

U.S. Department of Homeland Security

United States Coast Guard

LOCAL NOTICE TO MARINERS

District: 9 Week: 38/22

> 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-notices-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 - B159-22 through B161-22 Ninth District - C149-22 through C155-22 Sector Detroit, MI - D072-22 through D074-22 Sector Lake Michigan, WI - M270-22 through M276-22 Sector Sault Ste Marie, MI - S125-22 through S127-22

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://cgls.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 Al - 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 - Liaht

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. O FL W

LNM: 31/22

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
4665	Sandusky Straight Channel Buoy 15	LT IMCH	14845	D066-22	34/22	
4720	Sandusky Bay Exit Channel Buoy 8	LT IMCH	14845	D065-22	34/22	
6565	Monroe Harbor Range Rear Light	LT EXT	14846	D067-22	35/22	
6940	East Outer Channel Lighted Buoy 11	LT IMCH	14848	D068-22	35/22	
8410	Peche Island Range Rear Light	DAYMK IMCH	14853	D073-22	37/22	
11520	Middle Island Lighted Buoy 13	OFF STA	14864	D072-22	37/22	
11765	Fourteen Foot Shoal Light	LT IMCH	14881	S126-22	38/22	
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	
13345	Middle Neebish Channel Lighted Buoy 59	LT IMCH	14887	S125-22	37/22	
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	
13690	West Neebish Channel (Downbound) Light 14	OFF STA	14887		33/22	
14050	Six Mile Point Range Rear Light	DAYMK MISSING	14883	S016-21	10/21	
14540	Little Lake Harbor Light 2	MISSING	14961	S120-22	37/22	
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	
16965	Flag Island Lighted Buoy 4	OFF STA	14999	S95-21	43/21	
17210	Canoe Channel Daybeacon 8	STRUCT DEST/TRUB			23/22	
17550	Kabetogama Lake Warning Daybeacon	STRUCT DEST		S114-22	34/22	
21275	Rowley Bay Buoy 2	MISSING	14909	M111-22	21/22	
21455	Gravelly Island Shoal Buoy 4	MISSING	14909	M110-22	21/22	
21990	Peshtigo Reef Light	LT EXT/SS INOP	14910	M274-22	38/22	
22180	Green Bay Harbor Entrance Channel	DAYMK DMGD	14918		24/21	
22185	Range Front Light 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
1400	Point Vivian Leading Light	WATCHING PROPERLY			38/22	38/22
2425	Wilson Harbor Daybeacon 7	WATCHING PROPERLY	14806		37/22	38/22
13905	Sugar Island North Channel Lighted Buoy 1	RELIGHTED	14883		38/22	38/22
14015	Frechette Point Range Front Light	WATCHING PROPERLY	14883		37/22	38/22
14560	Grand Marais Harbor Of Refuge Inner Light	RELIGHTED			37/22	38/22
18390	Frankfort North Pierhead Light	WATCHING PROPERLY	14907		37/22	38/22
DISCREPANCIES	(PRIVATE AIDS)					
LLNR	Aid Name	Status	Chart No.	BNM Ref.	LNM St	LNM End
2396	Olcott Harbor Detached Breakwater East Light	LT EXT	14800		32/22	
2397	Olcott Harbor Detached Breakwater West Light	LT EXT	14800		32/22	
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	LT EXT	14825		27/22
3935	Light 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 IMCH	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	LT EXT	14841		27/22
4460	Light 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	LT EXT	14881		18/22
15440	Light Madeline Island Marina Entrance South	DAYMK IMCH			37/22
18215	Light Suttons Bay Municipal Entrance Buoy 4	OFF STA	14913		33/22
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
20165	Farwell Avenue Breakwater Light	LT EXT	14926		32/22
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
20495	Racine West Harbor Entrance Light 3	LT EXT	14925	M270-22	32/22
20500	Racine Harbor Light 5	LT EXT	14925		35/22
20515	Racine Harbor Light 9	LT EXT	14925		35/22
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
20759	Mickinley Marina Daybeacon 4	DAYMK MISSING	14924	M243-22	34/22
21798	Yacht Works Marina Breakwater Light 1	LT EXT	14909		35/22

