



# **Marine Surveys & Changes**

**Brian Hirsch, Marine Manager  
National Weather Service**

governmentshutdown.noaa.gov



# National Oceanic and Atmospheric Administration

U.S. Department of Commerce

The federal government is currently shutdown. NOAA.gov and many associated websites are unavailable while others remain live but not supported.

Specific NOAA websites necessary to protect lives and property are operational and will be maintained.

See [Weather.gov](https://www.weather.gov) for critical weather information. Visit [Commerce.gov](https://www.commerce.gov) to learn more about the shutdown.

[www.Weather.gov/GreatLakes](https://www.weather.gov/GreatLakes)

**Is an Essential Government Page and the data will be available even during a government shutdown.**

# Change:

The background of the slide features two red flags on poles, set against a dark blue gradient. The flags are positioned diagonally, with the top flag slightly higher and further to the left than the bottom flag. Both flags have a dark, square-shaped patch in the center, which appears to be a stylized logo or emblem. The flags are shown as if they are waving in the wind, with some fraying at the edges.

Supporting you with our evolving understanding and capabilities - means we need to make changes to the existing forecasts from time to time.

# You may have noticed, WE STOPPED SHOUTING



GLFLH

OPEN LAKE FORECAST FOR LAKE HURON  
NATIONAL WEATHER SERVICE DETROIT/PONTIAC MI  
1001 PM EST MON JAN 30 2017

FOR WATERS BEYOND FIVE NAUTICAL MILES OFF SHORE ON LAKE HURON

WAVES ARE THE SIGNIFICANT WAVE HEIGHT - THE AVERAGE OF THE HIGHEST 1/3 OF THE WAVE SPECTRUM. OCCASIONAL WAVE HEIGHT IS THE AVERAGE OF THE HIGHEST 1/10 OF THE WAVE SPECTRUM.

.SYNOPSIS...LOW PRESSURE...WEAKENING TO 29.60 INCHES...WILL DROP FROM MINNESOTA INTO THE CENTRAL GREAT LAKES BY TUESDAY. A SECOND AND SLIGHTLY WEAKER AREA OF LOW PRESSURE WILL MEANWHILE TRACK ACROSS LAKE HURON LATE TUESDAY NIGHT INTO WEDNESDAY. THE PASSAGE OF THESE LOWS WILL PULL A COLD FRONT THROUGH THE REGION TUESDAY INTO WEDNESDAY.

LHZ361-310915-  
LAKE HURON FROM 5NM EAST OF MACKINAC BRIDGE TO PRESQUE ISLE LT BEYOND 5 NM OFF SHORE-  
1001 PM EST MON JAN 30 2017

.REST OF TONIGHT...SOUTH WINDS 10 TO 15 KNOTS BECOMING SOUTHEAST 5 TO 10 KNOTS AFTER MIDNIGHT. WAVES 1 TO 3 FEET.  
.TUESDAY...SOUTHEAST WINDS 5 TO 10 KNOTS. A CHANCE OF SNOW. WAVES 1 TO 3 FEET.  
.TUESDAY NIGHT...SOUTHEAST WINDS 5 TO 10 KNOTS BECOMING WEST 10 TO 15 KNOTS LATE. SNOW SHOWERS LIKELY IN THE EVENING...THEN A CHANCE OF SNOW SHOWERS AFTER MIDNIGHT. WAVES 1 TO 3 FEET.  
.WEDNESDAY...NORTHWEST WINDS 15 TO 20 KNOTS. A CHANCE OF SNOW SHOWERS IN THE MORNING. WAVES 3 TO 5 FEET.  
.WEDNESDAY NIGHT...NORTHWEST WINDS 15 TO 20 KNOTS BECOMING WEST 20 TO 25 KNOTS WITH GUSTS TO 30 KNOTS LATE. WAVES 3 TO 5 FEET.

