IAGLR 2012

55th ANNUAL CONFERENCE

International Association for Great Lakes Research

Cornwall, ON Canada
May 13-17 2012

From Great Lakes flow Mighty Rivers

St. Lawrence River Institute of Environmental Sciences

Queen's University

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Un monde de possibilités

IAGLR 2012

55th Annual Conference

International Association for Great Lakes
Research Conference (IAGLR)

From Great Lakes Flow Mighty Rivers

May 13-17, 2012

NavCentre, Cornwall, ONTARIO CANADA

PUBLISHED BY

International Association for Great Lakes Research Office

4840 South State Rd., Ann Arbor, Michigan 48108
www.iaglr.org

IAGLR 2012

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Welcome Conference Exhibitors

AECL Nuclear Laboratories
Chalk River, Ontario K0J 1P0
http://www.aecl.ca

Aquatic Ecosystem Health and Management Society
P.O. Box 85388, Brant Plaza Postal Outlet Burlington, ON L7R 4K5
http://aehms.org/

Conservation Ontario
120 Bayview Ave
Newmarket, Ontario L3Y 4W3
http://www.conservation-ontario.on.ca

Cooperative Institute for Limnology and Ecosystems Research
G110 Dana Building (SNRE), University of Michigan
440 Church St.
Ann Arbor, Michigan 48109-1041
http://ciler.snre.umich.edu

Elsevier
Science & Technology Journals
360 Park Ave. South
New York, NY 10010
http://www.sciencedirect.com/jglr

Enviro-Analytical
RR#1, 286 Mask Island Dr.
Barry's Bay, ON K0J 1B0
http://www.enviro-analytical.com

Environment Canada
Great Lakes Division
4905 Dufferin St.
Toronto, Ontario M3H 5T4
http://www.ec.gc.ca

Environment Canada St. Lawrence Action plan - Quebec City
http://www.planstlaurent.qc.ca

Fluid Imaging Technologies Inc.
65 Forest Falls Dr.
Yarmouth, ME 04096
http://www.fluidimaging.com

GENEQ Inc.
10700 Secant St.
Montreal, Quebec H1J 1S5
http://www.geneq.com

Hach Hydromet
5600 Lindbergh Dr.
Loveland, CO 80538
http://www.hachhydromet.com/

Hoskin Scientific
4210 Morris Drive
Burlington, ON L7L 5L6
http://www.hoskin.ca

International Joint Commission
Great Lakes Regional Office
100 Ouellette Ave. 8th Floor
Windsor, ON N9A 6T3
http://www.ijc.org

IL/IN Sea Grant College Program
Purdue University
715 W. State Street
West Lafayette, IN 47907
http://www.iisgcp.org/

MetalCraft Marine, Inc.
347 Wellington Street
Kingston, Ontario K7K 6N7
http://www.metalcraftmarine.com

New York Sea Grant
121 Discovery Hall
Stony Brook, New York 11790-5001
http://www.seagrant.sunysb.edu

NOAA - Great Lakes Environmental Research Laboratory
4840 South State Road
Ann Arbor, MI 48108

Ontario Power Generation
Robert H. Saunders G.S., 2500 Second Street West
Cornwall, Ontario K6H 5V1
http://www.opg.com

RBR Ltd.
95 Hines Road
Ottawa, ON K2K 2M5
http://www.rbr-global.com

St. Lawrence River Institute of Environmental Sciences
www.riverinstitute.ca

University of Wisconsin Sea Grant Institute
1975 Willow Drive
Madison, WI 53706
http://www.seagrant.wisc.edu

U.S. Geological Survey
1451 Green Road
Ann Arbor, MI 48105
http://www.glsc.usgs.gov/

YSI, Inc.
1725 Brannum Lane
Yellow Springs, OH 45387
http://www.ysi.com

Exhibitors will be open daily

Please make the exhibitors feel welcome by visiting their displays!!!

IAGLR 2012

Sustaining Members

Our deepest appreciation is extended to our annual Sustaining members

Great Lakes Fishery Commission*
2100 Commonwealth Boulevard, Suite 100
Ann Arbor, Michigan 48105-1563

Great Lakes Protection Fund
1560 Sherman Avenue, Suite 880
Evanston, Illinois 60201-4808

International Joint Commission
Great Lakes Regional Office
l00 Ouellette Avenue
Windsor, Ontario N9A 6T3

U.S. Dept. of Commerce, National Oceanic and Atmospheric Administration**
Great Lakes Environmental Research Laboratory
4840 South State Road
Ann Arbor, Michigan 48108

U.S. Environmental Protection Agency
Great Lakes National Program Office
77 West Jackson Street
Chicago, Illinois 60604

* Proud sponsor of the Norman S. Baldwin Fishery Science Scholarship
**The IAGLR Business Office is grateful to reside at the GLERL Ann Arbor facility

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.

Visit our website or the registration area for further information. **IAGLR member benefits include:**
Quarterly *Journal of Great Lakes Research* subscription
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Access to *J. Great Lakes Research* archives from 1975-present
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Opportunities to work on various committees
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Stay abreast or post news of interest on our web site
Students, Retirees, Young Professionals, and our newest category, Developing Countries all enjoy reduced fees with full benefits! **www.iaglr.org**

IAGLR 2012

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Peter Hodson, Queen's University
Linda Campbell, Queen's University and St. Mary's University

Program Chairs

Jérôme Marty, Research Scientist
St. Lawrence River Institute of Environmental Sciences
Jeff Ridal, Executive Director
St. Lawrence River Institute of Environmental Sciences

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Christina Collard

IAGLR Business Manager

Wendy L. Foster

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Katherine Hargan, Student Member
Scott Higgins
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Peter J. Dillon

Our sincere appreciation for their contribution

- Paula McIntyre, (Lorac Design LLC)
- Michael Twiss
- Session Chairs
- Our Volunteers
- IAGLR Board of Directors
- Conference Committee

Special Events Information

Sunday May 13 7:00 pm - Welcome Reception (Theatre)

Monday May 14 - Early morning tours

6:45 a.m. - Nature Walk at Cooper Marsh Conservation Authority. Dr. Brian Hickey, Senior Biologist with the St. Lawrence River Institute of Environmental Sciences, will bring you on a guided tour of the Cooper Marsh Conservation Area. The bus will leave the Nav Centre main entrance at 6:45 a.m. and return by approximately 9 a.m. (20 min bus ride)

8:00 a.m. - Tour RAP Restoration Projects - Join Chris Critoph, Environmental Manager with the Raisin Region Conservation Authority, for a tour of local restoration projects accomplished under the Remedial Action Program for the St. Lawrence (Cornwall) AOC. Bus will leave the Nav Centre main entrance at 8 a.m. and return by 9:30 a.m. (10 min bus ride)

10:00 a.m. - Opening Ceremonies
Traditional Native Prayer—Mohawk Council of Akwesasne
Native North American Travelling College Dance Travel Troupe: The Travel Troupe consists of cultural technicians with knowledge of the Haudenosaunee lifeways. The cultural interpreters travel year round educating and performing in schools, communities and events throughout the United State and Canada.

Tuesday May 15
12:10 p.m. IAGLR Business Lunch (Campbell Hall)
Community Evening Events

- River Institute Fundraiser—Local Tastings– 7:00—9:00 p.m. ($25 extra)
- Ontario Power Visitor Centre Tour—RAP Displays/IJC Water Levels 7:00—9:00 p.m.
- Defy Cup Canada vs. U.S.A. Hockey Challenge (Benson Centre) 7:30 p.m.

Shuttle buses to events leave at 6:30 p.m. and 7:00 p.m. from NavCentre

Separate shuttle to downtown establishments provided by Cornwall Chamber of Commerce

Special Events Information

Wednesday, May 16, 2012

IAGLR Banquet and Awards Ceremony and Scholarships. (Campbell Hall)

Lifetime Achievement Award

Jack Vallentyne Award for Outreach and Education

Chandler-Misener Award

Anderson-Everett Award

Editor's Award

Elsevier Award - Best Reviewer

Elsevier Young Scientist Award

Elsevier Young Student Award

IAGLR-Hydrolab Best Student Paper Award – 2011

IAGLR-Hydrolab Best Student Poster Award – 2011

IAGLR Scholarship Award

Paul W. Rodgers Scholarship

Norman S. Baldwin Fishery Science Scholarship

IAGLR Certificates of Appreciation – Retiring Board members, Committee Chairs, Officers

IAGLR Certificates of Appreciation – Associate Editors, J. Great Lakes Research

IAGLR 2012 Conference Appreciation Award

IAGLR Certificates of Appreciation – Special Issue Editor, J. Great Lakes Research

*IAGLR is a non-profit 501(c)(3) organization. Donations are deductible from U.S. income tax and against U.S. earnings in Canada

Notes

IAGLR 2012 SCHEDULE AT A GLANCE

Sunday, May 13, 2012

9:00 a.m. – 4:00 p.m. IAGLR Board of Directors meeting (Room F236)
4:00 p.m. – 7:00 p.m. Registration open (Upper lounge)
4:00 p.m. – 7:00 p.m. Presentation loading (Registration area)
4:00 p.m. – 7:00 p.m. Exhibitor set up
6:30 p.m. – 9:30 p.m. Welcome mixer (Nav Theatre Lounge)

Native North American Travelling College

Monday, May 14

7:00 am - 6:00 p.m. Registration (Upper lounge)
7:00 a.m. – 6:00 p.m. Presentation loading (Registration area)
6:45 a.m. – 9:30 a.m. Early morning tour Cooper March (For delegates who have pre-registered)
8:00 a.m. – 9:00 a.m. Tour – RAP Restoration Projects (For delegates who have pre-registered)
9:00 p.m. – 9:30 a.m. Student volunteer training
10:00 a.m. -11:00 a.m. Opening Ceremonies (Campbell Hall)
11:00 am – 12:00 p.m. Plenary Speaker: Stuart Bunn (Campbell Hall)
1:40 pm – 5:20 p.m. Concurrent Sessions
7:00 p.m. – 9:00 p.m. Poster Session and exhibitor reception (Marc Garneau and Robert Thirsk rooms)

Tuesday, May 15

7:00 a.m. – 5:00 p.m.	Registration (Upper Lounge)
7:00 a.m. – 5:00 p.m.	Presentation loading (Registration area)
9:00 a.m. – 4:00 p.m.	Coffee and tea available all day (Marc Garneau and A section)
8:00 a.m. – 10:20 a.m.	Concurrent sessions (see schedule)
11:10 a.m. – 12:10 p.m.	Plenary speaker: Kelly Munkittrick (Campbell Hall)
12:10 p.m. – 1:30 p.m.	IAGLR Business lunch (Campbell Hall)
1:40 p.m. – 5:20 p.m.	Concurrent sessions

Early morning tour at Cooper Marsh

Evening Events—Enjoy Your Night in Our Community

Each event will have a dedicated shuttle to and from the event.
Event shuttles leave the front entrance of NavCentre at 6:30 p.m. and 7:00 p.m.
Not signed up for an event? A special shuttle will be available to take you to downtown establishments, courtesy of Cornwall Chamber of Commerce

TUESDAY, MAY 15, 2012 LOCAL TOURS AND DEFY CUP HOCKEY GAME

OPG Visitors Centre

7:00 p.m. – 9:00 p.m.
Water Levels Session
7:00 pm Take a tour of the Ontario Visitors Centre, view RAP displays and meet our Jr. Scientists (local Science Fair Winners)
7:30 p.m. A presentation by IJC on the proposed St. Lawrence - Lake Ontario water levels regulation plan

River Institute—Tastings

7:00 p.m. – 9:00 p.m.
Local Tasting
(St. Lawrence River Institute) $25 per person

Enjoy an evening tour of the St. Lawrence River Institute labs, nestled by the St. Lawrence River

Enjoy tastings of local food, wine and beer

Defy Cup —Canada vs US

7:30 p.m. – 9:00 p.m.
Defy Cup
(Benson Centre)

Team Canada vs. Team USA

The Mayor of the City of Cornwall (and former NHL referee, Bob Kilger) will drop the puck at 7:30 pm!

