



THE 15TH ANNUAL

St. Louis River S U M M I T

An Estuary Mosaic:
Understanding the Pieces,
Appreciating the Whole

UW-SUPERIOR YELLOWJACKET UNION

March 4-6, 2025



Tuesday, March 4 – Afternoon Session

Bright Ideas for Clear Waters

TIME	ACTIVITY	PRESENTER
1:00 pm	Welcome	
1:25 pm	Historical St. Louis River Estuary plankton communities and water quality at the Montreal Pier Facility	Michael Nagel
1:45 pm	Accuracy of Rapid Test Strips for the Detection of the Cyanotoxin Microcystin-LR	Janae Widiker
2:05 pm	Predicting total phosphorus level in streams over north shore of Lake Superior using hybrid machine learning model	Amit Kumar
2:25 pm	Working in Partnership to Improve the Understanding of Water Quality Along Lake Superior's Wisconsin Coastline	Sam Blackburn
2:40 pm	Break (20 minutes)	
3:00 pm	Evaluation of Ballast Water Management Systems on Great Lakes Vessels	Nathan Schwartz
3:20 pm	The Great Lakes Port Conditions Database: A Tool for Effective Ballast Water Management	Gwendolyn Ough
3:35 pm	Avian Night Sky Paintings and Poems	Stephen Wilbers
3:55 pm	Adjourn – transition to Poster & Art Session	
4:00 pm	Poster and Art Session (4:00-6:00 pm in Yellowjacket Union Atrium) See insert for details.	

Wednesday, March 5 – Morning Session

TIME	ACTIVITY
9:00 am	Keynote event – Water, We Respect You: Tribal Sovereignty in the watershed of Chigami-ziibi
10:30 am	Break (15 minutes)

Keynote event

Water, We Respect You: Tribal Sovereignty in the watershed of Chigami-ziibi

Presenter and panelists include: Nancy Schuldt, Water Projects Coordinator, and Thomas Howes, Natural Resources Manager, of the Fond du Lac Band of Lake Superior Chippewa; Darren Vogt, Resource Management Division Director at the 1854 Treaty Authority; Jason Schlender, Executive Administrator at the Great Lakes Indian Fish & Wildlife Commission, and Joseph Bauerkemper, Director of the Tribal Sovereignty Institute at University of Minnesota Duluth.

Chigami-ziibi (the St. Louis River) sprawls across the Ceded Territory of Ojibwe people and forms the eastern border of the Fond du Lac Reservation. Treaty rights and the efforts of Tribal Nations staff have played a central role in stewarding the river and the estuary, from the restoration of name (nah-meh, lake sturgeon) and manoomin (wild rice) to the Area of Concern delisting process to water quality protection. As the river heals and faces a mosaic of new challenges, how can Tribal Sovereignty illuminate ways we can all care for the river?

AOC Advances: Restoring Connections and Revitalizing Waterways

TIME	ACTIVITY	PRESENTER
10:45 am	Lest We Forget	Grace Leppink-Walz, Tyler Kaspar, Barb Huberty, and Matt Steiger
11:05 am	St. Louis River Area of Concern Annual Progress Update	Matt Steiger
11:25 am	Waterway Benefits Study Recommendations: Centering Reconnection	Molly Wick
11:40 am	New Opportunities for River Connections: Public Access Improvements in the Wake of River Restoration	Allison Brooks
12:00 pm	Lunch – with optional concurrent events (75 minutes)	
	Legislative Listening Session hosted by FOLSR (meet in Room 202)	
	Career Session for Students: Learning from Each Other (meet in Room 204)	

Wednesday, March 5 – Afternoon Session

Watershed Wisdom: Collaboration, Governance, and Sustainability in Action

TIME	ACTIVITY	PRESENTER
1:15 pm	Course-Based Research Provides Coastal Insights Through Collaborative Science and Big Data Skills	Kait Reinl and Paul Hanson
1:35 pm	A Watershed Approach to Co-Creating Just Sustainabilities: Reflections from the Lake Superior Living Labs Network	Rachel Portinga
1:50 pm	Tackling watershed wide issues with local efforts: A St Louis River One Watershed, One Plan in action	Andy Kasun
2:05 pm	Break (15 minutes)	
2:20 pm	Ripple effects: Examining the mosaics of governance structures in three Great Lakes Restoration Initiative projects	Meghan Klasic
2:40 pm	Sustaining Namāēw: partner-led climate adaptation for Indigenous fisheries in the Great Lakes	Holly Embke
3:00 pm	Activating a Community of Lake Superior Educators	Luciana Ranelli and Sue Correll
3:15 pm	Break – transition to Networking Sessions	
3:30 pm	Networking Sessions – held concurrently from 3:30-5:00 pm	

Attendees are encouraged to participate in one of the following **Networking Sessions**:

