GRS:	Escanaba/Little Bay DeNoc (NOAA ESI's 1, 2, 3, 4, 5, 6, 7, 8,9,10,11,12,13,14)	GRS #	NLM5-ESC

Protection Priority Sites / Ranking:
A = Highest Protection Priority
B = Protect after A Areas
C = Protect after B Areas

Priority	Site Name	Site Location
A	Sand Point	45.7449, -87.0378
A	Garth Point	45.9076, -86.9633
A	Escanaba River	45.7777, -87.0594
B	Ford River	45.6775, -87.1429
B	Bark River	45.5719, -87.2411
A	Portage Point	45.7078, -87.0666
C	Peninsula Point	45.6677, -86.9671
C	Fayette Historic State Park	45.7176, -86.6702

LOCATION INFORMATION

State: Michigan | **County:** Delta

CONTACT INFORMATION

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); or Other Assistance (O)

Type	Organization	Title	Phone
T	EPA Spill Hotline	Environmental Protection Agency	(312) 353-2318
T	WI DNR Spill Hotline	WI Dept. Natural Resources	(800) 943-0003
T	US Coast Guard	Command Center	(414) 747-7182
T	PEAS-Pollution Emergency Alert System	Watchstander	(800) 292-4706
T	Michigan Ecological Services (Section 7)	Section 7 Consultation	(517) 351-2555
T	MSD Sturgeon Bay	Pollution Responder	(920) 743-9448
T	Delta Co Emergency Response	Bob Berbohm	(906) 789-5121
T	Michigan EGLE	Scott Schaefer	(906) 630-4282
T	Escanaba Public Safety	Rob LaMarche	(906) 786-5911
T	EPA-Tribal Liason	Jennifer Manville	(231) 941-0237
O	USCG Station Sturgeon Bay	Watchstander	(920) 743-3367
O	Delta County Sheriff	Ed Oswald	(906) 786-5911

RESOURCES AT RISK CHARACTERISTICS

Managed Areas:	Escanaba River State Forest Shingleton State Forest Area Fayette Historic State Park
Sensitive Habitat: ESI Shoreline Sensitivity 1 = Least Sensitive 10 = Most Sensitive	Extensive Wetlands (10B) Fringing Wetlands (10A) Sheltered Vegetation (9B) Sheltered, Solid Man-Made Structures (8B) Sheltered scarps in bedrock (8A) Riprap Revetments, Groins and Jetties (6B) Gravel Beaches (6A) Mixed Sand and Gravel Beaches (5)

	Sand beaches (4) Eroding Scarps in Unconsolidated Sediments (3) Shelving Bedrock Shores Solid Man-Made Structures (1B)
Shoreline Type:	This GRS contains varied shorelines and infrastructure. Little Bay De Noc has significant changes to its shoreline, with two cities seated on the west side of the bay, and the east side being primarily beaches and forest. Despite two cities being seated on the west side, the entirety of the area has significant stretches of environmentally sensitive areas. **SOLID MAN-MADE STRUCTURES** (**ESI - 1B)** **Description** These are solid, man-made structures such as seawalls, groins, revetments, piers, and port facilities. Many structures are constructed of concrete, wood, or metal. They are built to protect the shore from erosion by waves, boat wakes, and currents, and thus are exposed to rapid natural removal processes. Multiple habitats are indicated if present. Attached animals and plants are sparse to common. **Predicted Oil Behavior** Oil is held offshore by waves reflecting off the steep, hard surface in exposed settings. Oil readily adheres to the dry, rough surfaces, but it does not adhere to wet substrates. The most resistant oil would remain as a patchy band at or above the high tide line. **Response Considerations** Cleanup is usually not required. High-pressure water spraying may be conducted to remove risk of contamination of people or vessels, or to improve aesthetics. **Sand Beaches (ESI = 3A and 4)** **Description** These beaches are moderate sloping, of variable width, and have soft sediments. These characteristics combine to lower their trafficability Generally species density and diversity is lower than on fine-grained sand beaches **Predicted Oil Behavior** During small spills, oil will be deposited primarily as a band along the high tide line. Under very heavy accumulations, oil may spread across the entire beach face, though the oil will be lifted off the lower beach with the rising tide. Penetration of oil into coarse-grained sand can reach 25 cm. Burial of oiled layers by clean sand can be as rapid as one tidal cycle and to depths of 60 cm or more. Burial to depths over 1m is possible if the oil comes ashore at the start of a depositional period. Biological impacts include temporary declines in infaunal populations, which can also affect important shorebird foraging areas. **Response Considerations** Cleanup should concentrate on removing oil and oily debris from the upper swash zone once oil has come ashore. Manual cleanup, rather than road graders and front-end loaders, is advised to minimize the volume of sand removed from the shore and requiring disposal. Efforts should focus on preventing mixing of oil deeper into the sediments by vehicular and foot traffic. Mechanical reworking of lightly oiled sediments from the high tide line to the middle intertidal zone can be effective along beaches. **SCARPS AND STEEP SLOPES IN SAND (ESI - 3B)** **Description** Occurs where sandy bluffs are undercut by waves or currents and slump. Some scarps are fronted by narrow beaches, if the erosion rates are moderate and episodic. Trees growing at the top of these slopes are eventually undercut and the logs can accumulate at the base of the scarp. Biological utilization by birds and infauna is low. **Predicted Oil Behavior** Any stranded oil will concentrate at the high-water line and may penetrate sandy sediments. Oil will also adhere to the dry surfaces of any logs that have accumulated at the base of the scarp. There is little potential for burial except when major slumping of the bluff occurs

