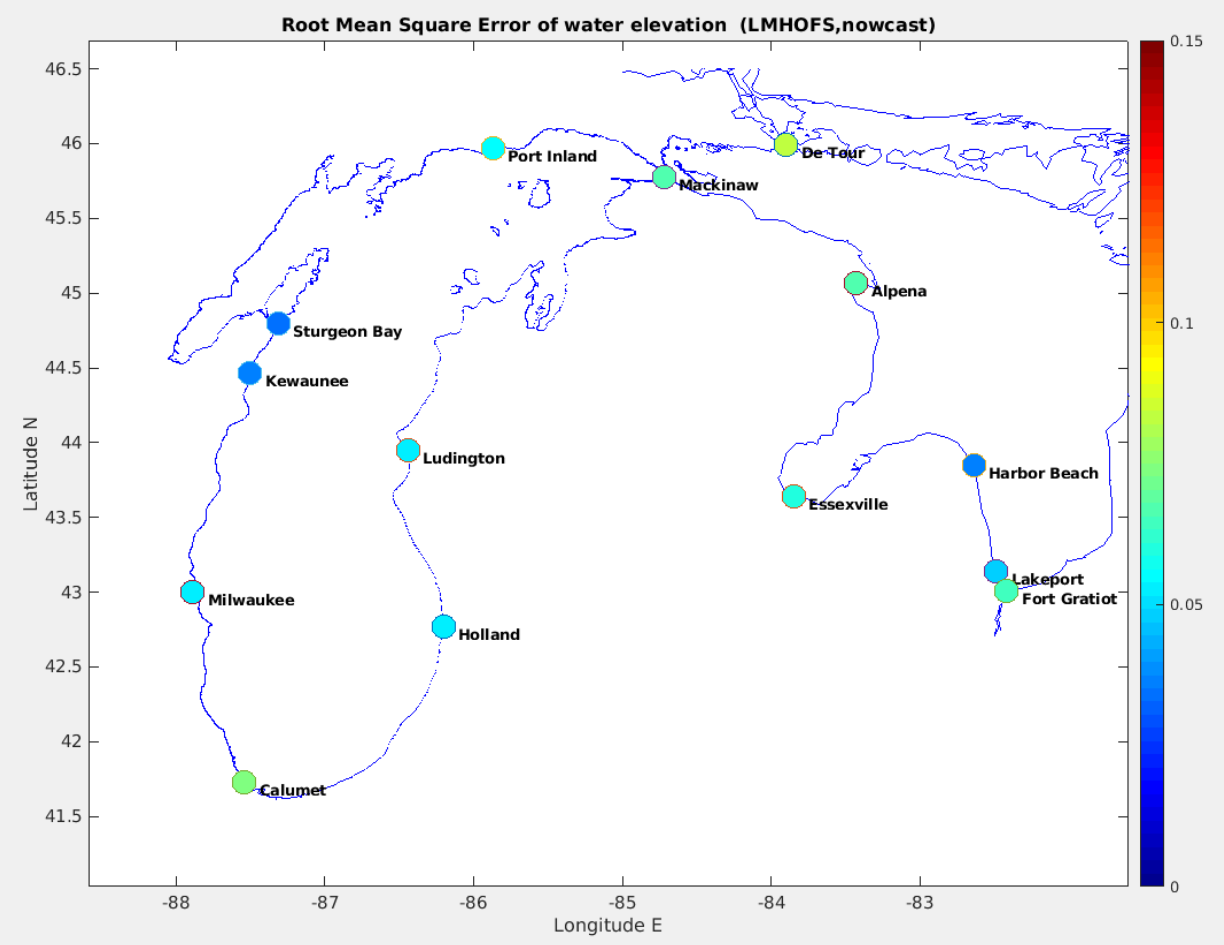
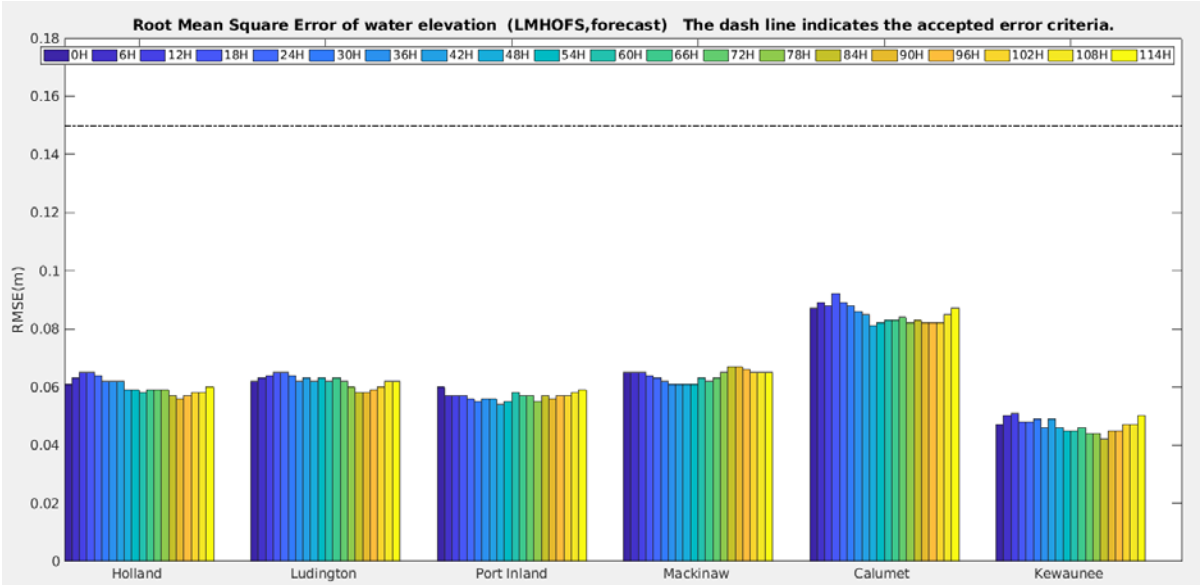
The Lake Michigan and Huron Operational Forecast System (LMHOFS) uses the University of Massachusetts at Dartmouth's three-dimensional Finite Volume Coastal Ocean Model (FVCOM) as its core model structure. It became operational in 2019 to provide nowcast and forecast guidance of water levels, currents, and water temperature four times per day. CO-OPS produces LMHOFS uncertainty estimates by running the NOS standardized skill assessment tools (Hess et al., 2003; Zhang et al. 2009) for the LMHOFS operational model output. The accepted error criteria for skill assessment are: water level 0.15m and temperature 3.0 °C.

