Great Lakes

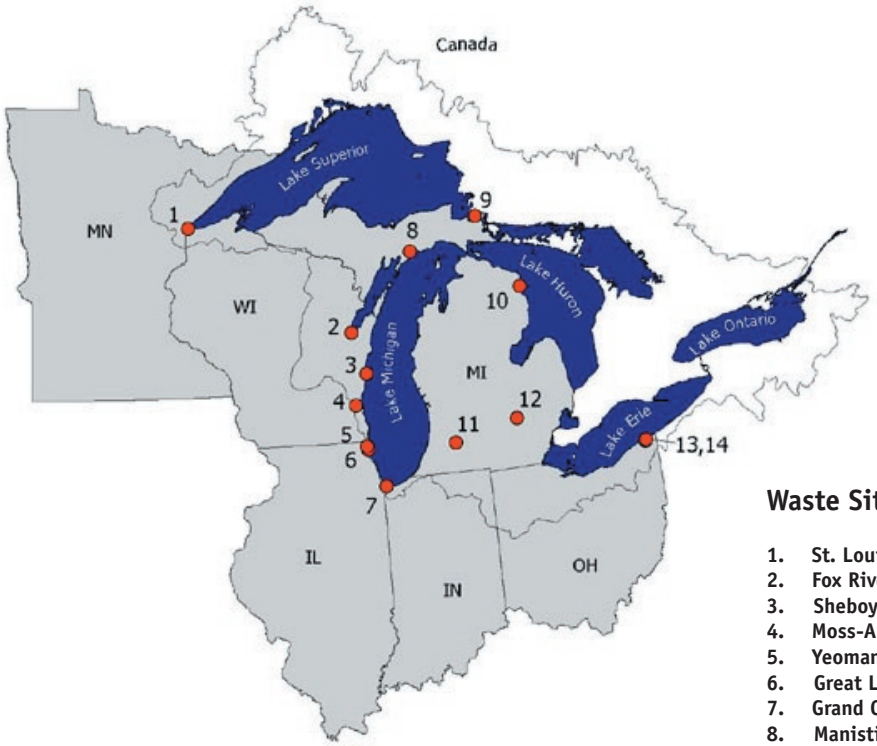
NOAA Works to Improve the Great Lakes Coastal Areas

National Oceanic and Atmospheric Administration (NOAA) acts for the Secretary of Commerce as a federal trustee under the Superfund Act to protect and restore natural resources in coastal and marine areas. NOAA trust resources in Great Lakes include salmon and steelhead, cutthroat and brown trout, alewife, rainbow smelt, lake sturgeon, American eel, white perch, lake trout, and mussels. Also of concern to NOAA are beluga whales and other marine mammals in the Saint Lawrence Estuary, the receiving waters of the Great Lakes. NOAA's stewardship also safeguards our nation's waterways and coastal activities, ranging from safe navigation and marine transportation to recreational activities along navigable waters.

Cleaning up and Restoring Sites in the Great Lakes Region

The Office of Response and Restoration's Coastal Protection and Restoration Division (OR&R/CPRD) partners with other agencies and responsible parties to ensure that waste site cleanups not only reduce risk but also restore natural resources and improve the quality of the environment. NOAA Coastal Resource Coordinators (CRCs) get involved early in site cleanups to:

- ensure that ecological assessments and the entire cleanup process evaluate and mitigate any risk to sensitive species and habitats;
- incorporate environmental restoration into cleanup actions;
- monitor the successful recovery of trust resources and habitats; and
- reduce the need for expensive re-evaluations.



Our goal: healthy, productive coastal ecosystems, fisheries, and marine mammals in the U.S.

Waste Sites

1. St. Louis River/Interlake
2. Fox River NRDA/PCB Releases
3. Sheboygan Harbor & River
4. Moss-American (Kerr-McGee Oil Co.)
5. Yeoman Creek Landfill
6. Great Lakes Naval Training Center
7. Grand Calumet/IHC Area of Concern
8. Manistique River/Harbor, Area of Concern
9. Cannelton Industries
10. Thunder Bay
11. Allied Paper/Portage Creek/Kalamazoo River
12. Shiawassee River
13. Ashtabula River
14. Fields Brook

Protecting and Restoring Coastal and Marine Resources

NOAA's Coastal Protection and Restoration Division (CPRD) protects and restores natural resources in marine and coastal environments that are affected by hazardous waste sites. NOAA Coastal Resource Coordinators (CRCs) work with the U.S. Environmental Protection Agency (EPA), the Great Lakes States, and other trustee agencies to identify risks to natural resources, recommend site cleanups that protect habitat and wildlife, and design projects to restore injured resources and habitats.

