

53rd Annual Conference on Great Lakes Research

Lessons from the past
Solutions for the future **IAGLR 2010**
MAY 17 – 21 TORONTO



International Association for Great Lakes Research

Conference Theme

Lessons from the past, Solution for the future

The 53rd International Association for Great Lakes Research conference will explore how far research science in the Great Lakes and large lakes around the world has come over the decades, highlighting the science and policy research that has helped to improve and protect some aspects of the Great Lakes. Today's challenges and tomorrow's solutions are rooted in this history as many of yesterday's problems continue or have resurfaced today. Science and policy research presented in the areas of ecology, limnology, habitat, fisheries, invasive species, contaminants, climate impacts, watershed interactions, water quality and quantity will become part of the solutions for the future!

Conference Logo



The IAGLR-2010 logo symbolizes the conference theme. The pale blue coloured wave in the background represents the problem-plagued Great Lakes of the past, while the bright sky blue coloured wave in the foreground mimics the prosperous, rejuvenated Great Lakes aimed for in future. The CN Tower drawing highlights the conference venue—Toronto, Canada.

Front Cover Design



The front cover of the program and abstract books illustrate the conference theme: Lessons from the past, Solutions for the future.

The left vertical panel consisting of four pictures represents (mostly) historical or continuing issues for the Great Lakes such as point source pollution from industrial activities, nutrient & algae problems in Lake Erie, and the invasion of sea lamprey and mussels.

The four pictures set in a square in the centre-right represent emerging and possible future problems such as invasion of Asian carp, fluctuations in water levels due to climate change, urban sprawl, diffuse pollution sources and impact of large cities around the Great Lakes. The horizontal layer of the Great Lakes with the "Program Book" reflection conveys a message that our actions in the basin are likely to be reflected in the Great Lakes.

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PROGRAM

53rd Annual Conference
International Association for Great Lakes Research
(IAGLR)

Lessons from the past, Solution for the future

May 17-21, 2010

University of Toronto
Toronto, Ontario, Canada



UNIVERSITY OF
TORONTO

Published by

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Conference Exhibitors

ASL Environmental Sciences Inc.

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www.aslenv.com

Elsevier

New York, NY 10010
www.sciencedirect.com/jglr

Environment Canada[^]

Toronto, ON M3H 5T4
www.ec.gc.ca/grandslacs-greatlakes

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Toronto & Region Conservation[^]

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Ann Arbor, MI 48108
www.glerl.noaa.gov

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www.unisense.com

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www.aehms.org

AXYS Analytical Services Ltd.[^]

Sidney, BC V8L 5X2
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Fluid Imaging Technologies, Inc.

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www.fluidimaging.com

Great Lakes Observing System

Ann Arbor, MI 48104
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www.ijc.org

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www.hoskin.ca

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www.lotek.com

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Toronto ON M5J 1B7
www.torontoport.com

U.S. Geological Survey[^]

Michigan Water Science Center
Lansing, MI 48911
www.usgs.gov

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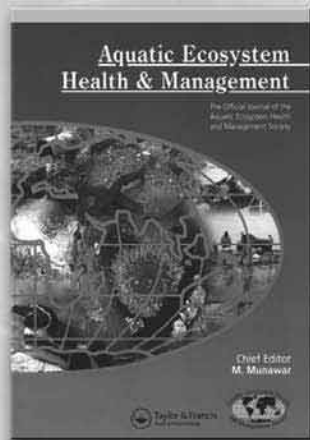
The International Association for Great Lakes Research is a member run organization. If you are interested in supporting the scientific community in its work in the exploration, discussion and resolution of Great Lakes issues, please consider joining IAGLR! Individual or Sustaining memberships are available.

Further information may be found on our website www.iaglr.org or pick up our brochure in the registration area.

IAGLR member benefits include:

- Quarterly *Journal of Great Lakes Research* subscription
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- Annual Conference on Great Lakes Research registration discount
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- Recognition through prestigious peer reviewed IAGLR Awards
- Free *Contents Direct* email alerting service
- Additional discounts available from Elsevier
- Eligible for election to serve on the IAGLR Board of Directors
- Opportunities to work on various committees
- Networking resources are available to all members
- Utilize the Job Board to advertise job openings or seek employment
- Stay abreast or post news of interest on our web site
- Students, Retirees, and Young Professionals enjoy reduced fees with full benefits!

FREE ONLINE ACCESS to Aquatic Science Journals for IAGLR 2010 Conference Attendees!



Aquatic Ecosystem Health & Management

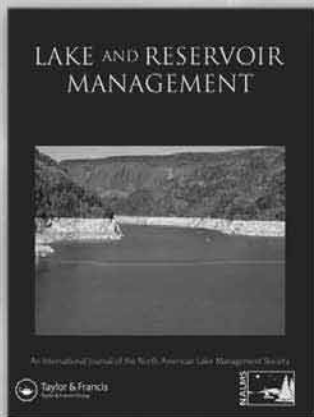
The Official Journal of the Aquatic Ecosystem
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Editor-in-Chief: M. Munawar

Great Lakes Laboratory for Fisheries & Aquatic Sciences,
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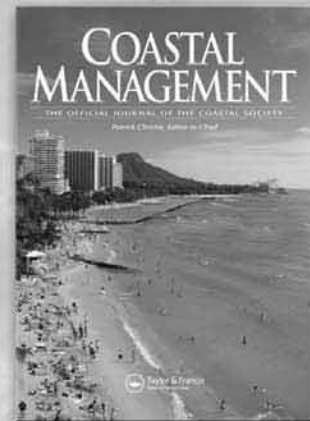
New Editor!

Reviews in Fisheries Science

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Conference Overview

Date	Time	Event	Location
Monday May 17	8:00 am – 5:00 pm	Workshop: Introduction to R	<i>Medical Sciences Building (Rm 3163)</i>
	9:00 am – 5:00 pm	IAGLR Board Meeting	<i>Hart House (South Dining Room)</i>
	1:00 pm – 5:00 pm	Workshop: VEMCO Acoustic Telemetry Technology	<i>Medical Sciences Building (Rm 3264)</i>
	5:00 pm – 6:30 pm	Defy Cup Hockey	<i>See footnote</i>
	5:00 pm – 8:00 pm	Registration Desk Open	<i>Medical Sciences Building</i>
	7:00 pm – 10:00 pm	Evening Welcome Mixer	<i>Hart House Great Hall</i>
Tuesday May 18	7:30 am – 5:00 pm	Registration Desk Open	<i>Medical Sciences Building</i>
	9:00 am – 3:00 pm	High School Day	<i>University College</i>
	8:00 am – 10:20 am	Platform Sessions (10 min Break @ 10:20 am)	<i>Medical Sciences Building Rosebrugh Building</i>
	10:30 am – 12 noon	Opening Ceremonies & IAGLR Awards Keynote Address: Murray Charlton Musician: David Francey	<i>Convocation Hall</i>
	12 noon – 1:20 pm	Lunch	<i>Hart House or on own</i>
	12 noon – 1:20 pm	Editor's Lunch (invite only)	<i>University College (Rm 240)</i>
	1:20 pm – 5:00 pm	Platform Sessions (20 min Break @ 3:00 pm)	<i>Medical Sciences Building Rosebrugh Building</i>
	5:00 pm – 6:30 pm	Poster Viewing / Social	<i>University College</i>
	6:00 pm – 8:30 pm +	Tour: Tommy Tompson Park (TRCA)	<i>Board buses outside Convocation Hall (see Pg 31 & Registration Desk for details)</i>
8:00 pm +	Student-only Mixer	<i>Madison Pub</i>	

Presentations and Posters are the property of the presenters. Audio recording, copying, videotaping or photographing of a presentation without the express permission of the presenter is prohibited.

Defy Cup IAGLR Hockey, Team IAGLR-Canada vs. Team IAGLR-USA

Sponsored by EcoAnalysts Inc.;

Venue: DeLaSalle College Arena, 131 Farnham Ave., Toronto M4V 1H7 - Ph. (416) 969-8771

Conference Overview

Date	Time	Event	Location
Wednesday May 19	7:30 am – 5:00 pm	Registration Desk Open	<i>Medical Sciences Building</i>
	8:00 am – 11:00 am	Platform Sessions (20 min Break @ 9:40 am)	<i>Medical Sciences Building Rosebrugh Building Sandford Fleming Building</i>
	9:40 – 10:00 am	Exhibitor Demos	<i>Medical Sciences Building</i>
	11:00 am – 12 noon	Plenary Speaker John P Smol – Queen’s University	<i>Convocation Hall</i>
	12 noon – 1:20 pm	IAGLR Business Lunch	<i>Hart House Great Hall</i>
	1:20 pm – 5:00 pm	Platform Sessions (20 min Break @ 3:00 pm)	<i>Medical Sciences Building Rosebrugh Building Sandford Fleming Building Fitzgerald Building</i>
	3:00 pm – 3:20 pm	Exhibitor Demos	<i>Medical Sciences Building</i>
	5:00 pm – 6:30 pm	Poster Viewing / Social	<i>University College</i>
	7:00 pm – 10:00 pm	Dinner Banquet / Harbour Cruise	<i>Mariposa Cruises – Queen’s Quay (See Pg 30 for directions)</i>
Thursday May 20	7:30 am – 5:00 pm	Registration Desk Open	<i>Medical Sciences Building</i>
	8:00 am – 11:00 am	Platform Sessions (20 min Break @ 9:40 am)	<i>Medical Sciences Building Rosebrugh Building</i>
	11:00 am – 12 noon	Plenary Speaker Cameron Davis US EPA Senior Advisor - GLRI	<i>Convocation Hall</i>
	12 noon – 1:20 pm	Lunch	<i>Hart House Great Hall or on own</i>
	1:20 pm – 5:00 pm	Platform Sessions (20 min Break @ 3:00 pm)	<i>Medical Sciences Building Rosebrugh Building</i>
	5:00 pm – 6:30 pm	Poster Viewing / Social	<i>University College</i>
	8:00 pm +	Movie Night: <i>Waterlife</i>	<i>Innis Town Hall</i>
Friday May 21	6:45 AM	Early Bird Hike - Tommy Thompson Park (TRCA)	<i>Meet at Gate of Tommy Thompson Park (Pg 32 & Registration Desk for details)</i>
	7:30 am – 12 noon	Registration Desk Open	<i>Medical Sciences Building</i>
	8:00 am – 12 noon	Platform Sessions (20 min Break @ 9:40 am)	<i>Medical Sciences Building</i>
	12 noon – 1:30 pm	Poster Viewing / Lunch	<i>University College</i>
	2:00 pm – 5:00 pm	Toronto Restoration Tour (TRCA)	<i>Board buses outside Convocation Hall (see Pg 32 & Registration Desk for details)</i>

Conference Information

Opening Ceremonies & IAGLR Awards

Tuesday, May 18th at 10:30 am in Convocation Hall (CH)

Open the 53rd Annual Conference on Great Lakes Research by recognizing the accomplishments of our colleagues and peers as they receive prestigious IAGLR scholarships and awards. Celebrate the lessons we have learned from the past, and encourage those who will find the solutions for the future!

Welcome Remarks

Keynote Address

Murray Charlton (2009 Lifetime Achievement Award Recipient)
“Great Lakes Programs: Success Factors”

IAGLR Awards:

IAGLR Lifetime Achievement Award
Jack R. Vallentyne Award
Anderson-Everett Award
Chandler-Misener Award
Editor's Award
IAGLR-HYDROLAB Best Student Paper
IAGLR-HYDROLAB Best Student Poster

IAGLR Scholarships:

IAGLR-OMNR Student Travel Award
IAGLR Scholarship
Norman S. Baldwin Fishery Science Scholarship
Paul W. Rodgers Scholarship

Music

David Francey Recognized as one of Canada's finest singer-songwriters, and a 3-time Juno Award Winner, David's storytelling and songwriting offers a unique perspective of the Great Lakes, past and present.

Speaker Ready Room

A speakers ready room is located in the Medical Sciences Building on the main floor in Room 2394. Laptop computers are available for speakers to review their presentation prior to uploading the talks in the session room.

Internet Access

Public internet terminals are available free in the Gerstein Library located just north of the Medical Sciences Building. When you enter the main lobby of the library, a LIRA terminal is located to the right near the entrance. Instructions are posted; briefly, swipe a credit card or driver's license (US or Canada) to obtain a unique username and password which is valid for 1 day. You can then use one of the terminals indicated by the yellow sign with “LIRA”. There is no cost to you. These steps need to be repeated on subsequent days to obtain username and password on subsequent days. If you have questions, ask at the library information desk.

Plenary Speaker—Tuesday

Convocation Hall, 10:30am-12noon

Murray Charlton

Great Lakes Programs: Success Factors

Murray Charlton, a former Research Scientist and Emeritus Associate with Environment Canada, has made lasting contributions to Great Lakes science through 40 years of dedicated research and service. His research has been key in exploring lake eutrophication, contaminant cycling, oxygen and carbon balances in lakes, shoreline algae, taste/odour problems and sediment dynamics; he has over 100 scientific publications to his credit. His work has led to a greater understanding of how lakes assimilate added nutrients, and the ultimate consequences perturbations have on lake ecosystems. Murray's work has enhanced our conceptualization of eutrophication, by clarifying the principle causes and consequences. During his career and since his retirement in 2007, he has provided authoritative advice on environmental issues to Environment Canada's senior management, binational Lakewide Management Plan committees, Remedial Action Plan committees and the International Joint Committee (IJC). In this way, he has guided policy decisions that have been effective in changing human behavior and ultimately improving the quality of our Great Lakes.



In 2005, the IJC awarded Murray the *Biennial Award for Great Lakes Science* for outstanding research and leadership dedicated to restoring the health of the Great Lakes. Also in 2005, EC awarded him the *Departmental Citation of Excellence* for his cumulative achievements. In 2009, Murray received IAGLR's *Lifetime Achievement Award* recognizing his important and continued contributions to Great Lakes scientific research.

Posters at IAGLR 2010

New this year! Due to an unprecedented number of submissions, and to ensure a vibrant, multi-format meeting, poster presentations will be an essential component of IAGLR 2010. IAGLR 2010 will feature

- Daily poster socials Tuesday, Wednesday & Thursday; finger foods and drinks
- Poster lunch social on Friday; lunch provided
- Poster "Highlights" in each associated session; 1-2 slides/poster shown by session chairs
- Posters presented on the same day as their associated platform session for continuity

Enjoy the added time for scientific and social discourse with your peers! See you at the posters!

Plenary Speaker—Wednesday

Convocation Hall, 11am-12noon

John P. Smol



Lake sediments and long-term environmental change: A window on the past and a view to the future”

John P. Smol FRSC is a professor in the Department of Biology at Queen’s University, with a cross-appointment to the School of Environmental Studies, where he also holds the *Canada Research Chair in Environmental Change*. He received a B.Sc. from McGill University, a M.Sc. from Brock University and a Ph.D. from Queen's University. Following post-doctoral work in the High Arctic with the Geological Survey of Canada, he became a faculty member at Queen's University. He has held adjunct appointments in Canada and the United States.

Smol founded the Paleoecological Environmental Assessment and Research Lab (PEARL) in 1991, a group of about 30 students and other scientists dedicated to the study of global environmental change, focusing primarily on changes in lake ecology. An *ISI Highly Cited Researcher*, he has authored about 400 journal publications and book chapters, as well as completed 16 books, including his textbook *Pollution of Lakes and Rivers: A Paleoenvironmental Perspective*, now in its second edition. He has lectured around the world, including the 2008 *Rutherford Lecturer* at the Royal Society (London). He was the founding Editor of the international *Journal of Paleolimnology* (1987-2007), is the current Editor of the journal *Environmental Reviews*, editor of the *Developments in Paleoenvironmental Research* book series, and is on the editorial boards of a number of other journals. Since 1990, he has received over 25 national and international research and teaching awards, including an NSERC *Steacie Fellowship*, the 1992 *Steacie Prize* (Canada’s top young scientist or engineer), a Canada Council *Killam Fellowship*, the Geological Association of Canada Past-Presidents’ Medal, the Botanical Society of America *Darbaker Prize*, the *Rigler Prize* from the Society of Canadian Limnology, the Royal Society of Canada *Miroslaw Romanowski Medal* for advances in the environmental sciences, an NSERC *Award of Excellence*, and the American Society of Limnology and Oceanography *Hutchinson Award*. The Royal Canadian Geographical Society named Prof Smol as the *2008 Environmental Scientist of the Year* (an honour he shared with his brother, Prof. Jules Blais, of the Univ. Ottawa). In 2009, he was presented with the *Killam Prize for the Natural Sciences* from the Canada Council, as well as the *Premier’s Discovery Award for Life Sciences and Medicine*. He has received two honorary doctorates: a *Doctor of Laws* from St Francis Xavier University and an honorary *Doctor of Philosophy* from the University of Helsinki. In December 2004, Prof. Smol was awarded the *NSERC Herzberg Gold Medal*, as Canada’s top scientist or engineer.

Prof Smol has also received six teaching awards, including the *W.T Barnes Teaching Excellence Award*, the *Chancellor A. Charles Baillie Teaching Award*, and the inaugural Queen’s University *Award for Excellence in Graduate Supervision*. In 2007, he was presented with the *T. Geoffrey Flynn Advancement Champion Award* for his work on scientific communication and outreach

Plenary Speaker—Thursday

Convocation Hall, 11am-12noon

Cameron Davis

Using Science to Guide Great Lakes Restoration

Cameron Davis is Senior Advisor to the U.S. Environmental Protection Agency Administrator. In that capacity he provides counsel to Administrator Lisa Jackson on the Obama Administration's Great Lakes Restoration Initiative. His job includes coordinating Great Lakes policy and funding initiatives with more than one dozen federal agencies and with state, municipal, tribal, business and civic stakeholders. The focus of this work involves restoring habitat, reducing pollution, preventing the introduction of invasive species, reducing runoff and enhancing coastal health for people, fish and wildlife.

For more than two decades, Mr. Davis has worked to develop and implement water quality and quantity policy. Starting as a volunteer, he served as a litigating attorney and law teacher at the University of Michigan Law School before serving as president and CEO of the Alliance for the Great Lakes. Under his leadership, the organization won the American Bar Association's Distinguished Award in Environmental Law & Policy, the first time for a public interest organization in the honor's history. He earned his law degree, including certification in environmental and energy law, from the Chicago-Kent College of Law and a B.A. from Boston University in International Relations.

While working in Chicago, Washington, D.C. and throughout the eight Great Lakes states, Cam lives across the street from Lake Michigan with his wife Katelyn, a child psychologist, and young son, where they try to swim in the lake several times a week, but only when it's warm enough.



Presentation Guidelines

Platform Presentation

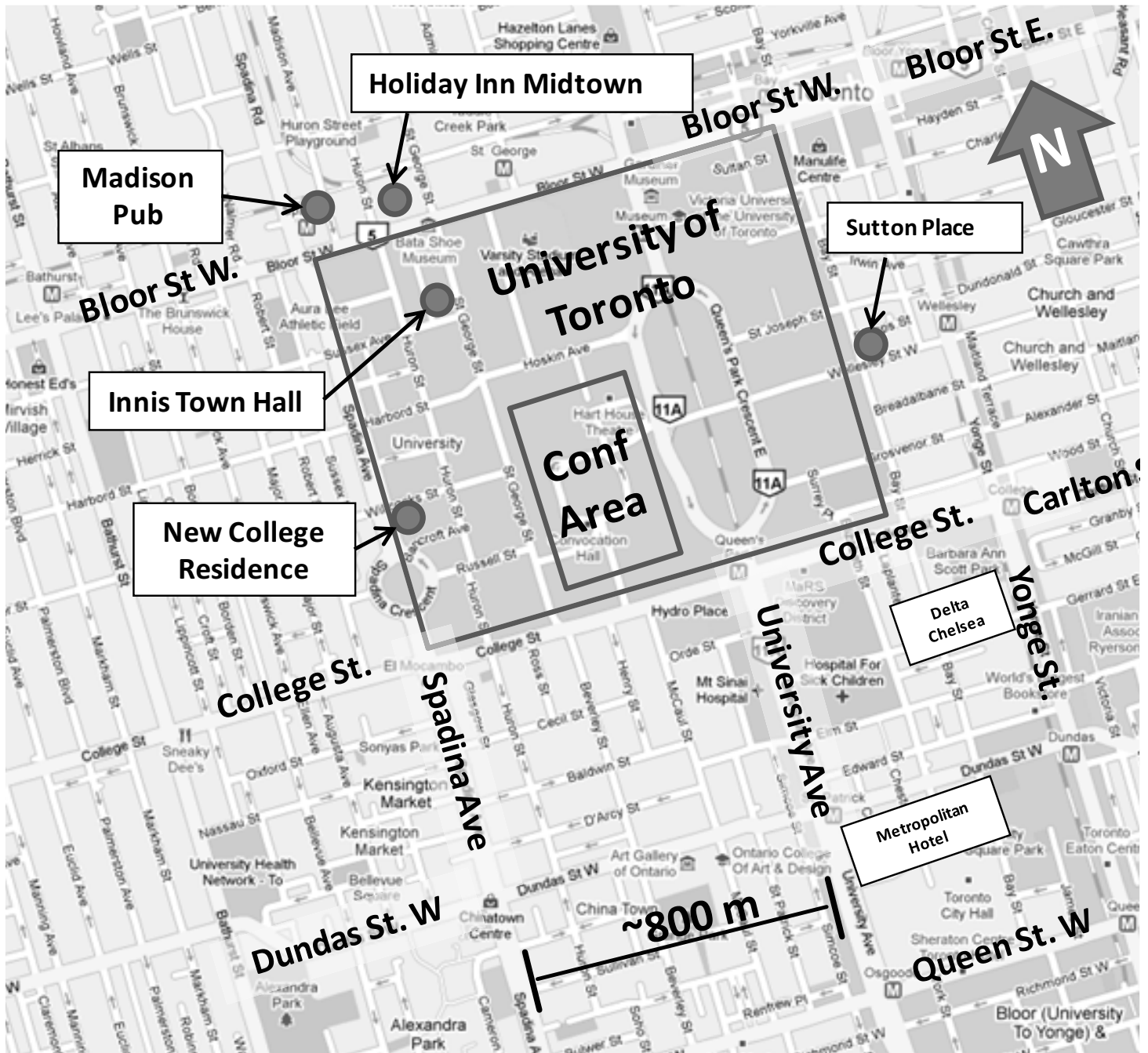
1. Each speaker has 20 minutes (15 minutes for the presentation and 5 minutes for Q & A). Time limits will be enforced.
2. An LCD projector and laser pointer, either through a teaching station or a laptop computer, will be provided in each room.
3. Presenters should bring their presentations on a USB flash drive or CD to their session 30 minutes before start time (0730 h for morning sessions, 1250 h for afternoon sessions). These times apply even if your session starts part-way through the morning or afternoon.
4. The speaker preview room is MS 2290 (Medical Sciences Building, ground floor). Please use this facility to ensure your presentation will work on the conference computer systems. Presentations should use Powerpoint compatible with **Microsoft Office 2003**. Mac users should take special care before the conference to ensure their presentation is compatible. Please test any videos before-hand.

Poster Presentation

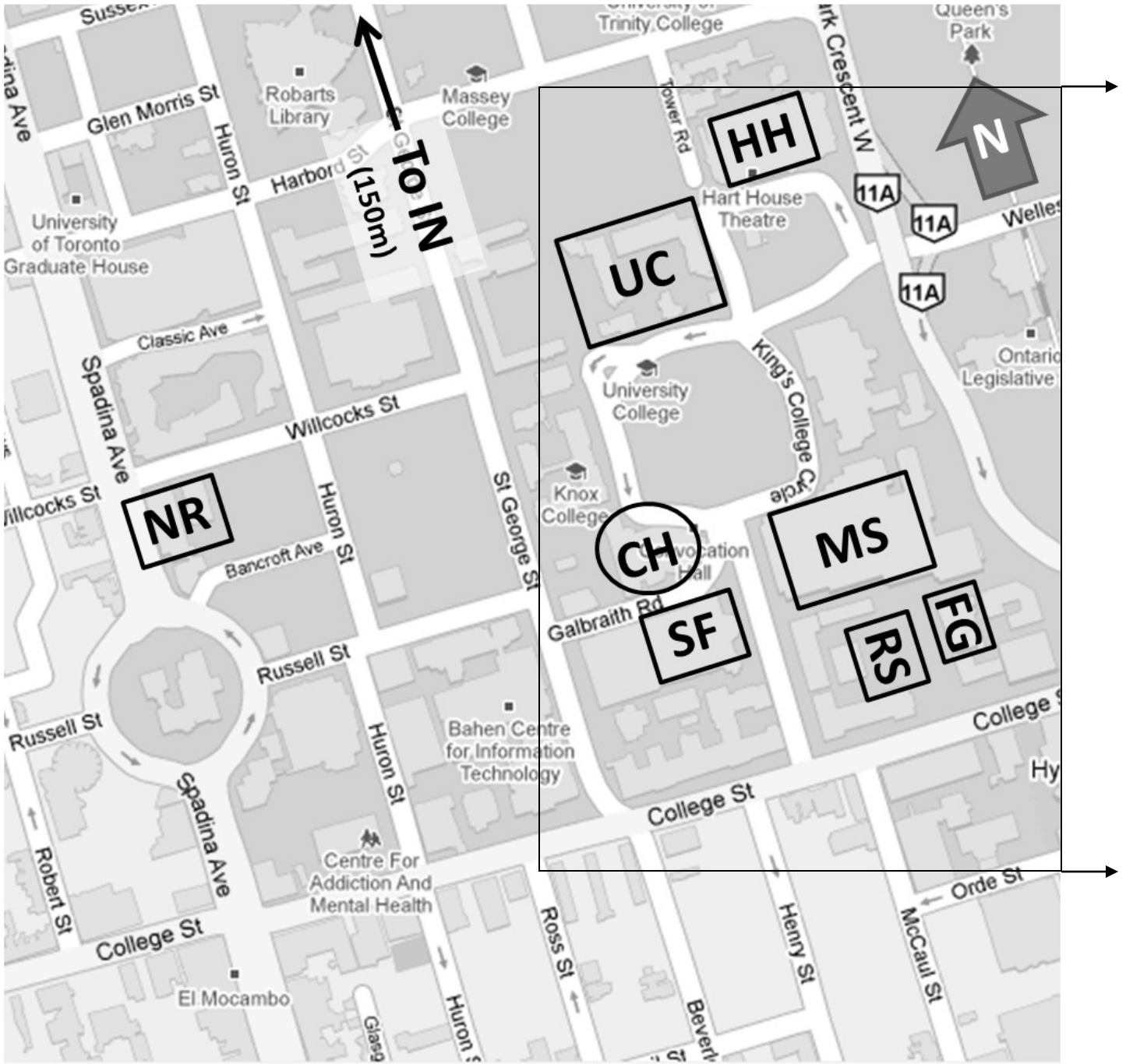
1. The poster sessions run each day in University College, West and East Halls (2nd floor), on the same day as the corresponding oral sessions. Posters should be mounted between 8 and 12:30 am (Tues-Thurs) and 7:30-10:00 am (Fri.). They must be removed at 6:30 pm (Tues-Thurs) and 1:30 pm (Fri.). *Poster numbers that show where each poster should be mounted will be communicated in a subsequent message, and will be displayed at the poster site each morning.*
2. The posters should be no higher than 3 feet and no wider than 4 feet (~1 meter high by ~1.3 meters wide). Mounting supplies will be available in the rooms. Volunteers will be available for assistance during lunch hour and an hour before the poster session begins.
3. Every poster presenter should email to their session chair one PowerPoint slide that can stand alone as a highlight for the poster, plus two more that could provide additional illustration if platform time permits. The session chair(s) can then assemble a presentation about the posters. If it is impossible to email these slides, please bring them on a USB flash drive for loading along with the oral presentations one half hour prior to the start of the corresponding oral session.

