



U.S. Department
of Homeland Security
**United States
Coast Guard**

LOCAL NOTICE TO MARINERS

District: 9

Week: 31/22

Issued by: Commander (dpw)
Ninth Coast Guard District
1240 East Ninth Street,
Cleveland, OH 44199-2060
Telephone: (216) 902-6069

Direct questions about this LNM to the above address.

All distances in this publication are STATUTE MILES unless otherwise noted.*

District Nine Internet Address <https://www.atlanticarea.uscg.mil/Our-Organization/District-9/>

District Nine Local Notice to Mariners email Address D09-DG-District-D9-LocalNoticetoMariners@uscg.mil

** Navigation Information Service watchstander, 24 hours a day at (703) 313-5900 ** **Internet Address** <https://www.navcen.uscg.gov/>

Light List Reference: Commandant Publication P16502.7, VOL VII, 2022 Edition

Coast Pilot Reference: 2022 U.S. Coast Pilot 6 Great Lakes 52nd Edition

Coast Pilots, along with corrections are available at: <https://nauticalcharts.noaa.gov/publications/coast-pilot/index.html>

The Local Notice to Mariners is available on the Internet at <https://www.navcen.uscg.gov/local-notice-to-mariners-by-cg-district> You will also have links to other government agencies- web pages including the US Army Corps of Engineers and the National Ocean Service.

REPORT DISCREPANCIES IN AIDS TO NAVIGATION TO THE NEAREST COAST GUARD UNIT

The Ninth District and all Sector offices for their areas of responsibility issue a BROADCAST NOTICE TO MARINERS.

The following Broadcast Notice to Mariners have been incorporated into this week's Local Notice to Mariners:

Sector Buffalo, NY - B116-22 through B124-22

Ninth District - C121-22 through C123-22

Sector Detroit, MI - D056-22 through D059-22

Sector Lake Michigan, WI - M208-22 through M217-22

Sector Sault Ste Marie, MI - S099-22 through S106-22

The United States Coast Guard Navigation Information Service (NIS), operated by the USCG Navigation Center, is staffed 24 hours a day, 7 days a week. The NIS provides information on the current operational status, effective policies, and general information for GPS and DGPS. The

NIS also disseminates Safety Broadcasts (BNM), Local Notice to Mariners (LNM), and the latest Notice Advisory to Navstar Users (NANU). NANU notices can be obtained via email subscription through the USCG Navigation Center website: <https://cgl.uscg.mil/mailman/listinfo/nanu>. In addition, the NIS investigates all reports of degradation or loss of GPS, DGPS or AIS service. Users are encouraged to report all degradation or loss of radio navigation services to the NIS via any of the following: Phone: (703) 313-5900, mail to: webmaster@smtp.navcen.uscg.mil, or on the internet at: <https://www.navcen.uscg.gov>

ABBREVIATIONS

A through H

ADRIFT - Buoy Adrift
AICW - Atlantic Intracoastal Waterway
AI - Alternating
B - Buoy
BKW - Breakwater
bl - Blast
BNM - Broadcast Notice to Mariner
bu - Blue
C - Canadian
CHAN - Channel
CGD - Coast Guard District
C/O - Cut Off
CONT - Contour
CRK - Creek
CONST - Construction
DAYMK/Daymk - Daymark
DBN/Dbn - Daybeacon
DBD/DAYBD - Dayboard
DEFAC - Defaced
DEST - Destroyed

I through O

I - Interrupted
ICW - Intracoastal Waterway
IMCH - Improper Characteristic
INL - Inlet
INOP - Not Operating
INT - Intensity
ISL - Islet
Iso - Isophase
kHz - Kilohertz
LAT - Latitude
LB - Lighted Buoy
LBB - Lighted Bell Buoy
LHB - Lighted Horn Buoy
LGB - Lighted Gong Buoy
LONG - Longitude
LNM - Local Notice to Mariners
LT - Light
LT CONT - Light Continuous
LTR - Letter
LWB - Lighted Whistle Buoy

P through Z

PRIV - Private Aid
Q - Quick
R - Red
RACON - Radar Transponder Beacon
Ra ref - Radar reflector
RBN - Radio Beacon
REBUILT - Aid Rebuilt
RECOVERED - Aid Recovered
RED - Red Buoy
REFL - Reflective
RRL - Range Rear Light
RELIGHTED - Aid Relit
RELOC - Relocated
RESET ON STATION - Aid Reset on Station
RFL - Range Front Light
RIV - River
RRASS - Remote Radio Activated Sound Signal
s - seconds
SEC - Section
SHL - Shoaling

DISCON - Discontinued
DMGD/DAMGD - Damaged
ec - eclipse
EST - Established Aid
ev - every
EVAL - Evaluation
EXT - Extinguished
F - Fixed
fl - flash
Fl - Flashing
G - Green
GIWW - Gulf Intracoastal Waterway
HAZ - Hazard to Navigation
HBR - Harbor
HOR - Horizontal Clearance
HT - Height

LWP - Left Watching Properly
MHz - Megahertz
MISS/MSNG - Missing
Mo - Morse Code
MRASS - Marine Radio Activated Sound Signal
MSLD - Misleading
N/C - Not Charted
NGA - National Geospatial-Intelligence Agency
NO/NUM - Number
NOS - National Ocean Service
NW - Notice Writer
OBSCU - Obscured
OBST - Obstruction
OBSTR - Obstruction
Oc - Occulting
ODAS - Anchored Oceanographic Data Buoy

si - silent
SIG - Signal
SND - Sound
SPM - Single Point Mooring Buoy
SS - Sound Signal
STA - Station
STRUCT - Structure
St M - Statute Mile
TEMP - Temporary Aid Change
TMK - Topmark
TRLB - Temporarily Replaced by Lighted Buoy
TRLT - Temporarily Replaced by Light
TRUB - Temporarily Replaced by Unlighted Buoy
USACE - Army Corps of Engineers
W - White
Y - Yellow

Additional Abbreviations Specific to this LNM Edition:

LIB - Lighted Ice Buoy

SECTION I - SPECIAL NOTICES

This section contains information of special concern to the Mariner.

Cancellation of NOAA Paper and Raster Nautical Charts

The National Oceanic and Atmospheric Administration (NOAA) is undertaking a multi-year program to end production and maintenance of its suite of over 1,000 traditional paper nautical charts and all associated raster chart products and services, including: Print-on-Demand (POD) paper nautical charts, Full-size chart PDF files, BookletChart™ PDF files, NOAA raster navigational charts (NOAA RNC®), the NOAA RNC tile service, and the online RNC viewer.

Six months notice of the intent to cancel a specific chart is provided in a "Last Edition" notice. The final cancellation of a chart is made in a "Canceled" notice. Both types of notices will appear in LNM Section IV, "Chart Correction." A comprehensive list of all canceled NOAA charts is available at: <http://www.charts.noaa.gov/MCD/Dole.shtml>.

Traditional paper nautical chart production is ending to enable the creation and maintenance of larger scale, more up-to-date, higher quality coverage of NOAA's electronic navigational chart (NOAA ENC®) product. This will significantly enhance the amount of charted detail available to mariners. More information about NOAA's program to sunset traditional paper charts is on the NOAA Coast Survey website at: <https://nauticalcharts.noaa.gov/charts/farewell-to-traditional-nautical-charts.html>

An online NOAA Custom Chart application at: <https://devgis.charttools.noaa.gov/pod> is available to create chart images from ENC data, which may then be printed. Notices to Mariners will not be issued for NOAA Custom Charts.

LNM: 04/20

USACE NOTICE TO NAVIGATION INTERESTS

Current Federal Channel conditions, shoaling, and the most recent channel surveys are available at the following Army Corps of Engineers web sites:

Buffalo: <http://www.lrb.usace.army.mil/>
Detroit: <http://www.lre.usace.army.mil/>
Chicago: <http://www.lrc.usace.army.mil/>
Rock Island: <http://www.mvr.usace.army.mil/>
St. Paul: <https://www.mvp.usace.army.mil/>

LNM: 28/12

GREAT LAKES - Great Lakes Water Levels

See Enclosure 1

The current and four week expected water level table for the Great Lakes, Connecting Channels and the St. Lawrence River, will be published in Enclosure 1 following SECTION VIII - LIGHT LIST CORRECTIONS of the Local Notice to Mariner or by visiting the link below:

<https://www.lre.usace.army.mil/Missions/Great-Lakes-Information/Great-Lakes-Water-Levels/Water-Level-Forecast/Connecting-Channels-Forecast/>

LNM: 32/20

Lake Erie – NY - Barcelona Harbor – Chart 14823

Due to significant shoaling in the Barcelona Harbor Main Entrance, vessels are no longer able to transit the channel. All mariners are requested to transit the area with caution. The following Aids to Navigation have been temporary discontinued until dredging operations are complete.

Barcelona Harbor East Breakwater Light (LLNR 3480)
Barcelona Harbor West Breakwater Light (LLNR 3485)

LNM: 23/22

ST. MARYS RIVER SYSTEM - DE TOUR PASSAGE TO WHITEFISH BAY - Charts 14882,14883,14884

Due to unusually high water levels, SOO Traffic requests all mariners transiting the St. Marys River System to monitor their speed and corresponding wake to protect the shoreline.

LNM: 14/20

ST. MARYS RIVER - AMERICAN CANAL - CHART 14884

Northeast Pierhead Light (LLNR 14205) The U. S. Army Corps of Engineers will be relocating this light to the top of their new camera tower. As soon as the position and height of the light's new location is confirmed it will be advertised in Section VIII - Light List Corrections of the LNM.

LNM: 10/21

LAKE ERIE – Buffalo River – Chart 14833

Due to a collapse seawall in the Buffalo River. 2 Obstruction buoys have been placed to mark the debris. The buoys are to best mark the wreckage and debris of the breakwater from the NFTA building that is submerged in the water approximately 75 feet long and 15 feet wide from the building. All mariners are request to transit the area with caution.

BUFFALO RIVER SOUTH MICHIGAN AVE BRIDGE OBSTRUCTION "A"
POSN: 42-52.332N, 078-52.419W, DEPTH OF WATER: 24 FEET.
Q FL W

BUFFALO RIVER SOUTH MICHIGAN AVE BRIDGE OBSTRUCTION B
POSN: 42-52.324N, 078-52.396W, DEPTH OF WATER: 24 FEET.
Q FL W

LNM: 31/22

LAKE ERIE - BUFFALO HARBOR - Chart 14833

North Entrance Light "7" (LLNR 2720) The light has been temporarily discontinued due to construction on the breakwater. A temporary light without day marks and lowered focal plane has been established in position 42-52'50.220"N / 078-53'45.474"W. The characteristic is FL G 2.5s. Another lantern was mounted on the Northwest end of the breakwater in position 42-53'04.590"N / 078-54'05.880"W. The characteristic of this light is QW.

LNM: 51/19

LAKE MICHIGAN – New Buffalo Harbor - Chart 14905

Shoaling has been reported near the middle of the channel immediately inside the break wall in New Buffalo Harbor, MI. The actual water depth is currently significantly below the charted depth. Mariners are urged to use caution when transiting the area. For further details, contact Sector Lake Michigan at (414) 747-7182 or VHF channel 16.

LNM: 15/22

LAKE MICHIGAN - WAUGOSHANCE POINT TO SEUL CHOIX POINT - CHART 14911

The abandoned Waugoshance Lighthouse located in approximate position 45-47-20N / 085-05-28W has become structurally unsafe. Landing and embarking on the light should not be attempted because of failing structural condition and it's in danger of collapsing. Mariners are advised to remain at least 300' from the structure at all times.

LNM: 45/20

LAKE MICHIGAN – Sheboygan River – Chart 14922

Shoaling has been reported in entrance of the Sheboygan River in the vicinity of 43-44.928N, 087-42.170W AND 43-44.936N, 087-42.110W. The actual water depth is currently significantly below the charted depth. Mariners are urged to use caution when transiting the area. For further details, contact Sector Lake Michigan at (414) 747-7182 or VHF channel 16.

LNM: 24/22

LAKE MICHIGAN – Muskegon Harbor – Chart 14934

Shoaling has been reported in entrance of Muskegon Harbor. The actual water depth is currently significantly below the charted depth. Mariners are urged to use caution when transiting the area. For further details, contact Sector Lake Michigan at (414) 747-7182 or VHF channel 16.

LNM: 24/22

SECTION II - DISCREPANCIES

This section lists all reported and corrected discrepancies related to Aids to Navigation in this edition. A discrepancy is a change in the status of an aid to navigation that differs from what is published or charted.

DISCREPANCIES (FEDERAL AIDS)

LLNR	Aid Name	Status	Chart No.	BNM Ref.	LNM St	LNM End
25	St. Lawrence Seaway Lighted Buoy 5	LT EXT		B113-22	29/22	
5815	Erie Proving Ground Buoy H	OFF STA	14842		24/22	
8400	Peche Island Range Front Light	LT EXT	14853		26/22	
8410	Peche Island Range Rear Light	LT EXT/DAYMK MISSING	14853	D017-22	13/22	
13025	Winter Point Range Rear Light	DAYMK MISSING	14887	S105-21	46/21	
13205	Harwood Point West Range Rear Light	REDUCED INT	14887	S096-22	29/22	
13475	West Neebish Channel (Downbound) Upper Range Rear Light	DAYMK MISSING	14887	S113-21	51/21	
13515	West Neebish Channel (Downbound) Oak Ridge Range Front Light	DAYMK MISSING	14887	S56-21	25/21	
13515	West Neebish Channel (Downbound) Oak Ridge Range Front Light	LT EXT	14887	S029-22	14/22	
14050	Six Mile Point Range Rear Light	DAYMK MISSING	14883	S016-21	10/21	
14465	Point Iroquois Shoal Lighted Buoy 33	LT EXT/TRUB	14884	S084-22	24/22	
15575	Sand Island Buoy 2	OFF STA		S104-22	31/22	
15880	Duluth Harbor Basin Lighted Buoy 3	LT EXT	14975	S106-22	31/22	
15925	Duluth Harbor Basin Lighted Buoy 7	LT IMCH	14975	S101-22	31/22	
16650	Hat Point Lighted Bell Buoy 1	LT EXT		S075-22	23/22	
16660	Isle Royale West End Buoy 2	OFF STA		S071-22	23/22	
16965	Flag Island Lighted Buoy 4	OFF STA	14999	S95-21	43/21	
17015	Warroad Range Front Light	LT EXT			43/21	
17020	Warroad Range Rear Light	DAYMK MISSING			43/21	
17210	Canoe Channel Daybeacon 8	STRUCT DEST/TRUB	14998		23/22	
19245	Grand River Buoy 72	OFF STA	14933	M207-22	30/22	
19510	South Haven North Pier Light	LT EXT	14905	M204-22	30/22	
21275	Rowley Bay Buoy 2	MISSING	14909	M111-22	21/22	
21455	Gravelly Island Shoal Buoy 4	MISSING	14909	M110-22	21/22	
22180	Green Bay Harbor Entrance Channel Range Front Light	DAYMK DMGD	14918		24/21	
22185	Green Bay Harbor Entrance Channel Range Rear Light	DAYMK MISSING	14918		44/20	

