

**NOAA/National Weather Service  
Product Description Document**

**Experimental Modernized Open Lake Forecast**

**Part I. Mission Connection**

- a. Product Description** – The Open Lake Forecast (GLF) is a text product issued by five primary Great Lakes Weather Forecast Offices (WFOs) to state expected weather conditions within their marine forecast area of responsibility through Day 5. The primary offices responsible for issuing the GLF are: WFOs Marquette (for Lake Superior), Detroit (for Lake Huron and Lake St. Clair), Chicago (for Lake Michigan), Cleveland (for Lake Erie), and Buffalo (for Lake Ontario). These offices issue a daily GLF that is routinely sent four times per day. It is primarily used as a tool for planning purposes to support and promote safe transportation across the Great Lakes. For more information regarding the GLF product, refer to NWSI 10-312.

**The enhancement is being tested at WFO Detroit for Lake Huron only. The enhancement may be added to the other WFOs at a later date.**

- b. Purpose** - The format of the Open Lakes Forecast (GLF) has been unchanged for many years and has not allowed the Great Lakes offices the flexibility of improving the forecast by adding new predictive variables. A seamless, harmonized suite of marine weather forecast information is required that provides for the variety of forecast elements felt by the customer and is efficiently presented in an easily readable manner.
- c. Audience** – The target audience for this product is all users of marine weather information, including the commercial marine community, recreational boating community, and other government agencies.
- d. Presentation Format** – The modernized format of the GLF will take a bulleted form, similar to the Fire Weather narrative, that concisely and effectively presents existing marine forecast elements - and allows gradual expansion for optional emergent capabilities such as wave spectra information, wave period, visibility, wind threshold probabilities, ice cover, 10 meter wind speed and direction forecasts, 30 meter wind speed and direction forecasts, etc.. For the evaluation period the GLF will contain forecasts of significant weather, 10m wind, 30m wind, significant waves, and occasional (maximum) waves.
- e. Feedback Method** - Comments regarding this enhancement to the GLF can be provided through a survey link which will be advertised in a Public Information Statement. During this experimental period, a proactive effort will be made to educate users and partners of the product availability and use. At the end of the comment period, a decision will be made whether to transition to operational, extend the comment period, or to discontinue the enhancement. If comments are favorable, the modernized GLF will be evaluated for

use at the other primary Great Lakes WFOs. The enhancement could also potentially expand to Great Lakes Nearshore Marine Forecasts.

## **Part II. Technical Description**

- a. Format and Science Basis** – A sample format is below. The format includes mandatory elements in bulleted format. The mandatory elements are 10m and 30m wind speed/direction, significant waves, occasional (maximum) waves and significant weather. Occasional (maximum) waves will only be included when waves exceed a certain threshold (5 feet / 2 meters /).

The Day 3-5 forecast will be in narrative format and will only include weather, significant wave height, and 10 meter wind speed and direction.

Before the end of the evaluation period, additional elements may be added to the format to test the capacity for expansion within the GLF. This could include Probability of Gale Force wind, return frequency of maximum (occasional) waves, or wave period.

**EXPERIMENTAL OPEN LAKE FORECAST FOR LAKE HURON  
NATIONAL WEATHER SERVICE CITY STATE  
TIME-DATE (example: 900 AM EDT FRI MMM DD YYYY)**

**.SYNOPSIS...**

**SSZXXX-XXX>XXX-DDHHMM- (UGC/FIPS CODING)  
GEOGRAPHICAL DESCRIPTORS  
TIME-DATE (example: 900 AM EDT FRI MMM DD YYYY)**

**...HEADLINE...**

**.TODAY...**

WEATHER.....

WIND (10M)....KNOTS

WIND (30M)...KNOTS

SIGNIFICANT WAVES.....FEET/METERS

OCCASIONAL WAVE (HIGHEST 5 PERCENT)....FEET/METERS (ABOVE THRESHOLD)

**.TONIGHT...**

**.TOMORROW...**

**.TOMORROW NIGHT...**

**.FORECAST DAYS 3 THROUGH 5....**

WEATHER...10M WIND...SIGNIFICANT WAVES

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- b. Product Availability** - The experimental product format will be available online at the following URL

<http://www.weather.gov/dtx/GLFTable>

- c. Additional Information** – A product formatter has been developed for use associated with GFE. Additionally, the formatter will use various tools for creating derived products as needed, such as maximum wave and 30m wind speeds. Also, a means for converting abbreviated text into narrative text for NOAA All-Hazards Weather Radio may be created as part of this project.

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Sample Product...

EXPERIMENTAL TABULAR OPEN LAKE FORECAST FOR LAKE HURON  
NATIONAL WEATHER SERVICE DETROIT/PONTIAC MI  
500 AM EST THU JAN 22 2015

.SYNOPSIS...HIGH PRESSURE OF 30.50 INCHES WILL BUILD INTO THE OHIO  
VALLEY TODAY. A COLD FRONT WILL THEN APPROACH ON FRIDAY...MOVING  
THROUGH SATURDAY MORNING.

LHZ361-222100-  
LAKE HURON FROM 5NM EAST OF MACKINAC BRIDGE TO PRESQUE ISLE LT  
BEYOND 5 NM OFF SHORE-  
500 AM EST THU JAN 22 2015

.TODAY...

WEATHER.....PARTLY SUNNY WITH SCATTERED FLURRIES.  
10-M WINDS.....WEST 10 TO 15 KNOTS.  
30-M WINDS.....WEST 15 TO 20 KNOTS.  
SIG WAVES.....2 TO 4 FEET / 1 METER /.  
OCNL WAVES.....AROUND 5 FEET.

.TONIGHT...

WEATHER.....CLOUDY...THEN SLIGHT CHANCE OF SNOW SHOWERS  
AFTER MIDNIGHT.  
10-M WINDS.....SOUTHWEST 15 TO 20 KNOTS.  
30-M WINDS.....SOUTHWEST 20 TO 25 KNOTS.  
SIG WAVES.....1 TO 3 FEET...BUILDING TO 2 TO 4 FEET / 1 METER / AFTER MIDNIGHT.  
OCNL WAVES.....AROUND 5 FEET UNTIL EARLY MORNING.

.FRIDAY...

WEATHER.....CLOUDY WITH CHANCE OF SNOW SHOWERS.  
10-M WINDS.....WEST TO 30 KNOTS.  
30-M WINDS.....WEST GALES TO 35 KNOTS.  
SIG WAVES.....2 TO 4 FEET / 1 METER /.  
OCNL WAVES.....AROUND 5 FEET.

.FRIDAY NIGHT...

WEATHER.....CLOUDY WITH CHANCE OF SNOW SHOWERS.  
10-M WINDS.....WEST 15 TO 20 KNOTS.  
30-M WINDS.....WEST 20 TO 25 KNOTS.  
SIG WAVES.....2 TO 4 FEET / 1 METER /.  
OCNL WAVES.....AROUND 5 FEET UNTIL EARLY MORNING.

.FORECAST DAYS 3 THROUGH 5...

.SATURDAY...CHANCE OF SNOW SHOWERS...THEN SLIGHT CHANCE OF SNOW  
SHOWERS. WEST WINDS 10 TO 15 KNOTS. WAVES 2 TO 4 FEET / 1 METER /.  
.SUNDAY...CHANCE OF SNOW. NORTHEAST WINDS 10 TO 15 KNOTS. WAVES  
2 TO 4 FEET/1 METER/.  
.MONDAY...NORTHEAST WINDS 10 TO 15 KNOTS. WAVES 2 TO 4 FEET/1 METER/.

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