



A cleanup plan for Lake Superior's headwaters

An ambitious plan outlines the work needed to restore water quality in the St. Louis River estuary and Duluth/Superior harbor by 2020.

Why it matters

For the first time, strategic partnerships and dedicated federal funding are lined up to make restoration possible for the headwaters of Lake Superior — the St. Louis River estuary and Duluth/Superior harbor. As part of the multi-state/federal/private effort to clean up the Great Lakes, the MPCA is seeking a state match of \$25.4 million in bonding to obtain \$47.2 million in federal funds to remove polluted riverbed sediment and industrial waste from the St. Louis River estuary. State funding at this time is crucial, due to the limited-time availability of a 65% federal cost share match. Minnesota is competing with other Great Lakes states for the federal match funds, which are available on a first-come, first-served basis.

The work being proposed

The St. Louis River estuary is the second largest of 43 locations around the Great Lakes that the International Joint Commission identified for cleanup. Due to decades of uncontrolled pollution before modern pollution laws went into effect, riverbed sediments are contaminated with mercury, dioxins, polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), and other toxins. These pollutants have settled out into sediments at the bottom of the St. Louis River estuary and continue to threaten public health, contaminate fish and wildlife, and make waterfronts unusable in Duluth and other coastal communities along Lake Superior. Federal funds now available will accelerate cleanup efforts and will help communities fulfill the promise of economic revitalization, increased property values, and improved quality of life.

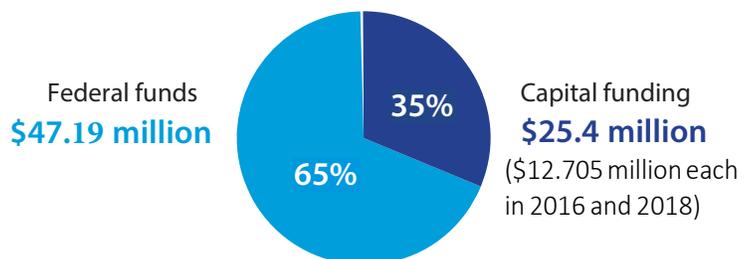
Minnesota's cleanup plan is now ready, thanks to years of collaborative work by dozens of partner organizations from local, state, tribal, and federal units of government, nongovernmental groups, businesses, research institutions, and community groups. The plan outlines the work needed to restore the water quality and natural resources of the St. Louis River estuary by 2020.

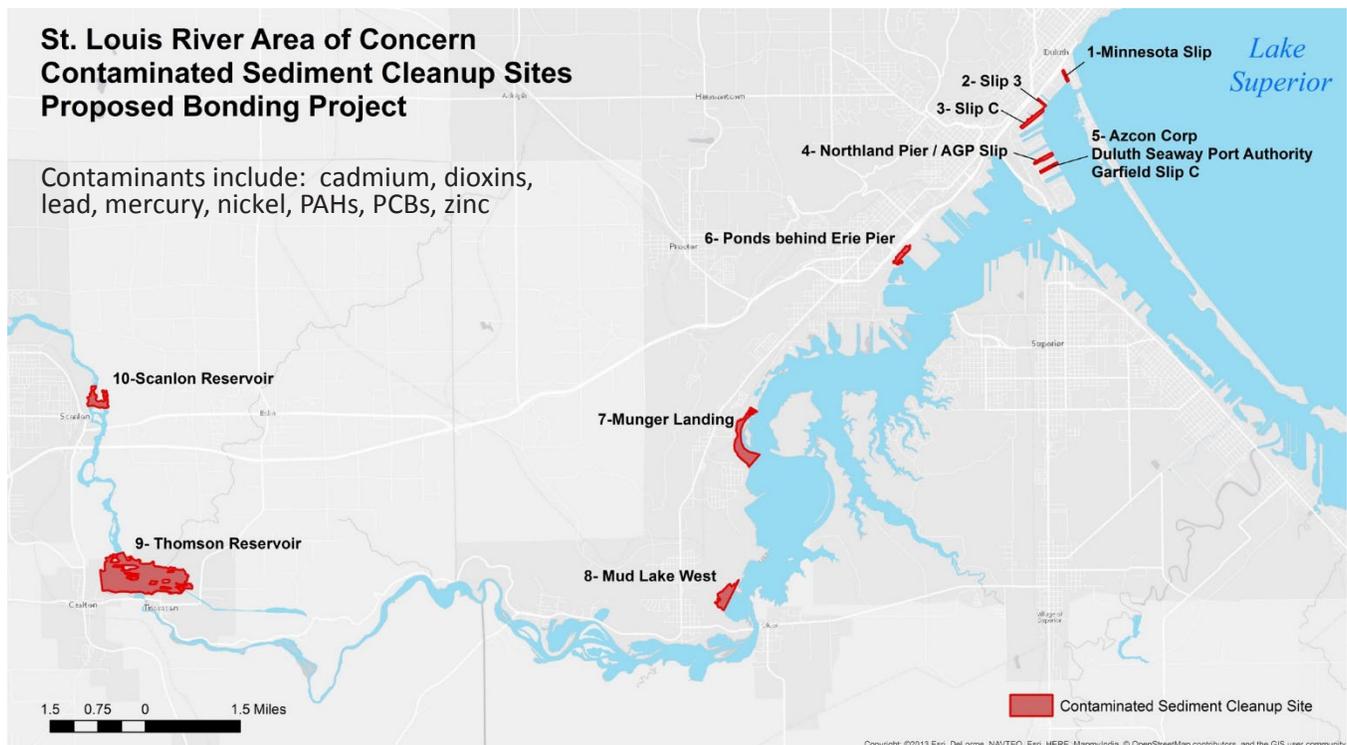
In addition, Minnesota has secured a partnership with the U.S. Army Corps of Engineers to provide technical, planning, and engineering assistance to Minnesota in implementing this plan. The Corps and other cooperating partners are coordinated to accelerate Minnesota's restoration work. Wisconsin has already adopted a capital budget approach to address cleanup needs. Michigan has created a \$25 million bonding program for cleanup of their contaminated Great Lakes sites.