GLFLH

Open Lake Forecast for Lake Huron  
National Weather Service Detroit/Pontiac MI  
959 PM EST Tue Jan 30 2018

For waters beyond five nautical miles off shore on Lake Huron

Waves are the significant wave height - the average of the highest 1/3 of the wave spectrum. Occasional wave height is the average of the highest 1/10 of the wave spectrum.

.SYNOPSIS...Strong low pressure, 29.20 inches, will track across western Ontario Wednesday bringing a strengthening southwesterly gale.

LHZ361-310915-  
Lake Huron from 5NM east of Mackinac Bridge to Presque Isle Lt beyond 5 NM off shore-  
959 PM EST Tue Jan 30 2018

...GALE WARNING IN EFFECT THROUGH WEDNESDAY AFTERNOON...

.REST OF TONIGHT...South winds 15 to 20 knots increasing to 20 to 25 knots with gusts to 35 knot gales after midnight. Snow showers after midnight. Waves 2 to 4 feet building to 6 to 9 feet after midnight. Waves occasionally around 12 feet.  
.WEDNESDAY...South winds 20 to 25 knots with gusts to 35 knot gales becoming southwest 15 to 20 knots with gusts to 30 knots in the late morning and early afternoon...then becoming west 20 to 25 knots with gusts to 30 knots late in the afternoon. Snow showers until late afternoon. A chance of showers in the late

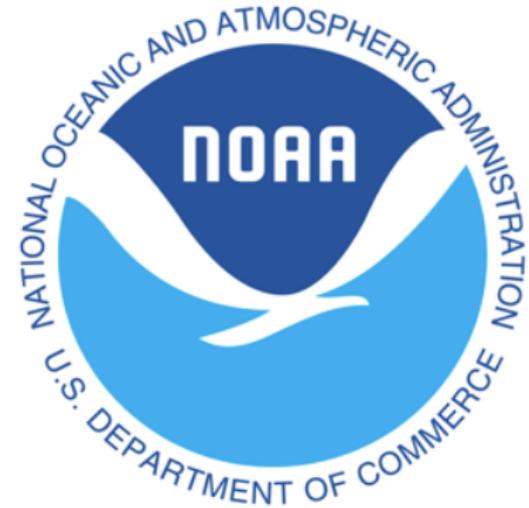
## Supporting you with our evolving understanding and capabilities

Last year we warned we would have some surveys for you and we needed your help.

We asked for your help with 2 Surveys this past year:

1. NWS has evidence that our warnings could be simplified and shortened. Should All NWS Warnings from Winter to Blizzards to Marine, Gales, and Storm Warnings change to meet our new standard.
2. NWS has capability to provide more information on winds and waves and match this up in a format which could be viewed more easily and matched by others. Should we change?