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Conf area and Vicinity



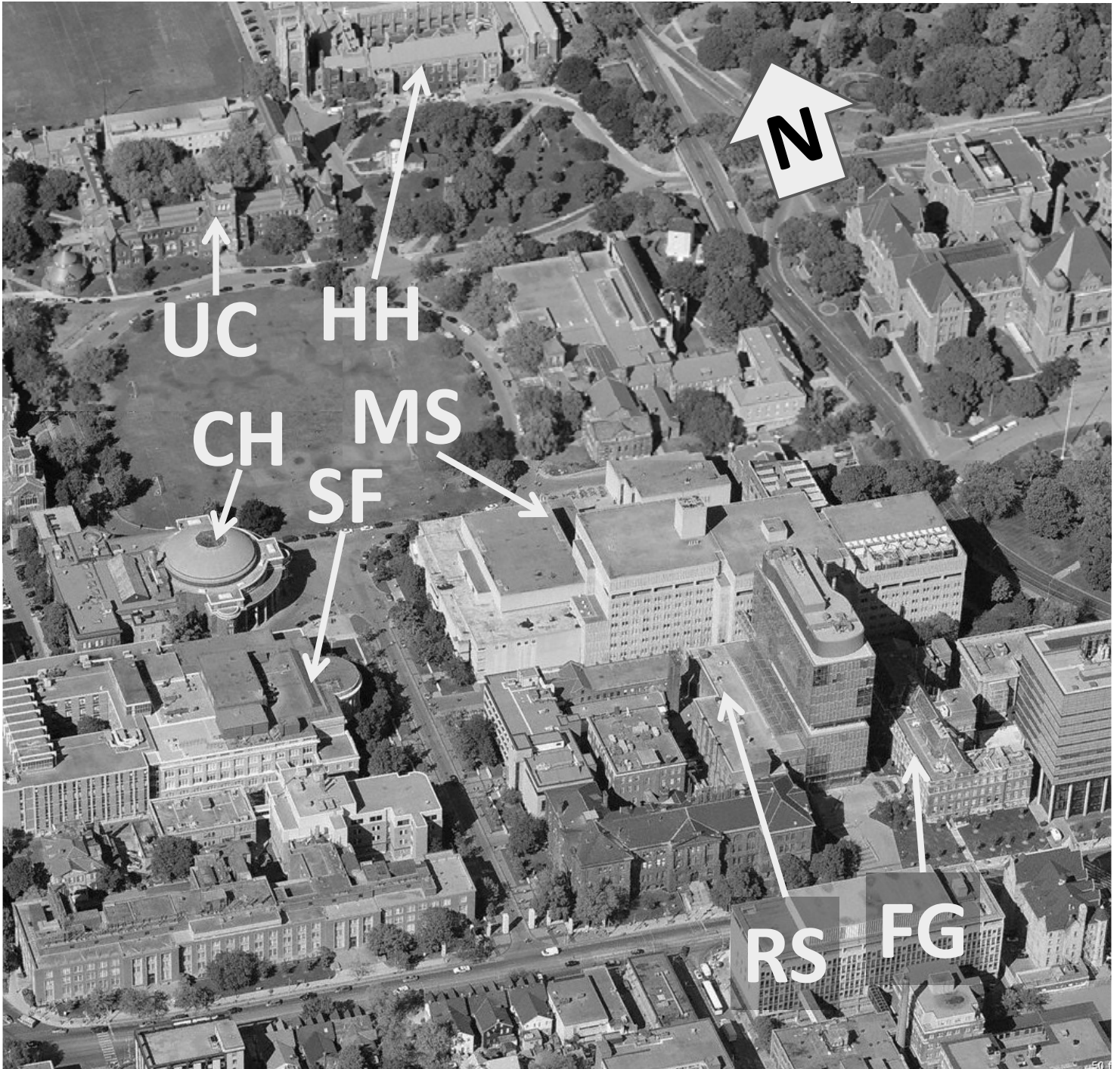
Conference Buildings



CH – Convocation Hall
 FG – Fitzgerald Building
 HH – Hart House
 IN – Innis Town Hall
 MS – Medical Sciences Building

NR - New College Residence
 RS – Rosebrugh Building
 SF – Sandford Fleming Building
 UC – University College

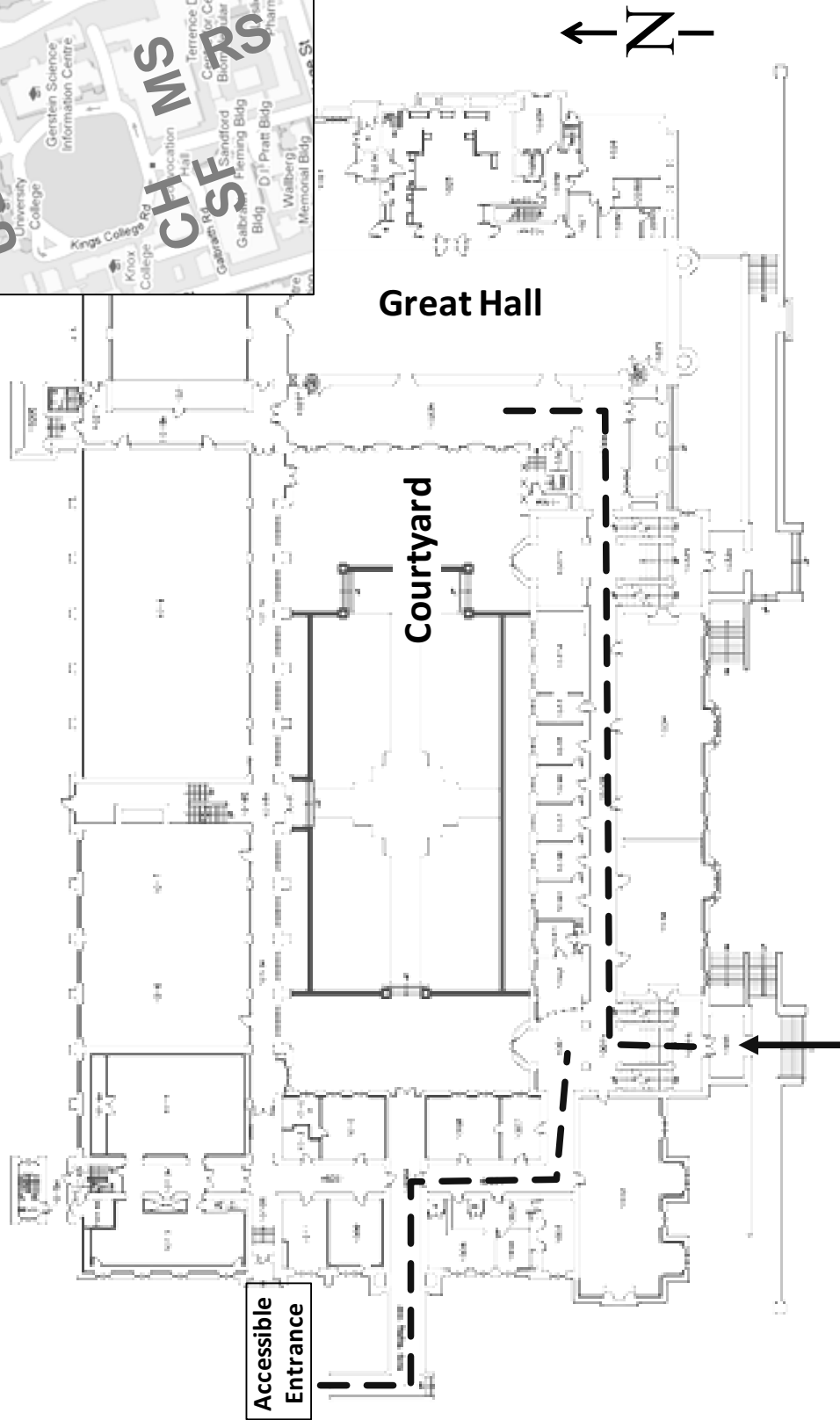
Conference Buildings



Floor Plan

Hart House (HH) Main Floor Plan

Opening Mixer, Lunches & Business
Lunch in Great Hall & Courtyard



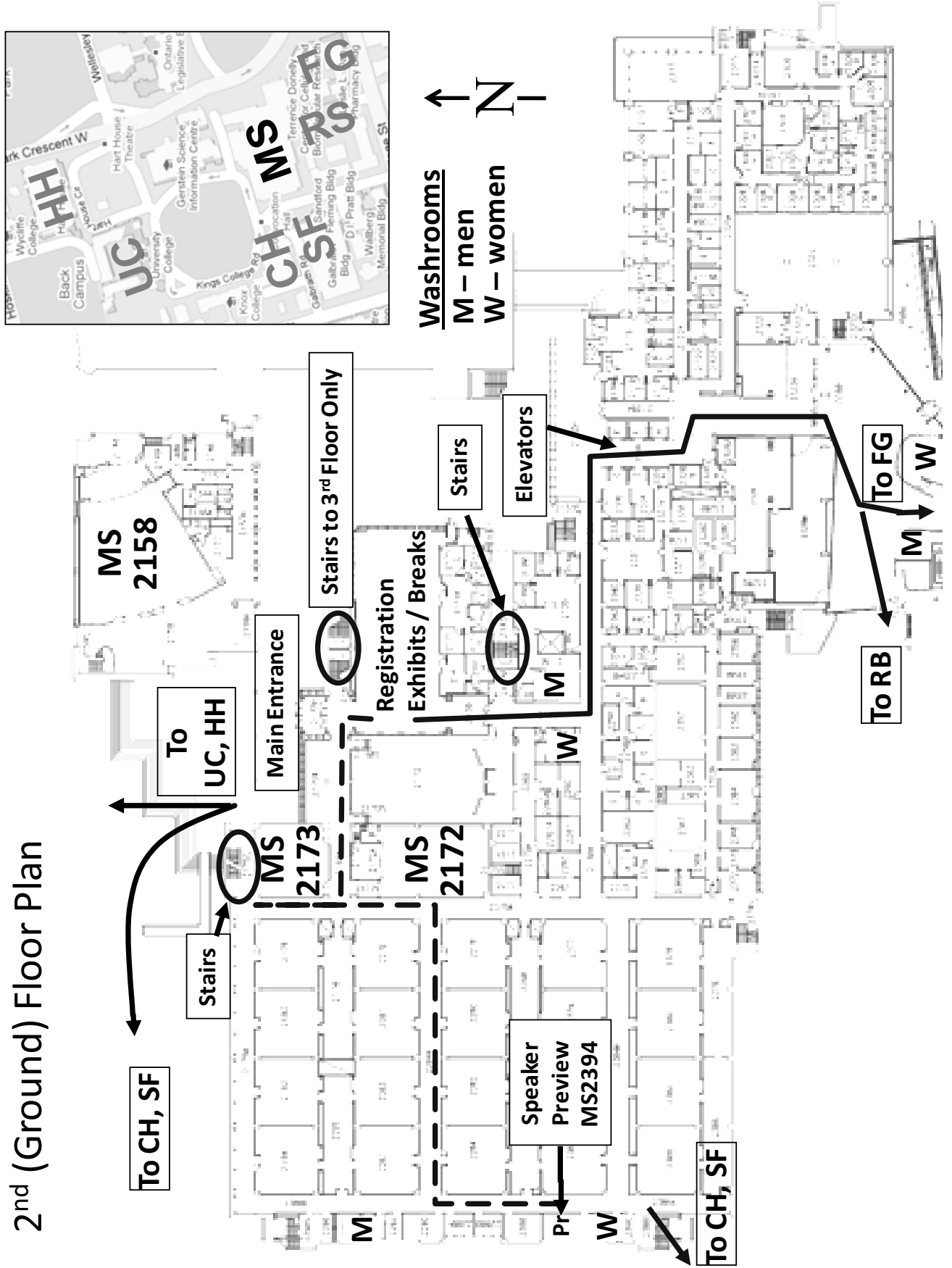
Great Hall

Courtyard

Accessible
Entrance

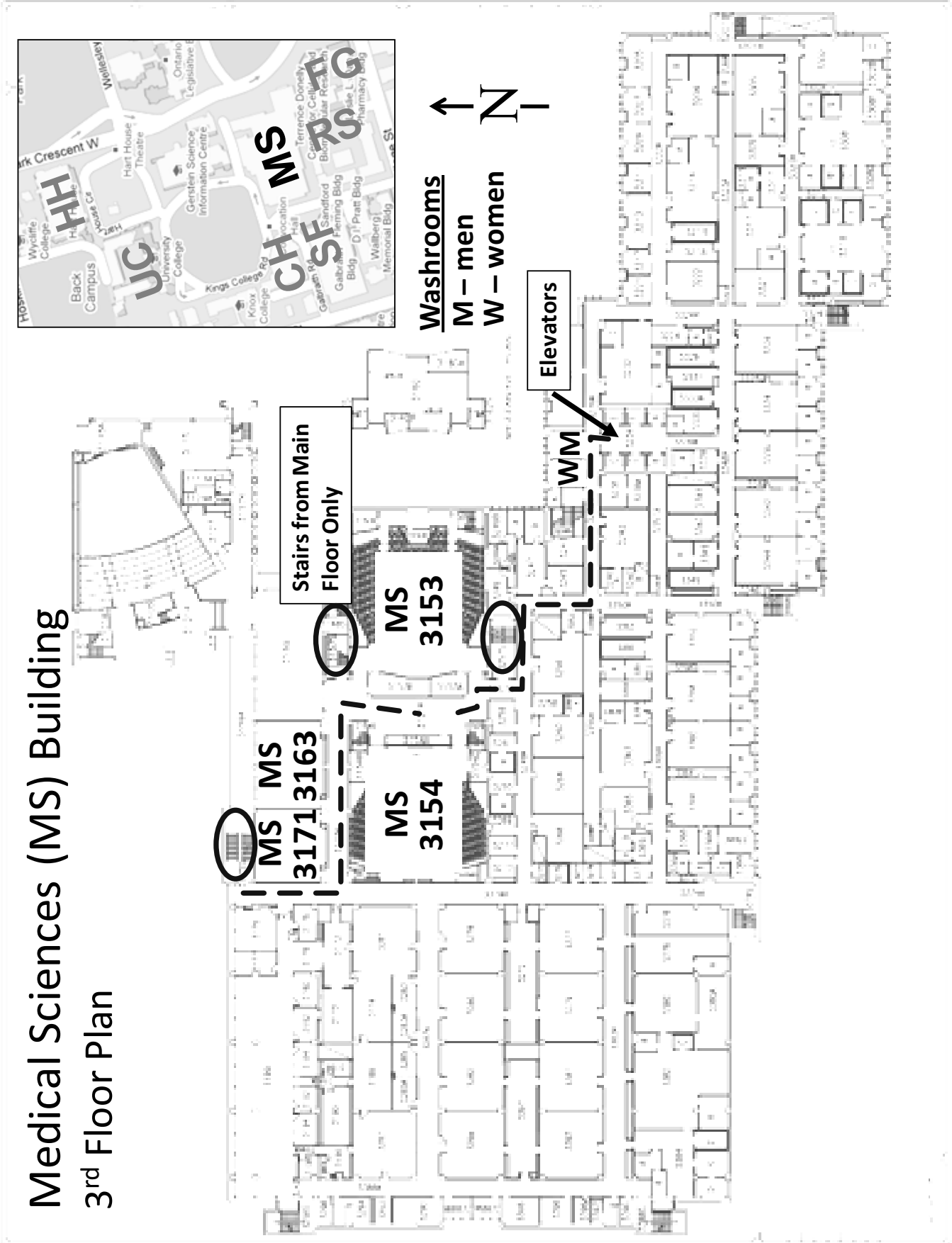
Hart House Circle (road)

Medical Sciences (MS) Building 2nd (Ground) Floor Plan

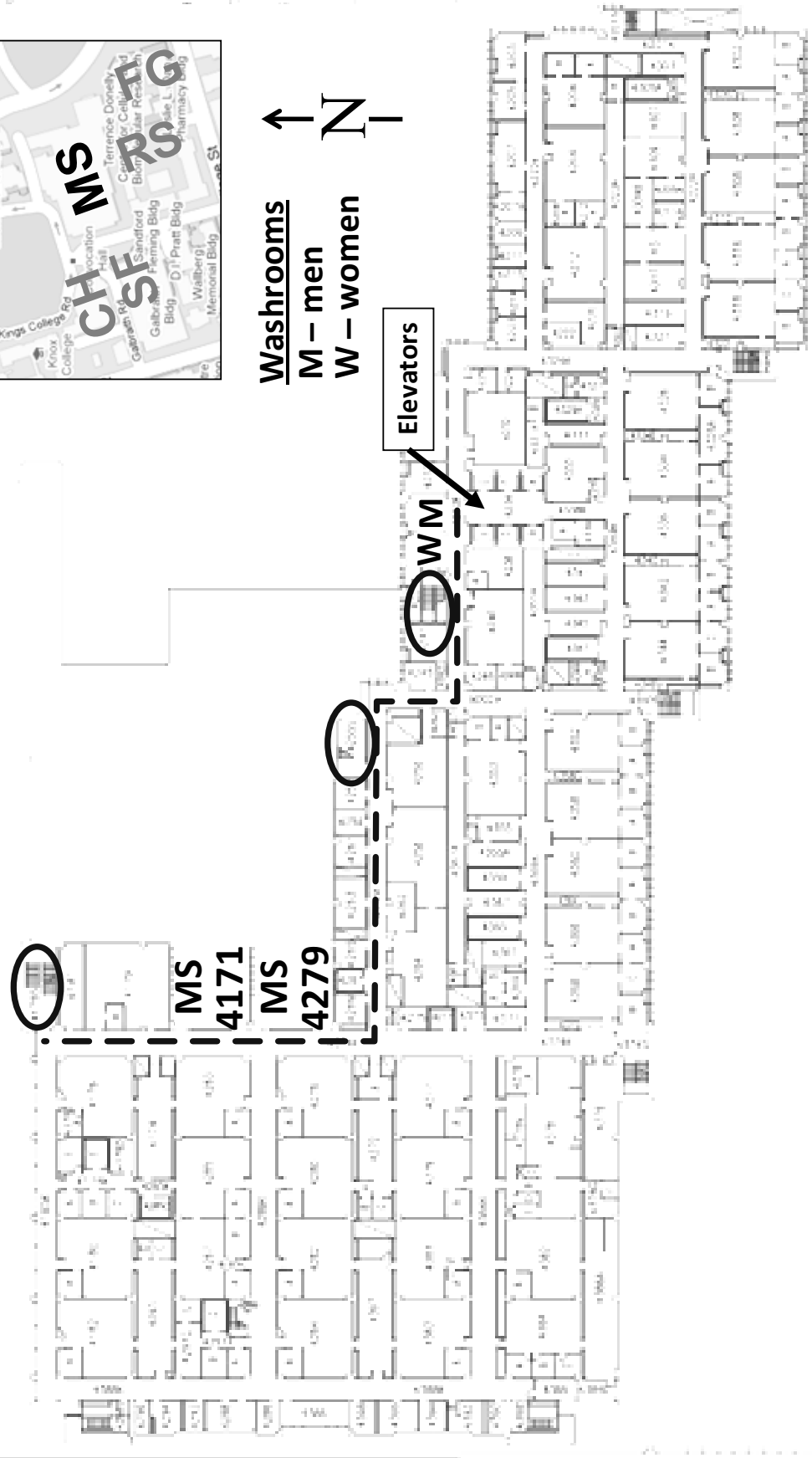


Floor Plan

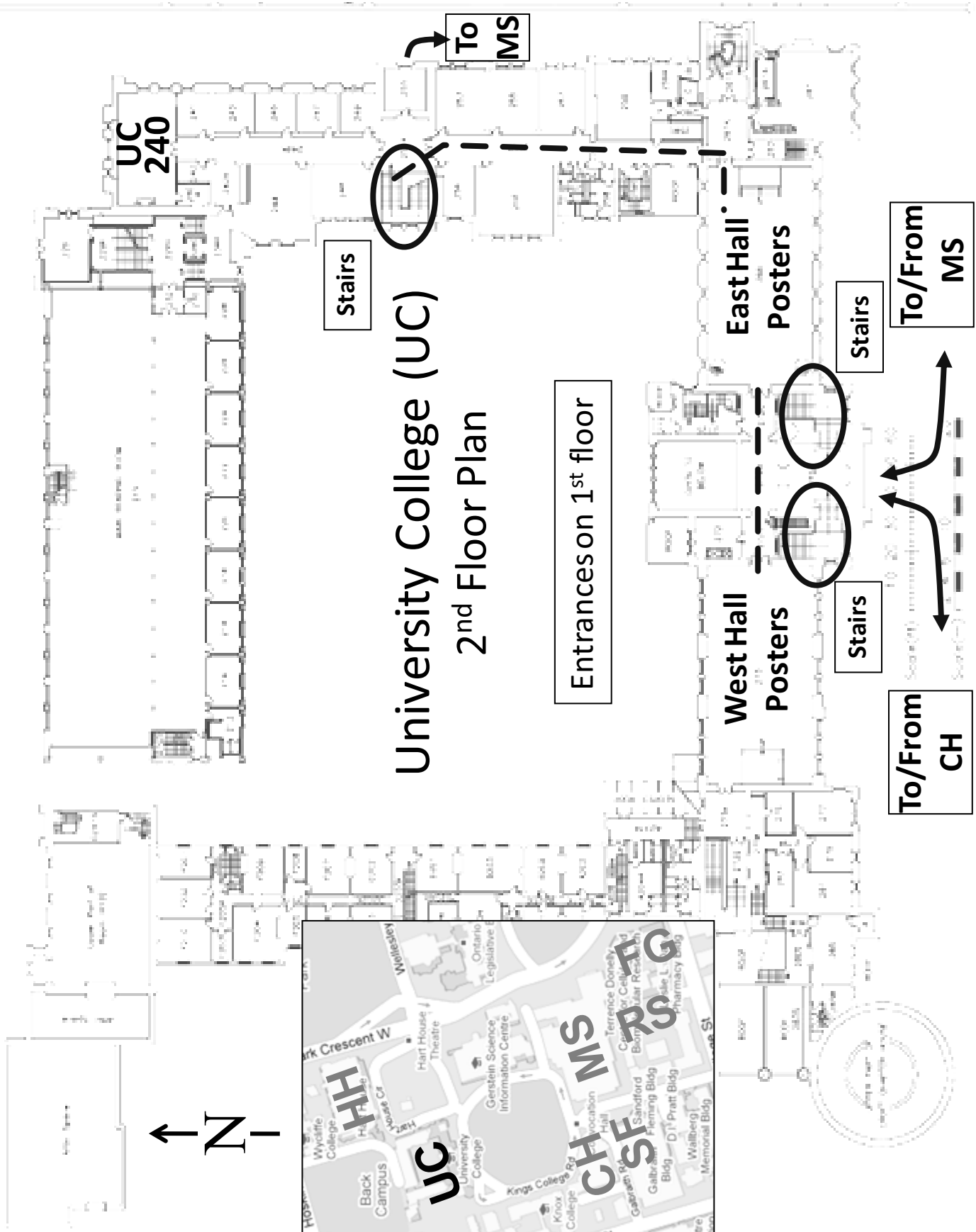
Medical Sciences (MS) Building 3rd Floor Plan



