Lake Superior & St Louis River: Water Issues, Concerns and Progress

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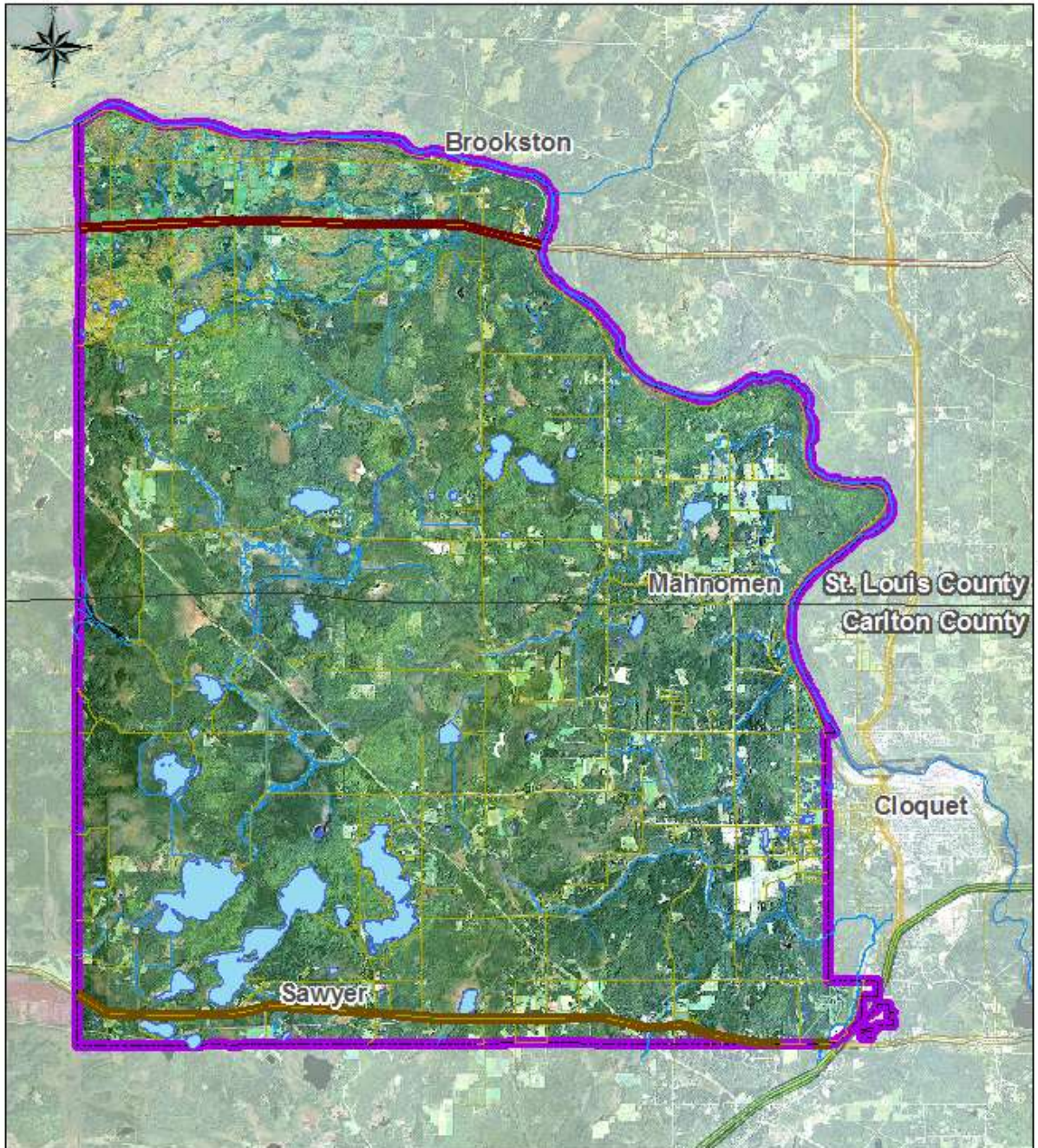
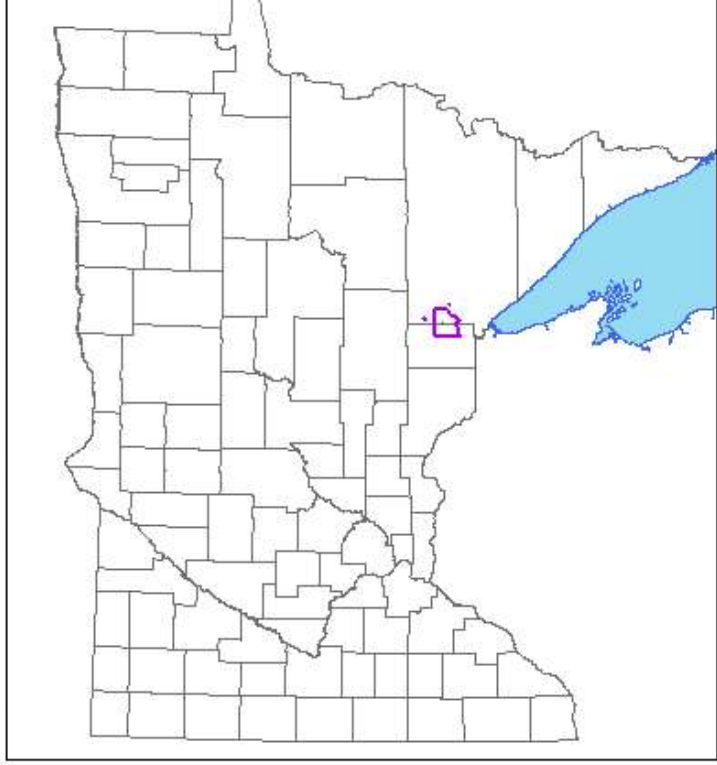
Fond du Lac Band of Lake Superior Chippewa

