IAGLR 2023 TORONTO

Adapting to Climate Change

International Association for Great Lakes Research

66th Annual Conference on Great Lakes Research | May 8–12, 2023

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PROGRAM

66th Annual Conference on Great Lakes Research

IAGLR 2023 TORONTO

Adapting to Climate Change

#IAGLR23

International Association for Great Lakes Research
4840 South State Road, Ann Arbor, MI 48108

iaglr.org

Cover design and conference logo by Jenifer Thomas

IAGLR 2023 Land Acknowledgement

WE ACKNOWLEDGE that the land we are meeting on is the traditional territory of many nations—including the Mississaugas of the Credit, the Anishinaabeg, the Chippewa, the Haudenosaunee and the Wendat Peoples—and is now home to many diverse First Nations, Inuit, and Métis Peoples. We also acknowledge that Toronto is covered by Treaty 13 with the Mississaugas of the Credit.

CONTENTS

Check out the Online Program

Browse and search for presentations and speakers.

Create your own schedule.

Indicate favorites.

Contact other attendees.

http://bit.ly/iaglr23App

Let's keep it healthy!

We **strongly encourage** attendees to wear masks during the conference.

In addition, Social Comfort Zone colored stickers will be available for you to put on your name badge to signal how you'd like to navigate the conference:

Red: No contact - 6 feet apart; no exceptions

Yellow: Elbows only - Still being cautious

Green: High fives & handshakes - Frequent hand washing

HOTEL WIFI

Network: Hilton_meeting

Password: GreatLakes

A lactation room is available in the University Room on the 3rd floor

Conference Organizers

IAGLR 2023 Program Committee

Tim Johnson, *Program Chair*
Calvin Hitch, *Site Chair*
Cindy Chu
Len Hunt
Andrea Kirkwood
Marten Koops
Jérôme Marty
Sophie Monfette
Mathew Wells
Chris Wilson

IAGLR Conference Committee

Mary Ginnebaugh, *Co-Chair*
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Andrew Bramburger
Paris Collingsworth
Brianna Ellis
Wendy Foster
Calvin Hitch
Jérôme Marty
Paula McIntyre
Neil Rooney
Edward Verhamme
Les Warren

IAGLR Staff

Brianna Ellis, *Conference Coordinator*
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Jérôme Marty, *Executive Director*
Paula McIntyre, *Communication Director*

Student Judging Team

Jean Adams
Evie Brahmstedt
Jessica Ives
Les Warren
Anonymous judges

Thanks also to all onsite volunteers.

IAGLR

We are a scientific organization made up of researchers studying the Laurentian Great Lakes, other large lakes of the world, and their watersheds, as well as those with an interest in such research. With a mission to advance understanding of the world's great lake ecosystems, IAGLR is uniquely positioned to foster the connection between science and policy, a connection vital for effective management and protection of the world's large lakes.

Our members hail from many countries and disciplines, and together they create a vibrant community to learn about and advance large lake science. This diversity is our strength. We welcome your participation in the IAGLR community.

iaglr.org/membership/

Sustainers Circle
Monthly Giving Program

Join the members and friends who support IAGLR and large lake science with convenient monthly contributions.

Together we can advance understanding of the world's large lake ecosystems to better manage and protect them for generations to come.

iaglr.org/giving/

Welcome Conference Exhibitors!

Exhibits are open daily in the conference foyer.

Cooperative Institute for Great Lakes Research
Ann Arbor, Michigan
ciglr.seas.umich.edu

DataStream
Toronto, Ontario
datastream.org

Environment and Climate Change Canada
Toronto, Ontario
canada.ca/en/environment-climate-change.html

Freeboard Technology
Cleveland, Ohio
freeboard.tech

Gold Standard Diagnostics Horsham, Inc.
Warminster, Pennsylvania
abraxiskits.com

Great Lakes Commission
Ann Arbor, Michigan
glc.org

Great Lakes Fishery Commission
Ann Arbor, Michigan
glfc.org

Great Lakes Institute for Environmental Research
Windsor, Ontario
uwindsor.ca/glier

Great Lakes Observing System
Ann Arbor, Michigan
glos.org

Great Lakes Sea Grant Network
Ann Arbor, Michigan
greatlakesseagrant.com

Halltech Aquatic Research Inc.
Guelph, Ontario
halltech.ca

Hoskin Scientific
Oakville, Ontario
hoskin.ca

Innovasea
Bedford, Nova Scotia
innovasea.com/fish-tracking

Inspired Planet Productions
Miller Lake, Ontario
inspiredplanet.ca

NOAA Great Lakes Region
Ann Arbor, Michigan
www.noaa.gov/regional-collaboration-network/regions-great-lakes

Nortek
Boston, Massachusetts
nortekgroup.com

Rice Resource Technologies
Edmonton, Alberta
riceresource.com

Royal Canadian Geographical Society - Canadian Geographic
Ottawa, Ontario
rcgs.org

University of Toronto Scarborough, Department of Physical and Environmental Sciences
Toronto, Ontario
utsc.utoronto.ca/physsci/

SPEAKERS

Tuesday, May 9
11:30–12:30
Toronto I & II

Adapting to climate change in the Great Lakes–St. Lawrence Basin: A retrospective to guide future action

LINDA MORTSCH has devoted her 40-year career to addressing climate change and facilitating adaptation in the Great Lakes–St. Lawrence Basin and elsewhere. She has assessed impacts, vulnerability, and resilience to support adaptation decision making in water resources, coastal areas, and wetland ecosystems. Linda co-led the 1990s binational project "Adapting to climate variability and change in the Great Lakes Basin," which was one of the first to engage stakeholders and explore adaptation to climate change. She co-authored a 2003 white paper for the International Joint Commission, Great Lakes Water Quality Board that developed the background for including climate change in the Great Lakes Water Quality Agreement. Her recent research focuses on advancing climate change adaptation in coastal areas through integrated coastal planning and management.

Wednesday, May 10
11:30–12:30
Toronto I & II

Trends, drivers & consequences of ice loss in lakes around the Northern Hemisphere

SAPNA SHARMA is an associate professor in the Department of Biology at York University. Her research highlights how lakes worldwide respond to climate change, including rapid ice loss, warming water temperatures, degrading water quality, and changing fish distributions. Her research has led to an induction to the Royal Society of Canada College of New Scholars, a prestigious Ontario Government Early Researcher Award, and York University President's Emerging Research Leadership Award. She is a dedicated science communicator and is the founder of SEEDS, an outreach program for refugees. For her commitment to science outreach, she was invited to serve as vice-chair for the Royal Canadian Institute for Science and awarded the Canadian Council of University Biology Chairs Science Promotion Prize.

Thursday, May 11
11:30–12:30
Toronto I & II

Key concepts fundamental for adapting to climate change: An Anishnabe Kwe perspective

KERRY-ANN CHARLES is a member of the Chippewas of Georgina Island First Nation, a proud mom of two boys, and has been a team member of Cambium Indigenous Professional Services since 2017 as the environment partnership coordinator. Kerry-Ann was proud to serve her community for over 17 years in various capacities. During her last 10 years, she was the environment coordinator and led the establishment of the Environment Department. She also led—in partnership with the Climate Risk Institute—the development of the Georgina Island First Nation Climate Change Adaptation Planning Framework. This framework uses Traditional Ecological Knowledge as the foundation for climate change planning. Stemming from this work, she has worked with her community, as well as a number of other communities, in the development of climate change adaptation and implementation plans and continues to do so in her position at CIPS.

SCHEDULE AT A GLANCE

	Event	Time	Location
MON	Registration	5:30–7:00 p.m.	Conference Foyer
	Welcome Mixer	6:00–8:00 p.m.	Conference Foyer
TUE	Registration	7:30 a.m.–5:00 p.m.	Conference Foyer
	Exhibits	8:00 a.m.–8:00 p.m.	Conference Foyer
	Concurrent Sessions	8:00–11:00 a.m.	Session Rooms
	Welcome/Opening & Presentation of Large Lake Champion Awards	11:00–11:30 a.m.	Toronto Ballroom I & II
	Plenary: Linda Mortsch	11:30 a.m.–12:30 p.m.	Toronto Ballroom I & II
	Science Strategy Town Hall / Lunch on your own	12:30–1:30 p.m.	Toronto Ballroom I & II
	Concurrent Sessions	1:40–5:20 p.m.	Session Rooms
	Editors' Reception	5:30–7:00 p.m.	Osgoode West
	Poster Session & Social	6:00–8:00 p.m.	Toronto Ballroom III
	Student Social	8:00–10:00 p.m.	Collective Arts Brewpub
WED	Registration	7:30 a.m.–5:00 p.m.	Conference Foyer
	Exhibits	8:00 a.m.–6:00 p.m.	Conference Foyer
	Concurrent Sessions	8:00–11:00 a.m.	Session Rooms
	Presentation of Student Awards	11:00–11:30 a.m.	Toronto Ballroom I & II
	Plenary: Sapna Sharma	11:30 a.m.–12:30 p.m.	Toronto Ballroom I & II
	IAGLR Business Lunch	12:30–1:40 p.m.	Toronto Ballroom I & II
	Concurrent Sessions	1:40–5:20 p.m.	Session Rooms
	The Erie Situation - Screening & Panel Discussion	6:00–8:00 p.m.	Toronto Ballroom I & II
	IAGLR Defy Cup Hockey Challenge	8:00–9:30 p.m.	Mattamy Athletic Centre
THU	Registration	7:30 a.m.–5:00 p.m.	Conference Foyer
	Exhibits	8:00 a.m.–6:00 p.m.	Conference Foyer
	Concurrent Sessions	8:00–11:00 a.m.	Session Rooms
	Presentation of Journal Awards & Anderson-Everett Award	11:00–11:30 a.m.	Toronto Ballroom I & II
	Plenary: Kerry-Ann Charles	11:30 a.m.–12:30 p.m.	Toronto Ballroom I & II
	Lunch on your own	12:30–1:40 p.m.	
	Concurrent Sessions	1:40–5:20 p.m.	Session Rooms
	Awards Dinner Presentation of IAGLR Lifetime Achievement Award & John R. (Jack) Vallentyne Award	6:00–9:00 p.m.	Toronto Ballroom I, II & III
FRI	Registration	7:45 a.m.–Noon	Conference Foyer
	Exhibits	8:00–11:00 a.m.	Conference Foyer
	Concurrent Sessions	8:00 a.m.–Noon	Session Rooms

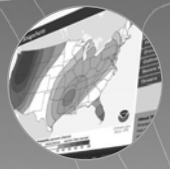
Looking for a career in research?

Come work with us!
At the NOAA Great Lakes Environmental Research Laboratory, we are a diverse group of people that share one common trait—a love for the Great Lakes. We are a transdisciplinary team of scientists, engineers, communicators, and administrators working together to understand and protect this valuable natural resource. Our blended government-academic workforce leads Great Lakes science by bringing together innovative approaches with strong partnerships to benefit society.

We hire a variety of professionals. We seek candidates from a wide range of disciplines, degrees, and career stages. Most of our positions require at least a bachelor's degree and many prefer a master's degree. We also offer postdoc and graduate fellowships through the Cooperative Institute for Great Lakes Research (CIGLR) to prepare students and early career researchers for Great Lakes professions.

Find out more at:

USAJobs.gov & CIGLR



Professionals we hire:

- Administrators
- Budget analysts
- Program managers
- Biologists
- Ecologists
- Engineers
- Chemists
- Data scientists
- Genomicists
- IT techs
- Programmers
- Modelers
- Limnologists
- Meteorologists
- Atmospheric scientists
- Oceanographers
- Marine scientists
- Hydrologists
- Vessel captains
- Marine/survey techs
- Environmental scientists
- Web developers
- Writers
- Science communicators
- Outreach specialists
- Social scientists

Skills we desire:

- Water sample processing & analysis
- Analytical chemistry
- Programming in various languages: Matlab, Python, R
- Lab & field experience
- Statistical analysis in R
- Numerical modeling & analysis
- Scientific writing & communication
- Handling large datasets in various formats: NetCDF, grib2, ASCII
- High-performance computing
- Offshore research vessel sampling & buoy deployments
- Hydrographic surveying

NOAA GREAT LAKES

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Great Lakes Science for Society

SESSION INDEX

Biology and Human Dimensions

Climate Change and Adaptation

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SESSION INDEX

Communicating Great Lakes Science

Great Lakes Habitats

General Contributions

Great Lakes Processes

Restoration and Management for the Future

Technology, Innovation, and Data Management

Threats to the Great Lakes

Water Quality and Healthy Ecosystems

TUESDAY, MAY 9

	Carmichael	Casson	Jackson	Johnston
	Remote Sensing of Lake Water Quality in a Changing Climate *Chairs: Caren Binding, Michael Sayers and Andrea Vander Woude*	**Advances in Hydroclimate Modeling and Data to Support Great Lakes Adaptive Management** *Chairs: Lauren Fry, Frank Seglenieks and Deanna Fielder*	**Inspiring Stewardship for the Great Lakes through Education** *Chairs: Kristin TePas, Emilie DeRochie and Megan Gunn*	**Chloride Sources, Transport, Impacts, and Management - Implications for Mitigating Freshwater Salinization** *Chairs: Jenn Drake, Shelley Arnott, Claire Oswald, Krista Chomicki, Lyndsay Cartwright and Stephanie Melles*
8:00	**A. Vander Woude** Climate change effects derived from long-term satellite data records on NOAA's Great Lakes CoastWatch Node	**L. M. Fry** Applications of Hydroclimate Data and Models in Adaptive Management of Great Lakes Outflows	**K. Leonard** Indigenous Water Justice for Climate Action: Indigenous Great Lakes Science Inclusive Education Standards	**M. Marchildon** Estimation of direct groundwater discharge and salt loading to the north shore of Lake Ontario
8:20	**L. R. Platt** Remote Sensing Plumes and Blooms in Lake Superior and Assessing Climate Drivers	**D. Fielder** Hydroclimate Baseline Datasets for Great Lakes Adaptive Management	**E. DeRochie** The Great River Rapport's Change Maker Series: Engaging youth to make change for local ecosystems	**L. Murison** Integrated surface and groundwater chloride modeling using MIKE SHE for road salt impacts
8:40	**A. J. Fields** Spatially and temporally heterogeneous trends in surface chlorophyll-a in Lake Superior from 2014-2018	**N. O'Brien** Creation of a coordinated Great Lakes dataset of Net Basin Supply and Components	**M. L. Gunn** Freedom Seekers and the Great Lakes: connecting the history of our land to current education efforts	**C. Mackie** Groundwater chloride in the Great Lakes Basin – geospatial analysis and ensuing field investigations in hot spot area
9:00	**C. L. C. Jones** Drivers of Spatial and Temporal variability in Net Ecosystem Production within the Central Basin of Lake Erie	**P. Paul** Benchmarking Technique: Study for Generating Water Quality Constituents in Data Limited Region	**N. Drag** Using Great Lakes research data in K-12 education to connect students with the Great Lakes and increase data literacy.	**L. Cartwright** Local factors and sources affecting stream chloride concentrations in the Toronto region
9:20	**Break**			

