

PRODUCT DESCRIPTION DOCUMENT

Great Lakes Port Forecasts - Experimental

APPROVED: //SIGNED//

James Hoke

Acting Director, Office of Climate, Water, and Weather Services

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GREAT LAKES PORT FORECASTS

Part 1 - Mission Connection

1. Product/Service Description:

Enhancements to the AWIPS NDFD and Text Formatter, and to capabilities of communications and display systems, now afford an opportunity for the NWS to create and test forecast service with an increased spatial and temporal resolution to a marine port area.

2. Purpose/Intended Use:

The purpose of the experimental Great Lakes Port Forecast is to provide forecasts of operationally important (potentially critical) weather, wind and wave conditions more specific both in time and space.

3. Audience:

The request for a Great Lakes Port Forecasts originated from the owners and operators of large ships on the Great Lakes. However, the anticipated audience for the Port Forecast is a wide variety of marine operators that includes recreational boaters, harbormasters, and ships of the Lake Carriers Association.

4. Presentation Format:

The Port Forecasts will be made available via two means, the Digital Marine Weather Distribution System (DMAWDS) and the Internet Home Pages of the Great Lakes Weather Forecast Offices (WFOs). Two forecast formats for each port will be issued – a coded port forecast which will be similar to the MAFOR format from WMO code FM-61-IV, and a tabular format. The forecast period is 24 hours.

A sample of the entire Coded Port Forecast is:

```
FZUS53 KGRB 110835
CPFGRB
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GREAT LAKES PORT FORECAST
NATIONAL WEATHER SERVICE GREEN BAY WI
335 AM CDT FRI MAY 11 2007
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LMZ522-112045-
GREEN BAY ENTRANCE LIGHT
44.66N 87.90W
335 AM CDT FRI MAY 11 2007
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```
DATE          FRI 05/11/07          SAT
UTC 3HRLY    08 11 14 17 20 23 02 05 08 11
CDT 3HRLY    03 06 09 12 15 18 21 00 03 06
```


ESCANABA - Forecast location - Escanaba Harbor

- 11600 - From 0900 UTC to 1200 UTC wind direction from the west at 5 to 10 kts and visibility over 3 nautical miles
- 11710 - From 1200 UTC to 1500 UTC wind direction from the northwest at 5 to 10 kts and visibility over 3 nm
- 11810 - From 1500 UTC to 1800 UTC wind direction from the north at 5 to 10 kts and visibility over 3 nm
- 13820 - From 1800 UTC to 0300 UTC wind direction from the north at 10 to 20 kts and visibility over 3 nm
- 12810 - From 0300 UTC to 0900 UTC wind direction from the north at 5 to 15 kts And visibility over 3 nm
- . - End of weather and wind forecast, and beginning of wave height forecast
- 210103 - From 0900 UTC to 1200 UTC wave heights 1 to 3 feet
- 250001 - From 1200 UTC to 0600 UTC wave heights to 1 foot
- 210001 - From 0600 UTC to 0900 UTC wave heights to 1 foot

Note: The forecasted wave heights are significant wave heights. Some waves may be higher.

A sample of the Tabular Port Forecast portion of the Coded Port Forecast is:

LAKE MICHIGAN-202000-
ESCANABA

45.75N 87.08W

400 AM EDT THU JUL 20 2006

DATE	THU	07/20/06					FRI	07/21/06		
UTC 3HRLY	07	10	13	16	19	22	01	04	07	
EDT 3 HRLY	03	06	09	12	15	18	21	00	03	
WAVES	2	0	0	0	1	1	1	0		
WIND DIR	W	NW	N	N	N	N	N	N		
WIND SPD	10	10	10	20	20	20	15	15		
CLOUDS	BK	BK	SC	FW	SC	FW	FW	FW		

RAIN SHWERS	C	C
TSTMS	S	S

Note: wave heights are in feet.

Wind speeds are in knots.

For Clouds – FW (Few), SC (scattered), BK (Broken), OC (Overcast)

For RAIN SHOWERS and TSTMS - “C” means “Chance” and
“S” means “Slight Chance”

5. Feedback Method:

The initial feedback period will occur from October 2, 2006 to September 30, 2008.

In order to assess this new product/service, users of the experimental Port Forecasts are asked to provide feedback on line at:

<http://www.weather.gov/survey/-survey/php?code=CPF>

Written comments may be mailed to:

National Weather Service
Mr. Tom Townsend
7220 NW 101st Terrace
Kansas City, MO 64153-2371

Comments may also be faxed to Tom at: 816-891-7810

For more detailed information contact Mr. Townsend at 816-268-3149.

Part 2 - Technical

1. Format and Science Basis:

The Great Lakes Port Forecasts will be derived from the National Digital Forecast Database (NDFD) grids using an AWIPS text formatter that will automate the composition and issuance of the product.

Each Great Lakes WFO will disseminate the product over the AWIPS/SBN. The products will also be posted on the home pages of the Great Lakes offices. The spatial resolution of the Port Forecasts can be as small as 2.5 kilometers. Data fields will be wind direction, wind speed, weather, precipitation, wave height, cloud cover, ice coverage, and marine warnings and advisories.

2. Availability:

The Great Lake Lakes Port Forecasts will be issued four times each day around 0200 UTC...0800 UTC...1400 UTC...and 2000 UTC.

3. Additional Information:

Initially, the Great Lakes Port Forecast will be available for the following sites.

In Central Region:

	<u>WFO</u>
Lake Superior	
Two Harbors	Duluth
Duluth Harbor	Duluth
Presque Isle Harbor	Marquette
Whitefish Point	North Central Lower Michigan (Gaylord)
Soo Locks	North Central Lower Michigan (Gaylord)
Lake Michigan	
Escanaba	Marquette
Frankfort	North Central Lower Michigan (Gaylord)
Sturgeon Bay Entrance	Green Bay
Green Bay Entrance	Green Bay
Milwaukee Harbor	Milwaukee
Calumet Harbor	Romeoville/Chicago
Burns Harbor	Romeoville/Chicago
St. Joseph Harbor	Northern Indiana
Grand Haven Harbor	Grand Rapids
Lake Huron	
Port of Calcite	North Central Lower Michigan (Gaylord)
Alpena Harbor	North Central Lower Michigan (Gaylord)

Port of Saginaw	Detroit
Port Huron	Detroit

Detroit River	
Port of Detroit	Detroit

In Eastern Region:

Lake Erie	
Toledo Harbor	Cleveland
Cleveland Harbor	Cleveland
Ashtabula Harbor	Cleveland
Buffalo Harbor	Buffalo

Lake Ontario	
Rochester Harbor	Buffalo
Oswego Harbor	Buffalo

Access to each of the Great Lakes forecast offices web pages can be made by navigating from the National Weather Service web page: <http://www.nws.noaa.gov> and from regional web sites.