Presentation to Legislative Committee on Water Resources, July 9, 2021

Fond du Lac Resource Management

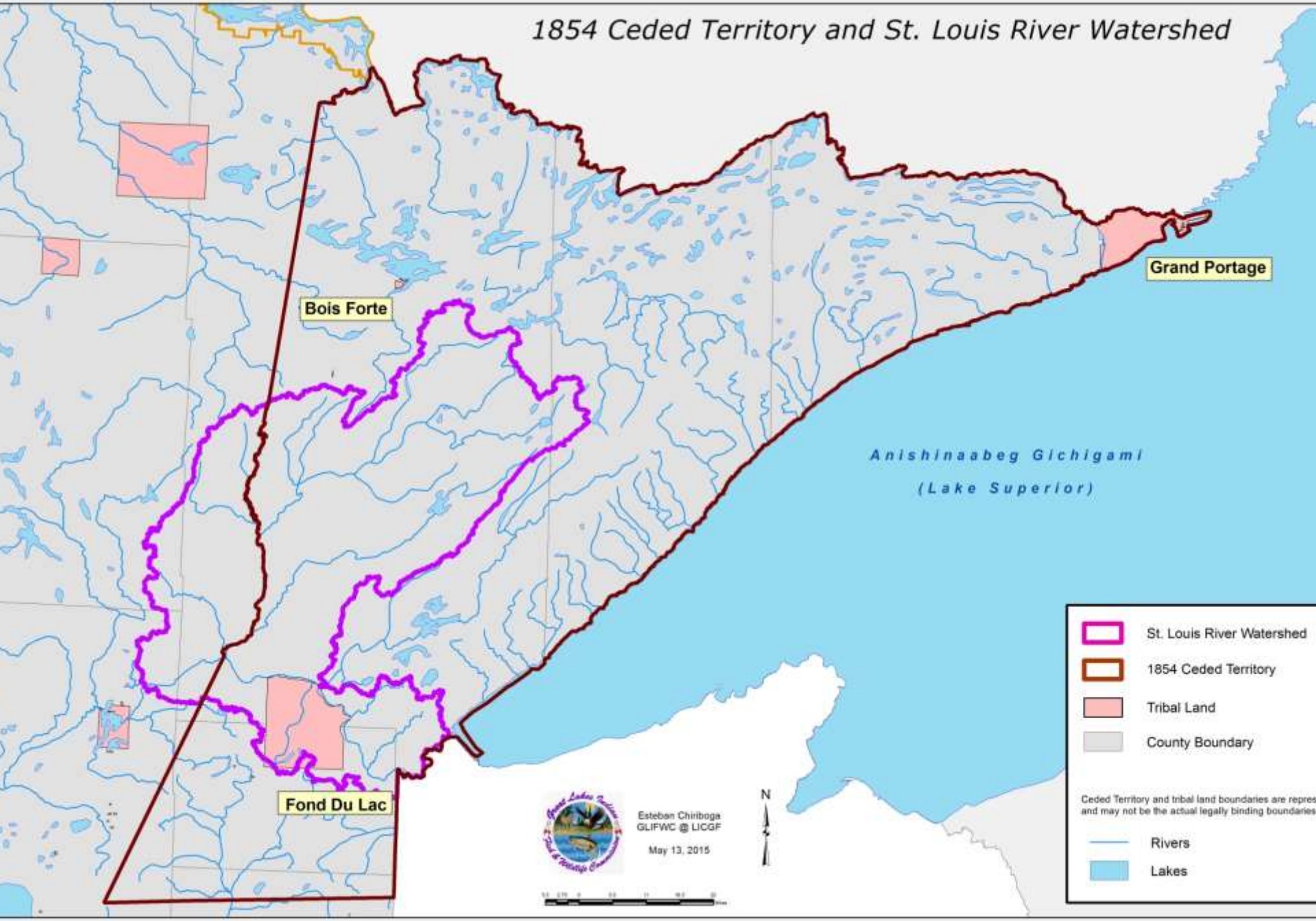
Fond du Lac Reservation Location





Major_rivers
Fond du Lac Boundary
US Hwy 2
State Hwy 210
State Hwy 33
Interstate 35
Lakes
Rivers and Streams

