 183.50        | 56                         |
| 183.45        | 3   |     |     |     | 8   | 11  | 15  | 9   | 15  | 23  | 4   |     | 183.45        | 144                        |
| 183.40        | 4   |     |     | 9   | 16  | 18  | 3   |     |     | 3   | 15  | 3   | 183.40        | 215                        |
| 183.35        | 13  | 5   | 2   | 13  | 2   | 1   |     |     |     |     | 10  | 6   | 183.35        | 267                        |
| 183.30        | 9   | 15  | 14  | 6   |     |     |     |     |     |     |     | 17  | 183.30        | 328                        |
| 183.25        | 2   | 6   | 12  | 2   |     |     |     |     |     |     |     | 4   | 183.25        | 354                        |
| 183.20        |     |     | 1   |     |     |     |     |     |     |     |     | 1   | 183.20        | 356                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 9070: Two Harbors, Minnesota on Lake Superior

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 183.42  | 183.38  | /       | 183.28  | 183.38  | 183.40  | 183.47  | 183.51  | 183.54  | 183.51  | 183.42  | 183.45  |
| 2    | 183.47  | 183.35  | /       | 183.36  | 183.41  | 183.43  | 183.46  | 183.49  | 183.55  | 183.53  | 183.43  | 183.42  |
| 3    | 183.47  | 183.37  | 183.29* | 183.37  | 183.43  | 183.43  | 183.48  | 183.50  | 183.54  | 183.50  | 183.44* | 183.31  |
| 4    | 183.42  | 183.35  | 183.31  | 183.40  | 183.45  | 183.42  | 183.48  | 183.52  | 183.47  | 183.50  | 183.46  | 183.35  |
| 5    | 183.36  | 183.35  | 183.36  | 183.39  | 183.48  | 183.43  | 183.50  | 183.53  | 183.46  | 183.41  | 183.42  | 183.38  |
| 6    | 183.38  | 183.39  | 183.23  | 183.33  | 183.42  | 183.44  | 183.45  | 183.54  | 183.48  | 183.48  | 183.47  | 183.38  |
| 7    | 183.38  | 183.35  | 183.26  | 183.31  | 183.44  | 183.41  | 183.45  | 183.54  | 183.47  | 183.47  | 183.55  | 183.39  |
| 8    | 183.30  | 183.32  | 183.34  | 183.30  | 183.47  | 183.41  | 183.45  | 183.51  | 183.47  | 183.46  | 183.41  | 183.44  |
| 9    | 183.32  | 183.30  | 183.35  | 183.33  | 183.49  | 183.44  | 183.47  | 183.52  | 183.51  | 183.48  | 183.36  | 183.32  |
| 10   | 183.37  | 183.32  | 183.29  | 183.32  | 183.47  | 183.45  | 183.50  | 183.50  | 183.52  | 183.50  | 183.41  | 183.33  |
| 11   | 183.35  | 183.31  | 183.32  | 183.34  | 183.46  | 183.46  | 183.54  | 183.50  | 183.50  | 183.49  | 183.43  | 183.34  |
| 12   | 183.32  | 183.28  | 183.34  | 183.38  | 183.45* | 183.43  | 183.52  | 183.52  | 183.46  | 183.50  | 183.36  | 183.33  |
| 13   | 183.40  | 183.28  | 183.36  | 183.39  | 183.48* | 183.44  | 183.48  | 183.54  | 183.46  | 183.48  | 183.39  | 183.33  |
| 14   | 183.41  | 183.29  | 183.31  | 183.44  | 183.46  | 183.45  | 183.50  | 183.54  | 183.48  | 183.48  | 183.36  | 183.33  |
| 15   | 183.38  | 183.30  | 183.30  | 183.36  | 183.46  | 183.49  | 183.51  | 183.53  | 183.47  | 183.46  | 183.44  | 183.37  |