TUESDAY, MAY 9

Osgoode East	Osgoode West	Tom Thomson	Varley	
Open Data Resources of the Laurentian Great Lakes *Chairs: Cynthia Collier, Tim Lewis, Craig Palmer and Louis Blume*	**Groundwater Influences on Lakes, Wetlands, Springs, and Tributaries** *Chairs: James Roy, Jana Levison, Sabina Rakhimbekova and Clare Robinson*	**Recent Advances in Plastic Pollution in the Great Lakes to Inform Monitoring and Ecological Risk Assessment I** *Chairs: Karen Kidd, Rebecca Rooney, Chelsea Rochman and Eden Hataley*	**Join the Great Lakes Harmful Algal Bloom Collaborative for Updates on HABs Management and Research I** *Chairs: Katie Stammler, Mary Anne Evans and Nicole Zacharda*	
T. Lewis Assessing the Quality of Non-Direct Data Used in Ecological Restoration Project Planning and Monitoring	**N. Basu** Nutrient legacies: the critical role of the subsurface in addressing surface water pollution	**R. Akhbarizadeh** Validating improved sampling and extraction procedures for microplastics in complex water samples	**C. Sandberg Waldmann** Nutrient Management in Lake Erie: Evaluating Stakeholder Values, Attitudes, and Policy Preferences	8:00
A. Boegehold 10 years of western Lake Erie water quality monitoring data from NOAA GLERL and CIGLR	**H. May** Nutrient dynamics in groundwater and surface water of an agricultural clay hydrosystem	**W. Cui** Detection of microplastics in water system using an MXene based microwave sensor	**S. Sinnha** Evaluation of the Lake Erie Adaptive Management Framework	8:20
R. Sturtevant GLANSIS: Verified data for non-native species	**S. Rixon** Using isotopic tracers to explore relationships between hydrologic processes and nutrient flux in rural Ontario	**P. Arieno, J. Kucharek** Input of anthropogenic debris across a rural-urban gradient in the Lake Ontario watershed	**A. Baker** From land to lake – tributary nutrient cycling and loads and their role in Lake Superior nearshore algal blooms WITHDRAWN	8:40
S. Shikaze The Oak Ridges Moraine Groundwater Program – Ontario's leading-edge water resource database and mapping portal	**C. J. Jobity** Determining Pathways Via Which Septic System Wastewater Effluent Reaches Tributaries	**B. Schwenk** Stormwater-mediated transport of macroplastic litter in urban watersheds	**S. Crevecoeur** Link between microbes involved in nutrient cycling and cHABs in Lake Erie watershed	9:00
Break				9:20

TUESDAY, MAY 9

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	Remote Sensing of Lake Water Quality in a Changing Climate *Chairs: Caren Binding, Michael Sayers and Andrea Vander Woude*	**Advances in Hydroclimate Modeling and Data to Support Great Lakes Adaptive Management** *Chairs: Lauren Fry, Frank Seglenieks and Deanna Fielder*	**Inspiring Stewardship for the Great Lakes through Education** *Chairs: Kristin TePas, Emilie DeRochie and Megan Gunn*	**Chloride Sources, Transport, Impacts, and Management - Implications for Mitigating Freshwater Salinization** *Chairs: Jenn Drake, Shelley Arnott, Claire Oswald, Krista Chomicki, Lyndsay Cartwright and Stephanie Melles*
9:40	**C. Binding** Satellite-derived algal bloom indices on Lake of the Woods; bloom status, trends, and drivers	**S. A. Zamaria** Comprehensive calibration of a SWAT model in the Lake Erie basin: Iterative calibration of submodels	**K. TePas** Shipboard Experience for Educators Spurs New Ideas in the Classroom	**H. Dugan** Upper bounds of chloride concentrations in the Laurentian Great Lakes watershed
10:00	**K. Bosse** Building a multi-decadal Great Lakes optical property dataset to track change and improve remote sensing	**A. DaSilva** Using seasonal forecast ensembles to support harmful algal bloom forecasts at the NWS Ohio River Forecast Center	**J. Lisuk** Fostering Stewardship Through Hands-On Experiences: ISEA's Approach to Great Lakes Literacy	**J. Radosavljevic** Salinization amplifies eutrophication symptoms in freshwater lakes
10:20	**N. Arringdale** Evaluating Remote Sensing Retrievals of Particulate Backscatter	**K. Semmendinger** Value of Forecast Lead-Time and Skill in Robust Reservoir Management in the Lake Ontario - St. Lawrence River Basin	**T. Becker** The First Rings First Fellowship: Facilitating student-centered watershed investigations	**B. Mazumder** Salt to stream: A process-based integrated watershed model for urban stream chloride from winter salts using SWMM
10:40	**L. Buller** An optical water type classification scheme for hyperspectral imagery over inland waters	**Y. Hong** Operational forecasting of net basin supply for the Great Lakes: A combination of NMME and NWM	**C. Voorhees** University Undergraduate General Education Curriculum and The Great Lakes.	**H. Momin** Influence of Stormwater Management Ponds on Chloride Transport to Urban Headwater Streams
11:00	**Welcome/Opening & Large Lake Champion Awards** Toronto Ballroom I & II			
11:30	**Linda Mortsch Plenary** *Adapting to climate change in the Great Lakes–St. Lawrence Basin: A retrospective to guide future action* Toronto Ballroom I & II			
12:30	**Lunch** (on your own) 12:30-1:40			
12:30	**Science Strategy Town Hall** Toronto Ballroom I & II 12:30-1:30			

TUESDAY, MAY 9

Osgoode East	Osgoode West	Tom Thomson	Varley	
Open Data Resources of the Laurentian Great Lakes *Chairs: Cynthia Collier, Tim Lewis, Craig Palmer and Louis J. Blume*	**Groundwater Influences on Lakes, Wetlands, Springs, and Tributaries** *Chairs: James Roy, Jana Levison, Sabina Rakhimbekova and Clare E. Robinson*	**Recent Advances in Plastic Pollution in the Great Lakes to Inform Monitoring and Ecological Risk Assessment I** *Chairs: Karen Kidd, Rebecca Rooney, Chelsea Rochman and Eden Hataley*	**Join the Great Lakes Harmful Algal Bloom Collaborative for Updates on HABs Management and Research I** *Chairs: Katie Stammler, Mary Anne Evans and Nicole Zacharda*	
E. K. Hinchey Malloy Show me the data! Datasets collected and managed by the EPA Great Lakes National Program Office monitoring programs.	**C. Lowry** Connecting the pieces between climate models and coupled groundwater-surface water interactions	**B. L. Dabney** Urban Stormwater Drainage Infrastructure Influences Microplastic Transport in Great Lake Tributaries	**J. Mancuso** Assessing the effects of Detroit River inflow on Western Lake Erie bloom conditions along a transect	9:40
D. McGoldrick Environment and Climate Change Canada, open science, and Great Lakes water quality monitoring datasets	**K. Weber** Identifying Ontario groundwater PFAS sources as a threat to Laurentian Great Lakes	**E. Batte, N. Fuller** Accumulation and degradation of debris in the watershed of Lake Ontario	**K. McCabe** Phosphorus Forms in the Western Lake Erie Basin Before, During, and After HAB Conditions	10:00
A. Livingstone Introducing Great Lakes DataStream – an open access platform for sharing water quality data	**L. Grapentine** Benthic zone assessments for aquatic ecosystems receiving groundwater plumes from landfills	**P. L. Corcoran** Understanding the Sources and Transport of Micro- and Macroplastic Pollution in Suburban Stormwater Ponds	**C. M. Stevens** The Role of N:P Stoichiometry on Harmful Algal Blooms in the Western Basin of Lake Erie	10:20
J. Smith Standards and cloud first platform for Laurentian Great Lakes data - GLOS Seagull Past, Present, and Future	**B. A. Biddanda** The 1 mm Journey: Diel vertical migration in extant microbial mats optimizes oxygenation	**A. K. Suchy** Patterns and drivers of microplastics in Great Lakes coastal wetlands	**A. Zastepa** Beyond total microcystins: Toxic and bioactive metabolites produced by cyanobacteria in Lake Erie's western basin	10:40
Welcome/Opening & Large Lake Champion Awards Toronto Ballroom I & II				11:00
Linda Mortsch Plenary *Adapting to climate change in the Great Lakes–St. Lawrence Basin: A retrospective to guide future action* Toronto Ballroom I & II				11:30
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1:40	**A. R. Shahvaran** Potential of multispectral satellite and UAV imagery for nearshore water quality monitoring	**N. Gervasi** Simulating Great Lakes outflows and water levels using an open source regulation and routing model	**A. Alfred Otieno** Large lakes of the World: Lessons from the Laurentian and African Great Lakes	**K. Horton** The role of stormwater management ponds in regulating chloride fate in urban sewersheds.
2:00	**Y. Pan** GAAC: A Tool for moderate to high spatial resolution imagery over inland and coastal waters	**J. Liu** High Resolution Regional Climate Modelling over Ontario and the Canadian Great Lakes Basin	**T. J. Lawrence** The plan to strengthen education and monitoring through a network of field stations on the African Great Lakes	**V. Wisniewski** High-resolution temporal chloride patterns and contributions from two urban creeks on Lake Ontario's north shore
2:20	**Z. Almquist** Evaluation of satellite spatial resolution impacts on detection and mapping of submerged aquatic vegetation	**N. Shrestha** An assessment of the current and future land hydroclimatology of the Ottawa River Basin	**R. K. Norton** A Conceptual Framework for Studying and Contributing to Great Lakes Coastal Management Decision-Making	**T. Martin** Evaluating "eco-friendly" road de-icer effects on aquatic communities
2:40	**R. H. Watkins** Validation of ICESat-2 products in the Great Lakes: Bathymetry, attenuation, and particulate backscatter	**P. Zuzek, I. Noyes** Climate Change Impacts on Flooding Hazards for the Great Lakes	**W. Kellogg** Knowledge mobilization for decision making in three Lake Erie watersheds WITHDRAWN	**A. Fee** Assessing the toxicity of a beet-juice brine de-icing product to *Daphnia pulicaria*
3:00	**M. J. Sayers** Characterization of bottom reflectance in Lake Michigan using in fused in situ radiometry and underwater imaging	**M. Fereshtehpour** Characterizing Compound Inland Flooding in the Great Lakes Region under Climate Change	**J. H. Hartig** The role of boundary organization networks in implementing ecosystem approach frameworks	**X. Tang** Zooplankton composition and water quality in 50 stormwater ponds, Ontario
3:20	**Break**			

TUESDAY, MAY 9

Osgoode East	Osgoode West	Tom Thomson	Varley	
The Climate Systems of Large Lakes at Seasons to Millennia *Chairs: Jia Wang, David Cannon and Abby Hutson*	**The Leslie Street Spit - Tommy Thompson Park: Exploring the Creation of a Biodiversity Hotspot** *Chair: Karen McDonald*	**Recent Advances in Plastic Pollution in the Great Lakes to Inform Monitoring and Ecological Risk Assessment I** *Chairs: Karen Kidd, Rebecca Rooney, Chelsea Rochman and Eden Hataley*	**Join the Great Lakes Harmful Algal Bloom Collaborative for Updates on HABs Management and Research I** *Chairs: Katie Stammler, Mary Anne Evans and Nicole Zacharda*	
P. J. Roebber Statistical modeling of historical and future Lake Michigan-Huron water levels	**A. Chreston** Evolution of an urban wilderness: 27 years of habitat restoration, monitoring and public engagement	**D. S. Gilbert** A bellwether for microplastic deposition in wetland catchments in the Great Lakes region	**T. Bridgeman** When HABs go bad: Detecting cell rupture and toxin release	1:40
A. Hutson Testing Sensitivity of A Great Lakes Regional Climate Model with a 1-D Lake Model	**H. Morris** Adaptive management of Dog-strangling Vine and *Phragmites australis* at Tommy Thompson Park	**B. Davidson** Microplastic contamination of beach sediments: unpacking trends across three sites in western Lake Superior	**C. Salter** Elucidating microcystin-LR degradation in Lake Erie sand through metabolomics and metatranscriptomics	2:00
A. Lauer Back extension of the ECCC's Regional Surface and Precipitation Reanalysis	**M. Adachi-Amitay** Effects of *Phragmites* Invasion and Management on Wildlife Communities at Cell 1 Wetland in Tommy Thompson Park	**B. Nayebi** In-depth Variability of Microplastics in Hamilton Harbour	**M. Summers** Role of Microbial Community in Removing Cyanotoxins During Drinking Water Filtration	2:20
J. Wang Interannual Variability of Ice Cover in Green Bay and Western Lake Erie in the Great Lakes	**J. Ruppert** Habitat enhancement monitoring at Tommy Thompson Park	**M. Watson** Time trends in microplastics deposition to a reservoir in the urbanizing Grand River Watershed	**G. Moots** The Fate of Microcystin in Recreational Lake Erie Beaches	2:40
C. Huang Lake-Atmosphere Feedbacks Intensify the Summer Warming of the Great Lakes	**H. L. James** Responses of migratory passerine species to restoration of stopover habitat in an urban park	**L. Jordao** Occurrence of persistent organic pollutants at Alqueva's surface water at touristic spots.	**M. A. Evans** Nuisance algae growth conditions in Lakes Michigan, Huron, Erie, and Ontario	3:00
Break				3:20