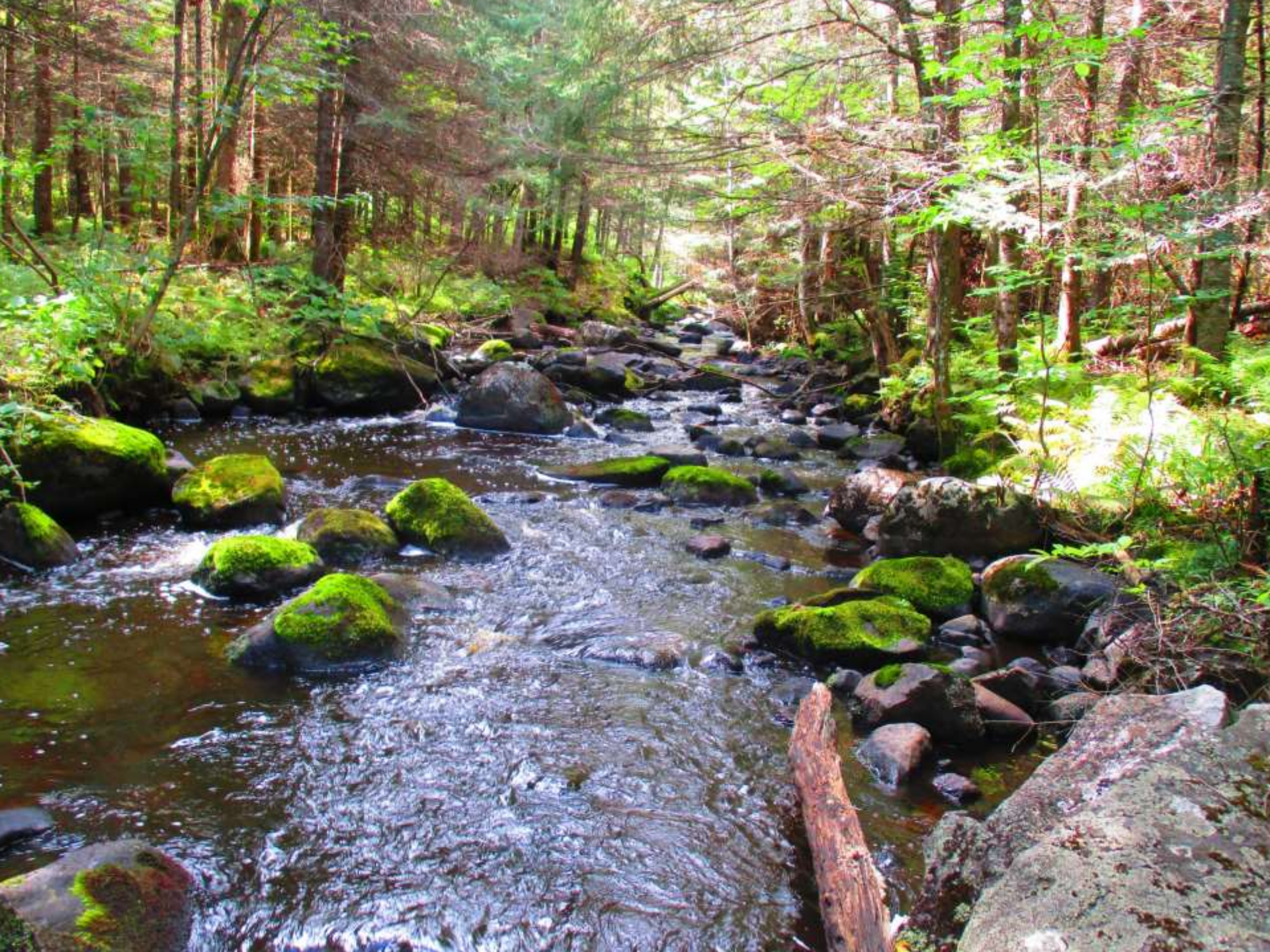
0 1 2 4 6 8
Miles

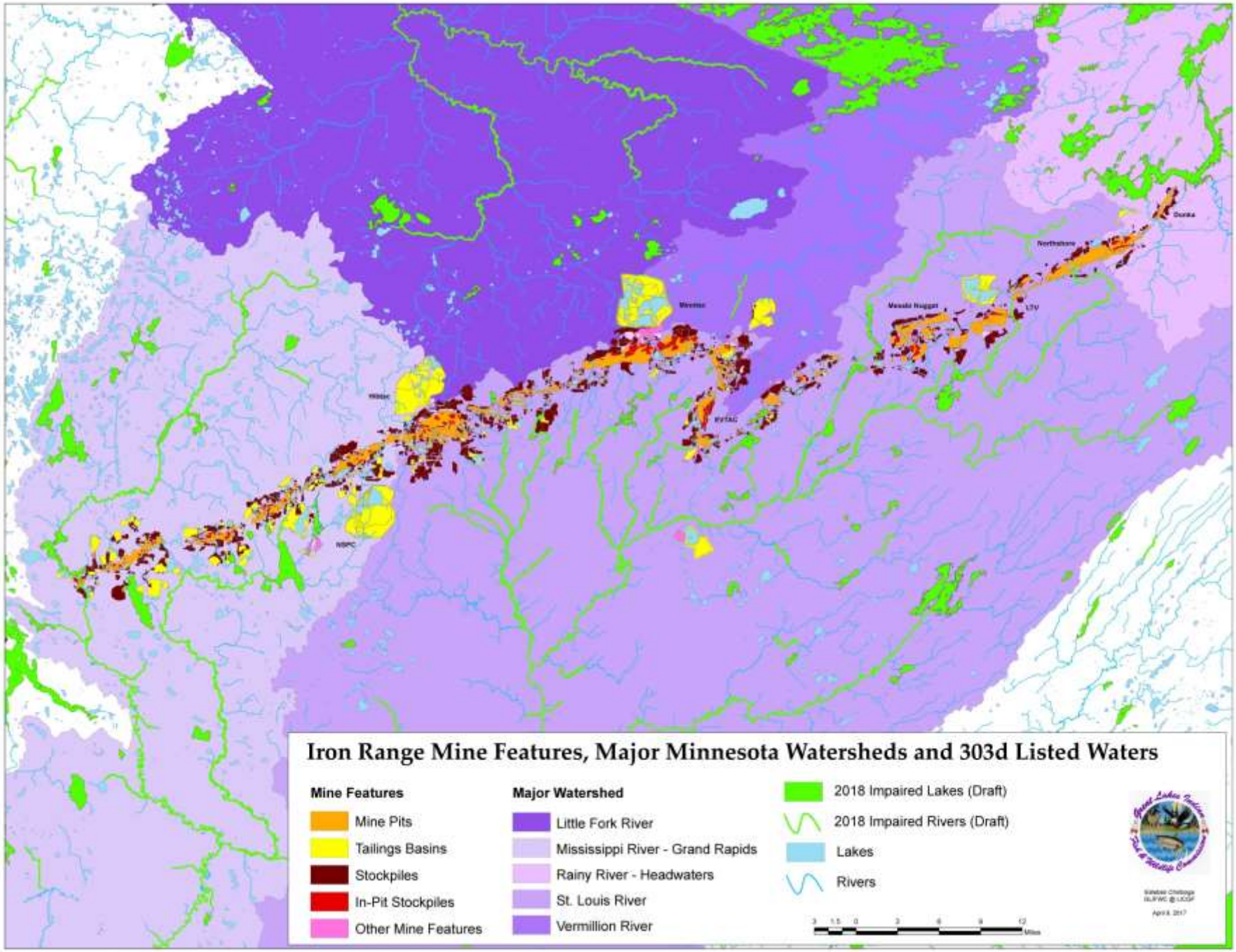

1854 Ceded Territory and St. Louis River Watershed
Bois Forte
Grand Portage
Fond Du Lac
Anishinaabeg Gichigami
(Lake Superior)
St. Louis River Watershed
1854 Ceded Territory
Tribal Land
County Boundary
Rivers
Lakes
N
Esteban Chiriboga
GLIFWC @ LICGF
May 13, 2015