LLNR	Aid Name	Status	Chart No	b. BNM Ref.	LNM St	LNM End
lone						
PLATFORM DISC	CREPANCIES					
Name	Status		Position	BNM Ref.	LNM St	LNM Enc
None						
PLATFORM DISC	CREPANCIES CORRECTED					
Name	Status		Position	BNM Ref.	LNM St	LNM End
	SECTION III - TEMPORARY CHANG ains temporary changes and corrections to Aids dging, testing, evaluation, or marking an obstruc- new p	to Navigation for this edit	ion. When charted	aids are tempora	arily	
EMPORARY CHA	NGES					
LLNR	Aid Name	Status	Chart No.	BNM Ref.	LNM St	LNM En
2105	Oswego Harbor West Channel Light 2	TRLB	14813		17/19	
2105 2720	Oswego Harbor West Channel Light 2 Buffalo Harbor North Entrance Light 7	TRLB DISCONTINUED	14813 14833		17/19 33/19	
2720	Buffalo Harbor North Entrance Light 7 Barcelona Harbor East Breakwater Light Barcelona Harbor West Breakwater Light	DISCONTINUED DISCONTINUED FOR DREDGING DISCONTINUED FOR DREDGING	14833		33/19	
2720 3480	Buffalo Harbor North Entrance Light 7 Barcelona Harbor East Breakwater Light Barcelona Harbor West Breakwater Light West Harbor Inner Channel Daybeacon 12	DISCONTINUED DISCONTINUED FOR DREDGING DISCONTINUED FOR DREDGING TRUB	14833 14823		33/19 23/22	
2720 3480 3485	Buffalo Harbor North Entrance Light 7 Barcelona Harbor East Breakwater Light Barcelona Harbor West Breakwater Light	DISCONTINUED DISCONTINUED FOR DREDGING DISCONTINUED FOR DREDGING TRUB	14833 14823 14823		33/19 23/22 23/22	
2720 3480 3485 5435	Buffalo Harbor North Entrance Light 7 Barcelona Harbor East Breakwater Light Barcelona Harbor West Breakwater Light West Harbor Inner Channel Daybeacon 12	DISCONTINUED DISCONTINUED FOR DREDGING DISCONTINUED FOR DREDGING TRUB	14833 14823 14823 14842		33/19 23/22 23/22 33/21	
2720 3480 3485 5435 5470	Buffalo Harbor North Entrance Light 7 Barcelona Harbor East Breakwater Light Barcelona Harbor West Breakwater Light West Harbor Inner Channel Daybeacon 12 West Harbor Inner Channel Daybeacon 14	DISCONTINUED DISCONTINUED FOR DREDGING DISCONTINUED FOR DREDGING TRUB TRUB Reduced Intensity TRLT	14833 14823 14823 14842 14842		33/19 23/22 23/22 33/21 48/20	
2720 3480 3485 5435 5470 8240	Buffalo Harbor North Entrance Light 7 Barcelona Harbor East Breakwater Light Barcelona Harbor West Breakwater Light West Harbor Inner Channel Daybeacon 12 West Harbor Inner Channel Daybeacon 14 William Livingstone Memorial Light	DISCONTINUED DISCONTINUED FOR DREDGING DISCONTINUED FOR DREDGING TRUB TRUB Reduced Intensity	14833 14823 14823 14842 14842 14853		33/19 23/22 23/22 33/21 48/20 33/21	
2720 3480 3485 5435 5470 8240 9690	Buffalo Harbor North Entrance Light 7 Barcelona Harbor East Breakwater Light Barcelona Harbor West Breakwater Light West Harbor Inner Channel Daybeacon 12 West Harbor Inner Channel Daybeacon 14 William Livingstone Memorial Light Grande Pointe Light 23	DISCONTINUED DISCONTINUED FOR DREDGING DISCONTINUED FOR DREDGING TRUB TRUB Reduced Intensity TRLT	14833 14823 14823 14842 14842 14853 14853		33/19 23/22 23/22 33/21 48/20 33/21 47/20	
2720 3480 3485 5435 5470 8240 9690 14020 15220 16963	Buffalo Harbor North Entrance Light 7 Barcelona Harbor East Breakwater Light Barcelona Harbor West Breakwater Light West Harbor Inner Channel Daybeacon 12 West Harbor Inner Channel Daybeacon 14 William Livingstone Memorial Light Grande Pointe Light 23 Frechette Point Range Rear Light Ontonagon Harbor East Breakwater Light Driftwood Point Light	DISCONTINUED DISCONTINUED FOR DREDGING DISCONTINUED FOR DREDGING TRUB TRUB Reduced Intensity TRLT Reduced Intensity DISCONTINUED DISCONTINUED	14833 14823 14823 14842 14842 14853 14853 14883		33/19 23/22 23/22 33/21 48/20 33/21 47/20 21/22 02/22 45/20	
2720 3480 3485 5435 5470 8240 9690 14020 15220	Buffalo Harbor North Entrance Light 7 Barcelona Harbor East Breakwater Light Barcelona Harbor West Breakwater Light West Harbor Inner Channel Daybeacon 12 West Harbor Inner Channel Daybeacon 14 William Livingstone Memorial Light Grande Pointe Light 23 Frechette Point Range Rear Light Ontonagon Harbor East Breakwater Light	DISCONTINUED DISCONTINUED FOR DREDGING DISCONTINUED FOR DREDGING TRUB TRUB Reduced Intensity TRLT Reduced Intensity DISCONTINUED	14833 14823 14823 14842 14842 14853 14853		33/19 23/22 23/22 33/21 48/20 33/21 47/20 21/22 02/22	
2720 3480 3485 5435 5470 8240 9690 14020 15220 16963	Buffalo Harbor North Entrance Light 7 Barcelona Harbor East Breakwater Light Barcelona Harbor West Breakwater Light West Harbor Inner Channel Daybeacon 12 West Harbor Inner Channel Daybeacon 14 William Livingstone Memorial Light Grande Pointe Light 23 Frechette Point Range Rear Light Ontonagon Harbor East Breakwater Light Driftwood Point Light	DISCONTINUED DISCONTINUED FOR DREDGING DISCONTINUED FOR DREDGING TRUB TRUB Reduced Intensity TRLT Reduced Intensity DISCONTINUED DISCONTINUED Reduced Intensity	14833 14823 14823 14842 14842 14853 14853 14883	01/21	33/19 23/22 23/22 33/21 48/20 33/21 47/20 21/22 02/22 45/20	
2720 3480 3485 5435 5470 8240 9690 14020 15220 16963 21635 22245	Buffalo Harbor North Entrance Light 7 Barcelona Harbor East Breakwater Light Barcelona Harbor West Breakwater Light West Harbor Inner Channel Daybeacon 12 West Harbor Inner Channel Daybeacon 14 William Livingstone Memorial Light Grande Pointe Light 23 Frechette Point Range Rear Light Ontonagon Harbor East Breakwater Light Driftwood Point Light Escanaba Light Green Bay Harbor Entrance Channel Light	DISCONTINUED DISCONTINUED FOR DREDGING DISCONTINUED FOR DREDGING TRUB TRUB Reduced Intensity TRLT Reduced Intensity DISCONTINUED DISCONTINUED Reduced Intensity	14833 14823 14823 14842 14842 14853 14853 14883	01/21	33/19 23/22 23/22 33/21 48/20 33/21 47/20 21/22 02/22 45/20 49/20	

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PLATFORM TEMPORARY CHANGES

Name Status Position BNM Ref. LNM St LNM End

None

PLATFORM TEMPORARY CHANGES CORRECTED

LNM St LNM End Name Status Position BNM Ref.

None

SECTION IV - CHART CORRECTIONS

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

Proposed Project(s) <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.

Waterways Analysis and Management System

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) 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)

LNM: 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.

LNM: 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

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Milwaukee

(LLNR 20635-20765)

MICHIGAN, WISCONSIN, MINNESOTA and SAILDRONE JOINT LAKE SURVEY OPERATION

equipment. Questions regarding saildrone operations should be directed to Saildrone Mission Control, missioncontrol@saildrone.com or (510) 722-6070.

LNM: 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.

LNM: 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.