# You may recall this survey:

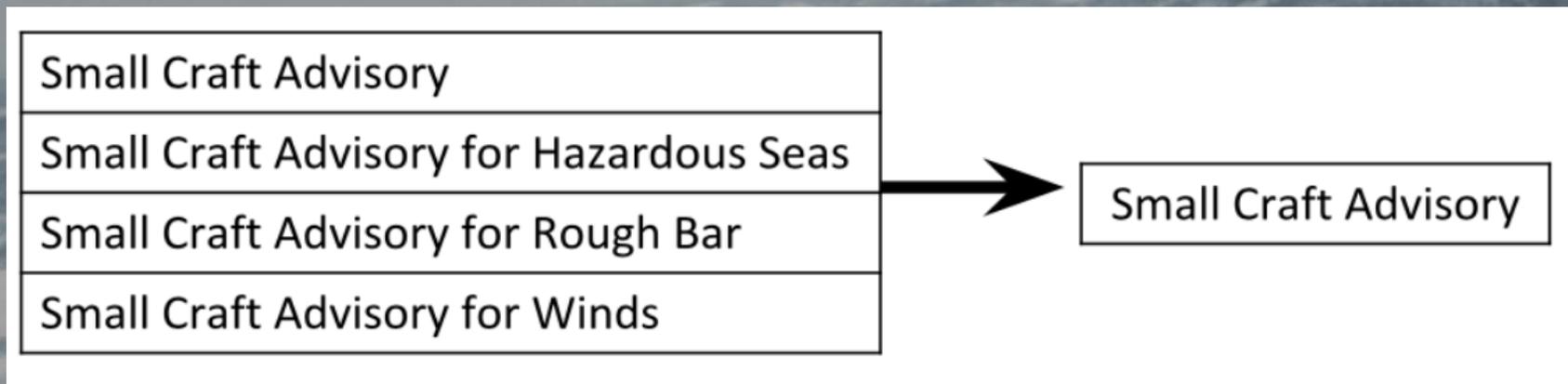


## Hazard Simplification Project: Marine Consolidation and Reformatting

### Introduction and Consent

As part of the ongoing Hazard Simplification Project, the National Weather Service (NWS) is proposing to reduce the number of (consolidate) and reformat its Marine hazard messages (products). In support of this project, NWS solicited public comment on a series of consolidation and reformatting proposals pertaining to our Marine products earlier this year.

Results:



*Gale, and Storm Warnings will  
retain their current IDs  
per your survey comments*

**Comments of the Boat Owners Association of The United States  
Regarding  
NOAA - National Weather Service  
Marine Advisory Consolidation**

**October 20, 2017**

BoatU.S. is the largest organization of recreational boaters in the United States, with more than 570,000 members nationwide. For more than 50 years we have worked to ensure that our members, who own a wide array of types and sizes of boats, can continue to enjoy this healthy outdoor family recreation. We appreciate the opportunity to comment on the proposed changes to marine weather products and their implications for recreational boaters.

Accurate weather information is an important part of any trip on the water. Helping recreational boaters understand the weather conditions they can expect is a key component of safe boating and a vital role of the National Weather Service. As NWS contemplates changes to its marine weather products, we urge a careful review be made of how boaters gather and interpret weather data in order to make intelligent choices on the water.

We have reviewed the proposed changes to the marine advisories, part of a larger effort to simplify NWS hazard messages. As we understand the goals of this program, NWS is seeking to reduce confusion of consumers regarding potential hazardous weather conditions. We appreciate the interest in improving the usability of weather information by the general public. We are concerned, however, with some of the proposed changes to marine warning information and the potential for them to decrease boaters understanding of hazardous weather condition while they are on the water.

Our general concern with the consolidation is that it takes a system that can precisely convey meaning to mariners in two to three words and generalizes it, requiring them to read or listen further to obtain the full understanding of the forecasted conditions. For example just the words, *Small Craft Advisory*, *Gale Warning* and *Rough Bar* convey very specific information to mariners. The general terms of Marine Advisory, Marine Watch and Marine Warning all necessitate additional information to make the best decisions. We recognize that NWS would further expand on the *Marine Advisory* with additional information in the message that follows the advisory. The addition of the "Where, When, Additional Details and Precautionary/Preparedness Action" format does add a logical flow to the additional information provided. Unfortunately, we are concerned that the loss of the specific key words such as *Small Craft Advisory*, *Rough Bar* or *Hazardous Seas*, terms well recognized by the boating community, will decrease a

## Example of Today's Message

URGENT - MARINE WEATHER MESSAGE  
National Weather Service Seattle WA  
848 AM PDT Wed Jul 19 2017

PZZ133-200000-  
/O.NEW.KSEW.SC.Y.0177.170720T0100Z-170720T1000Z/  
Northern Inland Waters Including The San Juan Islands-  
848 AM PDT Wed Jul 19 2017

...SMALL CRAFT ADVISORY IN EFFECT FROM 6 PM THIS EVENING TO 3 AM PDT THURSDAY...

The National Weather Service in Seattle has issued a Small Craft Advisory...which is in effect from 6 PM this evening To 3 AM PDT Thursday.