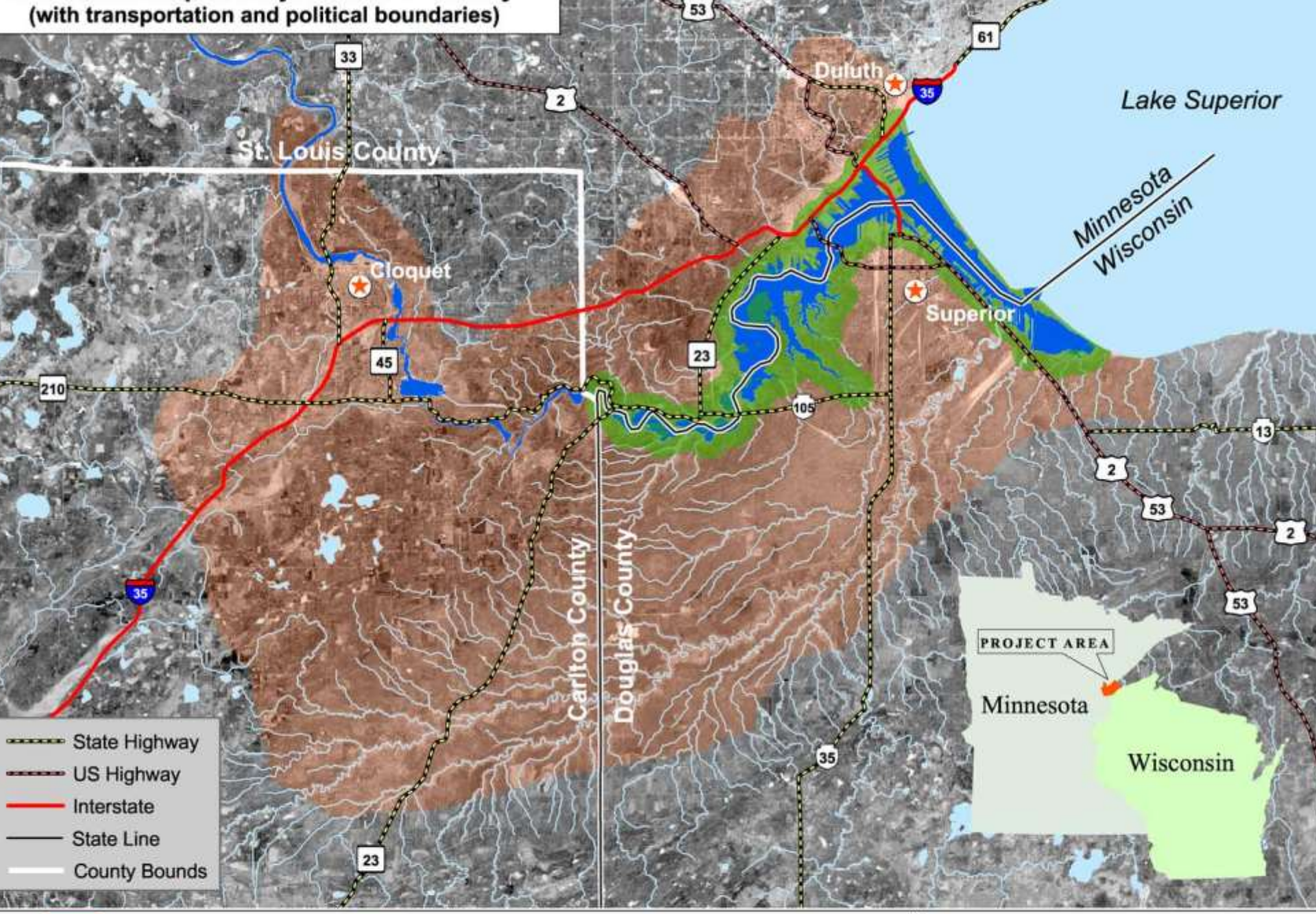
Water Quality Standards

--Clean Water Act §303(c)

- RBC adopted in 1998; EPA approved in 2001; latest updates approved in 2020
- Tribal-specific ***designated uses***, including cultural and aesthetic
- Protect ecosystems, human health in the context of a subsistence lifestyle (***criteria – numeric and narrative***)
- "Outstanding Reservation Resource Waters", "Exceptional Resource Waters" (***antidegradation***)
- Exercise sovereignty (jurisdiction over all waters of the Reservation)




Iron Range Mine Features, Major Minnesota Watersheds and 303d Listed Waters
Mine Features
Mine Pits
Tailings Basins
Stockpiles
In-Pit Stockpiles
Other Mine Features
Major Watershed
Little Fork River
Mississippi River - Grand Rapids
Rainy River - Headwaters
St. Louis River
Vermillion River
2018 Impaired Lakes (Draft)
2018 Impaired Rivers (Draft)
Lakes
Rivers
Miles

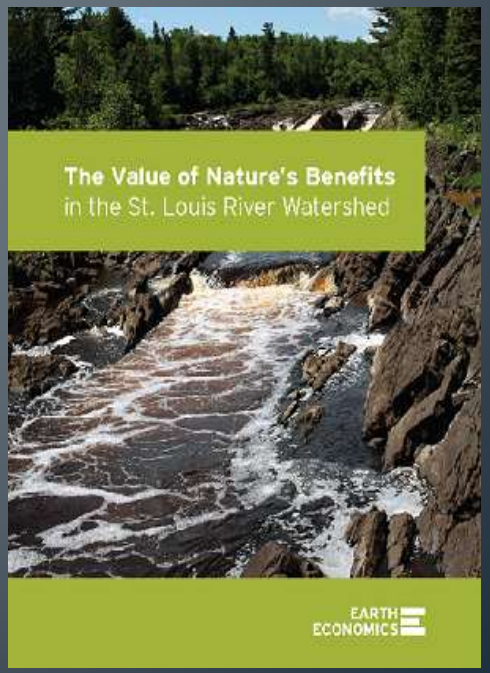

(with transportation and political boundaries)
St. Louis County
Duluth
Lake Superior
Minnesota
Wisconsin
Cloquet
Superior
Carlton County
Douglas County
PROJECT AREA
Minnesota
Wisconsin
State Highway
US Highway
Interstate
State Line
County Bounds
Project Area Boundary
St. Louis River
Plant Community and Aquatic Habitat Boundary
Tributary Streams
Lakes
Scale: 1 inch = 4 miles
0 1 2 4 6 8
Miles