| 16   | 183.43  | 183.37  | 183.32  | 183.36  | 183.43* | 183.43  | 183.51  | 183.52  | 183.51  | 183.51  | 183.40  | 183.36  |
| 17   | 183.34  | 183.34  | 183.32  | 183.38  | /       | 183.46  | 183.52  | 183.51  | 183.51  | 183.51  | 183.40  | 183.36  |
| 18   | 183.39  | 183.32  | 183.34* | 183.42  | /       | 183.47  | 183.50  | 183.53  | 183.48  | 183.50  | 183.41  | 183.29  |
| 19   | 183.37  | 183.32  | 183.29* | 183.38  | /       | 183.48  | 183.50  | 183.55  | 183.52  | 183.49  | 183.46  | 183.34  |
| 20   | 183.40  | 183.28  | 183.29  | 183.35  | /       | 183.50  | 183.50  | 183.51  | 183.51  | 183.48  | 183.42  | 183.34  |
| 21   | 183.39  | 183.34  | 183.29  | 183.36  | /       | 183.48  | 183.50  | 183.52  | 183.54  | 183.49  | 183.44  | 183.29  |
| 22   | 183.34  | 183.31  | 183.30  | 183.39  | 183.43* | 183.45  | 183.50  | 183.57  | 183.48  | 183.48  | 183.43  | 183.25  |
| 23   | 183.40  | 183.31  | 183.26  | 183.43  | 183.42  | 183.45  | 183.53  | 183.49  | 183.48  | 183.50  | 183.39  | 183.35  |
| 24   | 183.50  | 183.32  | 183.34  | 183.39  | 183.43  | 183.45  | 183.51  | 183.55  | 183.51  | 183.50  | 183.42  | 183.35  |
| 25   | 183.30  | 183.35  | 183.34  | 183.45  | 183.43  | 183.49  | 183.51  | 183.54  | 183.57  | 183.49  | 183.43  | 183.30  |
| 26   | 183.32  | 183.37  | 183.29  | 183.43  | 183.42  | 183.48  | 183.54  | 183.50  | 183.59  | 183.48  | 183.39  | 183.33  |
| 27   | 183.35  | /       | 183.33  | 183.45  | 183.42  | 183.45  | 183.54  | 183.48  | 183.54  | 183.48  | 183.36  | 183.29  |
| 28   | 183.36  | /       | 183.30  | 183.45  | 183.41  | 183.45  | 183.52  | 183.48  | 183.52  | 183.47  | 183.40  | 183.31  |
| 29   | 183.33  |         | 183.33  | 183.41  | 183.40  | 183.47  | 183.53  | 183.49  | 183.50  | 183.45  | 183.43  | 183.32  |
| 30   | 183.32  |         | 183.27  | 183.44  | 183.41  | 183.48  | 183.54  | 183.51  | 183.50  | 183.52  | 183.46  | 183.32  |
| 31   | 183.36  |         | 183.35  |         | 183.42  |         | 183.50  | 183.52  |         | 183.45  |         | 183.32  |
| MEAN | 183.38  | 183.33  | 183.31  | 183.38  | 183.44  | 183.45  | 183.50  | 183.52  | 183.50  | 183.49  | 183.42  | 183.34  |
| MAX. | 183.55  | 183.46  | 183.44  | 183.54  | 183.57  | 183.61  | 183.67  | 183.64  | 183.66  | 183.61  | 183.68  | 183.54  |
| MIN. | 1100/24 | 0100/06 | 0200/05 | 1900/25 | 1500/09 | 1700/25 | 1400/04 | 1400/22 | 2400/26 | 0200/31 | 0200/08 | 0800/08 |
|      | 183.15  | 183.19  | 183.14  | 183.17  | 183.32  | 183.33  | 183.31  | 183.42  | 183.35  | 183.34  | 183.15  | 183.15  |
|      | 2200/11 | 0900/20 | 0500/30 | 1100/01 | 1700/06 | 0300/01 | 0900/06 | 0200/23 | 1300/22 | 1000/05 | 2000/08 | 1300/22 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 183.42

ANNUAL SUMMARY OF LEVELS, 1986  
 Station 9090: Grand Marais, Minnesota on Lake Superior