LNM: 19/22

LAKE ERIE - Buffalo - Chart 14833

From 1 Sep 2022 to 30 Oct 2022 Ryba Marine Construction Co. will be conducting breakwater repairs on the north breakwater Buffalo, NY. Hours of operation are 24 hours a day 7 days a week. Tug Thomas R. Morrish can be contacted on VHF channels 13 and 16. All mariners are requested to transit the area with caution.

LNM: 34/22

LAKE ERIE - Buffalo - Chart 14833

From 12 Sep 2022 to 30 Nov 2022 Ryba Marine Construction Co. will be conducting breakwater repairs on the Buffalo South Breakwater. Hours of operation are 24 hours a day 7 days a week. Tug Thomas R. Morrish can be contacted on VHF channels 13 and 16. All mariners are requested to transit the area with caution.

LNM: 37/22

LAKE ERIE - Dunkirk - Chart 14823

From 19 Sep 2022 to 30 Nov 2022 Dean Marine and Excavating Inc will be conducting dredging in Dunkirk Harbor. Hours of operation are from 0630 to 1900 7 days a week. Andrew J, Megan J and Page Noel can be contacted on VHF channels 16 and 19. All mariners are requested to transit the area with caution.

LNM: 37/22

LAKE ERIE - OH - Ashtabula Harbor - Chart 14836

Construction of submerged breakwater in Ashtabula Harbor remains partialy 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.

LNM: 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.

LAKE ERIE - OH - Cleveland Harbor - Chart 14839

From 27 June 2022 to 9 Dec 2022 Dean Marine and Excavating will be conducting breakwater repairs in the Cleveland Harbor west basin and Cuyahoga River channel. Hours of operation are from 0700 to 1900 7 days a week. Megan J and ST-911 can be contacted on VHF channels 16 and 79. Commercial traffic are requested a 2 hour notice of arrival. Work will be on the West Cleveland Harbor breakwater and traversing through the harbor west basin, Dock 20. All mariner are advised of mooring ball with lights and Scow 42 lit at the northwest corner of Cleveland Harbor.

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.

LAKE ERIE -Toledo - CHART 14847

From 13 Sep 2022 to 25 Dec 2022 Ryba Marine Construction Co. will be conducting maintenance dredging in the Fairport Harbor Toledo, OH. Hours

LAKE ERIE -Toledo - CHART 14847

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.

LNM: 37/22

LAKE ERIE - Monroe Harbor - Chart 14830

From 20 Aug 2022 to 18 Sep 2022 The King Company, Inc will be conducting hydraulic dredging in the Monroe Harbor MI. 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. The disposal pipe is up to 20,000′ long and will be pumped into a government-owned containment area (CDF). 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.

_NM: 33/22

LAKE ERIE – SANDUSKY HARBOR – CHART 14845

From 19 Sep 2022 to 31 Oct 2022 Luedtke Engineering CO. Will be conducting maintenance dredging in the Sandusky Harbor federal channel. Hours of operation are 24 hours a day 7 days a week. Tug Paul L. Luedtke can be contacted n VHF channels 10, 16 and 19. All mariners are requested to transit the area with caution and reduce speed around dredging equipment. Loaded scows will be moved from the entrance of Sandusky Bay to the unloading equipment located off the Cedar Point Causeway on the east end of Sandusky Bay.

INM: 35/22

LAKE ST. CLAIR - St. Clair Flats - Chart 14850

From 30 Aug 2022 to 30 Nov 2022 Great Lakes Dock and Materials will be conducting maintenance dredging of Lake St. Clair. Hours of operationare 12 hours a day 7 days a week. Barges Hannah Avery, Jacquelyn, Tug Fischer Hayden and Duluth can be contacted on VHF channels 16 and 18. All mariners are requested to transit the area with caution, stay clear of operations if possible. Dredge equipment will be located on the eastern side of the Lake St. Clair flats channel. Offloading equipment will be located near Dickinson Island, tugs and material scows will be trans versing between the two.

LNM: 34/22

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 Blassom 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

The United States Geological Survey in coordination with the Michigan Department of Natural Resources will be conducting data collection to the north of the approach to Alpena, MI in NW Thunder Bay, Lake Huron. Surface floats will mark submerged receivers and will be in place through November 2022. Questions may be directed to Research Scientist Tom Binder, tbinder@usgs.gov. All mariners are requested to transit the area with caution.

LNM: 36/22

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 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

LAKE MICHIGAN - New Buffalo Harbor - Chart 14905

From 17 Aug 2022 to 14 Sep 2022 Viking Marine Construction will be conducting dredging operations in the New Buffalo Harbor. Hours of operation are 24 Hours a day 7 days a week. Tug Barry J can be contacted on VHF channels 16 and 73. All mariners are requested to transit the area with caution.

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LNM: 38/22

LNM: 35/22

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 - Green Bay - Chart 14918

From 29 Aug 2022 to 15 Oct 2022 Ryba Marine Construction Co. will be conducting maintenance dredging in Green Bay, WI. 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: 34/22

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 - 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 - 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- Charlevoix - Chart 14942

From 14 Aug 2022 to 19 Sep 2022 The U.S. Army Corps of Engineers will be conducting the removal of a pedestrian bridge south side of Charlevoix entry piers. Hours of operations 0700 to 1700 daily. Tugboat Mike Donlon, Crane Barge Veler, Scow BC-6576 can be contacted on VHF channels 13, 16 and 17. Vessel placement will be between points: LAT 45 19'.225 N / LON 085 15'.904 W & LAT 45 19'.189 N / LON 085 15'.798 W. Vessels will be positioned on the south side of entry pier (removing of pedestrian bridge). USACE vessels will require a 30 minute notice upon vessel traffic to allow time to shift out of channel for commercial traffic. Small vessel traffic that can safely navigate past working vessels, will pass on the north or green side of channel. When vessels are outside of working hours, they will be moor up at and adjacent to the Charlevoix U.S.C.G. base. All mariners are requested to transit the area with caution.

LNM: 32/22

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.

