	WATER RESOURCES DIVISION POLICY AND PROCEDURE		DEPARTMENT OF ENVIRONMENTAL QUALITY
Original Effective Date: May 8, 2015 Revised Date: Reformatted Date:	Subject: Placement of Dredged Material on Great Lakes Bottomlands Program Name: Water Resources Program Number: WRD-045	Page: 1 of 7	Category: ☐ Internal/Administrative ☐ External/Non-Interpretive ☒ External/Interpretive Type: ☒ Policy ☐ Procedure ☐ Policy and Procedure

A Department of Environmental Quality (DEQ) Policy and Procedure cannot establish regulatory requirements for parties outside of the DEQ. This document provides direction to DEQ staff regarding the implementation of rules and laws administered by the DEQ. It is merely explanatory; does not affect the rights of, or procedures and practices available to, the public; and does not have the force and effect of law.

PURPOSE: To identify when the placement of dredged material on Great Lakes bottomlands for the purposes of beach nourishment or disposal in the open lake may be approved.

AUTHORITY: Part 325, Great Lakes Submerged Lands, and Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA).

STAKEHOLDER INVOLVEMENT: The draft policy was provided for public comment as announced in the DEQ Calendar published on August 25, September 8, and September 22, 2014, with a comment due date of September 25, 2014. In addition, the following key stakeholder groups and coregulators were notified of the draft policy and invited to provide comments: Great Lakes dredging contractors; Department of Natural Resources; Underwater Salvage and Preserve Committee; Michigan Underwater Preserve Council; U.S. Fish and Wildlife Service; U.S. Coast Guard; U.S. Army Corps of Engineers (U.S. ACE) - Regulatory Branch; and U.S. Environmental Protection Agency (U.S. EPA), Region 5, Water Division.

DEFINITIONS: Dioxins and Furans Test Area - The Tittabawassee River downstream of the city of Midland, the Saginaw River downstream of the Tittabawassee River, the portion of Saginaw Bay that lies between the mouth of the Saginaw River, and a line drawn between the tip of Fish Point (Tuscola County) and the tip of the unnamed point east of the lakeward end of East Pinconning Road (Bay County).

Toxic substances (as defined in R 323.1205 of the Michigan Administrative Code) – Means a substance, except for heat, that is present in a sufficient concentration or quantity that is or may become harmful to plant life, animal life, or designated uses. These rules apply to all of the following toxic substances:

(i) The priority pollutant and hazardous chemicals specified in the provisions of 40 C.F.R. §122.21, Appendix D (1990), which are adopted by reference in R 323.1221.
(ii) The pollutants of initial focus specified in the provisions of 40 C.F.R. Part 132 (1995), water quality guidance for the Great Lakes system, which are adopted by reference in R 323.1221.
(iii) The pollutants specified in Table 1 [found in R 323.1205].
(iv) Any other toxic substances that the department determines are of concern at a specific site.

POLICY: Placement of dredged material on Great Lakes bottomlands for the purpose of beach nourishment may be approved as part of an overall permittable project when staff determines that:

1. The average mass percentage retained on the U.S. Standard Sieve Number 200 is 90 percent of the sample or greater (i.e., 90 percent or more of the sample is sand or coarser); and

2. Sand at the proposed beach nourishment site is of similar grain size to the proposed dredged material as determined by No. 1, above; and

3. Proposed dredged material is not contaminated with dioxins or furans, if chemical analysis is required; and

4. Proposed placement of dredged material is at or landward of the most landward 6-foot depth contour; or proposed placement of dredged material is at previously authorized location and depth out to, but not lakeward of, the most landward 12-foot depth contour.

Staff will determine whether criteria to allow beach nourishment have been met based on the following information to be provided by the applicant and a site inspection of the proposed beach nourishment area, if needed:

1. Results of grain size analysis of the material to be dredged as follows:

    a. Grain size analysis shall be conducted using the U.S. Standard Sieve Number 200.

    b. Six discrete samples shall be collected and analyzed for proposed dredge volumes less than 10,000 cubic yards. At least one additional sample shall be collected and analyzed for each additional 10,000 cubic yards of proposed dredge volume. The Water Resources Division (WRD) district staff may require specific sampling criteria, locations, and/or depth intervals, based on site-specific knowledge.

    c. Each sediment sample shall consist of a subset of composited core sample taken to full project depth.

    d. Results for each of the six (or more) discrete sample locations reported as a mass percentage of retained sediments.

2. Results of chemical analysis for dioxins and furans of each sediment sample described in No. 1, above, if the proposed dredging project is located in the Dioxins and Furans Test Area, and the average mass percentage retained on the U.S. Standard Sieve Number 200 is 90 percent or greater (i.e., 90 percent or more of the sample is sand or coarser).

3. Location of the proposed beach nourishment area on a to-scale map, showing depth contours below the ordinary high water mark by 1-foot increments.

4. Names and addresses of property owners adjacent to the proposed beach nourishment area.

An applicant may request open lake disposal of dredged material as part of a permit application. Use of open lake disposal is at the discretion of the permittee if authorized by the permit. Placement of dredged material on Great Lakes bottomlands for open lake disposal may be approved as part of an overall permittable project when staff determines that:

- Sediment test results demonstrate
  - Sediment to be dredged is not contaminated with toxic substances as determined by a weight of evidence evaluation of sediment characteristics, including but not limited to chemical and geophysical characteristics and bulk sediment toxicity (as reviewed by Surface Water Assessment Section [SWAS] staff); and
  - Sediment to be dredged has similar grain size as the sediment at the proposed open lake disposal site; and
- Dredged material will not be disposed of (i.e., come to rest) in waters shallower than the 30-meter depth contour or in bottomland preserves established under Part 761, Aboriginal Records and Antiquities, of the NREPA; submerged log recovery areas permitted under Part 326, Great Lakes Submerged Logs Recovery, of the NREPA; lake trout refuges; or diporeia refuges as evidenced by:
  - Acceptable scientific analysis of sediment transport and fate (Great Lakes Shorelands Unit staff will help coordinate this review) or proposed dredged material release site is at least 1 nautical mile from waters shallower than the 30-meter depth contour and the nearest bottomland preserve established under Part 761 of the NREPA, submerged log recovery area permitted under Part 326 of the NREPA, lake trout refuge, and diporeia refuge.

Staff will determine whether criteria to allow open lake disposal have been met based on the following information to be provided by the applicant:

1. Grain size analysis of the material to be dredged as follows:

   a. Results of grain size analysis shall be conducted using the U.S. Standard Sieve Number 200.

   b. Six discrete samples shall be collected and analyzed for proposed dredge volumes less than 10,000 cubic yards. At least one additional sample shall be collected and

analyzed for each additional 10,000 cubic yards of proposed dredge volume. The WRD district staff may require specific sampling criteria, locations, and/or depth intervals based on their site-specific knowledge.

c. Each sediment sample shall consist of a subset of a composited core sample taken to full project depth.

d. Results for each of the six (or more if required) discrete sample locations reported as a mass percentage of retained sediments.

2. Results of chemical and toxicity analysis of each sediment sample required as described in No. 1, above, as follows:

a. Dioxins and furans, using U.S. EPA promulgated methods, if the proposed dredging project is located in the Dioxins and Furans Test Area.

b. Heavy metals (arsenic, barium, cadmium, copper, chromium, lead, mercury, selenium, silver, and zinc), total organic carbon, phosphorus, nitrogen, and polynuclear aromatic hydrocarbons, using U.S. EPA promulgated methods, if the average mass percentage retained on the U.S. Standard Sieve Number 200 is less than 90 percent, regardless of the location of the proposed dredging.

c. Polychlorinated biphenyls, using U.S. EPA promulgated methods, if the proposed dredging is in Lake St. Clair, Detroit River, Rouge River, Raisin River, Kalamazoo River, Saginaw River, Saginaw Bay, and Manistique Harbor, or canals that connect to any of the listed bodies of water and the average mass percentage retained on the U.S. Standard Sieve Number 200 is less than 90 percent.

d. Bulk sediment toxicity testing will be required for each of the six (or more) sediment samples as outlined in the Great Lakes Dredge Material Testing Manual (U.S. ACE/U.S. EPA, 1998).

e. Additions or deletions to required chemical analyses may be made on a project-specific basis if WRD staff or the applicant has additional information related to the proposed dredging location.

3. Characterization of the proposed open lake disposal site, including biological community assessment (such as fish, benthic invertebrates, aquatic plants, threatened, and endangered species) and grain size and substrate analysis, consistent with guidance provided in the Great Lakes Dredged Materials Testing and Evaluation Manual (U.S. ACE/U.S. EPA, 1998). It is highly recommended that the sampling plan be reviewed by SWAS staff prior to implementation.

4. Locations by GPS coordinates and shown on a to-scale map:

   a. Proposed location where dredged material will be released into the open lake and approximately where the dredged sediment is expected to rest.

   b. Thirty-foot depth contour, bottomland preserves established under Part 761 of the NREPA, submerged log recovery areas permitted under Part 326 of the NREPA, lake trout refuges, and diporeia refuges that are within three nautical miles of the proposed open lake disposal site.

5. Scientific sediment transport and fate analysis of the proposed dredged material using disposal site-specific weather and hydrologic conditions to demonstrate the disposal location (i.e., where dredged material is expected to come to rest) if the location where dredged sediment is proposed to be released is less than 1 nautical mile (6,000 feet) from waters shallower than the 30-meter depth contour, bottomland preserves established under Part 761 of the NREPA, submerged log recovery areas permitted under Part 326 of the NREPA, lake trout refuges, or diporeia refuges. It is highly recommended that the data collection, modeling, and evaluation plan be reviewed by WRD staff prior to implementation.

NOTES: This policy applies to open lake disposal and beach nourishment in waters regulated under Part 325 even if the dredged materials are removed from waters regulated under other parts of the NREPA. Public Act 87 of 2013 did not change open water disposal or beach nourishment requirements in Part 301, Inland Lakes and Streams, of the NREPA. Furthermore, due to the size of most inland lakes, open water disposal or beach nourishment (not beach sanding) in waters regulated under Part 301 is not likely to meet water quality standards. If an open water disposal or beach nourishment application is received under Part 301, contact the Wetlands, Lakes, and Streams Unit for assistance.

Other state permits, including the following, for these activities may be required for impacts to natural and/or cultural resources. Staff should screen proposed projects for potential impacts and advise applicant of possible additional resource concerns and that other information may need to be collected to determine whether additional permits are required.

- Part 303, Wetlands Protection, of the NREPA, if placement of dredged material is proposed in a wetland.

- Part 323, Shorelands Protection and Management, of the NREPA, if beach nourishment is proposed in a designated Environmental Area.

- Part 353, Sand Dunes Protection and Management, of the NREPA, if dredged materials are placed landward of the water's edge for the purpose of beach nourishment in a designated Critical Dune Area (i.e., a contour change).

