

~The Pickle Pond Pilot Project~

Measuring changes in landscape and ecosystem benefits
through
the remediation of contaminated sediment and habitat restoration
in
a Great Lakes Area of Concern



Where:

Pickle Pond is in Superior, WI, near Barkers Island.

Why This Site?

Reasonable project scope and timeline.

Site restoration has not occurred yet, allowing us opportunity to gather baseline of aesthetics and use characterization, quantifiable patterns of use, and qualitative user feedback.

What's the Timeframe?

Restoration is scheduled potentially for Summer 2022; possibly Summer 2023.

Whose project is this?



Pickle Pond R3 Team

- Theodore Angradí - Research Biologist (EPA)
- Terry Brown - Data Analysis Software/Resident Genius (EPA)
- Sophia Green - Biology & Political Science (EPA/UMN)
- Joel Hoffman (Branch Chief) - Research Biologist (EPA)
- Tom Hollenhorst - Ecologist (EPA)
- Jennifer Josephs - Anthropology & Conflict Resolution (NRC/EPA)
- Jon Launspach - GIS Specialist (GDIT/EPA)
- Keahna Margeson - (former ORISE/EPA)
- Sebastian Paczuskí - Sustainable Peacebuilding (ORISE/EPA)
- Mark Pearson - Aquatic Biologist (EPA)
- Amber Sampler (ORISE/EPA - GLNPO)
- Daniel Sullivan (EPA)
- Molly Wick - Water Resource Management (UMD/EPA)
- Kathleen Williams - Geographer (EPA)
- Julia Wits - Interdisciplinary Social Scientist (EPA)



With Thanks to Our Partners

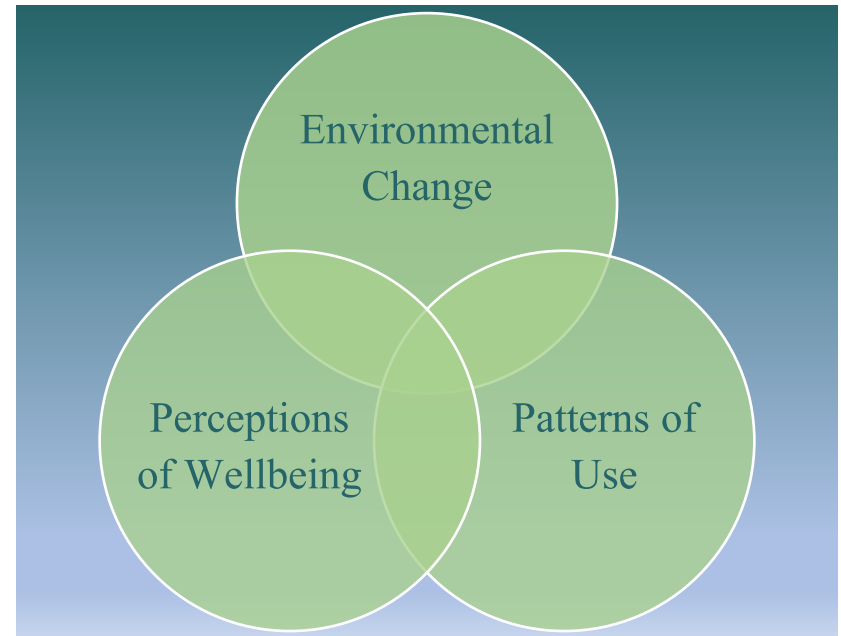
- Linda Cadotte (City of Superior)
- Matt Stieger (Wisconsin DNR)
- Everyone at the Lake Superior - National Estuarine Research Reserve
- Dennis O'Hara (Duluth Harbor Cam)
- Meagan Meyer (Fairlawn Mansion)



What are we trying to do?

Mixed-methods approach examining:

- the interconnections between site use,
- environmental change, and
- public perception of ecosystem services benefits.