\* WINDS...Southwest 15 to 25 knots. Strongest winds far south part.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A Small Craft Advisory means that wind speeds of 21 to 33 knots are expected to produce hazardous wave conditions to small craft. Inexperienced mariners...especially those operating smaller vessels should avoid navigating in these conditions.

URGENT - MARINE WEATHER MESSAGE  
National Weather Service Seattle WA  
848 AM PDT Wed Jul 19 2017

PZZ133-200000-  
/O.NEW.KSEW.MA.Y.0177.170720T0100Z-170720T1000Z/  
Northern Inland Waters Including The San Juan Islands-  
848 AM PDT Wed Jul 19 2017

**NEW Format:  
What...  
Where...  
When...**

...Small Craft Advisory in Effect...

\* WHAT...Hazardous wind for small craft expected. Winds will be 15 to 25 knots with higher gusts.

\* WHERE...Northern inland waters including the San Juan Islands

\* WHEN...6 PM Wednesday to 3 PM Thursday

\* ADDITIONAL DETAILS...Strongest winds will be furthest south

\*PRECAUTIONARY/PREPAREDNESS ACTIONS...Winds and seas will create a potential hazard to smaller vessels and inexperienced mariners.

Reformatting is taking place in most  
Weather Warnings such as winter and  
marine.

The new format will highlight  
the

WHAT, WHERE

and

WHEN

followed by precautionary and  
preparedness actions.

URGENT – WINTER WEATHER MESSAGE

National Weather Service Northern Indiana

1:15 PM EST Fri Dec 1 2017

...Winter Storm to Bring Heavy Snow to the Area...

INZ003-004-MIZ077-078-140500-

/O.NEW.KIWX.WS.W.0001.171201T1815Z-171202T1800Z/

La Porte-St. Joseph in-Berrien-Cass MI-

Including the cities of...Michigan City...La Porte...South bend...

Mishawaka...New Carlisle...Walkerton...Niles...Benton Harbor...

St. Joseph...Buchanan...Dowagiac...Cassopolis...Marcellus

1:15 PM EST Fri Dec 1, 2017 / 12:15 PM CST Fri Dec 1 2017

... WINTER STORM WARNING IN EFFECT UNTIL 1 PM EST /

12 PM CST SATURDAY...

\*WHAT... Heavy snow and blowing snow. Reduced visibility with slick,  
snow covered roads.

\*WHERE... Portions of northwest Indiana and southwest Lower Michigan

\*WHEN... Until 1 pm EST Saturday. The heaviest snowfall rates will occur until  
midnight tonight.

\*ADDITIONAL DETAILS... Plan on difficult travel conditions, including the  
evening commute. Northwest winds of 15 to 25 mph may gust to near 30 mph  
at times, leading to white out conditions.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A winter storm warning means significant amounts of snow, sleet, and/or ice are occurring.  
Strong winds are also expected. This will make travel very hazardous or impossible.

# The Great Lakes Survey

weather.gov/greatlakes/modernized



**NATIONAL WEATHER SERVICE**  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION



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## Great Lakes Modernized

As times and capabilities change, it is important to test new ways to bring the forecast to Marine Customers. The Open Lake Forecast (GLF) is a text product issued by five primary Great Lakes Weather Forecast Offices. It is written mainly in a sentence style which adds extra length to the forecast. This page shows an alternate format for the information and we want to know if this is easier to read and if you find this helpful.



Lake Superior



Lake Michigan



Lake Huron



Lake Erie



Lake Ontario

Before we make a change to the forecast appearance, we are creating these forecasts here and requesting your comments via the provide feedback link below. Please take a few minutes today to provide us your comments. Need a little help? Click on the side by side comparison of the forecast for Lake Huron.

[Provide Feedback Here](#)

[Side By Side Comparison](#)

# Which is easier to read?

Waves are the significant wave height - the average of the highest 1/3 of the wave spectrum. Occasional wave height is the average of the highest 1/10 of the wave spectrum.