- Part 365, Threatened and Endangered Species, of the NREPA, in the event that open lake disposal will result in a "take" of a species that appears on the state list of endangered or threatened species.

- Part 761 of the NREPA, in the event open lake disposal of dredged material will alter or destroy abandoned property (i.e., a shipwreck).

REFERENCES:

U.S. ACE/U.S. EPA. 1998. Great Lakes Dredged Material Testing and Evaluation Manual. U.S. EPA, Regions 2, 3, and 5 and the Great Lakes National Program Office and U.S. ACE's Great Lakes and Ohio River Divisions.

RELATED RESOURCES:

1. Great Lakes State Bottomlands Preserve Maps: http://www.michigan.gov/deq/0,4561,7-135-3313_3677_3701-14591--,00.html.

2. Lake Trout Refuge Maps: http://www.eregulations.com/wp-content/uploads/2019/01/2018-MI-Fishing-Guide-WEB_615716_7.pdf. Department of Natural Resources' Fisheries Order 200: https://www.michigan.gov/dnr/0,4570,7-350-79136_79772_80261-237033--,00.html.

3. Diporeia Concentration Locations Map – U.S. EPA, Great Lakes National Program Office, February 2013 (attached).

4. Permitted Submerged Log Recovery Areas (attached); map of an overall view of the state is available at: http://www.michigan.gov/deq/0,1607,7-135-3313_3677_3703---,00.html.

5. National Oceanic and Atmospheric Administration Navigation Charts: http://www.charts.noaa.gov/ChartCatalog/GreatLakes.html.

6. Thirty-Meter Depth Contour Maps – National Oceanic and Atmospheric Administration, Coastal Services Center Bathymetry, U.S. Census Bureau TIGER Products, ESRI Shoreline and Provinces (attached).

ATTACHMENTS:

Maps:

Diporeia Concentration Locations (Related Resource 3)
Permitted Submerged Log Recovery Areas (Related Resource 4)
Thirty-Meter Depth Contours (Related Resource 6)

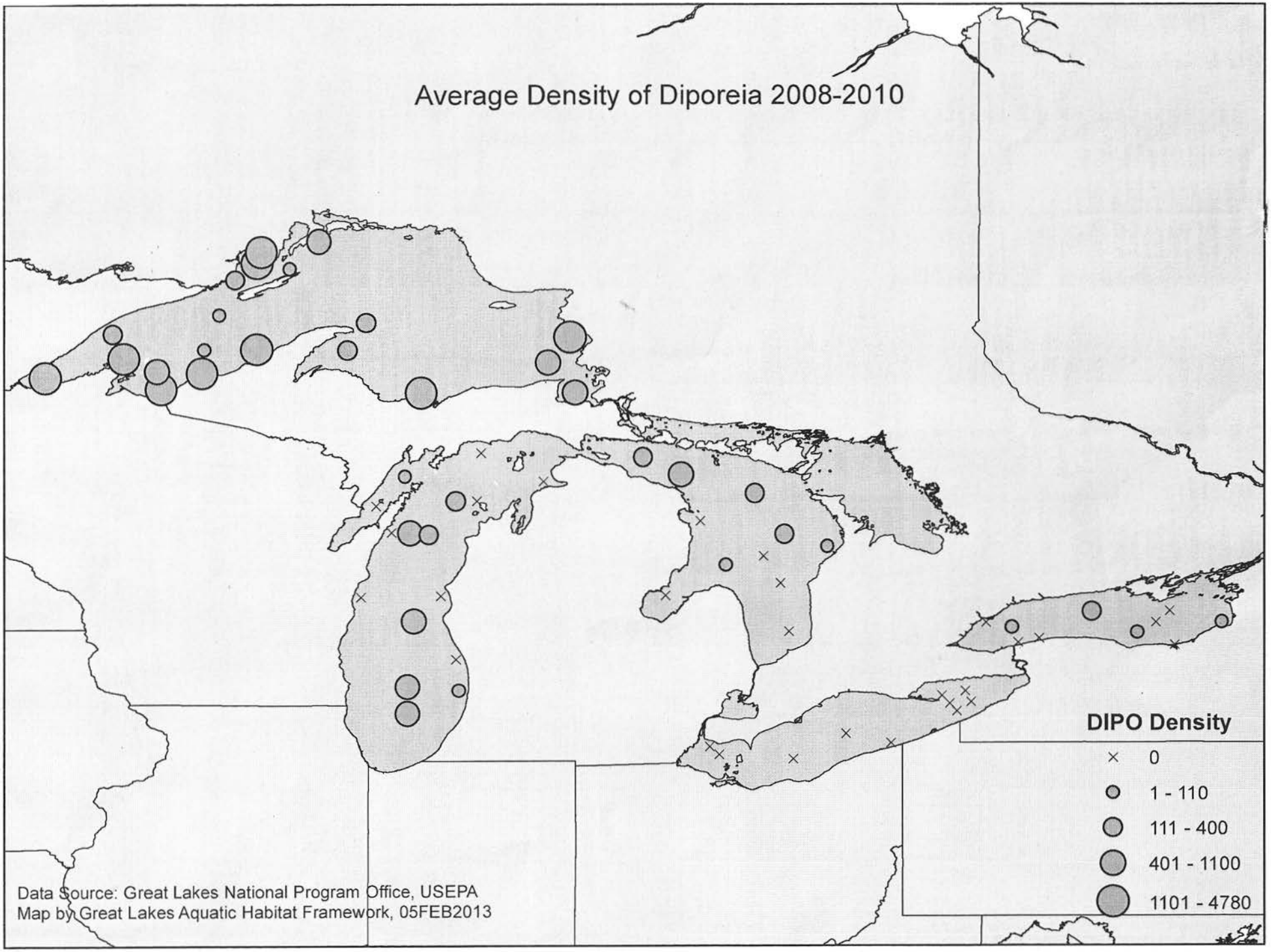
DIVISION CHIEF APPROVAL:

William Creal, Chief
Water Resources Division

DEPUTY DIRECTOR APPROVAL:

Jim Sygo, Chief Deputy Director

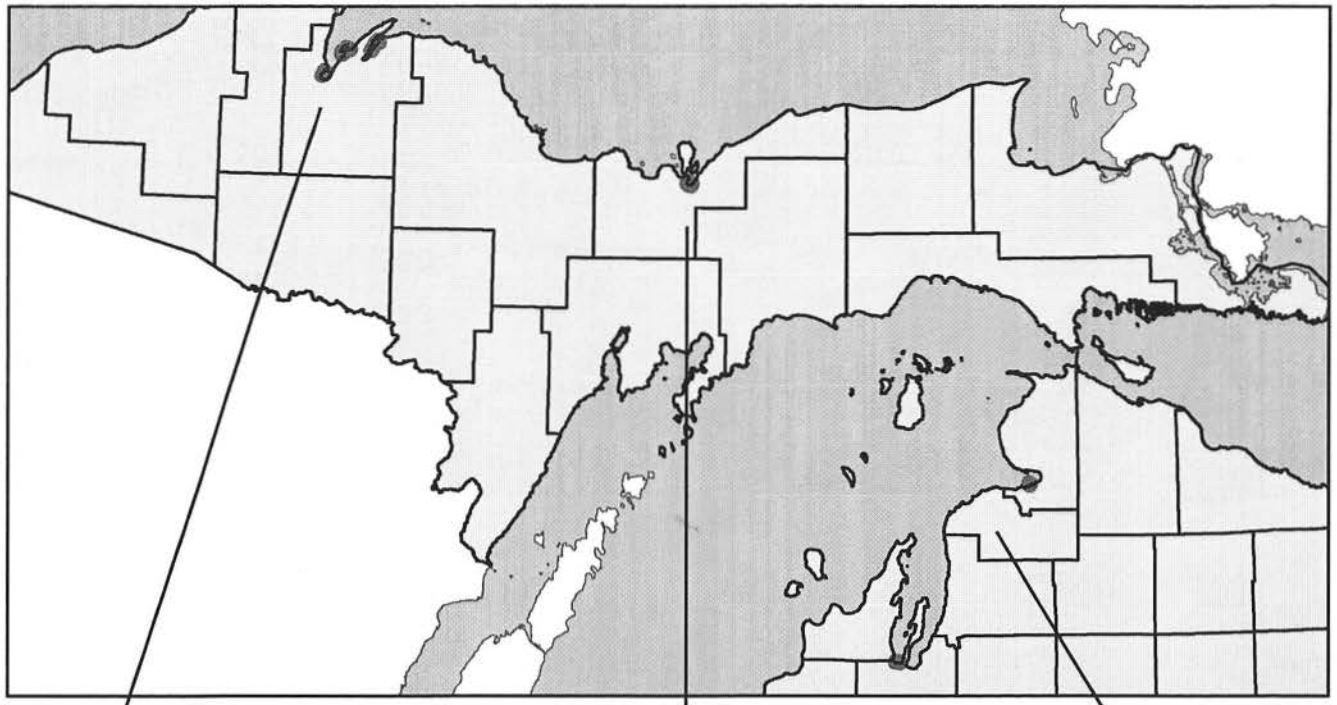
Diporeia Concentration Locations
(Related Resource 3)