The Value of Nature's Benefits in the St. Louis River Watershed

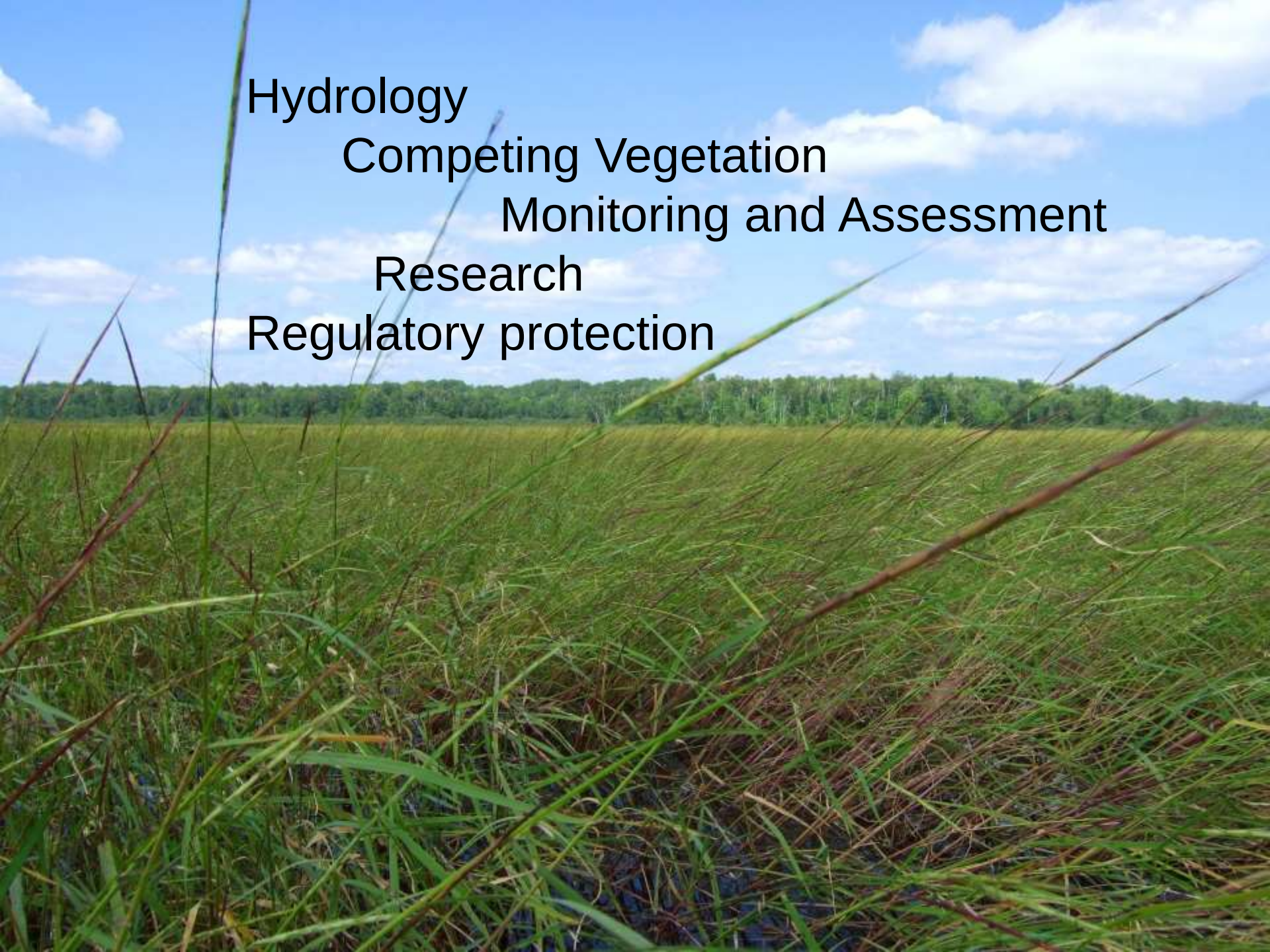
- Earth Economics 2015

- **Goods:** Wild rice, fish, traditional plants, outdoor recreational opportunities
- **Services:** Flood risk reduction, carbon sequestration, water purification

The goal of this report is to provide economic values for the ecosystem functions that exist within the natural landscape of the St. Louis River.