Response Considerations
In many cases, cleanup is not necessary because of the short residence time of the oil. The need for removal of oiled sediments and debris should be carefully evaluated because of the potential for increased erosion. Closely supervised manual labor should be used so that the minimal amount of material is removed

MIXED SAND AND GRAVEL BEACHES (ESI = 5)
Description
Because of the mixed sediment sizes, there may be zones of pure sand, pebbles, or cobbles. There can be large-scale changes in the sediment distribution patterns depending upon season, because of the transport of the sand offshore during storms. Because of sediment mobility and desiccation, exposed beaches tend to have low densities of attached animals and plants. Presence of attached algae, mussels, and barnacles indicates beaches that are relatively sheltered, with the more stable substrate supporting a richer biota
Predicted Oil Behavior
During small spills, oil will be deposited along and above the high-tide swash. Large spills will spread across the entire intertidal area. Oil penetration into the beach sediments may be up to 50 cm; however, the sand fraction can be quite
mobile, and oil behavior is much like on a sand beach if the sand fraction exceeds about 40 percent. Burial of oil may be deep at and above the high tide line, where oil tends to persist, particularly where beaches are only intermittently exposed to waves. In sheltered pockets on the beach, pavements of asphalted sediments can form if there is no removal of heavy oil accumulations because most of the oil remains on the surface
Response Considerations
Remove heavy accumulations of pooled oil from the upper beach. All oiled debris should be removed; sediment removal should be limited as much as possible. Sediment removal should be limited as much as possible. Low-pressure flushing can be used to float oil away from the sediment for recovery by skimmers or sorbents. High-pressures should be avoided because of potential for transporting contaminated finer sediment (sand) to the lower intertidal or subtidal zones. Mechanical reworking of oiled sediments from the high tide zone to the middle intertidal zone can be effective in areas regularly exposed to wave activity. Oiled sediments should not be relocated below the mid-tide zone. In-place tilling may be used to reach deeply buried oil layers on exposed beaches.

GRAVEL BEACHES – (ESI 6A)
Description
Gravel beaches are composed of sediments ranging in size from pebbles to boulders. They can be very steep, with multiple, wave-built berms forming the upper beach. Attached biota are usually restricted to the lowest parts of the beach, where the sediments are less mobile. The presence of attached biota indicates beaches that are relatively sheltered, with the more stable substrate supporting richer biological communities.
Predicted Oil Behavior
Stranded oil is likely penetrate deeply into gravel beaches because of their high permeability. On exposed beaches, oil can be pushed over storm berms, pooling and persisting above the normal zone of wave wash. Long-term persistence will be controlled by the depth of penetration versus the depth of routine reworking by storm waves. On sheltered portions of beaches, chronic sheening and formation of asphalt pavements is likely where accumulations are heavy.
Response Considerations
Heavy accumulations of pooled oil should be removed quickly from the upper beach. All oiled debris should be removed. Sediment removal should be limited as much as possible. Low- to high-pressure flushing can be used to lift oil from the sediments for recovery by skimmers or sorbents. Mechanical reworking of oiled sediments can be effective in areas regularly exposed to wave activity (as evidenced by storm berms). In-place tilling may be used to reach deeply buried oil layers on exposed beaches.