Because CRCs help make site-cleanup and restoration decisions in coastal regions, everyone saves time and money by avoiding litigation and duplication of effort. Responsible parties benefit from an early resolution of liability for damage to natural resources. Best of all, we can address environmental threats sooner, increasing the chances for effective protection, recovery, and restoration of coastal and marine resources and their habitats.

Priority Areas in the Great Lakes Region

Several areas are priorities for NOAA as they provide significant nursery, spawning, adult forage, refuge, and/or migration habitat for a variety of fish species. Many of these areas are also significant loading sources of persistent and bioacumulative contaminants to the Great Lakes. Except as noted, all of the sites listed below have been designated by the Great Lakes International Joint Commission as Areas of Concern and have been designated or proposed by EPA as Superfund sites. The priority areas for NOAA in the Region 5 Great Lakes states include:

St. Louis River/Interlake, Duluth, Minnesota, located along the St. Louis River, discharges into Lake Superior. Polynuclear aromatic hydrocarbons (PAHs), the principal contaminant of concern, were by-products of coal coking and crude tar distillation and were discharged into Stryker Bay and two commercial boat slips from the early 1900s until the 1960s. The site and adjacent areas include important nursery, forage, and adult refuge habitat for lake sturgeon and other fishery resources. The St. Louis River is the site of a long-term, lake sturgeon restoration project initiated by the states of Minnesota and Wisconsin. NOAA has provided extensive technical assistance to the site by developing a spatial data analysis and mapping project. The CRC program is helping to develop site cleanup goals necessary to developing and evaluating remedial cleanup alternatives for sediments. Partners: the CRC program is working toward a comprehensive cleanup and restoration with the State of Minnesota, U.S. Department of the Interior (DOI)/ U.S. Fish and Wildlife Service and Bureau of Indian Affairs, the Fond du Lac, Bois Forte, and Grand Portage Bands of Lake Superior Chippewa**,** and responsible parties.

Cannelton Industries, Sault Sainte Marie, Michigan, located along the St. Mary's River has contaminated river sediments with metals from previous tannery operations. NOAA has provided extensive technical assistance to the project by designing and developing a long-term biological monitoring program to verify the effectiveness of site cleanup actions. NOAA also conducted the baseline-monitoring event in a collaborative effort, designed to transfer specific monitoring technology to Cannelton and the State, enabling Cannelton to conduct future monitoring. Partners: the CRC program is working with EPA, the State of Michigan and responsible parties to ensure that remedial actions are protective of fishery resources and the aquatic environment.

Sheboygan River and Harbor, Wisconsin was contaminated by polychlorinated biphenyls (PCBs) released by the Tecumseh Die Cast plant in Sheboygan Falls. EPA designated the lower fourteen miles of river as a Superfund site. The site contributes approximately three percent (21 lbs/yr) of PCB loading to Lake Michigan. The Sheboygan River supports a wide variety of fishery resources, including anadromous fish. Although the river is considered a prime recreational fishery, the State of Wisconsin advises against eating most species taken from the river and advises limited consumption for fish taken from Lake Michigan. The area also provides recreational beach and boating activities including access to Lake Michigan. The CRC program designed and conducted an aquatic ecological risk assessment for the site. NOAA helped EPA to develop site cleanup goals based on both ecological and human health risk and has been crucial in developing and evaluating remedial cleanup alternatives for river sediments and floodplain soils. NOAA is promoting safe navigation as part of the final remedy by ensuring that the navigation channel will be dredged to remove the imminent and substantial threat to the environment and human health posed by PCBs. Partners: the CRC program is working toward a comprehensive cleanup and restoration with the State of Wisconsin, DOI/ USFWS, EPA, and responsible parties.

Moss-American, **Milwaukee, Wisconsin**, contaminated the Little Menomonee River sediments with PAHs, discharged from previous wood-treating operations. Five miles of the Little Menomonee River, a tributary to the Milwaukee Estuary (an IJC designated Area Of Concern), is included in the EPA designated Superfund site. The CRC program is helping develop a revised remedy that will provide a significantly greater degree of environmental protection. NOAA proposed an innovative remedial approach, including applying EPA's "contained-in" policy, allowing on-site treatment of contaminated soils and enabling a greater scope of river cleanup and restoration. Partners: NOAA continues to work with EPA, the State of Wisconsin, DOI/USFWS, and responsible parties to develop innovative approaches to achieving a comprehensive cleanup and restoration.