SECTION VIII - LIGHT LIST CORRECTIONS

LNM: 26/22

	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
None								
				SURES				
	(1) LNM Section I	- Special Notices	5					
1-6	ireat Lakes Water Levels						LNM:	06/22
	(2) LNM Section II	- Discrepancies						
N/A		Dicoropanicio						
							LNM:	19/19
	(3) LNM Section III	l - Temporary Ch	nanges and Tempor	ary Change	s Corrected	d		
N/A	1						L NIM.	10/10
							LNM:	19/19
	(4) LNM Section IV	/ - Chart Correct	ions					
N/A	A.						LNM:	19/19
N/A	(5) LNM Section V	- Advance Notic	ces					
111/7-	X						LNM:	19/19
	(6) LNM Section V	I - Proposed Cha	anges					
N/A		·						
							LNM:	19/19
	(7) LNM Section V	II - General						
1-M	larine Events							
2-0	urrent Ninth District Bridge I	Maintenance/Activ	vities					
3-V	Vaterway Analysis and Mana	gement System S	Survey					
							LNM:	19/19

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).

		Low Water	Expe	cted Levels (inch	es above or belo	w Low Water Dat	um,0)
	Forecast Point	Datum	Current	Week 1	Week 2	Week 3	Week 4
	Polit	IGLD 1985	16-Sep	23-Sep	30-Sep	7-Oct	14-Oct
GREAT LAKES							
Lake Ontario		243.3	15	14	13	12	11
Lake Erie		569.2	39	38	37	35	34
Lake St. Clair		572.3	38	37	36	35	34
Lake Michigan-Huron		577.5	28	27	27	26	25
Lake Superior		601.1	18	17	17	16	16
ST. LAWRENCE RIVER							
Above Long Sault Dam	0	237.9	14	13	12	12	16
Above Iroquois Dam	1	240.3	7	6	5	4	7
Ogdensburg	2	242.4	11	9	8	7	8
Alexandria Bay	2.1	243.0	14	13	12	11	10
Head of river at Cape Vincent	3	243.3	15	14	13	12	11
DETROIT RIVER							
Lake Erie at Pelee Passage	4	569.2	39	38	37	35	34
Mouth of River at Gibraltar	5	569.5	46	43	40	37	35
Fort Wayne	5.1	571.1	42	41	40	39	38
Head of River above Belle Isle	6	572.0	39	38	37	36	35
ST. CLAIR RIVER							
Mouth of River at St. Clair Flats	7	572.3	38	37	36	35	34
Algonac	8	572.8	41	40	39	38	37
St. Clair	9	574.4	34	34	33	32	31
Blue Water Bridge	10	576.2	34	34	33	32	31
Head of River at Fort Gratiot	11	577.2	31	30	29	28	27
Lake Huron Approach Channel	12	577.5	28	27	27	26	25
ST. MARYS RIVER							
Mouth of River at Detour	13	577.5	28	27	27	26	25
West and Middle Neebish	14	577.8	26	25	25	24	23
Head of Little Rapids	15	578.4	27	26	25	24	23
U.S. Slip	16	578.7	26	25	24	23	23
Above Locks	17	600.4	20	20	19	19	18
Head of River at Point Iroquois	18	601.1	18	17	17	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>	Name of Event	<u>Date / Time</u>		<u>POC</u>	Tel#
LAKE ONTARIO					
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	/1585-902-2183
LAKE ERIE					
Buffalo, NY	Buffalo Harbor Sailing Club-Racing Season	5/17/2022 to 9/28/2022	1800-2100	Gregory Toole	917-993-2976
DETROIT RIVER					
NA					
LAKE HURON					
NA					
LAKE MICHIGAN	& Green Bay				
Muskegon, MI	Muskegon Yacht Club - Wednesday Night Racing Series	each Wed. May 5 - Oct 12, 2022	1730-2200	MSTC Sherrill	414-747-7148

CURRENT NINTH DISTRICT BRIDGE MAINTENANCE/ACTIVITIES Week [38/22]

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 <u>HERE</u> 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 202200Z SEP 22 U.S.C.G. NINTH DISTRICT NOTICE TO MARINERS C142-22

MN - LAKE SUPERIOR - RAINER

FROM SEPTEMBER 12 THROUGH SEPTEMBER 27, 2022, BETWEEN THE HOURS OF 0700 AND 1900 DAILY, A 53-FOOT BY 30-FOOT BARGE WILL BE DRILLING BORE SAMPLES AT THE CANADIAN NATIONAL RAILROAD BRIDGE AT MILE 85.0 OVER THE RAINY RIVER. THE BARGE WILL MONITOR VHF-FM MARINE CHANNEL 16 AND WILL LEAVE ENOUGH ROOM FOR VESSELS TO PASS THE BARGE.

SUBJ/ ISSUE NOTICE TO MARINERS

SAFETY BCST PLUS SKED BCST UNTIL 251300Z SEP 22

U.S.C.G. NINTH DISTRICT NOTICE TO MARINERS C144-22

NY - LAKE ONTARIO - ROCHESTER HARBOR

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.

SUBJ/ ISSUE NOTICE TO MARINERS

SAFETY BCST PLUS SKED BCST UNTIL 272200Z SEP 22

U.S.C.G. NINTH DISTRICT NOTICE TO MARINERS C145-22

IL- LAKE MICHIGAN -CHICAGO HARBOR

FROM SEPTEMBER 21 THROUGH OCTOBER 31, 2022 BETWEEN THE HOURS OF 0700 AND 1530, MONDAY THROUGH FRIDAY A 80-FOOT BY 20-FOOT BARGE WILL BE WORKING UNDER THE

CANAL STREET BRIDGE AT MILE 3.88 (CORPS MILE 323.4) OVER THE SOUTH BRANCH OF THE CHICAGO RIVER. THE BARGE WILL MONITOR VHF-FM MARINE CHANNEL 16 AND MOVE TO ACCOMMODATE VESSELS IF A 1-HOUR ADVANCE NOTICE IS PROVIDED.

