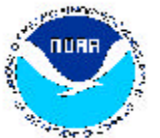


A Mariner's Guide to  
Marine Weather Services  
Great Lakes



U.S. DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
National Weather Service

NOAA PA 98053



## Introduction

Few people are affected more by weather than the mariner. An unexpected change in winds, waves, or visibility can reduce the efficiency of marine operations and threaten the safety of a vessel and its crew. The National Weather Service (NWS), a part of the National Oceanic and Atmospheric Administration (NOAA), provides marine weather warnings and forecasts to serve all mariners who use the Great Lakes for livelihood or recreation. This pamphlet describes marine weather services available from the NWS and other agencies.

## Warning and Forecast Services

The warning and forecast program is the core of the NWS's responsibility to mariners. Warnings and forecasts help the mariner plan and make decisions protecting life and property. NWS also provides information through weather statements or outlooks that supplement basic warnings and forecasts. The following are the basic marine warning products the NWS offers.

### **Small Craft Advisory:**

NWS issues Small Craft Advisories for hazardous lake conditions that may affect small craft operations.

### **Gale Warning:**

Forecast winds of 34 to 47 knots.

### **Storm Warning:**

Forecast winds of 48 knots or greater.

### **Special Marine Warning:**

Potentially hazardous over-water events of short duration (up to 2 hours).

These advisories and warnings are headlined in marine forecasts. (Details are included elsewhere in this brochure.) Small Craft Advisories are usually issued 2 to 6 hours before the onset of adverse conditions and warnings may be issued up to 24 hours in advance.

## Great Lakes Regional Products

**Great Lakes Storm Summary...**Issued every 3 hours to describe conditions when winds of 50 knots or greater are reported on some part of the Great Lakes and are expected to prevail for 12 hours or more.

**Great Lakes Freeze-up Outlook...**Issued in the late fall until the routine Great Lakes Ice Outlook product begins.

**Great Lakes Ice Outlook...**Routinely issued during the winter and early spring months with ice watches and warnings as needed

**Great Lakes Break-up Outlook...**Issued once or twice a year in the spring.

**St. Lawrence Freeze-up Date Outlook...**Expected freeze-up date on the St. Lawrence River at Massena, NY.

## Great Lakes Marine Products

## Open Lakes Forecasts

Issued by NWS offices in Chicago (Lake Michigan), Detroit (Lake Huron and Lake St. Clair), Cleveland (Lake Erie), Buffalo (Lake Ontario) and Marquette (Lake Superior).

### Effective/Issuance Times

Issued four times daily at 4 a.m./p.m. and 10 a.m./p.m. local time and valid for up to 48 hours, with an outlook to 5 days.

### Content and Format

GLFLS  
LSZ260-142000-

LAKE SUPERIOR FORECAST  
NATIONAL WEATHER SERVICE MARQUETTE MI  
1000 AM EDT FRI MAY 14 1999  
LAKE SUPERIOR FORECAST BEYOND FIVE NAUTICAL MILES FROM SHORE

.SYNOPSIS...A DEEP LOW PRESSURE SYSTEM OVER MINNESOTA WILL MOVE NORTH INTO CANADA TONIGHT. THIS SYSTEM WILL PRODUCE GALE FORCE WINDS THIS AFTERNOON.

...GALE WARNING IN EFFECT...

.THIS AFTERNOON...SOUTHWEST WINDS TO 40 KNOTS. WAVES 10 TO 12 FEET.  
.TONIGHT...SOUTH WINDS TO 30 KNOTS. WAVES SUBSIDING TO 4 TO 6 FEET.  
.SATURDAY...SOUTH WINDS 10 TO 20 KNOTS BECOMING SOUTHWEST. AFTERNOON THUNDERSTORMS LIKELY. WAVES 1 TO 3 FEET.  
.OUTLOOK FOR SATURDAY NIGHT THROUGH TUESDAY...WINDS BELOW 20 KNOTS.

SS  
LSZ261-142000-  
MAFOR 1415/  
SUPERIOR...GALE WARNING IN EFFECT...13550 11440 13430 11420 WAVES 10 TO 12 FEET THIS AFTERNOON SUBSIDING TO 4 TO 6 FEET TONIGHT AND TO 1 TO 3 FEET SATURDAY MORNING. 221012

## Great Lakes Nearshore Forecasts

Issued from spring through fall by NWS offices at Duluth, MN; Marquette, MI; Green Bay, WI; Milwaukee, WI; Chicago, IL; Grand Rapids, MI; Gaylord, MI; Detroit, MI; Cleveland, OH; and Buffalo, NY.

### Effective/Issuance Times

Issued four times daily at 4 a.m./p.m. and 10 a.m./p.m. local time from spring through fall and valid for up to 36 hours.

### Content and Format

NEARSHORE MARINE FORECAST  
NATIONAL WEATHER SERVICE MARQUETTE MI  
1000 AM EDT FRI MAY 14 1999

FOR WATERS WITHIN FIVE NAUTICAL MILES OF SHORE

LSZ241-142215-  
LAKE SUPERIOR...SAXON HARBOR TO ONTONAGON MI-  
1100 AM EDT FRI MAY 14 1999

...GALE WARNING IN EFFECT...

.THIS AFTERNOON...SOUTHWEST WINDS TO 40 KNOTS. MOSTLY CLOUDY. WAVES  
10 TO 12 FEET.

.TONIGHT...SOUTH WINDS TO 30 KNOTS. PARTLY CLOUDY. WAVES SUBSIDING TO 4  
TO 6 FEET.