INTERNATIONAL  
 GREAT LAKES  
 DATUM (1955)

|                           |        |            |                           |        |            |
|---------------------------|--------|------------|---------------------------|--------|------------|
| HIGHEST                   |        |            | LOWEST                    |        |            |
| Monthly mean elevation:   | 183.48 | Aug        | Monthly mean elevation:   | 183.27 | Mar        |
| Daily mean elevation:     | 183.50 | 27 Sep     | Daily mean elevation:     | 183.22 | 6 Mar      |
| Instant/hourly elevation: | 183.65 | 0700/8 Nov | Instant/hourly elevation: | 183.18 | 1500/6 Mar |

HIGHEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 183.44 | 24 Jan |
| 183.34 | 1 Feb  |
| 183.30 | 31 Mar |
| 183.41 | 30 Apr |
| 183.43 | 9 May  |
| 183.45 | 21 Jun |
| 183.50 | 30 Jul |
| 183.50 | 24 Aug |
| 183.50 | 27 Sep |
| 183.47 | 2 Oct  |
| 183.45 | 7 Nov  |
| 183.40 | 8 Dec  |

LOWEST DAILY MEAN  
 FOR EACH MONTH

| Elev.  | Date   |
|--------|--------|
| 183.30 | 30 Jan |
| 183.25 | 27 Feb |
| 183.22 | 6 Mar  |
| 183.27 | 1 Apr  |
| 183.36 | 1 May  |
| 183.38 | 8 Jun  |
| 183.42 | 2 Jul  |
| 183.45 | 28 Aug |
| 183.42 | 15 Sep |
| 183.40 | 5 Oct  |
| 183.36 | 27 Nov |
| 183.27 | 25 Dec |

| Elev.<br>(m.) | ~~~~~ FREQUENCY DISTRIBUTION OF DAILY MEAN LEVELS ~~~~~ |     |     |     |     |     |     |     |     |     |     |     | Elev.<br>(m.) | No. of days<br>above elev. |
|---------------|---------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|----------------------------|
|               | Jan                                                     | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |               |                            |
| 183.45        |                                                         |     |     |     |     |     | 18  | 29  | 15  | 8   |     |     | 183.45        | 70                         |
| 183.40        | 1                                                       |     |     | 1   | 12  | 19  | 13  | 2   | 15  | 22  | 6   |     | 183.40        | 141                        |
| 183.35        | 8                                                       |     |     | 9   | 19  | 11  |     |     |     | 1   | 24  | 4   | 183.35        | 237                        |
| 183.30        | 20                                                      | 10  |     | 11  |     |     |     |     |     |     |     | 16  | 183.30        | 294                        |
| 183.25        | 2                                                       | 17  | 24  | 9   |     |     |     |     |     |     |     | 11  | 183.25        | 357                        |
| 183.20        |                                                         | 1   | 7   |     |     |     |     |     |     |     |     |     | 183.20        | 365                        |

INTERNATIONAL  
GREAT LAKES  
DATUM (1955)