SUBJ/ ISSUE NOTICE TO MARINERS

SAFETY BCST PLUS SKED BCST UNTIL 232200Z SEP 22

U.S.C.G. NINTH DISTRICT NOTICE TO MARINERS C146-22

MI- DETROIT RIVER - TRENTON CHANNEL

FROM SEPTEMBER 19 THROUGH SEPTEMBER 23, 2022 BETWEEN THE HOURS OF 0600 AND 1800 THE GROSSE ISLE PARKWAY (FREE) BRIDGE AT MILE 5.60 OVER THE DETROIT RIVER TRENTON CHANNEL, WILL REQUIRE A 15-MINUTE ADVANCE NOTICE ON MONDAY AND FRIDAY AND A 1-HOUR ADVANCE NOTICE ON TUESDAY, WEDNESDAY, AND THURSDAY. MARINERS SHOULD PROVIDE ADVANCE NOTICE DIRECTLY TO THE DRAWTENDER.

SUBJ/ ISSUE NOTICE TO MARINERS

SAFETY BCST PLUS SKED BCST UNTIL 032200Z OCT 22

U.S.C.G. NINTH DISTRICT NOTICE TO MARINERS C148-22

IL- LAKE MICHIGAN -CALUMET HARBOR

FROM SEPTEMBER 19 THROUGH NOVEMBER 4, 2022, BETWEEN THE HOURS OF 0600 AND 1800 DAILY THE 100TH STREET BRIDGE AT MILE 1.78 (CORPS MILE 331.4) OVER THE CALUMET RIVER WILL REQUIRE A 1-HOUR ADVANCE NOTICE FOR BOTH LEAVES TO OPEN. THE BRIDGE WILL OPERATE ONE LEAF ON SIGNAL AND THE BRIDGE WILL BE LOCKED IN THE FULLY OPEN POSITION DURING NON-WORKING HOURS.

SUBJ/ ISSUE NOTICE TO MARINERS

SAFETY BCST PLUS SKED BCST UNTIL 282200Z SEP 22

U.S.C.G. NINTH DISTRICT NOTICE TO MARINERS C150-22

IL- LAKE MICHIGAN – CALUMET SAG CHANNEL

FROM SEPTEMBER 14 THROUGH **DECEMBER 15, 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. A 40-FOOT BY 40-FOOT BARGE WILL BE WORKING UNDER THE BRIDGES FROM 0700 TO 1800 MONDAY THROUGH SATURDAY. THE BARGE WILL MONITOR VHF-FM MARINE CHANNEL 16 AND WILL MOVE WITH A 15-MINUTE ADVANCE NOTICE.

SUBJ/ ISSUE NOTICE TO MARINERS

SAFETY BCST PLUS SKED BCST UNTIL 011500Z OCT 22

U.S.C.G. NINTH DISTRICT NOTICE TO MARINERS C151-22

WI- LAKE MICHIGAN – GREEN BAY

ON OCTOBER 1, 2022 BETWEEN THE HOURS OF 0500 AND 1000 THE RAY NITSCHKE BRIDGE AT MILE 1.58 OVER THE FOX RIVER WILL BE SECURED TO MASTED NAVIGATION IN CONJUNCTION WITH THE BERLIN WOMEN'S HALF MARATHON EVENT. VESSELS ABLE TO PASS UNDER THE BRIDGE WITHOUT AN OPENING MAY DO SO AT ANY TIME.

SUBJ/ ISSUE NOTICE TO MARINERS

SAFETY BCST PLUS SKED BCST UNTIL 302200Z SEP 22

U.S.C.G. NINTH DISTRICT NOTICE TO MARINERS C152-22

NY - NEW YORK BARGE CANAL SYSTEM

FROM SEPTEMBER 19 THROUGH OCTOBER 10, 2022, EACH DAY, BETWEEN THE HOURS OF 0700 AND 1500 A 50-FOOT BY 30-FOOTBARGE WILL BE INSPECTING ALL BRIDGES BETWEEN E216 MAIN STREET BRIDGE AT MILE 308.87 AND THE E248 WEBSTER STREET BRIDGE AT MILE 338.44, ALL OVER THE ERIE CANAL. THE BARGE WILL MONITOR VHF-FM MARINE CHANNEL 16 AND MOVE IF A 30-MINUTE ADVANCE NOTICE IS PROVIDED.

SUBJ/ ISSUE NOTICE TO MARINERS

SAFETY BCST PLUS SKED BCST UNTIL 032200Z OCT 22

U.S.C.G. NINTH DISTRICT NOTICE TO MARINERS C153-22

NY - NEW YORK BARGE CANAL SYSTEM

FROM OCTOBER 1, 2022 THROUGH APRIL 1, 2024, SNOOPER 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.

SUBJ/ ISSUE NOTICE TO MARINERS

SAFETY BCST PLUS SKED BCST UNTIL 062300Z OCT 22

U.S.C.G. NINTH DISTRICT NOTICE TO MARINERS C154-22

IL- LAKE MICHIGAN -CALUMET HARBOR

FROM SEPTEMBER 19 THROUGH NOVEMBER 4, 2022, BETWEEN THE HOURS OF 0600 AND 1800 DAILY THE 100TH STREET BRIDGE AT MILE 1.78 (CORPS MILE 331.4) OVER THE CALUMET RIVER WILL REQUIRE A 1-HOUR ADVANCE NOTICE FOR BOTH LEAVES TO OPEN. THE BRIDGE WILL OPERATE ONE LEAF ON SIGNAL AND THE BRIDGE WILL BE LOCKED IN THE FULLY OPEN POSITION DURING NON-WORKING HOURS.

SUBJ/ ISSUE NOTICE TO MARINERS

SAFETY BCST PLUS SKED BCST UNTIL 272300Z AUG 22

U.S.C.G. NINTH DISTRICT NOTICE TO MARINERS C155-22

MI - LAKE HURON - SAGINAW RIVER

ON SEPTEMBER 26 AND SEPTEMBER 27, 2022 BETWEEN THE HOURS OF 0700 AND 1900 EACH DAY, THE LIBERTY STREET BRIDGE AT MILE 4.99 OVER THE SAGINAW RIVER WILL REQUIRE A 2-HOUR ADVANCE NOTICE FOR OPENINGS. MARINERS SHOULD PROVIDE ADVANCE NOTICE FOR BRIDGE OPENINGS AND TO REQUEST THE BARGES TO MOVE BY CALLING THE DRAWTENDER AT 608-425-0171 OR EMAIL JDESMET@KRAEMERNA.COM.