Don't miss this exciting action!

IAGLR 2012

Wednesday, May 16

7:00 a.m. – 5:00 p.m.	Registration (Upper Lounge)
7:00 a.m. – 5:00 p.m.	Presentation loading (Registration area)
9:00 a.m. – 4:00 p.m.	Coffee and tea available all day (Marc Garneau and A section)
8:00 a.m. – 11:00 a.m.	Concurrent sessions
11:10 a.m. – 12:10 p.m.	Plenary speaker: Gail Krantzberg (Campbell Hall)
12:10 p.m. – 1:30 p.m.	Lunch NavCentre Cafeteria
1:40 p.m. – 5:20 p.m.	Concurrent sessions
6:00 p.m. – 7:00 p.m.	Cocktails (Marc Garneau)
7:00 p.m. – 9:00 p.m.	Banquet (Campbell Hall)

Thursday, May 17

7:00 a.m. – 1:00 p.m.	Registration (Upper Lounge)
7:00 a.m. – 1:00 p.m.	Presentation loading (Registration area)
9:00 a.m. – 4:00 p.m.	Coffee and tea available all day (Marc Garneau and A section)
8:00 a.m. – 11:00 a.m.	Concurrent sessions
11:10 a.m. – 12:00 p.m.	Plenary Speaker: Sarah Bailey (Campbell Hall)
12:20 p.m. – 1:30 p.m.	Lunch NavCentre Cafeteria
1:20 p.m. – 5:00 p.m.	Concurrent sessions
5:00 p.m. – 5:15 p.m.	Closing ceremony - Traditional Native Prayer (Theatre)

Welcome Stuart Bunn, Plenary Speaker

MONDAY, MAY 14 11:00 AM—12:00 (NOON)
CAMPBELL HALL

Rivers as Connected Ecosystems

Stuart Bunn, *Director, Australian Rivers Institute, Griffith University Brisbane, Australia*

Professor Bunn is the Director of the Australian Rivers Institute at Griffith University in Brisbane. His major research interests are in the ecology of river and wetland systems with a particular focus on the science to underpin river management, and he has published widely on this topic.

Professor Bunn has extensive experience working with international and Australian government agencies on water resource management issues. He is a member of the Scientific Steering Committee for the Global Water System Project, the Chair of the Scientific Expert Panel for the Southeast Queensland Healthy Waterways Partnership and has previously served as Chair of the Scientific Advisory Panel for the Lake Eyre Basin Ministerial Council and as a Director of Land and Water Australia. He also leads the Australian Climate Change Adaptation Research Network for Water Resources and Freshwater Biodiversity and, in 2008, was appointed as an Australian National Water Commissioner.

In 2007, Professor Bunn was awarded the Australian Society for Limnology Medal in recognition of his outstanding contribution to research and management of Australia's inland waters.

Welcome Kelly Munkittrick, Plenary Speaker

TUESDAY, MAY 15
11:10 AM—12:10 PM
CAMPBELL HALL

A New Paradigm for Monitoring the Cumulative Effects of Stressors in the Great Lakes

Kelly Munkittrick, *Scientific Director, Canada Research Chair in Ecosystem Health Assessment, Canadian Rivers Institute; Professor, Department of Biology, University of New Brunswick*

Dr. Munkittrick was appointed Scientific Director of the Canadian Water Network in March 2011, a position where he leads the development of an innovative network focused on providing clean, safe and sustainable water across Canada and internationally.

Dr. Munkittrick is also the Canada Research Chair in Ecosystem Health Assessment in the Canadian Rivers Institute at the University of New Brunswick, where he assesses the environmental impacts of industrial and agricultural activities and develops methods for environmental effects monitoring and cumulative effects assessment of multiple stressors on aquatic environments.

Welcome Gail Krantzberg, Plenary Speaker

WEDNESDAY, MAY 16
11:10 AM—12:10 PM
CAMPBELL HALL

Complex Science is No Match for Impaired Governance

An IAGLR plenary featuring :

Gail Krantzberg, *Professor and Director of the Centre for Engineering and Public Policy in the School of Engineering Practice McMaster University, Hamilton, Ontario*

Dr. Krantzberg is actively engaged in research at the interface between science and public policy with extensive expertise on disciplines that could advance Great Lakes sustainability. She worked for the Ontario Ministry of Environment from 1988 to 2001, as the Coordinator and Senior Policy Advisor for the Great Lakes Program. She is a past president of IAGLR and sits on the Board of Directors for several Great Lakes and policy-related non-profit organizations.

Dr. Krantzberg was the Director of the Great Lakes Regional Office of the International Joint Commission from 2001 to 2005. She is currently Professor and founding Director of the ArcelorMittal Dofasco Centre for Engineering and Public Policy at McMaster University offering Canada's first Master's Degree in Engineering and Public Policy. She also serves as Adjunct Professor at UNU-INWEH, working on lake management research.

Dr. Krantzberg received her Ph.D. from the University of Toronto in the field of ecotoxicology and a B.Sc. from McGill University . She has authored more than 100 scientific and policy articles on issues pertaining to ecosystem quality and sustainable public policy.

Welcome Sarah Bailey, Plenary Speaker

THURSDAY, MAY 17
11:10 AM -- 12:00 (NOON)
CAMPBELL HALL

Current State of Ballast Water as a Vector of Introduction and Spread of Aquatic Invasive Species in the Great Lakes

Sarah Bailey, *Research Scientist, Fisheries and Oceans Canada; Principal Investigator with the NSERC Canadian Aquatic Invasive Species Network; Adjunct Professor, Great Lakes Institute for Environmental Research (University of Windsor) and the University of Toronto (Scarborough)*

Dr. Bailey has conducted research on ship-mediated invasions since 2000, and leads federal ballast water research and monitoring activities in the Great Lakes and Arctic regions of Canada. Her research has been instrumental to the development of effective ballast water policies in Canada and the U.S. She also advises on development of international regulations through working groups at the International Council for the Exploration of the Sea and the International Maritime Organization.

Her primary research interests include quantification of propagule pressure associated with different invasion vectors, risk assessment, and development and evaluation of management strategies.

General Conference Information

Internet Access

The Nav Centre maintains open wireless access for delegates in the meeting rooms and academic areas. Internet access in the residences is wired.

Uploading Presentations

A dedicated station for uploading presentations will be located in the Registration Area and will be available during the same periods of time the Registration desk is open: Sunday between 4:00-7:00 p.m.; Monday between 7:00 a.m. and 6:00 p.m.; Tuesday and Weds between 7:00 a.m. and 5:00 pm; and Thursday between 7:00 and 1:00 p.m.

Bring your presentation on a USB flash drive or CD for uploading at the registration desk a minimum 4 hours prior to the start of your session (Mon afternoon for those of you speaking Tuesday morning). You will be able to verify that your presentation works properly on the conference computer system. For those speakers wishing to have access to a room to practice their talks, please see the registration desk.

Name your presentation file in the format "Sess#_PresenterLastName_DayTime". For example, presenter Jane Doe, speaking in Session 18. Lake Ontario Ecosystem: Status and Future Directions on Tuesday at 9:40 AM would name her talk "Sess18_Doe_Tue940". Use 12-hr rather than 24-hr time and omit the colon between hours and minutes. Verify your session number and presentation time. Session numbers may be found on the Sessions page. Presentation times may be found by visiting the Schedule of Scientific Presentations.

Presentations should be in PowerPoint format. Conference computers will be running MS Office 2010 in a Windows operating system, and will be able to handle any version of PowerPoint back to 1997. If you have concerns about compatibility (e.g., coming from a Mac operating system), bring a PDF-file version of your talk as a backup. Computers will have wireless Internet access. If your talk involves an internet demonstration, incorporate screen shots into your PowerPoint rather than relying on a live Internet session.

Oral Presentations

Each speaker has 20 minutes (15 min for the presentation, followed by 5 min for Q & A and transition to next speaker). Time limits will be enforced. An LCD projector and dedicated computer will be available in each room. Presenters may not use their own laptop. Bring a USB flashdrive back up of your presentation with you.