RIPRAP (ESI - 6B)

Description
Riprap structures are composed of cobble- to boulder-sized blocks of rock, concrete, etc. They are used as revetments and groins for shoreline protection and breakwaters and jetties around inlets and marinas.
Attached biota are sparse at the upper intertidal zone, but more common in the lower intertidal.
Predicted Oil Behavior
Deep penetration of oil between the blocks is likely, with oiling of trapped debris
Oil adheres readily to the rough surfaces of the blocks
Uncleaned oil can cause chronic leaching until the oil hardens
Response Considerations
When the oil is fresh and liquid, high-pressure spraying and/or water flooding may be effective if all liberated oil is recovered
Heavy and weathered oils are more difficult to remove, requiring scraping and/or hot-water spraying
Removal of oiled debris deep in the crevices will be difficult

SHELTERED ROCKY SHORES (ESI – 8A)
Description
These shores are characterized by a rocky substrate that can vary widely in permeability. Of particular concern are rocky shores that have a semi-permeable veneer of angular rubble overlying the bedrock. The wider shores may have some surface sediments, but the bedrock is the dominant substrate type. Species density and diversity vary greatly, but attached biota may be present at high densities at lower tidal elevations
Predicted Oil Behavior
Oil will adhere readily to the rough rocky surface, forming a distinct oil band along the high tide line. Even on wide ledges, the lower intertidal zone usually stays wet (particularly when algae covered), preventing oil from adhering to the rock surface. Heavy and weathered oils can cover the upper zone with little impacts to the rich biological communities of the lower zone. Where the rubble is loosely packed, oil will penetrate deeply, causing long-term contamination of the subsurface sediments
Response Considerations
Low- to high-pressure spraying at ambient water temperatures is most effective when the oil is fresh. Extreme care must be taken not to spray in the biologically rich lower intertidal zone or when the tidal level reaches that zone. Do not cut oiled, attached algae; use sorbents to recover oil as it is remobilized by tidal action

SHELTERED, SOLID MAN-MADE STRUCTURES (ESI - 8B)
Description
These are structures such as seawalls, groins, revetments, piers, and port facilities, constructed of concrete, wood, or metal. Most of the structures are designed to protect a single lot, thus their composition, design, and condition are highly variable. Often there is no exposed shore at low tide. There can be dense attachments of animal and plant life.
Predicted Oil Behavior
Oil will adhere readily to rough surfaces, particularly along the high tide line, forming a distinct oil band. The lower intertidal zone usually stays wet (particularly if algae covered), preventing oil from adhering to the surface.
Response Considerations
Cleanup of seawalls is usually conducted for aesthetic reasons or to prevent leaching of oil. Low- to high-pressure spraying at ambient water temperatures is most effective when the oil is fresh.