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 October 1, 2022 through **April 1, 2024** snooper 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 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]

NEW YORK STATE CANAL SYSTEM - NY - Erie Canal - Chart 14786

From September 7 through **October 7, 2022** between the hours of 0700 and 1800, each day inspectors will use a 30-foot Harcon Bridge inspection vessel under all highway bridges between the E27 River Road Bridge at Mile 71.45 and the E60 Higginsville Road Bridge at Mile 126.04 over the Erie Canal, The Harcon will monitor VHF-FM Marine channel 16 and will move to accommodate vessel traffic with a 15-minute advance notice. [32/22]

NEW YORK STATE CANAL SYSTEM - NY - Erie Canal - Chart 14786

From September 19 through **October 10, 2022**, each day, between the hours of 0700 and 1500 a 50-foot by 30-footbarge will be inspecting all bridges between E216 Main Street Bridge at Mile 308.87 and the E248 Webster Street Bridge at Mile 338.44, all over the Erie Canal. The barge will monitor VHF-FM Marine Channel 16 and move if a 30-minute advance notice is provided.

[37/22]

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 – 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 – NY – Buffalo Harbor – Chart 14833

From August 20 through **November 1, 2022**, scaffolding that hangs approximately 3-feet below low steel will be installed under the Ohio Street Bridge at Mile 2.10 over the Buffalo River. If provided at least 2-weeks' notice the center 75-feet of the scaffolding shall be pulled up to within 1-foot of the low steel to allow passage of vessels during foul weather. Advance notice should be provided directly to the drawtender. [34/22]

LAKE ERIE – NY – Buffalo Harbor – Chart 14833

From October 10 through **November 2, 2022** between the hours of 0700 and 1600 daily. A 50-foot by 30-foot barge will be inspecting the Ferry Street Bridge at Mile 2.66 over the Black Rock Canal and the Ohio Street Bridge at Mile 2.10 and the South Park Avenue Bridge at Mile 5.22 over the Buffalo River. The barge will monitor VHF-FM Marine Channel 16 and move if a 30-minute advance notice is provided. [37/22]

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 September 19 through **September 23, 2022** between the hours of 0600 and 1800 the Grosse Isle Parkway (Free) Bridge at Mile 5.60 over the Detroit River Trenton Channel, will require a 15-minute advance notice on Monday and Friday and a 1-hour advance notice on Tuesday, Wednesday, and Thursday. Mariners should provide advance notice directly to the drawtender.

[31/22]

DETROIT RIVER - MI - Belle Island - Chart 14848

From March 1, 2023 through **October 31, 2023**, between the hours of 0700 and 1900, Monday through Saturday, six barges 150-feet by 60-feet or smaller will be working under the MacArthur Bridge at Mile 24.0 over the Detroit River. The barge under the navigation span will monitor VHF-FM Channel 16 and will move to accommodate vessels if a 15-minute advance notice is provided. For additional safety the barges will be equipped with flashing yellow lights one meter apart. [37/22]

LAKE HURON

LAKE MICHIGAN – MI – Saginaw River – Chart 14867

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]

*****REVISED****

LAKE MICHIGAN - MI – Saginaw River – Chart 14867

From August 23 through **October 31, 2022** between the hours of 0700 and 1900 Monday through Friday the Liberty Street Bridge at Mile 4.99 over the Saginaw River will require a 2-hour advance notice for openings. An 80-foot by 60-foot barge and push boat will be working under the bridge along with snooper vehicles under the bridge. Mariners should provide advance notice for bridge openings and to request the barges to move by calling the drawtender at 608-425-0171 or email JDesmet@kraemerNA.com. [33/22] [38/22]

LAKE MICHIGAN - MI – Saginaw River – Chart 14867

On September 26 and **September 27, 2022** between the hours of 0700 and 1900 each day, the Liberty Street Bridge at Mile 4.99 over the Saginaw River will require a 2-hour advance notice for openings. Mariners should provide advance notice for bridge openings and to request the barges to move by calling the drawtender at 608-425-0171 or email JDesmet@kraemerNA.com. [38/22]

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 – 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 - 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-31Highway 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.

*****REVISED****

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

From 0700 on January 1, 2024 through 0700 on March 31, 2024 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.

[32/22] [33/22]

LAKE MICHIGAN – MICHIGAN CITY & INDIANA HARBOR & GARY HARBOR

LAKE MICHIGAN – IL – Calumet Harbor – Chart 14927

From September 26 through **October 6, 2022** between the hours of 0700 and 1900 daily. Inspectors will utilize an under bridge inspection platform under the South Hallstead Street Bridge at Mile 13.00 (CORPS MILE 320.1) over the Little Calumet River. Spotters will warn of approaching vessels and move the platform to allow vessels to pass.

[37/22]

LAKE MICHIGAN – IL – Chicago Harbor – Chart 14927

From September 19 through **November 4, 2022**, between the hours of 0600 and 1800 daily the 100th Street Bridge at Mile 1.78 (CORPS MILE 331.4) over the Calumet River will require a 1-hour advance notice for both leaves to open. The bridge will operate one leaf on signal and during non-working hours the bridge will be locked in the fully open position.

[37/22]

<u>CHICAGO RIVER – MAIN RIVER CHANNEL, NORTH BRANCH, NORTH SHORE CHANNEL,</u> 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]

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]

LAKE MICHIGAN – IL – Chicago Harbor – Chart 14927

From September 7 through **October 7, 2022** between the hours of 0600 and 1800, Monday through Saturday a 30-foot Harcon Bridge inspection vessel will be working under all highway bridges between River Mile 0.67 (CORPS MILE 326.5) and River Mile 2.44 (CORPS MILE 324.8) over the Main and South Branches of the Chicago River and to include The Kenzie Street Bridge at Mile 1.81 (CORPS MILE 325.7) over the North Branch of the Chicago River. The Harcon will move is provided a 15-minute advance notice on VHF-FM marine Channel 16. [31/22]

LAKE MICHIGAN – IL – Chicago Harbor – Chart 14927

From September 21 through **October 31, 2022** between the hours of 0700 and 1530, Monday through Friday a 80-foot by 20-foot barge will be working under the Canal Street Bridge at Mile 3.88 (CORPS MILE 323.4) over the South Branch of the Chicago River. The barge will monitor VHF-FM Marine Channel 16 and move to

accommodate vessels if a 1-hour advance notice is provided. [37/22]

LAKE MICHIGAN – IL – Chicago Harbor – Chart 14927

From September 15 through **September 16, 2022**, 24 hours a day, a 80-foot by 20-foot barge will be working under the Michigan Street Bridge at Mile 0.85 (CORPS MILE 326.3) over the Main Branch of the Chicago River. The barge will monitor VHF-FM Marine Channel 16 and will move to accommodate vessels with a 1-hour advance notice.