The figures below indicate the Root Mean Square Error (RMSE) of LMHOFS water levels, and water temperature nowcasts and forecasts from 6/17/2018 to 4/17/2019. Note: There are no observation data available for surface current skill assessment.

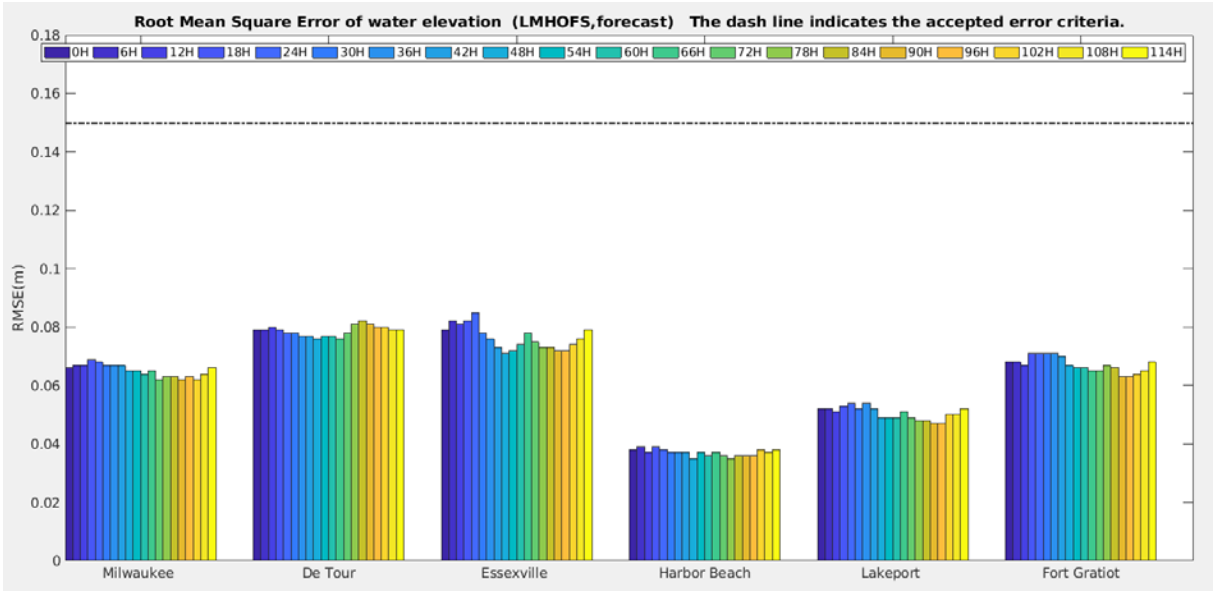
Nowcast Water Level



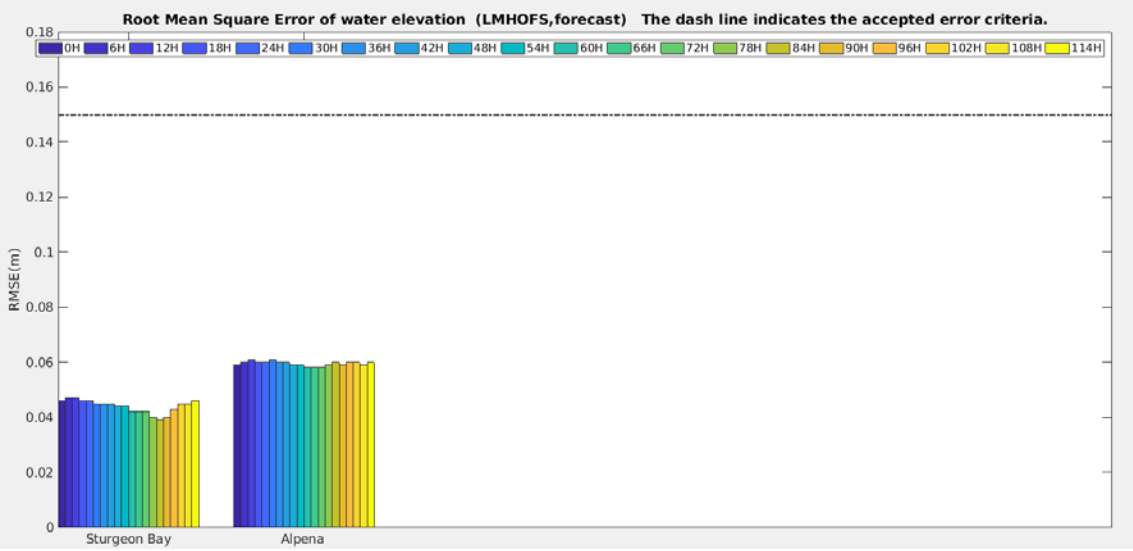
Forecast Water Level (1)