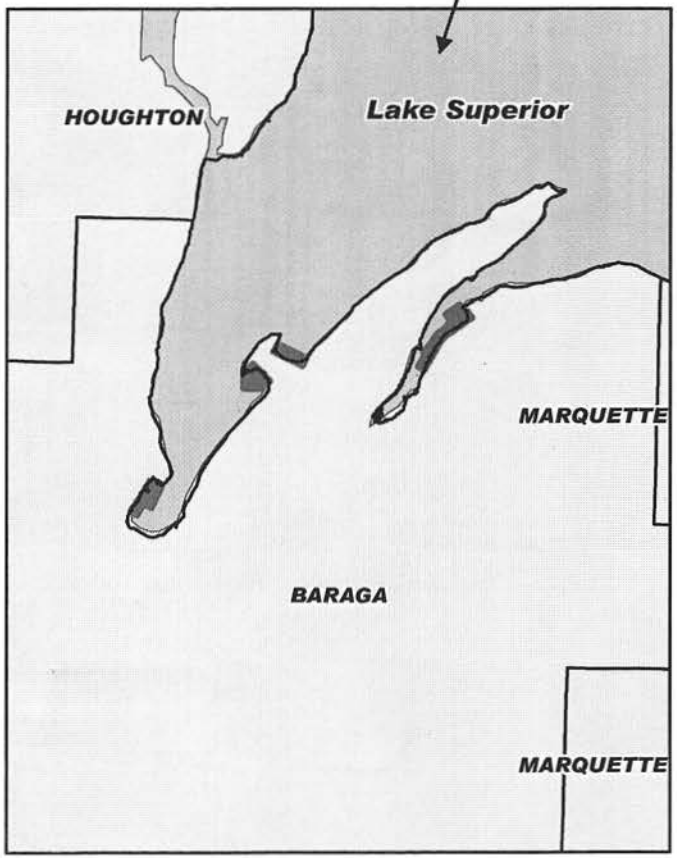


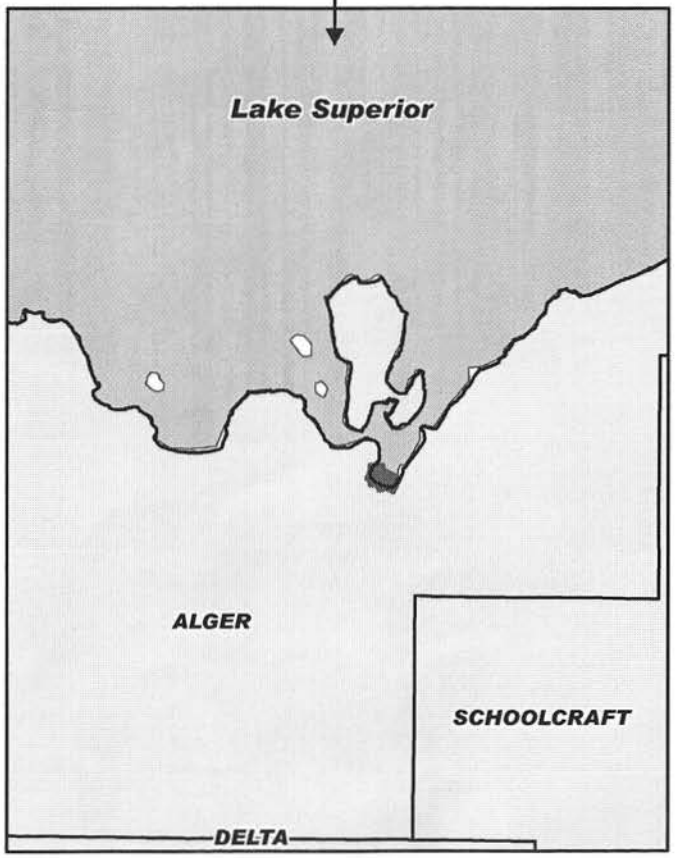
Permitted Submerged Log Recoery Areas (Related Resource 4)

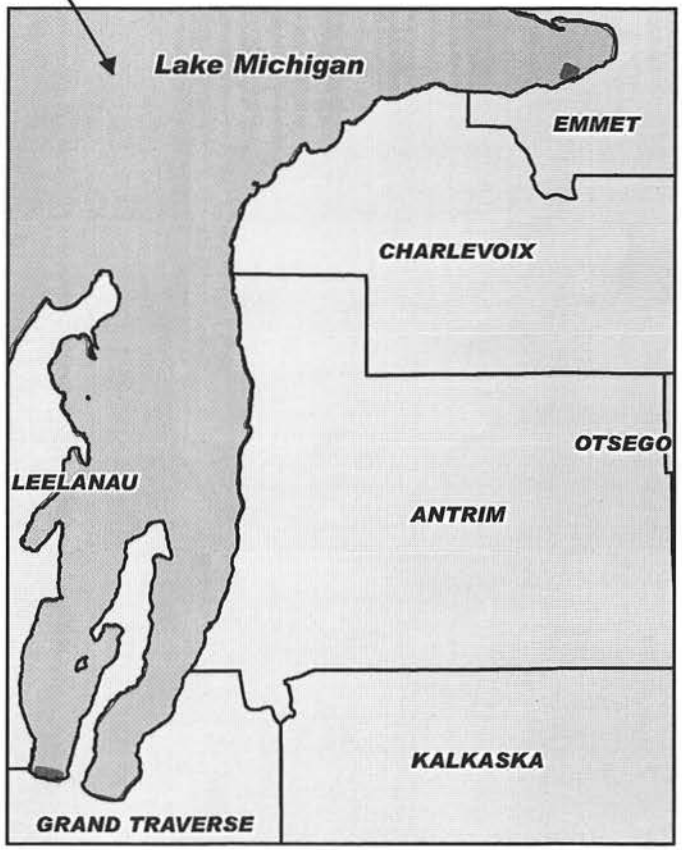
Permitted Submerged Log Recovery Areas

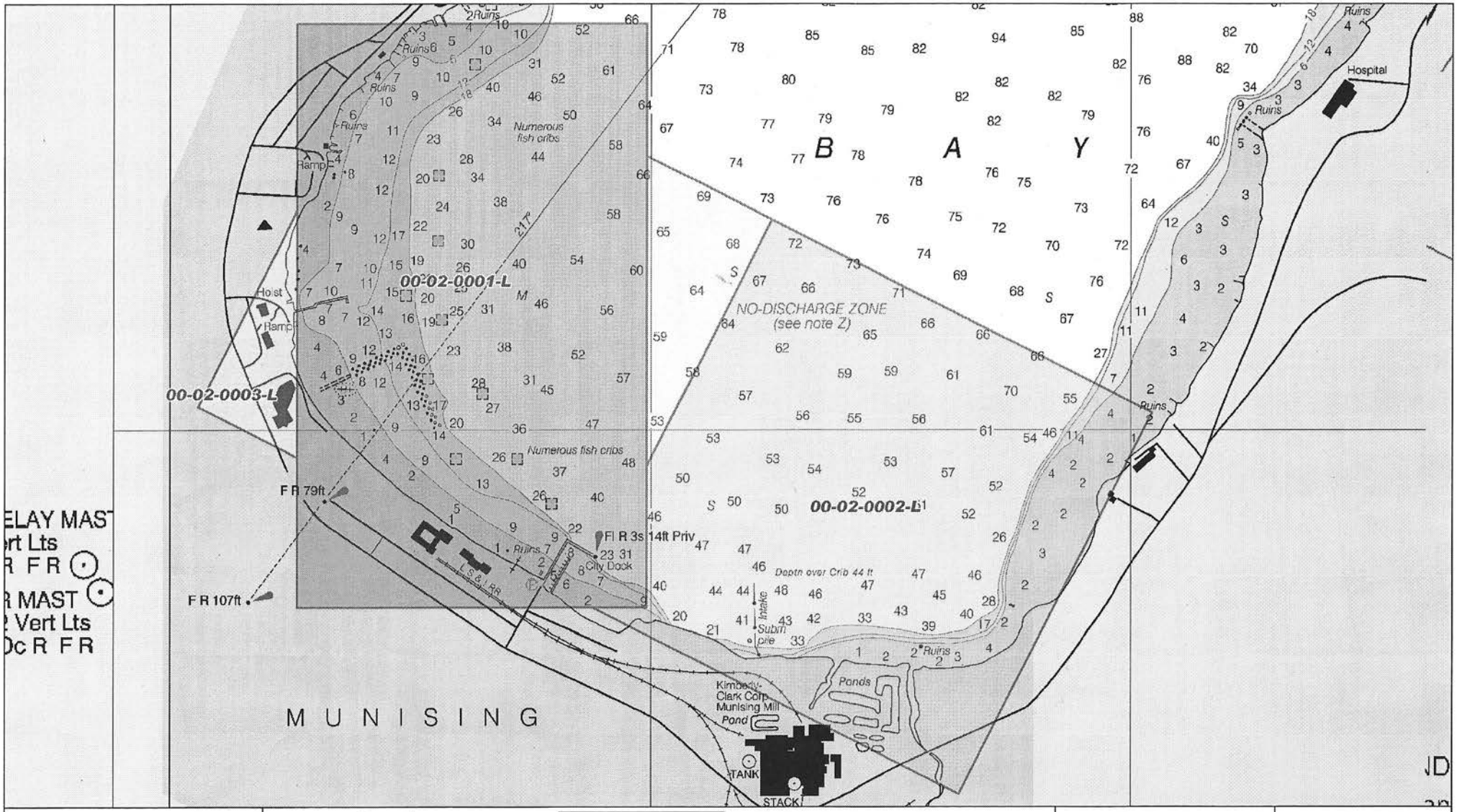
As of 3/15/2013











Log Recovery Areas
Munising Bay
Alger County

Legend

Priority Area 1

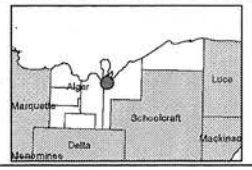
Overlap Areas

Priority Area 2

Priority Area 3

Latitude	Longitude
46.426367,	-86.662228
46.426367,	-86.650119
46.412382,	-86.662228
46.412383,	-86.650119

Background: NOAA's Raster Navigational Charts (RNCs)



N W E S

0 0.25 0.5 Miles

1 inch = 1,100 feet

Permits issued under Parts 325, Great Lakes Submerged Lands, and 326, Great Lakes Submerged Logs Recovery, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Submerged logs recovery area boundaries are defined by latitude and longitude coordinates. Permit number 00-02-0001-L has priority over 00-02-0002-L and 00-02-0003-L, which are able to recover logs within their respective areas which do not overlap other permits. Questions regarding latitude and longitude coordinates for 00-02-0002-L and 00-02-0003-L should be directed to: Jim Milne, milnej@michigan.gov or 517-284-5559

STATE OF MICHIGAN DEQ DEPARTMENT OF ENVIRONMENTAL QUALITY

Map Created: 2/25/2014
By: J.Jones

Log Recovery Areas
Munising Bay
Alger County

Legend

Priority Area 1

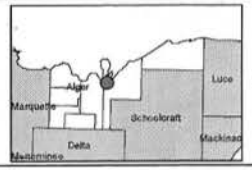
Overlap Areas

Priority Area 2

Priority Area 3

Latitude	Longitude
46.426367,	-86.662228
46.426367,	-86.650119
46.412382,	-86.662228
46.412383,	-86.650119