TUESDAY, MAY 9

	Carmichael	Casson	Jackson	Johnston
	Characterizing Climate Change Impacts with Integrated Large Lake/Coastal Ocean-Watershed Modelling *Chairs: Serghei Bocaniov, Kevin Lamb, Yerubandi Ram Rao, David Hamilton and Philippe Van Cappellen*	**Environmental DNA and RNA for Monitoring Great Lakes Ecosystem** *Chair: Subba Rao Chaganti*	**Mobilization of Science through Outreach and Communities of Practice** *Chairs: Wendy Kellogg, Navjot Dhaliwal and Samantha Pickering*	**Chloride Sources, Transport, Impacts, and Management - Implications for Mitigating Freshwater Salinization** *Chairs: Jenn Drake, Shelley Arnott, Claire Oswald, Krista Chomicki, Lyndsay Cartwright and Stephanie Melles*
3:40	**K. Gaudreau** Climate change and the effects of anthropogenic thermal effluent in Lake Huron (with ID 1219)	**R. M. McKay** Metatranscriptomic analysis of winter planktonic communities from Lake Erie spanning climatic gradients	**B. Pioro** Advancing the Ecosystem Approach as an integrated science-management framework	**L. Cicchetti** Evolved tolerance to road salt among wild populations of *Daphnia*
4:00	**G. Rose** Modelling techniques for determining climate change implications on thermal risk to Great Lakes fish (with ID 1211)	**K. Mitchell** Metabarcoding for predicting the impact of invasive species on the microbial food web	**L. Treemore-Spears** Advancing public knowledge of hidden threats – microplastics outreach across the Great Lakes region	**G. Hodgins** Evaluating chloride exposure in the benthic zone of two urban streams
4:20	**L. A. Halliwell** Modelling impacts of climate change on a Wastewater Stabilization Pond discharging into the Lake Ontario Watershed	**K. Yang** Role of abiotic and biotic factors on microbial community dynamics during cyanobacterial harmful algal blooms	**M. Smedsrud, Y. Yrad** Sustaining Freshwater Services as we Anticipate Climate Change in the Obtawaing Biosphere Region	**L. Nawroth** Turning A New Leaf on Salinization: Phytoremediation of Contaminated Soils Using Halophytes
4:40	**S. A. Bocaniov** Thermal structure and bottom water hypoxia of a large lake: Sensitivity to climate change	**C. I. Rounds** Who, what, when, where, and how: Optimizing eDNA sampling for detecting multiple aquatic invasive species	**J. L. Rebek** Action Research investigating freshwater stewardship and blue economy perspectives	**B. Zeeb** Vascular Plants in the Remediation of Saline Environments: A Dispersal Model using Recretohalophytes
5:00	**D. Hamilton** A coupled catchment-lake model to assess water quality challenges from climate change in an Australian reservoir	**S. R. Chaganti** Environmental DNA and RNA for detection and abundance measurement of invasive species	**B. Bourdages** Successes, Challenges, and Lessons learned: Collective Impact for a beautiful & Healthy St Lawrence River	**P. Strong** A review of management actions by the Lake Simcoe Region Conservation Authority to reduce salt use
5:20	**P. Van Cappellen** The phosphorus mass-balance of Lake Erie reveals an important contribution of in-lake loading			

TUESDAY, MAY 9

Osgoode East	Osgoode West	Tom Thomson	Varley	
The Climate Systems of Large Lakes at Seasons to Millennia *Chairs: Jia Wang, David Cannon and Abby Hutson*	**The Leslie Street Spit - Tommy Thompson Park: Exploring the Creation of a Biodiversity Hotspot** *Chair: Karen McDonald*	**Recent Advances in Plastic Pollution in the Great Lakes to Inform Monitoring and Ecological Risk Assessment I** *Chairs: Karen Kidd, Rebecca Rooney, Chelsea Rochman and Eden Hataley*	**Join the Great Lakes Harmful Algal Bloom Collaborative for Updates on HABs Management and Research I** *Chairs: Katie Stammler, Mary Anne Evans and Nicole Zacharda*	
R. Shukla Determination of climate factors driving water quality in Lake Erie using causal discovery approach	**G. Fraser** Loss of a species: Black-crowned night-herons at Tommy Thompson Park	**M. L. Diamond** Source-specific identification, characterization, and control of MPs across a remote, rural and urban gradient	**J. Pauer** Assessing Cyanobacteria in the Great Lakes: The need for transparent and maintainable models	3:40
D. Cannon Investigating multidecadal trends in ice cover and subsurface temperatures in the Laurentian Great Lakes	**G. Fraser** Occupancy and species diversity of carnivores at Tommy Thompson Park in relationship to nesting colonial waterbirds	**P. O. Semcesen** Tagging Trash – investigating transport of floating urban macroplastic debris	**M. A. J. Fitzpatrick** Putting algal blooms under the microscope: A planktonic food web perspective on algal blooms in the Great Lakes	4:00
H. U. Abdelhady Great Lakes Wave Forecasting - A Machine Learning Approach	**C. Weseloh** Colonial Waterbirds at Tommy Thompson Park (TTP): Nest numbers and contaminant levels in eggs	**A. Nance** Trapping Trash on Toronto's Waterfront: a monitoring tool for simultaneous cleanup and data collection	**J. Li** Variation of community structure of phytoplankton and metazoan zooplankton associated with a *Microcystis* bloom	4:20
E. Illyes Contemporary lacustrine fish communities in the Lake Agassiz basin: Legacy of a glacial lake	**D. V. C. Weseloh** The spring re-occupation of "The Spit" by 25,000+ gulls and cormorants – How do they do it?	**E. Montreuil Strub** Can't stop, won't stop: Freshwater snail survivorship unaffected by microplastics in biofilm diet	**K. L. Reinl** Blooms also like it cold	4:40
S. Brothers High CO_2 fluxes from the desiccated areas of a saline lake are unaccounted anthropogenic emissions	**P. Dworatzek, M. Sadler** Human Use of an Ecological Wonder: Using Survey Data to Understand how People are Experiencing the Leslie Street Spit.	**Q. Allamby** Accumulation and toxicity of environmentally relevant microplastics exposures in freshwater macroinvertebrates		5:00
				5:20

WEDNESDAY, MAY 10

	Carmichael	Casson	Jackson	Johnston
	Land-to-Lake Connections for a Resilient Future *Chairs: Namrata Shrestha, Krista Chomicki and Rebecca Dolson*	**Restoring Great Lakes Areas of Concern: Innovative Approaches to Assessment, Improvement and Restoration** *Chairs: Brittany Perrotta, Freya Rowland and Karen Kidd*	**Aquatic Invasive Species Research I** *Chair: Rochelle Sturtevant*	**Community Science: Local Action for Resilience and Management** *Chairs: Aislin Livingstone, Max B. Herzog, Gabrielle Parent-Doliner, Alana Tedeschi, Jacqueline Vinden and Pat Chow-Fraser*
8:00	**J. Hatcher** The first ever cumulative assessment of the Canadian Great Lakes nearshore waters		**A. Y. Karatayev** *Dreissena* in the Great Lakes: What have we learned in 35 years of invasion	**L. Brinks** Lakebed 2030: Visualizing Progress
8:20	**N. Kayitesi** Quantifying Land Use Land Cover Changes and Impacts on Hydro-morphology in Sebeya catchment of the Lake Kivu Basin.	**G. B. Arhonditsis** Integrating Regional Assessment with Watershed Planning and Field-level Implementation	**L. Burlakova** Rapid assessment of *Dreissena* populations in Great Lakes	**G. Ford** Crowdsourcing coastal information and improving decisions with the Visual Assessment Survey Tool
8:40	**B. Snodgrass** Development of the Lake Ontario Hydrodynamic and Water Quality Forecasting System (LOWQFS)	**N. M. Dugener** Variability in hypoxia severity is linked to temperature and precipitation in a Great Lakes estuary	**T. A. Kunze** Benthic algal and macroinvertebrate response to the removal of dreissenid mussels in Lake Michigan.	**L. Manns** Integrating Project WET, Water Quality, Wetlands, GIS and H2Ohio into the 7th Grade Curriculum
9:00	**C. A. Arnillas** Key steps toward a holistic crop modelling framework	**E. D. Reavie** Paleolimnology supports AOC delisting and recommendations for post-AOC goals	**K. Lewandowski** Identifying the importance of an invasive mussel veliger diet on larval yellow perch growth	**A. Yaple** Students taking action to improve Lake Erie's water quality.
9:20	**Break**			

WEDNESDAY, MAY 10

Osgoode East	Osgoode West	Tom Thomson	Toronto I & II	Varley	
Quantifying Nutrient Loading and the Changes in Loading to the Great Lakes *Chairs: Dale Robertson and Matthew Diebel*	**Great Lakes Shoreline Dynamics** *Chairs: Cary Troy, Pengfei Xue and Chin Wu*	**Recent Advances in Plastic Pollution in the Great Lakes to Inform Monitoring and Ecological Risk Assessment II** *Chairs: Karen Kidd, Rebecca Rooney, Chelsea Rochman and Eden Hataley*	**The Changing Dynamics of Fisheries: Understanding the Impacts of Climate Change and Pollution in the African Great Lakes** *Chair: Ted Lawrence*	**Join the Great Lakes Harmful Algal Bloom Collaborative for Updates on HABs Management and Research II** *Chairs: Katie Stammler, Mary Anne Evans and Nicole Zacharda*	
C. Lobson Community monitoring to collect high-quality phosphorus loading data in the Lake Winnipeg Watershed	Talk moved to Toronto I & II on Wed 8–11	**Q. Xiang** Metabolic profiling of polyethylene microplastic toxicity in *Daphnia magna*	**P. Ajok** The impact of the 2020-2021 rising water levels in Uganda's major lakes and the floods in the lake shores	**X. Chang** Neurotoxicity of *Microcystis* exudates based on fish embryonic, human cellular and computational toxicology	8:00
L. R. Benakoun Multi-Watershed Nutrient Study: Challenges and potential of a high-frequency monitoring network	**P. L. Lawrence** Assessing Shoreline Changes at Indiana Dune National Park,Lake Michigan (2013-2018) via LiDAR	**R. McNamee** Microplastics increase primary production and respiration in pelagic mesocosms	**Y. Bigengimana** Bioassessment of water quality using benthic macroinvertebrates as bioindicators in Akagera River in Rwanda	**B. Friday** Threat of toxic cyanobacterial blooms to early developing green frogs	8:20
S. Knorr Agricultural land and storm events alters the biogeochemical cycling capacity of aquatic and sediment environments	**S. Peterson** Shoreline change near coastal structures under water level fluctuations and varying wave climate	**K. Kidd** Impacts of municipal wastewater treatment plant effluents on microplastics in riverine biota	**M. Yegon** Elevation and landuse as drivers of macroinvertebrate functional composition in afrotropical streams	Talk moved to Poster Session	8:40
A. Elsayed Application of machine learning algorithms in categorizing nutrient concentrations in an agricultural watershed	**L. Zhu** Trends and variations of coastal erosion in Lake Michigan	**E. Kazmierczak** Microplastics in fish relative to point source proximity and trophic level in an urban river	**J. A. Bwoga** Climate change-induced effects of temperature on parasite-fish interactions	**A. Nankabirwa** Are algal bloom occurrences in Lake Victoria harmful to the fisheries and community?	9:00
Break			**F. Atukwatse** Occurrence of microplastics in *Oreochromis niloticus* from fish breeding areas of northern Lake Victoria.	**Break**	9:20