DISCREPANCIES (FEDERAL AIDS) CORRECTED

LLNR	Aid Name	Status	Chart No.	BNM Ref.	LNM St	LNM End
4670	Sandusky Straight Channel Lighted Buoy 16	RELIGHTED	14845		30/22	31/22
10644	Saginaw Bay Channel Light 8	RELIGHTED	14867		31/22	31/22
11330	Harrisville West Breakwater Light 4	WATCHING PROPERLY	14864		30/22	31/22
14630	Marquette Light	RELIGHTED	14970		30/22	31/22
15175	Copper Harbor Light	RELIGHTED			31/22	31/22
18245	West Arm Buoy 6	WATCHING PROPERLY	14913		29/22	31/22
18405	Arcadia Harbor Light 1	WATCHING PROPERLY	14907		30/22	31/22
18980	Grand Haven North Pierhead Light 1	RELIGHTED	14933		30/22	31/22
20605	Wind Point Light	RELIGHTED	14904		31/22	31/22

DISCREPANCIES (PRIVATE AIDS)

LLNR	Aid Name	Status	Chart No.	BNM Ref.	LNM St	LNM End
2517	Youngstown Safe Boating Zone Lighted Float C	LT EXT	14816		27/22	
2525	Lewiston Ski Jump Light	LT EXT	14816		27/22	
2670	Buffalo Intake Crib Light	LT EXT	14833		27/22	
2740	Buffalo River Light 5	LT EXT	14833		27/22	
2790	State Breakwater Light 2	LT EXT	14833		27/22	
3505	International Paper East Crib Light	LT EXT	14835		18/22	
3890	Fairport Harbor Port Authority Boat Ramp Light	LT EXT	14837		27/22	
3905	Painesville Inner Intake Crib Lighted Buoy 1	MISSING	14837		27/22	
3910	Mentor Harbor Light 1	LT IMCH	14825	B045-22	20/22	
3930	Mentor Harbor Yacht Club Range Front Light	LT EXT	14825		27/22	
3935	Mentor Harbor Yacht Club Range Rear Light	LT EXT	14825		27/22	
4021	Newport Harbor Entrance Light 1	LT EXT	14826		27/22	
4022	Newport Harbor Entrance Light 2	LT EXT	14826		27/22	
4030	Cleveland Waterworks Intake Crib Light	SS INOP	14826		22/22	
4104	Bkl Regulated Navigation Area Light	LT EXT	14839		25/22	
4105	Lakeside Yacht Club Entrance North Light	LT IMCH	14839	B029-22	17/22	
4110	Lakeside Yacht Club Entrance South Light	LT EXT	14839	B029-22	17/22	
4150	North Coast Harbor Light 2	LT EXT	14839		20/22	
4240	Cuyahoga River Abutment Light	LT EXT	14839		27/22	
4255	Bradstreet Landing Dock Light	LT EXT	14826		18/22	
4274	Avon Lake Launch Basin Light 1	LT EXT	14826		27/22	
4300	Sheffield Lake Light 1	LT IMCH	14826		27/22	
4385	U.S. Steel Corporation Mooring Cell Light	LT EXT	14841		27/22	
4460	Beachwood Villa Light 2	LT EXT	14830		28/22	
4840	East Bay Channel Lighted Buoy 6	DAYMK IMCH	14845	D057-22	31/22	
4870	East BayChannel Lighted Buoy 12	LT EXT	14845	D058-22	31/22	
4915	East Bay Channel Lighted Buoy 21	DAYMK IMCH	14845	D059-22	31/22	
12610	St Ignace Marina Northeast Breakwall Light	LT EXT	14881		18/22	
19605	Gary Bulkhead Light	LT EXT	14926	M167-22	27/22	
19636	Buffington Harbor Inner Breakwater East Light 2	LT IMCH	14926		30/21	
19665	Indiana Harbor East Bulkhead Light	LT IMCH	14926		14/22	
20090	Belmont Harbor Light	LT EXT	14926	M189-22	28/22	
20386	Northpoint Marina Reef Obstruction Lighted Buoy A	MISSING	14904		22/22	
20387	Northpoint Marina Reef Obstruction Lighted Buoy B	MISSING	14904		22/22	
20388	Northpoint Marina Reef Obstruction Lighted Buoy C	MISSING	14904		22/22	
20389	Northpoint Marina Reef Obstruction Lighted Buoy D	MISSING	14904		22/22	
20729	South Shore Park Entrance Lighted Buoy 1	MISSING	14924	M162-22	26/22	
20730	South Shore Park Entrance Lighted Buoy 2	OFF STA	14924	M161-22	26/22	

DISCREPANCIES (PRIVATE AIDS) CORRECTED

LLNR	Aid Name	Status	Chart No.	BNM Ref.	LNM St	LNM End
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None

PLATFORM DISCREPANCIES

Name	Status	Position	BNM Ref.	LNM St	LNM End
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None

PLATFORM DISCREPANCIES CORRECTED

Name	Status	Position	BNM Ref.	LNM St	LNM End
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None

SECTION III - TEMPORARY CHANGES and TEMPORARY CHANGES CORRECTED

This section contains temporary changes and corrections to Aids to Navigation for this edition. When charted aids are temporarily relocated for dredging, testing, evaluation, or marking an obstruction, a temporary correction shall be listed in Section IV giving the new position.

TEMPORARY CHANGES

LLNR	Aid Name	Status	Chart No.	BNM Ref.	LNM St	LNM End
2105	Oswego Harbor West Channel Light 2	TRLB	14813		17/19	
2720	Buffalo Harbor North Entrance Light 7	DISCONTINUED	14833		33/19	
3480	Barcelona Harbor East Breakwater Light	DISCONTINUED FOR DREDGING	14823		23/22	
3485	Barcelona Harbor West Breakwater Light	DISCONTINUED FOR DREDGING	14823		23/22	
5435	West Harbor Inner Channel Daybeacon 12	TRUB	14842		33/21	
5470	West Harbor Inner Channel Daybeacon 14	TRUB	14842		48/20	
8240	William Livingstone Memorial Light	Reduced Intensity	14853		33/21	
9690	Grande Pointe Light 23	TRLT	14853		47/20	
14020	Frechette Point Range Rear Light	Reduced Intensity	14883		21/22	
15220	Ontonagon Harbor East Breakwater Light	DISCONTINUED			02/22	
16963	Driftwood Point Light	DISCONTINUED			45/20	
21635	Escanaba Light	Reduced Intensity	14915		49/20	
22245	Green Bay Harbor Entrance Channel Light 25	TRLB	14918	01/21	33/21	

TEMPORARY CHANGES CORRECTED

LLNR	Aid Name	Status	Chart No.	BNM Ref.	LNM St	LNM End
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None

PLATFORM TEMPORARY CHANGES

Name	Status	Position	BNM Ref.	LNM St	LNM End
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None

PLATFORM TEMPORARY CHANGES CORRECTED

Name	Status	Position	BNM Ref.	LNM St	LNM End
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None

SECTION IV - CHART CORRECTIONS

This section contains corrections to federally and privately maintained Aids to Navigation, as well as NOS corrections.

This section contains corrective actions affecting chart(s). Corrections appear numerically by chart number, and pertain to that chart only. It is up to the mariner to decide which chart(s) are to be corrected. The following example explains individual elements of a typical chart correction.

Chart Number	Chart Edition	Edition Date	Last Local Notice to Mariners	Horizontal Datum Reference	Source of Correction	Current Local Notice to Mariners
12327	91st Ed.	19-APR-97	Last LNM: 26/97	NAD 83		27/97
Chart Title: NY-NJ-NEW YORK HARBOR - RARITAN RIVER						
Main Panel 2245 NEW YORK HARBOR						
(Temp) ADD	NATIONAL DOCK CHANNEL BUOY 3				CGD01	074-02-48.001W
	Green can				at 40-41-09.001N	
Corrective Action	Object of Corrective Action				Position	

(Temp) indicates that the chart correction action is temporary in nature. Courses and bearings are given in degrees clockwise from 000 true. Bearings of light sectors are toward the light from seaward. The nominal range of lights is expressed in nautical miles (NM) unless otherwise noted.

Chart Number	Chart Edition	Edition Date	Last LNM	Horizontal Datum Reference	Source of Correction	Current Local Notice to Mariners
14911	22nd Ed.	01-FEB-16	Last LNM: 19/22	NAD 83		31/22
Chart Title: Waugoshance Point to Seul Choix Point, including Beaver Island Group; Port Inland; Beaver Harbor						
Main Panel 1391 LK MICH WAUGOSHANCE PT-SEUL CHOIX PT. Page/Side: A						
ADD	GLF Sturgeon Bay Weather Buoy 1				CGD09	085-05-02.000W
	Yellow				at 45-42-58.000N	
	Fl Y 4s					

SECTION V - ADVANCE NOTICES

This section contains advance notice of approved projects, changes to aids to navigation, or upcoming temporary changes such as dredging, etc. Mariners are advised to use caution while transiting these areas.

SUMMARY OF ADVANCED APPROVED PROJECTS

Approved Project(s)	Project Date	Ref. LNM
None		
Advance Notice(s)		
LAKE ERIE – SOUTH SHORE OF LAKE ERIE – CHART 14842		
Squaw Island Light (LLNR 5085) Change the name of the aid to Muddy Creek Light (LLNR 5085)		LNM: 18/22
ST. MARYS RIVER – DE TOUR PASSAGE TO MUNUSCONG LAKE – CHART 14882		
Squaw Island Light "4" (LLNR 12895) Change the name to St Marys River Light "4" (LLNR 12895)		LNM: 18/22
LAKE MICHIGAN – WAUGOSHANCE POINT TO CHOIX POINT – CHART 14911		
Squaw Island Shoal Buoy "2" (LLNR 21560) Change the name to Garden Island Buoy "2" (LLNR 21560)		
Squaw Island Shoal Buoy "1" (LLNR 21565) Change the name to Garden Island Buoy "1" (LLNR 21565)		
		LNM: 18/22
GREEN BAY – LITTLE BAY DE NOC – CHART 14915		
Squaw Point Lighted Buoy "12" (LLNR 14915) Change the name to Little Bay De Noc Lighted Buoy "12" (LLNR 21690)		LNM: 18/22
LAKE SUPERIOR – DULUTH SUPERIOR HARBOR - Chart 14975		
Duluth Harbor Basin Traffic Lighted Buoy (LLNR 15870) Permanently discontinue the physical and continue the aid as a Virtual AIS MMSI 993672226.		LNM: 20/22
MINNESOTA-ONTARIO BORDER LAKES – NAMAKAN LAKE – CHART 14994		
Squaw Narrows Daybeacon "4" (LLNR 17460) Change the name to Namakan Lake Light "4" (LLNR 17460)		LNM: 18/22

SECTION VI - PROPOSED CHANGES

Periodically, the Coast Guard evaluates its system of aids to navigation to determine whether the conditions for which the aids to navigation were established have changed. When changes occur, the feasibility of improving, relocating, replacing, or discontinuing aids are considered. This section contains notice(s) of non-approved, proposed projects open for comment. SPECIAL NOTE: Mariners are requested to respond in writing to the District office unless otherwise noted (see banner page for address).

PROPOSED WATERWAY PROJECTS OPEN FOR PUBLIC COMMENT

<u>Proposed Project(s)</u>	<u>Closing</u>	<u>Docket No.</u>	<u>Ref. LNM</u>
None			

Proposed Change Notice(s)

For any comments or questions on these proposed changes please contact:

The Ninth District Aids to Navigation office at D09-DG-District-D9-LocalNoticetoMariners@uscg.mil or call (216) 902-6078

LNM: 30/13

SECTION VII - GENERAL

This section contains information of general concern to the Mariners. Mariners are advised to use caution while transiting these areas.

Waterways Analysis and Management System

The Ninth Coast Guard District will be reviewing the following waterways beginning in 2022. The study focuses primarily on aids to navigation in the waterway. Public comments are an important tool in this process so that we can provide the adequate markings and the right mix of signals to a waterway for safe navigation. Comments on the below listed waterways can be sent to Brian.A.Smicklas@uscg.mil or by calling (216) 902-6064. You may also complete the survey attached to the Local Notice to Mariner and either email it or mail it to: Commander (dpw), Ninth Coast Guard District, 1240 East Ninth St., Cleveland, Ohio 44199.

Sackets Harbor
(LLNR 1755-2024.9)
Buffalo Harbor/Black Rock Canal
(LLNR 2665-3360)
Dunkirk Harbor
(LLNR 3365-3492)
Erie Harbor
(LLNR 3495-3696)
Conneaut Harbor
(LLNR 3700-3735)
Ashtabula Harbor
(LLNR 3740-3830)
Fairport Harbor
(LLNR 3835-3955)
Cleveland Harbor
(LLNR 3975-4260)
Huron Harbor
(LLNR 4430-5455)
Erie Islands
(LLNR 5520-6025)
Detroit River / East Outer Channel
(LLNR 6885-8270)
St. Clair Rec/Belle Isle Channel
(LLNR 8280-8396)
Lake St. Clair
(LLNR 8665-9300)
Anchor Bay
(LLNR 9305-9565)
Toledo / Maumee Channel
(LLNR 6030-6455)
Monroe Harbor
(LLNR 6460-6680)
St. Clair River / Huron Cut
(LLNR 9570-10090)
St. Mary's River
(LLNR 12765-13755)
Lake Nicolet / Bayfield Channel
(LLNR 13955-14192)
Keweenaw Waterway
(LLNR 14725-15250)
Knife River / Two Harbors
(LLNR 16495-16580)
Straits of Mackinaw Western Section
(LLNR 17720-17850)
(LLNR 21525-21580)

Waterways Analysis and Management System

Sturgeon Bay Ship Canal
(LLNR 20990-21225)
Green Bay Entrance
(LLNR 21985-22360)
M.I.R.
(LLNR 11780-12170)
Marquette Harbor
(LLNR 14620-14720)
Apostle Islands
(LLNR 15255-15590)
St. Joseph / Benton Harbor
(LLNR 19515-19534.4)
Milwaukee
(LLNR 20635-20765)

LNLM: 09/20

GREAT LAKES - Marine Events

Marine events such as races, parades, regattas, and fireworks displays are frequently held in the Great Lakes region. Advance information on specific events is contained in enclosure (2) of this publication. The public is reminded to listen to the local broadcast notice to mariners for the most up-to-date information on a marine event. Mariners are advised that some events may require temporary aids to navigation that are not displayed on a chart or in the Light List, and that they should exercise additional caution while operating in the vicinity of a scheduled marine event.