FRINGING WETLANDS (ESI – 10A)
Description

	These are intertidal wetlands that consist of emergent, herbaceous vegetation. Depending on location and inter-annual variations in rainfall and runoff, associated vegetation may include species tolerant of or adapted to salt, brackish, or tidal freshwater conditions. The marsh width may vary widely, from a narrow fringe to extensive areas. Sediments are composed of organic-rich mud except on the margins of islands or along rivers where sand is abundant. Exposed areas are located along bays with wide fetches and along heavily trafficked waterways. Sheltered areas are not exposed to significant wave or boat wake activity. Resident flora and fauna are abundant with numerous species with high utilization by birds, fish, and shellfish **Predicted Oil Behavior** Oil adheres readily to the vegetation of most species. The band of coating will vary widely, depending upon the water level at the time oil slicks are in the vegetation; there may be multiple bands. Large slicks will persist through multiple tidal cycles and coat the entire stem from the high tide line to the base. Heavy oil coating will be restricted to the outer fringe of thick vegetation, although lighter oils can penetrate deeper, to the limit of tidal influence. Medium to heavy oils do not readily adhere to or penetrate the fine sediments, but can pool on the surface or in burrows. Light oils can penetrate the top few centimeters of sediment; under some circumstances oil can penetrate burrows and cracks up to 1 m **Response Considerations** Under light oiling, the best practice is natural recovery. Natural removal processes and rates should be evaluated prior to conducting cleanup. Heavily pooled oil can be removed by vacuum, sorbents, or low-pressure flushing. Cleanup activities should be carefully supervised to avoid vegetation damage. Any cleanup activity **FRESHWATER MARSHES (ESI - 10B)** **Description** These are grassy wetlands composed of emergent herbaceous vegetation. They occur upstream of brackish vegetation in the upper estuary and along creeks and rivers. Those along major channels are exposed to strong currents and boat wakes; smaller channels tend to be sheltered. Resident flora and fauna are abundant. **Predicted Oil Behavior** Oil adheres readily to the vegetation. The band of coating will vary widely, depending upon the water level at the time oil slicks are in the vegetation; there may be multiple bands. Most of the time, there will be a narrow band because of the small changes in water levels; the band can be very large during high-water events. Heavy oil coating will be restricted to the outer fringe of thick vegetation, although lighter oils can penetrate deeper. **Response Considerations** Under light oiling, the best practice is natural recovery. Natural removal processes and rates should be evaluated prior to conducting cleanup. Heavy accumulations of pooled oil can be removed by vacuum, sorbents, or low-pressure flushing. Cleanup activities should be carefully supervised to avoid vegetation damage. Any cleanup activity must not mix the oil deeper into the sediments. Trampling of the roots must be minimized. Aggressive cleanup methods should be considered only when other resources present (listed species, nesting birds) are at great risk from leaving the oiled vegetation in place.
Wildlife:	**Recreational Beaches** - Migratory birds such as ducks, geese and piping plovers. Various small mammals. **Marina/Yacht Club/Commercial Port** - Migratory birds such as ducks and geese. Various species of fish including salmon, steelhead, trout and bass. As well as various small mammals. **Wooded Areas –** Migratory birds, deer, coyotes, turkeys, ducks, geese, seagulls, **Wetlands-** Migratory birds such as: Black-bellied plover, Bonaparte's gull, Hooded merganser, Red-necked grebe, semi-palated plover, snow goose, solitary sandpiper, western sandpiper. Non-Migratory Birds include: Belted King Fisher, Mute Swan and the Northern Harrier. Carp, Rainbow Trout **Open Water-** Northern Pike, Yellow Perch, Black Crappie, Smallmouth Bass **River Systems** – Black Crappie, Brown Trout, Chinook Salmon (King), Longnose Sucker, Channel Catfish, Walleye, Beaver, Mink, Muskrat, River Otter

Federally Threatened / Endangered Species:
E = Endangered
T = Threatened

Mammals

Birds

Insects

Flowering Plants

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<td>Socio-Economic Resources:</td>
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Parks and Beaches

Ludington Park

Lake Shore Drive, Escanaba, MI, 49829

45.739682, -87.052611

Ludington Park is a large park with a large parking lot and a small dirt boat ramp. This could be an ideal staging location with public restrooms.

Escanaba Municipal Beach

45.738619, -87.046689

Van Cleve Park and Gladstone Beach

45.838061, -87.023423

Saunders Point Wilderness Loop

45.843903, -87.007748

Peninsula Point Beach

Rapid River, MI

45.6779, -86.9611

Town Line Beach

10379 Townline Rd, Union Pier, MI, 49129

41.8287, -86.7041

Small city beach with no parking and walking access only. Surrounded by private residential beaches.

Town Line Beach

10379 Townline Rd, Union Pier, MI, 49129

41.8287, -86.7041

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- Small city beach with no parking and walking access only. Surrounded by private residential beaches.