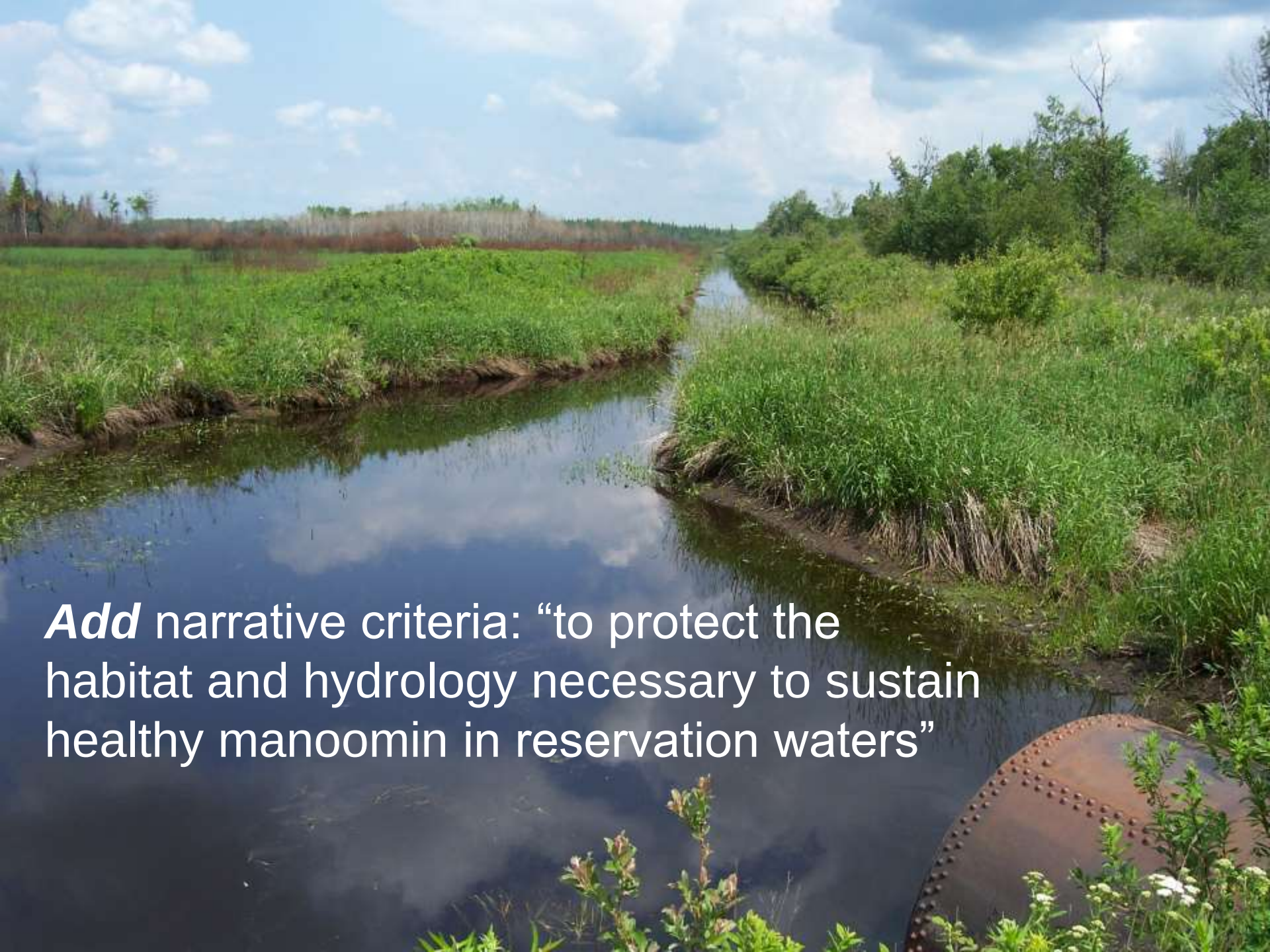


Multiple Stressors on Manoomin


Hydrology
Competing Vegetation
Monitoring and Assessment
Research
Regulatory protection

Support basic research:
Wild rice ecology,
Sulfate toxicity

Keep our numeric sulfate standard!



Add narrative criteria: “to protect the habitat and hydrology necessary to sustain healthy manoomin in reservation waters”

Food Security/Food Sovereignty

Economic Analysis

Contracted with Earth Economics:

- Provide more detailed analysis of manoomin's contribution to the Minnesota and tribal economies
- Data on tribal, state rice harvesters, processors; annual harvest data
- Developed IMPLAN model
- Evaluated scenario with reduced manoomin; economic impacts to tribes and the state, including increased health care costs, food replacement costs

http://www.eartheconomics.org/all-publications/manoomin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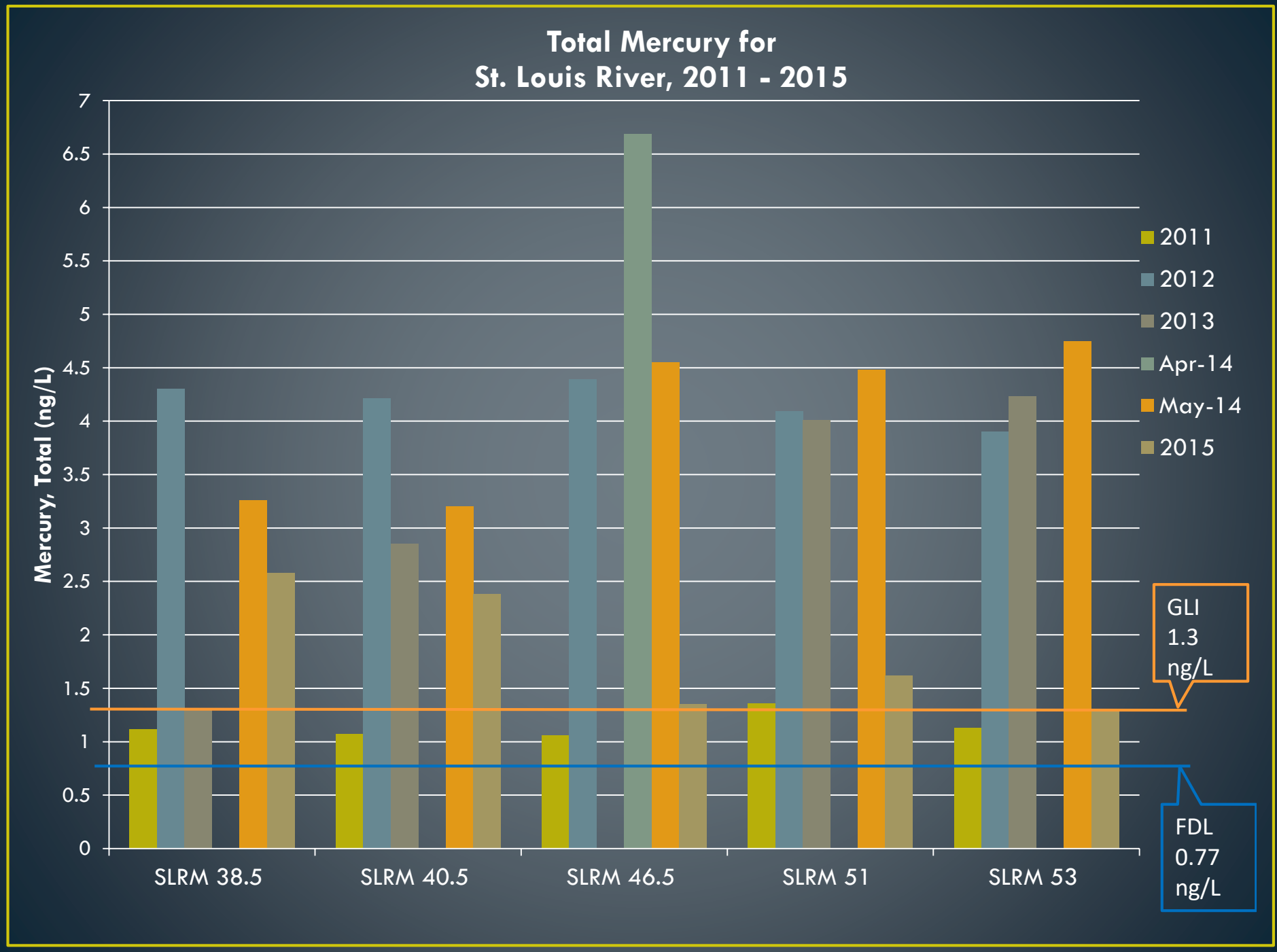
FISH ADVISORY
FISH IN THIS SECTION
OF THE ST. LOUIS RIVER
ARE CONTAMINATED.
MN. DEPT. OF HEALTH
RECOMMENDS LIMITING
MEALS OF THESE FISH.
CALL MN. DEPT. OF
HEALTH FOR MORE INFO.
612-627-5047