WEDNESDAY, MAY 10

	Carmichael	Casson	Jackson	Johnston
	Land-to-Lake Connections for a Resilient Future *Chairs: Namrata Shrestha, Krista Chomicki and Rebecca Dolson*	**Restoring Great Lakes Areas of Concern: Innovative Approaches to Assessment, Improvement and Restoration** *Chairs: Brittany Perrotta, Freya Rowland and Karen Kidd*	**Aquatic Invasive Species Research I** *Chair: Rochelle Sturtevant*	**Community Science: Local Action for Resilience and Management** *Chairs: Aislin Livingstone, Max Herzog, Gabrielle Parent-Doliner, Alana Tedeschi, Jacqueline Vinden and Pat Chow-Fraser*
9:40	**Y. T. Chen** Investigating nutrients sources and retention capacity along a river-lake corridor in a mixed land use watershed	**B. Hayhurst** Assessing estuary aquatic habitat and biological community health to select areas for protection or restoration	**K. A. Baumann** Success and consequences of multiple methods of small-scale dreissenid mussel removal	**L. Manns** Collaborative Watershed Education in 9th Grade Physical Science
10:00	**D. Pebesma** Temporal dynamics of benthic macroinvertebrate communities in an urbanized Lake Ontario tributary	**J. Robson** Benthic macroinvertebrate and bacteria communities along Detroit River tributary wetlands	**S. Beck-Andersen** Hydrilla verticillata in the Finger Lakes: Using monitoring and collaboration to inform mitigation efforts	**K. Czajkowski** Great Lakes Student Research Campaign: Engaging Students and Teachers in Authentic Watershed Studies
10:20	**L. Lawson** Temporal change in fish biodiversity across highly urbanized watersheds feeding into Lake Ontario	**B. Perrotta** Shifts in insect and riparian spider microbiome across the aquatic-riparian interface in a lake with elevated copper	**M. Ward** Coastal wetland biodiversity declines when *Phragmites aus.* invades at Point Pelee National Park	**A. Aggarwal** Community science and partnerships in water quality monitoring - Lake Simcoe and Nottawasaga River watersheds
10:40	**M. Fitzpatrick** Assessing ecosystem resilience in western Lake Ontario based on phytoplankton and primary productivity, 2013-2022	**C. Kotalik** Mercury stable isotopes track aquatic to terrestrial subsidies	**G. Melvin** Muskrat Population Density Not Correlated with Invasive Hybrid Cattail in Southern Ontario	**M. Muter** Community volunteers work together with researchers and a local municipality to improve nearshore water quality
11:00	**Student Awards** Toronto Ballroom I & II			
11:30	**Sapna Sharma Plenary** *Trends, drivers, and consequences of ice loss in lakes around the Northern Hemisphere* Toronto Ballroom I & II			
12:30	**IAGLR Business Lunch** Toronto Ballroom I & II			

WEDNESDAY, MAY 10

Osgoode East	Osgoode West	Tom Thomson	Toronto I & II	Varley	
Quantifying Nutrient Loading and the Changes in Loading to the Great Lakes *Chairs: Dale Robertson and Matthew Diebel*	**Great Lakes Shoreline Dynamics** *Chairs: Cary Troy, Pengfei Xue and Chin Wu*	**Recent Advances in Plastic Pollution in the Great Lakes to Inform Monitoring and Ecological Risk Assessment II** *Chairs: Karen Kidd, Rebecca Rooney, Chelsea Rochman and Eden Hataley*	**The Changing Dynamics of Fisheries: Understanding the Impacts of Climate Change and Pollution in the African Great Lakes** *Chair: Ted Lawrence*	**General Contributions (Food Web)** *Chair: Timothy Johnson*	
M. W. Diebel Stream nutrient changes with intensive implementation of agricultural conservation practices	**C. D. Troy** The Great Lakes Shoreline Model (GLSM): Development and Applications	Talk moved to Toronto I & II on Wed 8–11	**K. Nawanzi** Water pollution and its effect on fish production of Lake Tanganyika, Zambia	**A. E. Scofield** Consistent patterns in $\delta^{13}C$ and $\delta^{15}N$ of multiple trophic levels across the Laurentian Great Lakes	9:40
F. E. Rowland Normalizing Lake Erie tributary concentrations and loads to reduce flow variability	**M. E. Miller** Mapping wetland hydrological connectivity in the Laurentian Great Lakes	**B. D. Persaud** Data sharing practices and best data management for microplastics pollution.	**L. J. Kilanga** Future climates impacts and adaptation for women in small scale fisheries along Lake Victoria	**E. Eglite** Trophic dynamics of fishes in the Great Lakes: a cross-lake comparison using stable isotopes data	10:00
A. Javed Long-term phosphorus loading trend analysis in the Bay of Quinte, Ontario	**E. Ellis** A review of nearshore breakwater projects for habitat improvement in the Great Lakes	**E. Hataley** Towards a management strategy for microplastics in the Great Lakes – Monitoring and risk assessment	**M. Chimpesa** Reviewing the socio-economic role of the fisheries sector in developing countries: The case of Malawi	**C. E. Heuvel** Moving targets: Quantifying resource consumption in mobile predators using stable isotopes	10:20
L. C. Loken Trends in phosphorus loading since 2011 in 24 U.S. Great Lakes tributaries	**J. Dorvinen** A nature-based approach to the restoration of an industrially impacted shoreline on Lake Superior	**S. Qadir** Monitoring and risk assessment of Great Lakes microplastics: An International Joint Commission initiative	**A. Nkhata** Community Participation in Ecosystem Based Fisheries Management in Restoring Lake Malawi Fish Biodiversity	**T. B. Johnson** Comparative trophic ecology of juvenile salmonids in nearshore Lake Ontario	10:40
Student Awards Toronto Ballroom I & II					11:00
Sapna Sharma Plenary *Trends, drivers, and consequences of ice loss in lakes around the Northern Hemisphere* Toronto Ballroom I & II					11:30
IAGLR Business Lunch Toronto Ballroom I & II					12:30

WEDNESDAY, MAY 10

	Carmichael	Casson	Jackson	Johnston
	Land-to-Lake Connections for a Resilient Future *Chairs: Namrata Shrestha, Krista Chomicki and Rebecca Dolson*	**Restoring Great Lakes Areas of Concern: Innovative Approaches to Assessment, Improvement and Restoration** *Chairs: Brittany Perrotta, Freya Rowland and Karen Kidd*	**Aquatic Invasive Species Research I** *Chair: Rochelle Sturtevant*	**Community Science: Local Action for Resilience and Management** *Chairs: Aislin Livingstone, Max Herzog, Gabrielle Parent-Doliner, Alana Tedeschi, Jacqueline Vinden and Pat Chow-Fraser*
1:40	**E. Giles** Applying Priority Threat Management to Maximize Benefits for Biodiversity and Climate in Ontario	**X. Hou** The Mutual Inhibition between Submerged Macrophytes with Different Planting Density and *Microcystis aeruginosa*	**S. E. Campbell** Invasion risk of introduced fishes in the Laurentian Great Lakes altered by changing climate and community dynamics	**M. B. Herzog** Lake Erie Volunteer Science Network: Engaging Communities with Credible Water Quality Data Collection
2:00	**M. Keller** Making Nature Count – Findings of the Grindstone Creek Watershed Natural Assets Management Project	**S. T. Koenigbauer** Surveying spawning utilization of a restored reef in Saginaw Bay, Lake Huron	**J. Hubbard** Estimating global sources and secondary spread of freshwater invasions to the Great Lakes basin under climate change	**G. Ross** Driving decisions in Canada's 'western great lakes' through long-term community-based monitoring
2:20	**L. Taylor, S. Parkinson** The role of applied science in decision making for urban forest management in the great lakes basin	**D. Walters** Pulling the plug: Space use and movement of fishes prior to removal of a large dam	**R. Sturtevant** Leveraging historic AIS distribution data to predict future patterns of spread	**A. Tedeschi, J. Vinden** Degraded streams to crystal clear waters: Developing community-science methods for nutrient monitoring
2:40	**K. M. Chomicki** Unraveling nearshore temporal patterns: marsh, stormwater, tributary, and point source influences in W. Durham, LO	**F. O. Masese** Challenges and strategies for management and conservation of the Lake Victoria Basin, East Africa	**M. Gruwell** Development and Application of eDNA Probes for Rapid Identification of Four AIS in the Great Lakes	**M. Wright** A STREAM-lined approach to breaking barriers in community-based water monitoring
3:00	**E. Speller, R. Dolson** Integrated Watershed Planning, Science, Policy, and Implementation in the Greater Toronto Area	**A. S. Chiandet** Beyond delisting in Severn Sound – How do things look 20 years after the party is over?	**K. Towne** Evaluation metrics for an aquatic invasive species early detection program	**S. Petrella** Rouge River Citizen Science Programs Engage Residents in filling in Data Gaps to Guide River Restoration
3:20	**Break**			

WEDNESDAY, MAY 10

Osgoode East	Osgoode West	Tom Thomson	Varley	
Quantifying Nutrient Loading and the Changes in Loading to the Great Lakes *Chairs: Dale Robertson and Matthew Diebel*	**General Contributions (Fish & Fisheries)** *Chair: Timothy Johnson*	**Physical Processes in Lakes I** *Chairs: Mathew Wells, Jason Olsthoorn, Reza Valipour and Leon Boegman*	**Protected Areas, Natural Solutions to Climate Change.** *Chair: Scott Parker*	
C. Buelo Updating binational phosphorus loading estimates for Lake Erie	**L. Warren** Quantifying the importance of alternative nursery habitats to alewife recruitment in Lake Michigan	**S. MacIntyre** Oxygen depletion and sediment respiration in ice-covered arctic lakes	**T. King** Canada's Great Lakes Coastal Protected Areas	1:40
D. M. Robertson Using model-load ratios to improve estimation of nutrient loading from unmonitored watershed areas	**K. F. Robinson** Updated decision analysis for salmonine stocking in Lake Michigan	**D. Arends** Modelling the influence of bathymetry on local melt rates of an idealized ice-covered lake	**C. Masson** The COP-15 Kunming–Montreal Global Biodiversity Framework through a Freshwater Science–Policy Lens	2:00
D. Rokitnicki-Wojcik An assessment of binational phosphorus targets for Lake Ontario.	**E. M. Liljestrand** Application of State-space Stock Assessment Models to Laurentian Great Lakes Fisheries	**M. Stastna** Simulating late winter lake dynamics: lessons from process studies	**D. Kraus** Identifying Key Biodiversity Areas in the Great Lakes	2:20
K. Bailey Spatial heterogeneity in water quality across the northern nearshore regions of the Great Lakes.	**A. D. Miller** Modeling habitat influences on the distribution of native Great Lakes fishes to inform management and restoration	**J. A. Austin** The fall transition in deep, dimictic Lake Superior	**L. Sonnenburg** Integrating cultural resources into climate change monitoring and ecological corridor planning	2:40
	S. Flinn The consequences of connectivity: A decision analytic approach to fish passage decisions	**B. Laval** Deep Water Renewal in a thermobarically stratified fiord-type lake.	Talk moved to Toronto I & II on Wed 8–11	3:00
Break				3:20

WEDNESDAY, MAY 10

	Carmichael	Casson	Jackson	Johnston
	Expected Impacts of Climate Change on Fisheries Production and Potential Anticipatorily Adaptation Strategies *Chair: Geoffrey Chavula*	**From Climate Data to Climate Action: Towards Ecosystem-Based Adaptation in the Great Lakes** *Chairs: Sharon Lam, Yuestas David, Claire Sanders and Jenessa Doherty*	**Aquatic Invasive Species Research I** *Chair: Rochelle Sturtevant*	**Community Science: Local Action for Resilience and Management** *Chairs: Aislin Livingstone, Max Herzog, Gabrielle Parent-Doliner, Alana Tedeschi, Jacqueline Vinden and Pat Chow-Fraser*
3:40	Talk moved to Toronto I & II on Wed 8–11	**C. Clunas** Canadian Centre for Climate Services: Climate services and information for ecological adaptation	**E. Huber** Facilitating success: Adaptations made over ten years of early detection and monitoring in western Lake Erie	**O. Williams** A Comparison of Seining and Electroshocking in the Rouge River, MI
4:00	**D. Rose** Testing temperature preference and critical thermal maximum across walleye populations	**F. Seglenieks** Future Great Lakes water levels and hydroclimate variables under 1.5°C to 3°C warmer climates	**J. K. Connolly** Reevaluation of the genus *Cyclops* in the Great Lakes: report of the exotic species *Cyclops divergens* from Lake Erie	**T. Saleh** Supporting local community science through data and technology
4:20	**N. Beigzali** Three-dimensional simulation of walleye habitat in Lake Erie for management of quota allocation	**G. Mayne** Assessing and Enhancing the Resilience of Great Lakes Coastal Wetlands	**M. Labib** The origins of the negative attitudes towards the rusty crayfish (*Faxonius rusticus*) in North America	**D. Gasbarrini** Positive Conservation Impact Through Community Science Projects Turtle Tally and FrogWatch Ontario
4:40	**C. A. Krabbenhoft** A quarter-century decline in walleye recruitment	**K. McNeill** Tracking ecological impacts of climate change: A process for selecting valuable climate change indicators.	**N. Yeager** Round Goby Catch Efficiency Using Down Looking Still Imaging	**L. King** Community Finance Strategies for Citizen Science: an ongoing experiment with the Great Lakes Trust
5:00	Talk moved to Toronto I & II on Wed 8–11	**K. D. Read** Adapting to Change: Climate change research and initiatives in the Lake Simcoe watershed	**J. Bergman** An Interdisciplinary Evaluation of Native and Invasive Fish Connectivity in a Navigational Waterway	
5:20				