Background: ESRI Basemap Imagery



N W E S

0 0.25 0.5
Miles

1 inch = 1,100 feet

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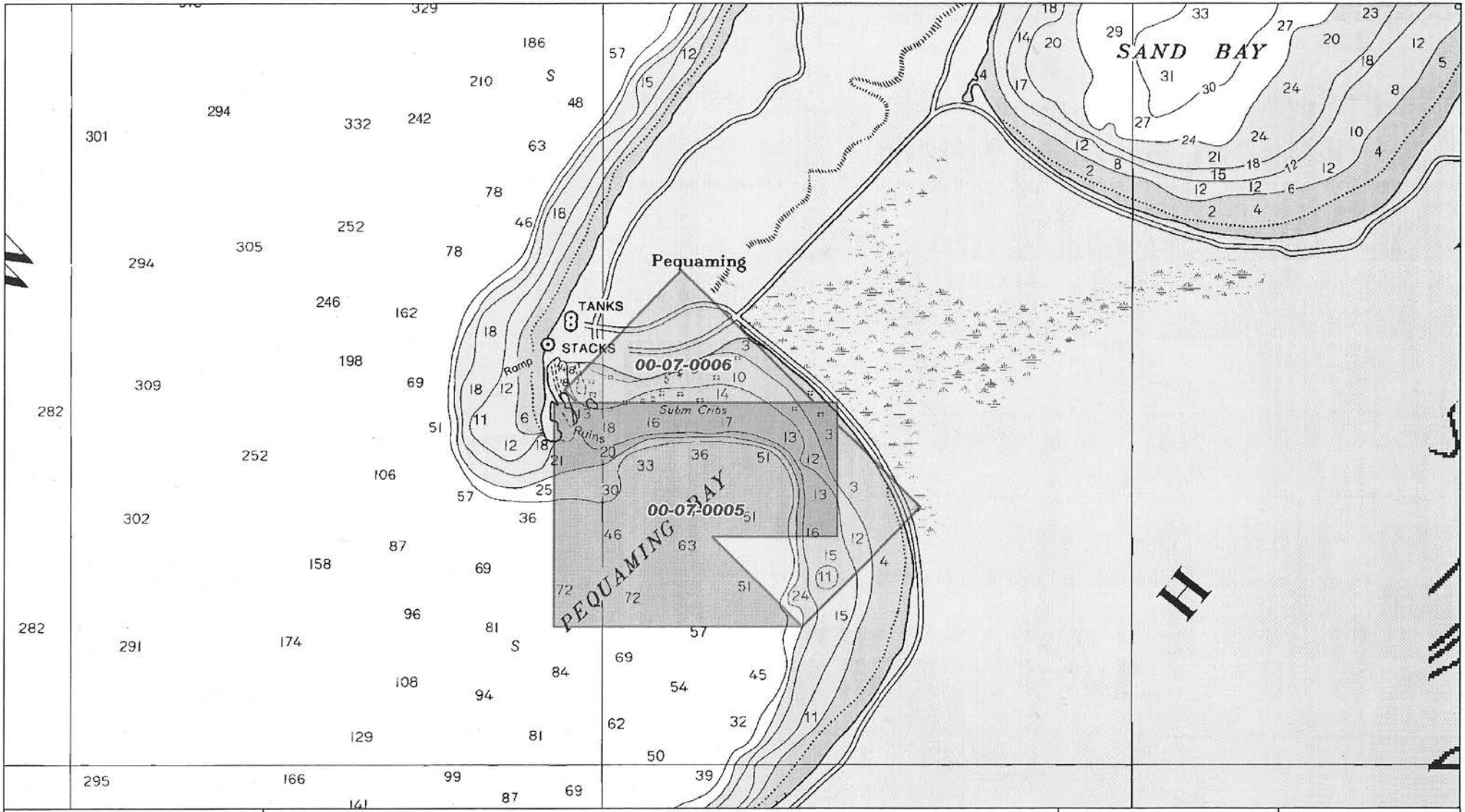

Log Recovery Areas
Pequaming
Baraga County

Legend

Priority Area 1

Overlap Areas

Priority Area 2

Latitude	Longitude
46.848853,	-88.403000
46.848853,	-88.385198
46.842970,	-88.385198
46.842970,	-88.393105
46.839205,	-88.387401
46.839205,	-88.403000

Background: NOAA's Raster Navigational Charts (RNCs)

N W E S

0 0.4 0.8
Miles

1 inch = 2,000 feet

Permits issued under Parts 325, Great Lakes Submerged Lands, and 326, Great Lakes Submerged Logs Recovery, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Submerged logs recovery area boundaries are defined by latitude and longitude coordinates. Permit number 00-07-0005-L has priority over 00-07-0006-L, which are able to recover logs within their respective areas that do not overlap other Permits. Questions regarding latitude and longitude coordinates for 00-07-0006-L should be directed to:
Jim Milne, milnej@michigan.gov or 517-284-6559

STATE OF MICHIGAN
DEQ
DEPARTMENT OF ENVIRONMENTAL QUALITY

Map Created: 2/25/2014
By: J.Jones

Log Recovery Areas
Pequaming
Baraga County

Legend

Priority Area 1

Overlap Areas

Priority Area 2

Latitude	Longitude
46.848853,	-88.403000
46.848853,	-88.385198
46.842970,	-88.385198
46.842970,	-88.393105
46.839205,	-88.387401
46.839205,	-88.403000

Background: ESRI Basemap Imagery

N
W E
S

0 0.4 0.8
Miles

1 inch = 2,000 feet

Permits issued under Parts 325, Great Lakes Submerged Lands, and 326, Great Lakes Submerged Logs Recovery, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Submerged logs recovery area boundaries are defined by latitude and longitude coordinates. Permit number 00-07-0005-L has priority over 00-07-0006-L, which are able to recover logs within their respective areas that do not overlap other permits. Questions regarding latitude and longitude coordinates for 00-07-0006-L should be directed to:
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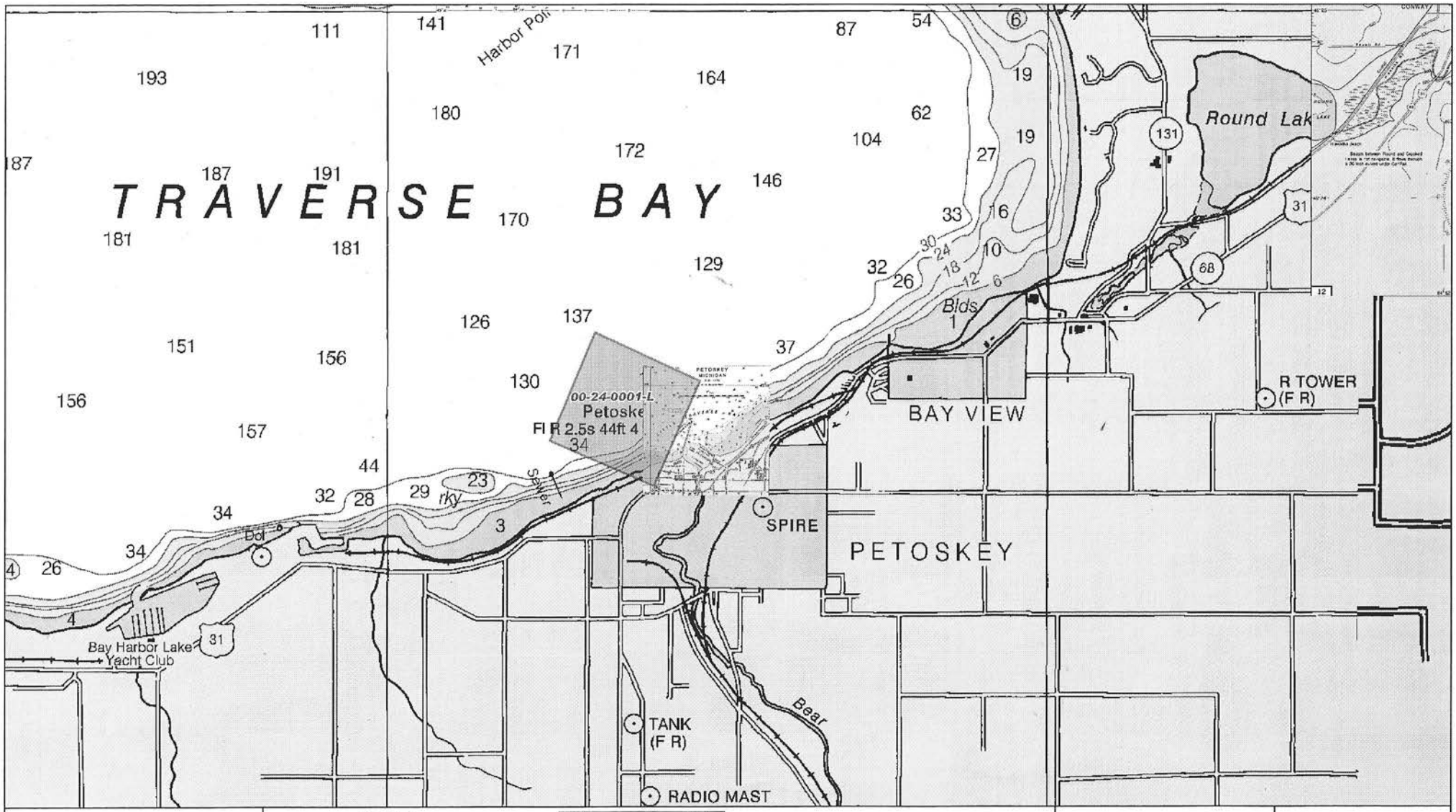


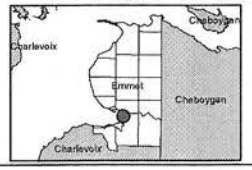
Log Recovery Areas
Petoskey/Bayfront Marina
Emmet County

Legend

Priority Area 1

Latitude	Longitude
45.383444,	-84.959897
45.387753,	-84.973081
45.378461,	-84.979192
43.374156,	-84.966011

Background: NOAA's Raster Navigational Charts (RNCs)



N W E S

0 0.75 1.5
Miles

1 inch = 4,000 feet

Permits issued under Parts 325, Great Lakes Submerged Lands, and 328, Great Lakes Submerged Logs Recovery, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Submerged logs recovery area boundaries are defined by latitude and longitude coordinates. Permit number 00-24-0001-L has priority over logs within these latitude and longitude coordinates.
Questions should be directed to:
Jim Milne, milnej@michigan.gov or 517-284-5559

STATE OF MICHIGAN
DEQ
DEPARTMENT OF ENVIRONMENTAL QUALITY

Map Created: 2/25/2014
By:J.Jones

Log Recovery Areas
Petoskey/Bayfront Marina
Emmet County

Legend

Priority Area 1

Latitude	Longitude
45.383444,	-84.959897
45.387753,	-84.973081
45.378461,	-84.979192
43.374156,	-84.966011

Background: ESRI Basemap Imagery

N
W E
S

0 0.75 1.5
Miles

1 inch = 4,000 feet

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DEPARTMENT OF ENVIRONMENTAL QUALITY