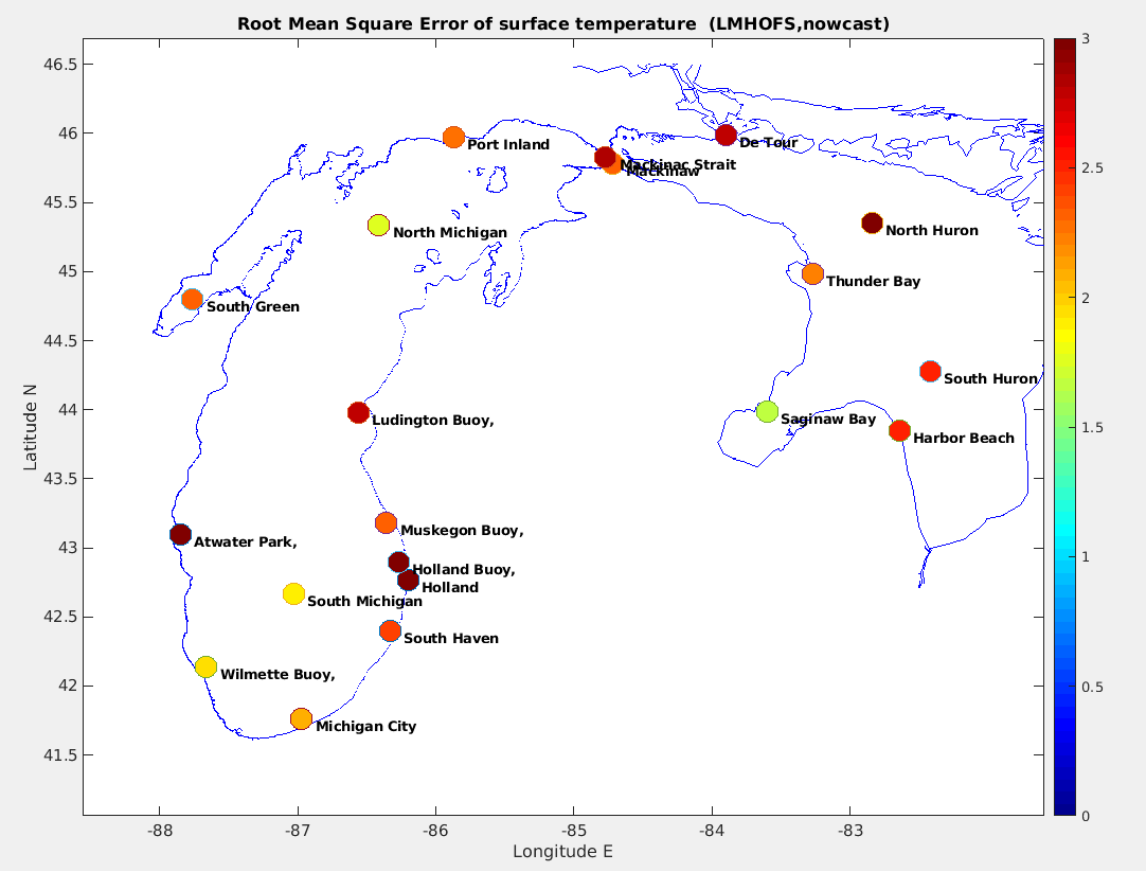
Forecast Water Level (2)



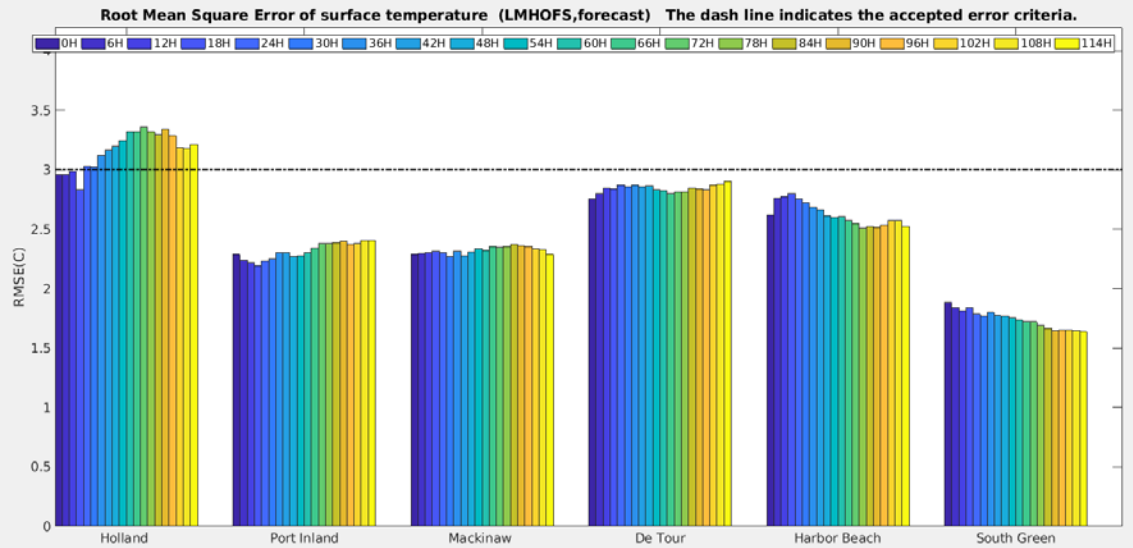
Forecast Water Level (3)