Osgoode East	Osgoode West	Tom Thomson	Varley	
Nature-based solutions as a Key Driver to Climate Adaptation in the Great Lakes Basin *Chair: Jérôme Marty*	**General Contributions (fish & fisheries)** *Chair: Timothy Johnson*	**Physical Processes in Lakes I** *Chairs: Mathew Wells, Jason Olsthoorn, Reza Valipour and Leon Boegman*	**Coregonine Ecology, Trends, and Management I** *Chairs: Erin Dunlop and Andrew Muir*	
B. Brown, R. Nicodemus Supporting locally prioritized nature-based solutions to build Great Lakes coastal resilience	**C. Nampemba** The potential of aquaculture development on Lake Tanganyika.	**J. Kessler** Skill Assessment of Great Lakes Ice Models	**E. S. Dunlop** Larval lake whitefish dynamics in Lake Huron	3:40
E. Hawton Do nature-based climate solutions matter in urbanizing areas?	**D. Umutoni** Effect of Octylphenol (OP) water exposure to sexually mature female mosquitofish, *Gambusia affinis* life history.	**J. Olsthoorn** Modelling convection with a variable surface temperature	**D. B. Bunnell** Larval coregonine dynamics in Lake Michigan and Huron, 2015-2021	4:00
Y. Uno Development of wetland carbon cycle models: Applications for the Great Lakes Basin.	Talk moved to Toronto I & II on Wed 8–11	**P. Torma** Exploring the seasonality of the latent heat flux transfer coefficient over lakes by eddy-covariance measurements	**K. Hoyer** Diet assessment and growth of larval *Coregonus clupeaformis* and *C. artedi* in the Upper Great Lakes	4:20
R. Saha Quantify agricultural impacts on GHG emissions at major cash crops farms in a changing climate in Ontario, Canada		**D. M. Robb** Turbidity variations in the epilimnion of a glacier-fed reservoir	**I. Hebert** Annual variation in the diet of larval lake whitefish (*Coregonus clupeaformis*) from the Fishing Islands of Lake Huron	4:40
Z. Duan Varying hydrological response to climate change in three neighborhood Chinese plateau lake basins		**M. Wells** Intrusions of sediment laden rivers into density stratified water columns is a source of mixing in lakes.	**M. Lowe** Running the gauntlet: effects of legacy mining wastes on lake whitefish (*Coregonus clupeaformis)* recruitment.	5:00
		A. J. Yang Enhanced sedimentation in particle-laden flows with and without velocity shear		5:20

THURSDAY, MAY 11

	Carmichael	Casson	Jackson	Johnston
	Agricultural Best Management Practices to Restore Farm Soil Health and Water Quality *Chair: Angelica Vazquez Ortega*	**The Paleolimnological Record of Large Lakes and Their Catchments: Insights for Adapting to Future Climates** *Chairs: Francine McCarthy, Soren Brothers, Paul Hamilton and R. Timothy Patterson*	**Aquatic Invasive Species Research II** *Chair: Rochelle Sturtevant*	**Urban Phosphorus Speciation, Retention, and Export: From Science to Management** *Chairs: Mahyar Shafii, Krista Chomicki, Chris Parsons and Philippe Van Cappellen*
8:00	**J. Dhiman** Modification of SWAT model for improved winter hydrology simulation in the Great Lakes Basin		**E. J. Bloomfield** Long-term temporal variation in the isotopic niche of three species of salmonids in Lake Ontario	
8:20	**A. Vazquez Ortega** Assessment of Lake-Dredged Sediments as Farm Soil Amendment growing Specialty Crops	**F. McCarthy** The wealth of non-pollen evidence of environmental change in 'pollen slides': applications to decision-making	**A. McReynolds** Mechanisms of coexistence between native rainbow smelt and invasive alewife in Lake Champlain	**S. Slowinski** Phosphorus retention performance of a stormwater pond in Richmond Hill, Ontario
8:40	**S. Gautam** Analyzing the Effect of Lake Dredged Sediments as Farm Soil Amendment on Corn and Soil Health	**J. R. MacDonald** Paleolimnological evidence of Middle Woodland settlement 2000 years earlier than archeological evidence suggests	**J. Bopp** Re-evaluating an adaptive management framework for invasive grass carp (*Ctenopharyngodon idella)* within Lake Erie	**D. Vyn** Effect of Land Use Type and SCMs on Nonpoint Source Phosphorus in a Cold Climate Urban Subwatershed
9:00	**K. Kieffer** Characterizing the molecular composition of extractable humic material in a farm soil and lake dredged sediments	**J. Moraal** Spheroidal carbonaceous particles in palynological preparations as proxies of anthropogenic impact	**S. Spear** What do Black Carp (*Mylopharyngodon piceus*) eat? Can metabarcoding aid in the identification?	**B. Zhou** Analysis of phosphorus accumulation in an urban bioretention cell using reactive-transport modelling
9:20	**Break**			

THURSDAY, MAY 11

Osgoode East	Osgoode West	Tom Thomson	Toronto I & II	Varley	
Revitalization and Resilience of Great Lakes Communities and Ecosystems *Chairs: Kathleen Colin Williams, Rebecca Nixon and Stuart Carlton*	**Watershed-Scale Collaboration to Understand and Address Water Quality Challenges in Saginaw Bay** *Chairs: Douglas Pearsall, David Karpovich and Sherry Martin*	**Physical Processes in Lakes II** *Chairs: Mathew Wells, Jason Olsthoorn, Reza Valipour and Leon Boegman*	**Valuing Indigenous Ways of Knowing, Being, Doing, and Connecting in an Era of Climate Change, Crisis, and Uncertainty** *Chairs: Andrea Reid, Alexander Duncan, Catherine Febria, Clint Jacobs and Elizabeth Nyboer*	**Coregonine Ecology, Trends, and Management II** *Chairs: Erin Dunlop and Andrew Muir*	
R. Melstrom Do water quality improvements in Areas of Concern affect moves to nearby communities? Evidence from Michigan WITHDRAWN	**D. R. Pearsall** Funding and governance models for watershed-scale water quality monitoring: Exploring options for Saginaw Bay	**M. Mahdinia** Overcoming challenges in the representation of large lakes in regional climate models	**A. Duncan, A. M. Muir** Learning to See as Another Sees	**N. L. Berry** Anyone need sunscreen? Comparing the UV-tolerance and risk of UV-exposure among coregonine species	8:00
I. Staph Public participation in restoration of the Grand Calumet River Area of Concern	**D. Karpovich** Status and Progress of monitoring activities by the Saginaw Bay Monitoring Consortium	**G. Lükő** Comprehensive analysis of model parameters and wind forcing for simulating hydrodynamics of a large shallow lake	**M. Brown** Biinaagami, our shared responsibility to protecting the Great Lakes	**T. A. Brown** Identifying and ranking important drivers of lake whitefish and cisco recruitment	8:20
G. Bock Community Involvement Critical for Revitalization: A Case Study in the Upper St. Lawrence River	**M. O. Schrenk** How are land uses and environmental geochemistry reflected in microbial communities of the Saginaw Bay Watershed?	**N. H. V. Pham** Accounting for Wind-Waves Improves Shallow-Water Mixing Predictions in Large Lakes	**K. O. Obiero, S. Klemet-N'Guessan** Bridging Indigenous and non-Indigenous knowledge systems for the sustainable management of African fresh waters	**C. Ryther** Spawning behaviour of dikameg (lake whitefish) revealed using fine-scale acoustic telemetry	8:40
K. C. Williams Recognizing different community visions and outcomes in community revitalization in Great Lakes Areas of Concern	**J. Meyer** Hypoxia in Saginaw Bay: Assessing its prevalence and trophic effects on a benthic invertebrate	**Y. Kuai** Physical drivers of hypoxia in a large polymictic lake: examples from western basin of Lake Erie	**J. A. Esquible** Salmon, Stewardship and Protecting Indigenous Livelihoods in Southwestern Alaska	**Y. Drebert** You Can Leave the Light On: Observing Coregonine Spawning Behaviour in Real Time with ROVs	9:00
Break					9:20

THURSDAY, MAY 11

	Carmichael	Casson	Jackson	Johnston
	Agricultural Best Management Practices to Restore Farm Soil Health and Water Quality *Chair: Angelica Vazquez Ortega*	**Smarter Lakes Are Better Lakes: Innovation, Collaboration, and Entrepreneurship** *Chairs: Edward Verhamme, Emily Hamilton and Calvin Hitch*	**Aquatic Invasive Species Research II** *Chair: Rochelle Sturtevant*	**Urban Phosphorus Speciation, Retention, and Export: From Science to Management** *Chairs: Mahyar Shafii, Krista Chomicki, Chris Parsons and Philippe Van Cappellen*
9:40	**C. Barth** Cycling of phosphate in farm soils amended with dredged materials: Insights from oxygen isotopes	**A. Luessenhop** What is needed for development of an AI algal bloom prediction algorithm	**J. Hoekwater** Competition between Round Goby and Slimy Sculpin in a Laboratory Setting	**M. Shafii** Statistical modeling of phosphorus loads and speciation in urban catchments under variable landuse
10:00	**C. Zeuner** Hydrogeological Transport of Agricultural Nutrients in a Changing Climate: Modelling and Forecasting	**I. Mrdjen** In situ harmful algal bloom monitoring using pocket-sized, AI-Powered microscopes	**M. F. Docker** Sex determination in sea lamprey: One small step towards genetic control in the Great Lakes	**G. K. Nurnberg** Cyanobacteria response to climate-affected internal phosphorus loading in two drinking water reservoirs
10:20	**M. J. McCarthy** The role of an agricultural settling pond as a source vs. sink for nitrogen runoff	**T. R. Miller** Panther Buoy: A Solar Powered Open Source Water Quality and Weather Monitoring System	**D. Mitrovic** Water Temperature Influences the Sensitivity of Larval Sea Lamprey (*Petromyzon marinus*) to Lampricides	**H. A. Bootsma** Riverine loading and dreissenid recycling of phosphorus in the Lake Michigan nearshore zone
10:40	**B. Young** Soil P Values Pre and Post BMP Implementation and Effect on Water Quality in Wisconsin Agricultural Watershed	**E. Verhamme** High Density Sensor Networks for the Great Lakes - Beyond Erie	**H. Flávio** The effect of Acclimation Temperature and TFM Concentration on the Oxygen Consumption of Larval Sea Lamprey	**S. Kaykhosravi** Urban phosphorus load estimation and speciation
11:00	**Journal Awards / Anderson-Everett Award** Toronto Ballroom I & II			
11:30	**Kerry-Ann Charles Plenary** *Key concepts fundamental for adapting to climate change: An Anishnabe Kwe perspective* Toronto Ballroom I & II			
12:30	**Lunch** (on your own)			

THURSDAY, MAY 11

Osgoode East	Osgoode West	Tom Thomson	Toronto I & II	Varley	
Revitalization and Resilience of Great Lakes Communities and Ecosystems *Chairs: Kathleen Colin Williams, Rebecca Nixon and Stuart Carlton*	**Watershed-Scale Collaboration to Understand and Address Water Quality Challenges in Saginaw Bay** *Chairs: Douglas Pearsall, David Karpovich and Sherry Martin*	**Physical Processes in Lakes II** *Chairs: Mathew Wells, Jason Olsthoorn, Reza Valipour and Leon Boegman*	**Valuing Indigenous Ways of Knowing, Being, Doing, and Connecting in an Era of Climate Change, Crisis, and Uncertainty** *Chairs: Andrea Reid, Alexander Duncan, Catherine Febria, Clint Jacobs and Elizabeth Nyboer*	**Coregonine Ecology, Trends, and Management II** *Chairs: Erin Dunlop and Andrew Muir*	
M. Hennessy Developing more robust resources for underserved communities in Great Lakes AOCs	**S. G. Tolnai** Improving the Quality of the Grand River by Optimizing Wastewater Treatment	**S. MacIntyre** Hydrodynamic modeling of stratification and mixing in shallow, tropical floodplain lakes	**M. C. Buell** Capturing the landscape of Indigenous-led initiatives and priorities for research in the Great Lakes	**A. E. Honsey** Documentation of a probable spawning run of Cisco *Coregonus artedi* in the Spanish River, Ontario, Canada	9:40
S. Sowa Improving How Science Informs Policy Within an Ecosystem Management Approach	**Q. Zhang** Progress in reducing nutrient loads to Chesapeake Bay: A synthesis of three decades of monitoring data and research	**S. Torok** Analyzing the thermal stratification of a large polymictic lake in the light of climate change	**K. Rousseau** Indigenous Partnerships with GLOS	**K. Alofs** A methodology for comparing historical and contemporary coregonine distributions to inform restoration	10:00
S. Dobie Defining coastal resilience in the Great Lakes: A systematic review and critical comparison	**N. F. Manning** When to Collect and How to Share: Insights from the Heidelberg Tributary Loading Program	**R. Ladwig** Combining 1D process-based modeling with deep learning in a modular compositional learning framework	**R. Duncan** The Bim'mazh Project: Dikameg (Lake Whitefish), Technology and Saugeen Ojibway Nation Ecological Knowledge	**C. Taylor** Regional diet and isotopic niche of lake whitefish and lake trout following a regime shift in Lake Huron	10:20
A. Jones, V. Blakely Emphasizing natural infrastructure, equity, and justice in Great Lakes coastal resilience planning and manage-ment	**H. Kelsey** Socio-environmental report cards as tools for synthesis and collaboration at the watershed scale	**H. Henderson** The glider flies while data drives: Assimilation and deep learning with high-resolution AUV data	**T. J. Hollinger, D. Hardy** Biinjitiwaabik Zaaging Anishinaabek Lake Nipigon Project.	**N. E. Mandrak** Taxonomy of Ciscoes (*Leucichthys* spp.) in the Laurentian Great Lakes: Current Status and Path Forward	10:40
Journal Awards / Anderson-Everett Award Toronto Ballroom I & II					11:00
Kerry-Ann Charles Plenary *Key concepts fundamental for adapting to climate change: An Anishnabe Kwe perspective* Toronto Ballroom I & II					11:30
Lunch (on your own)					12:30