DAILY MEAN WATER LEVELS, MONTHLY MEANS AND EXTREMES, 1986

Station 9090: Grand Marais, Minnesota on Lake Superior

| Day  | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 183.39  | 183.34  | 183.28  | 183.27  | 183.36  | 183.38  | 183.43  | 183.48  | 183.48  | 183.46  | 183.40  | 183.39  |
| 2    | 183.40  | 183.32  | 183.27  | 183.29  | 183.38  | 183.40  | 183.42  | 183.47  | 183.50  | 183.47  | 183.40  | 183.38  |
| 3    | 183.40  | 183.33  | 183.26  | 183.30  | 183.39  | 183.40  | 183.44  | 183.47  | 183.50  | 183.46  | 183.40  | 183.32  |
| 4    | 183.39  | 183.32  | 183.27  | 183.31  | 183.41  | 183.38  | 183.44  | 183.49  | 183.47  | 183.46  | 183.42  | 183.34  |
| 5    | 183.35  | 183.31  | 183.29  | 183.32  | 183.43  | 183.39  | 183.46  | 183.48  | 183.44  | 183.40  | 183.40  | 183.37  |
| 6    | 183.35  | 183.33  | 183.22  | 183.30  | 183.41  | 183.40  | 183.43  | 183.48  | 183.45  | 183.44  | 183.41  | 183.34  |
| 7    | 183.36  | 183.31  | 183.24  | 183.29  | 183.40  | 183.40  | 183.43  | 183.50  | 183.44  | 183.44  | 183.45  | 183.34  |
| 8    | 183.34  | 183.31  | 183.28  | 183.28  | 183.41  | 183.38  | 183.43  | 183.48  | 183.44  | 183.41  | 183.43  | 183.40  |
| 9    | 183.33  | 183.29  | 183.29  | 183.30  | 183.43  | 183.40  | 183.43* | 183.48  | 183.46  | 183.43  | 183.37  | 183.33  |
| 10   | 183.35  | 183.29  | 183.25  | 183.29  | 183.41  | 183.41  | 183.44  | 183.47  | 183.47  | 183.46  | 183.40  | 183.32  |
| 11   | 183.35  | 183.29  | 183.28  | 183.30  | 183.41  | 183.42  | 183.45  | 183.47  | 183.46  | 183.43  | 183.40  | 183.32  |
| 12   | 183.32  | 183.27  | 183.29  | 183.32  | 183.42  | 183.40  | 183.45  | 183.49  | 183.44  | 183.45  | 183.36  | 183.31  |
| 13   | 183.36  | 183.27  | 183.29  | 183.33  | 183.42  | 183.42  | 183.45  | 183.49  | 183.43  | 183.45  | 183.37  | 183.32  |
| 14   | 183.36  | 183.27  | 183.27  | 183.35  | 183.42  | 183.42  | 183.46  | 183.49  | 183.44  | 183.44  | 183.36  | 183.30  |
| 15   | 183.35  | 183.28  | 183.25  | 183.32  | 183.42  | 183.44  | 183.46  | 183.49  | 183.42  | 183.44  | 183.40  | 183.33  |
| 16   | 183.39  | 183.31  | 183.28  | 183.32  | 183.41  | 183.40  | 183.45  | 183.49  | 183.45  | 183.45  | 183.38  | 183.33  |
| 17   | 183.33  | 183.30  | 183.27  | 183.33  | 183.40  | 183.43  | 183.47  | 183.48  | 183.46  | 183.46  | 183.36  | 183.33  |
| 18   | 183.34  | 183.28  | 183.29  | 183.36  | 183.39  | 183.43  | 183.46  | 183.48  | 183.44  | 183.46  | 183.37  | 183.29  |
| 19   | 183.34  | 183.27  | 183.25  | 183.36  | 183.40  | 183.42  | 183.47  | 183.49  | 183.44  | 183.46  | 183.42  | 183.31  |
| 20   | 183.35  | 183.26  | 183.27  | 183.32  | 183.39  | 183.44  | 183.46  | 183.47  | 183.44  | 183.45  | 183.38  | 183.31  |
| 21   | 183.34  | 183.29  | 183.27  | 183.32  | 183.39  | 183.45  | 183.47  | 183.47  | 183.47  | 183.45  | 183.41  | 183.28  |
| 22   | 183.31  | 183.28  | 183.29  | 183.34  | 183.40  | 183.43  | 183.47  | 183.50  | 183.45  | 183.44  | 183.39  | 183.27  |
| 23   | 183.35  | 183.27  | 183.24  | 183.37  | 183.40  | 183.42  | 183.47  | 183.47  | 183.45  | 183.45  | 183.36  | 183.31  |
| 24   | 183.44  | 183.28  | 183.29  | 183.36  | 183.40  | 183.42  | 183.47  | 183.50  | 183.45  | 183.44  | 183.40  | 183.32  |
| 25   | 183.31  | 183.30  | 183.29  | 183.36  | 183.40  | 183.43  | 183.47  | 183.49  | 183.48  | 183.44  | 183.39  | 183.27  |
| 26   | 183.30  | 183.32  | 183.26  | 183.37  | 183.40  | 183.44  | 183.48  | 183.46  | 183.50  | 183.43  | 183.36  | 183.30  |
| 27   | 183.31  | 183.25  | 183.29  | 183.40  | 183.39  | 183.43  | 183.50  | 183.45  | 183.50  | 183.43  | 183.36  | 183.28  |
| 28   | 183.33  | 183.26  | 183.28  | 183.39  | 183.39  | 183.43  | 183.47  | 183.45  | 183.47  | 183.44  | 183.37  | 183.28  |
| 29   | 183.31  |         | 183.30  | 183.38  | 183.40  | 183.43  | 183.49  | 183.46  | 183.47  | 183.41  | 183.37  | 183.28  |
| 30   | 183.30  |         | 183.25  | 183.41  | 183.40  | 183.43  | 183.50  | 183.47  | 183.46  | 183.45  | 183.38  | 183.29  |
| 31   | 183.32  |         | 183.30  |         | 183.39  |         | 183.48  | 183.48  |         | 183.43  |         | 183.29  |
| MEAN | 183.35  | 183.29  | 183.27  | 183.33  | 183.40  | 183.42  | 183.46  | 183.48  | 183.46  | 183.44  | 183.39  | 183.32  |
| MAX. | 183.53  | 183.40  | 183.38  | 183.51  | 183.50  | 183.51  | 183.57  | 183.57  | 183.58  | 183.54  | 183.65  | 183.47  |
| MIN. | 1700/24 | 0900/01 | 1600/29 | 2000/25 | 1600/09 | 1600/25 | 1300/04 | 1300/22 | 2300/26 | 2400/02 | 0700/08 | 0800/08 |
|      | 183.21  | 183.21  | 183.18  | 183.20  | 183.31  | 183.32  | 183.35  | 183.40  | 183.33  | 183.32  | 183.24  | 183.18  |
|      | 0500/12 | 0900/20 | 1500/06 | 1200/01 | 0400/01 | 1500/25 | 0900/06 | 0200/17 | 1600/28 | 1900/05 | 2100/08 | 1300/22 |