Boat Ramps

- Escanaba Marina
  - 17 Water Plant Rd, Escanaba, MI
    - (906) 786-9614
- Gladstone Yacht Club
  - 723 S 10th St, Gladstone, MI 49837
    - (906) 428-4924
- Gladstone Public Boat Ramp
  - 1407 N Lake Shore Dr, Gladstone, MI 49837
- Fairport Fisher
  - 2015 II rd, Garden, MI, 49835
    - 45.6193, -86.6592
- Ford River Boat Launch
  - Unnamed street Bark River, MI 49807
    - 45.6766, -87.1411
- Rapid River Boat Ramp
  - Hubbard Ave Rapid River, MI 49878
    - 45.9148, -86.9656
- Unnamed boat Ramp
  - County Park Rd, Bark River, MI 49807
    - 45.5732, -87.2438

National Register of Historic Places

- Sand Point Light House
  - Water Plant Rd, Escanaba, MI
    - 45.744676, -87.044291
- Peninsula Point Lighthouse
  - 6833 US-2, Gladstone, MI 49837
    - 45.6675, -86.9671
- Gladstone Lighthouse
  - 45.837496, -87.018126
  -

Marinas

- Escanaba Marina
  - 17 Water Plant Rd, Escanaba, MI
    - (906) 786-9614
- Gladstone Yacht Club
  - 723 S 10th St, Gladstone, MI 49837
    - (906) 428-4924

Water Intakes – Potable

- Primary Intake (63’ deep)

	○ 45.743885, -87.03802 • Secondary Intake (30' Deep) ○ 45.7396, -87.04827 **Water Intakes – Non-Potable** • N/A
SPILL RESPONSE	
Predicted Behavior:	**Fluctuations of water level** The normal elevation of the lake surface varies irregularly from year to year. During the course of each year, the surface is subject to a consistent seasonal rise and fall, the lowest stages prevailing during the winter and the highest during the summer. The Lake conditions can vary dramatically. From 2013-2019, the Lake Levels rose nearly 6 feet. **Weather, Lake Michigan** The sea conditions are worst in October and November, when, lake-wide, wave heights of 5 to 10 feet (2 to 3 m) are encountered about 35 percent of the time. In October, south through southwest winds are most often responsible, while by November west through north winds often generate rough seas. Seas of 10 feet (3 m) or more are encountered 3 to 5 percent of the time from November through March. Extreme waves of 20 to 22 feet (6 to 7 m) have been encountered. During the spring, high seas are infrequent, but 5- to 10-foot (2 to 3 m) seas develop 15 to 30 percent of the time in the south. Summer seas climb above 10 feet (3 m) less than 1 percent of the time, while those in the 5- to 10-foot (2 to 3 m) category drop to less than 20 percent in June and July. By August, the fall buildup begins. Gales are most likely from September through April, particularly in the fall. During this season gales blow 3 to 7 percent of the time; speeds of 28 knots or more occur from 12 to 20 percent of the time. Strong winds often blow out of the west and northwest, making east shore harbor entrances dangerous. The strongest measured over-the-lake wind was out of the west-southwest at 58 knots. However, since Green Bay recorded a 70-knot southwesterly gust in May 1989, it is not unrealistic to expect a wind extreme of 70 knots or more over open waters. Spring winds can still blow strong, with winds of 28 knots or more encountered about 4 to 8 percent of the time. They do slacken from their winter fierceness, with southerlies and southwesterlies becoming more frequent and northerlies less so as summer approaches. Strong winds are infrequent in summer and mostly associated with thunderstorms. South and southwest winds prevail particularly in the north; southeasterlies are also common in the south. Northerlies are a secondary wind. Along the west shore of the lake, spring winds are variable, but the influence of the land-lake breeze is already noticeable. Morning winds often have a westerly component, while an easterly influence is evident during the afternoon. Wind strength gradually abates during spring; by May, winds of 28 knots or more are encountered less than 1 percent of the time. Except for occasional thunderstorm gusts, summer winds rarely exceed 28 knots through September. Morning breezes are generally out of the south through west. During the day, they strengthen slightly and blow out of the northeast through southeast; southwest and west winds are also common during the afternoon, when the prevailing circulation interferes with the lake-breeze effect. With autumn comes an increase in strength and less diurnal variability. By November, winds of 28 knots or more are encountered about 1 percent of the time. Fall winds blow mainly out of the south through northwest, with southwest and west winds the most frequent. During winter, westerlies and northwesterlies are common, but unseemingly, winds of 28 knots or more are no more frequent than in fall. While thunderstorms can occur at any time, they are most likely from May through September. During this period, thunder is heard on an average of 4 to 8 days per month at locations along the shore and 1 to 3 percent of the time over open water. Activity is a little more frequent in the south than the north. Over open water, July and August are the peak months, while June and July are more active along the shore. During the summer, a cool dome of air, the result of the lake breeze, often blocks thunderstorms and squall lines