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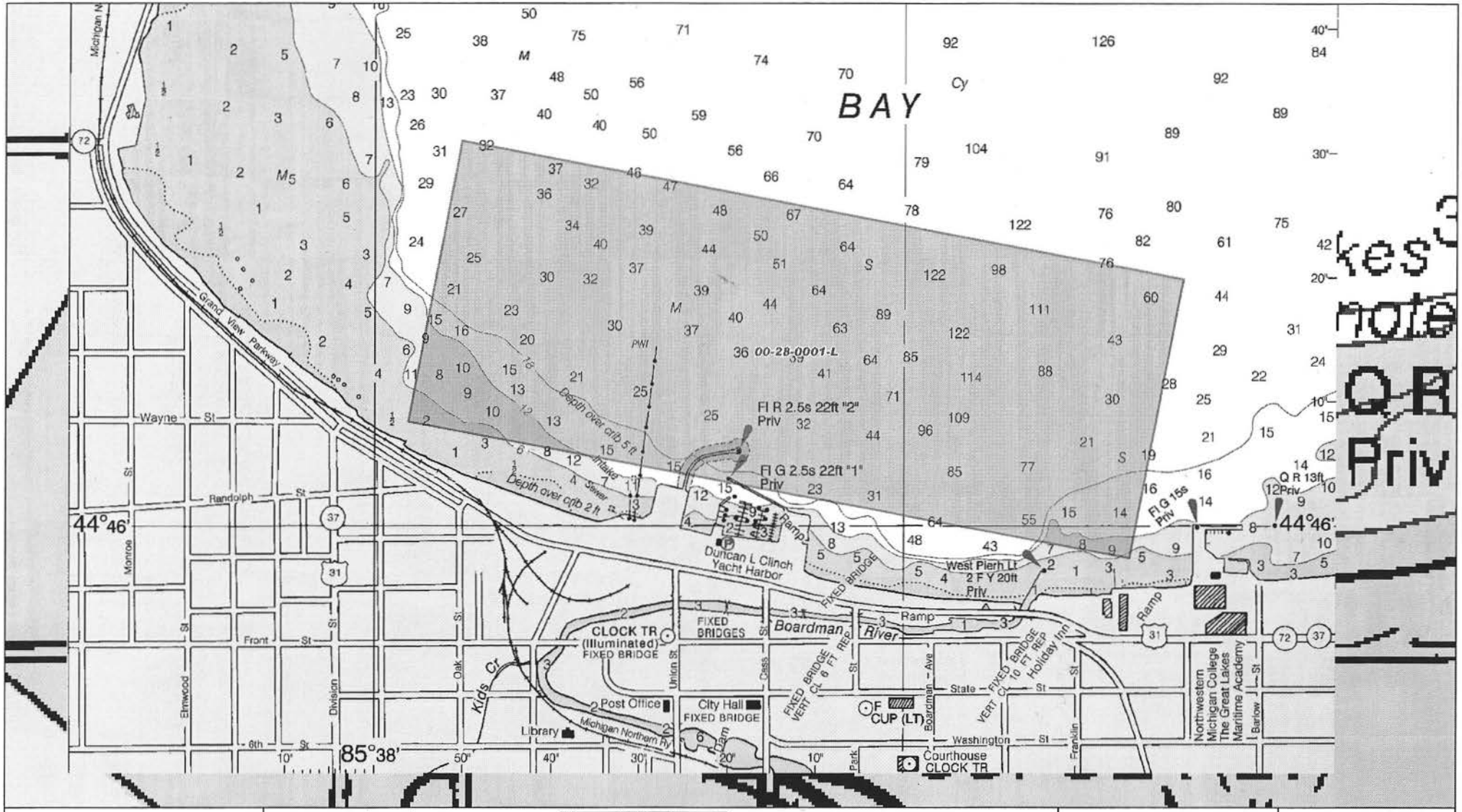

Log Recovery Areas
West Grand Traverse Bay
Grand Traverse County

Legend

Priority Area 1

Latitude	Longitude
44.774682,	-85.624558
44.768517,	-85.626817
44.770524,	-85.602202
44.764359,	-85.604463

Background: NOAA's Raster Navigational Charts (RNCs)

N W E S

0 0.2 0.4 Miles

1 inch = 1,000 feet

Permits issued under Parts 325, Great Lakes Submerged Lands, and 326, Great Lakes Submerged Logs Recovery, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Submerged logs recovery area boundaries are defined by latitude and longitude coordinates. Permit number 00-28-0001-L has priority over logs within these latitude and longitude coordinates.
Questions should be directed to:
Jim Milne, milnej@michigan.gov or 517-284-5559

STATE OF MICHIGAN
DEQ
DEPARTMENT OF ENVIRONMENTAL QUALITY

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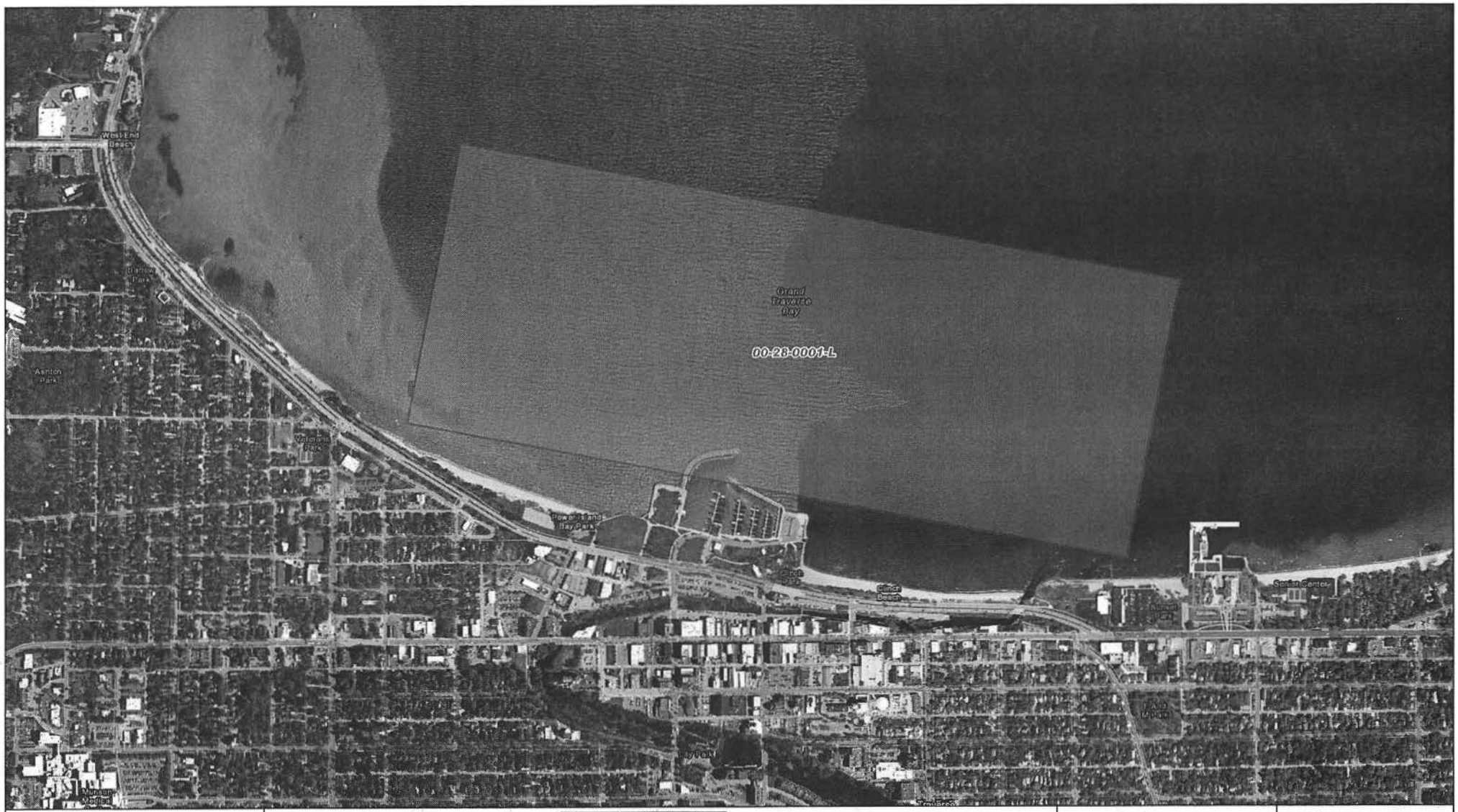


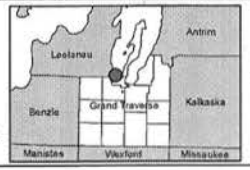
Log Recovery Areas
West Grand Traverse Bay
Grand Traverse County

Legend

Priority Area 1

Latitude	Longitude
44.774682,	-85.624558
44.768517,	-85.626817
44.770524,	-85.602202
44.764359,	-85.604463

Background: ESRI Basemap Imagery



N W E S

0 0.2 0.4
Miles

1 inch = 1,000 feet

Permits issued under Parts 325, Great Lakes Submerged Lands, and 326, Great Lakes Submerged Logs Recovery, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Submerged logs recovery area boundaries are defined by latitude and longitude coordinates. Permit number 00-28-0001-L has priority over logs within these latitude and longitude coordinates.
Questions should be directed to:
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STATE OF MICHIGAN
DEQ
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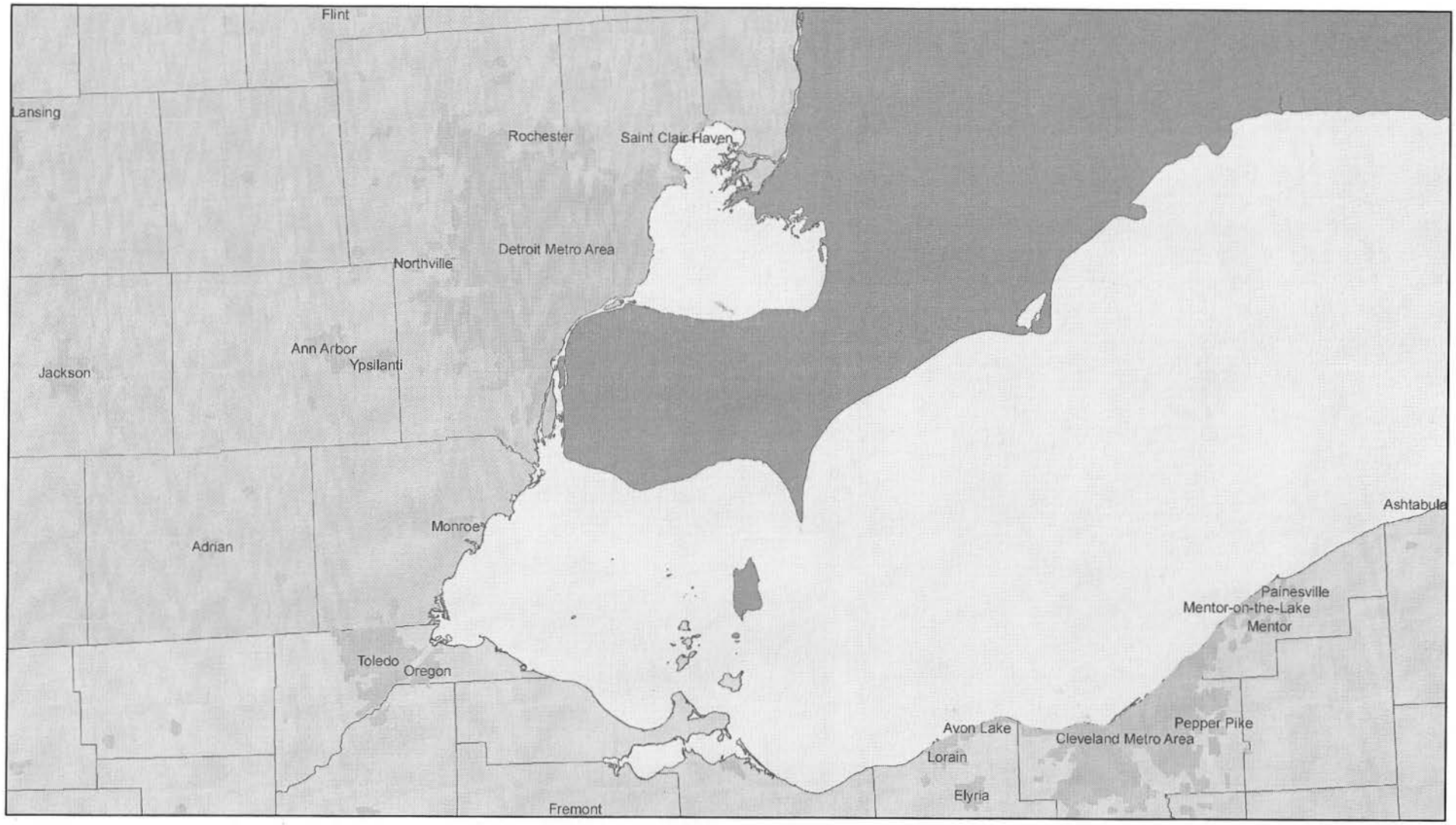
Thirty-Meter Depth Contours
(Related Resource 6)