.SYNOPSIS...High pressure, 30.60 inches, will track from the plains this morning to the eastern Great Lakes this evening. high will then move to New England tonight while low pressure of 30.00 inches lifts from the southern Mississippi Valley into the upper Ohio Valley. This low will track into New England on Wednesday. High pressure will then expand across the Ohio Valley and southern Great Lakes by Thursday in its wake.

LHZ361-061500-  
Lake Huron from 5NM east of Mackinac Bridge to Presque Isle Lt beyond 5 NM off shore-  
405 AM EST Tue Feb 6 2018

.Today...  
Weather.....Partly sunny.  
Sfc winds.....West 10 to 15 knots.  
100-ft winds.....West 15 to 20 knots.  
Sig waves.....2 to 4 feet / around 1 meter /.

.TONIGHT...  
Weather.....Cloudy, then chance of snow showers after midnight.  
Sfc winds.....Southwest 5 to 10 knots.  
100-ft winds.....Southwest 10 to 15 knots.  
Sig waves.....2 feet or less / less than 1 meter /.

.WEDNESDAY...  
Weather.....Mostly cloudy with chance of snow showers partly sunny in the afternoon.  
Sfc winds.....East 5 to 10 knots becoming northwest 10 knots in the afternoon.  
100-ft winds.....East 10 to 15 knots becoming northwest 15 knots in the afternoon.  
Sig waves.....1 to 3 feet / 1 meter or less /.

.WEDNESDAY NIGHT...  
Weather.....Partly cloudy.  
Sfc winds.....West 10 to 15 knots.  
100-ft winds.....West 15 to 20 knots.  
Sig waves.....2 to 4 feet / around 1 meter /.

more....

## Forecasts

Local  
Graphical  
Aviation  
Marine  
Hurricanes  
Severe Weather  
Fire Weather  
more....

## Text Messages

By State  
By Message Type  
National

## Forecast Models

Numerical Models  
MOS Prod Statistical Model  
GFS-LAMP Prod Statistical Model  
more....

## Climate

Past Weather  
Predictions

## Weather Safety

Weather Radio  
Hazard Assmt...  
StormReady  
TsunamiReady  
Skywarn™  
more....

## Education/Outreach Information

## Information Center

Tsunamis  
Publications...  
more....

## Contact Us

FAQ  
Comments...

Waves are the significant wave height - the average of the highest 1/3 of the wave spectrum. Occasional wave height is the average of the highest 1/10 of the wave spectrum.

.SYNOPSIS...High pressure, 30.60 inches, will track from the central plains this morning to the eastern Great Lakes this evening. This high will then move to New England tonight while low pressure of 30.00 inches lifts from the southern Mississippi Valley into the upper Ohio Valley. This low will track into New England on Wednesday. High pressure will then expand across the Ohio Valley and southern Great Lakes by Thursday in its wake.

LHZ361-062130-  
Lake Huron from 5NM east of Mackinac Bridge to Presque Isle Lt beyond 5 NM off shore-  
331 AM EST Tue Feb 6 2018

.TODAY...West winds 10 to 15 knots. Waves 1 to 3 feet.  
.TONIGHT...Southwest winds 5 to 10 knots in the evening becoming light and variable...then becoming southeast 5 to 10 knots early in the morning. A chance of snow showers early in the morning. Waves 2 feet or less.  
.WEDNESDAY...East winds 5 to 10 knots becoming west 10 to 15 knots early in the afternoon. A chance of snow showers until late afternoon. Waves 2 feet or less.  
.WEDNESDAY NIGHT...West winds 10 to 15 knots. Waves 2 feet or less.  
.THURSDAY...West winds 5 to 10 knots increasing to 10 to 15 knots late in the morning...then decreasing to 5 to 10 knots late in the afternoon. Waves 2 feet or less.  
.FRIDAY...Northwest winds 5 to 10 knots early in the morning becoming light and variable. Waves 2 feet or less.  
.SATURDAY...Southwest winds 5 to 10 knots. A chance of snow showers until early morning. Waves 2 feet or less.