LNLM: 24/13

MICHIGAN, WISCONSIN, MINNESOTA and SAILDRONE JOINT LAKE SURVEY OPERATION

SAILDRONE, INC. is conducting fish population surveys in Lake Superior along the Michigan, Wisconsin, and Minnesota coastline between August 8th, 2022 and September 30th, 2022. The survey will be conducted by two (2) Uncrewed Surface Vehicles (USVs), called "Saildrones", each 23 ft in length, 16 ft tall, orange in color with a white all-round light on the mast and marked "SAILDRONE". The two Saildrones will be deployed from Ashland, WI on or about August 8th 2022. Both vehicles are uncrewed and wind and solar powered and will have limited maneuverability during survey operations. Mariners are requested to transit areas with caution and to remain greater than 500 meters away from the research equipment. Questions regarding saildrone operations should be directed to Saildrone Mission Control, missioncontrol@saildrone.com or (510) 722-6070.

LNLM: 31/22

LAKE ONTARIO – NY – Little Sodus Bay – Chart 14811

From 20 Jun 2022 to 21 Dec 2022 the Crane-Hogan Structural Systems, Inc will be conducting pier repair in the vicinity of West side of the channel from Little Sodus Bay to Lake Ontario (Fair Haven, NY). Hours of operation are from 0600 to 1730 Monday through Friday. All mariners are requested to transit the area with caution.

LNLM: 23/22

LAKE ONTARIO-Rochester Harbor-Chart 14815

From 23 May 2022 to 15 Sep 2022 Great Lakes Dock and Materials LLC will be conducting pier repairs at the Rochester Harbor East Pier in Charlotte NY. Hours of operation is 24 hours a day 7 days a week. Tug Duluth, Barge Jacquelyn, Barge Hannah Avery, and GLDM can be contacted on VHF channels 7 and 16. All traffic should stay clear of the Operations if possible. Please have positive contact with equipment, marine equipment shall be located near east pier in Rochester Harbor, both channel and Lake Ontario sides of pier. Marine equipment will traverse in and out of the harbor daily.

LNLM: 19/22

LAKE ERIE – OH - Ashtabula Harbor – Chart 14836

Construction of submerged breakwater in Ashtabula Harbor remains partial unfinished. Buoys are unlighted marking the hazard of the breakwater. Buoys may change position as seasonal weather changes. Current positions as follows:

Buoy "1" 41-55-07.841N / 080-47-25.303W
Buoy "2" 41-54-58.921N / 080-47-16.850W
Buoy "3" 41-54-58.281N / 080-47-14.290W
Buoy "4" 41-54-56.304N / 080-47-14.726W
Buoy "5" 41-54-56.307N / 080-47-11.234W
Buoy "6" 41-54-58.474N / 080-47-02.054W

Mariners are advised to remain at least 300' from the breakwater. All mariners are requested to transit the area with caution.

LNLM: 43/21

LAKE ERIE – OH – Ashtabula – Chart 14836

From 20 Jun 2022 to 14 Sep 2022 the Geo Gradel Co. will be conducting dredging in the Ashtabula River and Harbor. Hours of operation are from 0700 to 1900 7 days a week, Tug John Francis and Barge Crow can be contacted on VHF channels 10, 16, and 18. All mariners are requested to transit the area with caution.

LNLM: 23/22

LAKE ERIE – Fairport Harbor – Chart 14837

From 25 Jul 2022 to 31 Aug 2022 Ryba Marine Construction Co. will be conducting dredging in the Fairport Harbor. Hours of operation are 24 hours a day 7 days a week. Tug Kathy Lynn can be contacted on VHF channels 13 and 16. All mariners are requested to transit the area with caution.

LNLM: 29/22

LAKE ERIE – OH – Cleveland Harbor – Chart 14839

From 27 Jun 2022 to 30 Sep 2022 Dean Marine and Excavating will be conducting breakwater repairs on the Cleveland Harbor West Basin Cuyahoga River channel. Hours of operation are from 0700 to 1900 7 days a week. Tug Madison R and Paige Noel can be contacted on VHF channel 16. Request 2 hour notice of arrival for commercial traffic. All mariners are requested to transit the area with caution.

LNM: 28/22

LAKE ERIE –Western Basin – Chart 14839

From 02 May 2022 to 30 Sep 2022 NOAA Ship Thomas Jefferson will be conducting hydrographic survey operations in the vicinity of Cleveland, Erie, and South Passage. Hours of operation are 24 hours a day 7 days a week. Gear may be towed astern. The ship and TJ small boats (TJ2903 and TJ2904) can be contacted on VHF channels 13 and 16. All mariners are requested to transit the area with caution.

LNM: 18/22

LAKE ST. CLAIR - MI - St. Clair Shores, MI - Chart 14850

E. C. Kozneffes Co. will be installing boardwalks and piers into Lake St. Clair at Blossom and Heath Park from 13 Sep. 21 to 01 Dec 22 from 0700 to 1900 Monday through Saturday. Tug Captain Dave and barge Comanche can be contacted on VHF channels 13 & 16. All mariners are requested to transit the area with caution.

LNM: 37/21

LAKE HURON – MI – Saginaw River – Chart 14867

From 15 July 2022 to 31 Sep 2022 Luedtke Engineering Co. will be conducting maintenance dredging near the mouth of the Saginaw River. Hours of operation are 24 hours a day 7 days a week. Tug Paul Luedtke can be contacted on VHF channels 10, 16, and 19. All mariners are requested to transit the area with caution.

LNM: 13/22

LAKE HURON – Thunder Bay - Chart 14864

1. From 10 Aug 2022 to 12 Aug 2022 Naval Surface Warfare Center, Crane Division, Crane Indiana will be Electromagnetic Spectrum Operations experimentation sponsored by the Office of the Undersecretary of Defense for Research and Engineering Electronic Warfare and Countermeasures Office (OUSD R&E EW&C) utilizing various Unmanned Surface & Underwater Vehicles (USV/UUV). We have coordinated vessel support from Alpena NOAA office for this event in the vicinity of South East portion of Thunder Bay, outside commercial shipping lanes. Hours of operation are from 0800 to 1800 Wednesday through Friday. NOAA Supplied Vessels (R5501 primary) can be contacted on VHF channel 16. All mariners are requested to transit the area with caution.

LNM: 30/22

St. Mary's River – MI – Saint Mary's SOO Locks – Chart 14887

Kokosing-Alberici LLC will commence construction on the New Soo Lock Upstream Approach Walls April of 2021. Construction activities will be generally limited to the upstream north channel approach to the decommissioned Sabin and Davis Locks. Delivery by barge and boat of materials, equipment and crew will cross the upstream approach to the Soo Locks navigation channel throughout construction. Operations will commence from 25 Mar 21 to 15 Oct 23 Monday through Saturday 24 hours a day.

LNM: 09/21

ST. MARYS RIVER – Lime Island – Chart 14882

From 8 Aug 2022 to 1 Nov 2022 Kokosing Industrial, Inc will be conducting dock and breakwall repair in the vicinity of Lime Island. Hours of operation will be from 0700-1900 7 days a week. Tug Nancy Anne can be contacted on VHF channels 13 and 16. Vessels will be working inside of the Lime Island Harbor constructing a new dock and breakwall. Passing vessels are requested to remain a safe distance of 200 feet away and transit the area with caution.

LNM: 31/22

STRAITS OF MACKINAW - Point LaBarbe to Point Emmet - Chart 14881

From 15 Apr 2022 to 31 Dec 2022 Kokosing Industrial Durocher Marine Division will be conducting backfill operations to protect new American Transmission Company 138kv submarine power cables installed in 2021. hours of operation are 24 hours a day 7 days a week. Tugs Valerie B, Nancy Anne, Champion, General, Barges Kokosing I, Kokosing III, Kokosing IV, D-2002, D-2006, crew boat Timmy V and 24' work boat will be onscene and monitoring VHF channels 13 and 16. All vessels are requested to remain 1500' (500-yard safety zone) away from construction vessels and transit the area with caution.

LNM: 06/22

STRAITS OF MACKINAC - Chart 14881

From 18 July 2022 to 09 Aug 2022 Collins Engineers Inc will be conducting hydrographic survey and underwater bridge inspection of the Mackinac Bridge. Hours of operation are from 0700 to 1900 7 days a week. Dive vessel Bottom Bouncer can be contacted on VHF channel 16. A white 28 ft cabin boat marked "Collins Engineers" will be on the water and conducting multi-beam sonar survey operations and underwater dive operations with surface supplied air dive gear. All vessels are requested to transit the area with caution.

LNM: 28/22

LAKE MICHIGAN – Menominee River – Chart 14917

From 8 Aug 2022 to 31 Oct 2022 drilling operations will be taking place in the vicinity if Fincantieri Marine. Tug Ruth Lucille and Mary Helen will be on scene with 5 barges and will extend approximately 200 feet from the shoreline. On scene vessels can be contacted on VHF channels 8 and 16. All mariners are requested to transit the area with caution. For further details, contact Sector Lake Michigan at (414)747-7182.

LNM: 31/22

LAKE MICHIGAN – Western Lake Michigan– CHART 14903, 14906

From 02 May 2022 to 31 Aug 2022 Geodynamics will be conducting hydrographic survey in support of nautical chart updates 14nm offshore of Fox Point up to 14nm offshore of Kewaunee Nuclear Power Plant. Survey operations will begin near Port Washington and transition north to Sheboygan and Manitowoc area in June 2022. Surveys will be conducted 24 hours a day, 7 days a week, on the RV Substantial and 12 hours a day, 7 days a week on the RV Benthos. The RV Benthos is a 30 ft Armstrong aluminum catamaran survey vessel operating multibeam sonar. The RV Substantial is

LAKE MICHIGAN – Western Lake Michigan– CHART 14903, 14906

a 65 ft steel hull survey vessel operating multibeam sonar and towing sound speed equipment. Please provide .5 nautical mile distance when possible. Mariners are urged to transit at their slowest safe speed in the vicinity of the survey vessels to minimize wake. All survey vessels have AIS and will monitor VHF channels 16/13.

LNM: 18/22

LAKE MICHIGAN – Michigan City – Chart 14926

From 01 June 2022 to 31 July 2022 Roen Salvage Company will be conducting breakwater repairs in Michigan City Harbor outer breakwater. Hours of operation are 24 hours a day 7 days a week. Tug Stephan Asher can be contacted on VHF channels 7 and 16. All mariners are requested to keep clear of the operations and pass with no wake.

LNM: 20/22

LAKE MICHIGAN – Sheboygan – Chart 14922

From 19 Sep 2022 to 1 Nov 2022 Kokosing Industrial, Inc will be conducting pipeline, dredging, and diving operations near the Sheboygan Water Utility. Hours of operation are from 0700 to 1900 7 days a week. Tug Valerie B can be contacted on vhf channels 13 and 16. Operations will be approximately 1.25 miles north of Sheboygan river entrance. Diving operations are present, nearby vessels maintain 500 foot CPA, minimum. Pleasure craft and passing vessels should remain a safe distance from the work at all times. Additional barges will be moored on anchor buoys inside the Sheboygan river breakwalls.

LNM: 31/22

LAKE MICHIGAN – Burns Harbor – Chart 14926

From 5 Jul 2022 to 15 Aug 2022 Ryba Marine Construction Co will be conducting maintenance dredging in Burns Harbor, IN. Hours of operation are 24 hours a day 7 days a week. Tug Kristin Joelle can be contacted on VHF channels 13 and 16. All mariners are requested to transit the area with caution.

LNM: 27/22

Lake Michigan – IL – Whiting – Chart 14929

From 1 Jul 2022 to 30 Nov 2022 Kokosing Industrial, Great Lakes Marine Division will be conducting intake replacement offshore from the BP Whiting Refinery in position 41-40-49.325N. 087-28-24.272W. Hours of operation are 0700 to 1900 Monday through Saturday. Tug Nancy can be contacted on VHF channels 13 and 16. Crane and diving barges will be spudded down within 200 feet of the intake cribbing. All mariners are requested to transit the area with caution.

LNM: 23/22

LAKE MICHIGAN – Manistee – Chart 14938

From 15 Aug 2022 to 31 Oct 2022 Roen Salvage Company will be conducting repairs on the Manistee South Breakwater. Hours of operation are 24 hours a day 7 days a week. Tug Stephan Asher can be contacted on VHF channels 7 and 16. All mariners are requested to transit the area with caution.

LNM: 31/22

LAKE MICHIGAN – Manistee – Chart 14938

From 3 Aug 2022 to 31 Aug 2022 The King Company Inc will be conducting hydraulic dredging in the Manistee Channel. Hours of operation are 24 hours a day 7 days a week. Dredge Barry J can be contacted on VHF channels 16, 18, 73. Submerged 22" pipe laying on the lake floor marked by orange round buoys every 500 feet. (2) White buoys will be seen North and South of the dredge. The white buoys indicate winch anchor locations. Disposal area starts 3,000 feet south of the breakwater and runs for an additional 2,000'. Main contact will be the Superintendent Robert Lister. Cell# listed below. During rough seas our pipe pontoon will be floating outside of the channel. It is bright yellow, 25'x8'x6' and has (2) flashers on each end that come on at night. TELEPHONE #: 616-399-1784(Office) Cell #: (989) 464-1511.

LNM: 31/22

Lake Michigan – IL – Waukegan Harbor – Chart 14905

From 7 Jun 2022 to 15 Aug 2022 the Great Lakes Dock and Material, LLC will be conducting breakwater repair work on the Waukegan Harbor Breakwater. Hours of operation are 24 hours a day 7 days a week. Barge Justin Avery and Tug Duluth can be contacted on VHF channels 16 and 18. Please have positive contact with equipment, marine equipment will be located along the north breakwater of Waukegan Harbor and shall travel in and out of the harbor. Equipment include crane barge, material barges and tug boats. All mariners are requested to transit the area with caution.

LNM: 23/22

LAKE MICHIGAN – Manistique Harbor - Chart 14908

From 01 Aug 2022 to 15 Sept 2022 Luedtke Engineering Co will be conducting maintenance dredging in Manistique Harbor. Hours of operation are from 0600 to 2000 7 days a week. Tug Kurt R. Luedtke can be contacted on VHF channels 10, 16 and 19A. All mariners are requested to reduce speed and use caution around dredging equipment. Material scows will be transported from the dredge to the disposal site at the west end of Harbor View Dr. Survey vessel will be conducting dredging surveys. Please transit at "No Wake" speeds

LNM: 30/22

LAKE MICHIGAN – Muskegon Harbor – Chart 14934

From 1 Aug 2022 to 26 Aug 2022 The King Company, Inc will be conducting hydraulic dredging in the Muskegon Outer Channel. Hours of operation are 24 hours a day 7 days a week. Dredge Buxton II can be contacted on VHF channels 16, 18 and 73. Submerged pipe laying on the lake floor marked by orange round buoys every 500 feet. Disposal area starts 3,500 feet south of the breakwater and runs for an additional 2,000'. Main contact will be the Superintendent Joseph Martin. Cell# listed below. During rough seas our pipe pontoon will be floating outside of the channel. It is bright yellow, 25'x8'x6' and has flashers on each end that come on at night. TELEPHONE #: 616-399-1784(Office) Cell #: (941) 628-6783.