[37/22]

CALUMET SAG CHANNEL

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]

*****REVISED****

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

from April 4 through **December 15, 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. A 40-foot by 40-foot barge will be working under the bridges from 0700 to 1800 Monday through Saturday. The barge will monitor VHF-FM Marine Channel 16 and will move with a 15-minute advance notice. [12/22] [38/22]

*****REVISED****

LAKE MICHIGAN - IL - Calumet-SAG Channel - Chart 14926

From September 6 through **September 29, 2022** between the hours of 0700 and 1700, Monday through Saturday, a 120-foot by 40-foot barge will be working under the Sag Highway Bridge at Mile 28.76 (CORPS MILE 304.2) over the Calumet-SAG Channel. The barge will monitor VHF-FM Marine Channel 16 and will move if a 3-hour advance notice is provided by calling 630-739-2460. Containment that hangs approximately 3-feet below low steel will be installed under the bridge. [21/22] [32/22]

LAKE MICHIGAN - IL - Calumet-SAG Channel

From September 6 through **September 23, 2022** between the hours of 0600 and 1800, Monday through Saturday a 120-foot by 30-foot barge will be working under the Southwest Highway Bridge at Mile 22.25 (CORPS MILE 310.7) over the Calumet-SAG Channel. The barge will move if a 1-hour advance notice is provided directly to the barge on VHF-FM Marine Channel 16. [33/22]

CHICAGO SANITARY AND SHIP CANAL, KANKAKEE RIVER & ROCK RIVER

(Lake Michigan to Mile 36.2/291.1)

LAKE MICHIGAN – IL – Chicago Sanitary and Ship Canal – Chart 14927

From August 22 through **November 11, 2022** between the hours of 0700 and 1530, Monday through Saturday a 125-foot by 35-foot barge will be working under the South Western Avenue Bridge at Mile 6.7 (CORPS MILE 320.6) over the Chicago Sanitary and Ship Canal. The barge will move if a 1-hour advance notice is provided on VHF-FM Marine Channel 16 or by calling (312) 747-2470. [32/33]

LAKE MICHIGAN – IL – Chicago Sanitary and Ship Canal – Chart 14927 – Proposed Bridge Construction

The U. S. Coast Guard is requesting mariner and public input regarding the proposed replacement South Western Avenue Bridge over Mile 6.7 (CORPS MILE 320.6) of the Chicago Sanitary and Ship Canal (CSSC) in the City of Chicago, Cook County, Illinois. The proposed replacement structure is a fixed bridge, which will have a vertical clearance of 22.00-feet available at the center with 21.00-feet at the limits of the navigation channel and a horizontal clearance of 155.00-feet. The complete public notice including a map of the location, and plans for the proposed bridge can be viewed and printed from the U.S. Coast Guard Navigation Center's web site https://www.navcen.uscg.gov/D9BN, or by calling, emailing or mailing a request to the Coast Guard project manager, Mr. Michael Walker, Commander (dpb), Ninth Coast Guard District, 1240 E. 9th St., Room 2047, Cleveland, OH 44199, (216) 902-6087, or michael.o.walker2@uscg.mil. Comments received will be made part of the case record until October 11, 2022.

LAKE MICHIGAN – WEST

LAKE MICHIGAN - WI - Milwaukee Harbor

on **September 17, 2022** between the hours of 0900 and noon the Wisconsin Avenue Bridge at Mile 1.46 over the Milwaukee River will be secured to recreational masted navigation, except at the discretion of the police department, in conjunction with the Al's Run-Walk Event. [36/22]

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]

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]

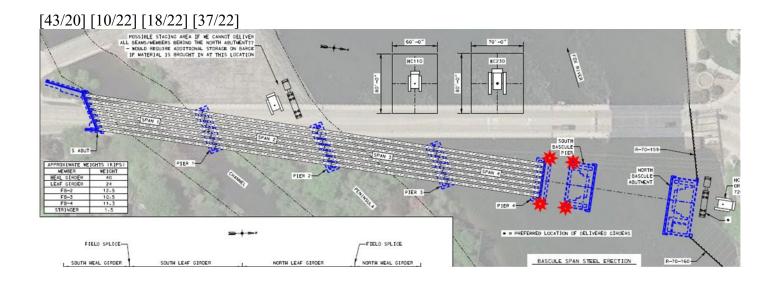
LAKE MICHIGAN – WI – Fox River – Chart 14972

On **October 1, 2022** between the hours of 0500 and 1000 the Ray Nitschke Bridge at Mile 1.58 over the Fox River will be secured to masted navigation in conjunction with the Berlin Women's Half Marathon event. Vessels able to pass under the bridge without an opening may do so at any time. [32/22]

*****REVISED****

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

From October 29, 2020 through **December 1, 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 new bridge has been installed but the lifting machinery is not installed. The temporary bridge over the slip near the George Banta Dock will continue to remain 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 are operational. 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



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 Kewanee 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]

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

LAKE SUPERIOR – MN – Rainy River – Chart 14998

From September 12 through **September 27, 2022**, between the hours of 0700 and 1900 daily, a 53-foot by 30-foot barge will be drilling bore samples at the Canadian National Railroad Bridge at Mile 85.0 over the Rainy River. The barge will monitor VHF-FM Marine Channel 16 and will leave enough room for vessels to pass the barge.