Medical Sciences (MS) Building
4th Floor Plan

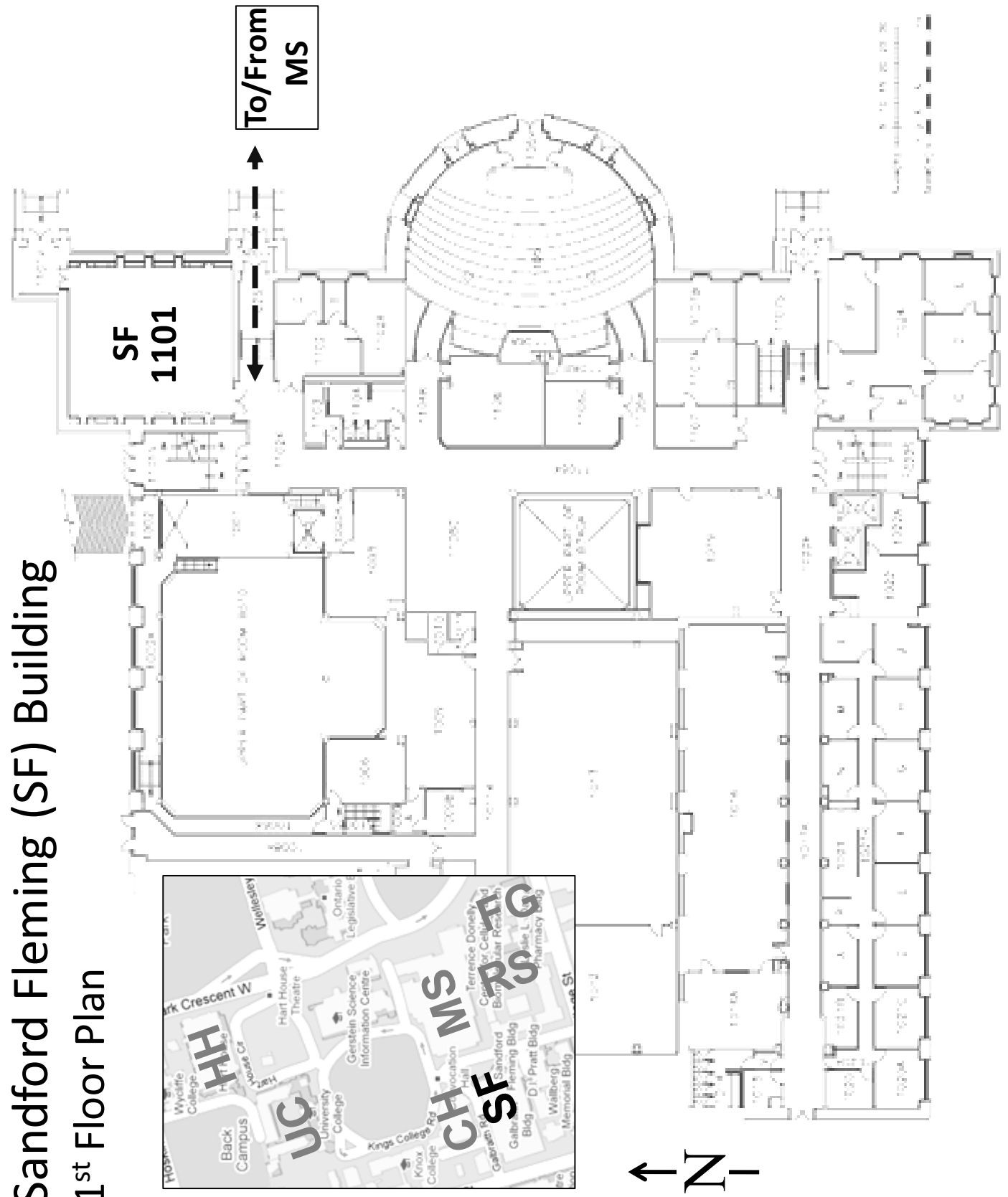


Floor Plan



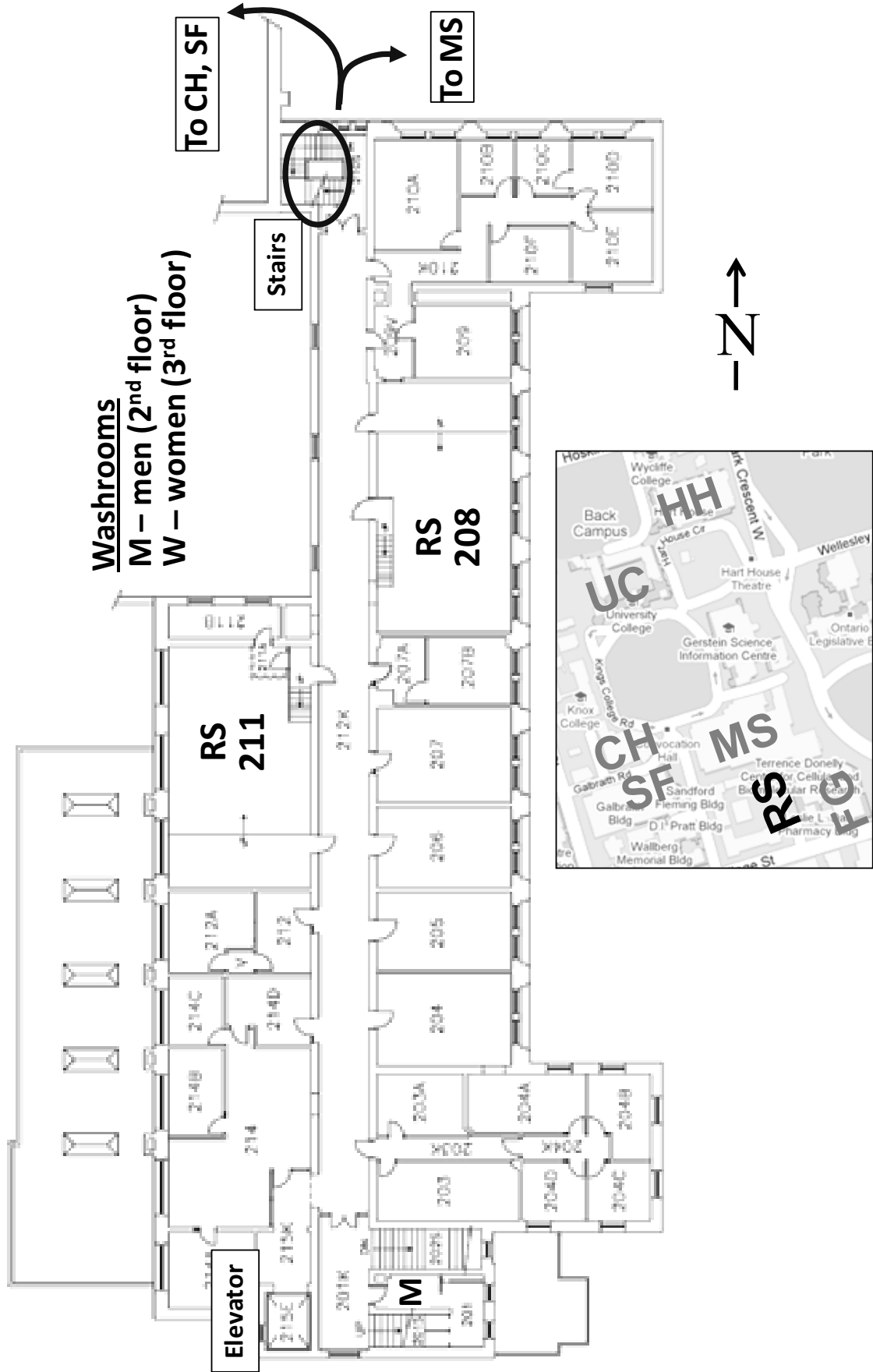
Sandford Fleming (SF) Building

1st Floor Plan

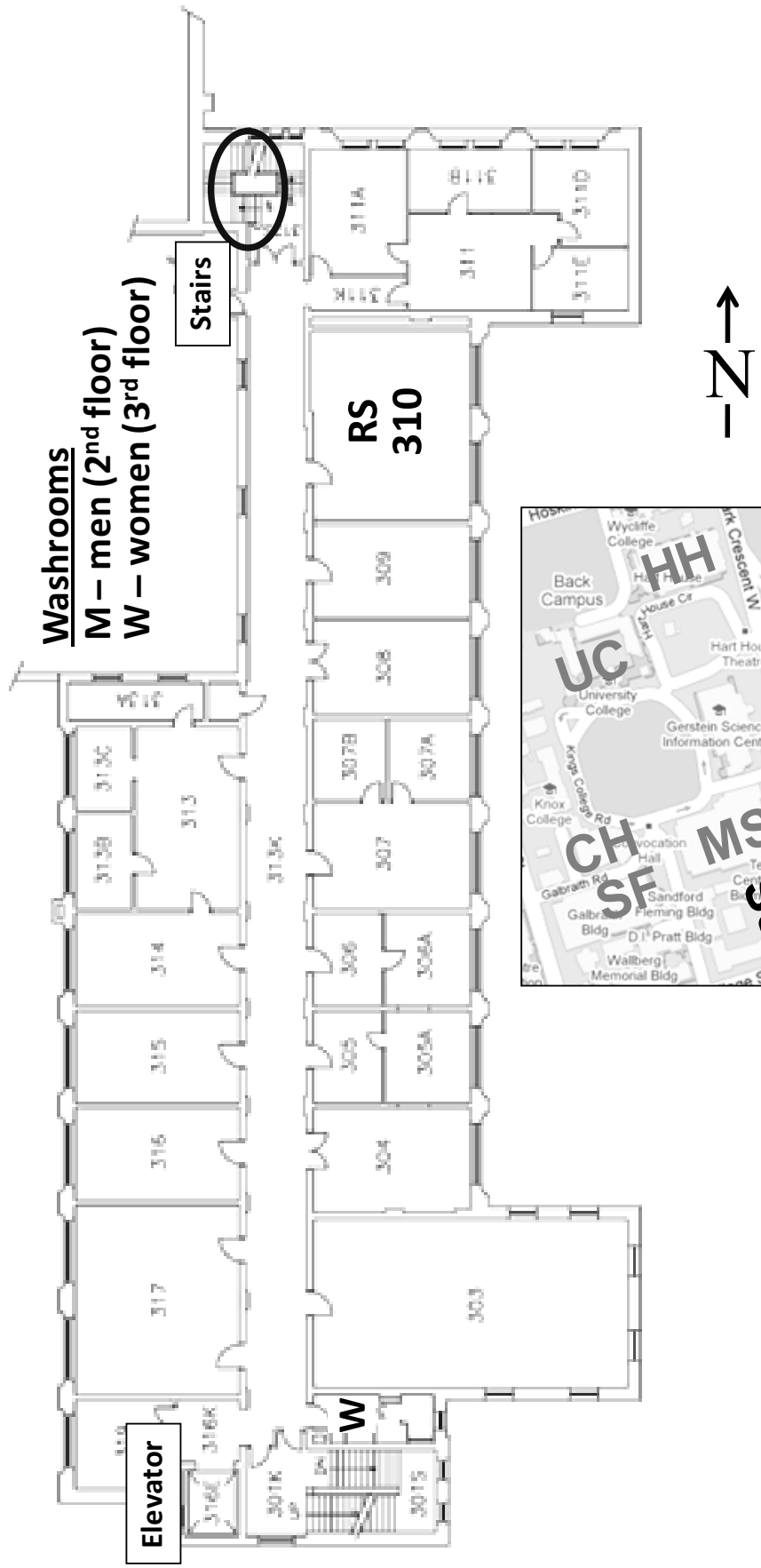


Floor Plan

Rosebrugh (RS) Building 2nd Floor Plan



Rosebrugh (RS) Building
3rd Floor Plan

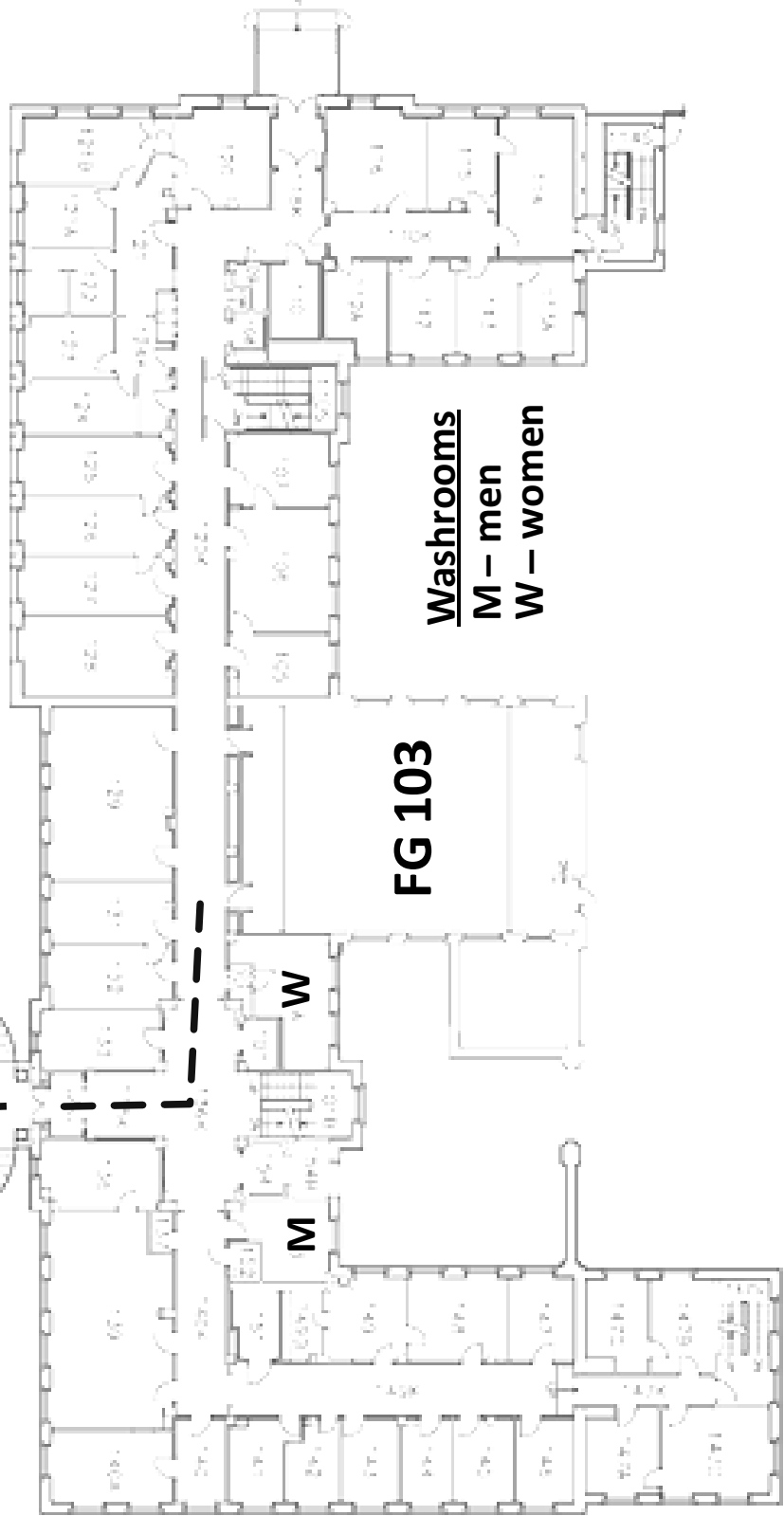


Floor Plan



Fitzgerald (FG) Building 1st Floor Plan

To MS & all bldgs



The following meals are included with your registration

- Coffee, tea, juice, fruit and snacks at morning and afternoon breaks
- Monday evening: Welcome Reception (Finger foods, 1 free drink ticket, then cash bar)
- Tuesday Poster Reception (Finger foods, 1 free drink ticket, then cash bar)
- Wednesday: Business lunch (Lunch provided)
- Wednesday: Poster Reception (Finger foods, 1 free drink ticket, then cash bar)
- Wednesday: IAGLR Dinner Banquet Harbour Cruise (Mariposa Cruise Lines)
- Thursday Poster Reception (Finger foods, 1 free drink ticket, then cash bar)
- Friday Poster lunch

Graduate students (only) are encouraged to attend the Graduate Student Mixer Tuesday evening at the Madison Pub (just north of campus); includes appetizers and 1 free drink.

Lunches on Tuesday and Thursday at Hart House are available for purchase at time of registration. There are also numerous restaurants off campus nearby (but watch your time!).

Off campus restaurants

Bloor Street

Toronto's Bloor Street features a wide range of restaurants and price points. Restaurants range from Nepalese to Sushi to Tai to a good old Pub. Price: Low to Mid to High-Range

Harbord Street

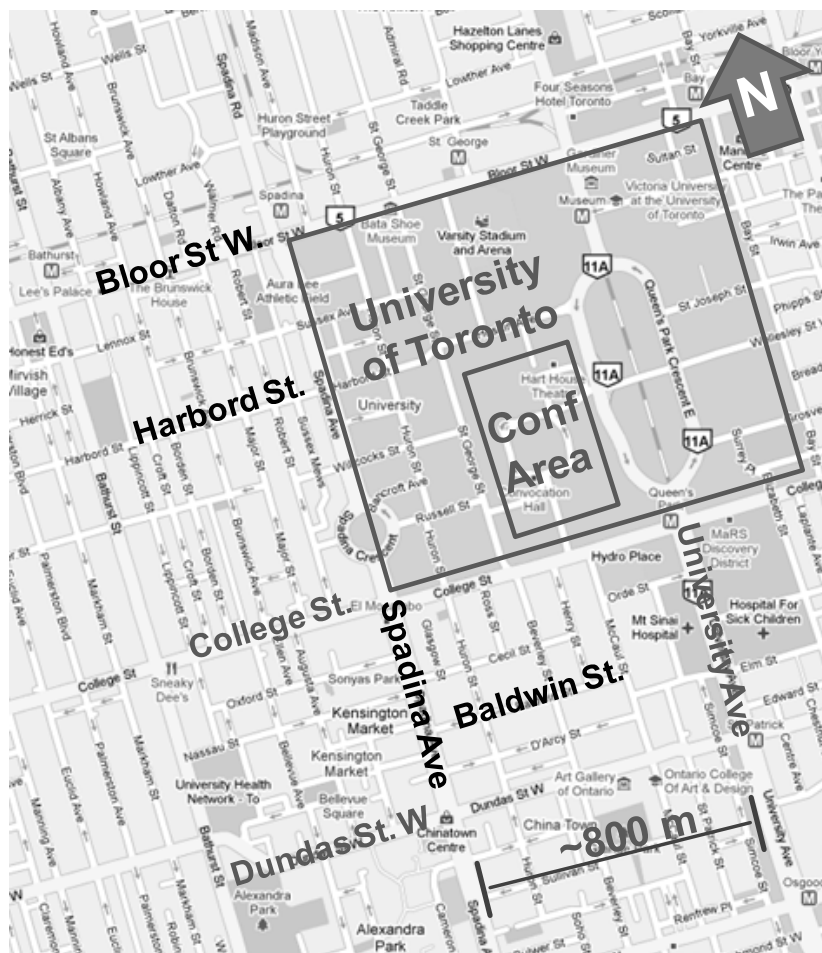
A favourite spot for University faculty and students alike, Harbord Street boasts a variety of higher-end eateries and cafes highlighting a range of cuisine, including: pan-Asian, Italian, French and more. Price: Mid-High Range

Spadina Avenue

Spadina Avenue, just south of the University of Toronto, is home to Toronto's Chinatown, featuring fresh markets and restaurants offering Pan-Asian cuisine. Price – Mid to Low-Range

Baldwin Street

Toronto's quaint Baldwin Street Village is a hodgepodge of charming independent restaurants featuring various cuisines, including: French, Indian, Bistro, Italian, Japanese, Mexican, Vegetarian and more. Price: Mid-Range



Movie Night: Waterlife

Thursday, May 20th , 8:00 PM

Innis Town Hall, University of Toronto

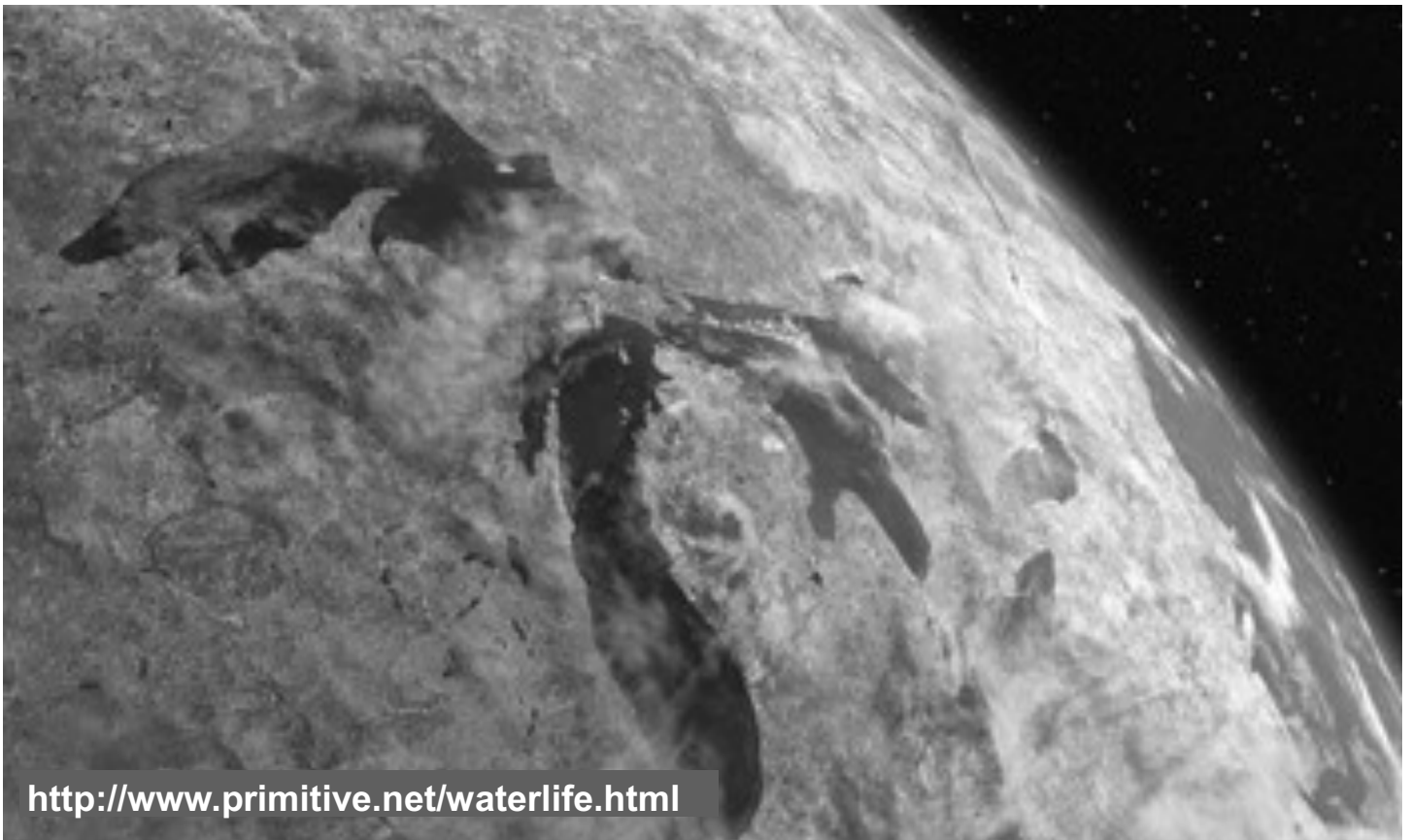
Director will attend



WATERLIFE

“*WATERLIFE* follows the epic cascade of the Great Lakes to the Atlantic Ocean. From the icy cliffs of Lake Superior to the ornate fountains of Chicago to the sewers of Windsor, this feature-length documentary tells the story of the last great supply (20 percent) of fresh water on Earth.”

Filled with fascinating characters and stunning imagery, *WATERLIFE* is an epic cinematic poem about the beauty of water and the dangers of taking it for granted. The film is narrated by The Tragically Hip’s Gord Downie and features music by Sam Roberts, Sufjan Stevens, Sigur Ros, Robbie Robertson and Brian Eno.



<http://www.primitive.net/waterlife.html>

Getting Around Toronto

Venues at IAGLR 2010 are located within walking distance of accommodations and are easily accessible by public transit. Lots of excellent restaurants and pubs are also within easy walking distance. For offsite activities, Toronto is effectively served by the Toronto Transit Commission (TTC) with integrated bus, streetcar, and subway service. Transit is quite affordable with cash fares for one way travel of \$3.00 CDN, or you can purchase 10 tokens (\$25.00 CDN) or a weekly pass (\$ 36 CDN). Contact the TTC at 416-393-INFO (416-393-4636) for information on Bus and Streetcar Routes or advice on how best to get to and from your desired locations. You can also visit the TTC website at www.ttc.ca for maps, fares, schedules, and route information.

Two subway lines (east-west Bloor-Danforth & north-south University/Spadina lines) cross at the north side of campus at Bloor St. and St. George St.

Subway: Exit at the northwest exit of Queen's Park station (there is a sign indicating the University of Toronto campus). At the top of the stairs of the subway exit, continue walking northwest to the concrete building on your left which is the Medical Sciences Building.

Streetcar: The 510 Spadina streetcar leaves Spadina station going south to either King St. or Union Station and stops at Willcocks St. (New College Residence accommodations) and College St. Walk east from Spadina along Willcocks to St. George St. and walkway to King's College Circle, or College St. to King's College Circle. You can also get to the Medical Sciences Building by taking the 506 College streetcar to McCaul St. Walk west a short distance to King's College Road, turn and walk northward towards the majestic University College Building. The Medical Sciences Building is on your right (east) as King's College Road turns into a circle.

Taxi: Several taxi companies service the downtown area. Taxis can be hailed from the street or called for pick-up. Taxi service to most locations in the downtown area will range from \$10.00 to \$20.00 (~\$3-6 per person if you are splitting rides).

Go Train: For regional attendees, several Go Train lines enter the city from the east, west, and north to Union Station. Most GO Train stations have convenient commuter parking.

From Union Station, take the TTC Yonge-University-Spadina Line north to Queen's Park station. Exit at the northwest exit of Queen's Park station (there is a sign indicating the University of Toronto campus). At the top of the stairs of the subway exit, continue walking northwest to the concrete building on your left which is the Medical Sciences Building.

For train routes, schedules, fares, and parking options for GO Transit, please visit www.gotransit.com.

Off-Site Conference Activities

Wednesday Dinner Cruise; 7pm – Mariposa Cruises

Location: 207 Queens Quay West, Toronto.

Mariposa's vessels are docked at Pier 6, at the Queens Quay Terminal building located at 207 Queens Quay West (Main intersection - Queen's Quay West & York Street)

By Public Transit from University of Toronto (20 minutes):

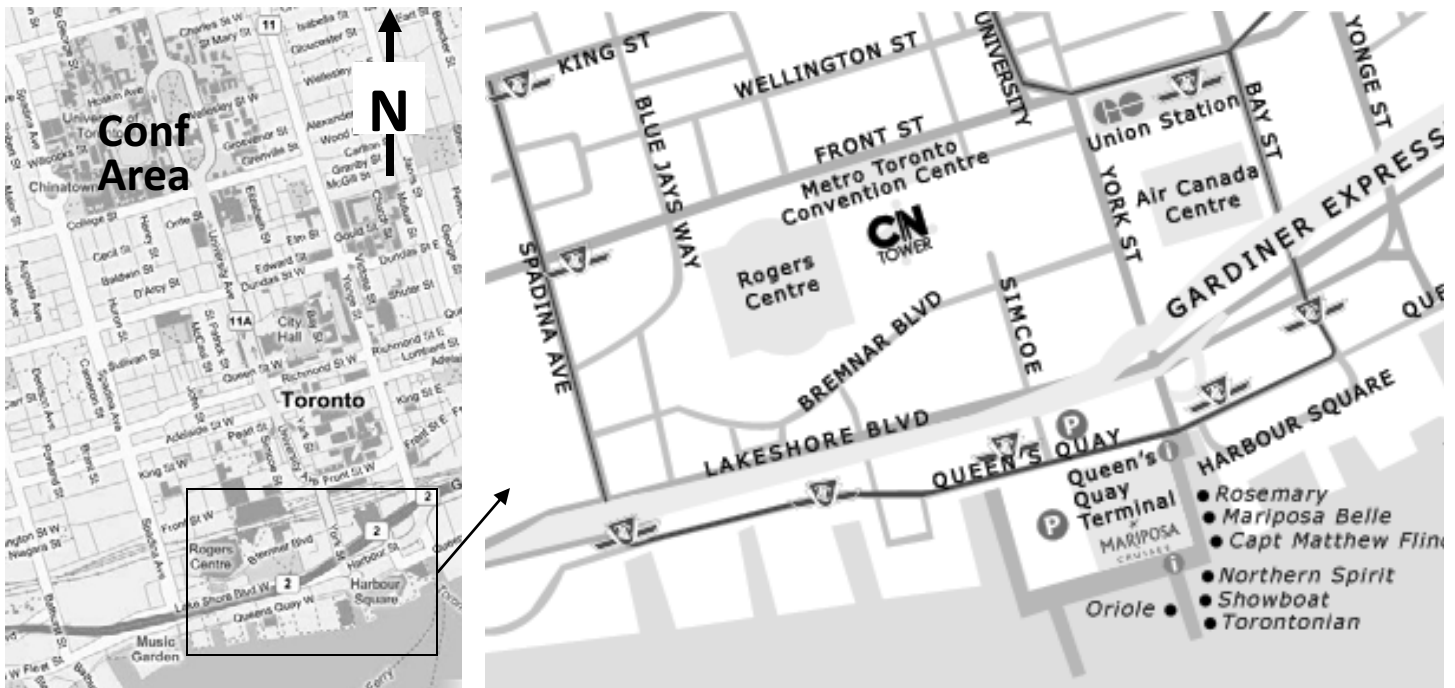
1) Enter the Queen's Park subway station at the corner of Queen's Park and College St (just southeast of the Medical Sciences building). Take the south bound subway to Union Station. When exiting the train, look for the stairway with the streetcar signs to Harbourfront. Taking the wrong stairs can result in having to exit and re-enter (& pay again). Follow signs to the hallway to the streetcars, and take either the 510 Spadina or the 509 Harbourfront car to Queen's Quay West and York Street. Then walk to Pier 6 of the the Terminal on the south side of Queen's Quay.

2) Take the Spadina Avenue 510 Streetcar (Union Stn) south and get off at York Street, and then walk to Pier 6 of the Terminal on the south side of Queen's Quay.

By Taxi: Ask your driver to take you to the intersection of Queen's Quay West & York Street, and then walk to Pier 6 of the Terminal (approx. 10 minutes).

Beck Taxi: 416.751.5555

Walking from University of Toronto: Walk south on University Avenue (turns into York Street at the intersection of Front and University). Continue south on York Street to Queen's Quay. Walk west (turn right) on Queen's Quay to 207 Queen's Quay West (Pier 6 at the Terminal) (approx. 40 minutes).