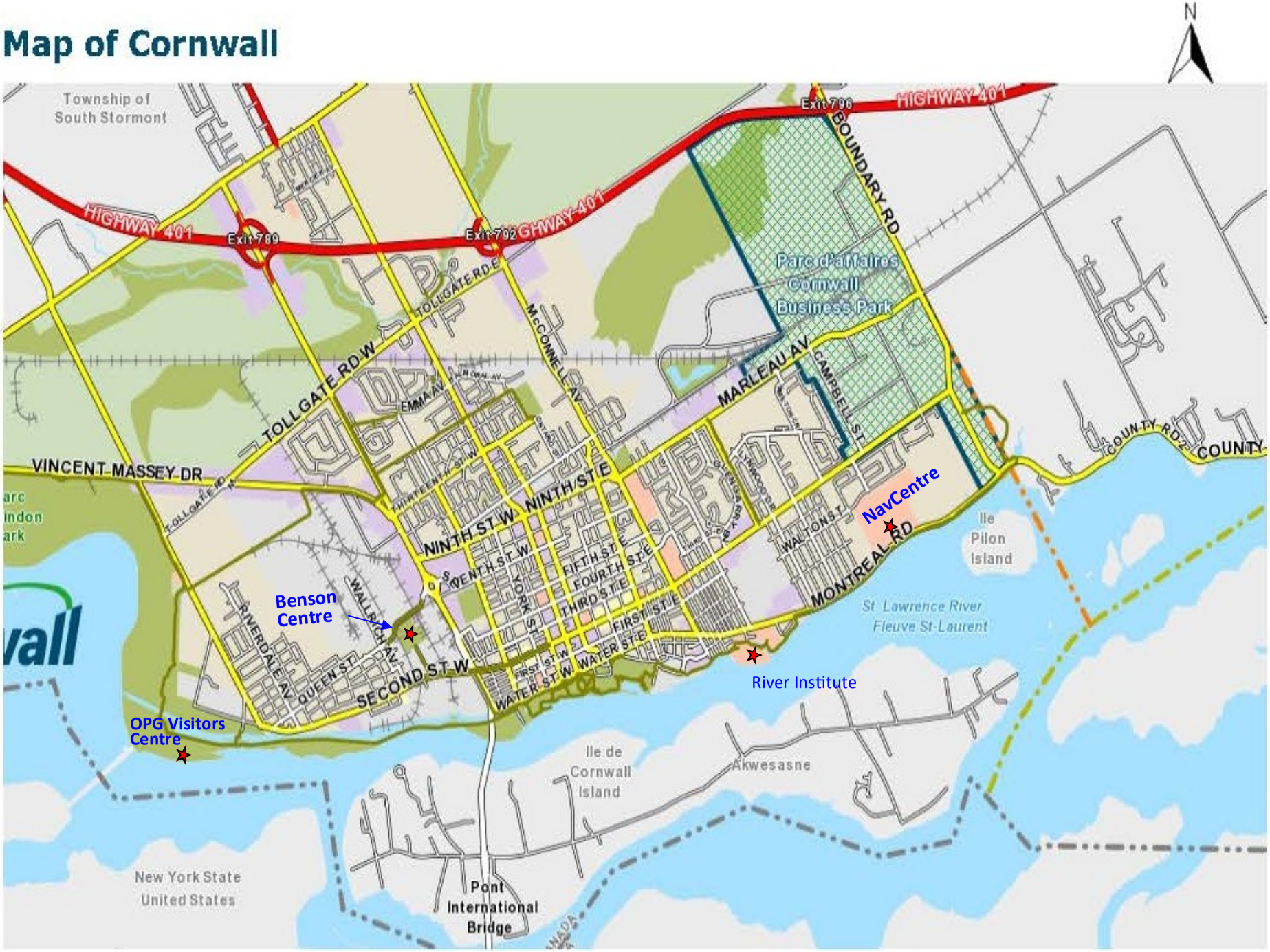
Poster Presentations

The poster social will be Monday, May 14, from 7:00 to 9:00 PM. Authors should stand by their poster for discussion during the poster session. The poster session is scheduled in two connected room (Marc Garneau and Robert Thirsk) and we invite presenters to mount the posters between Sunday night and Monday before 5:00 PM (the rooms will be open for the duration of the conference, so you will be able to hang your poster as soon as you arrive). Posters must be removed after the poster session. To find your poster location, cross-reference the poster board ID number with the number listed by your presentation in the conference program book.

Boards will be available in the Marc Garneau room for further viewing of posters during the week, we invite authors to re-display their posters on the same day as your session. Please ensure your poster is removed at the end of that day.

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

Map of Cornwall



NAV CENTRE

Hours of Operation

Main Dinning Room

Breakfast

Monday to Friday
6:45 a.m. to 8:30 a.m.

Saturday and Sunday
8:00 a.m. to 10:00 a.m.

Lunch

Monday to Friday
11:15 a.m. to 1:30 p.m.

Saturday and Sunday
12:00 p.m. to 1:30 p.m.

Dinner

Monday to Friday
5:15 p.m. to 7:15 p.m.

Saturday
5:15 p.m. to 7:00 p.m.

Sunday
5:15 p.m. to 7:15 p.m.

Lift Off Tuck Shop

Monday to Friday
7:00 a.m. to 10:30 p.m.

Saturday and Sunday
10:00 a.m. to 10:30 p.m.

Jet Set Pub

Monday to Thursday
4:00 p.m. to 1:00 a.m.

Friday
4:00 p.m. to 12:00 a.m.

Saturday and Sunday
5:00 p.m. to 12:00 a.m.

Wellness Centre

Swimming Pool

Monday to Thursday
5:00 a.m. to 8:00 a.m.
11:00 a.m. to 1:00 p.m.
4:00 p.m. to 9:30 p.m.

Friday
5:00 a.m. to 8:00 a.m.
11:00 a.m. to 1:00 p.m.
4:00 p.m. to 9:00 p.m.

Saturday and Sunday
12:00 p.m. to 8:00 p.m.

Gymnasium

Monday to Thursday
5:00 a.m. to 9:30 p.m.

Friday
5:00 a.m. to 9:00 p.m.

Saturday
8:00 a.m. to 8:00 p.m.

Sunday
9:00 a.m. to 8:00 p.m.

Fitness Centre

Monday to Thursday
5:00 a.m. to 9:30 p.m.

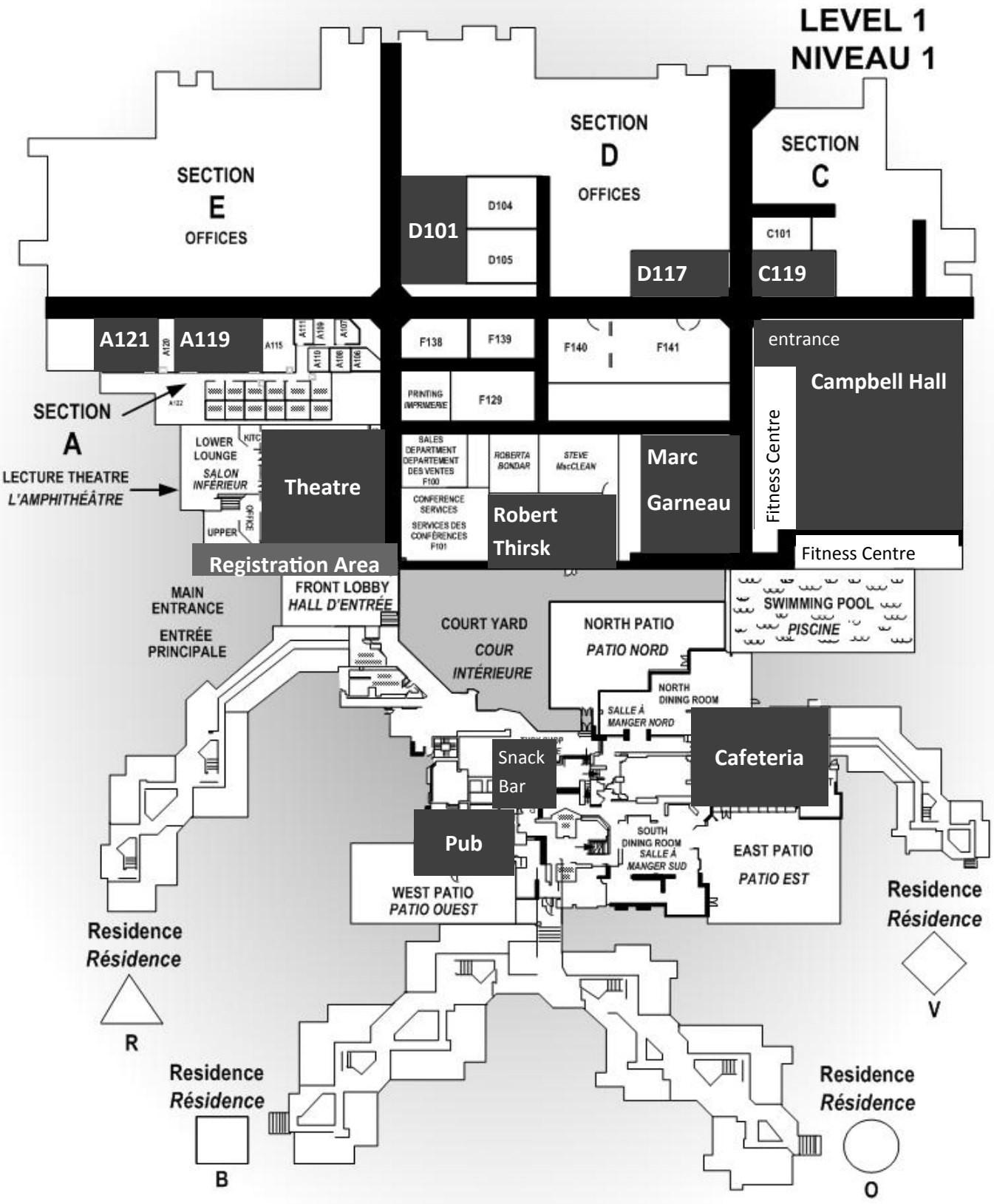
Friday
5:00 a.m. to 9:00 p.m.