THURSDAY, MAY 11

	Carmichael	Casson	Jackson	Johnston
	Agricultural Best Management Practices to Restore Farm Soil Health and Water Quality *Chair: Angelica Vazquez Ortega*	**Smarter Lakes Are Better Lakes: Innovation, Collaboration, and Entrepreneurship** *Chairs: Edward Verhamme, Emily Hamilton and Calvin Hitch*	**Small but Mighty: Wetlands as Keystone Ecosystems in the Great Lakes Basin in an Era of Climate Change I** *Chairs: Andrea Kirkwood and Rebecca Rooney*	**Ecological Modeling and Physical-Biological Interactions in Large Lakes and Their Watersheds I** *Chairs: Reza Valipour, Mark Rowe and Josef Ackerman*
1:40	**L. Shah** History and advancement of crop modelling	**C. Hitch, A. McDonald** The Toronto and Region Conservation Authority Water Quality Monitoring Network: a collaborative approach	**C. Schon** Protecting Great Lakes wetlands using biological control	**K. Shchapov** Temporal changes in water quality parameters across nearshore regions of Canadian Great Lakes
2:00	**W. Weatherson** Comparing and Evaluating Nutrient Offsetting Programs in Ontario	**T. A. Edge** Advancing molecular technologies and microbial water quality assessment in the Great Lakes basin	**A. Parnas** Effects of Invasive Cattail on Zooplankton Community Composition in Littoral Wetlands	**A. G. Hounshell** Nutrient and environmental factors regulating western Lake Erie cyanobacterial blooms
2:20	**S. Francis** Combating Legacy Phosphorus: Phosphorus Removal Structures for Tile-Drained Agricultural Fields	**P. V. S. L. Gunawardana** Estimation of metabolism in Lake Superior using autonomous underwater vehicle data	**V. Baker** Impacts of Water Lily Invasion and Removal on Wetland Ecosystem Function	**A. Arsenault** Great Lakes Winter Grab: Dissolved organic matter in and under the ice across a nutrient gradient
2:40	**R. Pinkerton** Predicting Soil Test Phosphorus Concentrations across Ontario to Aid in Management Strategies for The Great Lakes	**S. Brunner** Smarter Lakes: Advances from technology to information delivery	**D. S. Montocchio** How the CSR strategies of macrophytes in coastal wetlands influences their responses to water levels	**C. M. Godwin** Using contemporary optical properties to infer past changes in UV and visible light attenuation
3:00	**L. Ahmadi** Integrating detailed land management information into statistical watershed phosphorus loading models	**H. Blair** Insights into scattering layer identity using dual frequency acoustics in the Great Lakes	**M. Rumbach** Top-down effects of wetland invertebrates on nutrients via macrophytes and biofilm	**J. M. Watkins** Finescale vertical distribution of zooplankton in offshore Lake Ontario in 2018
3:20	**Break**			

THURSDAY, MAY 11

Osgoode East	Osgoode West	Tom Thomson	Toronto I & II	Varley	
Revitalization and Resilience of Great Lakes Communities and Ecosystems *Chairs: Kathleen Colin Williams, Rebecca Nixon and Stuart Carlton*	**Lake Simcoe: Progress, Trends, and Future Directions** *Chairs: Brian Ginn, Justin Trumpickas and Joelle Young*	**Physical Processes in Lakes II** *Chairs: Mathew Wells, Jason Olsthoorn, Reza Valipour and Leon Boegman*	**Valuing Indigenous Ways of Knowing, Being, Doing, and Connecting in an Era of Climate Change, Crisis, and Uncertainty** *Chairs: Andrea Reid, Alexander Duncan, Catherine Febria, Clint Jacobs and Elizabeth Nyboer*	**Coregonine Ecology, Trends, and Management II** *Chairs: Erin Dunlop and Andrew Muir*	
G. Chigamba Costing ecosystem services for rivers, does it matter in management? A case of Linthipe River in Southern Africa	**A. Neumann** Application of SPARROW model to examine phosphorus export between contrasting flow regimes in southern Georgian Bay	**L. L. Swatridge** Real-Time and Forecast Modelling of Storm Surges and Surface Waves in Lake Ontario	**S. R. Nolan** Stream health and controls on the complexity of dissolved organic matter in settled and Indigenous landscapes	**P. K. Schofield** Temporal Genetic Diversity of Cisco (*Coregonus artedi*) in Lake Huron	1:40
D. Carpenter Tools and Tactics for Sustainable Small Harbors	**B. Thompson** Land use change in the Lake Simcoe watershed: 2003-2018	**L. Fitzpatrick** Improving Flood Forecast Guidance for Ports in the Great Lakes Using a Linked Hydrologic-Hydrodynamic Framework	**H. Postma** Lessons learned towards the shared responsibility of safeguarding Great Lakes fisheries	**A. Krause** Assessing spatial and temporal variation in lake whitefish stock mixing rates throughout Lake Michigan	2:00
S. Myers The City and the Lake: Sociospatially Situating the Lake Erie Bill of Rights	**S. Moin** Inspection, Maintenance, and Resourcing Needs for Stormwater Features in the Lake Simcoe Watershed	**W. Shi** Identifying hatching locations of Walleye in Lake Erie with a backward particle tracking model	**A. Duncan, E. Nyboer** Listening to rights-holders: Research and stewardship of sea lamprey in the Laurentian Great Lakes	**B. Rook** Historical cisco population decline in Green Bay, Lake Michigan, with estimates of abundance during 1945–1957 WITHDRAWN	2:20
E. Wanderi Challenges facing the fisheries and economic viability of desert lakes-a case of Lake Turkana, Kenya	**E. A. Angus** Factors influencing fraction of septic system wastewater effluent delivered to tributaries.	**B. Hlevca** Estimating nearshore-offshore water exchange in Lake Ontario	**N. Latulippe** Connecting Indigenous Placemakers and Caring for Place in Toronto	**K. Tremblay** Lake Nipissing Cisco – Adaptive and Resilient	2:40
	L. Aspden Phosphorus loads to Lake Simcoe and in-lake conditions: investigating the impacts of nutrient decoupling	**Y. Shi** Observations of wind-driven upwelling in Lake Ontario during both summer and winter	**C. Febria** Nurturing transformative change and reconciliation pathways: A case study of Canada's National Urban Parks Program	**A. Cook** Lake Erie Whitefish Mortality Estimation Using Acoustic Telemetry	3:00
Break					3:20

THURSDAY, MAY 11

	Carmichael	Casson	Jackson	Johnston
	Agricultural Best Management Practices to Restore Farm Soil Health and Water Quality *Chair: Angelica Vazquez Ortega*	**Smarter Lakes Are Better Lakes: Innovation, Collaboration, and Entrepreneurship** *Chairs: Edward Verhamme, Emily Hamilton and Calvin Hitch*	**Small but Mighty: Wetlands as Keystone Ecosystems in the Great Lakes Basin in an Era of Climate Change I** *Chairs: Andrea Kirkwood and Rebecca Rooney*	**Ecological Modeling and Physical-Biological Interactions in Large Lakes and Their Watersheds I** *Chairs: Reza Valipour, Mark Rowe and Josef Ackerman*
3:40	**C. Wellen** Assessing the phosphorus mass balance of eleven headwater agricultural catchments in Southern Ontario	**E. Murray** Robust off-grid analyzer for autonomous remote in-situ monitoring of nitrate and nitrite in water	**R. Rooney** Wetland biofilm - a key primary producer and agent of water purification	**J. D. Ackerman** The effect of turbulence on the feeding of a freshwater grazer (*Daphnia magna*): The influence of algal size and shape
4:00	**C. Proctor** Crop root imaging at scale: Evidence from lab biosolid experiments	**T. M. Evans** Assessing fish avoidance to motorized acoustic survey vessels using quiet autonomous Saildrones in the Great Lakes	**T. S. Seilheimer** Fish and wild rice: a recipe for restoration success	**J. Carman** Spawning Habitat and Roughness Flows: Impacts on Walleye (*Sander vitreus*) Egg Displacement and Survival Likelihood
4:20	**K. Stammler** Expanding greenhouse sector in Essex County, ON contributes to downstream water quality degradation	**K. C. Nasworthy** Abundance of *Mysis diluviana* in Lakes Michigan and Huron assessed using acoustic data from autonomous vessels	**A. Chreston** Creating and managing wetlands on a constructed landform in Toronto	**K. Chong** Linking hydrodynamics to foraging: The swimming and feeding of walleye larvae (*Sander vitreus*) in turbulent flows
4:40	**O. F. Johnson** Developing a new program for monitoring the nutrient function of restored wetlands in Ohio		**J. Reid** In or Out? Tracking the movements of freshwater fishes in rehabilitated stormwater pond habitat	**N. R. Urban** Do fish contaminant concentrations reflect spatial scales of ecosystem structure in Lake Superior?
5:00			**D. Ruane** 29-year quantification of soil carbon sequestration rates in constructed wetlands	**A. Lu** Buffering success: assessing the effect of riparian vegetation buffers on juvenile unionid mussel habitats
5:20	**Break**			

THURSDAY, MAY 11

Osgoode East	Osgoode West	Tom Thomson	Toronto I & II	Varley	
Building Resilience in the Great Lakes Basin *Chair: Jérôme Marty*	**Lake Simcoe: Progress, Trends, and Future Directions** *Chairs: Brian Ginn, Justin Trumpickas and Joelle Young*	**Physical Processes in Lakes II** *Chairs: Mathew Wells, Jason Olsthoorn, Reza Valipour and Leon Boegman*	**Valuing Indigenous Ways of Knowing, Being, Doing, and Connecting in an Era of Climate Change, Crisis, and Uncertainty** *Chairs: Andrea Reid, Alexander Duncan, Catherine Febria, Clint Jacobs and Elizabeth Nyboer*	**Coregonine Ecology, Trends, and Management II** *Chairs: Erin Dunlop and Andrew Muir*	
N. Chin, K. Heim The Lake Superior Climate Champions Program: Building climate resilience through local action	**B. K. Ginn** Fifteen years of nearshore monitoring on Lake Simcoe	**J. D. Anderson** Coastal upwelling mechanisms and characteristics along the Keweenaw Peninsula, Lake Superior	**A. Reid** Facilitated discussion on addressing inequities at aquatic science conferences	**T. Haxton** Biological characteristics of inland lake whitefish populations in Ontario	3:40
M. Kocher Using Scenario Planning to Build Resilient Communities	**J. Young** Update on Lake Simcoe's Water Quality and Open-water Lower Food-web: 1980 to 2022	**R. Valipour** Nearshore-offshore exchanges by enhanced turbulent mixing along the north shore of Lake Ontario	Discussion continued	**A. Bonsall** Predator assemblage influences the maximum size of Cisco *(Coregonus artedi)* in Ontario inland lakes	4:00
R. D. Bergstrom Community capacity and climate change in the Laurentian Great Lakes Region	**R. Wilson** 20 years of monitoring the fish populations in the tributaries of the Lake Simcoe watershed	**M. W. Tryon-Petith** Abrupt bluff recession near coastal structures under fluctuating water levels in Lake Michigan		**J. L. Bonilla-Gomez** Survival and reproductive success of cultured cisco (*Coregonus artedi*) in Saginaw Bay, Lake Huron	4:20
D. Ferreira Identifying Lake Ontario shoreline vulnerabilities to extreme water level conditions	**J. Trumpickas** Seasonal spatial distribution and movement patterns of lake trout in Lake Simcoe	**E. J. Anderson** Detection of Meteotsunamis in Lake Michigan		**S. Hansen** Managing lake whitefish in Wisconsin waters of Lake Michigan – a tale of two waters	4:40
A. L. Holey Joint Probability Analysis of Extreme Precipitation and Water Level for Chicago, Illinois.	**C. Madramootoo** Improved Water Management Systems to Reduce Agricultural Non-Point Source Pollution in Lake Simcoe	**C. H. Wu** Occurrences of meteorologically induced water level oscillations in a semi-enclosed basin, Lake Superior			5:00
Break		**E. G. Kedir** Depth averaged velocity and Boundary Shear Stress distributions in Compound channels with Converging floodplains	**Break**		5:20

FRIDAY, MAY 12

	Carmichael	Casson	Jackson	Johnston
	Approaches for Horizon Scanning: Assessing Threats to the Great Lakes to Establish Early Warnings. *Chairs: Michael Twiss, Lucinda Johnson, Matthew Child and Lizhu Wang*	**Maximizing Results, Minimizing Disturbance: Non-Invasive, Low Impact Monitoring of Aquatic Ecosystems** *Chairs: Matthew Windle and Courtney Holden*	**Small but Mighty: Wetlands as Keystone Ecosystems in the Great Lakes Basin in an Era of Climate Change II** *Chairs: Andrea Kirkwood and Rebecca Rooney*	**Ecological Modeling and Physical-Biological Interactions in Large Lakes and Their Watersheds II** *Chairs: Reza Valipour, Mark Rowe and Josef Ackerman*
8:00	**M. Child** Framing an Early Warning System for the Great Lakes	**Z. Melnick** Swimming with the Fishes: Using Underwater Drones (ROVs) to Observe Fish Behaviour	**L. Wang** Comparison of fish communities in Lake Ontario coastal wetlands	Talk moved to Toronto I & II on Wed 8–11
8:20	**B. Crimmins** A Decade of Horizon Scanning for Contaminants in the Great Lakes	**C. Holden, K. Sunday** Monitoring dam impacts on migratory fish using visual survey methods founded on mutual respect and autonomy	**C. M. Tucker** Estimating fish production in Lake Ontario wetlands	**C. R. Farrow** Physical modelling of dispersal in Grand River watershed tributaries with different hydrodynamic conditions
8:40	**Y. Zi** Identification of potential mechanisms of action and toxins for immunotoxicity of cyanobacteria exudate mixtures	**R. C. Grow** Taking a look at the upside: Using a stationary up-looking acoustic platform to examine fish ecology in Lake Superior	**T. Ritz** Abiotic conditions impact survival of stocked young-of-year Northern Pike in Upper St. Lawrence River wetlands	**D. Rucinski** LEEM: A 3-Dimensional, Unstructured Finite-Volume Ecosystem Model for Lake Erie
9:00	**J. R. Krieger** NOAA Initiatives to Study and Manage Invasive Species in the Great Lakes and Beyond.	**T. Gehrke** Take only side scans, leave only wake – using technology to map broad-scale riverine fish habitats	**M. A. Casler** Exploring multi-season occupancy of Rallidae species in Great Lakes coastal wetlands	**M. D. Rowe** Intercomparison of three spatially-resolved, process-based Lake Erie hypoxia models
9:20	**S. L. Martin** A risk-based analysis of groundwater impacts on the water quality in Lake Superior	**S. Maracle** Gettin' Fishy With It: new approaches made possible through Indigenous partnerships	**T. J. Harrow-Lyle** Identifying climate and seiche influences on phosphorus loadings in coastal wetlands on Lake Ontario	**Q. Wang** Computational Water Quality Modelling of Western Lake Erie
9:40	**J. F. Bratton** Operationalizing a Great Lakes Early Warning System	**H. J. Esparra-Escalera** Land use effects on nutrient pollution and benthic macroinvertebrate assemblages in Michigan streams	**M. DellAquila** Investigating the role of anoxia in the nutrient dynamics of four Lake Ontario coastal wetlands.	**S. T. Gardner** The phenology of larval fish transport in Lake Michigan, USA
10:00	**Break**			