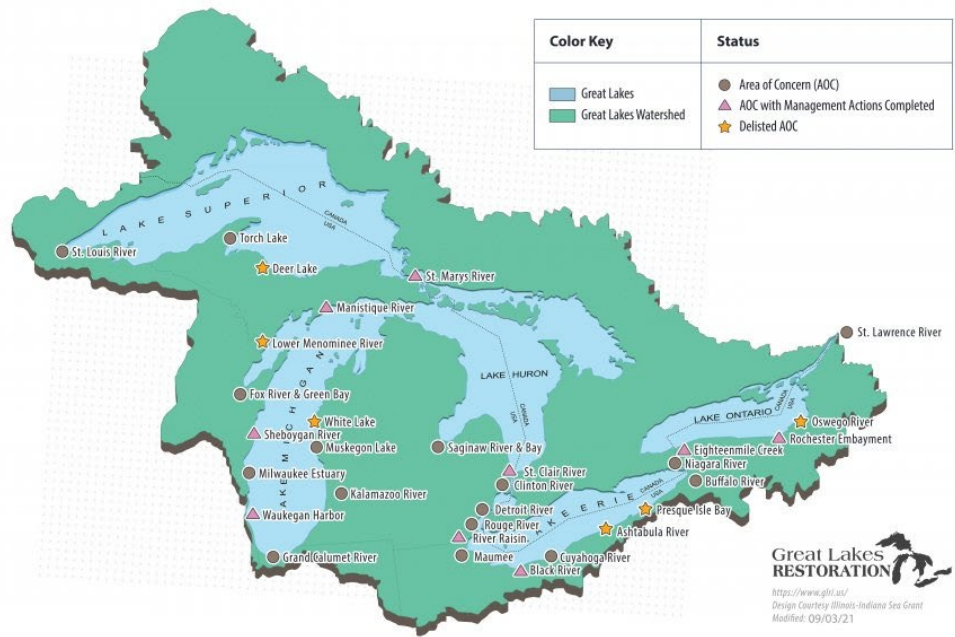


The Big Picture

Practical – Cost Efficient – Site Transferable

Exploring potentially viable methods to measure and assess the social impact of environmental improvements in this and other Great Lakes Areas of Concern project sites.

U.S. Great Lakes Areas of Concern



<https://www.epa.gov/great-lakes-aocs>



What types of Data Are We Collecting?

How are we collecting it?

Quantitative

Qualitative

Listening

Observing

Monitoring

Counting



What tools and strategies are we using to collect the data?

Using intercept surveys to **listen** to community input

Using Trail Cameras, a Web Camera, and on-site visits to **observe** how the project area is used

Recording environmental aesthetics to **monitor** changing conditions

Using Trail Counters to **count** frequency of site visitation

But that's not all...



What do we offer the community?

Informational Trail Signs

Pickle Pond is getting cleaned up What does it mean for our community?



PICKLE POND

Pickle Pond is a nine-acre urban pond that was created by the construction of a railroad embankment in the 1800's that cut off part of Barker's Bay. This sheltered area provides habitat to waterfowl, beaver, otters, fish and other wildlife.

Historically, sewage was diverted into the pond, and now urban runoff and stormwater are directed to the pond. Over time, sediments and contaminants have accumulated in the bottom of the pond, making it shallower. The pond was identified for clean-up and habitat restoration as part of the St. Louis River Area of Concern.

THE RESTORATION PROJECT

Wisconsin Department of Natural Resources and the City of Superior are working to clean-up contaminated sediments and restore fish and wildlife habitat at Pickle Pond. The project will:

- Remove contaminated sediment from the pond
- Deepen the pond to increase and improve fish habitat
- Enhance native vegetation and remove invasive plant species
- Improve the water flow between the pond and Barker's Bay
- Create small boat access to the pond from Barker's Bay
- Reduce pollution from stormwater runoff

COMMUNITY BENEFITS RESEARCH

Researchers at the US Environmental Protection Agency are studying how the restoration project impacts the community. Their research will describe and quantify the potential benefits of the project.

PROVIDE YOUR INPUT

Visitors and residents can participate in the research by sharing your experiences around the pond through a 15-minute survey. Results will be used to improve this and future projects. Visit the website below to participate!

Visit the website!

Learn more · Get project updates Help decide the future of Pickle Pond!

<https://arcg.is/1aaiqv>



Pickle Pond is getting cleaned up

What does it mean for our community?

The project will include:

- Remediating contaminated sediment
- Deepening the pond for better fish habitat
- Enhancing native vegetation
- Removing invasive species
- Creating small boat access to pond from Barker's Bay



Informational postcards

Please take the 15-minute Pickle Pond Survey

Participate in research to understand the potential benefits of the Pickle Pond restoration!

We want your input on:

- How you use the area
- How the Pickle Pond restoration will affect you
- What improvements should be considered at the pond

Results will be considered to improve this and future projects.



Learn more · Get project updates
Help decide the future of Pickle Pond!
<https://arcg.is/1aaiqv>



But that's not all...



We also developed a website

<https://pickle-pond-epa.hub.arcgis.com/>



Pickle Pond Restoration Project



Pickle Pond Restoration Project

Learn about the Pickle Pond restoration project.



What do we do with the data?



(3) Trail Counters – what do the numbers indicate?

(2) Trail Cameras - are there patterns of behavior? Notable shifts?

Aesthetics Monitoring – how is the environment changing?

Direct Observation – how are site users interacting with the environment?

Web Camera – how does the overall picture tie in with the parts?

Survey Comments – how are environmental attributes described and valued?



Please visit our website!

Website URL and QR code below

Please take the 15-minute Pickle Pond Survey

Participate in research to understand the potential benefits of the Pickle Pond restoration!

We want your input on:

- How you use the area
- How the Pickle Pond restoration will affect you
- What improvements should be considered at the pond

Results will be considered to improve this and future projects.



Learn more · Get project updates
Help decide the future of Pickle Pond!

<https://arcg.is/1aaiqv>



Questions?



Is this information useful for natural resource management?

How could be this be used at (or modified to suit) other sites or for other projects in the estuary?

We welcome your feedback about the design, the approach, or any of the components.

Please feel free to contact me with any questions, comments, or suggestions.

josephs.jennifer@epa.gov