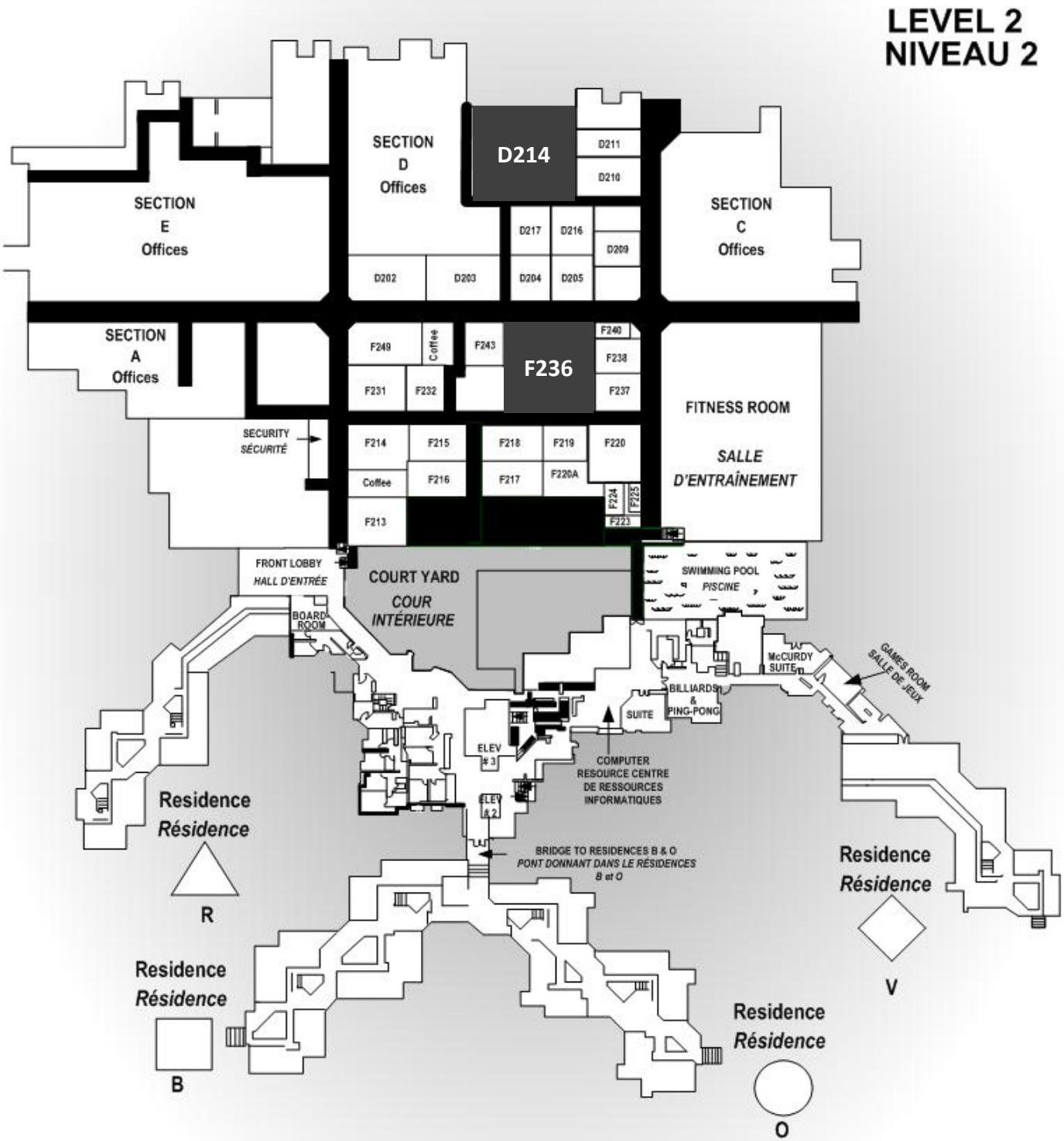
Saturday
8:00 a.m. to 8:00 p.m.

Sunday
9:00 a.m. to 8:00 p.m.

1 877 832 6416 | www.navcentre.ca
1950 Vanrao Road, Cornwall, ON K6H 6L2

NavCenter Floor Plan

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Program Overview

Monday, May 14

1:40 p.m. - 5:00 p.m.	**8. Hypoxia in the Great Lakes: Detection and Prediction** *Room Theatre*
1:40 p.m. - 5:20 p.m.	**14. Multi-media Assessment of Toxics in the Great Lakes 2012** *Room F236*
1:40 p.m. - 3:20 p.m.	**24. The Past, Present and Future of the Ottawa River** *Room C119*
1:40 p.m. - 5:20 p.m.	**2. Physical Processes in Lakes** *Room D214*
1:40 p.m. - 5:20 p.m.	**19. Chip Weseloh Tribute Session - 35 Years of Great Lakes Wildlife Research** *Room D101*
1:40 p.m. - 5:00 p.m.	**43. Large Vessel Research Capability and Program History on the Laurentian Great Lakes** *Room D117*
1:40 p.m. - 5:20 p.m.	**29. Atlantic Salmon Restoration - Tools and Techniques, Challenges and Solutions, Partnerships and Progress** *Room A119*
3:40 p.m. - 5:00 p.m.	**9. Quantifying Cumulative Effects to Great Lakes and St. Lawrence Tributaries Through Regional Monitoring** *Room C119*

Tuesday, May 15

8:00 a.m. - 9:20 a.m.	**16. The History of Water Pollution Issues in the St. Lawrence River** *Room Theatre*
8:00 a.m. - 11:00 a.m.	**28. Native and Non-native Invertebrates: Biology, Ecology and Role in Food Webs** *Room F236*
8:00 a.m. - 11:00 a.m.	**18. Lake Ontario Ecosystem: Status and Future Directions** *Room C119*
8:00 a.m. - 9:20 a.m.	**3. Nearshore Physical Limnology and Coastal Processes** *Room D214*
8:00 a.m. - 11:00 a.m.	**32. Lake Simcoe: Bringing the Science Together** *Room D101*
8:00 a.m. - 11:00 a.m.	**40. Remote Sensing, Visualization, and Spatial Data Applications for the Great Lakes** *Room D117*
8:00 a.m. - 11:00 a.m.	**12. Linkages Between the Landscape and Great Lakes Coastal Ecosystems** *Room A119*
9:40 a.m. - 11:00 a.m.	**15. Approaches for Contaminant Exposure and Effects Assessment in Large Lakes and River Systems** *Room Theatre*
9:40 a.m. - 11:00 a.m.	**1. Coupled Physical and Biogeochemical Processes in Large Lakes** *Room D214*
1:40 p.m. - 5:20 p.m.	**15. Approaches for Contaminant Exposure and Effects Assessment in Large Lakes and River Systems** *Room Theatre*
1:40 p.m. - 3:20 p.m.	**28. Native and Non-native Invertebrates: Biology, Ecology and Role in Food Webs** *Room F236*
1:40 p.m. - 5:20 p.m.	**18. Lake Ontario Ecosystem: Status and Future Directions** *Room C119*
1:40 p.m. - 5:20 p.m.	**1. Coupled Physical and Biogeochemical Processes in Large Lakes** *Room D214*
1:40 p.m. - 5:20 p.m.	**32. Lake Simcoe: Bringing the Science Together** *Room D101*
1:40 p.m. - 5:20 p.m.	**40. Remote Sensing, Visualization, and Spatial Data Applications for the Great Lakes** *Room D117*
1:40 p.m. - 3:20 p.m.	**12. Linkages Between the Landscape and Great Lakes Coastal Ecosystems** *Room A119*
3:40 p.m. - 5:20 p.m.	**50. Protected Areas Within and Bordering the Great Lakes and St. Lawrence River: Unique Conservation Challenges and Opportunities** *Room F236*
3:40 p.m. - 5:20 p.m.	**30. Waterbird Studies in Great Lakes Rivers: Populations, Contaminants, Management and** **Ecology** *Room A119*

Wednesday, May 16

8:00 a.m. - 11:00 a.m.	**6. Effects of Land Use on Nutrient Transport Through Aquatic Systems** *Room Theatre*
8:00 a.m. - 11:00 a.m.	**33. Aquatic Invasive Species in the Great Lakes: Spread, Population Dynamics and Ecological Impact** *Room F236*
8:00 a.m. - 11:00 a.m.	**49. Aquatic Habitat Restoration and Management in the Great Lakes** *Room C119*
8:00 a.m. - 11:00 a.m.	**41. Ecological Tracers in Great Lakes/St. Lawrence River Food Webs** *Room D214*
8:00 a.m. - 11:00 a.m.	**37. Climate Change: Modelling, Vulnerability, Adaptation and Mitigation** *Room D101*
8:00 a.m. - 9:20 a.m.	**7. Nearshore Issues: Connecting the Dots** *Room D117*
8:00 a.m. - 11:00 a.m.	**55. Fisheries Assessment and Management** *Room A119*
9:40 a.m. - 11:00 a.m.	**10. Beach Water Quality and Human Health** *Room D117*
1:40 p.m. - 5:20 p.m.	**6. Effects of Land Use on Nutrient Transport Through Aquatic Systems** *Room Theatre*
1:40 p.m. - 3:00 p.m.	**33. Aquatic Invasive Species in the Great Lakes: Spread, Population Dynamics and Ecological Impact** *Room F236*
1:40 p.m. - 5:20 p.m.	**26. Great Lakes Phytoplankton and Benthic Algae in a Changing Ecosystem** *Room C119*
1:40 p.m. - 5:20 p.m.	**41. Ecological Tracers in Great Lakes/St. Lawrence River Food Webs** *Room D214*
1:40 p.m. - 5:20 p.m.	**36. Large Lake Climate in a Global Context** *Room D101*
1:40 p.m. - 5:20 p.m.	**10. Beach Water Quality and Human Health** *Room D117*
1:40 p.m. - 3:20 p.m.	**46. From RAPs to a Nearshore Governance Framework** *Room A119*
1:40 p.m. - 3:20 p.m.	**31. Yellow Perch in the Great Lakes - St. Lawrence River System : Recent Responses to Different Stressors and Management Decisions** *Room A121*
3:40 p.m. - 5:20 p.m.	**52. Review and Recommendations for Addressing Nearshore Issues - International Joint Commission: 2009- 2011 Priority Cycle** *Room F236*
3:40 p.m. - 5:20 p.m.	**47. Great Lakes/St. Lawrence River Basin Sustainable Water Resources Agreement and Great Lakes/St. Lawrence River Basin Water Resources Compact: Linking Science and Policy to Improve Protections for Regional Water Resources** *Room A121*

Thursday, May 17

8:00 a.m. - 11:00 a.m. **20. Native Species Protection and Restoration in the Great Lakes: Progress and Issues**
Room Theatre

8:00 a.m. - 11:00 a.m. **34. Risk Assessment and Response to Aquatic Invasive Species**
Room F236

8:00 a.m. - 11:00 a.m. **17. Mercury Sources, Cycling and Bioaccumulation in the Great Lakes**
Room C119

8:00 a.m. - 11:00 a.m. **23. Coastal Zone Ecology**
Room D214

8:00 a.m. - 11:00 a.m. **38. Interactions Between Climate and the Energy and Water Balance of Lakes and Their Watersheds**
Room D101

8:00 a.m. - 11:00 a.m. **51. Managing Flows and Levels in the Great Lakes/St. Lawrence River System for Today and Tomorrow**
Room D117

8:00 a.m. - 10:40 a.m. **45. Education and Outreach**
Room A119

1:20 p.m. - 5:00 p.m. **20. Native Species Protection and Restoration in the Great Lakes: Progress and Issues**
Room Theatre

1:20 p.m. - 5:00 p.m. **22. Changing Face of Harmful Algal Blooms**
Room C119

1:20 p.m. - 3:00 p.m. **23. Coastal Zone Ecology**
Room D214

1:20 p.m. - 5:00 p.m. **11. Eutrophication Management in the Great Lakes: Past, Present and Future**
Room D101

1:20 p.m. - 3:00 p.m. **51. Managing Flows and Levels in the Great Lakes/St. Lawrence River System for Today and Tomorrow**
Room D117

1:20 p.m. - 4:40 p.m. **44. Watching Our Waters: Observing Systems and More in the Great Lakes/St. Lawrence Basin**
Room A119