Wave heights are for ice free areas.

\$\$

LHZ362-363-062130-  
Lake Huron from Presque Isle Light to Sturgeon Point MI beyond 5NM off shore-  
Lake Huron from Sturgeon Point to Alabaster MI beyond 5NM off shore-  
331 AM EST Tue Feb 6 2018

.TODAY...West winds 15 to 20 knots decreasing to 10 to 15 knots late in the afternoon. Waves 3 to 5 feet.  
.TONIGHT...Southwest winds 5 to 10 knots backing to the east

# We Asked and You Responded to the Survey - Thank You!

The screenshot shows a web browser window with the URL [www.nws.noaa.gov/survey/nws-survey.php?code=ModGLFProd](http://www.nws.noaa.gov/survey/nws-survey.php?code=ModGLFProd). The page header includes the NOAA logo, the text "National Oceanic and Atmospheric Administration's National Weather Service", and the "weather.gov" domain. A navigation bar contains links for "Site Map", "News", "Organization", "Search", "NWS", "All NOAA", and "Go".

The main content area is titled "Home -> Customer Survey" and "NWS Customer Survey for Official and Experimental Products/Services". It includes the OMB Control Number "0648-0342 Expires 05-31-2018" and a note: "Note: this survey is intended to document your satisfaction with this experimental product or service and to collect suggestions for improvements. We are not able to respond to questions you may submit in this survey. If you want to ask a question, please hit the 'Back' button on your browser and select the 'Ask Questions' link, or you can use the [comment/feedback link on this page](#)." A link for "- Privacy Policy -" is also present.

The survey question is: "Name of Product/Service: *Experimental Modernized GLF Product*".

Question 1: "1. On a scale of 0 to 10 (10 highest), rate technical quality of this product/service (e.g., forecast accuracy, timeliness, problems with display)." Below this is a "Select Rating" dropdown menu and a text box for comments: "Please provide specific comments below.".

Question 2: "2. On a scale of 0 to 10 (10 highest), rate how easy you found the product/service to interpret and use." Below this is a text box for comments.

The left sidebar contains various navigation links: "Local forecast by 'City, St'" with input fields for "City, St" and "Go"; "Sign-up for Email Alerts"; "XML RSS Feeds"; "Warnings" (Current, By State/County..., UV Alerts); "Observations" (Radar, Satellite, Snow Cover, Surface Weather..., Observed Precip); "Forecasts" (Local, Graphical, Aviation, Marine, Rivers & Lakes, Hurricanes, Severe Weather, Space Weather, Fire Weather); "Text Bulletins" (By State, By Message Type, National); and "Forecast Models" (Numerical Models).

## Question: Rate readability and ease of interpretation of the Tabular GLF

22 of 30 (78%) rated the new format strongly favorable (score of 8-10).

5/30 (17%) rated the new product neutrally (score of 4-7).

3/30 (10%) rated the new format strongly unfavorable (score of 1-3).

comments include:

- Easier to "read" by far.
- I like the new Open Water Forecast. It is very easy to read, and it's mobile phone friendly as well!
- Tabular format is easier to use when you want to pick out the "highlights"...similar to TS products out of TPC.
- Tabular format. Will not print out as nicely for hard copy records (Tug Operator)

www.nws.noaa.gov/survey/nws-survey.php?code=ModGLFProd

weather.gov

National Oceanic and Atmospheric Administration's  
National Weather Service

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NWS Customer Survey for Official and Experimental Products/Services

Note: this survey is intended to document your satisfaction with this experimental product or service and to collect suggestions for improvements. We are not able to respond to questions you may submit in this survey. If you want to ask a question, please hit the "Back" button on your browser and select the "Ask Questions" link, or you can use the [comment/feedback link on this page](#).