LNM: 24/22

LAKE MICHIGAN – St. Joseph River - Chart 14905

From 23 Jul 2022 to 05 Aug 2022 Roen Salvage Company will be conducting dredging in the St. Joseph River MI. Hours of operation are from 0700 to 1900 7 days a week. Tug Stephen Asher can be contacted on VHF channels 7 and 16. All mariners are requested to remain clear of dredging

LAKE MICHIGAN – St. Joseph River - Chart 14905
equipment and to transit the area with caution.

LNM: 29/22

LAKE SUPERIOR – Keweenaw Waterway – Chart 14961
From 4 Aug 2022 to 1 Oct 2022 Roen Salvage Company will be conducting maintenance dredging in the federal navigational channel in the vicinity of the Keweenaw Waterway. Hours of operation is from 0600 to 2000 7 days a week. Tug Charles Asher can be contacted on VHF channels 7 and 16. Equipment will be tied up on North side of channel when work is not taking place. All mariners are requested to transit the area with caution and to remain clear of dredging equipment.

LNM: 31/22

LAKE SUPERIOR - Apostle Islands - Chart 14966
The University of Wisconsin (Madison) is commissioning 8 water environment monitoring buoys around the Apostle Islands from 15 June 2022, to 30 September 2022. The buoys are yellow in color and are 2' in diameter with sensor equipment. All mariners are advised to use caution while transiting Apostle Islands during this timeframe

LNM: 18/22

LAKE SUPERIOR – DULUTH SUPERIOR HARBOR - Chart 14975
From 11 Jul 2022 to 15 Sep 2022 Roen Salvage Company will be conducting maintenance dredging in the federal navigation channel in the Duluth-Superior Harbor. Hours of operation are 24 hours a day 7 days a week. Tug John Asher can be contacted on VHF channels 7 and 16. All mariners are requested to transit the area with caution.

LNM: 26/22

LAKE SUPERIOR – MN – Spirit Lake – Chart 14975
From 09 May 2022 to 15 Sept 2022 the J.F. Brennan Company will be conducting dredging and capping operations. Operations will be in the vicinity of 46°41'35.0"N 92°12'11.4"W out to 46°41'37.7"N 92°11'54.4"W and down to 46°41'12.8"N 92°11'46.2"W and in the vicinity of from shoreline out to 46°40'37.9"N 92°11'50.4"W then north up to 46°40'50.9"N 92°11'54.9"W and back into the shoreline. HDPE pipeline will be running from the dredges and exiting the water in the vicinity of 46° 41' 03.8" N, 92° 12' 18.4" W. Hours of operation will be 24 hours a day Monday through Saturday. Dredge Mark Anthony, Dredge Calumet and Spreader Barge Neenah can be contacted on VHF channels 16. All mariners are requested to transit the area with caution.

LNM: 13/22

LAKE SUPERIOR – MN – Spirit Lake – Chart 14975
From July 2022 to November 2023 J.F. Brennan Company, Inc will be conducting Hydraulic Dredging operations are to be conducted in this area, with a sunken dredge pipeline running north from near the Spirit Lake Marina to Hallett Dock #7 along the western shoreline of the St. Louis River. The pipeline will be demarcated with buoys along the entirety of the pipe, approximately every 500 FT. Floating booster pump platforms will be between Hallett Dock #7 and Spirit Lake Marina, with construction signage upstream and downstream of the work zone. The work zone will mainly be between Munger Landing and the island just to the east of the landing. Within the work zone, there will be several pieces of equipment along with floating dredge pipelines.

LNM: 26/22

LAKE SUPERIOR – Upper St. Louis River – Chart 14975
From 6 Jul 2022 to 3 Sep 2022 J.F. Brennan Company will be conducting dredging and cover replacement behind the Erie Pier along the St. Louis River in the vicinity of 46-44-24.42N, 092-09-08.68W. Hours of operation are 24 hours a day Monday through Saturday. All mariners are requested to transit the area with caution.

LNM: 27/22

SECTION VIII - LIGHT LIST CORRECTIONS

An Asterisk *, indicates the column in which a correction has been made to new information

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
3763	<i>Limno Tech Ashtabula Harbor Weather Buoy I</i>	41-56-00.560N 080-44-50.000W	Fl Y 4s				Maintained from Apr.15 to Nov.15. Private Aid. 31/22
17783	* <i>GLF Sturgeon Bay Weather Buoy 1</i>	45-42-58.000N 085-05-02.000W	Fl Y 4s				Maintained from Apr.1 to Oct.31. Private Aid. 31/22
*	*	*	*	*	*	*	*

ENCLOSURES

(1) LNM Section I - Special Notices

1-Great Lakes Water Levels

		LNM: 06/22
	(2) LNM Section II - Discrepancies	
N/A		LNM: 19/19
	(3) LNM Section III - Temporary Changes and Temporary Changes Corrected	
N/A		LNM: 19/19
	(4) LNM Section IV - Chart Corrections	
N/A		LNM: 19/19
	(5) LNM Section V - Advance Notices	
N/A		LNM: 19/19
	(6) LNM Section VI - Proposed Changes	
N/A		LNM: 19/19
	(7) LNM Section VII - General	
	1-Marine Events	
	2-Current Ninth District Bridge Maintenance/Activities	
	3-Waterway Analysis and Management System Survey	
	4-R/V Lake Char operations in Lake Superior, April-June 2022	
		LNM: 19/19
	(8) LNM Section VIII - Light List Corrections	
N/A		LNM: 19/19

M. J. Johnston, RADM
U. S. Coast Guard
Commander, Ninth Coast Guard District

GREAT LAKES, CONNECTING CHANNELS AND ST. LAWRENCE RIVER WATER LEVELS AND DEPTHS

Expected water levels on the Great Lakes, Connecting Channels and the St. Lawrence River are given in inches above (+,0) or below (-,0) Low-Water Datum (LWD,0). LWD is a plane of reference on a navigation chart, also known as Chart Datum. LWD elevations shown below are given in International Great Lakes Datum, 1985 (IGLD 1985,0).

	Forecast Point	Low Water Datum IGLD 1985	Expected Levels (inches above or below Low Water Datum,0)				
			Current	Week 1	Week 2	Week 3	Week 4
			29-Jul	5-Aug	12-Aug	19-Aug	26-Aug
GREAT LAKES							
Lake Ontario		243.3	29	28	26	24	22
Lake Erie		569.2	44	43	42	41	40
Lake St. Clair		572.3	43	42	41	41	40
Lake Michigan-Huron		577.5	31	31	31	30	30
Lake Superior		601.1	16	16	16	16	16
ST. LAWRENCE RIVER							
Above Long Sault Dam	0	237.9	18	17	16	16	14
Above Iroquois Dam	1	240.3	15	14	12	12	10
Ogdensburg	2	242.4	25	23	20	19	17
Alexandria Bay	2.1	243.0	27	26	24	22	20
Head of river at Cape Vincent	3	243.3	29	28	26	24	22
DETROIT RIVER							
Lake Erie at Pelee Passage	4	569.2	44	43	42	41	40
Mouth of River at Gibraltar	5	569.5	44	43	43	42	41
Fort Wayne	5.1	571.1	47	46	45	45	44
Head of River above Belle Isle	6	572.0	43	43	42	41	41
ST. CLAIR RIVER							
Mouth of River at St. Clair Flats	7	572.3	43	42	41	41	40
Algonac	8	572.8	45	45	44	44	43
St. Clair	9	574.4	37	37	37	36	36
Blue Water Bridge	10	576.2	38	37	37	36	36
Head of River at Fort Gratiot	11	577.2	34	33	33	33	32
Lake Huron Approach Channel	12	577.5	31	31	31	30	30
ST. MARYS RIVER							
Mouth of River at Detour	13	577.5	31	31	31	30	30
West and Middle Neebish	14	577.8	29	28	28	28	27
Head of Little Rapids	15	578.4	29	28	28	27	27
U.S. Slip	16	578.7	28	27	27	26	26
Above Locks	17	600.4	19	19	19	18	18
Head of River at Point Iroquois	18	601.1	16	16	16	16	16

UNDERSTANDING THE FORECAST

Available water depth is determined for a location by adding (if+) or subtracting (if-) the amount from the above table to the appropriate channel depth shown in the profile Connecting Channel Depths Graphic or to water depths shown on National Oceanic and Atmospheric Administration (NOAA) navigational charts.

CAUTION

Depths so determined are representative of a still water surface elevation, disturbed by neither wind nor other causes. Depths, however, may be reduced or increased as much as several feet for short periods due to these disturbances, or when sections of channels develop shoals. Vessel masters should refer to "Local Notice to Mariners" for extent of shoaling and scattered bedrock projections in all channels. Ice conditions can have a dramatic impact on actual channel depth and can lead to large short-term water level fluctuations. Ice information can be found at the National Ice Center's website.

FOR FURTHER INFORMATION CONTACT:	FOR MORE INFORMATION VISIT:	WATER LEVEL INFORMATION SUPPLIED BY:
Detroit District Corps of Engineers	Detroit District Great Lakes Homepage	NOAA, National Ocean Service
477 Michigan Avenue	International Joint Commission	SSMC4, STATION 7523
Detroit MI, 48226	Great Lakes Information Network	1305 East-West Hwy
1-888-694-8318 ex. 1	NOAA Tides and Currents	Silver Spring, MD 20910-3233
email: hhpm@usace.army.mil	U.S. Coast Guard - District 9	(301) 713-2902

GREAT LAKES-MARINE EVENT-SAFETY ZONES-SECURITY ZONES

Events listed below are those events that may have accompanying special local regulations.

<u>Location</u>	<u>Name of Event</u>	<u>Date / Time</u>	<u>POC</u>	<u>Tel #</u>
<u>LAKE ONTARIO</u>				
Rochester, NY	Newport Yacht Club Saturday Morning Racing	6/25/2022 to 10/22/2022	1000-1330	Kenny Fourspring 585-902-2183
Rochester, NY	Newport Yacht Club Sunday Afternoon Racing	6/26/2022 to 10/16/2022	1200-1600	Kenny Fourspring/ 585-902-2183
Rochester, NY	Newport Yacht Club Thursday Night Racing	6/30/2022 to 8/6/2022	1800-2000	Kenny Fourspring/ 585-902-2183
Oswego, NY	Oswego Dragonboat Festival	8/2/2022 to 08/06/2022	1600-1800	Patricia Levine 315-529-5189
<u>LAKE ERIE</u>				
Cleveland, OH	Whiskey Island Paddfest	13-Aug-22	0730-1300	Rachel Nagle 440-679-1269
Erie, PA	Presque Isle Triathlon	8/6/2022 to 8/6/2022	1200-1600	Pat Davis 814-450-9526
Sandusky	Wednesday Evening Race Series	7/27/2022	1730-2000	
Cleveland	Tall Ships	6JUL2022-29AUG2022		Steve Such 814-450-2561
Buffalo, NY	Buffalo Harbor Sailing Club-Racing Season	5/17/2022 to 9/28/2022	1800-2100	Gregory Toole 917-993-2976
<u>DETROIT RIVER</u>				
Detroit	Tug Across the River 115-2022-D	7/30/2022	1600	
Grosse Isle	FYC Dacron Series Sailboat Race #8	7/31/2022	1000-1600	
Grosse Isle	FYC Monday One Design Series Sailboat Race #8	8/1/2022	1800-2100	
Grosse Pointe	Grosse Pointe Sail Club Sundown Fall Series #1	8/2/2022	1800-2300	
Harrison Twp	Top Gun Twilight Races #22	7/28/2022	1000-1700	
<u>LAKE ST. CLAIR/St. Clair River</u>				
St. Clair	St. Clair River Classic Offshore Race Set Up & testing	7/27/2022	1100-1900	
St. Clair	St. Clair River Classic Offshore Race Set Up & testing	7/28/2022	1100-1900	
St. Clair	St. Clair River Classic Offshore Race - Insured testing	7/30/2022	1230-1500	
St. Clair	St. Clair River Classic Offshore Race Set Up & testing	7/29/2022	1100-1900	
St. Clair	St. Clair River Classic Offshore Race	7/31/2022	1000-1900	
<u>LAKE HURON</u>				
Bay City	Bay City Yacht Club Wednesday Night Racing - Summer #5	7/27/2022	1900-2200	
Tawas	Tawas Bay Vets & Nets	7/30/2022	0900-1500	
<u>LAKE MICHIGAN & Green Bay</u>				
Muskegon, MI	Muskegon Yacht Club - Wednesday Night Racing Series	each Wed. May 5 - Oct 12, 2022	1730-2200	MSTC Sherrill 414-747-7148
Milwaukee, WI	Triathlon	August 5-7, 2022	1800	MSTC Sherrill 414-747-7148
Grand Haven	Coast Guard Festival Fireworks	August 6, 2022	2100-2300	MSTC Sherrill 414-747-7148

Muskegon, MI to					
Washington Island, WI	Clipper Cup Race	August 12-13, 2022	0600-1500	MSTC Sherrill	414-747-7148
Kenosha, WI	Great Lakes Watercross - Kenosha	August 12-14, 2022	0700-1800	MSTC Sherrill	414-747-7148
Pentwater, MI	Muskegon Powerboat Weekend	August 13, 2022	2130-2230	MSTC Sherrill	414-747-7148
Milwaukee, WI	Milwaukee Dragon Boat Fest	August 13, 2022	0800-1700	MSTC Sherrill	414-747-7148
Marinette, WI	Resue Squard Fireworks	August 13, 2022	2115-2145	MSTC Sherrill	414-747-7148
Sturgeon Bay, WI	Birthday Fireworks	August 13, 2022	2100-2130	MSTC Sherrill	414-747-7148
Ludington, MI	Triathlon	August 14, 2022	0730-0930	MSTC Sherrill	414-747-7148
Manitowoc, WI	Fireworks	August 19, 2022	2030-2045	MSTC Sherrill	414-747-7148
South Haven, MI	Salute to Veterans Boat Parade	August 20, 2022	1100-1400	MSTC Sherrill	414-747-7148
Saugatuck, MI	Saugatuck Venetian Festival FW	July 30, 2022	2100-2300	MSTC Sherrill	414-747-7148

CURRENT NINTH DISTRICT BRIDGE MAINTENANCE/ACTIVITIES
Week [31/22]

Note: Short-term bridge maintenance closures and various activities may only be published [through Broadcast Notice to Mariners](#) and may not be included [in the Local Notice to Mariners](#). Mariners should both *listen* to Broadcast Notice to Mariners (BNM) and *read* Coast Guard Local Notice to Mariners (LNM) available by clicking [HERE](#) for the most recent and complete marine information.

