

Lake Erie Hypoxia Forecast

2024-05-23

Summary

The experimental Lake Erie Hypoxia Forecast is predicting a potential hypoxic upwelling event in response to NE and E wind in the range of 5-10 kt on Saturday and Saturday night. Significant upwelling events along the Ohio shoreline are usually associated with E or NE wind greater than 15 kt, so a significant event would be more likely if wind on Saturday is stronger than currently predicted. The affected area includes the Ohio shoreline of central Lake Erie from Sandusky east to Ashtabula.

Forecasted Temperatures and Oxygen Levels at Bottom

Fri 24 May 2024 11:00 EDT
2024-05-24 15 GMT

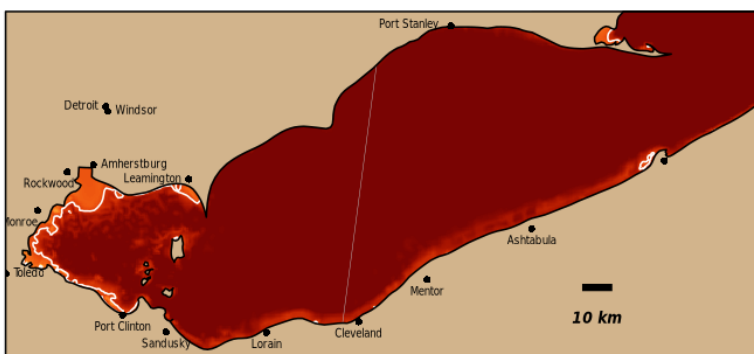
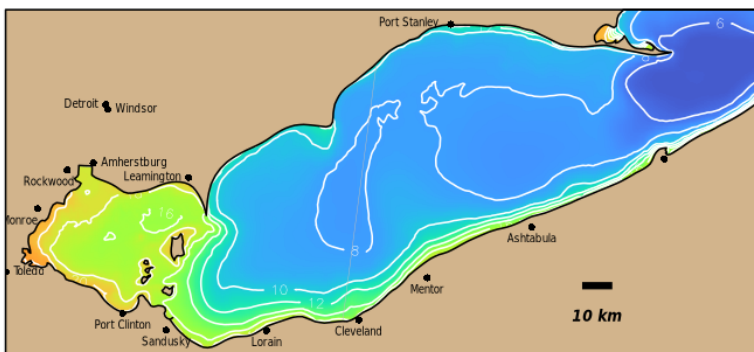


Image created on 2024-05-23

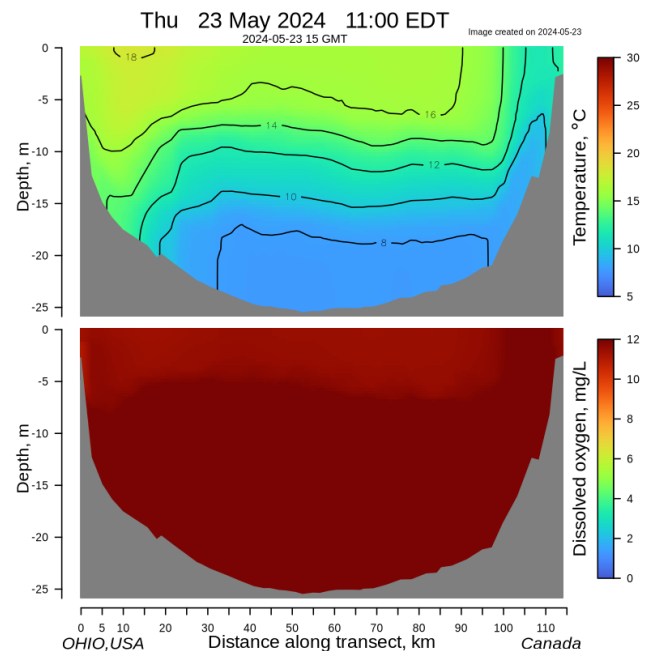
Model output includes near real-time estimated oxygen levels and temperatures in the bottom water across Lake Erie. In the top panel (temperatures), red colors indicate high temperatures (30 C) while blue colors indicate low temperatures (5 C). In the bottom panel (oxygen), red colors indicate high oxygen, while blue-green colors indicate hypoxic (< 2 mg/L) or anoxic (0 mg/L) conditions.