1:40 p.m. - 3:00 p.m. **34. Risk Assessment and Response to Aquatic Invasive Species**
Room F236

3:20 p.m. - 5:00 p.m. **13. Assessment of Progress Made Towards Restoring and Maintaining Great Lakes Water Quality Since 1987**
Room F236

3:20 p.m. - 5:00 p.m. **27. Wetlands Services: Diversity, Productivity and Aesthetics of St. Lawrence and Great Lakes Shorelines**
Room D214

3:20 p.m. - 5:00 p.m. **4. Reservoir Capacity and Sediment Loading Investigations: Implications for Dam Removal**
Room D117

Program

Monday May 14, 2012 (Morning)

55th International Association for Great Lakes Research Conference

10:00 a.m. **Opening Ceremonies**

Traditional Native Opening Prayer—Mohawk Council of Akwesasne

North American Traveling College Dance Troupe

Mayor Bob Kilger, City of Cornwall

Robert Letcher, IAGLR president

Hendrik Saaltink, Chair, St. Lawrence River Institute of Environmental Sciences

Peter Hodson / Jeff Ridal Conference Co-chairs

11:00 am **Stuart Bunn,** *Director, Australian Rivers Institute, Griffith University Brisbane, Australia*

12:00 pm— Lunch NavCentre Cafeteria

Monday May 14, 2012 (Afternoon)

	Theatre	Room F236	Room C119	Room D214
	8. Hypoxia in the Great Lakes: Detection and Prediction *Co-Chairs: Val Klump, David Dolan, and Joseph DePinto*	**14. Multi-media Assessment of Toxics in the Great Lakes 2012** *Co-Chairs: Bernard Crimmins and Sean Backus*	**24. The Past, Present and Future of the Ottawa River** *Co-Chairs: Adrienne Ethier and Renee Silke*	**2. Physical Processes in Lakes** *Co-Chairs: Cary Troy, Chin Wu, and Ram Yerabundi*
Time	Presented by / Title	Presented by / Title	Presented by / Title	Presented by / Title
1:40	V. Klump *et al.* Hypoxia and Biogeochemical Cycling in Green Bay, Lake Michigan	R.G. Vannier *et al.* Historical Distribution and Recovery of DDT as Interpreted from Michigan Inland Lake Sediments	M. Brown Ottawa River Health: Who is Paying Attention?	L. Boegman *et al.* Instability of Poincare Waves in Lake Erie
2:00	T.J. Valenta *et al.* Thermal Stratification and Oxygen Depletion in the Hypolimnion of the Deep Waters of Green Bay	P. Helm *et al.* Perfluoroalkyl Sulfonic Acids, Carboxylic Acids, and Phosphinic Acids, and Polyfluoroalkyl Phosphoric Acid Diesters in Remote and Impacted Sediments from the Great Lakes Region	T.D. Redpath The City of Ottawa's Water Quality Monitoring Initiatives for the Ottawa River	M.B. Goral and N.D. Yan Can the Prediction of Long-Term Zooplankton Abundance be Improved Using the Wind Field over Harp Lake?
2:20	B. Biddanda *et al.* Time-series Observations Reveal Seasonal Basin-wide Bottom Water Hypoxia in Muskegon Lake AOC	J.A. Banda *et al.* Changes in Dissolved Phase PCB and Hexachlorobenzene (HCB) Concentrations in the Ashtabula River Pre- and Post-Environmental Dredging	D.W. Rodgers The Ottawa River Project and the Development of Bioenergetics Based Modelling of Pollutant Accumulation in Aquatic Biota	F. Dupont *et al.* The Thermocline Problem in a Coupled Atmosphere-Lake-Hydrology Modelling System
2:40	C.A. Stow *et al.* Rapid Summertime Oxygen Depletion in Saginaw Bay	R. Lohmann *et al.* Spatial, Temporal Trends and Air-Water Exchange of PAHs Across Lake Superior	J. Leblanc *et al.* Monitoring of Chalk River Laboratories Effluents to the Ottawa River	S. Ahmed and C.D. Troy Spatial Structure of Poincare Waves in Lake Michigan
3:00	D.D. Kane *et al.* Morphometry, Meteorology, and Metalimnetic Oxygen Maxima: Monitoring Dissolved Oxygen Dynamics in the Sandusky Subbasin of Lake Erie	R.A. Yucuis *et al.* Organosiloxane Compounds in Urban and Rural Air	R. Silke *et al.* Nuclear Legacy Liabilities on the Ottawa River: Risk Assessment and Remediation Strategy for Ottawa River Sediment	A. Cortes *et al.* Mixing of Density Currents Inflowing a Mediterranean Stratified Reservoir (Spain)
3:20	**BREAK (Marc Garneau and A-Section)**			

Monday May 14, 2012 (Afternoon)

Room D101	Room D117	Room A119	
19. Chip Weseloh Tribute Session - 35 Years of Great Lakes Wildlife Research *Chair: Craig Hebert*	**43. Large Vessel Research Capability and Program History on the Laurentian Great Lakes** *Co-Chairs: Brian Lantry and Tom Stewart*	**29. Atlantic Salmon Restoration - Tools and Techniques, Challenges and Solutions, Partnerships and Progress** *Co-Chairs: Marion Daniels and Chris Robinson*	
Presented by / Title	Presented by / Title	Presented by / Title	Time
C. Pekarik *et al.* Legacy Contaminants in Great Lakes Herring Gulls, 1987-2010	R. O'Gorman and C.P. Madenjian Research Vessels of the Great Lakes Science Center: A Recent History	W. Ardren *et al.* Landlocked Atlantic Salmon Restoration and Management in Lake Champlain	1:40
S.R. de Solla *et al.* Reconcilable Differences: Methodological Changes and Long Term Monitoring of Contaminants in Herring Gulls	M.J. Burrows The Great Lakes Association of Science Ships - A Grass Roots Effort to Foster Collaboration between Operators of U.S. and Canadian Science Ships	J.H. Johnson New York's Lake Ontario Atlantic Salmon Program: A Review of Opportunities, Constraints, and Management Actions	2:00
R.J. Letcher *et al.* The Great Lakes Herring Gull Monitoring Program (GLHGMP): The Complex Cocktail of Emerging Contaminants and Comparative Spatiotemporal Changes, Sources and Fate Across the Great Lakes	T. Lewchanin *et al.* Research Vessels and Their Capabilities in the Lower Great Lakes	D.R. Rosborough *et al.* Ontario Ministry of Natural Resources - Fish Culture in Support of the Lake Ontario Atlantic Salmon Restoration Program.	2:20
C.E. Hebert and D.V.C. Weseloh Multiple Stressor Impacts on Top Avian Predators in the Laurentian Great Lakes	T.P. O'Brien *et al.* Research Capabilities and Program Overview of USGS Large Vessels in Lakes Michigan and Huron	C.C. Wilson and A.G. Kidd Genetic Assessment of Lake Ontario Atlantic Salmon Strain and Lifestage Contributions and Fitness through Pedigree Reconstruction	2:40
D.J. Moore Long-term Population Studies of Waterbirds on the Canadian Great Lakes, 1976-2011.	R.D. Ricketts The R/V Blue Heron: the University of Minnesota's Laboratory on the Great Lakes	H. Haddrath *et al.* Restoring Atlantic Salmon to Lake Ontario One Generation at a Time CANCELLED	3:00
BREAK (Marc Garneau and A-Section)			3:20

Monday May 14, 2012 (Afternoon)

	Theatre	Room F236	Room C119	Room D214
	8. Hypoxia in the Great Lakes: Detection and Prediction *Co-Chairs: Val Klump, David Dolan, and Joseph DePinto*	**14. Multi-media Assessment of Toxics in the Great Lakes 2012** *Co-Chairs: Bernard Crimmins and Sean Backus*	**9. Quantifying Cumulative Effects to Great Lakes and St. Lawrence Tributaries Through Regional Monitoring** *Chair: Les Stanfield*	**2. Physical Processes in Lakes** *Co-Chairs: Cary Troy, Chin Wu, and Ram Yerabundi*
Time	Presented by / Title	Presented by / Title	Presented by / Title	Presented by / Title
3:40	X. Mou *et al.* Microbially Mediated Nitrogen Removal Processes in Hypoxic Water of Lake Erie	N.T. Petrich *et al.* Quantifying Meteorological Artifacts in Passive Air Sampling: Implications for Urban and Regional POPs Monitoring in the Great Lakes Region	L. Wang *et al.* Delineation and Validation of River Network Spatial Units for Water Resources and Fisheries Management	S. Bocaniov *et al.* A 3-Dimensional Modeling of the Rappbode Reservoir: the First Insights into its Hydrodynamics
4:00	G. Matisoff *et al.* Chironomid Burrows Increase Sediment-Oxygen Demand in Lake Erie Sediments	A.M. McLeod *et al.* Variability in PCB Concentration Between Generalist and Specialist Species	J.D. Allan *et al.* Assessing Cumulative Influence of Multiple Stressors at Large Spatial Scale	C.J. Subich *et al.* Numerical Studies of Near-Boundary Currents in Lake Simcoe
4:20	D.K. Rucinski *et al.* A Modeling Analysis of Loading Scenarios and Hypoxia in Lake Erie	S.M. Mackintosh *et al.* Analysis of Brominated Flame Retardants in the Lake Erie Food Web: Levels, Bioaccumulation, and Trophic Transfer	L.W. Stanfield Quantifying Assimilative Capacity of all Tributaries to Lake Simcoe Based on Cumulative Impacts to Biological Integrity	P.C. Liu On Three Cases of Encountering Freaque Waves in Lake Michigan in 2011 and what we do or do not know about Freaque Waves CANCELLED
4:40	T.M. Sesterhenn *et al.* Individual-based Modeling to Forecast Population-level Effects of Increasing Hypoxia and Temperature on Fish Species in Lake Erie's Central Basin	M.S. Milligan *et al.* Identification of Emerging Contaminants in Great Lakes fish using GCxGC-TOF Mass Spectrometry	T. Iacobelli *et al.* Can Municipal Planners Realistically Consider Cumulative Effects in Land Use Decisions?	R.R. Yerubandi *et al.* Hydrodynamics And Water Quality In A Spatially Complex Lake (Lake Of The Woods)
5:00		D. Gefell *et al.* Survey of Emerging Contaminants Associated with Areas of Concern in the Great Lakes Basin		S. MacIntyre Mixing Dynamics in Lake Victoria, East Africa - Will Changes in Climate alter Contemporary Patterns?
7:00	Poster and Exhibitor Session (Marc Garneau and Robert Thirsk rooms)			
9:00	Student Mixer—Stone House			