PUBLIC NOTICES FOR 9th District BRIDGES: <https://www.navcen.uscg.gov/D9BN>

Please contact us with any questions or concerns:

Blair Stanifer (216) 902-6086 or William.B.Stanifer@uscg.mil
Lee Soule (216) 902-6085 or Lee.D.Soule@uscg.mil
Michael Walker (216) 902-6087 or Michael.O.Walker2@uscg.mil
FAX: (216) 902-6088

Commander (dpb)
Ninth Coast Guard District
1240 E. 9th St. Room 2047B
Cleveland, Ohio 44199-2001

NOTES:

ACTIVE BROADCAST NOTICE TO MARINERS (BNM)

SAFETY BCST PLUS SKED BCST UNTIL 082200Z AUG 22
U.S.C.G. NINTH DISTRICT NOTICE TO MARINERS C113-22
OH- LAKE ERIE - CLEVELAND HARBOR
THE COAST GUARD HAS RECEIVED A REPORT THAT ONE OR MORE LIGHTS ON THE COLUMBUS ROAD BRIDGE AT MILE 1.93 OVER THE CUYAHOGA RIVER ARE EXTINGUISHED OR SHOWING IMPROPER CHARACTERISTICS.

U.S.C.G. NINTH DISTRICT NOTICE TO MARINERS C117-22
IN - LAKE MICHIGAN - MICHIGAN CITY
ON AUGUST 6, 2022 BETWEEN THE HOURS OF 1800 AND 1900 THE FRANKLIN STREET BRIDGE AT MILE 0.50 OVER TRAIL CREEK WILL BE SECURED TO MASTED NAVIGATION IN CONJUNCTION WITH THE GREAT LAKES GRAND PRIX BOAT PARADE. VESSELS ABLE TO PASS UNDER THE BRIDGE WITHOUT AN OPENING MAY DO SO AT ANY TIME.

U.S.C.G. NINTH DISTRICT NOTICE TO MARINERS C118-22
WI- LAKE MICHIGAN - GREEN BAY
FROM JULY 27 THROUGH AUGUST 4, 2022 FROM 0900 THROUGH 1400 EACH DAY INSPECTORS WILL UTILIZE SNOOPER TRUCKS UNDER THE TOWER DRIVE / LEO FRIGO BRIDGE AT MILE 0.41 OVER THE FOX RIVER. SPOTTERS WILL WARN OF APPROACHING VESSELS AND MOVE THE MAN LIFT TO ALLOW VESSELS TO PASS UNDER THE BRIDGE.

U.S.C.G. NINTH DISTRICT NOTICE TO MARINERS C120-22

OH - LAKE ERIE - ERIE ISLANDS – SANDUSKY

ON AUGUST 8 AND AUGUST 9, 2022 BETWEEN THE HOURS OF 0600 AND 1800, EACH DAY THE NORFOLK SOUTHERN RAILROAD BRIDGE AT MILE 3.5 OVER THE SANDUSKY BAY WILL BE SECURED TO MASTED NAVIGATION FOR MAINTENANCE. VESSELS ABLE TO PASS UNDER THE BRIDGE WITHOUT AN OPENING MAY DO SO AT ANY TIME.

SAFETY BCST PLUS SKED BCST UNTIL 110500Z AUG 22

U.S.C.G. NINTH DISTRICT NOTICE TO MARINERS C122-22

MN- LAKE SUPERIOR - DULUTH-SUPERIOR HARBOR

ON AUGUST 9 AND AUGUST 10, 2022 FROM 2100 TO 2359 EACH DAY THE MINNESOTA SLIP BRIDGE AT THE MOUTH OF MINNESOTA SLIP OVER THE ST. LOUIS BAY AND RIVER AT DULUTH WILL BE SECURED TO MASTED NAVIGATION FOR EMERGENCY MAINTENANCE. VESSELS ABLE TO PASS UNDER THE BRIDGE WITHOUT AN OPENING MAY DO SO AT ANY TIME.

SAFETY BCST PLUS SKED BCST UNTIL 070600Z AUG 22

U.S.C.G. NINTH DISTRICT NOTICE TO MARINERS C123-22

MI - LAKE MICHIGAN - GRAND HAVEN

FROM 2200 ON AUGUST 6 UNTIL 0200 ON AUGUST 7, 2022, THE U.S. 31 BRIDGE AT MILE 2.89 OVER THE GRAND RIVER WILL BE SECURED TO MASTED NAVIGATION IN CONJUNCTION WITH THE ANNUAL COAST GUARD DAY CELEBRATION. VESSELS ABLE TO PASS UNDER THE BRIDGE WITHOUT AN OPENING MAY DO SO AT ANY TIME.

2021 FEDERAL REGULATIONS DOCKET STATUS

USCG-2021-0336 – NPRM – Oshkosh – FR Pending

USCG-2022-0237 - TD – Keweenaw Waterway – open for public comments until November 1, 2022

USCG-2022-0303- NPRM – Michigan City Amtrak Remote Ops – FR Pending

ACTIVE LOCAL NOTICE TO MARINERS (LNM)

GREAT LAKES REGION

GREAT LAKES, Drawbridge Delay Reports, Chart 14500

Mariners are requested to submit Reports of Drawbridge Signal/Operations Delays directly to the Ninth Coast Guard District Bridge Branch using the attached form. Reports of signal or drawbridge delays have been processed by Coast Guard Marine Safety Offices in recent years, but will now be processed and traced by the Bridge Branch. Reports may be sent by mail, e-mail, or by fax. The mailing address and fax number are on the form. The updated form is printed and also attached on the last page of this list.

[08/05] [34/12]

ST. LAWRENCE SEAWAY

NY STATE CANAL SYSTEM

(Everything West of St. Johnsville, NY)

NEW YORK STATE CANAL SYSTEM – NY - Erie Canal – Chart 14786 – Bridge Maintenance

From May 11 through **August 17, 2022** between the hours of 0700 and 1730, Monday through Saturday, a 50-foot by 20-foot barge will be working under the E-138, Main Street SR 96 at Mile 253.50 over the Erie Canal. The barge will monitor VHF-FM Marine Channel 16 and will move to accommodate vessels as needed.

[11/22]

NEW YORK STATE CANAL SYSTEM – NY - Erie Canal – Chart 14786 – Bridge Maintenance

From April 25 through **August 31, 2022** between the hours of 0700 and 1700, Monday through Friday, contractors will be washing the E234 Transit Road Bridge at Mile 320.82, the E233 Main Street Bridge at Mile 320.82, the E236A Lockport Bypass Road Bridge at Mile 322.16, and the E248, Webster Street Bridge at Mile 338.44 over the Erie Canal. Spotters will warn of approaching vessels and move the man lift to allow vessels to pass. Mariners should avoid passing under any falling water from the bridge.

[15/22]

NEW YORK STATE CANAL SYSTEM – NY - Erie Canal – Chart 14786 – Bridge Maintenance

From October 1, 2022 through **April 1, 2024** snoopers trucks will be working under the E-200 North Main Street Bridge, mile 293.15, over the Erie Canal to rehabilitate the bridge in the fully open position. The permitted navigation lights will be removed and temporarily replaced with steady burning yellow lights on the bottom and four-corners of the drawspan. Spotters will warn of approaching vessels and move the man lift to allow vessels to pass.

[22/22]

NEW YORK STATE CANAL SYSTEM – NY - Erie Canal – Chart 14786 – Bridge Maintenance

From May 31 through **August 31, 2022** between the hours of 0800 and 1700 daily workers will be using snoopers trucks to wash the underside of all bridges from the E-93 CSX Railroad Bridge at Mile 209.36 to the E-212 Marshall Road Bridge at Mile 305.63 over the Erie Canal. Spotters will warn of approaching vessels and will move the man lift to allow vessels to pass. Mariners should avoid passing under the clean water falling from the bridge.

[22/22]

NEW YORK STATE CANAL SYSTEM – NY - Erie Canal – Chart 14786 – Bridge Inspection

From July 11 through **August 12, 2022**, between the hours of 0730 and 1700, Monday through Friday a 35-foot Harcon Vessel will be under the S1 US 20 Free Bridge at Mile 0.54, the S3 State Route 89 Bridge at Mile 5.70, and S6 Ovid Street Bridge at Mile 8.65 over the Cayuga-Seneca Canal, including the bridges between the E73 Cold Springs Road at Mile 167.10 and the E92 Armitage Road Bridge at Mile 205.59 over the Erie Canal. The Harcon will move if a 30-minute advance notice of arrival is provided directly to the Harcon on VHF-FM Marine Channel 16.

[23/22]

NEW YORK STATE CANAL SYSTEM – NY - Erie Canal – Chart 14786 – Bridge Inspection

From July 11, 2022 through **April 30, 2023** scaffolding will be installed under one half of the E-99a Forgham Street Bridge at Mile 220.27 over the Erie Canal.

[24/22]

LAKE ONTARIO

LAKE ONTARIO – NY – Rochester Harbor – Chart 14815

On **September 25, 2022** between the hours of 0745 and 0930 the O'Rourke Bridge at Mile 1.25 over the Genesee River will be secured to masted navigation in conjunction with the Rochester Marathon. Vessels able to pass under the bridge without an opening may do so at any time.

[31/22]

LAKE ERIE - MAHONING RIVER - NIAGARA RIVER- ALLEGHENY RIVER

*****REVISED*****

LAKE ERIE – OH – Toledo Harbor – Chart 14847 – Bridge Construction/Demolition

From July 1, 2019 through **July 23, 2023** a temporary causeway will be constructed between mile 6.73 and 6.76 for the construction of the new and demolition of the old Michael V. DiSalle Memorial (I-75) Bridge at Mile 6.73 over the Maumee River. The causeway will be marked with flashing yellow lights spaced approximately 10 meters apart with red over red lights marking the ends of the causeway. A 100 foot wide channel will be provided for vessels to pass through the construction area. Mariners are encouraged to pass through the area at a slow speed.

[26/19] [21/20]

LAKE ERIE – OH – Cleveland Harbor – Chart 14839 - Bridge Special Event

On **October 8, 2022** between the hours of 0700 and 1400 the Carter Road Bridge at Mile 2.43 over the Cuyahoga River will be secured to masted navigation in conjunction with the Towpath Marathon event. Vessels able to pass under the bridge without an opening may do so at any time.

[46/21]

LAKE ERIE – NY – Buffalo Harbor – Chart 14833 – Bridge Maintenance

From March 21 through **August 30, 2022** between the hours of 0700 and 1600, Monday through Sunday, you are authorized to utilize two barges 40-foot by 10-foot at the Niagara Street Bridge at the mouth of Scajaquada Creek. A 20-foot navigation channel will be maintained for vessels to pass through the work area.

[06/22]

LAKE ERIE – OH – Toledo Harbor – Chart 14847 – Bridge Maintenance

From April 28 through **August 31, 2022** between the hours of 0700 and 1700, Monday through Friday a 150-foot by 50-foot barge will be working at the Norfolk Southern Railroad Bridge at Mile 5.76 over the Maumee River. During this time the bridge will require a 2-hour advance notice for openings. Mariners should provide advance notice on VHF-FM Marine Channel 16 or by calling 419-254-1539.

[17/22]

LAKE ERIE – OH – Cleveland Harbor – Chart 14839 - Bridge Maintenance

From June 22 through **October 28, 2022**, inspectors will be utilizing Bosun Chairs and Snooper vehicles under the Main Avenue Viaduct at Mile 1.01, the Detroit Superior Bridge at Mile 1.42, and the Hope Memorial Bridge at Mile 3.14, over the Cuyahoga River. Spotters will warn of approaching vessels and move the inspectors to allow vessels to pass.

[25/22]

LAKE ERIE – OH – Sandusky Bay – Chart 14845

On August 8 and **August 9, 2022** between the hours of 0600 and 1800, each day the Norfolk Southern Railroad

Bridge at Mile 3.5 over the Sandusky Bay will be secured to masted navigation for maintenance. Vessels able to pass under the bridge without an opening may do so at any time.

[30/22]

DETROIT RIVER - LAKE ST. CLAIR - ST. CLAIR RIVER – RIVER ROUGE

*****REVISED*****

DETROIT RIVER – MI – Main Channel – Chart 14848 – Bridge Construction.

From November 1, 2022 through **August 30, 2024**, contractors will be constructing the Gordie Howe International Bridge at mile 16.7 over the Detroit River. No equipment will be placed in the water. Overhead work will have temporary steady burning yellow lights to mark new construction. A moving platform with quick flashing red lights and orange or red ball fenders on the bottom four corners with a safety net that hangs approximately 15-feet below low steel will be constructing the bridge. Mariners should avoid passing directly under the platform at any time. Snooper type vehicles will be utilized on the bridge throughout construction. Spotters will warn of approaching vessels and move the man lift to allow vessels to pass. When construction is completed and all equipment removed, the final vertical clearances for the bridge will be 152-feet for the center 100-feet of the navigation channel. No less than 137-feet of vertical clearance will be available at the channel limits. Vertical clearances are based on IGLD85.

[47/20] [07/22]

ST. CLAIR RIVER – MI – Pine River – Chart 14853 – Bridge Maintenance

From January 1, 2023 through **March 17, 2023**, the Riverside Avenue, State Route 29 Bridge at Mile 0.10 over the Pine River will be secured to masted navigation. Vessels able to pass under the bridge without an opening may do so at any time.

[18/22]

DETROIT RIVER – MI – Trenton Channel – Chart 14848

From August 24 through **August 26, 2022** between the hours of 0900 and 1600 each day divers will be inspecting the Grosse Isle Parkway (Free) Bridge at Mile 5.60 over the Detroit River Trenton Channel. Mariners should provide a 15-minute advance notice to the drawtender or the dive safety vessel on VHF-FM Marine Channel 16 before passing under or through the bridge.

[31/22]

LAKE HURON

LAKE HURON – MI – Saginaw River – Chart 14867- Bridge Maintenance

From January 1 through **February 28, 2023**, the Lafayette Street Bridge at Mile 6.78 over the Saginaw River will be secured to masted navigation. Vessels able to pass under the bridge without an opening may do so at any time.

[28/22]

STRAITS OF MACKINAC, SAINT MARY'S RIVER AND FALLS

LAKE MICHIGAN – EAST

LAKE MICHIGAN – MI – Grand Haven – Chart 14933- Bridge Maintenance

From November 1, 2022 through **April 30, 2023**, the U.S. Route 31 Bridge at Mile 2.89 over the Grand River will be secured to masted navigation. From May 1, 2023 through May 26, 2023, one leaf of the bridge will be secured to masted navigation and the other leaf will operate normally.

[42/20]

LAKE MICHIGAN – MI – Grand Haven – Chart 14933- Bridge Maintenance

From September 6, 2022 through **October 30, 2022**, one leaf of the U.S. Route 31 Bridge at Mile 2.89 over the Grand River will be secured to masted navigation and the other leaf will operate normally.