Fox River/Green Bay, **Wisconsin,** has elevated PCB concentrations released to the river by several paper companies' carbonless copy paper operations. EPA proposed designating the lower 39 miles of the river as a Superfund site. The Fox River is the major source of PCB loading to Green Bay, contributing sixty-two percent (440 to 600 lbs/yr) of the overall PCB tributary loading to Lake Michigan. It is estimated that 160,000 pounds of PCBs have already been transported via the Lower Fox River into Green Bay. Both the river and Green Bay provide diverse habitats for a wide variety of fishery resources and opportunity for recreational boating and fishing. Water and sediments are so contaminated with PCBs that the State advises limited or no consumption of fish caught in Fox River or Green Bay. Elevated levels of PCBs cause reproductive toxicity in fish and avian species, for example, embryo deformity and lethality. The CRC program helped to establish a coordinated, cooperative effort to clean up and restore the Fox River. Partners: EPA, Wisconsin Department of Natural Resources, DOI/U.S.FWS, Menomonee Tribe, Oneida Tribe.

Kalamazoo River, Michigan, is contaminated with elevated PCB concentrations released to the river by several paper companies' carbonless copy paper operations. Portage Creek in the city of Kalamazoo and eighty miles of the Kalamazoo River downstream to Lake Michigan are contaminated. The site contributes approximately twelve percent (84 lbs/yr) of PCB loading to Lake

Michigan. Although the Kalamazoo River is a prime recreational fishery, PCB contamination has compelled the State to advise against eating most species of fish taken from the river. The CRC program has helped develop an ecological risk assessment and a long-term biomonitoring program for the river, and is helping the State to develop a site database and GIS mapping project. The long-term monitoring program will provide data to evaluate trends in PCB uptake and will establish a baseline for comparison with future remedy effectiveness monitoring. The site database will allow seamless data transfer with the EPA's National Sediment Inventory and will provide the public with ready access to site data in an easy to use format. NOAA is also assisting fellow natural resource trustee agencies in assessing natural resource damages at the site. Partners: the CRC program has coordinated with the State of Michigan, EPA, and DOI/ U.S.FWS to ensure that resources throughout the system are protected and restored.

Fields Brook/Ashtabula River and Harbor, Ohio, and Lake Erie sediments are contaminated with PCBs and other persistent compounds. Fields Brook is a Superfund site. The lower two miles of Ashtabula River and Harbor, including the confluence with Fields Brook and the nearshore areas of Lake Erie, have been designated an IJC Area of Concern. The Ashtabula River and Harbor site is being addressed through a public/private partnership that includes regulatory and trustee agencies, municipalities, parties responsible for the contamination, and local businesses. Though the site's diverse habitats are used by a wide variety of fishery resources, the State has advised against eating fish from these waters. The area is utilized for boating and recreational fishing and provides access to Lake Erie. NOAA is promoting safe navigation through unimpeded maintenance dredging in the river and harbor as part of the site restoration. Through EPA, NOAA has helped the Partnership evaluate and develop cleanup alternatives for the Ashtabula River and Harbor site. NOAA helped EPA and other natural resource agencies to evaluate and develop cleanup alternatives, prepare the proposed remedy for the Floodplains/Wetland area, and negotiate a comprehensive settlement with response parties for site cleanup and restoration of trust resources at the Fields Brook site. Partners and responsible parties: EPA, State of Ohio, DOI/USFWS.

Grand Calumet River/Indiana Harbor and Canal, Indiana, sediments are contaminated with PAHs, PCBs, metals, and oil. This site is a complex group of Superfund, Resource Conservation and Recovery Act, and Water Quality sites that has been designated as an Area of Concern. The site contributes approximately twelve percent (88 lbs/yr) of PCB loading to Lake Michigan. The site is severely degraded due to the extensive contamination, which has resulted in the State of Indiana advising anglers against eating most fish taken from these waters. The site provides a diversity of habitat and is used by a variety of fishery resources. NOAA is promoting safe navigation through unimpeded maintenance dredging in the harbor and canal as part of the site restoration. Partners and responsible parties: the CRC program has coordinated with the State of Indiana, DOI/ USFWS, and EPA to ensure that resources throughout the system are protected and restored.

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