	during the day. This results in a nighttime peak in activity. However, a severe squall line may break through this block, or due to a strong prevailing circulation, the block may not exist. In spring, when there is often a clash between cold and warm air, thunderstorms and squall lines can be violent. On occasion they may trigger tornadoes or even waterspouts. This area lies at the northeast edge of the nation's maximum frequency belt for tornadoes. Although rare, tornadoes are most likely from April through June. Poor visibilities, caused by fog, rain, snow and pollution, may occur in any season. Fog is the principal cause of visibilities less than 0.5 statute mile (0.4 nm). It is most likely in the spring and early summer over open water (advection fog) and from late fall through spring along the shore (radiation fog). In open waters, from March in the south and April in the north through June, warm moist air riding winds with a southerly component blowing at 5 to 20 knots reduces visibilities to less than 0.5 statute mile (0.4 nm) from 5 to 10 percent of the time. These fogs are most likely during the morning and early afternoon and when the air is 5° to 15°F (3° to 8°C) warmer than the water. May and June are the most likely months. The shores of Lake Michigan are subject to varying amounts of fog. Upwelling along the northwest shores increases the possibility of advection fog in spring and summer; in fact, the west shore waters in general are 5 to 10°F (3° to 6°C) cooler than the east shore waters. North of Chicago, visibilities drop to less than 0.5 statute mile (0.4 nm) on about 25 to 35 days annually. In the Chicago area, smoke and haze frequently reduce visibility to the 3- to 6-mile (2.6 to 5.2 nm) range, but dense fog is less common than it is to the north. It is most likely from fall through late spring with a minimum in July. Along the Michigan shore, the indication from the few locations with fog observations is that frequencies are similar to those along the Wisconsin shore. In comparing Muskegon to Milwaukee, both exhibit a morning maximum from April through October, early morning in the summer and around sunrise in other seasons. The most fog-free times occur during the afternoon in spring and late morning through evening in summer. Milwaukee is more fog prone in spring, but less in summer and fall. Overall, Muskegon averages 5 fewer days annually with visibilities less than 0.5 statute mile (0.4 nm). **Ice** Shores exposed to the full force of the wind often have large ice fields of very heavy brash extending 1 to 2 miles offshore. In addition, a circular current pattern in the south part of the lake distributes drifting floes along the shore. Even during a mild winter, these floes can build out 10 to 15 miles into the lake. A mild winter on Lake Michigan means about 10-percent coverage compared to an average 40-percent coverage and an 80-percent coverage during a severe winter. Maximum ice coverage occurs by mid-March, on the average, while decay begins a week or two later. By mid-April, ships are once again transiting the Straits of Mackinac.
Response Considerations:	**Most likely product to discharge/release** Asphalt is shipped in and out of Gladstone and is the most likely product to discharge in addition to Oil, Diesel, Gasoline and other petroleum based products. **Water Depths** **-Peninsula Point Shoal**, a rocky ledge with depths of 1 to 6 feet, extends 1.1 miles south from the point. Depths less than 18 feet extend 1 mile farther south, and detached shoals reach about 8 miles south of Peninsula Point.. Depths less than 18 feet extend 1 mile farther south, and detached shoals reach about 8 miles south of Peninsula Point." **-Sand Point** – marked by a private light, extends east from shore at the city. The harbor has depths of 28 to 40 feet within 0.4 mile of shore and affords access for the largest vessels on the lakes. **Escanaba River** flows into the harbor 2.5 miles northwest of Sand Point.