Mercury Concerns

- Boreal forest/wetland ecoregion is especially sensitive to mercury deposition and methylation.
- Some tribal members consume fish at a greater rate than the general population.
- Existing industrial sources in our watershed can also enhance mercury methylation rates; warming climate can accelerate further
- The statewide TMDL for mercury does not include the St. Louis River.


Total Mercury for
St. Louis River, 2011 - 2015
Mercury, Total (ng/L)
7
6.5
6
5.5
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
SLRM 38.5
SLRM 40.5
SLRM 46.5
SLRM 51
SLRM 53
2011
2012
2013
Apr-14
May-14
2015
GLI
1.3
ng/L
FDL
0.77
ng/L

Q. Which waters in Fond du Lac have been tested?

Lake or River	Species Tested
Joe Martin	Black crappie
Lost	Walleye
Pat Martin	Black crappie
Perch	Northern pike
Simian	Northern pike
Sofie	Bluegill
West Twin	Walleye
	Northern pike
St. Louis River	Channel catfish
	Northern pike
	Smallmouth bass
	Walleye

Notes:

- The guidelines in this brochure are based on mercury and PCB levels measured in fish from waters throughout Minnesota, including the reservation lakes listed at left and the St. Louis River along the reservation border.
- To obtain specific advice for Minnesota waters that have been tested by the state, please visit the Minnesota Department of Health or Department of Natural Resources (DNR) Web sites listed on the back of this brochure. You may also call the Minnesota DNR and ask to be mailed a DNR Lake Survey Report.

Mercury in fish collected and analyzed in 2001, 2008, 2015; Repeat in 2022

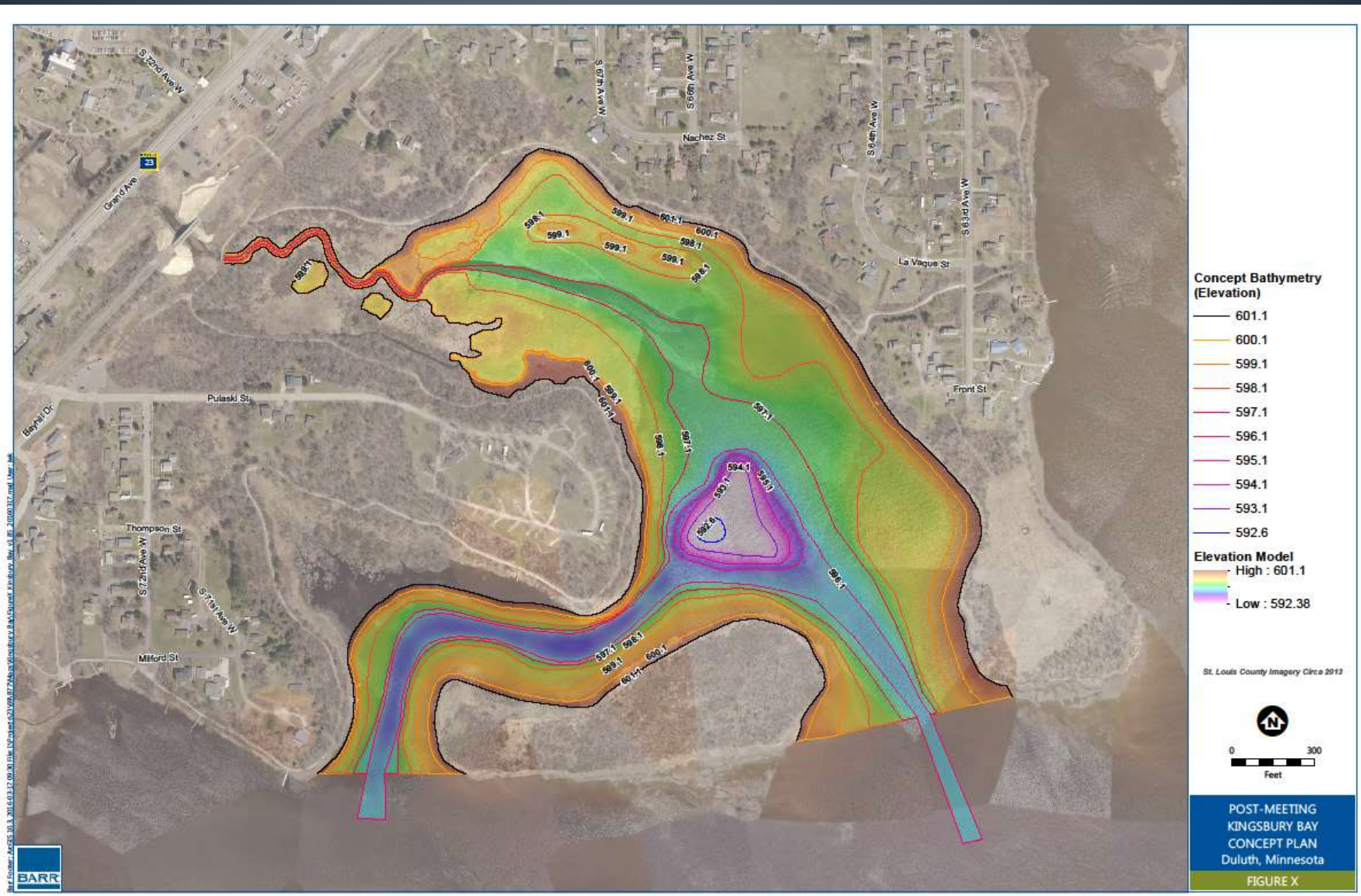
Work with MN Dept. of Health to determine safe consumption and offer guidance…but this is not a solution