- Privacy Policy -

Name of Product/Service: Experimental Modernized GLF Product

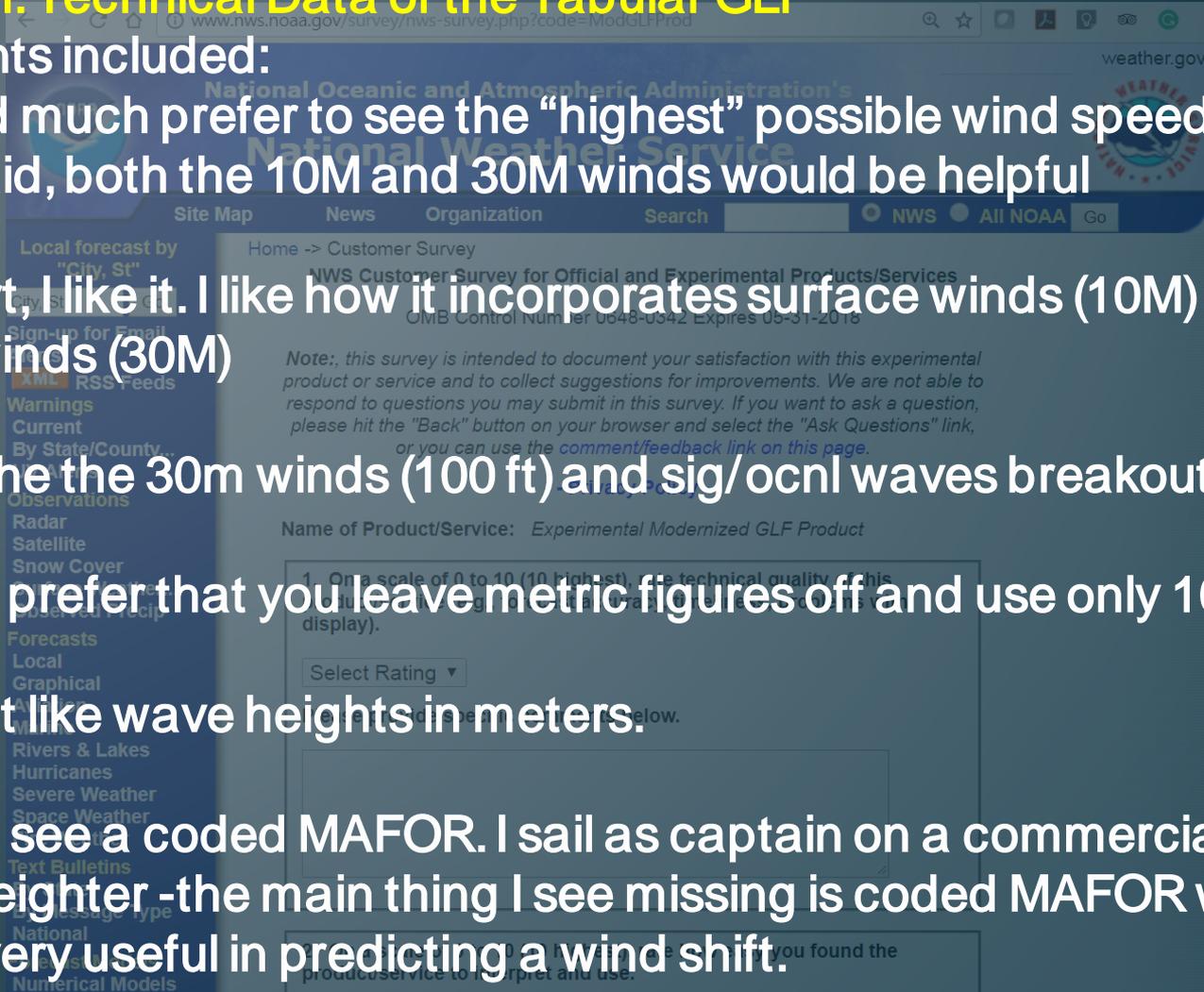
1. On a scale of 0 to 10 (10 highest), rate technical quality of this product or service and to collect suggestions for improvements. We are not able to respond to questions you may submit in this survey. If you want to ask a question, please hit the "Back" button on your browser and select the "Ask Questions" link, or you can use the [comment/feedback link on this page](#).