-Big Bay de Noc Shoal extends 6.6 miles south into the center of Big Bay de Noc. The bank has depths of 3 to 7 feet at the south end and is marked at the south end by a buoy.
-Garden Bay, on the south side of Ansels Point, has available depths of 8 to 12 feet and affords anchorage with protection from all but southwest to northwest winds.
-Little Summer Island: There are numerous rocks awash in this area. Depths over the flat are 1 to 3 feet between the islands and 5 feet between the islands and the mainland except for a narrow 6-foot channel that closely follows the shore. This channel is obstructed by a 1-foot spot marked on the northwest side by a buoy. Shoals extend 1 mile west from Little Summer Island

Ice
Little and Big Bay De Noc's can experience icing conditions as early as October 1st and as late as May. Typical icing conditions occur early December till early April. There is no ice breaking operations in and around Little and Big Bay De Nocs. Ice fishing occurs throughout the bays and is one of the top tourism industries in the area.

Vessel Traffic
Small vessel traffic increases greatly during summer months. Barges and Tugs will regularly move in and out of Gladstone, MI. Vessel traffic occurs very close to the secondary water intake. Discharges occurring in the marina could create difficulties with Secondary intake

Water Intakes
The primary and secondary intake are near shore. Awareness to protecting both should be of a high priority.

Socio-Economic Impacts
Escanaba hosts a very large 4th of July event
Traffic: The road running along the lakes border would result in an impact to the traffic in and out of town as this is the primary road. Escanaba hosts events at the State Fair Grounds. If there is an event, it could impact their tourism event.

Staging locations and important response considerations
-The C. Reiss Coal Co., Dock No. 2: 1 mile west-north-west of Escanaba Light; 1,900-foot face; 21 to 24 feet alongside; deck height, 7 feet:
-Chicago and North Western Railway, Ore Dock No. 6: 1.7 miles northwest of Escanaba Light: 1,979-foot north and south faces; 28 to 31 feet alongside south face, 28 to 32 feet alongside north face; deck height, 2 feet at pilings increasing to 8 feet at top of dock fill; open storage for 2 million tons of material
-The C. Reiss Coal Co., Escanaba Dock No.1: 2.1 miles northwest of Escanaba Light, 1,050-foot face; 21 to 27 feet alongside; deck height, 5 feet
-**Defense Fuel Supply Center, Escanaba Terminal Dock:** 1 mile north of the mouth of Escanaba River; offshore wharf, 435 feet of berthing space with dolphins; 28 feet alongside the face; deck height, 9 feet
-Nahma, MI, is a small village on the shore west of Stony Point and at the mouth of **Sturgeon River.** It contains the mills and docks of the American Playground Device Co. Three dilapidated docks extend about 450 feet into the bay, and east therefrom are the ruins of four other docks. There is a reported depth of about 12 feet between the docks, but they should be approached with extreme caution