Monday May 14, 2012 (Afternoon)

Room D101	Room D117	Room A119	
19. Chip Weseloh Tribute Session - 35 Years of Great Lakes Wildlife Research *Chair: Craig Hebert*	**43. Large Vessel Research Capability and Program History on the Laurentian Great Lakes** *Co-Chairs: Brian Lantry and Tom Stewart*	**29. Atlantic Salmon Restoration - Tools and Techniques, Challenges and Solutions, Partnerships and Progress** *Co-Chairs: Marion Daniels and Chris Robinson*	
Presented by / Title	Presented by / Title	Presented by / Title	Time
L.R. Wires *et al.* Monitoring Double-crested Cormorants in the Great Lakes: Forty Years of Coordination between the U.S. and Canada.	R.T. Kraus and M.W. Rogers Role of Large Vessels in Lake Erie Fisheries Research	C. Halewood and A.J. Cousineau Natural Curiosity: A Resource for Teachers - Building Children's Understanding of the World through Environmental Inquiry	3:40
M.S. Ridgway and T.A. Middel Distribution of Double-Crested Cormorants Before, During and After a Regime Shift in the Coastal Food Web of Lake Huron	B.F. Lantry *et al.* Planning, Construction and Science Programs for the New US Geological Survey (USGS) Research Vessels on Lakes Erie and Ontario	A.L.S. Houde *et al.* The Effect of Non-Native Salmonids on the Performance of Atlantic Salmon During the Juvenile Life Stage	4:00
S.B. Elbin and E.C. Craig Population Dynamics of Double-crested Cormorants Breeding in the New York Harbor	T.J. Stewart and B.F. Lantry Lake Ontario Ecosystem Surveillance Using Large Vessels: Challenges and Opportunities	R.J. Bobrowski *et al.* Survival, Condition, and Outmigration Timing of Reintroduced Atlantic Salmon in Cobourg Brook, Ontario	4:20
K. McDonald and R. Toninger Wildlife Research and Management in Canada's Largest City? A Retrospective of Tommy Thompson Park	M. Walsh *et al.* A Synopsis of the 2011 Great Lakes Trawling Workshop	T.E. Pitcher and C. Black Effects of Hybridization on the Reintroduction of Atlantic Salmon to Lake Ontario	4:40
D.V.C. Weseloh and D.J. Moore Roosting Habits, Post-Fledging Dispersal and Wintering Areas of Great Egrets from Southern Ontario		R. Toninger *et al.* Strategic Restoration of Atlantic Salmon (*Salmo salar*) Habitat - A Case Study of a Partnered Approach to Restoring a Subwatershed in the Greater Toronto Area	5:00
Poster and Exhibitor Session (Marc Garneau and Robert Thirsk rooms)			7:00
Student Mixer—Stone House			9:00

Tuesday May 15, 2012 (Morning)

	Theatre	Room F236	Room C119	Room D214
	16. The History of Water Pollution Issues in the St. Lawrence River *Co-Chairs: Peter V. Hodson Department of Biology and School of Environmental Studies, and David Carpenter*	**28. Native and Non-native Invertebrates: Biology, Ecology and Role in Food Webs** *Co-Chairs: Alicia Perez-Fuentetaja and Jérôme Marty*	**18. Lake Ontario Ecosystem: Status and Future Directions** *Co-Chairs: Mohiuddin Munawar, Lars Rudstam, and Marten Koops*	**3. Nearshore Physical Limnology and Coastal Processes** *Co-Chairs: Ryan Mulligan, Damien Bouffard, and Leon Boegman*
Time	Presented by / Title	Presented by / Title	Presented by / Title	Presented by / Title
8:00	R.B. Hill and P. Klawunn Long-term Monitoring at Wolfe Island: 18 Years of Water Quality Data on the Upper St. Lawrence River	D.R. Branson and A.S. McNaught Feeding Preferences of an Invasive Mysid, *Hemimysis anomala*, in Lake Michigan	E.T. Howell and J.C. Makarewicz Features of Water Quality in the Nearshore of Lake Ontario in 2008	T. Sakai and L.G. Redekopp Lagrangian Particle Transport Driven by Basin-scale Internal Waves in a Circular Lake
8:20	J. Robinson *et al.* Long-Term Assessment of Mercury in Sport Fish from the St. Lawrence River, Canada	B.T. Boscarino *et al.* Effect of Light, Prey Density, and Prey Type on the Feeding Rates of the Invasive Mysid Shrimp, *Hemimysis anomala*	A. Dove and B. Hill Updated Long-term Trends of Nutrients and Major Ions in Lake Ontario	M.P. McCombs *et al.* Validation of a Hydrodynamic and Wave Model of Eastern Lake Ontario
8:40	L. Champoux Trends in Contaminants in the Great Blue Heron Along the St. Lawrence River	J.T. Ives *et al.* Spatial Variability in Food Sources of the Invasive Shrimp, *Hemimysis anomala*, Within Lentic and Lotic Systems	S.M. Short *et al.* The Molecular Ecology of Algal Viruses in and Around Lake Ontario	A. Oveisy *et al.* Three-Dimensional Hydrodynamics and Nutrient Transport in the Bay of Quinte
9:00	C. deBarros and J. Anderson Historic Contaminant Releases to the St. Lawrence River - Their Impact and Current Environmental Signature	S. Avlijas *et al.* Patterns of Distribution and Abundance of *Hemimysis anomala* in the St. Lawrence River in Relation to Physico-Chemical Variables	M. Munawar *et al.* A Structural and Functional Assessment of the Microbial - Planktonic Food Web of Lake Ontario	A. Jabbari Sahebari *et al.* Oscillating Boundary Layers in Lakes and Coastal Oceans
9:20	**BREAK**			

Tuesday May 15, 2012 (Morning)

Room D101	Room D117	Room A119	
32. Lake Simcoe: Bringing the Science Together *Co-Chairs: Joelle Young, Michelle Palmer, and Véronique Hiriart-Baer*	**40. Remote Sensing, Visualization, and Spatial Data Applications for the Great Lakes** *Co-Chairs: George Leshkevich and Robert Shuchman*	**12. Linkages Between the Landscape and Great Lakes Coastal Ecosystems** *Co-Chairs: James Larson, Jeff Schaeffer, William Richardson, and Paul Seelbach*	
Presented by / Title	Presented by / Title	Presented by / Title	Time
D. Puric-Mladenovic and K. Gee A Vision for Terrestrial Vegetation Inventory and Monitoring for the Lake Simcoe Watershed	G. Meadows *et al.* Motion Compensated Buoy, Laser Wind Sensor Measurements of the Turbulent Marine Boundary Layer Over Lake Michigan	S.R. Stein *et al.* Habitat Characterization of Southern Lake Michigan River Plumes: Implications for Fish Recruitment	8:00
E.P. Thuss *et al.* Soil Resource Information Renewal for Five Southwestern Lake Simcoe Watersheds	G. Leshkevich *et al.* NOAA SAR-Derived High-Resolution Winds for the Great Lakes	A.S. McNaught *et al.* Assessment of Nursery Habitat Use by Larval Fishes in the St. Clair River Delta, MI	8:20
J.A. Thompson *et al.* Comparing the Particle Size Distribution of Parent and Eroded Soil at Construction Sites in the Grand River and Lake Simcoe Watersheds	D.M. O'Donnell *et al.* Lake Champlain: Optical Characterization, Historic Comparisons, and Tests of Closure	L.B. Johnson *et al.* A Comparison of 4 Analytical Methods to Derive a Composite Bioindicator of Fish Condition Relative to Anthropogenic Stress at Great Lakes Coastal Margins	8:40
K.A. Baranowska *et al.* Drivers of the Spatial and Temporal Variation in Î´^{15}N and Î´^{13}C Signatures of Particulate Organic Matter in Lake Simcoe	R.A. Shuchman *et al.* Generation of an Operational Algorithm to Retrieve Chlorophyll, Dissolved Organic Carbon, and Suspended Minerals from Satellite Data of the Great lakes	K.E. Kovalenko *et al.* Invertebrate, Fish, Diatom and Bird Community Responses to Anthropogenic Stress in the Laurentian Great Lakes Coastal Wetlands: Threshold Analysis	9:00
BREAK			9:20

Tuesday May 15, 2012 (Morning)

	Theatre	Room F236	Room C119	Room D214
	15. Approaches for Contaminant Exposure and Effects Assessment in Large Lakes and River Systems *Co-Chairs: Paul Helm and Alice Dove*	**28. Native and Non-native Invertebrates: Biology, Ecology and Role in Food Webs** *Co-Chairs: Alicia Perez-Fuentetaja and Jérôme Marty*	**18. Lake Ontario Ecosystem: Status and Future Directions** *Co-Chairs: Mohiuddin Munawar, Lars Rudstam, and Marten Koops*	**1. Coupled Physical and Biogeochemical Processes in Large Lakes** *Co-Chairs: Mathew Wells, Joseph Ackerman, and Ralph Smith*
Time	Presented by / Title	Presented by / Title	Presented by / Title	Presented by / Title
9:40	S. Yacoob *et al.* Investigation Of Toxicity Source At Ross Lake Flin Flon, Ma.	Y. de Lafontaine *et al.* Seasonal Variability in Potential Risk of *Hemimysis anomala* Transfer by Shipping in Montreal Harbour.	H.J. Kling and M. Munawar A Detailed Taxonomic Assessment of Potentially Toxic Cyanobacteria in the Bay of Quinte, Lake Ontario, 2010	R. Valipour *et al.* Evidence of Sediment Resuspension in Central Lake Erie
10:00	C. O'Sullivan *et al.* Abundance of Black Carbon and Polychlorinated Biphenyl Congeners in Highly Impacted Sediment from Indiana Harbor and Ship Canal	T.B. Johnson *et al.* Resolving Fish Predation on *Hemimysis anomala*: Gut Contents, Digestion Rate, and Species Specific Molecular Primers	B. Weidel *et al.* Deep Green: Dynamics and Implications of a Deep Chlorophyll Layer in Lake Ontario	J.D. Ackerman *et al.* Impact of Physical Processes on the Oxygen Depletion in Central Lake Erie
10:20	K.C. Hornbuckle *et al.* Measurement and Estimation of PCB Pore Water Concentrations and their Effect in the Release of PCBs from Sediment to Water in Indiana Harbor and Ship Canal	M.J. Yuille *et al.* Energetic Effects of *Hemimysis anomala* on Yellow Perch (*Perca flavescens*) in Lake Ontario	K.T. Holeck *et al.* Lake Ontario's Nearshore Zooplankton Community: Response to Invasion by Non-native Species and Changes in Lake Productivity	M.G. Wells and M.A. Coman Turbulence and Temperature Variability in the Near Shore Benthic Region of Lake Opeongo, Canada.
10:40	J.M. Roche and D.R. Lee Discharge of a Groundwater Plume to a Major River	J. Marty *et al.* Comparison of the Ecology of the Native *Mysis diluviana* and the Exotic *Hemimysis anomala* from Lake Ontario Based on Stable Isotopes and Fatty Acid Analyses.	K.L. Bowen *et al.* Consumption of *Bythotrephes longimanus* by *Mysis diluviana* and *Hemimysis anomala* in Lake Ontario	B. Hlevca and M.G. Wells Man-made Influences upon the Water Exchange Driven by Lake Seiches in a Coastal Wetland of the Great Lakes
11:00	**Plenary—Kelly Munkittrick—*A New Paradigm for Monitoring the Cumulative Effects of Stressors in the Great Lakes (Campbell Hall)***			
12:10	**IAGLR BUSINESS LUNCH (Campbell Hall)**			