For more information visit: <http://coastalscience.noaa.gov/lake-erie-hypoxia-forecast>

For questions regarding the forecast contact the NCCOS HAB Forecasting Branch: hab@noaa.gov

Vertical transect of Forecasted Oxygen and Temperature

This transect, marked as a light line on the map of Lake Erie, extends from just west of Cleveland, OH to west of Port Stanley, ON. In this cross-sectional view you can see today's modeled distribution of temperatures (top) and oxygen (bottom) in the water column in the center of the lake. The color scales are the same as in the whole-lake images.



Lake Erie Hypoxia Forecast

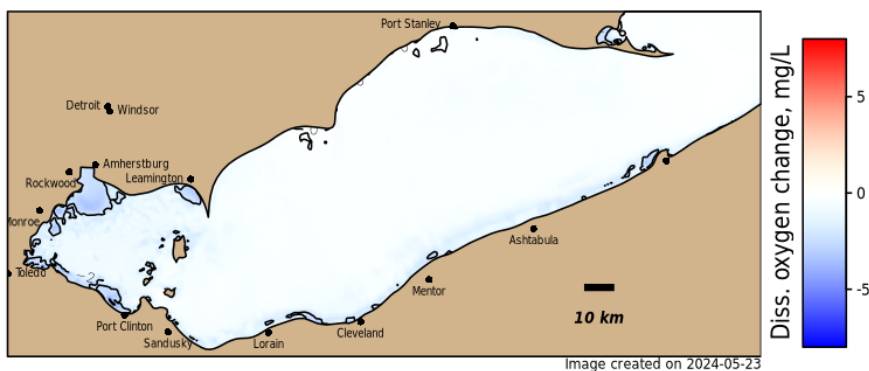
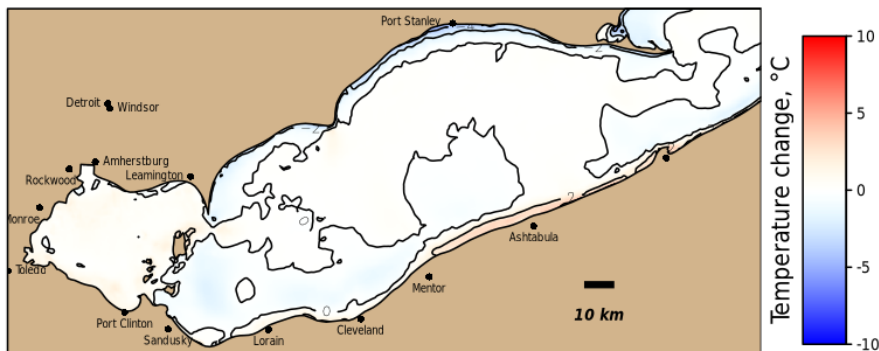
2024-05-23

Lake Erie Forecasted Changes in Bottom Water Temperature and Dissolved Oxygen

Change in Bottom Temperature and Dissolved Oxygen

Fri, 24 May 2024 12:00 with reference to Wed, 22 May 12:00 EDT

2024-05-24 16 with reference to 05-22 16 GMT



Changes in bottom water temperature and dissolved oxygen (mg/L)

Lake Erie Forecasted Winds Counts by Direction (Wind Rose Plot)

This panel depicts the frequency of occurrence of wind directions and speeds for yesterday, today, tomorrow, and the following 3 days. The length of each spoke indicates how frequently a wind blows from a particular direction. Wind speeds are indicated by color, as given by the color scale at the bottom of the plot. The data were sampled from the wind data used to drive the hydrodynamic model simulation at locations around the central basin of Lake Erie

Wind Rose, Lake Erie Central Basin

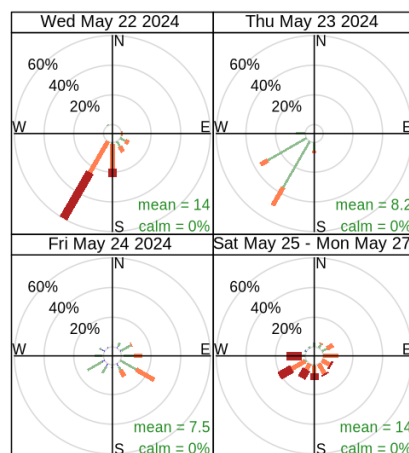


Image created on 2024-05-23

Frequency of counts by wind direction (%)

For more information visit: <http://coastalscience.noaa.gov/lake-erie-hypoxia-forecast>

For questions regarding the forecast contact the NCCOS HAB Forecasting Branch: hab@noaa.gov