Lake Erie



N

0 10 20 40 60 80 Miles

GLAHF
Great Lakes Aquatic Habitat Framework

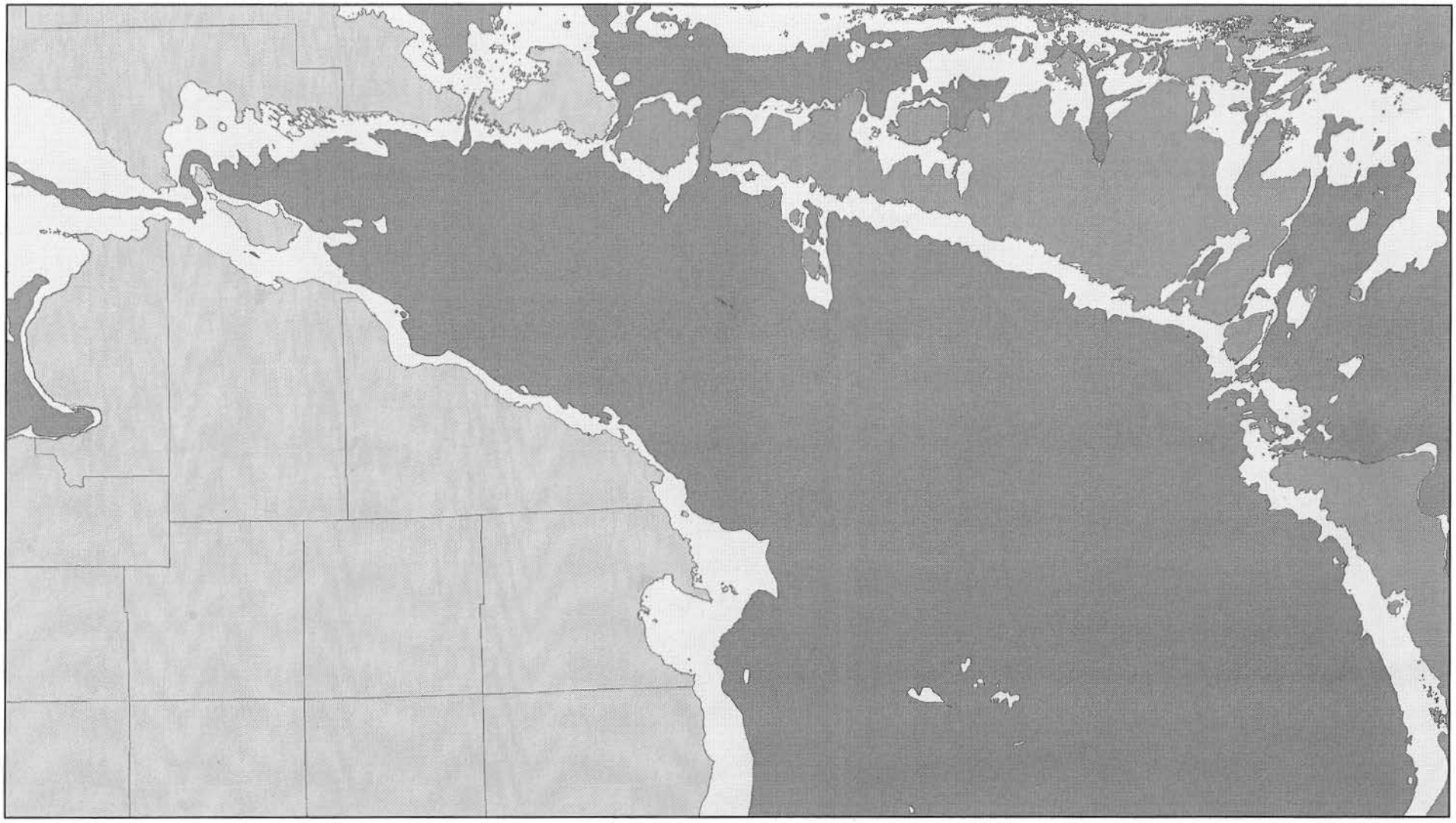
Sources: NOAA Coastal Services Center Bathymetry
US Census Bureau TIGER Products
ESRI Shoreline and Provinces

Depth

0 - 30 meters

30+ meters

Lake Huron North



N

0 10 20 40 60 80 Miles

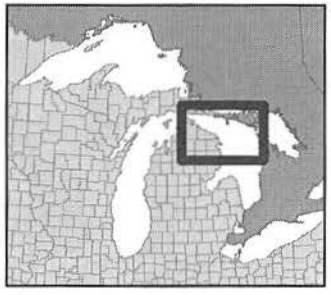
GLAHF
Great Lakes Aquatic Habitat Framework

Sources: NOAA Coastal Services Center Bathymetry
US Census Bureau TIGER Products
ESRI Shoreline and Provinces

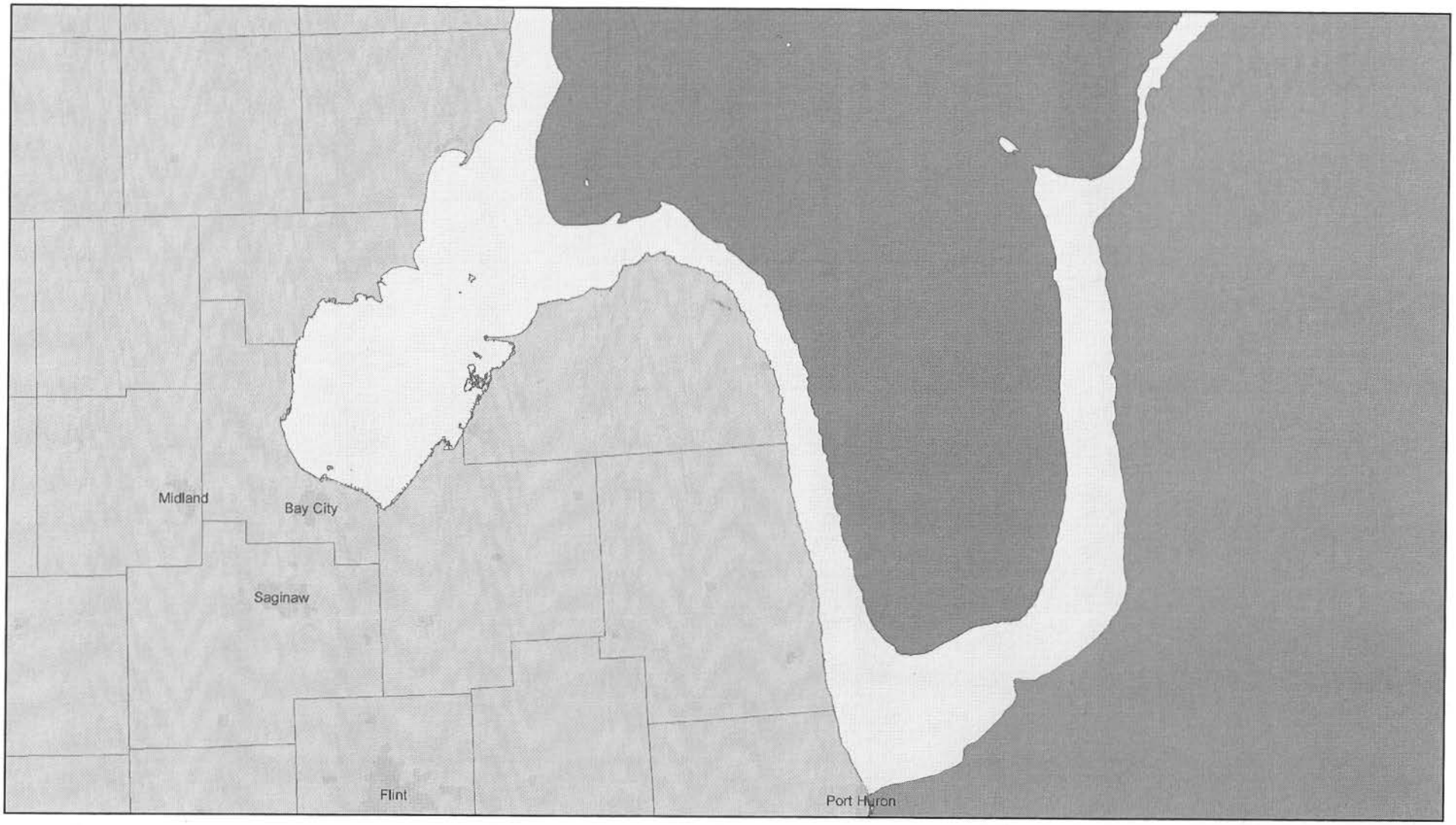
Depth

0 - 30 meters

30+ meters



Lake Huron South



N

0 10 20 40 60 80 Miles

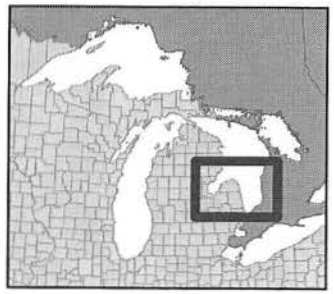
GLAHF
Great Lakes Aquatic Habitat Framework

Sources: NOAA Coastal Services Center Bathymetry
US Census Bureau TIGER Products
ESRI Shoreline and Provinces