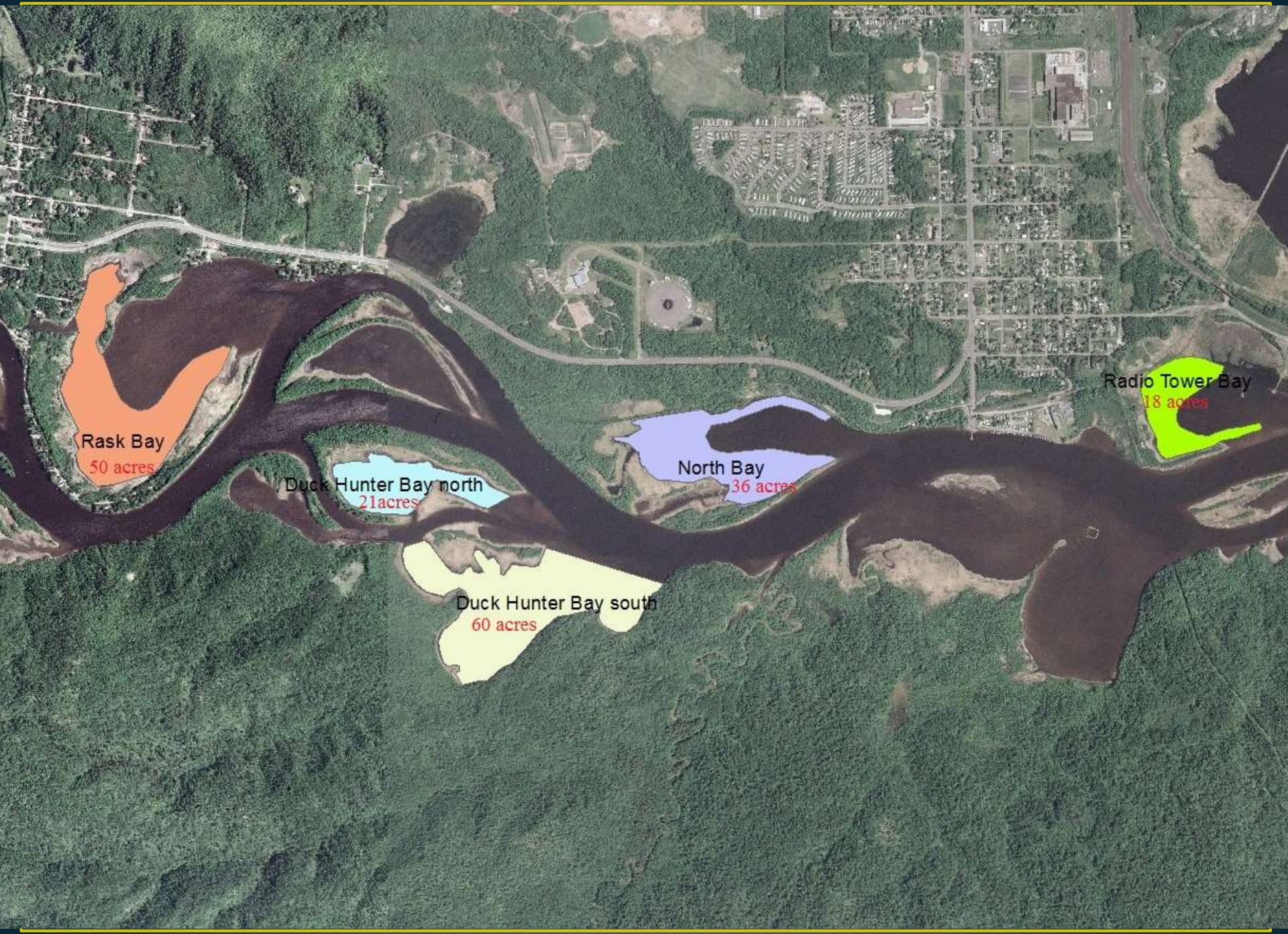
St. Louis River Mercury TMDL

- MN, WI, EPA Region 5, FDL commenced in 2010
- States' focus on AOC – multiple impairments, legacy contamination;
- Tribal focus on fish consumption advisories for mercury – upstream loadings, watershed factors
- Mercury is the ubiquitous contaminant
- *Off the rails in 2013, but…*
- Renewed initiative in 2021, including funding from legislature: technical advisory group convened, agencies discussing roles and outcomes

St. Louis River/Interlake Duluth Tar

Natural Resources Damage Assessment and Restoration…final settlement!




Rask Bay
50 acres
Duck Hunter Bay north
21acres
North Bay
36 acres
Radio Tower Bay
18 acres
Duck Hunter Bay south
60 acres

US Steel Superfund site
Great Lakes Legacy Act remedy: key to BUI/AOC delisting
Also active NRDA action underway

Spirit Island:
The sixth stopping place (Ojibwe migration story); now owned by the Band

Oversight/Inspection of Enbridge pipelines during construction:
Environmental compliance and cultural surveys
Comprehensive surface and groundwater monitoring plan

Restoring lake sturgeon: culturally significant, historically abundant

Chi miigwech!

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