Off-Site Conference Activities

Tuesday Evening, Tour: Tommy Thompson Park

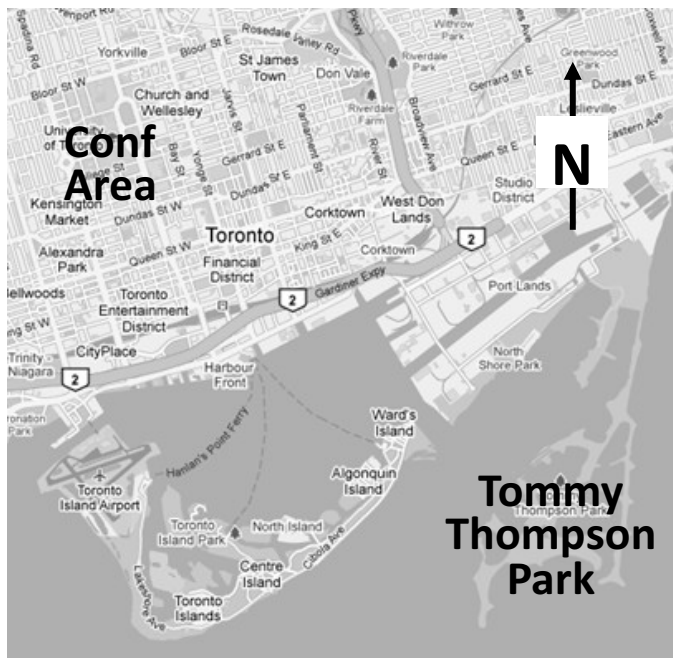
Natural Area Restoration (Courtesy of TRCA)

Bus departs U of T at 6:00 pm.

Bus returns ~8:30 pm.

Cost: Free (advanced registration necessary)

Drop off available en route at Toronto's historic Distillery District
(Note: on own for return to accommodations; approx \$15 taxi)



Tommy Thompson Park (TTP) is located on the Leslie Street Spit, a man-made peninsula that has evolved into an urban wilderness on the rubble and earth materials used as lakefill by the Toronto Port Authority for the last 50 years. Land that did not exist a century ago is now the largest greenspace on the Toronto waterfront and is a significant landscape filled with an unusually high diversity of biological communities containing habitat for a multitude of species including avian, mammalian and herpetofauna. While these habitats started to evolve naturally, Toronto and Region Conservation Authority (TRCA) has used a 'conservation by design' approach to accelerate the process. This trip will highlight the various projects undertaken by TRCA including shoreline and aquatic habitat restoration, wetland creation and terrestrial enhancements. A significant portion of the tour will focus on the Wetland Capping of a Confined Sediment Disposal Facility Known as Cell 1,

and Coastal Wetland Restoration. Additionally, demonstrations of fisheries survey work and migratory avian monitoring practices will be provided.

If interested, you may be dropped off in Toronto's historic Distillery District for drinks or a late evening dinner. (<http://www.thedistillerydistrict.com/frameset.html>)



Off-Site Conference Activities

Friday Morning

Tommy Thompson Park - Early Bird Hike

(courtesy of TRCA)

Transportation will not be provided (approx \$15 taxi from downtown; taxi-pooling encouraged)

Meet at the entrance of Tommy Thompson Park at 6:45 am (map provided at Registration Desk)

Cost: Free (please register at the registration desk to indicate interest)

As Toronto's only globally significant Important Bird Area, Tommy Thompson Park is a spectacular place to go birding during spring migration. Join us on an early morning bird walk through the diverse habitats at the park as we search for as many species as we can find. 317 species have been recorded at the park to date! We will make a stop at the Tommy Thompson Park Bird Research Station where the banding coordinator will give a bird banding demonstration and describe the importance of her research. May is the month of the Baillie Bird-a-thon. Please consider participating in the bird-a-thon to raise critical funds for the operation of the Tommy Thompson Park Bird Research Station. Our morning walk will be sure to help you spot a substantial number of species!



Friday Afternoon

Toronto Restoration Tour (courtesy of TRCA)

Bus departs U of T at 2:00 pm.

Bus returns approx 5:00 pm

Cost: Free (advanced registration necessary)

As a compliment to the Session 26 Prioritizing Restoration and Protection Efforts in the Great Lakes Region discussion of **Restoration Opportunities Planning in the GTA**, TRCA has planned a bus tour north of the city. The tour will include multiple stops to look at and discuss the assessment and planning techniques outlined in the **Restoration Opportunities Planning in the GTA** presentation. To do this, TRCA will walk through the real world process of assessing restoration opportunities, prioritization through a systems approach and ultimately implementing projects. Stops will be made at sites that demonstrate how this technique is used to assess the landscape for restoration in the field. Also, the tour will make stops at existing wetland restoration, natural channel design, reforestation, and structural habitat projects. Sites will be analyzed and assessed to address successes and failures in wetland and shoreline restoration.

Other Considerations

Great options to consider for accompanying guests, or before or after the conference!

Royal Ontario Museum (www.rom.on.ca)

Time: open to 5:30 6 days, 9:30 Fridays; Cost: \$22 per person

Canada's largest museum of world cultures and natural history located in the heart of downtown. Explore special exhibitions, permanent galleries of dinosaurs, ancient Egypt, Canada's First Peoples, gems & minerals, dinosaurs and more, alongside world-class dining, shopping and breathtaking architecture. ROM is located at the north-east end of the campus.

Art Gallery of Ontario (www.ago.net)

Time: open to 5:30, 6 days, 8:30 on Wednesday; Cost: \$18 per person

With a permanent collection of more than 73,000 works of art, the Art Gallery of Ontario is among the most distinguished art museums in North America. Highlights include the extensive Group of Seven collection to the brand new African Art Gallery; from David Altmejd's monumental installation *The Index* to Peter Paul Rubens' masterpiece *The Massacre of The Innocents*, a highlight of the internationally acclaimed Thomson Collection; there is truly something for everyone at the new AGO. Located within walking distance south of campus.

Hockey Hall of Fame (www.hhof.com)

Time: open to 5PM; Cost: \$15 per person

Experience the game that defines Canada and a sport that has been adopted by over 80 countries. Home of the Stanley Cup, the Hockey Hall of Fame has something for everyone: state-of-the-art games, interactive exhibits, larger-than-life statues, replica dressing room and rink zone, theatres, and hockey's most precious artifacts. Take the subway from campus.

Bata Shoe Museum (www.batashoemuseum.ca)

Time: open to 5PM 6 days/wk, 8PM on Thursdays; Cost: \$12 per person

The Bata Shoe Museum contains countless stories. What was it like to be a knight going into battle and donning long pointed *sabatons*? What can intricately crafted beaded moccasins indicate about trade patterns in Native North America? How have shoes signified status in different cultures? With about 1000 items of footwear on display at any given time, it's got a lot to show and tell. The Bata Shoe Museum is located at the north end of campus.

Other Considerations

Casa Loma (www.casaloma.org)

Time: last admission 4PM; Cost: \$18 per person

Former estate of Canadian financier, Sir Henry Pellatt. The Edwardian Castle is complete with decorated suites, towers, 800-foot tunnel and stables. Access via walking (about 20-25 minutes north of campus) or the Bathurst bus.

Toronto Symphony Orchestra Last Night at the Proms (www.tso.ca)

Location: Roy Thompson Hall; Time: Tuesday evening, 8 p.m.; Cost: \$22-99 per person

Join the Toronto Symphony Orchestra for joyful flag-waving and your favourite British tunes in this annual Promenade tradition! The programme includes *Pomp and Circumstance*, *Jerusalem*, and *Rule Britannia*.

CN Tower Observation Sky Pod Experience (www.cntower.ca)

Time: open until 10 p.m. every day; Cost: \$26.99 per person

Canada's National Tower and Wonder of the Modern World, offers spectacular views, spell-binding Glass Floor.

Musical Theatre Rock of Ages (mirvish.com/shows/rockofages)

Location: Royal Alexandra Theatre, 260 King Street West

Time: 8 p.m.; Cost: \$28-\$150 per person

In 1987 on the Sunset Strip, a small town girl met a big city rocker and in LA's most famous rock club, they fell in love to the greatest songs of the 80s. It's ROCK OF AGES, an arena-rock love story told through the mind-blowing, face-melting hits of JOURNEY, NIGHT RANGER, STYX, REO SPEEDWAGON, PAT BENATAR, TWISTED SISTER, POISON, ASIA, WHITESNAKE and many more. Don't miss this awesomely good time about dreaming big, playing loud and partying on! Nominated for five Tony™ awards, including Best Musical, ROCK OF AGES took Broadway by storm when it opened at the Brooks Atkinson Theatre in April 2009.

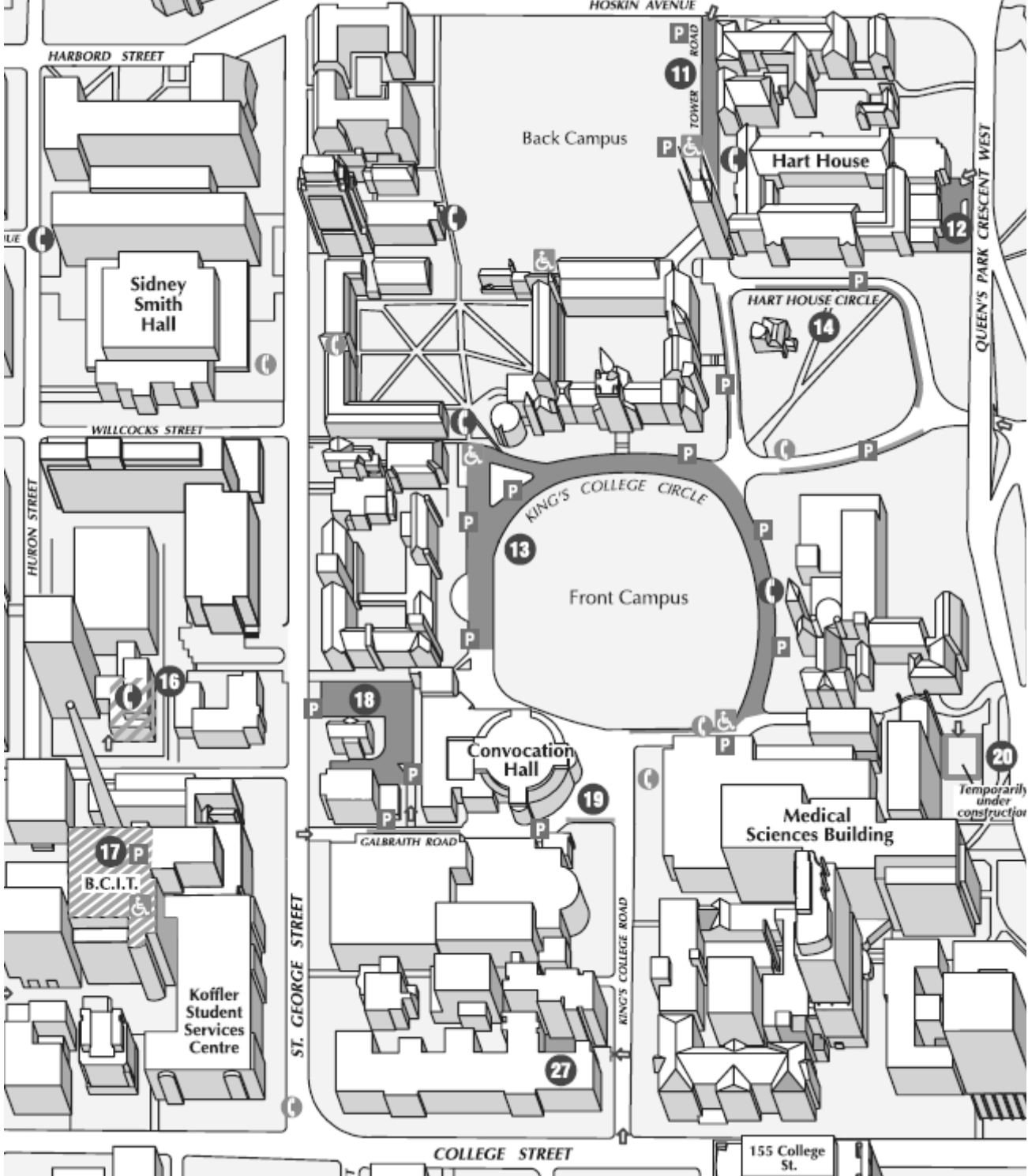
Jersey Boys (www.dancaptickets.com/pages/jersey-boys)

Toronto Centre for the Arts, 5000 Yonge St.; Time: 2 p.m. & 8 p.m.; Cost: \$25-85 per person

JERSEY BOYS is the story of Frankie Valli and The Four Seasons: Frankie Valli, Bob Gaudio, Tommy DeVito and Nick Massi. This is the story of how a group of blue-collar boys from the wrong side of the tracks became one of the biggest American pop music sensations of all time. They wrote their own songs, invented their own sounds and sold 175 million records worldwide -- all before they were thirty. The musical features such Four Seasons' hits as "Sherry," "Big Girls Don't Cry," "Walk Like A Man," "Oh What a Night" and "Can't Take My Eyes Off You."

Parking Locations

Pay and Display parking is available on a first-come-first-serve basis at parking lots located throughout the University of Toronto campus at a rate of \$3.00/half hour to a maximum of \$14.00/day



- Campus Parking designated area
- Underground Parking Garage
- Pay & Display machine
- Parking entrance
- Parking for People with Disabilities
- Emergency Hand-Free Telephone
- Pay Telephone with Toll-Free Access
- Subway Station (TTC)

PARKING LOCATIONS IN CLOSE PROXIMITY TO THE CONFERENCE LOCATION INCLUDE:

King's College Circle – #13 on the parking map
 B.C.I.T. (Entrance off Huron Street - Underground) – #17 on the parking map

Tuesday, May 18

- 8:00 a.m. - 10:20 a.m. **The Lakes They Are A-Changin': Long-Term Trends of Great Lakes Water Quality**
Room MS 2173
- 8:00 a.m. - 10:20 a.m. **Phytoplankton Ecology, Nutrient Cycles and Management Issues**
Room RS 208
- 8:00 a.m. - 10:20 a.m. **Linking Science-Policy-Action: Using Science to Guide Decision Making and Influence Behaviours.**
Room MS 3163
- 8:00 a.m. - 10:20 a.m. **Physical Processes in Lakes**
Room RS 211
- 8:00 a.m. - 10:20 a.m. **Trophic transfer of contaminants and nutrients, and risks and benefits of Great Lakes fish consumption**
Room MS 2172
- 8:00 a.m. - 10:20 a.m. **Hamilton Harbour: Science as a Tool for Achieving Future Goals in the AOC**
Room MS 3171
- 1:20 p.m. - 5:00 p.m. **Education & Outreach: Applying Science to Problem Solving**
Room MS 2173
- 1:20 p.m. - 5:00 p.m. **Phytoplankton Ecology, Nutrient Cycles and Management Issues**
Room RS 208
- 1:20 p.m. - 5:00 p.m. **Wildlife on the Great Lakes: Lake-specific to Basin-wide Issues**
Room MS 3163
- 1:20 p.m. - 5:00 p.m. **Physical Processes in Lakes**
Room RS 211
- 1:20 p.m. - 3:00 p.m. **Henry Regier Tribute Session**
Room MS 2172
- 1:20 p.m. - 5:00 p.m. **Source Water Protection on the Great Lakes**
Room MS 3171
- 3:20 p.m. - 5:00 p.m. **Evaluation of the Current State of Ecological Modeling and Future Perspectives**
Room MS 2172

Program Overview

Wednesday, May 19

- 8:00 a.m. - 9:40 a.m. **Ecological and Biochemical Tracers: Profiling the Flow of Materials in Food Webs**
Room MS 2173
- 8:00 a.m. - 9:40 a.m. **Causes and Consequences of Continued Diporeia Declines**
Room RS 208
- 8:00 a.m. - 11:00 a.m. **Great Lakes Aquatic Health and Environments - Past, Present, and Future**
Room MS 3163
- 8:00 a.m. - 11:00 a.m. **Aquatic Invasive Species: Solutions for the Future?**
Room SF 1101
- 8:00 a.m. - 9:40 a.m. **Changes on the Land: What Does it Mean for Water Quality in the Great Lakes Basin**
Room MS 2172
- 8:00 a.m. - 9:40 a.m. **Lessons from the Past, Solutions for the Future: Great Lakes Areas of Concern**
Room RS 211
- 8:00 a.m. - 11:00 a.m. **Building a Collaborative Science Strategy for the Great Lakes Basin**
Room RS 310
- 10:00 a.m. - 11:00 a.m. **Towards Linking Wind-Driven Physical Processes with Near-shore Aquatic Biology in Lakes.**
Room MS 2173
- 10:00 a.m. - 11:00 a.m. **Movements of Great Lakes Fishes: Uncertainties, Opportunities, and Implications**
Room RS 208
- 10:00 a.m. - 11:00 a.m. **Chemical contaminants and environmental forensics in the Great Lakes Basin.**
Room MS 2172
- 10:00 a.m. - 11:00 a.m. **Ecosystem Health and Recovery of the Bay of Quinte, Lake Ontario: Past, Present and Future**
Room RS 211

Wednesday, May 19

- 1:20 p.m. - 3:00 p.m. **Towards Linking Wind-Driven Physical Processes with Near-shore Aquatic Biology in Lakes.**
Room MS 2173
- 1:20 p.m. - 5:00 p.m. **Movements of Great Lakes Fishes: Uncertainties, Opportunities, and Implications**
Room RS 208
- 1:20 p.m. - 5:00 p.m. **Aquatic Invasive Species: Solutions for the Future?**
Room SF 1101
- 1:20 p.m. - 5:00 p.m. **Ecosystem Health and Recovery of the Bay of Quinte, Lake Ontario: Past, Present and Future**
Room RS 211
- 1:20 p.m. - 3:00 p.m. **Challenges with Geomatics Databases for Modeling in Great Lakes Watersheds**
Room RS 310
- 1:20 p.m. - 5:00 p.m. **Mysids in the Great Lakes**
Room FG 103
- 1:20 p.m. - 5:00 p.m. **Chemical contaminants and environmental forensics in the Great Lakes Basin.**
Room MS 3154
- 3:20 p.m. - 5:00 p.m. **Coupled Physical and Biogeochemical Processes in Large Lakes**
Room MS 2173
- 3:20 p.m. - 5:00 p.m. **Historical Sedimentation in Great Lakes Watersheds – Causes, Quantification and Consequences**
Room RS 310

Program Overview

Thursday, May 20

- 8:00 a.m. - 11:00 a.m. **Climate Change and Variability and their Impacts on Environment and Ecosystems in the Great Lakes Region**
Room RS 211
- 8:00 a.m. - 9:40 a.m. **Coastal Fish and Food Webs in the Great Lakes**
Room MS 2173
- 8:00 a.m. - 11:00 a.m. **Integration of Ecological and Hydrologic Approaches to the Restoration of Great Lakes Urban Rivers**
Room MS 3163
- 8:00 a.m. - 11:00 a.m. **Gaining and Applying Insights from Long-term Ecological Research on Lake Simcoe**
Room MS 2158
- 8:00 a.m. - 9:40 a.m. **Chemical contaminants and environmental forensics in the Great Lakes Basin.**
Room MS 3154
- 8:00 a.m. - 9:40 a.m. **Renovating Great Lakes Governance for Sustainability**
Room RS 208
- 10:00 a.m. - 11:00 a.m. **Fish Communities, Habitat Coupling and Energy Transfer in Great Lakes Ecosystems**
Room MS 2173
- 10:00 a.m. - 11:00 a.m. **Fate and Effects of Currently Used Pesticides**
Room MS 3154
- 10:00 a.m. - 11:00 a.m. **The Toronto & Region AOC: Measuring Progress and Moving Forward**
Room RS 208

Thursday, May 20

- 1:20 p.m. - 5:00 p.m. **Quantitative Models to Inform Management of Natural Resources**
Room RS 211
- 1:20 p.m. - 3:00 p.m. **Fish Communities, Habitat Coupling and Energy Transfer in Great Lakes Ecosystems**
Room MS 4279
- 1:20 p.m. - 5:00 p.m. **Coastal Zone of Lake Ontario: Present Day Conditions and Dynamics**
Room MS 3163
- 1:20 p.m. - 5:00 p.m. **Gaining and Applying Insights from Long-term Ecological Research on Lake Simcoe**
Room MS 2158
- 1:20 p.m. - 5:00 p.m. **Fate and Effects of Currently Used Pesticides**
Room MS 3154
- 1:20 p.m. - 5:00 p.m. **The Toronto & Region AOC: Measuring Progress and Moving Forward**
Room RS 208
- 3:20 p.m. - 5:00 p.m. **Remote Sensing, Visualization, and Spatial Data Applications for the Great Lakes**
Room MS 4279

Program Overview

Friday, May 21

- 8:00 a.m. - 9:40 a.m. **Lake Winnipeg: Causes and Effects of Eutrophication**
Room MS 2173
- 8:00 a.m. - 12:00 p.m. **Remote Sensing, Visualization, and Spatial Data Applications for the Great Lakes**
Room MS 4171
- 8:00 a.m. - 9:40 a.m. **Changing Water's Edge: Nearshore-Coastal Ecosystem Response to Loading of Inorganic Nutrients and Organic Matter**
Room MS 3163
- 8:00 a.m. - 12:00 p.m. **Recent Science, Monitoring, and Modeling in Lake Erie**
Room MS 3153
- 8:00 a.m. - 12:00 p.m. **Contaminants of Concern : Legacy to New / Past to Present**
Room MS 2172
- 8:00 a.m. - 12:00 p.m. **Prioritizing Restoration and Protection Efforts in the Great Lakes Region**
Room MS 3171
- 10:00 a.m. - 12:00 p.m. **Great Lakes in Regional and Global Biogeochemical Cycles**
Room MS 2173
- 10:00 a.m. - 12:00 p.m. **Groundwater in the Great Lakes: Source, Magnitude, Composition, Reactivity and Ecosystem Response.**
Room MS 3163

Platform Sessions by Day

Tuesday, May 18 (morning)

	MS 2172	MS 2173	MS 3163
Time	Trophic transfer of contaminants and nutrients, and risks and benefits of Great Lakes fish consumption <i>Co-Chairs: John Pouloupoulos, Donna Mergler, and Susan Schantz</i>	The Lakes They Are A-Changin': Long-Term Trends of Great Lakes Water Quality <i>Co-Chairs: Steven Chapra and David Dolan</i>	Linking Science-Policy-Action: Using Science to Guide Decision Making and Influence Behaviours. <i>Co-Chairs: Karl Schaefer and Matthew Pearson</i>
	Presented by / Title	Presented by / Title	Presented by / Title
8:00	<u>K.D. Norris</u> <i>et al.</i> The Distribution and Biomagnification of Mercury in Lake St. Francis	<u>S.C. Chapra</u> <i>et al.</i> Temporal and Spatial Trends of Great Lakes Precipitation Chemistry	<u>N.E. Dobiesz</u> Integrating fisheries data: addressing the challenges and creating new tools
8:20	<u>L. Zhang</u> <i>et al.</i> Trophic linkages and potential for contaminant transfer associated with Hemimysis anomola, the latest invader in the Laurentian Great Lakes	<u>D.M. Dolan</u> <i>et al.</i> Nutrient Loading Trends for Lakes Michigan, Superior and Huron	<u>E.M. Gwyn</u> <i>et al.</i> Knowledge Translation and Transfer - From Research Topics to Policy and Program Development - Examples from Ontario
8:40	<u>L.M. Campbell</u> <i>et al.</i> Bioaccumulation and transfer of mercury and silver in an ultraoligotrophic lake, Patagonia, Argentina	<u>J.L. Mida</u> <i>et al.</i> Long-term Monitoring Programs Reveal Recent Changes in Lake Michigan Primary Production	Poster Highlights
9:00	<u>S.P. Bhavsar</u> <i>et al.</i> Risk-based fish consumption advisories for the Canadian Great Lakes (2009-2010)	<u>Y. Zhou</u> <i>et al.</i> Estimating the History of Hypoxic Spatial Extent in Lake Erie	<u>W.E. Briggs</u> and J. Anderson Lake Huron Southeast Shore Working Group - A Multi-stakeholder Effort to Address Nearshore Water Quality Issues
9:20	<u>S.L. Schantz</u> <i>et al.</i> Fish Consumption Patterns in Recent Hmong Immigrants Living in Northeastern Wisconsin	<u>L. Richman</u> <i>et al.</i> Monitoring Metal And Persistent Organic Contaminants Through Time Using Caged Mussels (<i>Elliptio complanata</i>) and Quagga Mussels (<i>Dreissena bugensis</i>) Collected From The Niagara River ('83-'09)	<u>P.B. Donnelly</u> and G. Peach A Decade of Lake Huron Coastal Stewardship
9:40	<u>A. Lambertino</u> <i>et al.</i> Uterine Leiomyoma in a Cohort of Female Great Lakes Sport Fish Consumers	<u>E.D. DeLong</u> <i>et al.</i> An Evaluation of Model-Based Prediction of Mercury Contaminant Concentrations in Ontario Sport Fish	<u>S.F. Reid</u> and M.A. Veliz Community Involvement in Water Quality Decision Making in Huron County, Ontario
10:00	Poster Highlights	Poster Highlights	<u>M.J. Pearson</u> "Love the tank you're with" - Huron-Kinloss Community Septic Inspections (HK-CSI)
10:40	OPENING CEREMONIES & IAGLR AWARDS KEYNOTE featuring MURRAY CHARLTON		

MS 3171	RS 208	RS 211	Time
Presented by / Title	Presented by / Title	Presented by / Title	
<p>Hamilton Harbour: Science as a Tool for Achieving Future Goals in the AOC</p> <p><i>Chair: Tanya Labencki</i></p>	<p>Phytoplankton Ecology, Nutrient Cycles and Management Issues</p> <p><i>Co-Chairs: Curtis Clevinger, Robert Heath, Susan Watson, and Steve Wilhelm</i></p>	<p>Physical Processes in Lakes</p> <p><i>Co-Chairs: Dmitry Beletsky, Chin Wu, and Cary Troy</i></p>	
<p><u>J.D. Hall</u></p> <p>Leading with Science: The Hamilton Harbour Remedial Action Plan Experience in Integrating Research and Monitoring into Environmental Management Actions</p>	<p><u>R.E. Hicks et al.</u></p> <p>Planktonic Archaeal Communities Related to Nitrogen Cycle Processes Change Seasonally in Lake Superior</p>	<p>Poster Highlights</p>	8:00
<p><u>M. Fitzpatrick et al.</u></p> <p>A Comparative Evaluation of the Structure and Function of the Planktonic Food Web of Hamilton Harbour Before and During Algal Bloom Conditions</p>	<p><u>G.S. Bullerjahn et al.</u></p> <p>Detection and diversity of bacterial and archaeal ammonia oxidation genes (<i>amoA</i>) in Lake Superior</p>	<p><u>A.B. Bechle et al.</u></p> <p>Automated stereo imaging system for three-dimensional surface wave measurements in Lakes</p>	8:20
<p><u>A. Gudimov et al.</u></p> <p>Eutrophication Risk Assessment in Hamilton Harbour: System Analysis and Evaluation of Nutrient Loading Scenarios</p>	<p><u>D.L. Bade et al.</u></p> <p>A Review of Nitrification and Its Role in Lake Erie</p>	<p><u>Q. Liao et al.</u></p> <p>The development of the second generation of in situ Particle Image Velocimetry (PIV)</p>	8:40
<p><u>J.S. Quinn</u></p> <p>Santa Saves the Day for Nesting Herring Gulls Threatened by Double-crested Cormorants</p>	<p><u>C.C. Clevinger et al.</u></p> <p><i>AmoA</i> gene quantification, nitrification, and oxygen demand in the Central Basin of Lake Erie.</p>	<p><u>A. Martynov et al.</u></p> <p>Interactive Lakes in the Canadian Regional Climate Model (CRCM): Present State and Perspectives</p>	9:00
<p><u>B.E. McCarry et al.</u></p> <p>Sources of Aromatic Hydrocarbons in the Hamilton Harbour Airshed and Watershed</p>	<p><u>G.P. Horst</u> and O. Sarnelle</p> <p>Nitrogen limitation, but not <i>Dreissena</i> grazing, affect microcystin quota of <i>Microcystis aeruginosa</i></p>	<p><u>S.A. Schweitzer</u> and E.A. Cowen</p> <p>The Water Quality of a Shallow Shelf Connected to a Deep Lake as Forced by Tributary Flow Events and Internal Waves</p>	9:20
<p><u>D.A. Burniston</u></p> <p>Contaminants in Hamilton Harbour Water</p>	<p><u>S.M. Short et al.</u></p> <p>The Molecular Ecology of Algal Viruses in Lake Ontario</p>	<p><u>J. Zhao et al.</u></p> <p>Dispersion and Connectivity in Lake Winnipeg from Particle Tracking in a 3-D Hydrodynamic Model</p>	9:40
<p>Poster Highlights</p>	<p><u>A.M. Hanson et al.</u></p> <p>Viral lysis of freshwater bacteria provides phosphorus for P-starved eukaryotic algae</p>	<p><u>B. Boehrer</u></p> <p>Lakes density stratified by biogeochemical processes</p>	10:00
<p>OPENING CEREMONIES & IAGLR AWARDS KEYNOTE featuring MURRAY CHARLTON</p>			10:40