- **Great Room: Who is monitoring what in the St. Louis River Estuary in 2025?** with Tom Hollenhorst, Barb Huberty, Joel Hoffman, and Hannah Nicklay
- **YU 201: Cut & Paste – Creating Mosaics, Crossing Boundaries, & Making Connections** with Rachel Portinga
- **YU 202: Collaborative Use of Educational and Research Vessels in the Twin Ports** with Alan Brew, Amy Eliot, and John Phelan
- **YU 204: Ecological Justice in the St. Louis River Estuary** with Nicolette Slagle and Leah Prussia
- **Swenson 1058: Bridging Science and Education: Developing Data-Driven Lessons for Classrooms** with Erik Johnson

Thursday, March 6 – Morning Session

Contaminants and Resilient Habitats

TIME	ACTIVITY	PRESENTER
9:00 am	Incorporating Habitat Use and Life History to Predict PCB Residues in St. Louis River estuary fish	Joel Hoffman
9:20 am	Changes in methylmercury exposure to Common Tern chicks at a breeding colony in the St. Louis River Estuary (2016 - 2023)	Annie Bracey
9:40 am	How do contaminants in the St. Louis River estuary affect the health of restored manoomin and those who eat it?	Gigi Diekelman and Ashla Ojibway
9:55 am	Woodland Ave - Hartley Park Green Infrastructure Project	Tim Olson
10:10 am	Break (10 minutes)	
10:20 am	<p>Featured Event – Climate Resilience is Every Day</p> <p>Featured panelists: Mindy Granley, Supervisor - Climate Assistance Unit, Minnesota Pollution Control Agency; Karola Dalen, Sustainability and Capital Planning Manager, St. Louis County; Dr. Natalie Chin, Climate and Tourism Outreach Specialist, Wisconsin Sea Grant</p> <p>Embedding climate resilience into communities and the landscape is certainly a matter of innovative techniques and know-how, but it is also a mindset that takes opportunities to build resilience whenever they are available across the mosaic of infrastructure, community development, and landscape restoration along Lake Superior's shores. This discussion shares new, timely perspectives on creating a sustainable future across our region.</p>	
11:00 am	Break (15 minutes)	

Restoration in Focus

TIME	ACTIVITY	PRESENTER
11:15 am	Larval fish as indicators of St. Louis River estuary habitat quality and restoration effectiveness	Greg Peterson
11:35 am	Allouez Bay Marsh Bird Habitat Restoration Update	Tom Prestby
11:50 am	Substrate Environmental DNA for Detecting Fish Fauna in Comparison to Physical Surveys	Valerie Brady
12:05 pm	Adjourn – transition to pre-registered optional Field Trips following.	

Thursday, March 6 – Afternoon

TIME	ACTIVITY
1:30 pm	<p>Optional Field Trips – held concurrently. Pre-registration is required.</p> <ul style="list-style-type: none"> • Perch Lake Habitat Restoration Project Tour • Gibiskising minis Azhe-dibinaweziwin (Planning for the Restoration of Wisconsin Point) • Putting the Voice of People in Your Projects – A Field Trip into the Landscape of Community • Great Lakes Aquarium: Aquarium Exhibits are More than the Sum of Their Parts

THANK YOU TO OUR 2025 SUMMIT SPONSORS



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2025 SUMMIT PLANNING COMMITTEE

Sam Blackburn	Deanna Erickson	Tom Hollenhorst	Gus Pendleton	Stephen Thomforde
Gini Breidenbach	Ryan Feldbrugge	Barb Huberty	Luciana Ranelli	Molly Wick
Allison Brooks	Jim Gharrity	Leah Kavallaris	Kait Reinl	Katie Williams
Melissa Burke	Callie Grones	Hannah Nicklay	Kirsten Rhude	
Val Damstra	Karina Heim	Travis Olson	Leah Schleppebach	



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Posters

★ indicates entry in People's Choice award for best student poster.