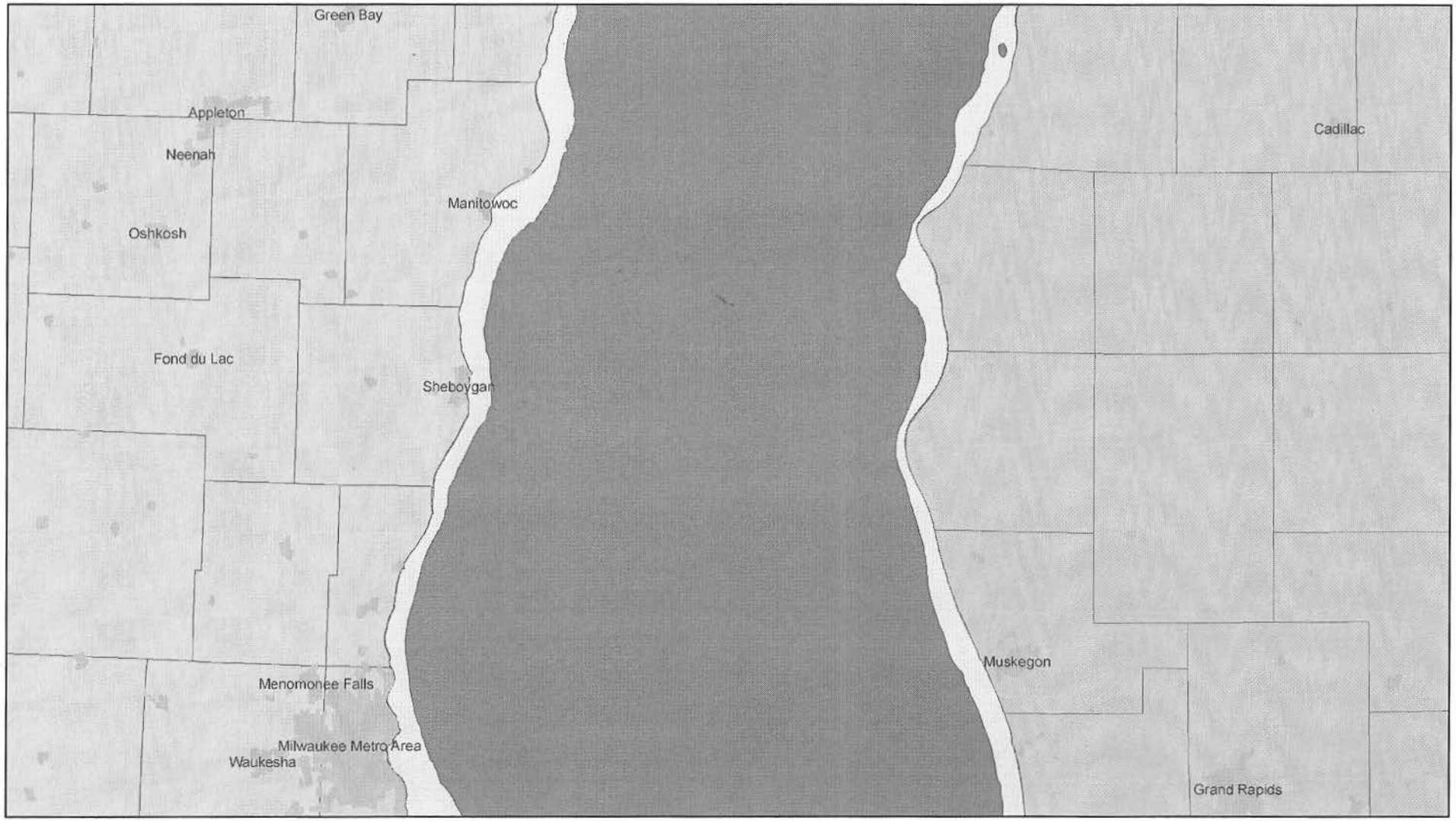
Depth

0 - 30 meters

30+ meters



Lake Michigan Central



N

0 10 20 40 60 80 Miles

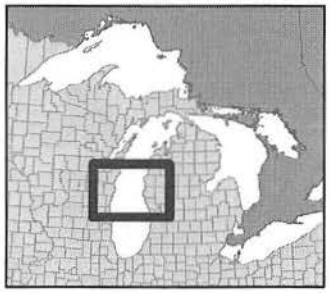
GLAHF
Great Lakes Aquatic Habitat Framework

Sources: NOAA Coastal Services Center Bathymetry
US Census Bureau TIGER Products
ESRI Shoreline and Provinces

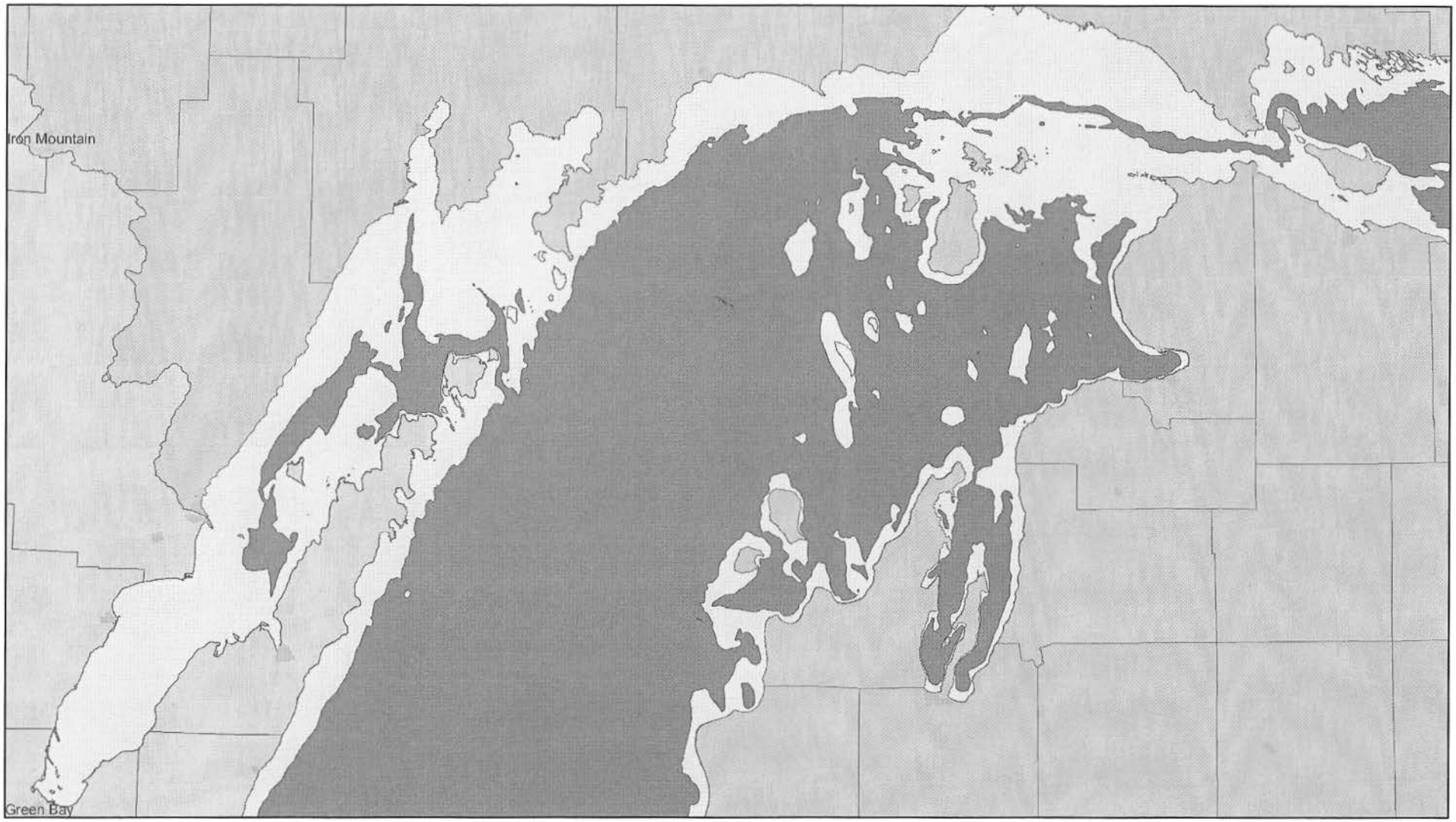
Depth

0 - 30 meters

30+ meters



Lake Michigan North



N

0 10 20 40 60 80 Miles

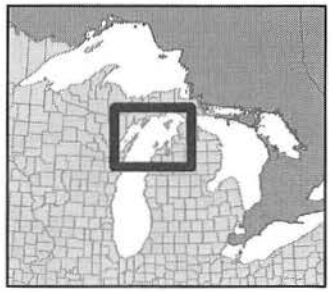
GLAHF
Great Lakes Aquatic Habitat Framework

Sources: NOAA Coastal Services Center Bathymetry
US Census Bureau TIGER Products
ESRI Shoreline and Provinces