FRIDAY, MAY 12

Osgoode East	Osgoode West	Tom Thomson	Varley	
General Contributions (Water Quality & Plankton) *Chair: Timothy Johnson*	**Contaminants in a Future Climate: Legacy and Emerging Contaminants Under Global Change** *Chairs: Roxanne Razavi and Evie Brahmstedt*	**Restoring and Monitoring Habitat in the Toronto and Region Area of Concern** *Chairs: Don Little and Andrew Ramesbottom*	**Human Dimensions of Recreational Use of the Laurentian Great Lakes: Insights about Behaviours, Value, and Impacts** *Chair: Len Hunt*	
Talk moved to Toronto I & II on Wed 8–11	**E. Brahmstedt** Where have we been and where are we going: contaminants in the Great Lakes	**T. Sciscione** Waterfront integrated restoration prioritization: a tool for improving aquatic habitat	**C. Sigmann** Climate Change Adaptation: The Tourism Industries of the Northwestern Region of Michigan USA	8:00
Talk moved to Toronto I & II on Wed 8–11	**S. Rakhimbekova** Effect of climate change on the functioning of sediment traps and discharge of pollutants to large lakes	**M. L. Piczak** Towards effective ecological restoration: Knowledge co-production with Aquatic Habitat Toronto	**S. Carlton** Trust ecology and fisheries management: do trust evenness and richness matter?	8:20
L. Sitoki Interannual variability of water quality conditions in the Nyanza Gulf of Lake Victoria, Kenya	**A. M. Harrison** Influences of lake connectivity and site conditions on heavy metals in Great Lakes coastal wetlands	**R. Scott** Assessing the biological response to stream restoration in the Toronto region	**M. Wick** How do social factors influence coastal cultural ecosystem services? A case study in the St. Louis River Estuary	8:40
E. DiBiasio Analyzing spring carbon dynamics across the nearshore-offshore boundary of lake Erie off the Cleveland coast	**A. Okolocha** Emerging contaminants, PFAS under climatic variability: Insights from Agulu Lake, Nigeria	**S. Theis** Fish community changes along the Toronto Waterfront over the past decades based on boat electrofishing surveys	**V. M. Nguyen** Provisioning Fisheries: Calling Attention to Non-Recreational Dimensions of Recreational Fisheries	9:00
E. Doody Trends in particulate nutrient concentrations and seston stoichiometry of the Laurentian Great Lakes	**O. J. Aladekoyi** Evaluating the impacts and the management of pharmaceuticals released into the Canadian aquatic environment	**M. Elmarsafy** Study of zooplankton communities in Area of Concern (Toronto Harbour).	**L. M. Hunt** Understanding the diversity of Ontario's Great Lakes recreational fishery	9:20
J. Tuyisenge Assessing local environmental effects of cage fish farming on Lakes Kivu and Muhazi, Rwanda	**M. Milligan** Toxaphene Concentrations in Great Lakes Fish: 2004-2020	**C. Coppolino** Gibraltar Point: restoring lost features, incorporating new ones, and preserving the Toronto Islands	**Z. Su** Evaluation of Bus-route and Aerial-access Methods for Great Lakes Recreational Fisheries Surveys	9:40
Break		**N. Stuart, J. Herrington** Creating new habitat through an urban brownfield and how to protect it	**Break**	10:00

FRIDAY, MAY 12

	Carmichael	Casson	Jackson	Johnston
	The Impacts of Climate Change on the Great Lakes-St. Lawrence Basin and Potential Policy Responses *Chair: Peter Johnson*	**Communicating about Great Lakes Invasive Species** *Chair: El Lower*	**Great Lakes Oil Spill Science: Planning and Response in a Changing Climate** *Chairs: Kelsey Prihoda, Mark Burrows, Natalie Chin and Rachel Pryor*	**Ecological Modeling and Physical-Biological Interactions in Large Lakes and Their Watersheds II** *Chairs: Reza Valipour, Mark Rowe and Josef Ackerman*
10:20	**P. Johnson** Management Planning in the Great Lakes-St. Lawrence River Basin	**E. Lower** Metaphors Be With You: Alternative Frameworks for Communicating about AIS	**K. Prihoda** How HazMaTON is working to help advance oil spill science in the Laurentian Great Lakes	**P. J. Alsip** Developing light attenuation models for use in Great Lakes biophysical models
10:40	**A. Pruitt** From dry streams to flooded fields: Managing groundwater/surface water interactions in a changing climate	**N. G. Stratton** The role of the media in communicating about Great Lakes aquatic invasive species	**Y. Song** Advancing modeling capability of oil spill transport by considering ice cover in the Great Lakes	**H. Ebrahimi** Automatic calibration of a three-dimensional hydrodynamic and water quality model using machine learning
11:00	**B. Sterner** Vanishing winter underlies summer cyanobacterial blooms in Earth's largest lake WITHDRAWN	**K. O'Reilly** How the Grinch stole #Fishmas: Invasive species communication within a broader biodiversity campaign	**I. Bigcraft** Oil Biodegradation and Prediction of the Presence of Oil in the Great Lakes.	**X. Zhou** Impact of Climate Change Scenarios on Phytoplankton in Lake Michigan: A Biophysical Modeling Study
11:20	**K. Bunting-Howarth, A. Harder** Climate-Induced Human Migration in the Great Lakes Basin	**G. A. Hitzroth** Release Zero Retailer Program – Aquatic Invasive Species Education in the Aquarium Industry	**H. D. Dettman** Temperature effect on oil spill behaviour and biodegradation – meso-scale studies of diluted bitumen	**R. Valipour** Year-round ecological responses of two large lakes using process-based hydrodynamic and water quality models
11:40	**J. A. Polidori** Improving water management and climate resilience through regional coordination and collaboration	**E. Lower** Discussion	**C. G. Weisener** Improving our understanding of Environmental Stress in Freshwater-watersheds impacted by hydrocarbons	
12:00	**Conference Ends**			

FRIDAY, MAY 12

Osgoode East	Osgoode West	Tom Thomson	Varley	
General Contributions (Water Quality & Plankton) *Chair: Timothy Johnson*	**Contaminants in a Future Climate: Legacy and Emerging Contaminants Under Global Change** *Chairs: Roxanne Razavi and Evie Brahmstedt*			
H. A. Niblock Exploring Phytoplankton community structure, primary and bacterial productivity in the urbanized Toronto Harbour	**R. Lepak** Exploring contaminant trends in fish to establish a baseline for climate change evaluation			10:20
K. E. Watchorn Lake Winnipeg's nearshore: water quality and aquatic biota	**J. J. Ridal** Legacy mercury contamination in the St. Lawrence River: consideration of climactic factors in long term monitoring			10:40
C. C. Marshall Seasonal Zooplankton Community Trends: Lake Ontario CSMI 2018	**I. Armstrong** Subfossil chironomid assemblages show ecological recovery in the Cornwall, ON waterfront			11:00
P. V. Boynton Does Age Matter? Daily Migration Patterns of Mysis diluviana in the Laurentian Great Lakes	**C. Lajoie** The effects of forestry and beaver dams on mercury dynamics in Ontario's Boreal stream food webs			11:20
S. D. Lawhun Shrimply Biased? Lakewide Mysis estimates in Lake Michigan over time and potential bias due to basin differences	**R. Razavi** Project Breathless: assessing hypoxia exposure and mercury uptake in fish			11:40
Conference Ends				12:00

POSTER SESSION & SOCIAL

Toronto Ballroom III

Tuesday, 6–8

Posters are grouped in the following themes:

BHD	Biology and Human Dimensions
CCA	Climate Change and Adaptation
COM	Communicating Great Lakes Science
GEN	General Contributions
GLP	Great Lakes Processes
HAB	Great Lakes Habitats
RMF	Restoration and Management for the Future
TGL	Threats to the Great Lakes
TID	Technology, Innovation, and Data Management
WQE	Water Quality and Healthy Ecosystems

They will remain on display through 1 p.m. on Thursday, May 11.

POSTERS

BHD: Biology and Human Dimensions

BHD-1 ARNOLD, A.
High Resolution Multibeam Mapping and AUV Ground-Truthed Habitat Assessment of Fish Spawning Reefs in Lake Michigan

BHD-2 CHEMOIWA, E.
A Study on Diversity of Labeobarbus altianalis Populations in Lake Victoria Watershed Using MtDNA

BHD-3 COFFIN-SCHMITT, J.
Self-provisioning from urban recreational fishing on the Niagara River

BHD-4 GREENHORN, J., SADOWSKI, C.
Orthoimagery as a viable alternative to ground surveys for conducting muskrat house counts

BHD-5 HARIG, J.
Basal respiration rates of larval Coregonus clupeaformis and C. artedi

BHD-6 NYFFELER, O.
Investigating Drivers of Cisco Recruitment in Lake Superior

BHD-7 QUIROZ, C.
Causing a Stir in Northern Pitcher Plants (Sarracenia Purpurea)

CCA: Climate Change and Adaptation

CCA-1 CHIN, A.
Developing a Nature-based Climate Solutions Siting Tool for the Toronto Region

CCA-2 FEVOLD, B.
Designing Ecological Restoration Goals and Objectives to be Climate Smart

CCA-3 GRONEWOLD, A.
Assessing Impacts of Climate Change on the Great Lakes' Future Water Balance

CCA-4 LUO, Y.
Apply the Large Lake Statistical Water Balance Model to Reduce Uncertainty in Great Lakes Water Balance Components

CCA-5 MUGISHA, S.
Assessing the resilience of rivers to climate change in the Lake Erie Basin

CCA-6 PUOPOLO, N.
Spatiotemporal Variability of Climatic, Extreme Weather, and Agroclimatic Indices in Three Great Lakes Basins

CCA-7 SOLDI, P.
Determining economic and social vulnerability of flooding events in Great Lakes communities

COM: Communicating Great Lakes Science

COM-1 BELLE, A.
Diversifying outreach to increase knowledge of a Great Lakes Legacy Act sediment remediation project

COM-2 DATENO, C.
Attitudes, risk perceptions, and behaviors toward aquatic invasive species among boaters in Illinois and Indiana

COM-3 RATTRAY, G.
Addressing Environmental Leadership Through Interdisciplinary Community Engagement

COM-4 RODMAN, M.
Supporting community solutions through the Lake Superior Great Lakes One Water Community of Practice

COM-5 SAMPLE, A.
Using ArcGIS StoryMap to engage with the public about Great Lakes Piping Plovers conservation

COM-6 VAN ZEGHBROEK, J.
GLANSIS Education Hub: Ensuring that AIS education is relevant, inspiring, and accessible

COM-7 ZIEGLER, C.
Inciting stewardship action in middle school students through long-term limnology data collection

GEN: General Contributions

GEN-1 ACHIENG, D.
Predicting the relationship between water hyacinth and cyanobacterial blooms in lake Victoria

GEN-2 CHRISTIAN, E.
Evaluating multiple stressors using Chironomids in Lake Erie

GEN-3 DAGGUPATI, P.
Bibliometric Analysis on Lake Erie and its Watershed

GEN-4 DOBERSTEIN, A.
Bathymetric Study of Laguna Bacalar Quintana Roo Yucatan Peninsula

GEN-5 DROUILLARD, K.
Temporal trends of mercury and isotopes in Nile Perch from Winam Gulf, Lake Victoria, Kenya: 1998 vs 2022

GEN-6 FORTUNE, C.
Monitoring movement of Hardside Dace and congener species to identify overwinter habitat and inform recovery plans

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GEN-7 HERNE, T.
Shrimp on Film - Utilization of Benthic Habitat by Mysis diluviana in Lake Michigan

GEN-8 HUTCHINS, R.
Greener Ice with Cleaner and Recycled Water: Improving Water Quality and Reducing the Carbon Footprint of Arenas

GEN-9 IVES, J.
International aspects of the International Association for Great Lakes Research and Journal of Great Lakes Research

GEN-10 KOEBEL, C.
The effect of N:P ratio on growth rates of Lake Erie phytoplankton

GEN-11 OMACH, Z.
Environmental impacts of cage culture in Lake Victoria, Kenya

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GEN-12 POTTER, L.
Fatty acid differences amongst different populations of river mussels

GEN-13 RUPNIK, A.
Multi-species analysis of seasonal movement corridors for Lake Ontario fishes

GEN-14 SALAH, H.
Global Intercomparisons of Impacts of Air Pollution on Air Quality and Human Health

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GEN-15 STOLL, J.
Nutrient limitation in the cyanobacteria harmful algal bloom (cHAB) riddled Nyanza Gulf, Lake Victoria, Kenya

GEN-16 THORNBURG, B.
Influence of episodic events on nearshore water quality in Lake Superior's Chequamegon Bay