Tuesday, May 18 (afternoon)

	MS 2172	MS 2173	MS 3163	
Time	Henry Regier Tribute Session	Education & Outreach: Applying Science to Problem Solving	Wildlife on the Great Lakes: Lake-specific to Basin-wide Issues	
	<i>Chair: Mohi Munawar</i>	<i>Co-Chairs: Rochelle Sturtevant and Frank Lichtkoppler</i>	<i>Co-Chairs: Chip Weseloh and Craig Hebert</i>	
	Presented by / Title	Presented by / Title	Presented by / Title	
1:20	<u>M. Munawar</u> Henry Regier: a Scientist, a Leader and a Model for the Future	- Poster Highlights	<u>R.L. DeBruyne et al.</u> Location, Location, Location: Cormorant Diets from Four Sites on Lake Champlain	
1:40	<u>J. Magnuson et al.</u> Henry Regier - His Science and His Influence on Colleagues	<u>T.W. Hilditch</u> and M. Horton Presqu"ile Bay Species at Risk Outreach Project Case Study In Endangered Species Act, 2007 Stewardship & Outreach Tom Hilditch ¹ , Melanie Horton ² 1 Savanta Inc., 2 St Marys Cement	<u>B.A. Muter et al.</u> Birds of a Feather: Influence of Social Networks on Stakeholder Risk Perceptions Associated with Cormorant Management in Northern Lake Huron	
2:00	<u>A.P. Zimmerman</u> Henry A. Regier: Afflicter of the comfortable	<u>E.S. Isely</u> and A.D. Steinman Rein in the Runoff Integrated Assessment: Stormwater Management in Spring Lake (MI)	<u>K. McDonald</u> and R. Toningner Cormorants in the city: Double-crested Cormorant management at Tommy Thompson Park	
2:20	<u>G. Krantzberg</u> and J. Gannon Innovation, Evolution and Applications of the Ecosystem Approach	<u>R.A. Sturtevant</u> and H. Domske School for Scientists: Evaluation of an IAGLR-COSEE partnership	- Poster Highlights	
2:40	<u>G.C. Christie et al.</u> Toward an Ecosystem Approach to Fisheries Management - Henry Regier's Influence on the Great Lakes and Beyond	<u>T.A. Gabriel</u> Effective Lake Erie Education and Outreach: Aquatic Visitors Center at Put-in-Bay, OH	<u>D. Moro</u> and R. Toniger Canada Goose Management in the Greater Toronto Area	
3:00	BREAK			

(afternoon) Tuesday, May 18

MS 3171	RS 208	RS 211	Time
Source Water Protection on the Great Lakes <i>Co-Chairs: Martin Keller, Jennifer Read, and Fiona Duckett</i>	Phytoplankton Ecology, Nutrient Cycles and Management Issues <i>Co-Chairs: Curtis Clevinger, Robert Heath, Susan Watson, and Steve Wilhelm</i>	Physical Processes in Lakes <i>Co-Chairs: Dmitry Beletsky, Chin Wu, and Cary Troy</i>	
Presented by / Title	Presented by / Title	Presented by / Title	
<u>I.R. Smith</u> Protecting The Great Lakes as Sources of Drinking Water through the Ontario Clean Water Act, 2006	<u>M.A. Saxton et al.</u> Phosphonate Influence of Phytoplankton Community Structure in Lake Erie	<u>C.D. Troy et al.</u> Near-inertial internal waves in southern Lake Michigan: observations, analysis, and consequences	1:20
<u>S.R. Seabrook et al.</u> Considerations for IPZ-3 Delineations at Great Lake Intakes	<u>R.M.L. McKay et al.</u> Life Under Ice: Insights on Winter Production in Lake Erie	<u>W. Liu and K.G. Lamb</u> Internal Kelvin Waves in Lake Erie	1:40
<u>W.J. Snodgrass et al.</u> Application of Event Simulations to Support Development of Source Water Protection Plans for Lake Ontario Intakes.	<u>J.D. Chaffin et al.</u> Western Lake Erie <i>Microcystis Nutrient Deficiencies in the Large Bloom of 2008</i>	<u>D. Bouffard et al.</u> Spatial and temporal variability of turbulent hot spots in Lake Erie	2:00
<u>G.S. Bowen and W.G. Booty</u> Watershed Pollutant Loadings Estimates Developed for Lake Ontario Intake Protection Zone Studies.	<u>S.W. Wilhelm et al.</u> <i>Harmful algal blooms in China's Lake Taihu: A looking glass for other large, eutrophying waters</i>	<u>D. Beletsky et al.</u> Thermocline of Lake Erie	2:20
<u>K. Grootendorst et al.</u> Use of GIS Tools to Determine a Spatially-Distributed IPZ-3 Area Vulnerability Factor in Source Water Studies	<u>L.J. Simmons et al.</u> Application of High-Performance Liquid Chromatography (HPLC) for Interpretation of Nutrient-Phytoplankton-Zooplankton Interactions in the Great Lakes	<u>D.J. Schwab et al.</u> Evaluation of Great Lakes Ice Model (GLIM) Real-time Ice Forecasts for Lake Erie during the 2009-2010 Ice Season	2:40
BREAK			3:00

Tuesday, May 18 (afternoon)

Time	MS 2172	MS 2173	MS 3163
	Evaluation of the Current State of Ecological Modeling and Future Perspectives <i>Co-Chairs: George Arhonditsis and Craig Stow</i>	Education & Outreach: Applying Science to Problem Solving <i>Co-Chairs: Rochelle Sturtevant and Frank Lichtkoppler</i>	Wildlife on the Great Lakes: Lake-specific to Basin-wide Issues <i>Co-Chairs: Chip Weseloh and Craig Hebert</i>
	Presented by / Title	Presented by / Title	Presented by / Title
3:20	<u>C.A. Stow</u> and E.C. Lamon Evaluating and Forecasting Lake Superior Water Level Fluctuations Using Dynamic Linear Models	<u>M. Gleason</u> The use of ROV Technology to survey, map and evaluate Great Lakes Shipwrecks while Providing Education.	<u>S.K. Solomon</u> and P. Chow-Fraser Effect of Road Remediation Efforts on Freshwater Turtle Populations
3:40	<u>A.D. Gronewold</u> <i>et al.</i> Improving Recreational Water Quality Assessments through Novel Approaches to Quantifying Measurement Uncertainty	<u>C.A. Hagley</u> and D.J. Sass Shipboard and Shoreline Science on the R/V Lake Guardian	<u>S.A. Petrie</u> Waterfowl Use of the Great Lakes: Future Challenges and Opportunities
4:00	<u>C.P. McDonald</u> and N.R. Urban Bayesian test-bed calibration of a mechanistic aquatic biogeochemical model for Lake Superior	<u>D.D. Kane</u> <i>et al.</i> Collegiate Service Learning Using Large Lake Restoration	<u>E.E. Hanna</u> <i>et al.</i> Population size, fall recruitment, and migratory habits of Eastern Population Sandhill Cranes (<i>Grus canadensis</i>) staging and breeding along the North Shore of Lake Huron, Ontario
4:20	<u>G.K. Nurnberg</u> Internal Load and Sedimentation in Phosphorus Mass Balance Models	<u>D. Copplestone</u> and F. MacDonald The Invading Species Hit Squad - Spreading Awareness Through Monitoring, Education, and Outreach	<u>A.M. McMillan</u> Botulism in the Great Lakes: using a novel approach to track disease impacts on bird populations
4:40	<u>G.B. Arhonditsis</u> <i>et al.</i> Should We Trust the Phosphorus Loading Models? A Bayesian Hierarchical Reassessment	<u>J.M. Zoltak</u> The Invasives Tracking System: A Tool for Data Collection and Dissemination in Ontario	<u>C.E. Hebert</u> <i>et al.</i> Great Lakes Pelagic Prey Fish Declines and Impacts on Top Avian and Fish Predators
5:00	POSTER VIEWING/SOCIAL		

(afternoon) Tuesday, May 18

MS 3171	RS 208	RS 211	Time
Source Water Protection on the Great Lakes <i>Co-Chairs: Martin Keller, Jennifer Read, and Fiona Duckett</i>	Phytoplankton Ecology, Nutrient Cycles and Management Issues <i>Co-Chairs: Curtis Clevinger, Robert Heath, Susan Watson, and Steve Wilhelm</i>	Physical Processes in Lakes <i>Co-Chairs: Dmitry Beletsky, Chin Wu, and Cary Troy</i>	
Presented by / Title	Presented by / Title	Presented by / Title	
<u>T.A. Edge</u> <i>et al.</i> Occurrence of fecal indicator bacteria and waterborne pathogens in Lake Ontario source water of several Drinking Water Treatment Plants	<u>M.J. Twiner</u> <i>et al.</i> From Zebras to Cats: Development of Transcriptional Biomarkers in Larval Zebrafish for Application to Channel Catfish Exposed to Microcystis and the Cyanotoxin Microcystin	A. Oveisy <i>et al.</i> Simulation of Ice Formation on Lake Ontario	3:20
<u>S.B. Watson</u> <i>et al.</i> Caffeine and optical brighteners as wastewater markers: spatial and temporal patterns in Lake Ontario rivers, in-shore and open waters and drinking water intakes	<u>A.E. Poste</u> <i>et al.</i> Seasonal Dynamics and Bioaccumulation of Microcystin in Ugandan Lakes	<u>P. Cheng</u> and J.A. Austin The role of ice cover in the response of thermal structure to warming climate: a numerical study of Lake Superior	3:40
<u>E.J. Anderson</u> and D.J. Schwab Hydrodynamic Modeling and Contaminant Tracking in the St. Clair River for Public Water Safety and Spill Response	<u>S.B. Watson</u> <i>et al.</i> Long term patterns in taste-odour and toxins in inshore and offshore Lake Ontario	<u>V. Bennington</u> <i>et al.</i> Lake Superior Circulation 1979-2006: a Modeling Study	4:00
<u>J.C. Bryant</u> <i>et al.</i> A Case Study on the Impact of the Canard Watershed on the Amherstburg Water Treatment Plant (WTP) Intake Water Quality using Finite Volume Method in FVCOM	<u>A.S. Chiandet</u> and R.K. Sherman <i>Metalimnetic Oxygen Minimum and Algal Associations in an Isolated Bay of Honey Harbour, Georgian Bay</i>	<u>J.A. Austin</u> Resolving a persistent offshore temperature maximum using an Autonomous Underwater Glider	4:20
- Poster Highlights	- Poster Highlights	<u>J.D. Lenters</u> Seasonal Variations in the Lake Superior Energy Balance: Preliminary Results From an Island-Based Meteorological Station Near Marquette, Michigan	4:40
POSTER VIEWING/SOCIAL			5:00

Wednesday, May 19 (morning)

	MS 2172	MS 2173	MS 3163
Time	Changes on the Land: What Does it Mean for Water Quality in the Great Lakes Basin <i>Chair: Pamela Joosse</i>	Ecological and Biochemical Tracers: Profiling the Flow of Materials in Food Webs <i>Co-Chairs: Michael Arts and Ken Drouillard</i>	Great Lakes Aquatic Health and Environments - Past, Present, and Future <i>Co-Chairs: Scudder Mackey and Tom MacDougall</i>
	Presented by / Title	Presented by / Title	Presented by / Title
8:00	<u>P.G.R. Smith</u> Agriculture in the Canadian Great Lakes Basin: How is it Changing and What is the Effect?	<u>T.J. Newton et al.</u> Understanding the Role of Unionid Mussels in Riverine Food Webs Using Biochemical Tracers	<u>G.C. Christie</u> and M.J. Siefkes Killing Sea Lampreys to Protect Lake Sturgeon in the Great Lakes
8:20	<u>G.J. Wall et al.</u> Agricultural land management and water quality data evaluation in representative agricultural watersheds in the Grand River and Thames River basins.	<u>S. Gutreuter et al.</u> Preliminary Observations on Fish Tissue Lipid Quantity and Quality Associated with Spatial Patterns in the Distribution of Asian Carp	<u>L.M. O'Connor et al.</u> In Situ Assessment of Lampricide Toxicity to Age-0 Lake Sturgeon
8:40	<u>E. van Bochove et al.</u> Changes in agricultural management decreased the risk of water contamination by phosphorus in the Great Lakes Watersheds	<u>S.J. Czesny et al.</u> Exploring sources of variability in lipid content and fatty acid signatures of Lake Michigan forage fish and invertebrates	<u>S.N. Pandit et al.</u> Spatial and temporal distribution of Walleye (<i>Sander vitreum</i>) in Lake Erie
9:00	<u>R.P. Richards et al.</u> Causes of Increased Dissolved Reactive Phosphorus Loading to Lake Erie	<u>G. Paterson et al.</u> Ecological tracers demonstrate changes in the foraging activities of Great Lakes avian and fish top predator species	<u>J.D. Midwood</u> and P. Chow-Fraser Changes in Fish Habitat and Community Composition in Response to Low Water Levels in Eastern Georgian Bay Coastal Marshes
9:20	<u>S.I. Ahmed et al.</u> The Possible Impact of Changing Climate Characteristics on Soil and Water Resources in the Ontario Great Lakes Basin	<u>S.A. Rush et al.</u> Chemical Tracers Reveal Diminished Capacity of Laurentian Great Lake System to Support an Apex Native Fish Predator	<u>D. Rokitnicki-Wojcik et al.</u> Development of an inventory of coastal wetlands for eastern Georgian Bay, Lake Huron
9:40	BREAK (Exhibitor Demos)		

	RS 208	RS 211	RS 310	SF 1101	
	Causes and Consequences of Continued Diporeia Declines <i>Co-Chairs: Tomas Hook, Thomas Nalepa, and Maria Sepulveda</i>	Lessons from the Past, Solutions for the Future: Great Lakes Areas of Concern <i>Co-Chairs: Patrick Lawrence and Gail Krantzberg</i>	Building a Collaborative Science Strategy for the Great Lakes Basin <i>Co-Chairs: Jonathan Staples and Emily Higginson</i>	Aquatic Invasive Species: Solutions for the Future? <i>Co-Chairs: Lyubov Burlakova, Christopher Pennuto, and Alexander Karatayev</i>	Time
	Presented by / Title	Presented by / Title	Presented by / Title	Presented by / Title	
	<u>S.G. McCalla et al.</u> Patterns of Genetic Diversity in <i>Diporeia</i> in the Laurentian Great Lakes	<u>J.E. Gannon</u> How AOCs and RAPs evolved and what is their future?	<u>L.M. Seaman</u> Assessing and Managing Water Use Impacts in the Great Lakes Basin	<u>A.J. Olynyk et al.</u> Spatial Variation In Summer Diet of Invasive Rainbow Smelt (<i>Osmerus mordax</i>) in Lake Winnipeg	8:00
	<u>J.M. Watkins et al.</u> Coexistence of the native amphipod <i>Diporeia</i> and <i>Dreissena bugensis</i> in the New York Finger Lakes	<u>J.H. Gee et al.</u> Status of Canada's Great Lakes Areas of Concern	<u>S.R. Bellamy et al.</u> Development of a Climate Change Hydrologic Assessment Framework for the Province of Ontario	<u>J.W. Brownscombe and M.F. Fox</u> The Rate of Spread of Round Gobies in the Trent Severn Waterway: Modeling Upstream and Downstream Movements	8:20
	<u>D.J. Ryan et al.</u> Short-term Condition Assessment and Comparison of <i>Diporeia</i> spp. Populations in the Great Lakes Region	<u>L. Matos et al.</u> Review of Projects which may lead to delisting of Toronto & Region as an AOC	<u>D.J. Van Vliet et al.</u> Conjunctive Models and the Assessment of Cumulative Hydrologic Impacts	<u>M.P. Lynch and A.F. Mensinger</u> Alongshore dispersal of the invasive round goby (<i>Apollina melanostomus</i>) in the Duluth-Superior Harbor of Lake Superior by individual mark-recapture.	8:40
	<u>S. Maity et al.</u> Exploring the Causes of <i>Diporeia</i> Declines using Metabolomics	<u>R.M. Stewart et al.</u> Challenges on the Road to Delisting Great Lake's Areas of Concern: Case studies from the North Shore of Lake Superior.	<u>A.S. Mayer et al.</u> Modeling and Analyzing the Use, Efficiency, Value, and Governance of Water in the Great Lakes Region through an Integrated Approach	<u>C.R. Ruetz III et al.</u> Round Goby Predation on <i>Dreissena</i> in Drowned River Mouth Lakes: Evidence for Spatial Heterogeneity?	9:00
	<u>T.O. Höök et al.</u> Mapping the condition of Diporeia	- Poster Highlights	<u>M. Khoury et al.</u> Principles of Environmental Flows In the Great Lakes Region	<u>M.G. Fox et al.</u> Spatio-temporal variation in life history traits in an invasive species during its range expansion phase: round goby (<i>Neogobius melanostomus</i>) in the Trent River	9:20
BREAK (Exhibitor Demos)					9:40

Wednesday, May 19 (morning)

	MS 2172	MS 2173	MS 3163
Time	Chemical contaminants and environmental forensics in the Great Lakes Basin. <i>Co-Chairs: Chris Marvin, Matthew Robson, Tom Harner, and Liisa Jauntunen</i>	Towards Linking Wind-Driven Physical Processes with Nearshore Aquatic Biology in Lakes. <i>Co-Chairs: Agnes Blukacz-Richards and Mathew Wells</i>	Great Lakes Aquatic Health and Environments - Past, Present, and Future <i>Co-Chairs: Scudder Mackey and Tom MacDougall</i>
	Presented by / Title	Presented by / Title	Presented by / Title
10:00	<u>D. Hu and K.C. Hornbuckle</u> 3, 3'-Dichlorobiphenyl in Lake Erie and Lake Ontario Sediment Cores	<u>B. Pinel-Alloul</u> The Role of Wind in the Generation of Multiscale Patterns of Plankton Heterogeneity: Implications for Ecosystem Function.	<u>Y. Bhagat and C.R. Ruetz III</u> Assessing patterns of spatial and temporal variation of fish assemblages in a drowned river mouth (DRM) system of Lake Michigan
10:20	<u>A. Martinez and K.C. Hornbuckle</u> Dispersion of PCBs volatilized from a contaminated waterway in Lake Michigan	<u>E.A. Blukacz et al.</u> Wind-driven patchiness; spatial-patterns, trophic interactions and monitoring implications	<u>D. Gislason et al.</u> Assessment and mitigation of the effects of commercial fishing activities on aquatic SARs in Long Point Bay
10:40	Poster Highlights	<u>W.G. Sprules</u> Spatial Patterns of Freshwater Zooplankton in Nearshore Regions of Varying Wind Exposure and Bottom Slope	<u>J.G. Gilbert and K. Oldenburg</u> Ecological Assessment of Inner Long Point Bay, Lake Erie
11:00	PLENARY featuring JOHN P. SMOL		
Noon	IAGLR BUSINESS LUNCH		

(morning) Wednesday, May 19

	RS 208	RS 211	RS 310	SF 1101	
	Movements of Great Lakes Fishes: Uncertainties, Opportunities, and Implications <i>Chair: Rob McLaughlin</i>	Ecosystem Health and Recovery of the Bay of Quinte, Lake Ontario: Past, Present and Future <i>Co-Chairs: Mohiuddin Munawar, Charles Minns, and Marten Koops</i>	Building a Collaborative Science Strategy for the Great Lakes Basin <i>Co-Chairs: Jonathan Staples and Emily Higginson</i>	Aquatic Invasive Species: Solutions for the Future? <i>Co-Chairs: Lyubov Burlakova, Christopher Pennuto, and Alexander Karatayev</i>	Time
	Presented by / Title	Presented by / Title	Presented by / Title	Presented by / Title	
	- Poster Highlights	<u>K.H. Nicholls</u> Phosphorus and Chlorophyll in the Bay of Quinte: a Time-series/Intervention Analysis of 1972-2008 Data.	<u>L. Keeshig-Tobias</u> Geomorphology and the Great Lakes	<u>M. Henry et al.</u> Differences in the responses of larval and upstream migrant sea lampreys (<i>Petromyzon marinus</i>) to the lampricide 3-trifluoromethyl-4-nitrophenol (TFM)	10:00
	<u>D.W. Welch</u> Optimal Design & Operation Of The Pacific Ocean Shelf Tracking Array (POST)- Making Telemetry Array Measurements Cost-Effective & Policy Relevant	<u>K. Nicholls</u> The Phytoplankton of the Bay of Quinte, 1972-2008: Point-source Phosphorus Loading Control, Dreissenid Mussel Establishment, and a Proposed Community Reference.	<u>H. Lickers</u> Lessons from the Past - Solutions for the Future. Naturalized Knowledge System: An Old Idea Made New	<u>A.Y. Karatayev et al.</u> Contrasting Survival And Growth Of Zebra Mussels And Quagga Mussels Under Different Temperature Regimes	10:20
	- Previous Presentation Continued	<u>H. Niblock et al.</u> The missing carbon link: microbial energy pathways in the Bay of Quinte	<u>J. Staples and S. Pfeiffer</u> Water Quantity and Ecological Impact Assessment in Wisconsin	<u>C.A. Stepien and J.E. Brown</u> Population Genetic History of the Dreissenid Mussel Invasion: Expansion Patterns Across North America	10:40
PLENARY featuring JOHN P. SMOL					11:00
IAGLR BUSINESS LUNCH					Noon

Wednesday, May 19 (afternoon)

	FG 103	MS 2173	MS 3154	
Time	Mysids in the Great Lakes <i>Co-Chairs: Brent Boscarino and Maureen Walsh</i>	Towards Linking Wind-Driven Physical Processes with Nearshore Aquatic Biology in Lakes. <i>Co-Chairs: Agnes Blukacz-Richards and Mathew Wells</i>	Chemical contaminants and environmental forensics in the Great Lakes Basin. <i>Co-Chairs: Chris Marvin, Matthew Robson, Tom Harner, and Liisa Jauntunen</i>	
	Presented by / Title	Presented by / Title	Presented by / Title	
1:20	<u>T.J. Caldwell</u> and F.M. Wilhelm The role of the opossum shrimp (<i>Mysis relicta</i>) in the nutrient and zooplankton community dynamics of a large and deep (>350 m) oligotrophic lake in Northern Idaho, USA.	<u>M. Coman</u> and M.G. Wells Physical Mechanisms of the Spatial and Temporal Water Temperature Variations in Lake Openogo.	<u>R.A. Hites</u> and M. Venier Harmonic Fitting of Atmospheric POPs' Concentrations Measured Near the Great Lakes Over the Last 17 Years	
1:40	<u>O. Johannsson</u> <i>et al.</i> Mysis diluviana Population Dynamics with <i>Dreissena</i> , <i>Cercopagis</i> and <i>Bythotrephes</i> Invasion of Lake Ontario.	<u>H. Cyr</u> The Spatial and Temporal Variability in Nutrient Limitation of Phytoplankton in Nearshore Areas: the Importance of Physical Forces	<u>C. Persoon</u> and K.C. Hornbuckle Consistent Spatial Distribution of Atmospheric PCBs "hot spots" Over Time in Intra-City Environments	
2:00	<u>T.J. Stewart</u> and W.G. Sprules The offshore Lake Ontario food web before and after invasion-associated ecosystem change with an emphasis on Mysis trophic interactions	<u>M.R. Silva</u> and S.L. McLellan The Sources and Nearshore Transport of Human Fecal Pollution in Lake Michigan Beaches	<u>S.J. Hayward</u> <i>et al.</i> Atmospheric Concentrations, Transport, and Temporal Trends of Pesticides in the Great Lakes Region	
2:20	<u>K.L. Bowen</u> <i>et al.</i> Nucleic Acid Ratios and other Growth Indicators in Great Lakes Mysids	<u>L.S. Cardoso</u> <i>et al.</i> Hydrodynamics-driven biological processes in two subtropical lakes	<u>M. McInnes</u> <i>et al.</i> Measurement and Modelling of Altitudinal Flux of Nonylphenol Ethoxylates to the Atmosphere via Aqueous Aerosol Production	
2:40	<u>B.T. Boscarino</u> <i>et al.</i> Substrate preference and benthic predator avoidance responses of Great Lakes mysids	- Poster Highlights	<u>J. Huang</u> <i>et al.</i> Ambient Mercury Sources in Rochester, NY: Results from Principle Component Analysis (PCA) of Mercury Monitoring Network Data	
3:00	BREAK (Exhibitor Demos)			

(afternoon) Wednesday, May 19

	RS 208	RS 211	RS 310	SF 1101	
	Movements of Great Lakes Fishes: Uncertainties, Opportunities, and Implications <i>Chair: Rob McLaughlin</i>	Ecosystem Health and Recovery of the Bay of Quinte, Lake Ontario: Past, Present and Future <i>Co-Chairs: Mohiuddin Munawar, Charles Minns, and Marten Koops</i>	Challenges with Geomatics Databases for Modeling in Great Lakes Watersheds <i>Chair: Stewart Sweeney</i>	Aquatic Invasive Species: Solutions for the Future? <i>Co-Chairs: Lyubov Burlakova, Christopher Pennuto, and Alexander Karatayev</i>	Time
	Presented by / Title	Presented by / Title	Presented by / Title	Presented by / Title	
	<u>C.M. Holbrook et al.</u> From Fine-Scale Fish Behavior to System-Wide Survival: Acoustic Telemetry Studies in Large Regulated Rivers	<u>A. Bedford et al.</u> Changes in Zooplankton Production and Biomass in the Bay of Quinte, 1975 to 2008	<u>L.W. Stanfield et al.</u> Improving understanding of tributary influences on the Great Lakes: Improved linkages between field and geospatial datasets in Ontario	<u>R.A. Sturtevant</u> GLANSIS as a Management Tool	1:20
	<u>R.A. Goodwin et al.</u> ELAM Neurobiology Describing Animal Movement Decision-Making Behavior in Changing Environments	<u>R. Dermott et al.</u> Changing Benthic Fauna in the Bay of Quinte, 40 years of change.	<u>G.J. Smith et al.</u> New Approaches to Developing Detailed Terrain Data for Watershed Nonpoint Source Modeling	<u>D. Mayer et al.</u> Potential to Manage the Impacts of Invasive Species on Endangered Wildlife in the Great Lakes	1:40
	- Previous Presentation Continued	<u>M. Munawar et al.</u> Application of Ecological Indicators as a Tool for Assessing Beneficial Use Impairments Towards Delisting of the Great Lakes Areas of Concern: Bay of Quinte Example	<u>H. Yao</u> HYDAM: hydrologically distributed areal model as applied to Muskoka-Haliburton region and its demand for spatial data	<u>B.C. Cudmore</u> Using Risk Assessment to Inform Aquatic Invasive Species Prevention Strategies	2:00
	<u>S.J. Cooke and E.B. Thorstad</u> The changing role of radio telemetry in studies of freshwater ichthyofauna relative to other tagging and telemetry technology: a review	<u>R.G. Randall et al.</u> Effect of macrophyte density on spatial variability in the abundance and growth of littoral fishes in bays of Prince Edward County, Lake Ontario.	<u>E.P. Thuss et al.</u> LiDAR-derived DEM's enhance the resolution of ArcGeoWEPP results for "within-field-scale" soil erosion assessment to inform mitigation action deployment	<u>J.M. Gilbert et al.</u> Insight Gained on Effective Control of the Invasive Alien Species <i>Phragmites australis subsp. australis</i> (common reed) in Sensitive Great Lakes Coastal Habitats	2:20
	<u>W.R. Glass et al.</u> Evaluating Habitat Utilization of the Threatened Spotted Gar (<i>Lepisosteus oculatus</i>) in Rondeau Bay with the Aid of Radiotelemetry	<u>J.N. Bowlby and J.A. Hoyle</u> Distribution and Movement of Bay of Quinte Walleye in Eastern Lake Ontario	- Poster Highlights	<u>A. Drake et al.</u> From Incidental Harvest to Release: Quantifying the Likelihood of Introducing Aquatic Invasive Species through the Baitfish Industry in Ontario	2:40
BREAK (Exhibitor Demos)					3:00 p.m.