.SATURDAY...SOUTH WINDS 10 TO 20 KNOTS BECOMING SOUTHWEST. AFTERNOON  
THUNDERSTORMS LIKELY. WAVES 1 TO 3 FEET.

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## Lakeshore Warnings

Lakeshore warnings are issued for lakeshore flooding or significant shoreline erosion that is occurring or expected within the next 12 hours and poses a threat to life or property.

## Lakeshore Statements

Lakeshore statements are used to advise mariners and other people who live along the shore of flooding or erosion potential. They are also used to update warning issuances.

## Special Marine Warnings

The NWS issues Special Marine Warnings for potentially hazardous over-water events, usually of short duration (up to 2 hours), not adequately covered by other marine warnings and forecasts. These events include thunderstorms, waterspouts, squalls, wind shifts, and other short-lived conditions.

If a tornado or severe thunderstorm is expected to move over the lakes, NWS issues a Special Marine Warning. If a severe thunderstorm or waterspout is expected to move ashore, NWS issues a separate warning for the shoreside areas.

### Content and Format

BULLETIN - IMMEDIATE BROADCAST REQUESTED  
SPECIAL MARINE WARNING  
NATIONAL WEATHER SERVICE BUFFALO NY  
226 AM EDT THU OCT 1 1998

THE NATIONAL WEATHER SERVICE IN BUFFALO NY HAS ISSUED A

- \* SPECIAL MARINE WARNING FOR . . .  
LAKE ERIE FROM RIPLEY TO BUFFALO  
BUFFALO HARBOR AND UPPER NIAGARA RIVER
- \* EFFECTIVE UNTIL 335 AM EDT
- \* AT 235 AM EDT...NATIONAL WEATHER SERVICE DOPPLER RADAR  
INDICATED STRONG THUNDERSTORMS FROM NIAGARA FALLS TO  
CENTRAL LAKE ERIE...MOVING EAST AT 40 KNOTS
- \* THESE THUNDERSTORMS WILL REACH BUFFALO HARBOR BY 330AM
- \* ALL MARINE INTERESTS SHOULD REMAIN ALERT AND SMALL BOATS  
TAKE SHELTER IMMEDIATELY.

## Marine Weather Statements

Marine Weather Statements are used to follow up the Special Marine Warnings or to provide information on non-severe conditions such as fog.

## Dissemination Of Marine Weather Products

Marine weather products are widely disseminated via U.S. Coast Guard (USCG) broadcasts, NOAA Weather Radio and the Internet. Schedules for marine broadcasts are listed in NIMA Publication 117 and NWS Marine Weather Service Charts, available at your local National Ocean Service chart agent. To find dissemination details on marine products go to the Marine Weather Dissemination Information Home Page.

### NOAA Weather Radio (NWR)

The NWR network provides voice broadcasts of coastal and marine forecasts on a continuous cycle. This network covers most of the Great Lakes shorelines. When severe weather threatens, an alarm tone is sent to automatically turn on compatible NWR receivers in the transmitter's coverage area.

### NOAA Telephone Recordings

Many NWS forecast offices offer recorded marine and local forecasts by telephone. These numbers are usually listed in the telephone directory under "United States Government, Commerce Department, National Weather Service."

### USCG VHF VOICE

USCG broadcasts warnings and forecasts on VHF channel 22A following an initial call on VHF Channel 16. The USCG VHF network provides near-continuous coverage of the Great Lakes.

### NAVTEX

NAVTEX is a broadcast of products in text form. The Canadian government operates the NAVTEX service for the Great Lakes and provides weather and in-season ice information.

### Web Sites of Interest

- ◆ NOAA Home Page: <http://www.noaa.gov>
- ◆ NWS Home Page, links to local NWS office Web sites: <http://www.nws.noaa.gov>
- ◆ NOS Home Page: <http://www.nos.noaa.gov>
- ◆ Marine Weather Dissemination Home Page: <http://www.nws.noaa.gov/om/marine/home.htm>
- ◆ USCG Home Page: <http://www.uscg.mil>
- ◆ USCG Navigation Center: <http://www.navcen.uscg.mil>  
(Excellent descriptions of marine communications)

### DIAL-A-BUOY

Obtain the latest lake weather observations through a telephone service, Dial-A-Buoy. The service provides wind and wave measurements taken within the last hour at Great Lakes stations. To access, dial **228/688-1948** on a touch tone or cellular phone. Enter the five-digit station identifier when prompted. The menu tree has a selection for the caller to receive a map of buoy station identifiers via return call fax. Station identifiers can be obtained at: <http://seaboard.ndbc.noaa.gov>.

## Marine Weather Service Charts

MSC charts are available for 15 segments of the continental United States, Alaska, Hawaii, Puerto Rico and the Virgin Islands, and Guam and the Northern Mariana Islands, and the Great Lakes. These charts are regularly updated. MSC 11/12 covers the Great Lakes.

MSC charts contain maps of the area including locations of NWR transmitters, USCG stations, and marine observation sites; helpful information such as locations, times, and frequencies of marine broadcasts; and NWS telephone numbers. MSC charts can be purchased from:

National Ocean Service  
Distribution Division (N/ACC3)  
Riverside, MD 20737-1199  
Telephone: **301-436-8301**

MSC charts can also be found on-line at <http://www.nws.noaa.gov/om/marine/pub.htm>.

For boating safety weather rules, see Safe Boating Weather Tips (NOAA PA 94058) at <http://www.nws.noaa.gov/om/nwspub.htm>.