2. On a scale of 0 to 10 (10 highest), rate how easy you found the product/service to interpret and use.

## Question: Technical Data of the Tabular GLF

comments included:

- I would much prefer to see the “highest” possible wind speed. That being said, both the 10M and 30M winds would be helpful
- In short, I like it. I like how it incorporates surface winds (10M) with higher winds (30M)
- (Like) the the 30m winds (100 ft) and sig/ocnl waves breakout.
- Would prefer that you leave metric figures off and use only 100'
- I do not like wave heights in meters.
- Do not see a coded MAFOR. I sail as captain on a commercial Great Lakes freighter -the main thing I see missing is coded MAFOR which can be very useful in predicting a wind shift.



## **Final Comments regarding the Survey :**

Many of the technical comments appreciated having significant waves (highest 30% in the spectra) and occasional waves (highest 10% in the spectra)

The surface(10 meter) and the 100 foot(30 meter) levels also drew a few comments with small boats and tug operators responding no need for winds at 100 foot and larger Ships requesting those higher winds.

There were numerous comments concerning the lack of a MAFOR forecast. While use of the MAFOR should be discouraged due to its lack of spatial and temporal resolution - many mariners still use the MAFOR and as a result of this survey, the MAFOR has been included in the code for the tabular GLF for Lake Huron as a test and will be in the final version in 2019.

Lastly, there were several complaints about the use of metric units from U.S. - based mariners. While international vessels do frequent the Great Lakes, it is recommended that the Tabular GLF use imperial units for consistency and a less “cluttered” look

## Required Government Survey Question

“Do you feel it is appropriate for NWS to provide this product ?”.

- Yes. So clear and easy to read, I think it might be widely used. Accurate data easy to locate will make it more widely used by more people. Who better than NOAA?
- Yes. May I say God and his weather can kick us in the head. But we have the ability to see the boot coming. That is why it is appropriate for the NWS to stand on the wall and say here it comes.
- Yes, for safety of Life at sea, (and) commercial business efficiency for cargo delivery.
- Yes. More reliable and verifiable professional than others.
- Yes. It is imperative to utilize the forecasts for professional mariners, we check the forecasts on average every 4 hours. A user friendly version is much appreciated.

www.nws.noaa.gov/survey/nws-survey.php?code=ModGLFProd

weather.gov

Home -> Customer Survey  
NWS Customer Survey for Official and Experimental Products/Services

GMB Control Number 0648-0342 Expires 05-31-2018

Note: this survey is intended to document your satisfaction with this experimental product or service and to collect suggestions for improvement. We are not able to answer questions about the survey. If you have a question, please hit the "Back" button on your browser and select the "Ask Questions" link.

- Privacy Policy -

Name of Product/Service: *Experimental Modernized GLF Product*

product/service (e.g., forecast accuracy, timeliness, problems with display).

Select Rating ▾

Please provide specific comments below.

2. On a scale of 0 to 10 (10 highest), rate how easy you found the product/service to interpret and use.

## Supporting you with our evolving understanding and capabilities

To summarize, based on your surveys, we will have 2 Changes in future

1. Small Craft, Gale, and Storm Warnings - names will remain unchanged.
1. This Fall, 2018: Small Craft, Gale, and Storm warnings will adopt the: What - When - Where format.
1. In 2019: the Open Lakes Forecast will transition from the current format to a mobile friendly Tabular Display.

# Thank you

- Any questions, please contact:
  - Brian Hirsch [brian.hirsch@noaa.gov](mailto:brian.hirsch@noaa.gov)
  - Ron Williams [ron.williams@noaa.gov](mailto:ron.williams@noaa.gov)
  - Mike Bardou [mike.bardou@noaa.gov](mailto:mike.bardou@noaa.gov)