[36/22]

(Revised 11/19) NINTH DISTRICT DRAWBRIDGE SIGNALS OR OPERATION DELAYS FORM TO: Commander (dpb) DATE: Ninth Coast Guard District 1240 E. 9th Street – Room 2047b NOTE: Reports of Delay will be processed only when all items Cleveland, Ohio 44199-2060 are fully addressed and reports submitted within 15 Phone: (216) 902-6087 days of reported delay / difficulty. Attach additional Fax: (216) 902-6088 sheets if necessary. E-Mail: William.B.Stanifer@uscg.mil Lee.D.Soule@uscg.mil Michael.O.Walker2@uscg.mil 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: _____



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: YesNotation: "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"

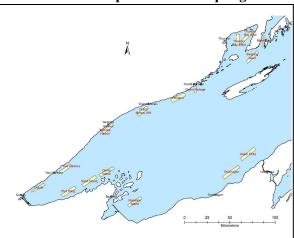
Saildrone



SAILDRONE MISSION CONTROL (510) 722-6070

missioncontrol@saildrone.com

Western Lake Superior with sampling sites



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

- 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.
- 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

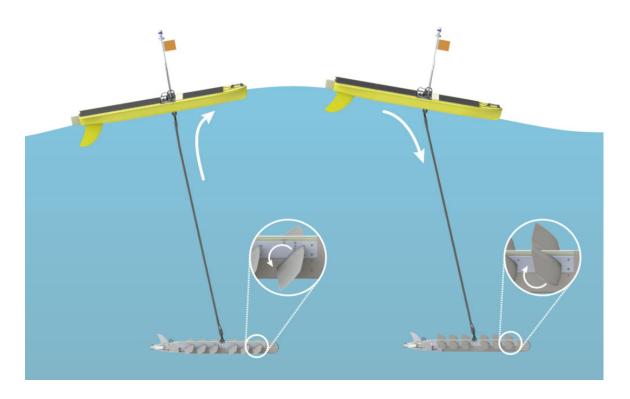
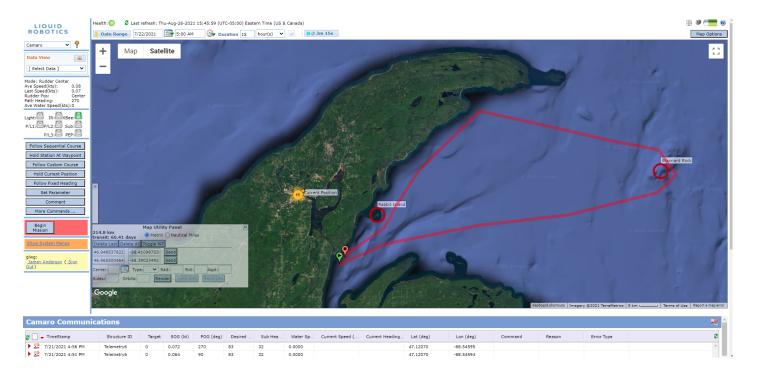
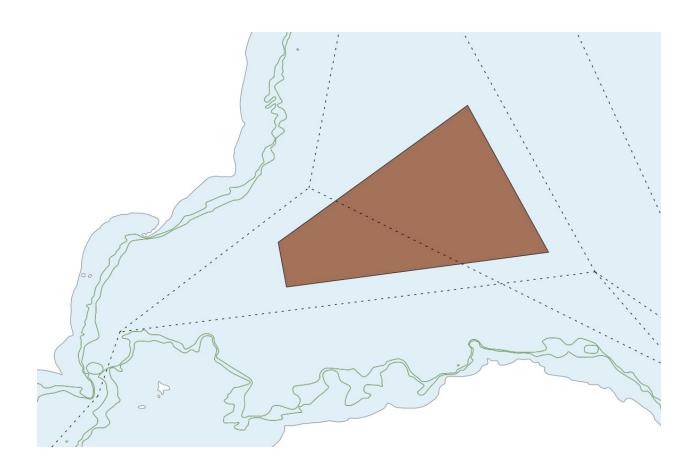


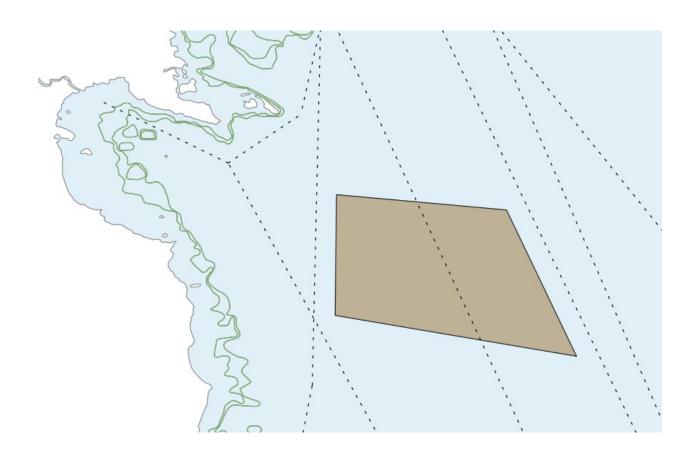
Figure 2 - Example screenshot of the Wave Glider Management System (WGMS) use by remote pilots to control the WaveGlider during deployment





Outer Saginaw Bay Polygon Boundaries:

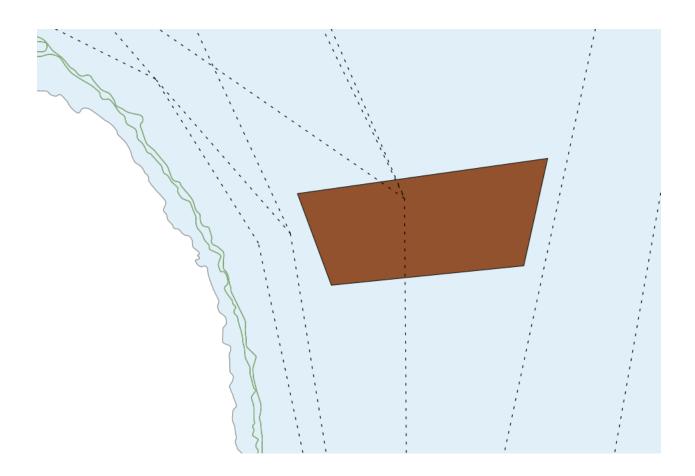
-83.2713, 44.2383 -83.2598, 44.1746 -83.0017, 44.4333 -82.8859, 44.2234



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