[43/20]

LAKE MICHIGAN – MI – Charlevoix Harbor – Chart 14942 – Bridge Maintenance

From 0700 on January 16, 2023 through 0700 on **April 1, 2023** the US 31 Bridge Street Bridge, over the Pine River will be secured to masted navigation. Vessels able to pass under the bridge without an opening may do so at any time.

[05/22]

LAKE MICHIGAN – MI – Grand Haven – Chart 14933 – Bridge Maintenance

From May 1 through **September 30, 2022**, scaffolding will be installed under the U.S. Route 31 Bridge at Mile 2.89 over the Grand River that hangs approximately 4-feet below low steel. Between the hours of 0600 and 2000 Monday through Saturday, four barges 80-feet by 40-feet or smaller will be utilized under the approach spans. The barges will monitor VHF-FM marine Channel 16 and move to accommodate vessels if provided a 20-minute advance notice of arrival. No equipment will be used in the navigation draw of the bridge and the bridge operating schedule will not be changed.

[12/22]

LAKE MICHIGAN – MI – Grand Haven – Chart 14933 - Bridge Special Event

From 2200 on August 6 until 0200 on **August 7, 2022**, the U.S. 31 Bridge at Mile 2.89 over the Grand River will be secured to masted navigation in conjunction with the Annual Coast Guard Day Celebration. Vessels able to pass under the bridge without an opening may do so at any time.

[14/22]

LAKE MICHIGAN – MI – Saugatuck Harbor – Chart 14906 - Bridge Maintenance

From August 1 through **November 15, 2022**, scaffolding that extends approximately 4-feet below low steel of the Douglas-Saugatuck US-31 Highway Bridge at the Southeast Corner of Lake Kalamazoo. A 20-foot by 10-foot barge will be working under the bridge daily.

[29\22]

LAKE MICHIGAN – MI – Grand Haven – Chart 14933

From August 15, 2022 through **April 30, 2023**, two 60-feet by 40-feet barges will be working around the piers and banks of the U.S. Route 31 Bridge at Mile 2.89 over the Grand River and the M-104 Bridge at Mile 3.15 over the Spring Lake Channel installing new riprap. The barges can be contacted on VHF-FM Marine Radio and will move to accommodate vessels passing if a 20-minute advance notice is provided. From September 6, 2022 through May 26, 2023, one-half of the U.S. Route 31 Bridge at Mile 2.89 over the Grand River will be secured to masted navigation and scaffolding that extends approximately 3-feet below low steel will be installed under the secured spans. Two 120-feet by 40-feet barges will be used to install a new submarine cable starting in November of 2022.

[30/22]

LAKE MICHIGAN – MICHIGAN CITY & INDIANA HARBOR & GARY HARBOR

LAKE MICHIGAN – IN – Michigan City – Chart 14927 - Bridge Regulation

The Coast Guard proposes to modify the operating schedule that governs the Amtrak Railroad Bridge, mile 0.9, over Trail Creek, in Michigan City, Indiana, to allow it to operate remotely. The bridge has operated remotely since 2003 without inclusion in the CFR and without incident or public complaint. We invite your comments on this proposed rulemaking. If you have questions on this proposed rule, call or e-mail Mr. Lee D. Soule, Bridge Management Specialist, Ninth Coast Guard District; telephone 216-902-6085, e-mail Lee.D.Soule@uscg.mil. To view the entire docket or to submit comments please visit <https://www.regulations.gov> and type USCG-2022-0303 in the search field. Comments and related material must reach the Coast Guard before **July 25, 2022**.

LAKE MICHIGAN – IN – Michigan City – Chart 14926 - Bridge Inspection

On **August 30, 2022** between the hours of 0700 and 1900, the Franklin Street Bridge at Mile 0.5 over Trail Creek will require a 1-hour advance notice for openings. Mariners should provide advance notice directly to the drawtender. Inspectors will utilize snooper trucks under the bridge. Spotters will warn of approaching vessels and move the man lift to allow vessels to pass under the bridge.

[27/22]

LAKE MICHIGAN – IN – Indiana Harbor – Chart 14927 - Bridge Inspection

On **August 31, 2022** between the hours of 0700 and 1900, the Dickey Road Bridge at Mile 1.21 over the Indiana Harbor Canal will require a 1-hour advance notice for openings. Mariners should provide advance notice directly to the drawtender. Inspectors will utilize snooper trucks under the bridge. Spotters will warn of approaching vessels and move the man lift to allow vessels to pass under the bridge.

[27/22]

LAKE MICHIGAN – IN – Indiana Harbor – Chart 14927 - Bridge Inspection

On September 1, and **September 2, 2022** between the hours of 0700 and 1900, the Indianapolis Boulevard Bridge at Mile 2.59 over the Indiana Harbor Canal will continue to require a 12-hour advance notice for openings. Mariners should provide advance notice directly to the drawtender. Inspectors will utilize snooper trucks under the bridge. Spotters will warn of approaching vessels and move the man lift to allow vessels to pass under the bridge.

[27/22]

LAKE MICHIGAN – IN – Michigan City – Chart 14926 - Bridge Special Event

On **August 6, 2022** between the hours of 1800 and 1900 the Franklin Street Bridge at Mile 0.50 over Trail Creek will be secured to masted navigation in conjunction with the Great Lakes Grand Prix boat parade. Vessels able to pass under the bridge without an opening may do so at any time.

[27/22]

LAKE MICHIGAN – IN – Michigan City – Chart 14926 - Bridge Inspection

On **August 30, 2022** between the hours of 0700 and 1900, the Franklin Street Bridge at Mile 0.5 over Trail Creek will require a 1-hour advance notice for openings. Mariners should provide advance notice directly to the drawtender. Inspectors will utilize snooper trucks under the bridge. Spotters will warn of approaching vessels and move the man lift to allow vessels to pass under the bridge.

[27/22]

LAKE MICHIGAN – CALUMET RIVER & LITTLE CALUMET RIVER

LAKE MICHIGAN – IL – Chicago Harbor – Chart 14927 – Bridge Inspections

From July 25, through **August 19, 2022** between the hours of 0600 and 1800, Monday through Saturday a 30-foot Harcon bridge inspection vessel will be inspecting all bridges between: Wilson Avenue at mile 8.35 (CORPS MILE 352.5) to the South Damen Avenue Bridge at Mile 6.14 (CORPS MILE 321.2) over the Chicago River and From the South Western Avenue Bridge at Mile 6.7 (CORPS MILE 320.6) to the South Cicero Avenue Bridge at Mile 10 (CORPS MILE 317.3) over the Chicago Sanitary and Ship Canal and From the 95th Street Bridge at Mile 1.09 (CORPS MILE 332.1) over the Calumet River to the Indiana Avenue Bridge at Mile 1.80 (CORPS MILE 322.3) over the Little Calumet River. The Harcon will monitor VHF-FM Marine Channel 16 and will move if a 30-minute advance notice is provided directly to the Harcon.

[27/22]

CHICAGO RIVER – MAIN RIVER CHANNEL, NORTH BRANCH, NORTH SHORE CHANNEL, AND SOUTH BRANCH AND SOUTH FORK OF SOUTH BRANCH

LAKE MICHIGAN – IL – Chicago River – Chart 14927 – Bridge Discrepancy

The Coast Guard has received a report that the protection cells of the Fullerton Avenue Bridge at Mile 5.30 (CORPS MILE 329.1) over the North Branch of the Chicago River are leaning away from the channel.

[23/20]

LAKE MICHIGAN – IL – Chicago Harbor – Chart 14927 – Bridge Maintenance

From midnight on February 13 through noon on **November 1, 2022**, one leaf of the Dearborn Street Bridge at Mile 1.13 over the Main Branch of the Chicago River will be secured to masted navigation. The other leaf will operate normally. Monday through Friday between the hours of 0700 and 1530, a 125-foot by 35-foot barge will be working under the secured leaf and will move to accommodate vessels if a 1-hour advance notice is provided directly to the barge on VHF-FM Marine Channel 16.

[04/22]

*****REVISED*****

LAKE MICHIGAN – IL – Chicago Harbor – Chart 14927 – Bridge Maintenance

From February 14 through **August 12, 2022**, between the hours of 0600 and 1800, Monday through Friday a 100-foot by 50-foot barge will be working at the Webster Avenue Bridge at Mile 4.85 (CORPS MILE 328.6) over the North Branch of the Chicago River. The barge will move if provided a 2-hour advance notice by calling the barge on VHF-FM Marine Channel 16 or 630-514-0695 or 773-842-7470-1570.

[05/22] [16/22] [24/22] [31/22]

LAKE MICHIGAN – IL – Chicago Harbor – Chart 14927 – Bridge Inspections

From July 25, through **August 19, 2022** between the hours of 0600 and 1800, Monday through Saturday a 30-foot Harcon bridge inspection vessel will be inspecting all bridges between: Wilson Avenue at mile 8.35 (CORPS MILE 352.5) to the South Damen Avenue Bridge at Mile 6.14 (CORPS MILE 321.2) over the Chicago River and From the South Western Avenue Bridge at Mile 6.7 (CORPS MILE 320.6) to the South Cicero Avenue Bridge at Mile 10 (CORPS MILE 317.3) over the Chicago Sanitary and Ship Canal and From the 95th Street Bridge at Mile 1.09 (CORPS MILE 332.1) over the Calumet River to the Indiana Avenue Bridge at Mile 1.80 (CORPS MILE 322.3) over the Little Calumet River. The Harcon will monitor VHF-FM Marine

Channel 16 and will move if a 30-minute advance notice is provided directly to the Harcon.

[27/22]

LAKE MICHIGAN – IL – Chicago Harbor – Chart 14927 – Bridge Maintenance

From July 18 through **November 12, 2022** between the hours of 0700 and 1600 daily a 100-foot by 80-foot barge will be working under the Grand Avenue Bridge at Mile 2.0 (CORPS MILE 325.9) over the North Branch of the Chicago River. The barge will move if a 2-hour advance notice is provided directly to the barge on VHF-FM Marine Channel 16 or by calling 708-253-5818. Snooper trucks will be used under the bridge. Spotters will warn of approaching vessels and move the man lifts to allow vessels to pass.

[27/22]

CALUMET SAG CHANNEL

LAKE MICHIGAN - IL – Calumet-SAG Channel - Chart 14926 - Bridge Maintenance

From March 1 through **August 31, 2022** scaffolding that extends approximately 1-foot below low steel will be installed under one half of the 96th Avenue Bridge (LaGrange US 45) at Mile 24.56 (CORPS MILE 308.4) over the Calumet-SAG Channel. The other half of the bridge the scaffolding will be pulled up tight against low steel. Steady burning yellow lights will warn mariners of the temporary reduction in vertical clearance.

[07/22]

LAKE MICHIGAN - IL – Calumet-SAG Channel - Chart 14926 - Bridge Maintenance

From June 1 through **November 1, 2022** scaffolding that extends approximately 1-foot below low steel will be installed under one half of the Western Avenue Bridge at Mile 15.01 (CORPS MILE 318.0) over the Calumet-SAG Channel.

[07/22]

LAKE MICHIGAN – IL – Calumet-SAG Channel – Chart 14927 – Bridge Maintenance

from April 4 through **November 18, 2022**, scaffolding that hangs approximately 1-foot below low steel will be installed under one-half of the Francisco Avenue at Mile 15.63 (CORPS MILE 317.4), the Crawford Avenue Bridge at Mile 17.01 (CORPS MILE 316.0), the Ridgeland Avenue at Mile 20.47 (CORPS MILE 312.5), 104th Avenue Bridge at Mile 25.56 (CORPS MILE 307.3) over the Calumet-SAG Channel.

[12/22]

CHICAGO SANITARY AND SHIP CANAL, KANKAKEE RIVER & ROCK RIVER

(Lake Michigan to Mile 36.2/291.1)

*****REVISED*****

LAKE MICHIGAN – IL – Chicago Sanitary and Ship Canal – Chart 14927 - Bridge Maintenance

From March 21 through **August 1, 2022**, between the hours of 0700 and 1530, Monday through Friday, a 125-foot by 35-foot barge will be working at the South Cicero Avenue Bridge at Mile 10.0 (CORPS MILE 317.3) over the Chicago Sanitary and Ship Canal. The barge will monitor VHF-FM Marine Channel 16 and will move if a 1-hour advance notice is provided.

[10/22] [21/22] [26/22]

LAKE MICHIGAN – IL – Chicago Harbor – Chart 14927 – Bridge Inspections

From July 25, through **August 19, 2022** between the hours of 0600 and 1800, Monday through Saturday a 30-foot Harcon bridge inspection vessel will be inspecting all bridges between: Wilson Avenue at mile 8.35 (CORPS MILE 352.5) to the South Damen Avenue Bridge at Mile 6.14 (CORPS MILE 321.2) over the Chicago River and From the South Western Avenue Bridge at Mile 6.7 (CORPS MILE 320.6) to the South

Cicero Avenue Bridge at Mile 10 (CORPS MILE 317.3) over the Chicago Sanitary and Ship Canal and From the 95th Street Bridge at Mile 1.09 (CORPS MILE 332.1) over the Calumet River to the Indiana Avenue Bridge at Mile 1.80 (CORPS MILE 322.3) over the Little Calumet River. The Harcon will monitor VHF-FM Marine Channel 16 and will move if a 30-minute advance notice is provided directly to the Harcon.

[27/22]

LAKE MICHIGAN – WEST

LAKE MICHIGAN – Sturgeon Bay Ship Canal – Green Bay – Fox River – Wolf River

LAKE MICHIGAN – WI – Fox River – Chart 14972- Bridge Maintenance

From April 27, 2022 through **October 7, 2022** the Tayco Street Bridge at Mile 37.52 over the Fox River at Menasha will require a 2-hour advance notice from 0800 to Midnight and a 6-hour advance at all other times, each day, for openings. Mariners should call 920-360-5792 to provide advance notice.