Requested and matching funds

State-sourced funding will trigger federal match from the following federal programs:

- EPA Great Lakes Legacy Program
- EPA's Great Lakes Restoration Initiative
- U.S. Army Corps of Engineers Continuing Authority Program





Cleanup sites

Bonding dollars are proposed for clean up (both design and actual cleanup activities) of the contaminated sites listed on the map starting in FY2017. Contaminants at all sites shown exist at concentrations of concern.

1. **Minnesota Slip:** A 4-acre former industrial slip, out of use for several decades due to an estimated 38,000 cubic yards of contaminated sediment (lead, mercury, zinc, metals, PAHs, and more) in layers up to 12 feet thick.
2. **Slip 3:** A 2.75-acre commercial slip, out of use due to contaminated sediment layers greater than five-feet thick that contain lead, zinc, and mercury.
3. **Slip C:** A 13-acre industrial slip used only for docking large cargo ships due to lead and PAHs contamination and even higher levels of mercury and zinc in the sediment.
4. **Northland Pier/AGP Slip:** A nine-acre industrial slip used only for docking large cargo ships due to scattered contamination of PAHs, lead, and cadmium.
5. **Azcon Corp/Duluth Seaway Port Authority Garfield Slip C:** A 6.4-acre slip used for docking ships, with an operating scrap yard to the north. Contamination includes PAHs, lead, zinc, and dioxins, concentrated mainly in the back third of the slip and along the northern dock wall.
6. **Ponds behind Erie Pier:** About 20 backwater ponds, separated from the main harbor by manmade railroad grade. Contains PCBs, mercury, lead, PAHs, chromium, cadmium, zinc, and nickel about 7 feet thick and mixed with layers of wood waste.
7. **Munger Landing:** A 77-acre prime habitat site that includes a cut-off river channel located next to the Smithville and Morgan Park neighborhoods of West Duluth. Widespread contamination of sediment including PAHs, lead, nickel, zinc, PCBs, and dioxins.
8. **Mud Lake West:** A 42-acre shallow bay and wetland complex, adjacent to the U.S. Steel Superfund Site. Across-the-board presence of dioxin. A large embankment of waste (mainly slag) is piled along the western shore of the bay.

9. **Thomson Reservoir:** A 400-acre reservoir impounded behind a Minnesota Power dam and hydro-electric generating plant. Testing in 2014 showed high levels of dioxin and furans.

10. **Scanlon Reservoir:** A 25-acre reservoir impounded behind a Minnesota Power dam and hydro-electric generating plant. 2014 testing showed high levels of dioxin and furans.

History and timeline

In 1987, this proposed bonding site was designated the St. Louis River Area of Concern. It includes the Twin Ports and the Nemadji River Watershed, and it stretches 39 miles up the St. Louis River to the Fond du Lac Reservation and 10 miles up the Lake Superior North Shore. In July 2013, the U.S. EPA approved and adopted a remedial action plan for the St. Louis River AOC/Estuary and harbor. Forty-plus partner organizations created the plan, under which the major cleanup actions will be completed by 2020.

The positive impact of cleanup



Economic benefits

The direct economic benefits of restoring the Great Lakes total at least \$50 billion. Restoration will:

- Lead to direct economic benefits of \$6.5 billion to \$11.8 billion from tourism, fishing, and recreation
- Directly raise coastal property values \$12 billion to \$19 billion by remediating “toxic hot spots”
- Reduce costs to municipalities by \$50 million to \$125 million
- Yield a \$2–\$3 return for every \$1 spent
- Make the region more attractive to business and workers

From the Brookings Institution, “Healthy Waters, Strong Economy: The Benefits of Restoring the Great Lakes Ecosystem,” September 2007

For more information

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Partner organizations

1854 Treaty Authority

AMI Consultants

Audubon Minnesota

Barr Engineering

City of Duluth

City of Superior

Douglas County, Wisconsin

Duluth Port Authority

Duluth-Superior Metropolitan Interstate Council

Fond du Lac Band of Lake Superior Chippewa

Harbor Technical Advisory Committee

Izaak Walton League

Lake Superior NERR-NOAA

LimnoTech

Marine Tech

Minnesota Department of Health

Minnesota Department of Natural Resources

Minnesota Land Trust

Minnesota Pollution Control Agency

Minnesota Sea Grant

Morgan Park Community Club

National Oceanic and Atmospheric Administration

NRRI-UMD Center for Water and the Environment

Save Lake Superior Association

SEH Inc.

St. Louis River Alliance

St. Louis River Habitat Workgroup

Surge Communication

United States Steel Company

University of Wisconsin-Superior

US Army Corps of Engineers

US Department of Agriculture

US EPA Great Lakes National Program Office

US EPA Mid-Continent Ecology Division

US Fish and Wildlife Service

USDA – Natural Resource Conservation Service

UWS-Lake Superior Research Institute

Western Lake Superior Sanitary District

Western Wisconsin Land Trust

Wisconsin Department of Natural Resources

Wisconsin SeaGrant