POSTER	TITLE AND AUTHOR
1	Monitoring for the Future: Post AOC Water Quality in the St. Louis River Estuary Jesse Anderson, Minnesota Pollution Control Agency
★ 2	Biological Factors Influencing Mercury Cycling in the St. Louis River Watershed Hailey Anderson, Fond du Lac Tribal and Community College
3	Uncovering connections between forest fire smoke and harmful algal blooms Bridget Beyer, Oak Ridge Associated Universities
4	Long-term trends in mercury concentrations in waterbodies and fish in the St. Louis River watershed Jennifer Brentrup, Minnesota Pollution Control Agency
5	Everyone Can Bird Natalie Chin, Wisconsin Sea Grant
★ 6	Evaluating the Effectiveness of Manoomin Hulls as Mulch Simon Councillor, Student Researcher
7	Spirit Lake Great Lakes Legacy Act Project Video Kali Denis, Environmental Protection Agency - Great Lakes National Program Office
8	Characterizing Zooplankton Samples from GLISSNet: Using Morphological Analysis Alongside Metagenetics Data Lana Fanberg, University of Wisconsin-Superior, Lake Superior Research Institute
9	Five Years of Non-Native Species Control on Clough Island; Light at the End of the Tunnel Dara Fillmore, Wisconsin Department of Natural Resources
10	How does wildfire severity affect mercury mobilization and bioaccumulation in Minnesota's wilderness lakes? Christopher Filstrup, Natural Resources Research Institute, University of Minnesota Duluth, Duluth, MN
11	Using a non-invasive, molecular approach to determine sex ratios of Lake Sturgeon (<i>Acipenser fulvescens</i>) in the St. Louis River estuary Noah Grode, Oak Ridge Institute of Science Education
★ 12	Harmful Algal Bloom Identification Training for Water Professionals Emma Kleinschrodt, College of St. Scholastica, Lake Superior National Estuarine Research Reserve
★ 13	Evaluating Post-Restoration Erosion and Streambank Stability Under Various Vegetation and Flow Conditions David Lange, University of Minnesota Duluth
14	Effects of a Sediment Microbiome Amendment on Geochemistry and Microbial Community Composition for Wild Rice Restoration Britta Larson, University of Minnesota Duluth, Natural Resources Research Institute
15	MPCA recommends removal of body contact restrictions at Munger Landing and Spirit Lake LaRae Lehto, Minnesota Pollution Control Agency
16	Reducing The City of Duluth's Chloride Application to Protect Streams Jake Mikna, City of Duluth (Minnesota Green Corps)
★ 17	High-Resolution Metagenomics Reveals Microbial Connectivity in the St. Louis River Estuary Augustus Pendleton, Cornell University; Lake Superior National Estuarine Research Reserve
18	Allouez Bay Marsh Bird Habitat Restoration - Construction Phase Tom Prestby, Audubon Great Lakes

POSTER	TITLE AND AUTHOR
19	Patterns in Community Engagement and Social Science Literature in the Great Lakes Areas of Concern Program Meera Ramakrishnan, United States Environmental Protection Agency
20	HABs in the St. Louis River Estuary: The last two years helps guide a future monitoring plan Euan Reavie, Natural Resources Research Institute, University of Minnesota Duluth
21	Adaptive restoration and understory plantings in black ash wetlands of the St. Louis River Estuary Kirsten Rhude, Lake Superior National Estuarine Research Reserve
22	Community Codes & Ordinances: Powerful Tools for Protecting our Waters Madison Rodman, University of Minnesota Sea Grant
23	Spatial and temporal distributions of protozoa in Lake Superior during 2022: The start of long-term monitoring Leah Schleppebach, Natural Resources Research Institute
24	New Taxa Records of Macroinvertebrates within Lakes Erie, Michigan and Superior Watersheds Gerald Shepard, SpecPro Sustainment & Environment
25	Assessing the resiliency of Lake Superior coastal wetlands to climate change Mike Smale, Wisconsin Sea Grant
26	Minnesota Pollution Control Agency (MPCA) Biological Monitoring Program Murphy Steininger, Minnesota Pollution Control Agency (MPCA)
★27	Investigation of Microplastic Buoyancy: Effects of Particle Characteristics in Controlled Density Separations Angela Tippery, Large Lakes Observatory and Water Resources Science, University of Minnesota Duluth
28	Developing a Habitat Map of the St. Louis River Estuary Howard Veregin, Wisconsin State Cartographer's Office
29	Sulfate Remediation with Barite Precipitation Technology for Manoomin Waters Daniel Wisniewski, Natural Resources Research Institute
★30	Assessing the Perceptions of Environmental Restoration through Aesthetics Monitoring Jules Witts, US Environmental Protection Agency
31	From genes to ecosystems: building environmental genomic capacity at NRRI Andrew Wood, Natural Resources Research Institute

Artworks

EXHIBIT	ARTWORKS	ARTIST
A	St. Louis River Mosaic	Kasey Banesh
B	Moonrise over the St. Louis River	Alberta Marana
C	2023 Storm Drain Art Project	2023 Storm Drain Artists
D	Invasive plants in my backyard	Monica Ihrke
E	Scientific Illustration of the Spiny Water Flea, Winter Shoreline at Duluth Rose Garden, Storm Clouds Over Lake Superior	Adam Frankiewicz
F	Canvas prints on easels from the SLR	Michael Anderson
G	Microscopic Life in the Estuary, Lake Sturgeon of the St. Louis River	Becca Marston
H	Drawing 1–Black Ash Canopy Drawing 2–Fading Ancient Forest - Magney-Snively	Kelly Beaster
I	The SLR Estuary as Healing	Lynn Goerd
J	Avian Night Sky Paintings and Poems: Protecting Our Dark Starry Nights	Stephen Wilbers