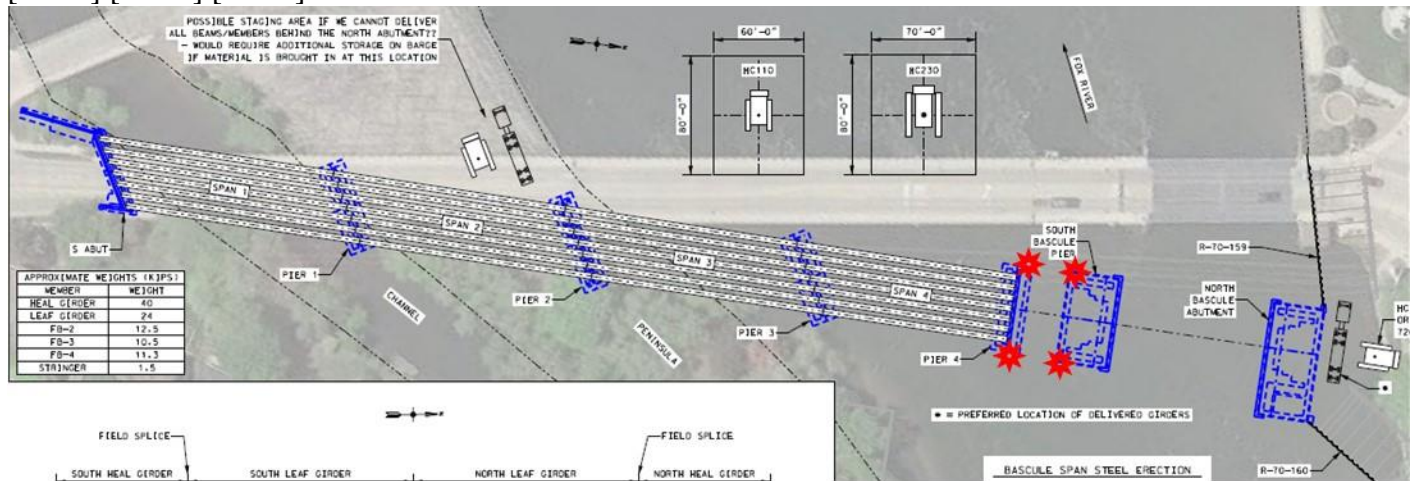
[45/21]

*******REVISED*******

LAKE MICHIGAN – WI – Fox River – Chart 14916- Bridge Construction

From October 29, 2020 through **August 31, 2022**, between the hours of 0700 to 2200, Monday through Friday, eight barges, 80-feet by 70-feet or smaller, will be used to construct the Racine Street Bridge at Mile 37.91 over the Fox River at Menasha. The old bridge has been removed. The temporary bridge over the slip near the George Banta Dock will continue to remain through the summer for temporary access. A 20-foot channel will be maintained for vessels through the construction area, between pier 4 and the south bascule pier until the bascule spans have been constructed and installed. Steady burning red lights will mark the temporary channel for vessels to pass through the construction area. Cranes in the drawspan will move if a 12-hour advance notice is provided by calling: 920-224-2068 or 920-450-4987

[43/20] [10/22] [18/22]



LAKE MICHIGAN – WI – Fox River – Chart 14972- Bridge Maintenance

From May 1, 2023 through **September 1, 2023** scaffolding that hangs approximately 3-feet below low steel will be installed under the Tower Driver / Leo Figaro Bridge at Mile 0.41 over the Fox River.

[11/22]

LAKE MICHIGAN – WI – Fox River – Chart 14972

From July 27 through **August 4, 2022** from 0900 through 1400 each day inspectors will utilize snooper trucks under the Tower Drive / Leo Frigo Bridge at Mile 0.41 over the Fox River. Spotters will warn of approaching vessels and move the man lift to allow vessels to pass under the bridge.

[28/22]

LAKE SUPERIOR

LAKE SUPERIOR – MI – Keweenaw Waterway – Chart 14972- Bridge Test Schedule

The Coast Guard has issued a temporary deviation (87 FR 30418) from the operating schedule that governs the US41 Bridge, mile 16.0, over the Keweenaw Waterway between the towns of Houghton and Hancock, Michigan to test the effectiveness of a new bridge operating schedule.

From May 26, 2022 through **September 6, 2022** the US41 Bridge, mile 16.0, over the Keweenaw Waterway, shall open on signal: except that from 0700 to 1900 Monday through Friday, less federal holidays, the draw only need to be opened on the hour and half hour for any vessel. Between midnight and 0400, the draw shall be placed in the intermediate position and opened if a 2-hour advance notice is given. The bridge shall be opened on signal to pass any vessels over 300 feet in length or at any time 5 or more vessels gather at the bridge requesting an opening. All other provisions of 33 CFR 117.635 shall remain in effect.

If you have questions on this proposed rule, call or e-mail Mr. Lee D. Soule, Bridge Management Specialist, Ninth Coast Guard District, telephone 216-902-6085, e-mail Lee.D.Soule@uscg.mil. You may read the entire docket or submit comments identified by docket number USCG-2022-0237 using Federal Decision Making Portal at <https://www.regulations.gov>. Comments and relate material must reach the Coast Guard on or before **November 1, 2022**.

[20/22]

LAKE SUPERIOR – MN – Duluth – Chart 14975- Bridge Maintenance

From July 6, through **August 12, 2022** between the hours of 0700 and 1730, Monday through Saturday contractors will utilize Snooper trucks under the John A. Blatnik, I-535 Bridge at mile 2.74 over the St. Louis Bay and River. Spotters will warn of approaching vessels and move the man lift to allow vessels to pass.

[27/22]

RAINY LAKE, RAINY RIVER, LAKE OF THE WOODS, WISCONSIN RIVER, MISSISSIPPI RIVER, & RED RIVER OF THE NORTH

(Revised 11/19) NINTH DISTRICT DRAWBRIDGE SIGNALS OR OPERATION DELAYS FORM

TO: Commander (dpb)
Ninth Coast Guard District
1240 E. 9th Street – Room 2047b
Cleveland, Ohio 44199-2060
Phone: (216) 902-6087
Fax: (216) 902-6088
E-Mail: William.B.Stanifer@uscg.mil
Lee.D.Soule@uscg.mil
Michael.O.Walker2@uscg.mil

DATE: _____

NOTE: Reports of Delay will be processed only when all items are fully addressed and reports submitted within 15 days of reported delay / difficulty. Attach additional sheets if necessary.

CONFIDENTIALITY: Please check here if you wish to keep names of vessels and persons confidential

1. NAME OF VESSEL: _____

2. PORT: _____

3. DATE OF DELAY: _____ () INBOUND () OUTBOUND

4. BRIDGE NAME: _____

5. WATERWAY: _____ MILE: _____

(Bridge name, waterway, and mile from Coast Pilot #6)

NOTE: IF DELAY IS AT RAILROAD BRIDGE, AND TRAINS ARE "CONTINUOUSLY" BEING RUN ACROSS OR STOPPED ON A DRAWBRIDGE, PLEASE INDICATE ON REVERSE SIDE OF FORM THE STARTING AND ENDING TIMES FOR EACH TRAIN, OR TIMES THAT TRAINS ARE STOPPED ON BRIDGE.

6. IF ADVANCE NOTICE IS PROVIDED, TIME NOTICE GIVEN: _____

ETA PROVIDED: _____ TO WHOM: _____

7. TIME FIRST SIGNAL GIVEN FOR BRIDGE: _____ TIME ARRIVED AT BRIDGE: _____

8. TIME FIRST SIGNAL RECEIVED FROM BRIDGE: _____

9. DID RESPONSE INDICATE AN IMMEDIATE OPENING COULD BE EXPECTED OR THAT THERE COULD BE A DELAY? _____

10. NAME(S) AND PHONE NUMBER OF BRIDGE TENDER: _____

11. TIME BRIDGE OPENED: _____ TIME LOST: _____

12. WHAT WAS REASON PROVIDED FOR DELAY AND WHO PROVIDED IT?: _____

13. WHAT NAVIGATIONAL OR MANEUVERING DIFFICULTIES WERE CAUSED BY DELAY?: _____

14. PRINTED OR TYPED NAME(S) AND ADDRESS(ES) OF REPORTING SOURCE(S): _____

15. PHONE NUMBERS AND/OR E-MAIL FOR REPORTING SOURCE(S) (FOR ADDITIONAL QUESTIONS BY COAST GUARD AND FOR FINAL STATUS OF REPORT): _____

(SIGNATURE)

Waterway Analysis and Management System Survey

Name of Waterway: _____

User Information

___ Commercial User

___ Recreational User

Number of years in the maritime industry or number of years using this waterway: _____

Number of transits in the waterway per year: _____

Number of night transits of waterway: _____

Seasonal Dates: Start: _____ End: _____

Name of Vessel: _____

Vessel Description: _____

Length: _____ Beam: _____ Draft: _____ Gross Tons: _____

Net Tons: _____ Bridge Height of Eye: _____

Cargo Carried: _____

Navigational tools used: (ECDIS/ECPINS, GPS, DGPS, VISUAL, RADAR) _____

What area do you believe is the most dangerous or difficult to navigate: _____

Are the floating aids to navigation (lighted and unlighted buoys) adequate for this waterway: _____

Are the fixed aids to navigation (lights, ranges, lighthouses, daybeacons) adequate for this waterway: _____

Are the year round and lighted ice buoys adequate: _____

Are there buoys that you feel should be changed to fixed aids to navigation?

Are there any buoys that could be eliminated from this waterway: _____

Are there any buoys with sound signals that the bell or gong could be removed:

Are there any areas that require additional aids to navigation in this waterway:

Do the nautical charts, Coast Pilot, and Light List meet your needs for this waterway: _____

Are there private Aids to Navigation that you find misleading or interfere with the current system in the waterway:

Any addition comments on this waterway: _____

Thank you for taking time to comment on this waterway. Your input as a mariner very valuable to the U. S. Coast Guard in evaluating waterways to make them safe and as easily navigable as possible. Please feel free to contact D09-DG-District-D9-ATON-Support@uscg.mil with any other questions or concerns about any aids to navigation in the Great Lakes. The survey can be mailed to:

Commander (dpw-2)
Ninth Coast Guard District
1240 East Ninth Street
Cleveland, Ohio 44199



RESEARCH EQUIPMENT IN WATER

Lake Superior, Michigan, Wisconsin, Minnesota

August 8th to September 30th, 2022

SAILDRONE, INC. will operate two Uncrewed Surface Vehicles, called “Saildrones”, to study fish populations in Lake Superior waters. They will be launched from Ashland, WI on or about August 8th and transit through the central and western areas of Lake Superior through September 30, 2022. They will have track lines nearshore and offshore throughout the lake.

VESSELS ARE REQUESTED TO TRANSIT THE AREA WITH CAUTION, AND REMAIN GREATER THAN 500 METERS AWAY FROM THE RESEARCH EQUIPMENT.

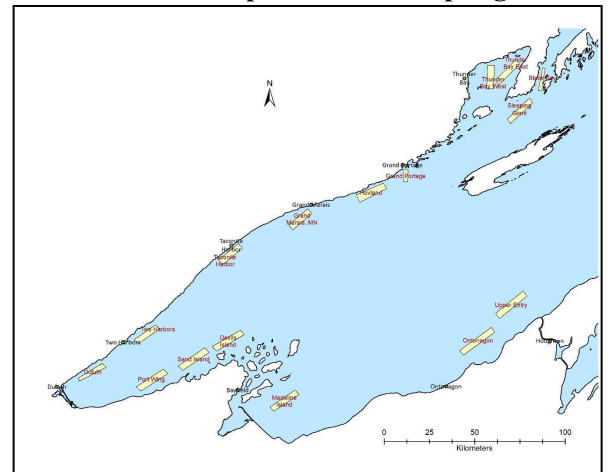
Saildrones are wind-powered Uncrewed Surface Vehicles that carry important oceanographic and fisheries acoustics research instrumentation and are controlled from shore through satellite communications.

- **Color: Orange**
- **Light: white all-round light on top of mast**
- **Radar Reflector: Yes**
- **Notation: “Saildrone”**
- **Length: 23 ft & Width: 2 ft**
- **Height: 16 ft above water line**
- **Draft: 6 ft, Avg. speed: 3 kts**
- **GPS / AIS / Cameras: Yes**
- **AIS identifiers: “SD-1063”, “SD-1064”**

Saildrone



Western Lake Superior with sampling sites



SAILDRONE MISSION CONTROL

(510) 722-6070

missioncontrol@saildrone.com

USCG Autonomous Vessel Mission Notification - Submitted May 10th, 2022

Submitted to: LTJG Gagnon, Waterways Management Branch, USCG 9th District

Submitted by: Stephen Constant, Physical Science Tech., NOAA, Great Lakes Environmental Research Lab

Boeing Liquid Robotics SV2 WaveGlider, Autonomous Wave Driven Surface Vehicle

1. Characteristics:
 - a. Size:
 - i. Surface component - "Float" 82" x 24"
 - ii. Sub-surface component - "Sub" 42" x 75"
 - iii. Sub and Float joined by 6m (20ft) tether (Figure 1)
 - b. Propulsion: Mechanical conversion of wave energy into forward propulsion, max speed 1.4 knots
 - c. Draft: Float 12". Sub when hanging below Float 20'
 - d. Color: Float @ surface is Safety Yellow w/ Yellow Flag
 - e. Lighting Configuration: Shore activated, LED, white, all around on 4' mast
2. Capabilities:
 - a. Communication: Real time Iridium Short Burst Data - Real time, on demand commands from Pilot in Charge, vehicle sends status updates every 5 minute or up to every 1 minute if an AIS equipped vessel approaches within 1km.
 - b. Collision Avoidance: remotely commanded manual evasive action, as directed by Pilot in Charge/ On Duty
 - c. Means Of Lookout: Map based web interface displaying all control systems, charts, AIS targets, waypoints, path, etc. All updated at 5 or 1 minute intervals as listed in "Communication" above. A 24hr watch schedule will be instituted when the vehicle is deployed.
3. Contact Info:
 - a. Stephen Constant, Physical Science Technician, Marine Instrumentation, Great Lakes Environmental Research Lab, NOAA, Ann Arbor, MI. Office 734-741-2336, Mobile 734-717-0205, steve.constant@noaa.gov
4. Location and Time of Deployment:
 - a. Launch - 1300 July 5th, 2022. Thunder Bay, 14.86nm southeast of Alpena, MI Lighthouse (
 - b. Operational Area - Please see attached polygon boundaries for Thunder Bay, Outer Saginaw Bay, and Southern Basin.
 - c. Recovery - Estimated to be between August 18th and 20th, 2022 depending on rate of travel/wave conditions. Exact time TBD. Retrieval at deployment location.
5. Ability to recover vessel: As needed in waves up to 1.5'. Launch and recovery via crane on R/V NOAA 5503 (55ft)
6. Other - Assessment
 - a. Mission - The Wave Gliders will be placed in the water from an NOAA vessel and begin their mission near the outer Thunder Bay polygon. They will then split up and cover the other remaining polygons (Outer Saginaw Bay and Southern Basin) before returning to the deployment location on or around 8/18/22.
 - b. Risk Mitigation - The Wave Glider is bright yellow in color (highly visible during daylight hours) and contains an all around white LED at the top of the mast for night navigation. The average speed is approximately 1 knot, giving ample time to maneuver as needed in the event a change of course is warranted. The Wave Glider will be monitored/piloted 24 hours/day using software that provides sufficient means of collision avoidance. It has an AIS receiver that will be programmed to give the

pilot early notification of an approaching vessel (equipped with AIS). If any malfunction occurs, the vessel will be programmed to enter a "holding pattern" until an NOAA vessel arrives on scene to troubleshoot. Above contact information will also be affixed to the vessel topsides. If all vessel power is lost, an attached stand-alone back-up satellite tracking device will be used for location and recovery.