\* Indicates Less than 90% of the Hourly Data Available.  
/ Indicates No Data.

ANNUAL MEAN: 183.38

# Monthly Water Level Stages - Lake Ontario at Oswego

1900 thru Dec 1986

NOAA/NOS  
 WSC-1 N/OMA12  
 Great Lakes Water Levels  
 Rockville, Maryland 20852

Levels in Meters above  
 IGLD (1955)  
 ~~~~~  
 Chart Datum 74.0

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	1946	1952	1952	1973	1952	1952	1947	1947	1947	1945	1945	1945
HIGH	75.01	75.12	75.22	75.50	75.58	75.61	75.51	75.42	75.26	75.08	75.04	75.04
MEAN	74.39	74.41	74.50	74.71	74.83	74.87	74.84	74.73	74.60	74.48	74.40	74.38
	1935	1936	1935	1935	1935	1935	1934	1934	1934	1934	1934	1934
LOW	73.66	73.64	73.79	73.88	73.97	74.04	73.99	73.84	73.74	73.68	73.59	73.60

1900 thru 1986 mean 74.59

Monthly Water Level Stages - Lake Erie at Cleveland

1900 thru Dec 1986

NOAA/NOS
 WSC-1 N/OMA12
 Great Lakes Water Levels
 Rockville, Maryland 20852

Levels in Meters above
 IGLD (1955)
 ~~~~~  
 Chart Datum 173.3

|      | Jan    | Feb    | Mar    | Apr    | May    | Jun    | Jul    | Aug    | Sep    | Oct    | Nov    | Dec    |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|      | 1973   | 1986   | 1986   | 1985   | 1986   | 1986   | 1986   | 1986   | 1986   | 1986   | 1986   | 1986   |
| HIGH | 174.46 | 174.60 | 174.68 | 174.79 | 174.78 | 174.86 | 174.85 | 174.76 | 174.64 | 174.74 | 174.65 | 174.68 |
| MEAN | 173.72 | 173.71 | 173.79 | 173.96 | 174.05 | 174.09 | 174.08 | 174.02 | 173.93 | 173.83 | 173.75 | 173.73 |
|      | 1935   | 1936   | 1934   | 1934   | 1934   | 1934   | 1934   | 1934   | 1934   | 1934   | 1934   | 1934   |
| LOW  | 173.01 | 172.97 | 173.02 | 173.19 | 173.26 | 173.27 | 173.27 | 173.24 | 173.20 | 173.11 | 173.00 | 172.98 |