COMMENTS

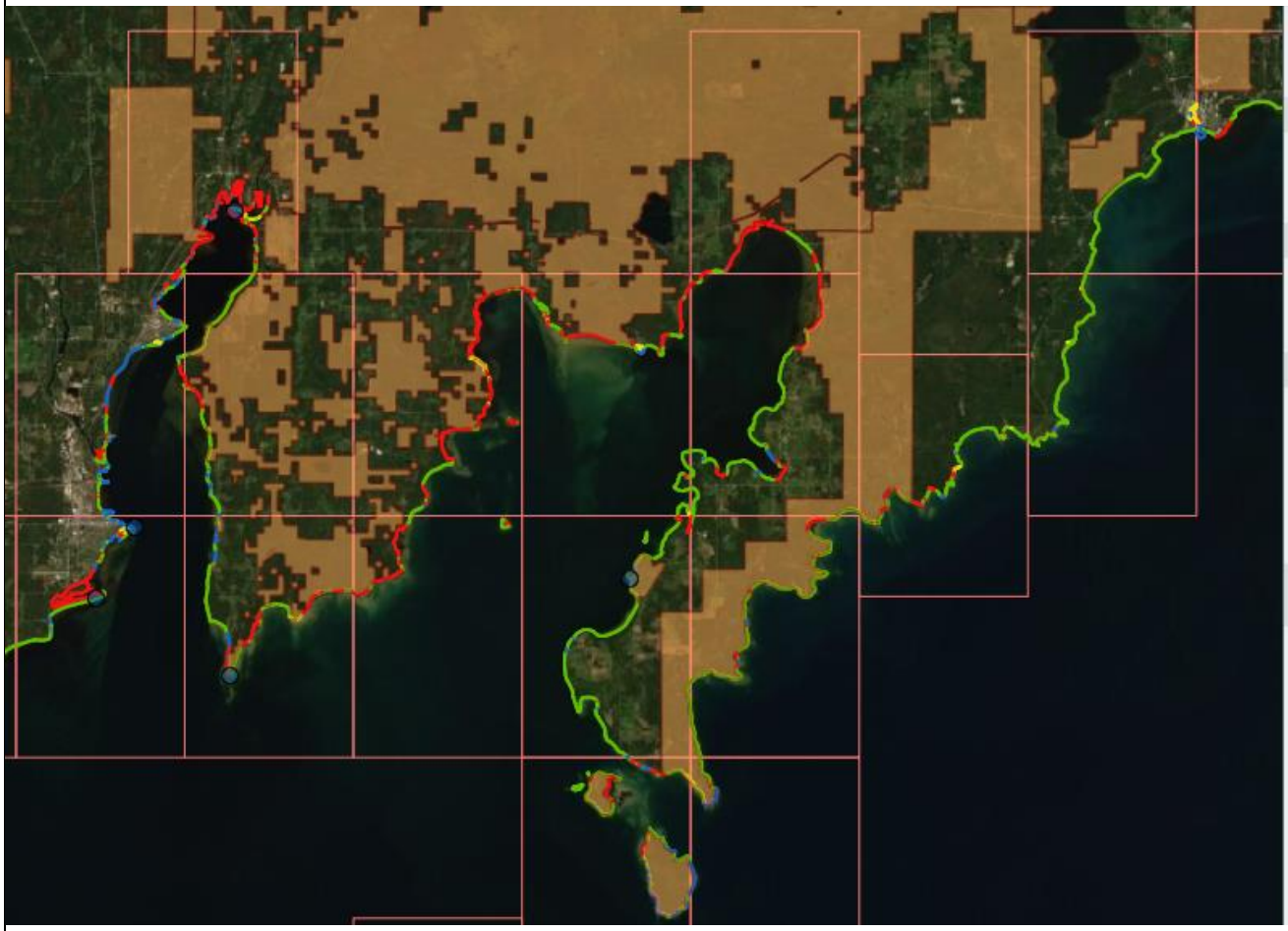
- Sheriff has local jurisdiction over waterways.
- Sheriff has only one boat for response.
- Local Fire Departments do not have the ability to respond to a spill nor do they have water response capabilities.
- City of Escanaba utilizes two unique systems to that region.
    - PEAS (Pollution Emergency Alerting System)- the system notifies relevant parties and activates proper resources which includes alerting the National Response Center.
    - My SIMS- A system that opens up a state Emergency Operations Center (EOC) on a VOIP line, similar to the DADSAFE call on a federal level.
- All parks in the city are owned by the city with no State Owned parks.
- Response time for Coast Guard Pollution Responders is approximately five hours from Sturgeon Bay, WI to Escanaba.
- Treaties have affirmed local tribal rights to own land and have hunting and fishing rights in the waters of Little and Big Bay De Noc.
- Michigan has 10 official tribes; Two tribes are located in the area of concern: Potawatomi and the Chippewa.
- The distance a crossed Little Bay de Noc is estimated to be approximately three miles.
- ESI 1,2, an 3 is comprised mostly of residential coastal properties with few businesses. Launch access is extremely limited.

AMPLIFIED INFORMATION ABOUT PRIORITY SITES

Ford River 45.6775, -87.1429

- Strategy: Exclusion
- Length
- Description:

GRS Maps
Print Function in ERMA



My Map Data

Priority Table 2020.csv

My Map Data

ISA Managed Natural Resource Areas, MI

ISA Managed Natural Resource Areas, MI

ISA Managed Resource Areas

ISA Shoreline Sensitivity (ESI), MI

ISA Shoreline Sensitivity (ESI), MI

None
Low
Medium
High

National Wetlands Inventory (USFWS) (NWI)(Zoo Dependent)

National Wetlands Inventory (USFWS) (NWI)(Zoom Dependent)

Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Freshwater Emergent Wetland
Freshwater Forested/Shrub Wetland
Freshwater Pond
Lake
Other
Riverine