Figure 1 - Simple schematic of vehicle and means of propulsion

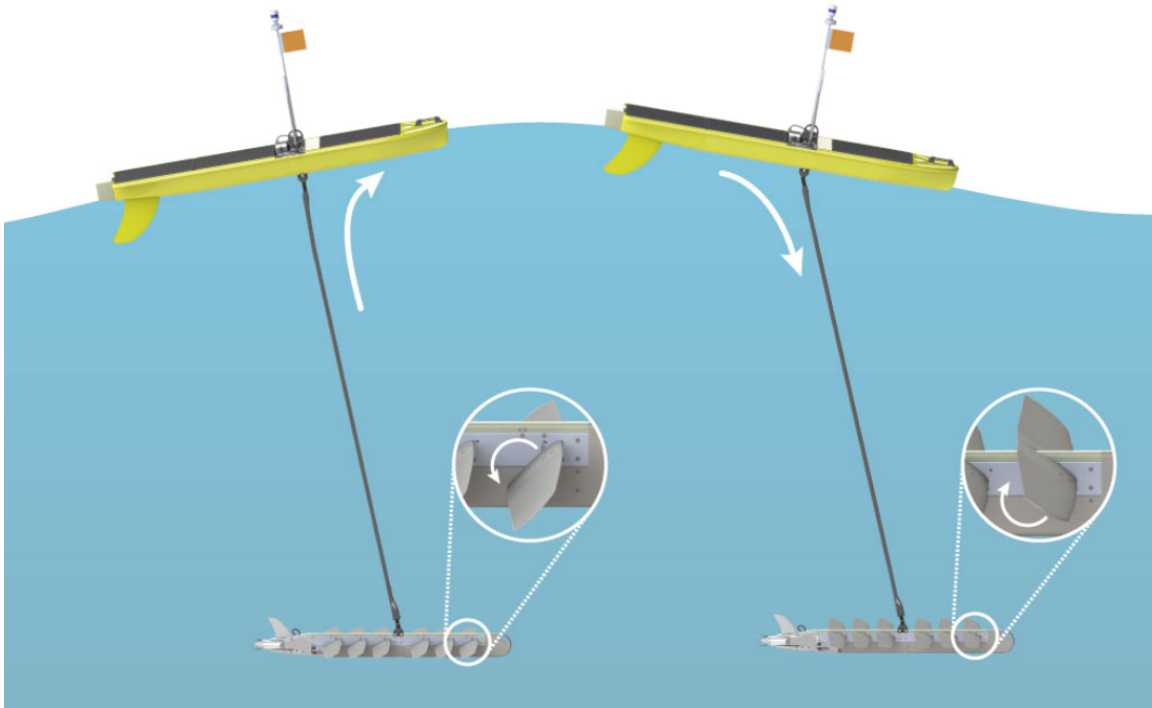


Figure 2 - Example screenshot of the Wave Glider Management System (WGMS) use by remote pilots to control the WaveGlider during deployment

Health: ● Last refresh: Thu-Aug-26-2021 15:45:59 (UTC-05:00) Eastern Time (US & Canada)

Date Range: 7/22/2021 5:00 AM Duration 15 hour(s) 3m 15s

Map Satellite

Mode: Rudder Center
 Ave Speed(kts): 0.08
 Last Speed(kts): 0.07
 Rudder Pos: Center
 Path Heading: 270
 Ave Water Speed(kts): 0

Light: IR: XBee
 P/L1: P/L2: Sub
 P/L3: PEP

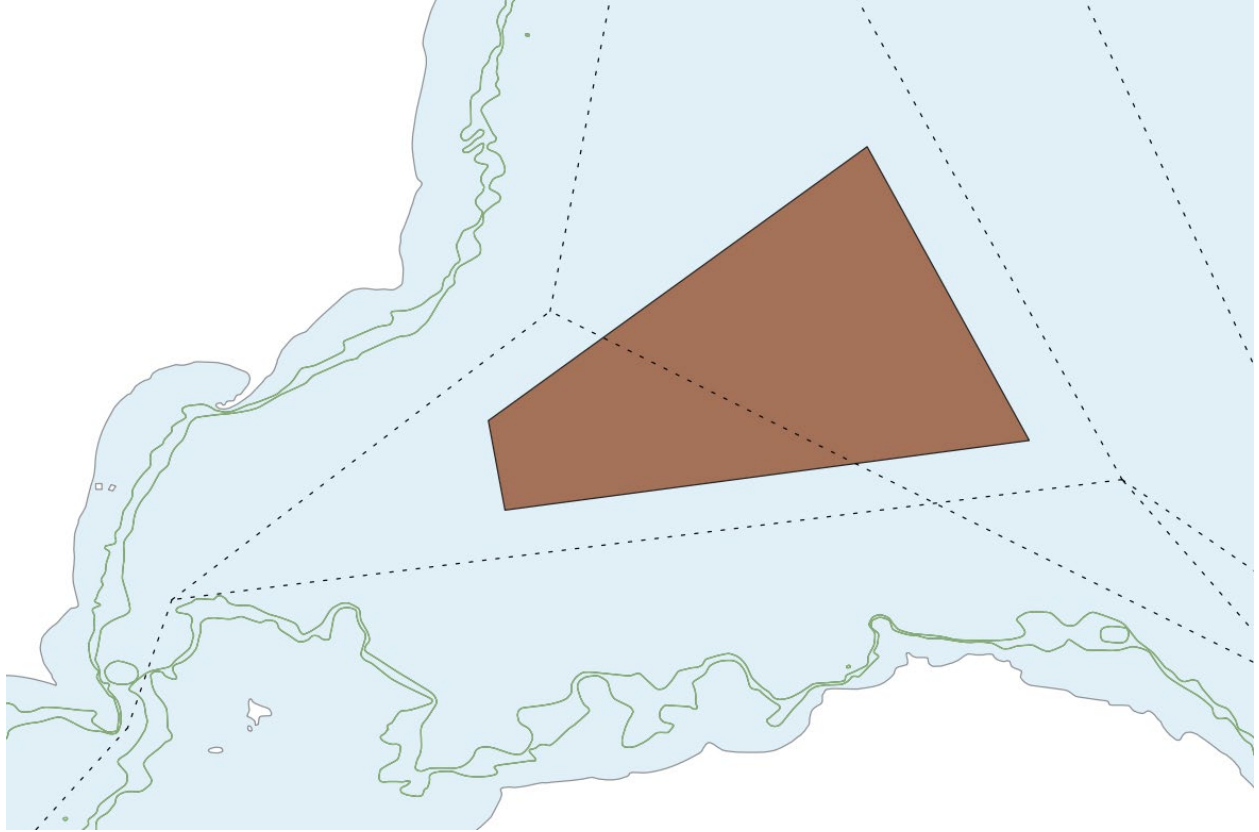
Follow Sequential Course
 Hold Station At Waypoint
 Follow Custom Course
 Hold Current Position
 Follow Fixed Heading
 Set Parameter
 Comment
 More Commands...

Begin Mission
 Show System Menu

glwg: James Anderson (Sign Out)

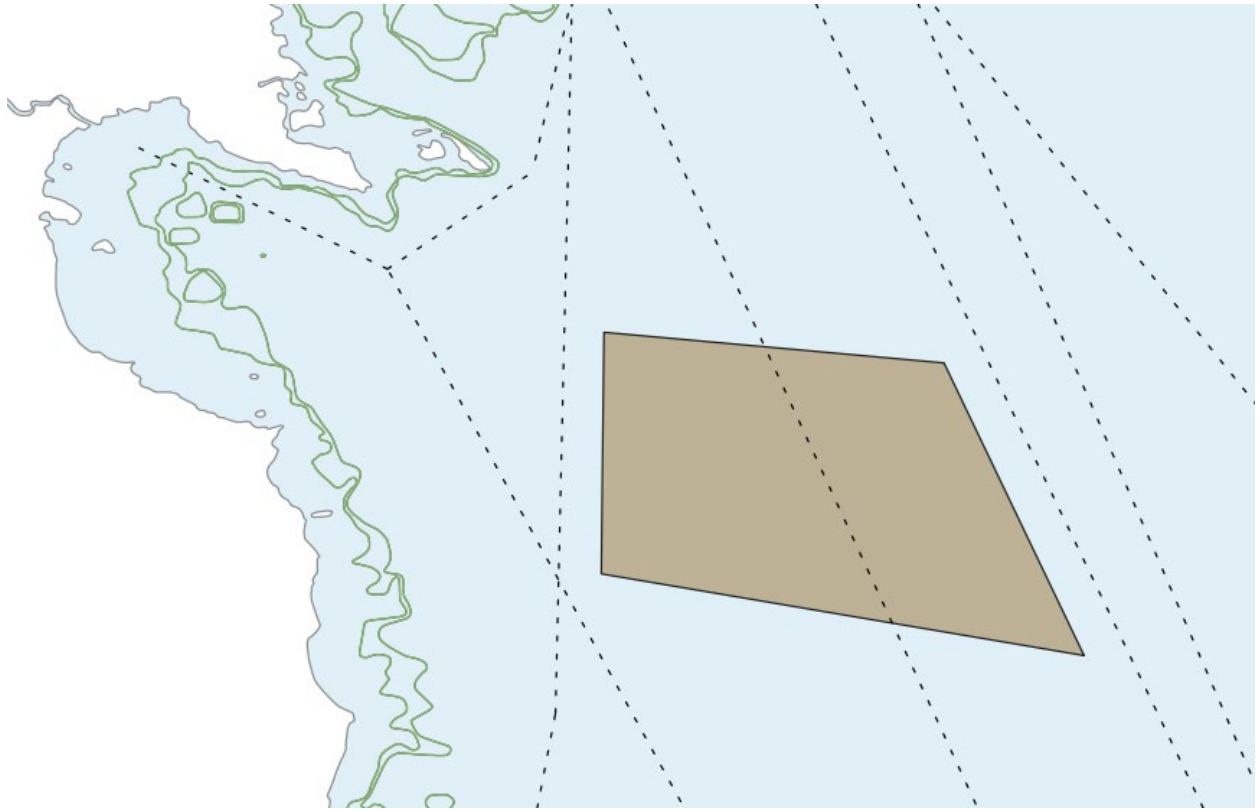
Map Utility Panel
 214.8 km
 Transit: 60.41 days
 Metric Nautical Miles
 Delete List Delete All Toggle WP
 46.948537822 -88.410967703 Send
 46.965500454 -88.39023492 Send
 Center: Type: Rad: Rot: Aspt:
 Sides: Orbits: Render

TimeStamp	Structure ID	Target	SOG (kt)	POG (deg)	Desired	Sub Hea	Water Sp	Current Speed	Current Heading	Lat (deg)	Lon (deg)	Command	Reason	Error Type
7/21/2021 4:56 PM	Telemetry6	0	0.072	270	83	32	0.0000			47.12070	-88.54595			
7/21/2021 4:51 PM	Telemetry6	0	0.064	90	83	32	0.0000			47.12070	-88.54594			



Outer Saginaw Bay Polygon Boundaries:

- 83.2713, 44.2383
- 83.2598, 44.1746
- 83.0017, 44.4333
- 82.8859, 44.2234



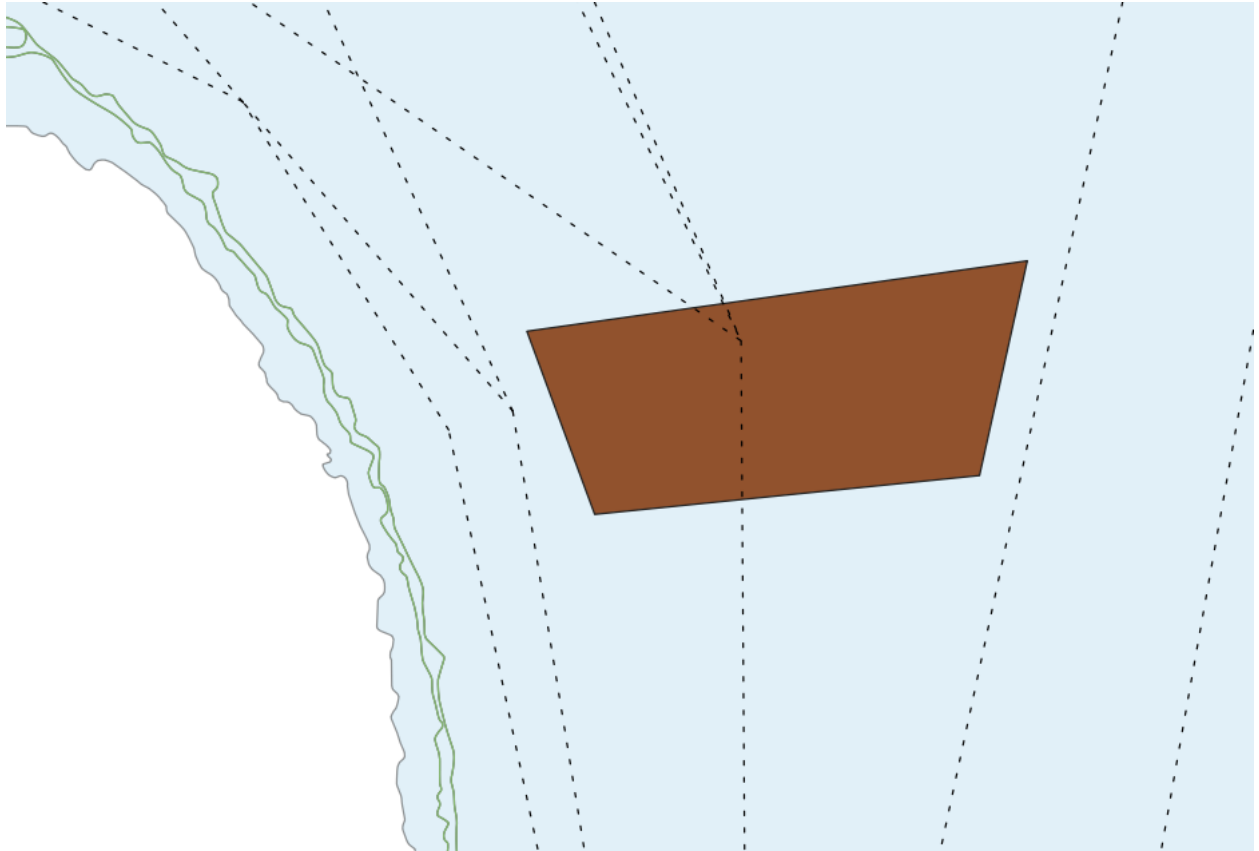
Thunder Bay Polygon Coordinates:

-83.1227, 44.9380

-83.1238, 44.7960

-82.9209, 44.9204

-82.8387, 44.7488



Southern Basin Lake Huron Polygon:

-82.5318, 43.9187

-82.2484, 43.9590

-82.4933, 43.8157

-82.2744, 43.8372