1900 thru 1986 mean 173.89

Monthly Water Level Stages - Lake St. Clair at St. Clair Shore<sup>s</sup>

1900 thru Dec 1986

NOAA/NOS  
 WSC-1 N/OMA12  
 Great Lakes Water Levels  
 Rockville, Maryland 20852

Levels in Meters above  
 IGLD (1955)  
 ~~~~~  
 Chart Datum 174.2

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	1986	1986	1986	1986	1986	1986	1986	1986	1986	1986	1986	1986
HIGH	175.60	175.62	175.62	175.63	175.64	175.72	175.74	175.70	175.66	175.78	175.63	175.61
MEAN	174.58	174.50	174.64	174.80	174.89	174.94	174.96	174.93	174.86	174.78	174.69	174.70
	1936	1926	1934	1901	1934	1934	1934	1934	1934	1934	1934	1925
LOW	173.69	173.70	173.86	174.07	174.24	174.27	174.31	174.22	174.15	174.08	173.99	174.06

1900 thru 1986 mean 174.77

Monthly Water Level Stages - Lake Huron-Michigan at Harbor Beach

1900 thru Dec 1986

NOAA/NOS
 WSC-1 N/OMA12
 Great Lakes Water Levels
 Rockville, Maryland 20852

Levels in Meters above
 IGLD (1955)
 ~~~~~  
 Chart Datum 175.8

|      | Jan    | Feb    | Mar    | Apr    | May    | Jun    | Jul    | Aug    | Sep    | Oct    | Nov    | Dec    |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|      | 1986   | 1986   | 1986   | 1986   | 1986   | 1986   | 1986   | 1986   | 1986   | 1986   | 1986   | 1986   |
| HIGH | 176.93 | 176.89 | 176.91 | 177.01 | 177.06 | 177.11 | 177.17 | 177.19 | 177.17 | 177.28 | 177.18 | 177.05 |
| MEAN | 176.14 | 176.13 | 176.14 | 176.22 | 176.32 | 176.39 | 176.43 | 176.42 | 176.37 | 176.30 | 176.24 | 176.19 |
|      | 1965   | 1964   | 1964   | 1964   | 1964   | 1964   | 1964   | 1964   | 1964   | 1964   | 1964   | 1964   |
| LOW  | 175.38 | 175.39 | 175.37 | 175.37 | 175.50 | 175.53 | 175.55 | 175.56 | 175.55 | 175.49 | 175.43 | 175.38 |

1900 thru 1986 mean 176.27

Monthly Water Level Stages - Lake Superior at Marquette

1900 thru Dec 1986

NOAA/NOS  
 WSC-1 N/OMA12  
 Great Lakes Water Levels  
 Rockville, Maryland 20852

Levels in Meters above  
 IGLD (1955)  
 ~~~~~  
 Chart Datum 182.9

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	1986	1986	1986	1986	1986	1986	1986	1986	1985	1985	1985	1985
HIGH	183.38	183.30	183.28	183.33	183.40	183.42	183.46	183.50	183.51	183.56	183.56	183.49
MEAN	183.00	182.93	182.89	182.91	183.01	183.10	183.16	183.20	183.20	183.19	183.14	183.07
	1926	1926	1926	1926	1926	1926	1926	1926	1926	1925	1925	1925
LOW	182.45	182.38	182.37	182.34	182.36	182.46	182.57	182.62	182.72	182.72	182.63	182.56

1900 thru 1986 mean 183.07