GEN-17 WANG, L.
Great Lakes Science Strategy for the Next Decade

GLP: Great Lakes Processes

GLP-1 BASU, A.
Phenological Shifts in Lake Ice across the Northern Hemisphere

GLP-2 EKOA BESSA, A.
Lacustrine records from Cameroon lakes (SW-Africa): insight for paleoenvironmental evolution

GLP-3 GALVAN, J., HABIB, J.
Total bottom stress as a potential predictor of Microcystis resuspension in the western basin of Lake Erie

GLP-4 GAO, Y.
Remote sensing tool to identify locations of septic systems within the Canadian Lake Erie Basin

GLP-5 HODGINS, G.
Characterizing shallow groundwater chloride near urban streams using geoelectric techniques

GLP-6 LEGARE, S.
Modelling under-ice algal growth

GLP-7 MARISCAL, N.
Evaluation of Ozone Using High-Resolution Model Simulations during the Michigan-Ontario Ozone Source Experiment

GLP-8 NAKASHIMA, M.
Assessing biases in climate models and atmospheric reanalysis datasets in the Great Lakes

GLP-9 OVIEDO, C.
Six thousand years of vegetation history from a mineral marsh on the Lake Erie sand plains

GLP-10 ROY, J.
Aquatic life exposure to per- and poly-fluoroalkyl substances (PFAS) of groundwater landfill plumes

GLP-11 VEHLING, T.
Identifying significant groundwater recharge areas and hydrological function assessment of the Neebing River

HAB: Great Lakes Habitats

HAB-1 BAKER, A.
Cattail restoration impacts on two grasses in the wet meadow zone in Lake Ontario coastal wetlands

HAB-2 FONTZ, J.
Leveraging priority effects to resist biological invasion: Marsh organs

HAB-3 MARTIN, S.
Subcatchment Spatiotemporal Solute Trends in a Wetland-Dominated Catchment in Michigan, USA

HAB-4 ZAVAREEI, H.
The Shiawassee Flats: Restoration, Reconnection, and Response

RMF: Restoration and Management for the Future

RMF-1 BELLEVILLE, R.
Assessing establishment of native species in a restored Great Lakes coastal wetland invaded by Typha x glauca

RMF-2 BHAVSAR, S.
Assessment of the fish consumption beneficial use (BU #1) in the Toronto and Area AOC

RMF-3 FARHANI, M.
Artificial neural network modeling of sediment organic carbon, and PCBs in the Detroit River

RMF-4 HARPLEY, P.
Probing the Land/Water interface at rivers and streams: South Lake Simcoe, Sand and Clay plain landscape

RMF-5 READ-MANEY, K.
Microscopic aquatic epiphytes as bioindicators of water quality in the wetlands of Lake Simcoe

RMF-6 ROUNDS, C.
Model comparison for evaluating changes in inland lake ice cover.

RMF-7 WANG, G.
Environmental variables associated with fish biodiversity in stormwater ponds in Ontario

TGL: Threats to the Great Lakes

TGL-1 ALCOTT, L.
Direct Wastewater Treatment Plant Inputs of Microplastics to the Laurentian Great Lakes

TGL-2 ALLEN, E.
Nutrient-dependent effect of microplastic and anthropogenic fiber on phytoplankton productivity

TGL-3 CALTABIANO, S.
Our current understanding of nitrate reductase in Microcystis

TGL-4 DANIEL, S.
Status of the New Zealand Mud Snail *(Potamopyrgus antipodarum)* in the Laurentian Great Lakes

TGL-5 BROWN, C.
Effectiveness of environmental DNA for routine larval monitoring of invasive Sea Lamprey

TGL-6 EVANS, K.
Road Dust as an Indicator of Microplastic Deposition in the Greater Toronto Area, Ontario

TGL-7 HALL, S.
Analysis of the LightDeck Biosensor for Cyanotoxins in Freshwater Samples

TGL-8 HELM, P.
Tire-additive transformation product 6PPD-quinone in Lake Ontario urban watersheds and receiving waters

TGL-9 HELMER, C.
Investigating eutrophication as a driver of methanogenesis in the western basin of Lake Erie

TGL-10 JAFAROVA, M.
Deposition of airborne microplastics by moss biomonitoring: a case study from Tuscany, Central Italy

TGL-11 JOHNSON, E.
Microplastic addition to littoral lake mesocosms: Impacts on ecosystem processes

TGL-12 KLEINHEINZ, G.
Regional Approach to Marine Debris Removal in Northern Lake Michigan

TGL-13 KOKILATHASAN, N.
Impacts of Polystyrene Nanoplastics on the Cell Surface Properties of Synechococcus and Spirulina

TGL-14 LACKEY, R.
Geochemical determination of chloride sources in waters across various land uses of an Ontario watershed

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TGL-15 LAVOIE-BERNSTEIN, S.
Atmospheric Sampling for Microplastics: Determining Effective Sampling Methods

TGL-16 MELENDEZ, A.
Collection, Identification, and qPCR Analysis of Aquatic Invasive Amphipods in The Great Lakes

TGL-17 MONTEIRO, B.
Abundance and Characteristics of Microplastics in Urban Stormwater Ponds

TGL-18 NGUYEN, T.
Controls on microplastics accumulation in stormwater pond sediments: Preliminary results

TGL-19 OKEYO, H.
Fish waste to resource management to reduce eutrophication

TGL-20 PAKUWAL, E.
The Effect of Long-Term Exposure to Sublethal Dosage of Cyanotoxins on Gut Microbial Communities

TGL-21 PAYNE, C.
Microplastic Pollution in Water and Air of an Agricultural Region in the Thames River Watershed

TGL-22 PETERSEN, F.
Storm Induced Microplastic Flux in an Urban Watershed

TGL-23 PHILLIPS, H.
A Straw Protocol for Early Detection of Ballast-Mediated Target AIS in Great Lakes Harbors using PCR

TGL-24 ROBSON, E.
Happy as a clam? Abundance of microplastics in bivalves collected from an urban river

TGL-25 SAHA, J.
Can microplastics in Great Lakes water enter our drinking water?

TGL-26 VRIENS, B.
Exploring Rare Earth Elements Distribution Patterns in the Great Lakes

TGL-27 WALDIE, A.
Oxidative Enzyme-Catalyzed Surface Functionalization of Polyethylene

TGL-287 WARDELL, J.
A comparison of underwater images and diver-based methods to assess percent cover of submerged aquatic vegetation

TGL-29 WARDLAW, C.
Transfers of microplastics from aquatic to terrestrial food webs via emergent insects

TGL-30 WARKHADE, Y.
Diversity of organisms encoding aerobic and anaerobic hydrocarbon-degrading genes in the Great Lakes.

TGL-31 WELSBACHER, A.
Collection of Nitellopsis obtusa and Determination of eDNA Signal Detection Limit

TGL-32 WELSH, B.
A particle balance approach to the fate of microplastics in background headwater lake catchments

TID: Technology, Innovation, and Data Management

TID-1 COLLIER, C.
Using Great Lakes open data resources

TID-2 EDGLEY, E.
Citizen science in Severn Sound – assessing program success

TID-3 KLUMP, J.
IOT networking & remote environmental monitoring in Green Bay's hypoxic-prone waters

TID-4 TARPEY, W.
Low Cost "Open Source" Fluorometry Hardware

WQE: Water Quality and Healthy Ecosystems

WQE-1 ARCE-RODRIGUEZ, J.
Examining Agricultural Nitrogen Transport in a Southern Ontario Sand Plain System.

WQE-2 GREENBERG, T.
Nutrient Loading in Lake Erie: A decadal update of trends

WQE-3 KEITZER, S.
Watershed-scale collaboration using socio-environmental report cards: An example from southeastern Michigan

WQE-4 KHAN, N.
Assessment of Long-Term Variation of TKN concentrations in Maumee River

WQE-5 PENNINGROTH, P.
Synergistic influence of land use and storms on total phosphorus load in Lake Superior tributaries

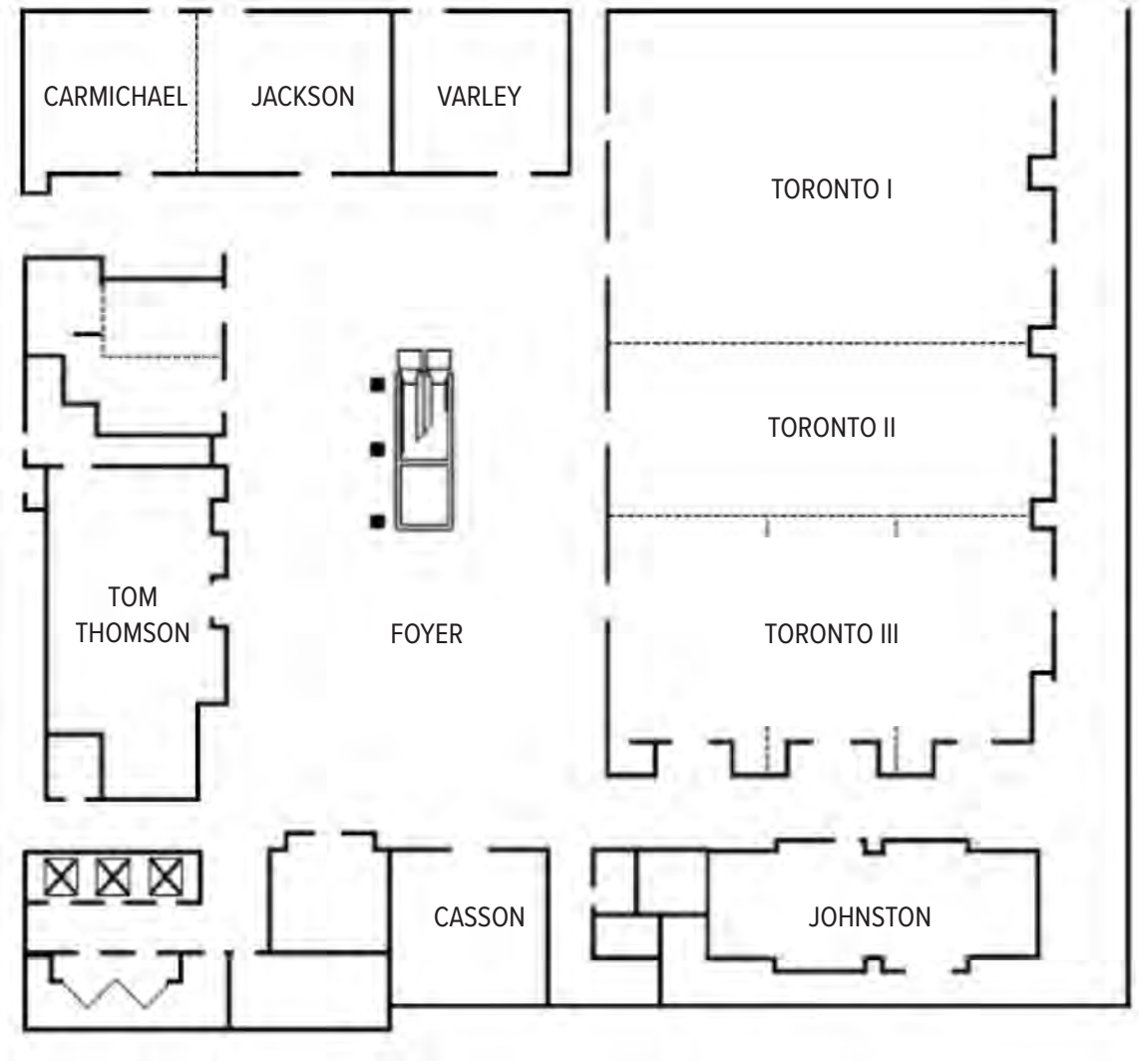
WQE-6 SIEBERT, K.
Climate influences on water quality in Lake Erie

WQE-7 WANG, S.
Potential phosphorus release and retention from streambed sediments with changing stream pH

WQE-8 MCNEILL, L.
Effects of tile drainage, seasonality and cash crop rotation on edge-of-field nutrient losses in southern Ontario

HILTON TORONTO FLOOR PLANS

Convention Level



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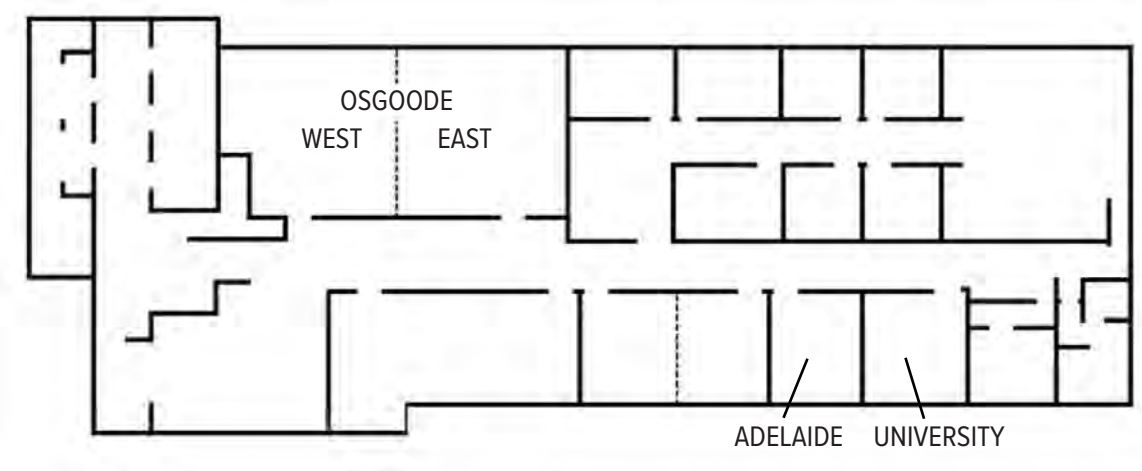

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