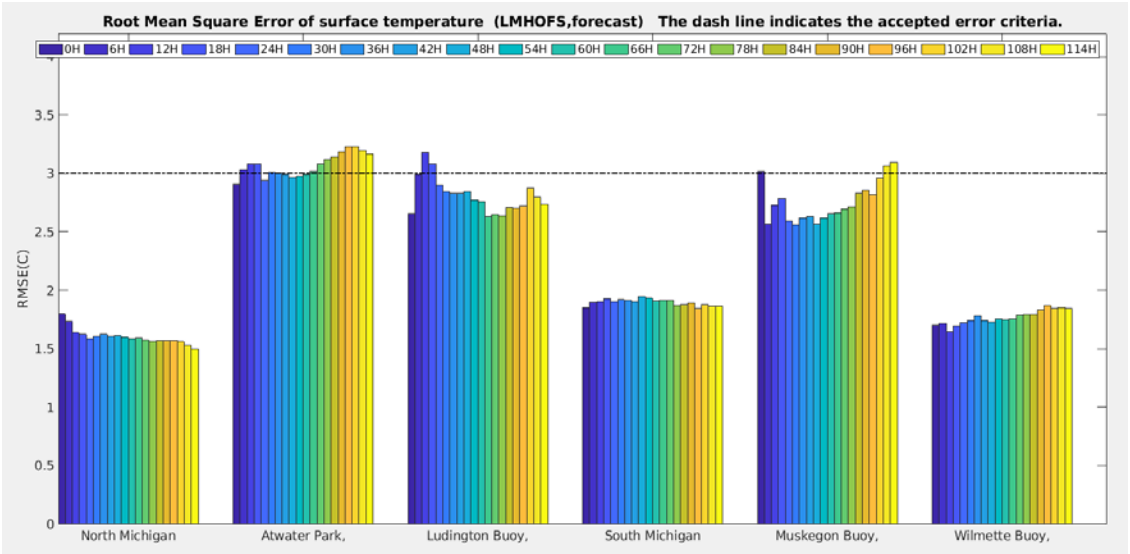
Nowcast Surface Temperature



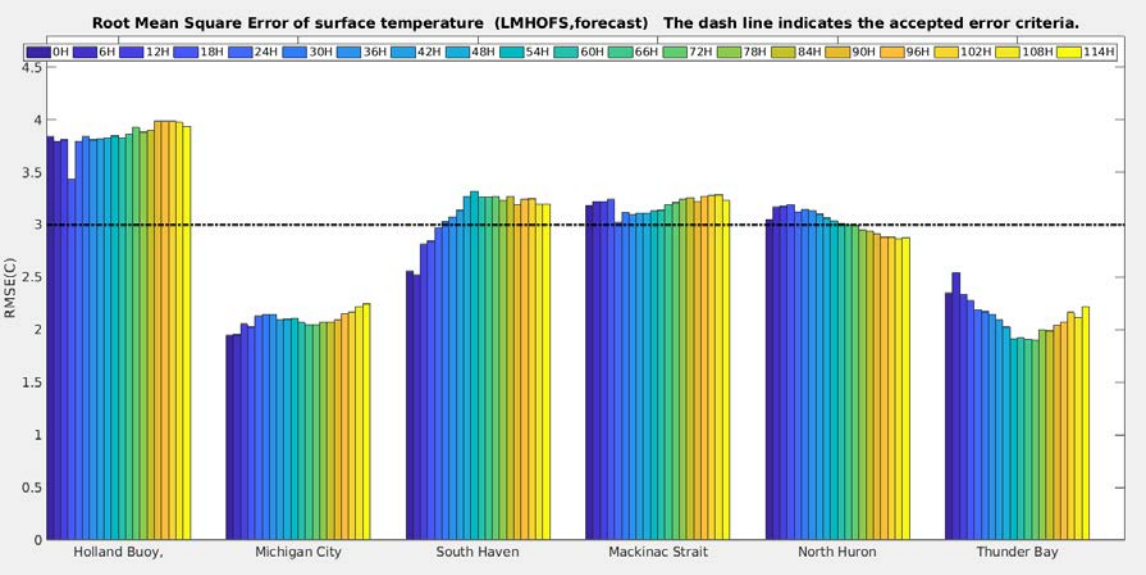
Forecast Surface Temperature (1)



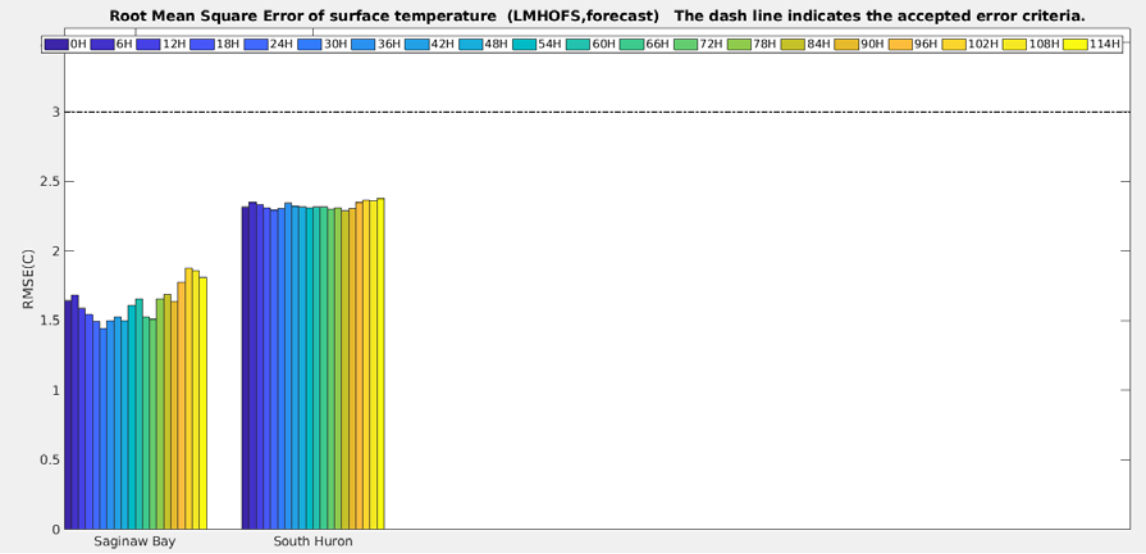
Forecast Surface Temperature (2)



Forecast Surface Temperature (3)



Forecast Surface Temperature (4)



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Hess, K.W.; Gross, T.F.; Schmalz, R.A.; Kelley, J.G.W.; Aikman, F.; Wei, E.; Vincent, M.S. *NOS Standards for Evaluating Operational Nowcast and Forecast Hydrodynamic Model Systems*; NOAA Technical Report NOS CS 17; National Oceanic and Atmospheric Administration: Silver Spring, MD, USA, 2003.

Zhang, A., Hess, K., Wei, E. and Myers, E., 2009. Implementation of model skill assessment software for water level and current in tidal regions, NOAA Technical Report, NOS CS 24.