Tuesday May 15, 2012 (Morning)

Room D101	Room D117	Room A119	
32. Lake Simcoe: Bringing the Science Together *Co-Chairs: Joelle Young, Michelle Palmer, and Véronique Hiriart-Baer*	**40. Remote Sensing, Visualization, and Spatial Data Applications for the Great Lakes** *Co-Chairs: George Leshkevich and Robert Shuchman*	**12. Linkages Between the Landscape and Great Lakes Coastal Ecosystems** *Co-Chairs: James Larson, Jeff Schaeffer, William Richardson, and Paul Seelbach*	
Presented by / Title	Presented by / Title	Presented by / Title	Time
D. Danesh *et al.* Non-Pollen Palynomorphs as Indicators of Long-Term Anthropogenic Impacts on Cooks Bay, Lake Simcoe, Ontario.	R.A. Shuchman *et al.* Satellite Derived Primary Productivity Estimates for Lake Michigan	W.B. Richardson *et al.* Variation in Fatty Acid Content of Seston from Tributaries, Rivermouths and Nearshore Lake Michigan	9:40
M. Dittrich *et al.* Phosphorus Diagenesis in Lake Simcoe Sediments: Modeling and Experimental Study	M.J. Sayers *et al.* Mapping Harmful Algae Blooms (HABs) in the Great Lakes Using MODIS and MERIS Satellite Data	J.H. Larson *et al.* Relationships Between Elemental Composition and Watershed Characteristics in Caddisflies and Dreissenid Mussels	10:00
G.K. Nurnberg *et al.* Evidence of Internal Phosphorus Load in Lake Simcoe	C.E. Binding *et al.* The MERIS Maximum Chlorophyll Index; Its Merits and Limitations for Algal Bloom Monitoring Over Inland Waters	J.S. Schaeffer *et al.* Characterizing and Classifying Great Lakes Rivermouths	10:20
R. Cossu and M.G. Wells Observations of Large Amplitude Internal Seiches Interacting with the Lake Bed in Lake Simcoe	M.J. Sayers *et al.* A Satellite Algorithm for River Plume Mapping within the Great Lakes Basin	M.L. Carlson Mazur *et al.* Understanding Hydrogeomorphic Influences on Rivermouth Ecosystem Structure	10:40
Plenary—Kelly Munkittrick—*A New Paradigm for Monitoring the Cumulative Effects of Stressors in the Great Lakes (Campbell Hall)*			11:00
IAGLR BUSINESS LUNCH (Campbell Hall)			12:10

Tuesday May 15, 2012 (Afternoon)

	Theatre	Room F236	Room C119	Room D214
	15. Approaches for Contaminant Exposure and Effects Assessment in Large Lakes and River Systems *Co-Chairs: Paul Helm and Alice Dove*	**28. Native and Non-native Invertebrates: Biology, Ecology and Role in Food Webs** *Co-Chairs: Alicia Perez-Fuentetaja and Jérôme Marty*	**18. Lake Ontario Ecosystem: Status and Future Directions** *Co-Chairs: Mohiuddin Munawar, Lars Rudstam, and Marten Koops*	**1. Coupled Physical and Biogeochemical Processes in Large Lakes** *Co-Chairs: Mathew Wells, Joseph Ackerman, and Ralph Smith*
Time	Presented by / Title	Presented by / Title	Presented by / Title	Presented by / Title
1:40	P.V. Hodson *et al.* Spatial and Temporal Patterns of Embryotoxicity of Contaminants Extracted from American Eel (*Anguilla rostrata*)	J. Iacarella *et al.* Functional Responses of Invasive Mysids at Different Temperatures	R.M. Dermott and R.G. Bonnell Good Bye Diporeia, and Thanks for all the Fish.	R.E.H. Smith *et al.* Modeling Hydrodynamic Contributions to Inter-Annual Variation of Recruitment Success in Walleye of West Basin Lake Erie
2:00	J.L. Newsted Application of the Tissue Residue Approach (TRA) to Assess Potential Risks of Perfluorinated Compounds to Aquatic Organisms	S.F. Figary *et al.* Unexpected Effects of an Invasive Zooplankton, *Cercopagis pengoi*, on the trophic Position of Planktivorous Fish, *Alosa pseudoharengus*, in New York's Finger Lakes	S.J. Lozano *et al.* The Expansion of *Dreissena* and Long-Term Shifts in Benthic Macroinvertebrate Community Structure in Lake Ontario, 1998-2008	P. Pernica *et al.* Is There a Relationship Between Variance in Horizontal Plankton Distribution and Internal Waves in the Epilimnion of Lake Opeongo, Canada?
2:20	M. Ryder *et al.* Non Steady State Bioaccumulation of PCBs in Lake Trout (Salvelinus Namaycush)	R. Castaneda *et al.* Distribution, Abundance and Condition of the Asian Clam (*Corbicula fluminea*) Along a Thermal Gradient in the St-Lawrence River	J. Watkins *et al.* High Frequency Acoustics Reveal Patchiness Structure in Zooplankton Distribution in Lake Ontario	D.J. Schwab *et al.* The Role of Lake Circulation in the Development of the 2011 Algal Bloom in Western Lake Erie
2:40	P.C. Baumann *et al.* Assessment of the Fish Tumor BUI for Canadian Areas of Concern in the Lower Great Lakes	C.V. Florence *et al.* Impacts of Water discharge from a Coal-Fired Power Plant on Native Unionids in Western Lake Erie	J.A. Hoyle Fish Community Status in North Eastern Lake Ontario--Indicator of an Ecosystem in Change	Y. Sun *et al.* The Influences of Physical Flushing Timescales on the Spatial Distribution of Plankton in Lake St. Clair
3:00	J.M. Daley *et al.* Bioamplification as a Non-Steady State Bioaccumulation Mechanism for Persistent Organic Pollutants (POPs) in Fish and Wildlife	T.V. McDaniel *et al.* The CABIN Program; Monitoring the Benthic Macro-Invertebrate Community as a Bio-Indicator for Lake of the Woods.	B.W. Metcalfe and T.B. Johnson Assessing Fish Health in Lake Ontario Using Biochemical and Nutritional Metrics	N.R. Urban and G.A. McKinley CO_2-driven Acidification of the Great Lakes: Equilibrium and Kinetic Bounds on the Magnitude
3:20	**BREAK**			

Tuesday May 15, 2012 (Afternoon)

Room D101	Room D117	Room A119	
32. Lake Simcoe: Bringing the Science Together *Co-Chairs: Joelle Young, Michelle Palmer, and Véronique Hiriart-Baer*	**40. Remote Sensing, Visualization, and Spatial Data Applications for the Great Lakes** *Co-Chairs: George Leshkevich and Robert Shuchman*	**12. Linkages Between the Landscape and Great Lakes Coastal Ecosystems** *Co-Chairs: James Larson, Jeff Schaeffer, William Richardson, and Paul Seelbach*	
Presented by / Title	Presented by / Title	Presented by / Title	Time
D. Bouffard *et al.* Spatial and Temporal Variability of Phosphorus in Lake Simcoe as a Result of Hydrodynamic Circulation	J. Tan *et al.* Application of Satellite Remote Sensing to Monitor Episodic River Inflow Plumes in Southern Lake Michigan	N.D. Amaral Ecological and Geomorphic Impacts of a Severe Storm Event on Watersheds in the Toronto Region	1:40
H. Bolkhari and L. Boegman Potential Effects of Climate Change on Aquatic Ecosystem of Lake Simcoe	S.V. Nghiem and G. Leshkevich Toward an Operational Satellite Synthetic Aperture Radar (SAR) Ice Type Classification Algorithm for the Great Lakes	T.M. Redder *et al.* Development of Integrated Tools for Assessing Current and Future Sedimentation in Great Lakes River Mouth Systems	2:00
T.Y. Kim *et al.* Spatial and Temporal Dynamics of Phytoplankton Production and Size Distribution in a Large Mesotrophic Lake (Lake Simcoe)	M.K. Reif *et al.* U.S. Army Corps of Engineers Airborne Coastal Mapping in the Great Lakes	P.W. Seelbach and J.H. Larson Cafe Session: Great Lakes Rivermouth Ecosystems: Understanding Connections Between Ecosystem Structure, Function and Services.	2:20
T.A. Tennant *et al.* Seasonal and Long-Term Trends in Diatom Composition in Lake Simcoe	S.D. Mackey *et al.* ROVER - A Remotely Operated Vessel for Environmental Research	Previous Presentation Continued	2:40
A. Gudimov *et al.* A Bayesian Network for Studying the Causal Links Between Phosphorus Loading and Plankton Patterns in Lake Simcoe, Ontario, Canada	C.N. Brooks *et al.* Mapping Cladophora and Other Submerged Aquatic Vegetation in the Great lakes Using Satellite Imagery	Previous Presentation Continued	3:00
BREAK			3:20

Tuesday May 15, 2012 (Afternoon)