Wednesday, May 19 (afternoon)

	FG 103	MS 2173	MS 3154
Time	Mysids in the Great Lakes <i>Co-Chairs: Brent Boscarino and Maureen Walsh</i>	Coupled Physical and Biogeochemical Processes in Large Lakes <i>Co-Chairs: Leon Boegman, Josef Ackerman, and Ram Yerubandi</i>	Chemical contaminants and environmental forensics in the Great Lakes Basin. <i>Co-Chairs: Chris Marvin, Matthew Robson, Tom Harner, and Liisa Jauntunen</i>
	Presented by / Title	Presented by / Title	Presented by / Title
3:20	<u>A. Welsh et al.</u> Genetic Determination of the Invasion Pathway of <i>Hemimysis anomala</i> throughout the Great Lakes	<u>J.V. DePinto et al.</u> Calibration and Diagnostic Analysis of SAGEM2, a Fine-Scale Ecosystem Model of Saginaw Bay	<u>D.C.G. Muir et al.</u> Atmospheric deposition and bioaccumulation of selected halogenated organics in remote lakes in Ontario and in the Great Lakes
3:40	<u>M.G. Walsh et al.</u> Population characteristics and distribution patterns of <i>Hemimysis anomala</i>	<u>L.F. Leon et al.</u> Water Quality and <i>Cladophora</i> Modeling in the Nearshore of Lake Ontario : Variations in Algal Growth and the Role of Local Nutrient Sources	<u>F. Wong et al.</u> Effect of Aging on the Volatility and Degradation of Brominated Flame Retardants and Organochlorine Pesticides in an Urban Soil from Toronto, Ontario
4:00	<u>J. Marty et al.</u> <i>Hemimysis anomala</i> diet and trophic position: a comparative study between lentic and lotic ecosystems using stable isotopes	<u>G.J. Smith</u> and J.D. Ackerman Exploring the spatial and temporal patterns of hypoxia in the Central Basin of Lake Erie	<u>J.L. Van Geest et al.</u> The effectiveness of laboratory bioaccumulation methods in reflecting environmental exposures and bioavailability
4:20	<u>M.J. Yuille et al.</u> Eating or competing? <i>Hemimysis anomala</i> : food web effects in Lake Ontario	<u>J. Xiao</u> and Q. Liao A flume experiment of turbulent flow structures over a quagga mussel bed	<u>T. Bidleman et al.</u> Tracing Pathways of HCHs Through Lake Superior
4:40	- Poster Highlights	<u>M. Stastna</u> Simulating Internal wave dynamics using high order methods	<u>T.P. Towey et al.</u> Statistical Fingerprinting of PCDDs, PCDFs, and PCBs in Soil, Dust, Fish Tissue, and Human Serum Samples from the Tittabawassee River and Floodplain
5:00	POSTER VIEWING/SOCIAL		

(afternoon) Wednesday, May 19

	RS 208	RS 211	RS 310	SF 1101	
	Movements of Great Lakes Fishes: Uncertainties, Opportunities, and Implications <i>Chair: Rob McLaughlin</i>	Ecosystem Health and Recovery of the Bay of Quinte, Lake Ontario: Past, Present and Future <i>Co-Chairs: Mohiuddin Munawar, Charles Minns, and Marten Koops</i>	Historical Sedimentation in Great Lakes Watersheds: Causes, Quantification and Consequences <i>Co-Chairs: Jim Selegear and Faith Fitzpatrick</i>	Aquatic Invasive Species: Solutions for the Future? <i>Co-Chairs: Lyubov Burlakova, Christopher Pennuto, and Alexander Karatayev</i>	Time
	Presented by / Title	Presented by / Title	Presented by / Title	Presented by / Title	
	<u>C. Wilson</u> Genetic markers as heritable tags: temporal and spatial tracking of individuals and populations in the Great Lakes	<u>T.B. Johnson</u> Fish response to aquatic ecosystem change in the Bay of Quinte, Lake Ontario	<u>P. Ashmore et al.</u> Morphology, sedimentology and dynamics of the upper St. Clair River	<u>Y. Sun</u> and M.G. Wells How the physical dispersion of ballast water influences the risk of aquatic invasive species establishment - field observations and modelling.	3:20
	<u>S.A.C. Marklevitz et al.</u> The use of otolith micro-chemistry to study the natal origins and movement patterns of Chinook salmon in Lake Huron	<u>J.A. Hoyle et al.</u> Bay of Quinte Fish Populations: The Influence of Nutrient Levels and Invasive Species on Community Structure	<u>C.C. Creech et al.</u> The Ontonagon River: A History of Sediment Yields in a Geologically Young Watershed	<u>S.A. Bailey et al.</u> Have Ballast Water Policies for the Great Lakes Reduced the Risk of Ship-mediated Aquatic Invasions?	3:40
	<u>M.M. Robillard et al.</u> A framework to guide research into complex migratory systems applied to migratory brook trout in Lake Superior	<u>S.E. Doka et al.</u> Predicting the production dynamics of selected fish populations in the Bay of Quinte in relation to changes in habitat quality and quantity	<u>N.G. Clubine et al.</u> A Quarter Century of Seasonal and Annual Sediment Yield Variations into Lake Huron from Ausable River, Ontario	<u>E.D. Reavie et al.</u> Testing Ballast Water Treatments at the Great Ships Initiative Land-based Facility: Zooplankton and Phytoplankton assessments	4:00
	<u>S.G. Hinch et al.</u> Linking Telemetry, Physiology, And Experimental Biology: Novel Approaches For Use In Studying Salmonid Migrations And Managing Fisheries	<u>C.M. Brousseau et al.</u> Fish community indices of ecosystem health: Are Index of Biotic Integrity values at Bay of Quinte relatively high compared to other coastal sites in Lake Ontario?	<u>T.M. Redder et al.</u> Development and Application of a Fine-Scale Model to Evaluate Sediment Dynamics in Toledo Harbor and the Western Basin of Lake Erie	- Poster Highlights	4:20
	- Previous Presentation Continued	- Poster Highlights	<u>P.V. Villard et al.</u> Recent Evolution of Rattray Marsh, Mississauga, Lake Ontario	- Previous Presentation Continued	4:40
POSTER VIEWING/SOCIAL					5:00

Thursday, May 20 (morning)

Time	MS 2158	MS 2173	MS 3154
	Gaining and Applying Insights from Long-term Ecological Research on Lake Simcoe	Coastal Fish and Food Webs in the Great Lakes	Chemical contaminants and environmental forensics in the Great Lakes Basin.
	<i>Co-Chairs: David Evans, Rebecca North, Michael Rennie, and Joelle Young</i>	<i>Chair: Mark Ridgway</i>	<i>Co-Chairs: Chris Marvin, Matthew Robson, Tom Harner, and Liisa Jauntunen</i>
	Presented by / Title	Presented by / Title	Presented by / Title
8:00	<u>R.L. North</u> <i>et al.</i> State of Lake Simcoe	<u>K.L. Kapuscinski</u> and J.M. Farrell Description and Comparison of Fish Assemblages at Muskellunge Nursery Sites in the Buffalo Harbor (Lake Erie), Upper Niagara River, and St. Lawrence River	<u>N.B. Benoit</u> and D. Burniston Tracking PCB Contamination in Great Lakes Tributaries
8:20	Poster Highlights	<u>R. Dolson</u> <i>et al.</i> Long-Term changes in the Biodiversity of the Nearshore Fish Community in Lake Simcoe, Ontario	<u>E.B. Dussault</u> <i>et al.</i> Health Status of Wild Fish from the St. Lawrence River (Cornwall) Area of Concern - 2. PCB body burden and hydroxylated metabolites in fish plasma
8:40	<u>J. Hawryshyn</u> <i>et al.</i> Diving into Lake Simcoe's Past: A Paleolimnological Study of Lake Water Quality	<u>L.N. Ivan</u> and T.O. Höök Modeling the impacts of zooplankton abundance on walleye and yellow perch YOY growth and survival in Saginaw Bay, Lake Huron	<u>B.W. Kilgour</u> <i>et al.</i> Quantifying Road Salt Impacts in Toronto-Area Streams, and Ecological Benefits of Reducing Salt Loads
9:00	<u>N.L. Bumstead</u> and F.J. Longstaffe The Stable Isotope Paleolimnology of Lake Simcoe	<u>R.M. Gorney</u> and M.C. Watzin Diet analysis of invasive planktivorous fish species in Missisquoi Bay, Lake Champlain	<u>R.J. Letcher</u> <i>et al.</i> The Increasing Complexity of Brominated Flame Retardants (BFRs) in Eggs of Great Lakes Herring Gulls: Tetrabromobisphenol-S and Tetrabromobisphenol-A Derivatives and Other New BFRs
9:20	<u>A. Mazumder</u> <i>et al.</i> Paleo patterns of algal pigments, C/N isotopes and nutrients provide new insights into historic water quality trends in Lake Simcoe.	<u>T.M. Guzzo</u> <i>et al.</i> Linking Sources of Primary Production to Fish Production in the Western Basin of Lake Erie	<u>W.A. Gebbink</u> <i>et al.</i> Spatial Trends of Perfluorinated Carboxylates and Sulfonates and Precursor Compounds in Eggs of Colonial Herring Gulls and the Influence of Dietary and Food Web Sources
9:40	BREAK		

MS 3163	RS 208	RS 211	Time
<p>Integration of Ecological and Hydrologic Approaches to the Restoration of Great Lakes Urban Rivers</p> <p><i>Co-Chairs: Ken Dion, Don Haley, and Alex Brunton</i></p>	<p>Renovating Great Lakes Governance for Sustainability</p> <p><i>Co-Chairs: Gail Krantzberg and Jon MacDonagh-Dumler</i></p>	<p>Climate Change and Variability and their Impacts on Environment and Ecosystems in the Great Lakes Region</p> <p><i>Co-Chairs: Brent Lofgren, Jia Wang, and Murray MacKay</i></p>	
Presented by / Title	Presented by / Title	Presented by / Title	
<p><u>D.P. Johnston et al.</u> Linking Ecology and Hydraulics in Urban Watersheds - Riverview Creek Naturalization Case Study</p>	<p><u>J.E. Gannon</u> Towards Great Lakes Chemical, Physical and Biological Integrity</p>	<p><u>C. Spence et al.</u> Evaporation from Lake Superior</p>	8:00
<p><u>M.F. Bassingthwaite and J. Helka</u> The Enhancement of Windermere Basin - Sediment Management, Habitat Restoration and Aesthetic Improvement within the City of Hamilton</p>	<p><u>C. McLaughlin</u> You Can Do It, We Can Help: Coherent Leadership for Renovation of the Great Lakes Water Quality Agreement</p>	<p><u>W.T. Dickinson et al.</u> Trends in Winter Precipitation and Temperatures across Ontario</p>	8:20
<p><u>A. Brunton et al.</u> Numerical Models of Hydrodynamics and Sediment Transport as Environmental Assessment Tools for the Don River Mouth Naturalization</p>	<p><u>E. Rankin-Gouthro and G. krantzberg</u> The Lorax Can Win: Using Scenario Building to Create A New Vision and Invigorate An "Activist Agenda" for the Great Lakes St. Lawrence Basin</p>	<p><u>J. Wang et al.</u> Severe Great Lakes Ice Cover in Winter 2008/09: Contribution of AO and ENSO</p>	8:40
<p><u>T.J. Dekker et al.</u> Evaluating Hydrology, Flooding, Sediment Transport and Ecology within the Lower Don Lands Naturalization Project</p>	<p><u>P. Enquist et al.</u> <i>The Great Lakes and St. Lawrence Region: Achieving a Sustainable Vision for this New Century</i></p>	<p><u>A.D. Gronewold et al.</u> Novel Modeling Tools for Propagating Climate Change Variability and Uncertainty into Hydrodynamic Forecasts</p>	9:00
<p>- Poster Highlights</p>	<p><u>D.A. Ullrich</u> Renovating Great Lakes Governance for sustainability: Cities as a Catalyst</p>	<p><u>M. Lewis et al.</u> The Reduced Lakes Erie and Ontario, a Severe Response to a Past Drier Climate</p>	9:20
BREAK			9:40

Thursday, May 20 (morning)

Time	MS 2158	MS 2173	MS 3154
	Gaining and Applying Insights from Long-term Ecological Research on Lake Simcoe <i>Co-Chairs: David Evans, Rebecca North, Michael Rennie, and Joelle Young</i>	Fish Communities, Habitat Coupling and Energy Transfer in Great Lakes Ecosystems <i>Co-Chairs: Owen Gorman and Thomas Hrabik</i>	Fate and Effects of Currently Used Pesticides <i>Co-Chairs: John Struger and Ed Sverko</i>
	Presented by / Title	Presented by / Title	Presented by / Title
10:00	<u>B.K. Ginn et al.</u> Sediment phosphorus and the potential for internal loading in Lake Simcoe and the Holland River (Ontario, Canada)	<u>O.T. Gorman</u> and D.L. Yule Habitat Coupling by Fishes of Lake Superior across Inshore, Nearshore, and Offshore Waters	<u>M.G. Clark et al.</u> Organochlorine Pesticides in Whole Fish Tissues, in the Canadian Waters of the Great Lakes: 1977 to 2008
10:20	<u>D.C. Depew et al.</u> Some observations on the lack of Cladophora growth in Lake Simcoe	<u>A.E. Gamble et al.</u> Nearshore-offshore linkages in Lake Superior: potential management implications	<u>D.V. Weseloh</u> and D.J. Moore Contaminant Trends in Great Lakes Herring Gulls, 1974-2007
10:40	<u>D.R. Barton et al.</u> Changes In The Benthic Invertebrate Community And Trophic Relationships In The Nearshore Of Lake Simcoe Following The Introduction of <i>Dreissena polymorpha</i>	<u>E.J. Isaac et al.</u> Consumption by the Lake Superior Fish Community: How Important are <i>Mysis relicta</i> ?	J.W. Kramer and <u>R.P. Richards</u> Atrazine in Northwest Ohio Rivers: Long-Term Trends
11:00	PLENARY featuring CAMERON DAVIS		

(morning) Thursday, May 20

	MS 3163	RS 208	RS 211	
	Integration of Ecological and Hydro-logic Approaches to the Restoration of Great Lakes Urban Rivers <i>Co-Chairs: Ken Dion, Don Haley, and Alex Brunton</i>	The Toronto & Region AOC: Measuring Progress and Moving Forward <i>Co-Chairs: Susan Doka, Willaim Snodgrass, and Stephanie Hawkins</i>	Climate Change and Variability and their Impacts on Environment and Ecosystems in the Great Lakes Region <i>Co-Chairs: Brent Lofgren, Jia Wang, and Murray MacKay</i>	Time
	Presented by / Title	Presented by / Title	Presented by / Title	
	<u>S.I. Apfelbaum</u> <i>et al.</i> An Ecologist's Perspective on the Don River Naturalization: Toronto, Canada	<u>G. MacPherson</u> <i>et al.</i> The Toronto Waterfront: An Integrated Management and Restoration Approach	S.T. Cheng and M.J. Wiley Climate Change: Warming up Muskegon River and its Chinook Salmon Community	10:00
	<u>D.A. Leadbeater</u> and M.B. Roy Drowned River Mouth Restoration on the Great - Exploring the links between hydrology and biology in past restoration projects and demonstrating their influence on the design of current projects	<u>J. DiRocco</u> <i>et al.</i> Tommy Thompson Park: Toronto's best example of planned habitat restoration and adaptive management	<u>Y. Shimoda</u> <i>et al.</i> Our Current Understanding of Lake Ecosystem Response to Climate Change: What Have We Really Learned from the North Temperate Deep Lakes?	10:20
	<u>G. Macpherson</u> and D. Moro Duffin's Creek Marsh - Rehabilitation of Corner Marsh using Adaptive Management	<u>C. Tu</u> <i>et al.</i> Measuring the Success of Watershed Based Fisheries Management Plans: Science and Society Meet	- Poster Highlights	10:40
PLENARY featuring CAMERON DAVIS				11:00

Thursday, May 20 (afternoon)

Time	MS 2158	MS 3154	MS 3163
	Gaining and Applying Insights from Long-term Ecological Research on Lake Simcoe	Fate and Effects of Currently Used Pesticides	Coastal Zone of Lake Ontario: Present Day Conditions and Dynamics
	<i>Co-Chairs: David Evans, Rebecca North, Michael Rennie, and Joelle Young</i>	<i>Co-Chairs: John Struger and Ed Sverko</i>	<i>Co-Chairs: Todd Howell and Joseph Makarewicz</i>
	Presented by / Title	Presented by / Title	Presented by / Title
1:20	<u>J.D. Young</u> <i>et al.</i> Changes in the Zooplankton Community Composition of Lake Simcoe from 1986 to 2007	<u>J. Struger</u> <i>et al.</i> Current-use Pesticides in Selected Canadian Ambient Waters	<u>E.T. Howell</u> and J.C. Makarewicz Water Quality on the Shores of Lake Ontario in 2008
1:40	<u>M.D. Rennie</u> <i>et al.</i> Isotopes reveal changes in the importance and identity of offshore resources to coldwater fishes in Lake Simcoe	<u>A.K. Todd</u> Urban stream water pesticide concentrations before and after Ontario's cosmetic pesticides ban	<u>W.G. Booty</u> and G.S. Bowen Watershed Nutrient and Sediment Loadings on the Canadian Side of Lake Ontario
2:00	<u>J. Pouloupoulos</u> and L.M. Campbell Stable Isotope Analyses Reveal Structural Changes in Lake Simcoe Fish Food Webs From 1950s, and Impacts on Hg Bioaccumulation	<u>A.S. Crowe</u> <i>et al.</i> Persistence of Glyphosate in groundwater and nearshore lake water following the application of Roundup® to Phragmites at a beach on Southern Georgian Bay.	<u>P.M. Yurista</u> <i>et al.</i> Lake Ontario: Nearshore Variability
2:20	<u>J.K.L. La Rose</u> <i>et al.</i> Natural Reproduction in the Lake Simcoe Coldwater Fish Community	<u>M. Kivi</u> and P. Delorme Scientific evaluation and decision-making process for pest control products in Canada-Environmental Risk Assessment for pesticides in Canada	<u>J.E. Milne</u> <i>et al.</i> Physical and Water Quality Regimes in Nearshore Western Lake Ontario: 2006 to 2009
2:40	<u>D.O. Evans</u> <i>et al.</i> Foodweb Structure and Phosphorus Cycling in Lake Simcoe: Ecosystem Integration of Nutrient Enrichment, Species Invasions and Alteration of Predator Prey Dynamics	-	- Poster Highlights
3:00	BREAK		

(afternoon) Thursday, May 20

MS 4279	RS 208	RS 211	Time
Fish Communities, Habitat Coupling and Energy Transfer in Great Lakes Ecosystems <i>Co-Chairs: Owen Gorman and Thomas Hrabik</i>	The Toronto & Region AOC: Measuring Progress and Moving Forward <i>Co-Chairs: Susan Doka, Willaim Snodgrass, and Stephanie Hawkins</i>	Quantitative Models to Inform Management of Natural Resources <i>Co-Chairs: Aaron Berger, Brian Langseth, and Matt Catalano</i>	
Presented by / Title	Presented by / Title	Presented by / Title	
<u>T.D. Ahrenstorff</u> and T.R. Hrabik Seasonally Dynamic Diel Vertical Migrations of the Opossum Shrimp <i>Mysis relicta</i> , <i>Coregonids Coregonus spp.</i> , and Siscowet Lake Trout <i>Salvelinus namaycush</i> in the Pelagia of Western Lake Superior	<u>M. Granados</u> Multivariate analysis of fish communities the Toronto Harbour	E.S. Rutherford <i>et al.</i> Modeling Great Lakes Fish Spatial Distributions	1:20
<u>T.R. Hrabik et al.</u> Cisco as an Energy Vector from Offshore Pelagic to Nearshore Benthic Habitats in Lake Superior	<u>E.K. Leisti et al.</u> Assessment of the Offshore Fish Community in Toronto Harbour Using Hydroacoustics and Bottom Trawling	<u>A.E. Krause</u> and K.F. Frank The Importance of Network Properties for Understanding Great Lakes Food Webs: A Case Study of Southeastern Lake Michigan	1:40
<u>D.T. Chaloner et al.</u> Ecological Effects of Pacific Salmon Spawners on Great Lakes Stream Ecosystems	<u>S.C. Murphy et al.</u> Thermal Habitat and Fish Use of Restored Embayments in the Toronto Region	<u>I.D. Wilson</u> and T. Bolisetti Optimal Operation of Big Creek Marsh, Ontario	2:00
<u>O.T. Gorman et al.</u> Development of an Ecosystem Model for the Lake Superior Offshore Food Web	<u>E. Awad et al.</u> <i>Contaminants in Sport Fish from the Toronto Waterfront</i>	<u>E.R.B. Smyth et al.</u> A Decision Analysis Evaluating Management Options for the Dam on the Black Sturgeon River	2:20
- Poster Highlights	- Poster Highlights	- Poster Highlights	2:40
BREAK			3:00

Thursday, May 20 (afternoon)

Time	MS 2158	MS 3154	MS 3163
	Gaining and Applying Insights from Long-term Ecological Research on Lake Simcoe <i>Co-Chairs: David Evans, Rebecca North, Michael Rennie, and Joelle Young</i>	Fate and Effects of Currently Used Pesticides <i>Co-Chairs: John Struger and Ed Sverko</i>	Coastal Zone of Lake Ontario: Present Day Conditions and Dynamics <i>Co-Chairs: Todd Howell and Joseph Makarewicz</i>
	Presented by / Title	Presented by / Title	Presented by / Title
3:20	<u>M.J. Walters</u> <i>et al.</i> State of the Lake Simcoe Watershed	<u>P.F. Hoekstra</u> and C.R. Harrington The Environmental Safety of Pesticides: An Industry Perspective	<u>M.T. Auer</u> <i>et al.</i> Monitoring, Modeling & Management of Water Quality in the Lake Ontario Nearshore at Ajax, Ontario
3:40	<u>B. Gharabaghi</u> <i>et al.</i> Wind Erosion Susceptibility Map for the Lake Simcoe Airshed	<u>P.B. Kurt-Karakus</u> <i>et al.</i> Concentrations And Stereoisomer Compositions Of Mecoprop, Dichloroprop And Metolachlor In Ontario Streams; 2006-2007 vs 2003-2004	<u>S.N. Higgins</u> and E.T. Howell The current status of Cladophora blooms along the northern coastline of Lake Ontario
4:00	<u>S.K. Oni</u> <i>et al.</i> Seasonal variations and hydrologic controls of dissolved organic carbon concentrations and fluxes in Lake Simcoe watershed.	<u>L.M. Jantunen</u> <i>et al.</i> Pentachloronitrobenzene (PCNB) from the Great Lakes Integrated Atmospheric Deposition Network	G.M. Martin and W.D. Taylor Does the Spatial Distribution of SRP Support the Role of Allochthonous Inputs and/or Dreissenids in Fostering <i>Cladophora</i> Growth in Lake Ontario?
4:20	<u>J.W. Roy</u> <i>et al.</i> Groundwater contaminants affecting urban streams in the Lake Simcoe watershed	<u>A.J. Bartlett</u> <i>et al.</i> In situ exposures of <i>Hyalella azteca</i> : A tool to assess the impacts of pesticide use on freshwater ecosystems.	<u>S.Y. Malkin</u> <i>et al.</i> Long-term trends in patterns of water quality in Lake Ontario: Comparing offshore with coastal zones and implications for <i>Cladophora</i> growth
4:40	<u>E.A. Stainsby</u> and E. Schmarje A Phosphorus Reduction Strategy for Lake Simcoe	<u>P.A. Martin</u> <i>et al.</i> Toxicity and absorption of pesticides and fertilizers to snapping turtle eggs (<i>Chelydra serpentina</i>)	<u>J.G. Winter</u> <i>et al.</i> Changes in chloride concentrations, nutrients and phytoplankton in nearshore Great Lakes waters over three decades
5:00	POSTER VIEWING/SOCIAL		

MS 4279	RS 208	RS 211	Time
Remote Sensing, Visualization, and Spatial Data Applications for the Great Lakes <i>Co-Chairs: George Leshkevich, Robert Shuchman, and Jennifer Read</i>	The Toronto & Region AOC: Measuring Progress and Moving Forward <i>Co-Chairs: Susan Doka, Willaim Snodgrass, and Stephanie Hawkins</i>	Quantitative Models to Inform Management of Natural Resources <i>Co-Chairs: Aaron Berger, Brian Langseth, and Matt Catalano</i>	
Presented by / Title	Presented by / Title	Presented by / Title	
<u>D.M. O'Donnell et al.</u> Optics Surveys of Lake Ontario: Optical Characterization and Pursuit of Closure with <i>In Situ Instrumentation</i>	<u>M. D'Andrea et al.</u> Toronto Beaches: Past, Present & Future Management	<u>B.J. Langseth et al.</u> Evaluation of Harvest Policies for the Lake Huron Cold-Water Fish Community in a Changing Food Web	3:20
<u>F. Peng et al.</u> Temporal and Spatial Variations in Suspended Mineral Particles in Lake Ontario: Importance to Light Scattering and Remote Sensing	<u>S. Hill et al.</u> Microbial source tracking to identify sources of fecal pollution contaminating Toronto beaches and rivers	<u>T. Haxton et al.</u> Predicted Sustainable Harvest of Great Lakes Lake Sturgeon as Estimated by Markov-Chain Monte Carlos	3:40
<u>R.A. Shuchman et al.</u> An Operational MODIS Algorithm for the Retrieval of Chlorophyll, Dissolved Organic Carbon, and Suspended Minerals for All Laurentian Great Lakes	<u>R. Bishop et al.</u> Forecast Receiving Water Response to alternative Control Levels for Combined sewer overflows discharging to Toronto's Inner harbour	<u>Y. Jiao and K. Reid</u> Incorporating Bayesian Model Selection into Bayesian Decision Making in Fisheries Management	4:00
<u>D.L. Witter</u> Calibration and Validation of Satellite-Derived Chlorophyll-a Algorithms for Lake Erie	<u>B. Hindley et al.</u> <i>Time - trend Analysis of constituents in Water Courses Discharging to the Toronto AOC over the past 4 decades</i>	<u>K.B. Reid et al.</u> Bioeconomic Evaluation of Harvest Control Rules for Lake Erie Walleye Fishery	4:20
- Poster Highlights	<u>G. Van Arkel and W.J. Snodgrass</u> Forecast of trends in Nutrient Content and oxygen Regimes in Toronto Harbour over the past Century	<u>H. Yu et al.</u> Performance Comparison of Traditional Sampling Designs and Adaptive Sampling Designs for Fishery-Independent Surveys	4:40
POSTER VIEWING/SOCIAL			5:00