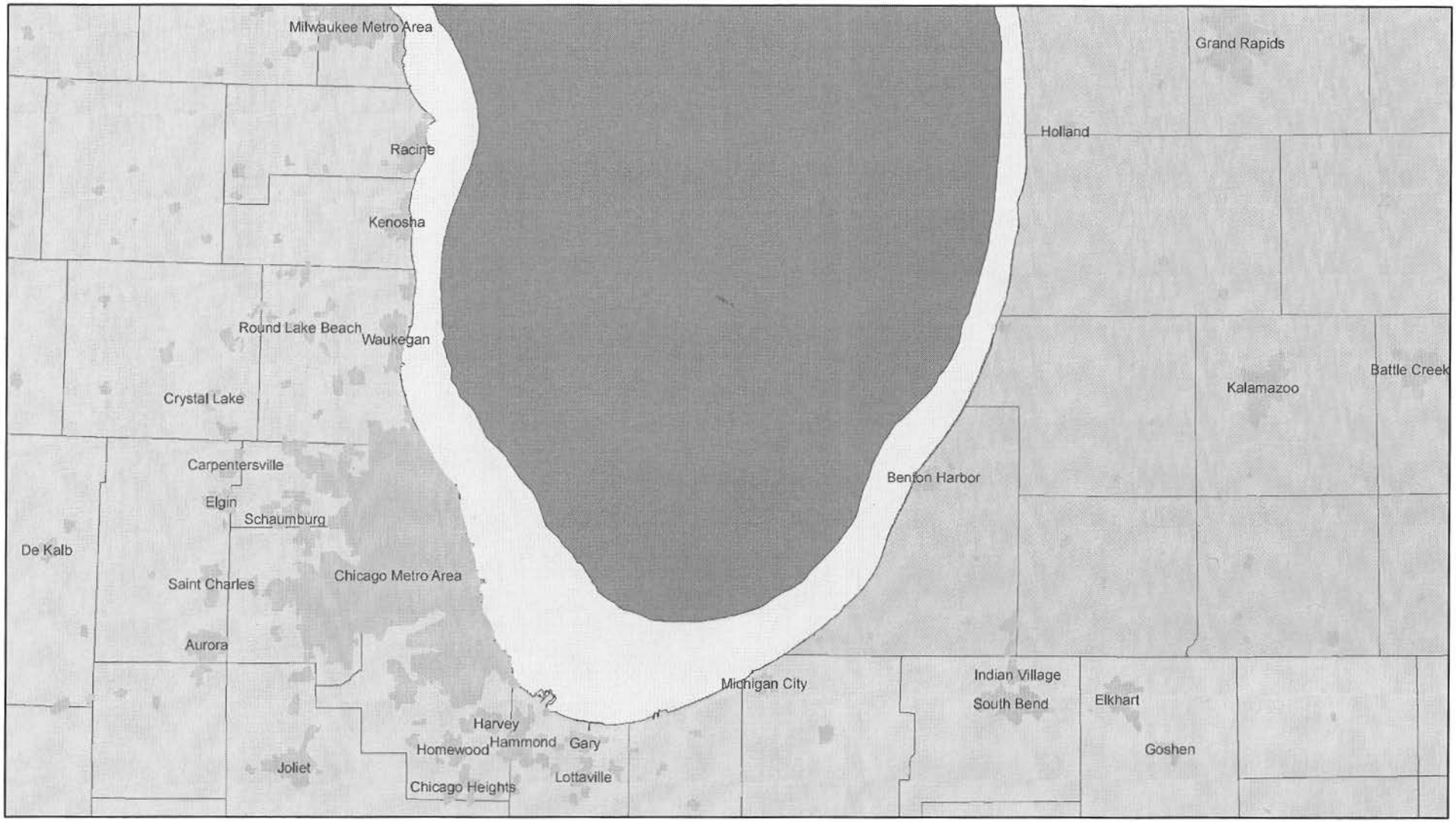
Depth

0 - 30 meters

30+ meters



Lake Michigan South



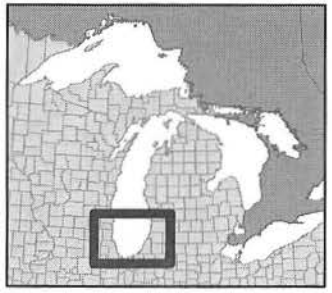
N

0 10 20 40 60 80 Miles

Depth

0 - 30 meters

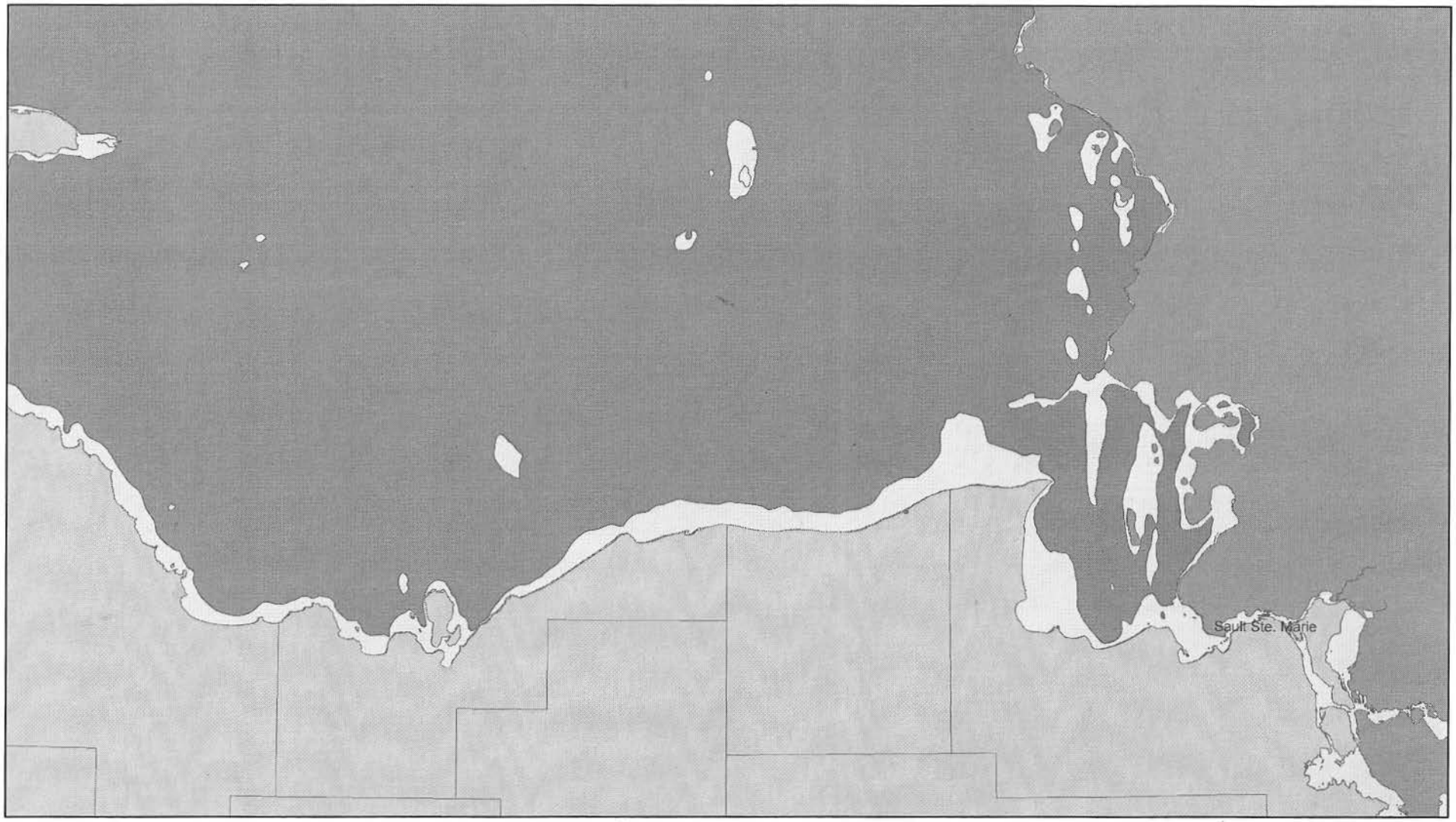
30+ meters



GLAHF
Great Lakes Aquatic Habitat Framework

Sources: NOAA Coastal Services Center Bathymetry
US Census Bureau TIGER Products
ESRI Shoreline and Provinces

Lake Superior East



N

0 10 20 40 60 80 Miles

GLAHF
Great Lakes Aquatic Habitat Framework

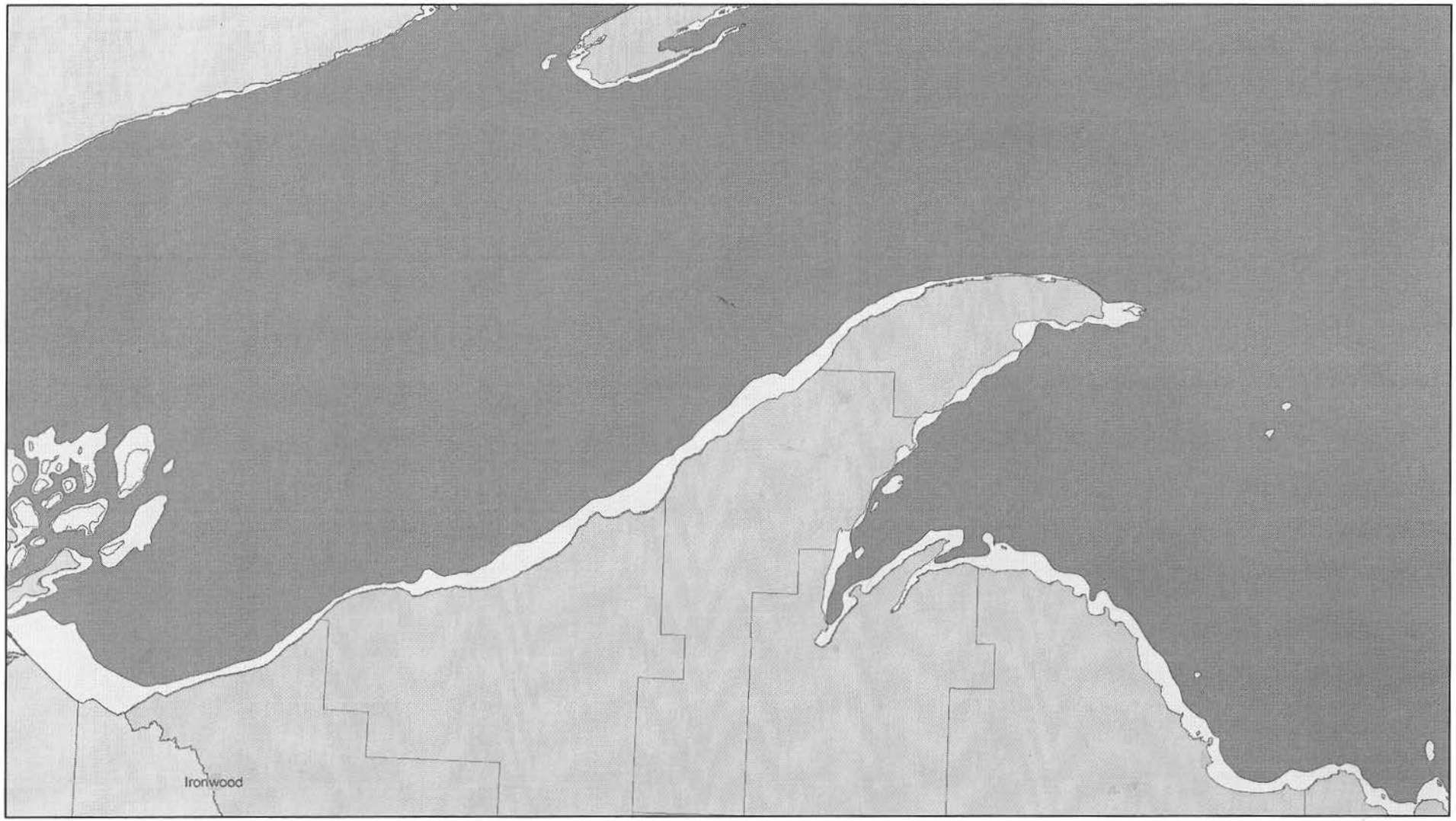
Sources: NOAA Coastal Services Center Bathymetry
US Census Bureau TIGER Products
ESRI Shoreline and Provinces

Depth

0 - 30 meters

30+ meters

Lake Superior West



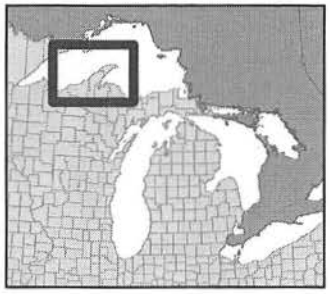
N

0 10 20 40 60 80 Miles

GLAHF
Great Lakes Aquatic Habitat Framework

Sources: NOAA Coastal Services Center Bathymetry
US Census Bureau TIGER Products
ESRI Shoreline and Provinces

Depth

0 - 30 meters

30+ meters