Friday, May 21 (morning)

Time	MS 2172	MS 2173	MS 3153
	Contaminants of Concern : Legacy to New / Past to Present	Lake Winnipeg: Causes and Effects of Eutrophication	Recent Science, Monitoring, and Modeling in Lake Erie
	Co-Chairs: Sean Backus and Bernard Crimmins	Co-Chairs: Greg McCullough and Hedy Kling	Co-Chairs: Joseph DePinto, Jan Ciborowski, and Jeff Reutter
	Presented by / Title	Presented by / Title	Presented by / Title
8:00	<u>D.J. McGoldrick et al.</u> Monitoring contaminants in fishes from the Canadian waters of the Great Lakes: 1977 to 2009 - PCBs to PBDEs	<u>P. Badiou et al.</u> Discharge and water quality in a highly drained landscape: Impacts of Wetland Loss in South-Western Manitoba and implications for Lake Winnipeg	<u>N.S. Bosch et al.</u> Using the Soil and Water Assessment Tool (SWAT) to Evaluate the Impact of Agricultural BMPs on Riverine Nutrient Export to Lake Erie
8:20	<u>C.S. Eckley et al.</u> Spatial and temporal trends of airborne trace metals in the Great Lakes Basin (1988 to 2005)	<u>B.R. Parker and D.B. Donald</u> Nutrient Loading to Lake Winnipeg via the Red River at Emerson	<u>J.D. Allan et al.</u> Spatial and Temporal Variation in Phosphorus Budgets for 24 Lake Erie and Lake Michigan Watersheds
8:40	<u>T.J. Zananski et al.</u> Total Mercury Trends in Top Predator Fish (1999-2008) Determined as part of the Great Lakes Fish Monitoring Program	<u>T. McDaniel et al.</u> Monitoring in a complex system: Water quality in Lake of the Woods and the Rainy River	<u>T.B. Bridgeman et al.</u> Lake Erie Algal Source Tracking (LEAST): Contributions of the Maumee River and Lake Sediments to <i>Microcystis Blooms</i>
9:00	<u>L.E. Melymuk et al.</u> Urban Sources and Loadings of Organic Contaminants to Lake Ontario: assessing the influence of precipitation from urban and rural sites	<u>M.P. Stainton et al.</u> A Lake Winnipeg Carbon Budget	<u>D.D. Kane et al.</u> The LEAST We Can Do Is Study HABS: Tracking of Harmful Algal Blooms in the Maumee River
9:20	<u>S. Kennedy et al.</u> Are dioxin-like contaminants contributing to the population decline of L. Ontario eels (<i>Anguilla rostrata</i>)?	<u>B.J. Hann</u> Compound Effects of Eutrophication, Stratification and Hypolimnetic Hypoxia on Zoobenthos in Lake Winnipeg	- Poster Highlights
9:40	BREAK		

MS 3163	MS 3171	MS 4171	Time
Changing Water's Edge: Nearshore-Coastal Ecosystem Response to Loading of Inorganic Nutrients and Organic Matter <i>Co-Chairs: Bopi Biddanda and Tom Johengen</i>	Prioritizing Restoration and Protection Efforts in the Great Lakes Region <i>Co-Chairs: Michael Murray, Peter McIntyre, and J. David Allan</i>	Remote Sensing, Visualization, and Spatial Data Applications for the Great Lakes <i>Co-Chairs: George Leshkevich, Robert Shuchman, and Jennifer Read</i>	
Presented by / Title	Presented by / Title	Presented by / Title	
<u>R. DeCatanzaro</u> and P. Chow-Fraser Landscape and seasonal controls on water chemistry of coastal marshes in eastern Georgian Bay	<u>M.W. Murray</u> and D. Scavia Identifying Priority Geographic Areas for Restoration and Protection Via an Expert Opinion Process	<u>K.A. Ali et al.</u> An improved method for optical-feature extraction from multi-spectral data	8:00
<u>K. Pangle et al.</u> The dynamics of river plumes and yellow perch recruitment in western Lake Erie: Are they related?	<u>J.J. Ciborowski et al.</u> Great Lakes Environmental Indicators (GLEI) - An Integrated, Watershed Based, Anthropogenic Stressor Scale Approach for the Great Lakes	<u>J.D. Lekki</u> and G. Leshkevich Hyperspectral Airborne Monitoring of Microcystis Blooms in Lake Erie: 2009	8:20
<u>A.L. Defore</u> and B.A. Biddanda Carbon Cycling in Muskegon Lake: What's Driving It?	<u>S.P. Sowa et al.</u> The Nature Conservancy's Perspective, Approach and Application of Conservation Planning in the Laurentian Great Lakes	<u>B.M. Lesht et al.</u> Upwelling and primary production in Lake Superior	8:40
<u>K.A. Peters et al.</u> Spatial and temporal analysis of nutrient vs. light limitation of benthic algae in Saginaw Bay, Lake Huron	<u>P.B. McIntyre et al.</u> <i>The Great Lakes Threat Mapping Project: a new tool to aid in prioritization</i>	<u>R.A. Shuchman et al.</u> A New Remote Sensing Algorithm for Mapping Cladophora in the Great Lakes	9:00
<u>J.J. Ciborowski et al.</u> Benthic Invertebrate Community Composition in Severn Sound, (Georgian Bay) Lake Huron - 2008.	<u>K.J. Hedges et al.</u> If You Build It, Will They Come (or Stay)? Summary and Assessment of Great Lakes Aquatic Protected Areas	<u>S.V. Nghiem</u> and G. Leshkevich Advancing a Satellite Synthetic Aperture Radar (SAR) Ice Classification Algorithm for RADARSAT-2 Data	9:20
BREAK			9:40

Friday, May 21 (morning)

Time	MS 2172	MS 2173	MS 3153
	Contaminants of Concern : Legacy to New / Past to Present	Great Lakes in Regional and Global Biogeochemical Cycles	Recent Science, Monitoring, and Modeling in Lake Erie
	Co-Chairs: Sean Backus and Bernard Crimmins	Co-Chairs: James Cotner, Harvey Bootsma, and Galen McKinley	Co-Chairs: Joseph DePinto, Jan Ciborowski, and Jeff Reutter
	Presented by / Title	Presented by / Title	Presented by / Title
10:00	Poster Highlights	<u>M.V. Panchenko</u> <i>et al.</i> CO2 fluxes in the atmosphere - water system during the free-of-ice water period in littoral zone of lake Baikal.	<u>P.M. Armenio</u> and C.M. Mayer Nutrient contributions from <i>Dreissena to the benthic cyanobacterium Lyngbya wollei</i>
10:20	<u>B. Crimmins</u> <i>et al.</i> Quantitative Screening of Emerging Contaminants in Lake Michigan Lake Trout	<u>V.M. Domysheva</u> and M.V. Sakirko Estimation of the modern hydrochemical state of Lake Baikal	<u>T.T. Wynne</u> <i>et al.</i> Improvements to NOAA's Demonstrational Harmful Algal Bloom Forecast System in Lake Erie
10:40	<u>A.O. De Silva</u> <i>et al.</i> Perfluorinated Acids in the Current Lake Ontario Foodweb	<u>B.A. Biddanda</u> <i>et al.</i> Balance of Production and Respiration in Lake Michigan: Insights into Land-Lake Linkages and the Carbon Cycle	<u>A. Perez-Fuentetaja</u> <i>et al.</i> Biological Production and Nutrient Fate in Nearshore and Offshore Lake Erie
11:00	<u>E.A. Hanna</u> <i>et al.</i> PBDEs in the Fish of Lake Huron	<u>J.V. Klump</u> The Stoichiometry and Magnitude of Carbon Transport and Cycling in the Green Bay Ecosystem of Lake Michigan	<u>D.E. Smith</u> <i>et al.</i> Tight Coupling of Phytoplankton Growth and Grazing Rates under Ice in Lake Erie
11:20	<u>A. Li</u> <i>et al.</i> Sediment Record of Halogenated Flame Retardants in the Great Lakes	<u>J.B. Cotner</u> <i>et al.</i> Fluorescent dissolved organic matter helps unravel the carbon cycle in Earth's largest lake	<u>E.M. Verhamme</u> <i>et al.</i> Application of a Fine-Scale 3-D Water Quality Model to Maumee Bay and the Western Basin of Lake Erie
11:40	<u>T. Pascoe</u> <i>et al.</i> An Overview of the Canadian Aquatic Biomonitoring Network (CABIN) and its Application to Sediment Assessment in the Great Lakes	<u>P.K. Zigah</u> <i>et al.</i> Radiocarbon insights into provenance and transformation of carbon in Lake Superior: A lake-wide survey	<u>E. Azim</u> <i>et al.</i> Spatiotemporal Trends of Mercury in Lake Erie Fish Communities
Noon	POSTER VIEWING / LUNCH		

MS 3163	MS 3171	MS 4171	Time
Groundwater in the Great Lakes: Source, Magnitude, Composition, Reactivity and Ecosystem Response. <i>Co-Chairs: Steve Ruberg, Bopaiah Bidanda, and Yevgeniy Kontar</i>	Prioritizing Restoration and Protection Efforts in the Great Lakes Region <i>Co-Chairs: Michael Murray, Peter McIntyre, and J. David Allan</i>	Remote Sensing, Visualization, and Spatial Data Applications for the Great Lakes <i>Co-Chairs: George Leshkevich, Robert Shuchman, and Jennifer Read</i>	
Presented by / Title	Presented by / Title	Presented by / Title	
<u>N.G. Grannemann</u> History of Estimated Rates of Groundwater Discharge to the Great Lakes	<u>F. Lupi et al.</u> Economic Value of Public Access to Great Lakes Beaches	H. Nelson <i>et al.</i> In situ Characterization of Phytoplankton Communities using a Novel Submersible Imaging Flow Cytometer	10:00
<u>T.J. Black</u> Karst Water Input to Lakes Huron and Michigan	<u>D. Kraus et al.</u> Developing and Implementing Biodiversity Conservation Strategies for Lakes Ontario and Huron	<u>L.A. Tutty</u> Using Multibeam Sonar Acoustic Technology to Create Benthic Ecology Habitat Maps in Lake Huron, Fathom Five National Marine Park.	10:20
<u>S.A. Ruberg et al.</u> Exploration of Submerged Karst Systems in Lake Huron	<u>M. Cvetkovic et al.</u> Road Density as a Simple Indicator to Assess Habitat Quality of Coastal Marshes of the Laurentian Great Lakes	<u>T.H. Hansen</u> and J. Janssen Creation, Implementation, and Practical Field Use of a Real-Time Bathymetry Mapping System Created with Open-Source Tools as an Adjunct to Multibeam Surveys	10:40
<u>S.C. Nold et al.</u> Lacustrine Submerged Sinkhole Sediments are a Sink for Organic Carbon	<u>M.J. Wiley et al.</u> <i>Prioritizing restoration and conservation activities in the Muskegon River watershed: a multi-modeling approach.</i>	<u>L.D. Betzhold</u> and R.L. Mataosky Topographic and Bathymetric Inventory for the Great Lakes	11:00
<u>M.L. Carlson Mazur et al.</u> Water-balance interactions of plants and groundwater in a Lake Huron coastal wetland complex	<u>M.N. Charlton</u> Prioritization: Are There Any Givens?	<u>J.W. Morse et al.</u> Constructing a Multi-Scale Database to Identify Spawning Habitat for Lake Trout (<i>Salvelinus namaycush</i>) in Lake Erie	11:20
<u>H.W. Reeves</u> and D.T. Feinstein Regional Groundwater Availability in the Lake Michigan Basin	- Poster Highlights	<u>R.M. McNinch</u> and E.A. Dreelin Landuse Trends Surrounding Michigan Great Lakes Beaches Based on Annapolis Protocol Classifications	11:40
POSTER VIEWING / LUNCH			Noon

Poster Sessions by Day

Session	Physical Processes in Lakes (E1-E13)
E1	<u>AGHSAEE, P.</u> , <u>BOEGMAN, L.</u> , and <u>LAMB, K.G.</u> Instability mechanisms and reflection of internal solitary waves shoaling upon coastal boundaries of lakes and oceans
E2	<u>ALLEN, J.</u> and <u>AUSTIN, J.A.</u> The sensitivity of lake thermal structure to changes in meteorological forcing
E3	<u>BOEGMAN, L.</u> and <u>YERUBANDI, R.R.</u> Process oriented modeling of Lake Ontario hydrodynamics
E4	<u>CHITTIBABU, P.</u> , <u>YERUBANDI, Y.</u> , and <u>ZHANG, W.</u> Modelling of Circulation in Lake of the Woods
E5	<u>DJOURMNA, G.</u> and <u>LAMB, K.G.</u> Turbulent and Radiative Fluxes and their Effects on Heating Lake Erie
E6	<u>DOROSTKAR, A.</u> , <u>BOEGMAN, L.</u> , <u>DIAMESSIS, P.J.</u> , and <u>POLLARD, A.</u> Comparison of hydrostatic and non-hydrostatic modeling of internal wave fields in Cayuga Lake
E7	<u>GUTIERREZ, L.</u> , <u>LIAO, Q.</u> , and <u>BOOTSMA, H.A.</u> Hydrodynamic study of mass exchange between nearshore and offshore waters in Lake Michigan
E8	<u>LUDEWIG, B.G.</u> and <u>AUSTIN, J.A.</u> Numerically produced Nowcasts of Circulation, Surface Heights and Hydrography for the St. Louis River Estuary
E9	<u>MIER, J.M.</u> and <u>GARCIA, M.H.</u> Laboratory Tests on Critical Shear Stress for Erosion of Glacial Till from the St. Clair River (Great Lakes Basin)
E10	<u>PATURI, S.</u> , <u>BOEGMAN, L.</u> , and <u>YERUBANDI, R.</u> Near-shore hydrodynamics and tracer modeling of Upper St. Lawrence River using EL-COM model
E11	<u>REZA VALIPOUR, R.</u> , <u>LEON BOEGMAN, L.</u> , <u>DAMIEN BOUFFARD, D.</u> , and <u>RAM YERUBANDI, R.</u> Large Scale Internal Waves in the Central Basin of Lake Erie
E12	<u>SINGER, J.</u> , <u>MANLEY, T.O.</u> , <u>HUGHES, W.</u> , and <u>MANLEY, P.</u> Hydrodynamics and Sedimentation Processes in the Buffalo River
E13	<u>WU, C.H.</u> , <u>ANDERSON, J.D.</u> , and <u>LIN, Y.T.</u> Impacts of seichings on bed erosion potential in the Lower Sheboygan River

Session	Phytoplankton Ecology, Nutrient Cycles and Management Issues (E14-E24)
E14	<u>BANTELMAN, A.</u> , EDWARDS, W.J., SOSTER, F., SCHLOESSER, D.W., and MATISOFF, G. Internal nutrient recycling by burrow irrigation in Chironomus spp.: implications for eutrophication
E15	BOYER, G.L. and <u>SATCHWELL, M.F.</u> Good News for Managers: The Cyanobacteria Neurotoxin Beta-Methyl Amino Alanine (BMAA) does not appear to be a major new hazard in the Great Lakes.
E16	<u>CARRICK, H.J.</u> , BOURBONNIERE, R.A., BULLERJAHN, G.S., DESOUZA, N.A., MCKAY, R.M.L., SAXTON, M.A., SMITH, R.E.H., TWISS, M.R., and WILHELM, S.W. Plankton on Ice: Taxonomic Composition, Production, and Grazing Loss of Winter Assemblages in Lake Erie
E17	CHANDLER, D.J. and <u>HEATH, R.T.</u> Evidence of N and P Co-Limitation of Phytoplankton Growth in the Central Basin of Lake Erie, Summer 2008
E18	<u>DSOUZA, N.A.</u> , SAXTON, M.A., BULLERJAHN, G.S., WILHELM, S.W., and MCKAY, R.M.L. Psychrophilic Diatoms in Ice-Covered Lake Erie
E19	<u>FAHNENSTIEL, G.</u> , POTHOVEN, S., and KLARER, D. Phytoplankton abundance, composition and primary production along a nearshore/offshore transect in southeastern Lake Michigan, 2007-09
E20	<u>KUTOVAYA, O.A.</u> , MCKAY, R.M., and BULLERJAHN, G.S. Detection and expression of genes involved in organic P utilization by freshwater picocyanobacteria
E21	<u>MUKHERJEE, M.</u> , MCKAY, R.M., and BULLERJAHN, G.S. Enumeration of <i>Actinobacteria</i> in Lakes Erie and Superior, and Detection of <i>Actinorhodopsin</i> Genes
E22	<u>RATTAN, K.J.</u> and SMITH, R.E.H. Using Traditional Methods and Chl a Variable Fluorescence for Determining Nutrient Status in Oligotrophic and Eutrophic Systems
E23	<u>SCHUSTER, L.E.</u> and WATZIN, M.C. The Molecular Diversity of the Cyanobacterium <i>Microcystis</i> and its Relationship to Toxin Production in Lake Champlain
E24	<u>SULLIVAN, J.M.</u> and BOYER, G.L. Potential Discrimination of Phytoplankton Genera on the Basis of Their Pigment Fingerprints.

Session	Trophic transfer of contaminants and nutrients, and risks and benefits of Great Lakes fish consumption (E25-E28)
E25	<u>MUIR, T.</u> Future Balancing of Risks and Benefits of Great Lakes Fish Consumption Must be Integrated: Past Approaches are not Protective
E26	<u>POULOPOULOS, J.</u> and <u>CAMPBELL, L.M.</u> Hg biomagnification trends in 3 large lakes after 80 years of food web changes
E27	<u>RAZAVI, N.R.</u> , <u>CHAN, W.</u> , <u>COLE, L.</u> , <u>WANG, Y.</u> , and <u>CAMPBELL, L.M.</u> Characterizing the Food Web of a Chinese Reservoir to Identify Differences in Mercury Concentrations Between Wild and Farmed Fish
E28	<u>SAWYER, J.</u> , <u>GANDHI, N.</u> , <u>DIAMOND, M.</u> , <u>ARHONDITSIS, G.</u> , and <u>KOOPS, M.</u> Examining the Transfer and Accumulation of Polychlorinated Biphenyls (PCBs) and Polyunsaturated Fatty Acids (PUFAs) through the Bay of Quinte Food Web
Session	Wildlife on the Great Lakes: Lake-specific to Basin-wide Issues (W1-W5)
W1	<u>KING, L.E.</u> , <u>DE SOLLA, S.R.</u> , and <u>QUINN, J.S.</u> DNA mutation rate in Double-crested Cormorants (<i>Phalacrocorax auritus</i>) associated with exposure to PAH's on Lakes Ontario and Erie
W2	<u>MOORE, D.J.</u> and <u>WESELOH, D.V.</u> Avian Mortality and Type E Botulism on Islands in Eastern Lake Ontario, 2004-2008
W3	<u>ROBINSON, S.A.</u> , <u>FORBES, M.R.</u> , and <u>HEBERT, C.E.</u> Parasitism, Mercury Contamination and Stable Isotopes in Cormorants
W4	<u>RUSH, S.A.</u> , <u>VERKOEYEN, S.</u> , <u>DOBBIE, T.</u> , <u>DOBBYN, S.</u> , <u>HEBERT, C.E.</u> , and <u>FISK, A.T.</u> Impact of Double-crested Cormorants on the Soil Characteristics of Western Lake Erie Islands
W5	<u>TRYON, B.</u> , <u>MCDONALD, K.</u> , and <u>TONINGER, R.</u> Bird Conservation in the Living City: A Balance of Fundamental Research and Education at Tommy Thompson Park Bird Research Station

Session	The Lakes They Are A-Changin': Long-Term Trends of Great Lakes Water Quality (W6-W10)
W6	<u>KENNEDY, J.A.</u> and <u>VALENTA, T.J.</u> GBMSD Long Term Monitoring Program on lower Green Bay and the Fox River: 2010 and Beyond
W7	<u>MACCOUX, M.J.</u> , <u>CHAPRA, S.C.</u> , and <u>DOLAN, D.M.</u> Total Phosphorus Loads and Mass Balance Model for Green Bay
W8	<u>SCHMITT-MARQUEZ, H.S.</u> , <u>CHAPRA, S.C.</u> , and <u>DOLAN, D.M.</u> Phosphorus Loading Trends in the Upper Great Lakes System, 1994 - 2008
W9	<u>SHERMAN, K.</u> and <u>CHIANDET, A.S.</u> Long term improvements in the water quality of Severn Sound following remedial action
W10	<u>VERHAMME, E.M.</u> and <u>DEPINTO, J.V.</u> An Analysis of Past, Present, and Future Concentrations of PCBs in Lake Ontario; Are we there yet?
Session	Source Water Protection on the Great Lakes (W11-W15)
W11	<u>ARNOLD, R.T.</u> On certainty economics of integrated data management for Drinking Water Source Protection
W12	<u>BOUCHARD, R.R.</u> and <u>MOORE, L.</u> The "Collaborative" - Purpose, Structure and Objectives
W13	<u>DEWEY, R.</u> , <u>HOWELL, T.</u> , <u>BOWEN, G.</u> , <u>BOOTY, W.</u> , <u>BISHOP, R.</u> , <u>BOUCHARD, R.</u> , and <u>SNODGRASS, W.J.</u> Importance of Diffuse Sources and Direct Point Source Discharges in Lake Ontario Source Water Protection Studies
W14	<u>ROBLIN, R.J.</u> , <u>LU, Q.</u> , <u>DUCKETT, F.J.L.</u> , and <u>TAYLOR, S.R.</u> Implications of Reverse Flow in the Detroit River for Source Water Protection Studies
W15	<u>RUDRA, R.P.</u> , <u>DICKINSON, W.T.</u> , <u>KHAYER, M.</u> , <u>AHMED, S.I.</u> , <u>TUCKER, C.</u> , <u>GOEL, P.K.</u> , and <u>GHARABAGHI, B.</u> Mapping Baseflow Dominated and Rapid Runoff Response Dominated Watersheds in Southern Ontario

Tuesday, May 18

Session	Education & Outreach: Applying Science to Problem Solving (W16-W18)
W16	DAVIS,, G., ZONDAG, R., <u>LICHTKOPPLER, F.</u> , and ORNDORFF, M. Lake County Nursery Industry Survey: A Case Study of Applied Research.
W17	MILITO, J. and <u>NURNBERG, G.K.</u> Cyanobacteria Blooms in Bright Lake, Ironbridge, ON: How a Lake Association Tries to Clean up its Lake
W18	<u>SMITH, L.A.</u> and CHOW-FRASER, P. URBAN - Urban-Rural Bio-monitoring and Assessment Network: A citizen science biological monitoring program for the city of Hamilton, Ontario
Session	Linking Science-Policy-Action: Using Science to Guide Decision Making and Influence Behaviours (W19-W22)
W19	<u>ALLAN, B.V.</u> , POND, B.R., GEE, K.R., HERNANDEZ, P.A., and MEYER, S.A. Monitoring the Terrestrial Natural Heritage and Hydrologic Features in the Lake Simcoe Watershed.
W20	<u>FRENCH, R.P.</u> Engaging People and Partnerships through Collaboration
W21	<u>JAFFE, M.S.</u> The Illinois Green Infrastructure Study
W22	<u>VELIZ, M.A.</u> Watershed Planning: Linking Individuals to the Great Lakes
Session	Evaluation of the Current State of Ecological Modeling and Future Perspectives (W23-W25)
W23	<u>RAMIN, M.</u> , LABENCKI, T., GUDIMOV, A., STREMILOV, S., BOYD, D., and ARHONDITSIS, G.B. Integration of Mathematical Modeling and Bayesian Inference for Setting Water Quality Criteria in Hamilton Harbour
W24	<u>RIGOSI, A.</u> , MARCÉ, R., ESCOT, C., and RUEDA, F. Calibration strategy for dynamic succession models including several phytoplankton groups
W25	<u>SADRADDINI, S.</u> , AZIM, E., BHAVSAR, S., and ARHONDITSIS, G.B. Spatiotemporal Trends of PCB Contamination in Lake Erie Fish Communities: A Bayesian Approach

Session	Hamilton Harbour: Science as a Tool for Achieving Future Goals in the AOC (W26-W30)
W26	HOSSAIN, M., ARHONDITSIS, G.B., MINNS, K., and KOOPS, M. Examination of Ecosystem Management Options in Hamilton Harbour using Food Web Modeling
W27	LABENCKI, T.L. and BOYD, D. Tracking down potential sources of PCBs in the Hamilton Harbour Area of Concern (AOC)
W28	THEYSMEYER, T. Restoring urban wetlands in Cootes Paradise, Hamilton, Ontario
W29	THOMASEN, S.M. and CHOW-FRASER, P. Effectiveness of Ecological Indices in Detecting Changes to Ecosystem Health at Cootes Paradise Marsh
W30	WELLEN, C., LABENCKI, T., BOYD, D., and ARHONDITSIS, G.B. Non-Point-Source Impacts on Stream Nutrient Concentrations in the Hamilton Harbour Watershed

Wednesday, May 19

Session	Coupled Physical and Biogeochemical Processes in Large Lakes (W1-W5)
W1	<u>BAZZARD, A.R.</u> and <u>BOURBONNIERE, R.A.</u> Carbon Dioxide and Nitrous Oxide Accumulation in Lake Erie's Central Basin Hypolimnion
W2	<u>BOCANIOV, S.A.</u> , <u>LEON, L.F.</u> , <u>SILSBE, G.M.</u> , <u>ZHAO, Y.</u> , <u>SMITH, R.E.H.</u> , and <u>LAMB, K.</u> Modelling the three dimensional spatial dynamics of nutrients, phytoplankton and dissolved oxygen in Lake Erie
W3	<u>KELLY, M.D.</u> , <u>CAMPBELL, L.M.</u> , <u>CUMMING, B.F.</u> , <u>KIRK, J.</u> , and <u>MUIR, D.</u> Methyl Mercury Regulation within Sediments via Cycling Sulphur
W4	<u>ROWSELL, R.D.</u> and <u>DEPALMA, S.G.S.</u> GUI Structured Quality Assurance of Shipboard Water Quality Measurements in Canadian Freshwaters
W5	<u>SONEKAN, C.</u> , <u>BOEGMAN, L.</u> and <u>YERUBANDI, R.</u> Application of a one-dimensional hydrodynamic model to Hamilton Harbour and Lake Simcoe.
Session	Towards Linking Wind-Driven Physical Processes with Nearshore Aquatic Biology in Lakes (W6-W9)
W6	<u>PERNICA, P.</u> and <u>WELLS, M.G.</u> Wind Driven Mixing of the Surface Waters of Lake Opeongo, Ontario
W7	<u>TROY, C.D.</u> and <u>AHMED, S.A.</u> Implications of Great Lakes internal waves for biological dispersion: analysis and observations
W8	<u>TRUMPICKAS, J.J.</u> , <u>SHUTER, B.J.</u> , and <u>MINNS, C.K.</u> Characterizing Patterns of Nearshore and Whole-Lake Water Temperatures in the Great Lakes
W9	<u>WELLS, M.G.</u> and <u>PARKER, S.</u> The thermal variability of the waters of Fathom Five National Marine Park, Lake Huron.

Session	Mysids in the Great Lakes (W10-W15)
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W12	JAKOBI, N.J., TARABORELLI, A.C., YUILLE, M., JOHNSON, T.B., BOWEN, K.L., and BOSCARINO, B. Distribution, abundance and production of <i>Hemimysis anomala</i> in Lake Ontario
W13	LANTRY, B., GUMTOW, C., WALSH, M., BOSCARINO, B., and RUDSTAM, L. Consumption of the Recent Great Lakes Invader, <i>Hemimysis anomala</i> , by Fish in the Nearshore Waters of Eastern Lake Ontario
W14	MIDA, J.L., SCAVIA, D., JUDE, D.J., SCHAEFFER, J.S., and WARNER, D.M. The Role of <i>Mysis</i> in Pelagic Food Webs of Lakes Michigan and Huron
W15	RUDSTAM, L.G. Mysids in the Great Lakes
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W16	BARBIERO, R.P., SCHMUDE, K., LESHT, B.M., RISENG, C.M., WARREN, G.J., and TUCHMAN, M.L. Trends in <i>Diporeia</i> populations across the Laurentian Great Lakes, 1997-2008
W17	DERMOTT, R., BONNELL, R., and BEDFORD, A. Possible Factors Allowing Continued Survival of <i>Diporeia</i> in a Lake with <i>Dreissena</i> .
W18	NALEPA, T.F., FANSLow, D.L., RINCHARD, J., HOOK, T.O., and RYAN, D.J. Variation in Lipid Content of <i>Diporeia</i> spp. across the Great Lakes and in Cayuga Lake
W19	PILGRIM, E.M., SCHAROLD, J.V., DARLING, J.A., and KELLY, J.R. Genetic diversity of <i>Diporeia</i> in the Great Lakes: comparison of Lake Superior to the other Great Lakes
W20	RYAN, D.J., HOOK, T.O., NALEPA, T.F., and LOFGREN, B.M. Development and Application of a Bioenergetics Model for <i>Diporeia</i> spp. in Lake Michigan

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W22	<u>JONAS, J.L.</u> Methods for adopting and evaluating lake trout size regulations in Lake Michigan
W23	<u>LUMSDEN, J.S.</u> , RUSSELL, S.K., YOUNG, K.M., AL-HUSSINEE, L., CONTADOR, E., REID, A., WRIGHT, E., and METHNER, P. Chlamydia-like Organism in Ontario Lake Trout (<i>Salvelinus namaycush</i>)
W24	<u>MACKEY, S.D.</u> , <u>MARKHAM, J.L.</u> , and MACDOUGALL, T.M. Effects of Lithophyllic Species on Potential Historic Spawning Substrates in the Eastern Basin of Lake Erie
W25	<u>REDMAN, R.A.</u> , CZESNY, S.J., and MACKEY, S.D. Evaluation of lake trout <i>Salvelinus namaycush</i> spawning habitat: Are southern Lake Michigan's offshore reefs attractive?
W26	<u>WRIGHT, E.</u> , CONTADOR, E., LUMSDEN, J.S., LORD, S., and STEVENSON, R.M.W. An update on fish health in the Canadian Great Lakes
Session	Movements of Great Lakes Fishes: Uncertainties, Opportunities, and Implications (W27-W37)
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W28	<u>CHILDRESS, E.S.</u> , MCINTYRE, P.B., and ALLAN, J.D. Incorporation of Nutrients from Sucker Migrations into Great Lakes Tributary Food Webs
W29	<u>COPPAWAY, C.W.</u> , MCLAUGHLIN, R., and MACKERETH, R. The Dynamics of Brook Charr (<i>Salvelinus fontinalis</i>) "Residency" in Lake Superior Tributaries
W30	<u>DOLINSEK, I.J.</u> , MCLAUGHLIN, R.L., GRANT, J.W.A., O'CONNOR, L., and PRATT, T. Movements of PIT tagged fishes among six Lake Ontario tributaries

W31	<u>LANDSMAN, S.</u> , COOK, K., GOBIN, J., GUTOWSKY, L., NGUYEN, N., BINDER, T., LOWER, N., MCLAUGHLIN, R.L., and COOKE, S.J. A review of fish movement and migration studies in the Laurentian Great Lakes: historical perspectives, management needs, and future research opportunities
W32	<u>MARTIN, B.</u> , <u>CZESNY, S.J.</u> , and <u>REDMAN, R.A.</u> Vertical distribution of larval fish in pelagic waters of southwestern Lake Michigan
W33	<u>MCLAUGHLIN, R.</u> , JONES, M., MANDRAK, N., STACEY, D., and COTE, J. FishMaP: A Web Application Supporting Science-Based Decisions Concerning Fish Movement and Passage
W34	<u>MORBEY, Y.E.</u> , MOERKE, A., NEFF, B.D., QUACH, K., and SUK, H.Y. Population Genetic Structure of Chinook Salmon in Lake Huron
W35	<u>MURPHY, S.C.</u> , COLLINS, N.C., and DOKA, S.E. 'Sources and Sinks': Using Otolith Microchemistry to Evaluate the Habitat Quality of Coastal Embayments Along the Shoreline of Toronto, Ontario
W36	<u>PATTERSON, K.A.</u> , BLANCHFIELD, P.J., and GEILING, D. Movement patterns of rainbow trout after release from open-pen aquaculture operations in Lake Huron
W37	<u>RENNIE, M.D.</u> , EBENER, M.P., and WAGNER, T. Can migration mitigate the effects of ecosystem change? Patterns of dispersal, energy acquisition and allocation in Great Lakes lake whitefish (<i>Coregonus clupeaformis</i>)
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W39	<u>BALDWIN, B.S.</u> Are Ecosystem Impacts of Exotics Pronounced Near Confluences of the St. Lawrence River and its Tributaries?
W40	<u>BURLAKOVA, L.E.</u> , KARATAYEV, A.Y., PENNUTO, C., MASTITSKY, S.E., HAJDUK, M.M., BASILIKO, C.P., and CONROY, J. Dominance Of Exotic Invertebrates Changes the Structure of the Lake Erie Benthic Community
W41	<u>CLIFFORD, A.M.</u> , MCCLELLAND, G.B., WANG, Y.S., and WILKIE, M.P. Responses of Larval Sea Lampreys to Shorter-Term TFM Exposure and Restoration of Energy Reserves During a Post-TFM Recovery Period
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W43	<u>FULLER, M.M.</u> Successful Management of the Invasive Species the Common Carp (<i>Cyprinus carpio</i>) in the Restoration of Cootes Paradise, Hamilton, Ontario, Canada
W44	<u>GINN, B.K.</u> and <u>YEREX, G.</u> Benthic invertebrates, environmental degradation, and the extent of Dreissenid colonization in Lake Simcoe (Ontario, Canada)
W45	<u>HAJDUK, M.M.</u> , <u>BURLAKOVA, L.E.</u> , <u>MASTITSKY, S.E.</u> , and <u>KARATAYEV, A.Y.</u> Hidden Invaders in the Great Lakes: Endosymbionts of Non-Native Species
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W48	<u>NADDAFI, R.</u> and <u>RUDSTAM, L.G.</u> Lethal and non-lethal effects of predators on exotic dreissenids
W49	<u>PENNUTO, C.M.</u> , <u>JANIK, C.A.</u> , <u>CUDNEY, K.</u> , and <u>CHAPMAN, S.</u> Seasonal abundance and larval drift of invasive round gobies in a Lake Erie tributary stream.
W50	<u>PIERCE, L.</u> , <u>CRAWFORD, E.</u> , <u>WILLEY, J.</u> , and <u>STEPIEN, C.A.</u> Viral Hemorrhagic Septicemia (VHS) Immersion Challenge in Juvenile Muskellunge Using StaRT PCR: A Quantification Study
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W52	<u>SHERMAN, J.S.</u> , <u>UZARSKI, D.G.</u> , <u>ZANATTA, D.T.</u> , and <u>WOOLNOUGH, D.</u> Locating Refuge Populations of Unionids and Monitoring Dreissenid Mussel (<i>Dreissena polymorpha</i> and <i>D. bugensis</i>) Colonization in Great Lakes Coastal Wetlands
W53	<u>STEWART, K.M.</u> Increasing Dominance of "quagga" mussels in the Erie Canal
W54	<u>ZHU, B.</u> , <u>RUDSTAM, L.G.</u> , <u>BROWN, M.</u> , <u>GEORGIAN, S.E.</u> , <u>KOPCO, J.</u> , and <u>BASHAW, B.</u> Controlling Invasive Aquatic Plant European Frogbit Using Two Management Techniques - Hand Pulling and Shading

Session	Chemical contaminants and environmental forensics in the Great Lakes Basin (E1-E17)
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E2	<u>CSISZAR, S.A.</u> , DAGGUPATY, S., and DIAMOND, M.L. BLFM-MUM: A Coupled Atmospheric Transport and Multimedia Model Used to Study PCBs in Toronto
E3	<u>DUSSAULT, E.B.</u> , SHERRY, J.P., MCMASTER, M.E., PARROTT, J.L., HEWITT, L.M., and BROWN, S.B. Health Status of Wild Fish from the St. Lawrence River (Cornwall) Area of Concern - 1. Biological Effects
E4	<u>EASTLING, P.M.</u> and HORNBUCKLE, K.C. Polychlorinated Biphenyls in Cedar Rapids Flood Sediment
E5	<u>GEWURTZ, S.B.</u> , BHAVSAR, S.P., JACKSON, D.A., FLETCHER, R., MOODY, R., and REINER, E.J. PCBs and mercury in Ontario fish: influence of size and gender and implications for fish consumption advisories
E6	<u>HILL, R.B.</u> Long Term Contaminant Trends From The Niagara River
E7	<u>KURT-KARAKUS, P.B.</u> , MUIR, D.C.G., TEIXEIRA, C., BIDLEMAN, T.F., and SMALL, J. Current-Use Pesticides in Ontario Remote Lakes and Precipitation Samples
E8	<u>MAREK, R.F.</u> , THORNE, P.S., NORSTROM, A.K., DEWALL, J., and HORNBUCKLE, K.C. PCBs and Their Hydroxylated Metabolites in Human Serum from Urban and Rural Communities: East Chicago, IN and Columbus Junction, IA
E9	<u>MARVIN, C.H.</u> , BURNISTON, D.A., MARTIN, P., BACKUS, S., SMYTHE, S.A., PELLETIER, M., BANIC, C., and NEILSON, M. Occurrence, Distribution and Fate of Polybrominated Diphenylethers in the Canadian Environment
E10	<u>MEYER, T.</u> and WANIA, F. Transport of organic pollutants within an urban watershed during snowmelt
E11	<u>MILLIGAN, M.</u> , VALENTIN, L., SIMPSON, S., PAGANO, J., XIA, X., CRIMMINS, B., HOLSEN, T., and HOPKE, P. PCDD/F and Coplanar PCB Toxic Equivalency (TEQ) Analysis of Great Lakes Fish

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E13	<u>REDISKE, R.R.</u> and O'KEEFE, J.P. Assessment of PCBs and PBDEs in Fish from Several Trophic Levels in Western Michigan Drowned River Mouth Lakes
E14	<u>ROBSON, M.E.</u> , MELYMUUK, L.E., CSISZAR, S.A., GILBERT, B., HELM, P.A., DIAMOND, M.L., BACKUS, S., JANTUNEN, L.M., and DAGGUPATY, S. Urban Sources and Loadings of Toxics to Lake Ontario from the Greater Toronto Area
E15	<u>SHEN, L.</u> , REINER, E., MACPHERSON, K., KOLIC, T., BURNISTON, D., HELM, P., RICHMAN, L., HILL, B., BRINDLE, I., and MARVIN, C. Halogenated Norbornene Flame Retardants in the Great Lakes Tributaries
E16	<u>SVERKO, E.</u> , REINER, E.J., HOMY, G.T., MCCRINDLE, R., SHEN, L., ARSENAULT, G., ZARUK, D., MACPHERSON, K.A., MARVIN, C.H., HELM, P.A., and MCCARRY, B.E. Compounds Structurally Related to Dechlorane Plus in Sediment and Biota from Lake Ontario
E17	<u>ZWIERNIK, M.J.</u> , KENNEDY, S.W., FARMAHIN, R., BURSIAAN, S.J., CRUMP, D., GIESY, J.P., HAHN, M.E., COHEN-BARNHOUSE, A., YANG, Y., and HERVE, J. Linking Molecular Mechanism of Action to Ecological Risk Assessment - Constructs of the Aryl Hydrocarbon Receptor and Predicting Sensitivity of Avian Species to "Dioxin-Like" Compounds
Session	Historical Sedimentation in Great Lakes Watersheds - Causes, Quantification and Consequences (E18)
E18	KANDEL, H. and <u>GOMEZDEL CAMPO, E.</u> Spatial Variability of Sediment Delivery in the Sandusky Watershed, Ohio

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E19	<u>DANESHFAR, B.</u> , JARVIS, I., EILERS, W., and HUFFMAN, T. Agricultural Land Use Change at Watershed Level_ Present and Future Possibilities
E20	<u>DUNN, G.</u> , MCKAGUE, K., RANDELL, D., LOCKE, B., SWEENEY, S., and GILBERT, J.M. A Successful Multi-partnership Initiative Toward Restoring Rondeau Bay's Ecological Integrity
E21	<u>JUHASZ, M.</u> and CUMMINGS, F.H. Evaluation of agri-environmental program performance: Lessons learned from the EFP and Two Ontario Watersheds
E22	<u>STANG, C.M.</u> , GHARABAGHI, B., RUDRA, R.P., SHERMAN, K., WALTERS, M., and PALMER, R.M. Use of Agricultural Best-Management Practices for Watershed Management
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E23	<u>NICHOLAS, J.R.</u> , MCKENNA, J.E., REEVES, H.W., SEELBACH, P.S., and STEWART, J.S. Great Lakes Basin Framework for Ecological Flow
E24	<u>PIGGOTT, A.R.</u> Groundwater Discharge to Surface Water in Southern Ontario and the Great Lakes Basin
E25	<u>TONTO, J.F.</u> and CHIOTTI, Q. The Weather-Water Information Gateway
Session	Ecological and Biochemical Tracers: Profiling the Flow of Materials in Food Webs (E26-E28)
E26	<u>BRUSH, J.</u> , JOHNSON, T., JAKOBI, N., TARABORELLI, C., and FISK, A. Using Stable Isotopes and Fatty Acids to Understand the Influence of Temperature in Structuring Freshwater Fish Communities
E27	<u>PERHAR, G.</u> and ARHONDITSIS, G.B. From the Microscopic to the Macroscopic: Incorporating Highly Unsaturated Fatty Acids into Plankton Population Models
E28	<u>WATSON, S.B.</u> , KLASS, T., PAYTAN, A., KENDALL, C., SILVA, S., and OSTROM, N. The use of stable isotopes to measure phosphate release from anoxic sediments in Lake Erie

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E30	<u>DAS, S.</u> , SWEENEY, S.J., GOEL, P.K., and MCKAGUE, K. Database challenges for modelling efforts in southern Ontario Great Lakes-tributary watersheds over the decade from 2000-2009
E31	<u>MCKAGUE, K.J.</u> and SCHROETER, H.O. Assembling Climate Datasets to Drive Hydrologic and Water Quality Models in the Ontario Great Lakes Basin
E32	<u>RUDRA, R.P.</u> , CHAPI, K., DICKINSON, W.T., GHARABAGHI, B., AHMED, S.I., GOEL, P.K., and TUCKER, C. Runoff Generating Area and its Identification in a Watershed
Session	Lessons from the Past, Solutions for the Future: Great Lakes Areas of Concern (E33-E35)
E33	<u>BAKELAAR, C.</u> , DOOLITTLE, A., and DOKA, S. Integrated Spatial Framework for Storage & Analyses of Fish Habitat Data in Hamilton Harbour, Lake Ontario
E34	<u>LAWRENCE, P.L.</u> Completion of a Watershed Restoration Plan/Stage II Report for the Maumee Area of Concern
E35	<u>RUTTER, M.A.</u> A Statistical Approach for Establishing Tumor Incidence Delisting Criteria in Areas of Concern: a Case Study
Session	Ecosystem Health and Recovery of the Bay of Quinte, Lake Ontario: Past, Present and Future (E36-E44)
E36	BLUKACZ, E.A. and <u>KOOPS, M.A.</u> A Mass-Balance Remediation Approach towards Reaching Delisting Targets in Areas of Concern
E37	<u>FORRESTER, L.</u> , MOLOT, L., and WATSON, S.B. Blooms in the Bay: do iron and light affect microcystin levels in <i>Microcystis aeruginosa</i> ?
E38	HICKEY, M.B.C. and <u>RIDAL, J.J.</u> Addressing the Fish Consumption Beneficial Use Impairment in the Bay of Quinte

E39	<p><u>HOYLE, J.A.</u>, JOHANNSSON, O.E., and BOWEN, K.L. Lake Whitefish (<i>Coregonus clupeaformis</i>) Early Life History Studies on the Bay of Quinte, Lake Ontario</p>
E40	<p><u>LEISTI, K.E.</u>, DOKA, S.E., and MINNS, C.K. Submerged Aquatic Vegetation Response to Perturbation in the Bay of Quinte: 1972 – 2007</p>
E41	<p><u>LYNN, D.H.</u>, MUNAWAR, M., NIBLOCK, H., and FITZPATRICK, M. Long Term Assessment Of Ciliated Protozoa In The Bay Of Quinte, 2000-2008</p>
E42	<p><u>MACECEK, D.</u> and GRABAS, G.P. Refining and Reporting Delisting Criteria in the Bay of Quinte Area of Concern using an Existing Regional Coastal Wetland Monitoring Framework</p>
E43	<p><u>MINNS, C.K.</u>, DOKA, S.E., MOORE, J.E., and ST. JOHN, M. Temporal trends and spatial patterns in the temperature and oxygen regimes in the Bay of Quinte, Lake Ontario, 1972-2008</p>
E44	<p><u>RANDALL, R.G.</u>, KOOPS, M.A., and MINNS, C.K. Comparison of approaches for integrated management in coastal marine areas of Canada with the historical approach used in the Great Lakes (Bay of Quinte)</p>

Session	Climate Change and Variability and their Impacts on Environment and Ecosystems in the Great Lakes Region (W1-W7)
W1	BAI, X. and <u>WANG, J.</u> Simulations of water circulation and temperature in the Great Lakes with FVCOM
W2	<u>CALVERT, M.B.</u> and MCCARTHY, F.M.G. When Nanabush wept: Paleodrought-forced early Holocene lowstands, and implications under projected climatic scenarios
W3	<u>DICKINSON, W.T.</u> , RUDRA, R.P., PATEL, P., ZHOU, J., and AHMED, S.I. Trends in Rainfall Extremes in Ontario
W4	<u>LOFGREN, B.M.</u> and RUBERG, A. Projections of Great Lakes Levels Under Enhanced Greenhouse Gases Using Energy Budget-Based Evapotranspiration
W5	<u>MACRITCHIE, S.M.</u> , GOEL, P.K., KALTENECKER, G., FLEISCHER, F., JAMIESON, A., MILLAR, M., RAMANATHAN, L., WORTE, C., and GRGIC, D. An Approach for Evaluating Two Water Monitoring Networks for Climate Change Detection and Adaptation in Great Lakes Watersheds in Ontario.
W6	<u>PERROUD, M.</u> Impacts of a 2 X CO ₂ global climate change on the thermal structure of the deep Swiss Lake Geneva
W7	<u>WANG, J.</u> , HU, H., SCHWAB, D., LESHKEVICH, G., BELETSKY, D., HAWLEY, N., and CLITES, A. Development of the Great Lakes Ice-circulation Model (GLIM): Model-data fusion and sensitivity studies
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W9	<u>MURRY, B.A.</u> and FARRELL, J.M. Body-Size Versus Species Composition Stability in a Large River Fish Assemblage: Implications to Ecosystem Services
W10	<u>ROSWELL, C.R.</u> , HÖÖK, T.O., and POTHOVEN, S.A. Diet Selection and Growth of age-0 yellow perch (<i>Perca flavescens</i>) in Saginaw Bay, Lake Huron
W11	<u>WILSON, C.</u> , ADDISON, P., CHONG, S., and D'AMELIO, S. Regional metapopulation structure of coaster brook trout in northern Lake Superior

W12	WOZNEY, K.M., LISKAUSKAS, A.P., and WILSON, C.C. Genetic Structure and Diversity Among Populations of Muskellunge (<i>Esox masquinongy</i>) in Lake Huron and Georgian Bay
Session	Fish Communities, Habitat Coupling and Energy Transfer in Great Lakes Ecosystems (W13-W16)
W13	BARTON, N.T., GALAROWICZ, T.L., CLARAMUNT, R.M., and FITZSIMONS, J.D. A Comparison of Egg Bag and Funnel Estimates of Native Fish Egg Deposition Rates in Grand Traverse Bay, Lake Michigan.
W14	HENSLER, S.R., JUDE, D.J., WANG, Y., and JANSSEN, J. Offshore Larval Fish Distribution in the Great Lakes
W15	HERBST, S. and MARSDEN, J.E. Comparison of Lake Champlain and Great Lakes lake whitefish populations following the introduction of dreissenids
W16	SCHOCK, N.T., UZARSKI, D.G., and WEBSTER, W.C. Impacts of Anthropogenic Disturbance on Fish and Macroinvertebrate Populations Among Great Lakes Coastal Wetlands
Session	Gaining and Applying Insights from Long-term Ecological Research on Lake Simcoe (W17-28)
W17	GARREAU, D.M., BAULCH, H.M., and DILLON, P.J. Sediment Phosphorus Fractions of Lake Simcoe Tributaries.
W18	KELLY, N.E., YAN, N.D., YOUNG, J.D., and WINTER, J. Dynamics of the Invasive Spiny Water Flea, <i>Bythotrephes longimanus</i> , in Lake Simcoe
W19	KOPF, V.E. and EVANS, D.O. Influence of changing climate and lake thermal regime on spawning time of lake trout, <i>Salvelinus namaycush</i> , in Lake Simcoe, 1976-2003.
W20	LU, Q., DUCKETT, F.J.L., BALDWIN, R.J., and STAINSBY, E.A. Modeling Assessment of Inter-lake Flushing Rates in Lake Simcoe
W21	MOLES, M., LA ROSE, J.K.L., and WILLOX, C.C. The Lake Simcoe recreational fishery from 1961 to 2009
W22	O'CONNOR, E.M., MCCONNELL, C., LEMBCKE, D., and WINTER, J.G. Selecting a loading calculation procedure to estimate total phosphorus loads in rivers: Application to the Black River and East Holland River (Lake Simcoe watershed, Ontario, Canada)

W23	<u>PATERSON, G.</u> , <u>DROUILLARD, K.G.</u> , and <u>BHAVSAR, S.P.</u> Assessing the influence of multiple stressors on persistent organic pollutant bioaccumulation by Lake Simcoe yellow perch (<i>Perca flavescens</i>)
W24	<u>RENNER, V.E.</u> and <u>EVANS, D.O.</u> The Thermal Regime of Lake Simcoe Has Been Modified by Invasion of Zebra Mussel, <i>Dreissena polymorpha</i> , and Climate Change
W25	<u>THORN, M.</u> , <u>VAILLANT, C.</u> , <u>KURISSERY, S.</u> , and <u>KANAVILLIL, N.</u> Species diversity and succession of microalgae in biofilms developed on glass coupons suspended in northwestern part of Lake Simcoe, Orillia, ON
W26	<u>TRENOUTH, W.</u> , <u>KAZMI, S.</u> , <u>ASNAASHARI, A.</u> , <u>GHARABAGHI, B.</u> , <u>MCBEAN, E.</u> , <u>WALTERS, M.</u> , and <u>RUDRA, R.</u> Monitoring of Phosphorus Load in Stormwater Runoff from Urban Development Projects in the Lake Simcoe Watershed
W27	<u>WILLOX, C.C.</u> , <u>ROBILLARD, M.M.</u> , and <u>LA ROSE, J.K.L.</u> Current state and temporal trends in the nearshore fish community of Lake Simcoe
W28	<u>WOZNEY, K.M.</u> and <u>WILSON, C.C.</u> Historical and contemporary genetics of muskellunge (<i>Esox masquinongy</i>) in Lake Simcoe: options for restoration
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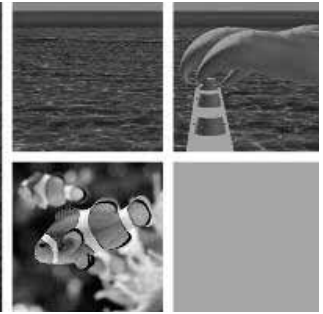
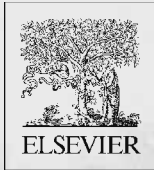
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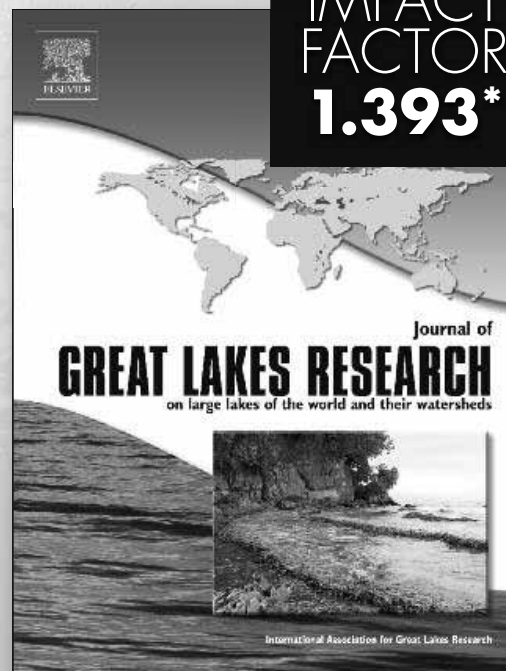
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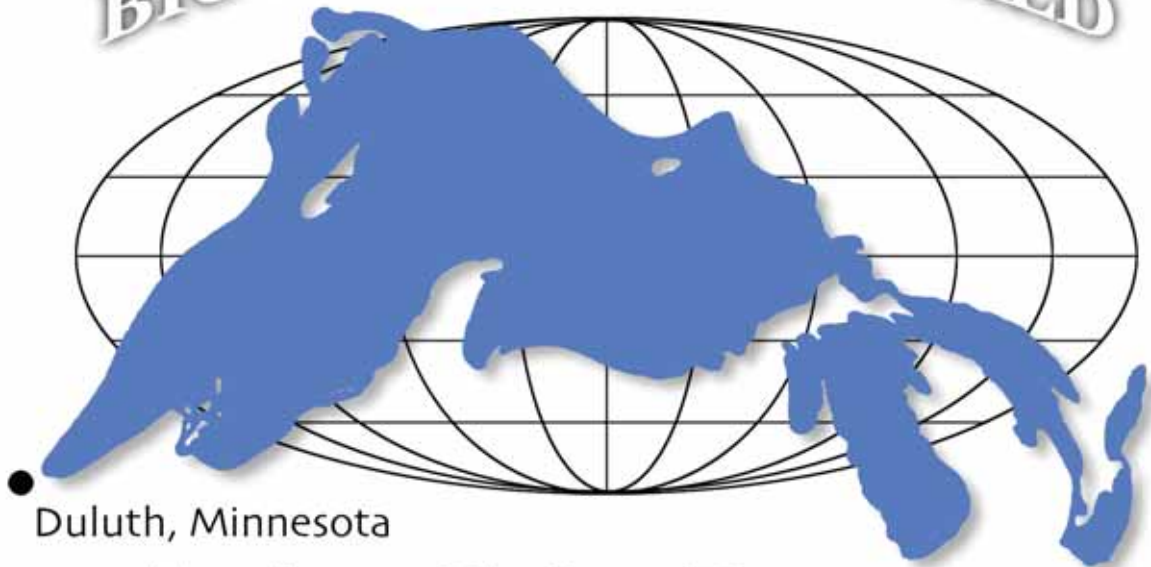
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