	Theatre	Room F236	Room C119	Room D214
	15. Approaches for Contaminant Exposure and Effects Assessment in Large Lakes and River Systems *Co-Chairs: Paul Helm and Alice Dove*	**50. Protected Areas Within and Bordering the Great Lakes and St. Lawrence River: Unique Conservation Challenges and Opportunities** *Co-Chairs: Chantal Vis and Dan Kraus*	**18. Lake Ontario Ecosystem: Status and Future Directions** *Co-Chairs: Mohiuddin Munawar, Lars Rudstam, and Marten Koops*	**1. Coupled Physical and Biogeochemical Processes in Large Lakes** *Co-Chairs: Mathew Wells, Joseph Ackerman, and Ralph Smith*
Time	Presented by / Title	Presented by / Title	Presented by / Title	Presented by / Title
3:40	J. Verreault *et al.* GPS-Based Biotelemetry and Stable Isotope Profiling Meets Ecotoxicology: a Novel Approach for Understanding the Exposure of Avian Species to Organohalogen Contaminants	R.P. Boudreau Lake Superior National Marine Conservation Area	C. Chu *et al.* An Ecological Classification for the Nearshore Zone of Lake Ontario	G.A. McKinley *et al.* Physical Drivers of Biogeochemical and Carbon Cycling in Lake Superior CANCELLED
4:00	T. Schulz *et al.* Comparison of PCBs in East Chicago, IN and Columbus Junction, IA in Indoor and Outdoor Air	C.C. Drake and C. Vis Monitoring of Water Quality and Quantity in 3rd and 4th Order Streams in Pukaskwa National Park: Defining and Maintaining Ecological Integrity	B.J. Morrison and T.J. Stewart A Conceptual Model of Lake Ontario Nearshore and Offshore Trophic Flows	D. Planas and S. Paquet Extreme Storm Events and Harmful Algae Blooms Occurrences, in a Lake with Low External Nutrient Loads
4:20	L.E. King *et al.* Microsatellite DNA Mutations Associated with PAH Exposure in Double-Crested Cormorants, *Phalacrocorax auritus*	S.R. Parker *et al.* Managing for Resilience in a Freshwater Protected Area: Fathom Five National Marine Park, Lake Huron	W. Zhang *et al.* Examination of the Capacity of the Bay of Quinte Phosphorus Model to Guide Future Management Decisions	S.K. Oliver *et al.* Nutrient Regeneration by *Mysis Diluviana* and the Copepod Community in the Deep Chlorophyll Layer of Lake Superior
4:40	D.H. Miller *et al.* Application of Biochemical Markers for Population Level Assessment of a White Sucker (*Catostomus commersoni*) Population Exposed to Bleached Kraft Pulp Mill Effluent	J. Hall The Cootes to Escarpment Park System: Protecting Natural and Cultural Heritage at the Head of Lake Ontario	M. Hossain *et al.* Towards the Development of an Ecosystem Model for the Hamilton Harbour, Ontario, Canada	S. Quazi *et al.* Geochemistry of Iron and Phosphorous In Lake Superior Sediments: Comparison of Two East Basin Sites
5:00	K.J. Jobst *et al.* Non-targeted Screening of (Unknown) Environmental Contaminants using Ultrahigh Resolution Mass Spectrometry	J.F. Van Wieren Conserving the Complex Thousand Islands Ecosystem: St. Lawrence Islands National Park	M. Koops *et al.* Emerging Issues, Challenges and Future Directions for Research and Monitoring on Lake Ontario	M. Colton Integration of Measurements, Models, and Missions in Great Lakes Ecosystem Science
6:30	Evening Community Events—First City of Cornwall Shuttle leaves at 6:30 pm and then at 7:00 pm Or Free shuttle bus provided by Cornwall Chamber of Commerce—to local restaurants downtown			

Tuesday May 15, 2012 (Afternoon)

Room D101	Room D117	Room A119	
32. Lake Simcoe: Bringing the Science Together *Co-Chairs: Joelle Young, Michelle Palmer, and Véronique Hiriart-Baer*	**40. Remote Sensing, Visualization, and Spatial Data Applications for the Great Lakes** *Co-Chairs: George Leshkevich and Robert Shuchman*	**30. Waterbird Studies in Great Lakes Rivers: Populations, Contaminants, Management and Ecology** *Co-Chairs: Chip Weseloh, Lee Harper, and Scott Rush*	
Presented by / Title	Presented by / Title	Presented by / Title	Time
T. Ozersky *et al.* Effects of Dreissenid Mussels on Nutrient Dynamics in Lake Simcoe, Ontario	C.N. Brooks *et al.* Mapping Coastal Great Lakes Wetlands and Adjacent Land use Through Hybrid Optical-Infrared and Radar Image Classification Techniques	D.C. Tozer and D.S. Badzinski Population Trends of Wetland Birds in Great Lakes Connecting Channels	3:40
R.E.H. Smith *et al.* Variation in Phytoplankton Distribution in Lake Simcoe - The Effect of Benthic Communities and Hydrodynamics	K.A. Scarbrough *et al.* Mapping Invasive *Phragmites Australis* in the Coastal Great Lakes with ALOS PALSAR Satellite Imagery for Decision Support	F.J. Cuthbert *et al.* Colonial Waterbirds in the St. Marys River	4:00
B.K. Ginn Science-Based Monitoring of Environmental Changes to the Nearshore Zone of Lake Simcoe (Ontario, Canada) with a Focus on Aquatic Plants, Sediment Nutrients, and Benthic Communities	G.A. Meadows *et al.* A Comparison of Remotely Sensed Lake Superior Upwellings with Buoy and Operational Forecasting	D.J. Moore *et al.* Colonial Waterbirds Nesting on the Connecting Channels of the Great Lakes, 1976-2011.	4:20
M. Thiebert *et al.* Assessing Temporal Changes in Lake Simcoe Yellow Perch Growth and Contaminant Bioaccumulation	T.R. Hahn Acoustic Remote Sensing of Fish Schools	C.J. Baird *et al.* Mercury in Common Terns (*Sterna hirundo*) breeding Along the St. Lawrence River: A Comparison between Summer and Winter Habitat	4:40
R. Dolson *et al.* Long-Term Trends in the Fish Communities of Lake Simcoe	C.M. Riseng *et al.* The Great Lakes Aquatic Habitat Framework (GLAHF)	L.H. Harper *et al.* Common Tern Nesting Habitat Improvement Projects on Lake St. Lawrence and in Buffalo Harbor (New York) Successfully Increase the Number of Breeding Pairs of this Threatened Species	5:00
Evening Community Events—First City of Cornwall Shuttle leaves at 6:30 pm and then at 7:00 pm Or Free shuttle bus provided by Cornwall Chamber of Commerce—to local restaurants downtown			

Wednesday May 16, 2012 (Morning)

	Theatre	Room F236	Room C119	Room D214
	6. Effects of Land Use on Nutrient Transport Through Aquatic Systems *Co-Chairs: Rebecca North, Mohamed Mohamed, Krista Chomicki, and Peter Dillon*	**33. Aquatic Invasive Species in the Great Lakes: Spread, Population Dynamics and Ecological Impact** *Co-Chairs: Alexander Karatayev and Lyubov Burlakova*	**49. Aquatic Habitat Restoration and Management in the Great Lakes** *Co-Chairs: John Farrell and Kevin Kapuscinski*	**41. Ecological Tracers in Great Lakes/St. Lawrence River Food Webs** *Co-Chairs: Tim Johnson, Aaron Fisk, and Gilbert Cabana*
Time	Presented by / Title	Presented by / Title	Presented by / Title	Presented by / Title
8:00	K.M. Chomicki *et al* Soluble Reactive Phosphorus and Conductivity as Measures of Land-Based Influences to the Nearshore Environment	H. Pettitt-Wade *et al.* Investigating The Link Between Diet, Ecological Niche And Environmental Fitness in Aquatic Invasive Species	D.G. Uzarski *et al.* Changes in Lake Huron Coastal Wetland Health Measured Over a Ten Year Period During Exotic Species Invasion	J.F. Bratton and M. Baskaran Recent Advances in Understanding of Biogeochemical and Hydrological Processes in the Great Lakes Basin Using Natural and Anthropogenic Tracers
8:20	H. Carrick *et al.* Evidence for Ecological Thresholds: Abrupt Changes in Stream Diatoms Along Both Experiment and Environmental Gradients	L.A. Jones and A. Ricciardi Exotic Species Replacement in Relation to Small-Scale Environmental Heterogeneity	J. Keitel and C. Vis Restoring the Ecological Integrity of a Large Coastal Wetland in Point Pelee National Park; use of Remote Sensing and Modeling Tools to Measure Cattail Encroachment and Guide Restoration.	M. Baskaran *et al.* Tracer Studies in the Exchange of Water and Material between Sub-reservoirs in Great Lakes System
8:40	D.B. Baker *et al.* Watershed-Scale Observations of Direct Runoff of Broadcast Phosphorus Fertilizer Applications in Northwestern Ohio	D.T. Zanatta *et al.* Survey and Reassessment of Unionidae in Lake Erie and Lake St. Clair, 25 Years After the Dreissenid Invasion	M.S. Riedel *et al.* Impacts of Beaver Dam Management Scenarios on Stability and Connectivity of a Lake Superior Tributary for Fish Migration	R. Hladyniuk and F.J. Longstaffe The Paleoproductivity of Lake Ontario Since >12.3 ka BP
9:00	J.L.A. Hood *et al.* Long-term, Seasonal and Spatial Changes in N and P in the Grand River: Implications for Assimilative Capacity and Downstream Transport of Watershed-derived Nutrients	L.E. Burlakova *et al.* *Dreissena* Impacts on Unionidae: Recent Trends in Lake Erie	B.L. Brown and J.M. Farrell Restoring Connectivity in Coastal Wetland Habitats via Channel Creation in the Upper St. Lawrence River	C.T. Boehler *et al.* Extent of Straying by Spawning Adult Lake Erie Steelhead Trout
9:20	**BREAK**			

Wednesday May 16, 2012 (Morning)

Room D101	Room D117	Room A119	
37. Climate Change: Modelling, Vulnerability, Adaptation and Mitigation *Co-Chairs: Eleanor Stainsby, Scott MacRitchie, and Allan Douglas*	**7. Nearshore Issues: Connecting the Dots** *Co-Chairs: James Morris and Charles Peters*	**55. Fisheries Assessment and Management** *Chair: Alastair Mathers*	
Presented by / Title	Presented by / Title	Presented by / Title	Time
W.T. Dickinson *et al.* How Rising Temperatures Are Changing Winter Hydrology Across Ontario	M. Carson *et al.* Suspended Sediment Sources, Resuspension and Nutrient Depositional Fluxes in Lake Erie	J.A. Tyler *et al.* Effects of Changes in Climate and Land Use on Steelhead Production in the Muskegon River: A Multi-Modelling Analysis.	8:00
F. Seglenieks and M. MacKay Future Great Lakes Water Levels Simulated With Dynamically Downscaled GCM Data Using the Canadian Regional Climate Model	C.M. Pennuto *et al.* Benthos and Water Column Correlations in Nearshore Lake Erie.	A. Sandström *et al.* Are Trends and Dynamics in Recruitment of Pelagic Fish Species in L. Vänern and Vättern Driven by Climate Variability? CANCELLED	8:20
M. Garraway *et al.* Climate Change and Source Water Protection	N.B. Benoit and E.T. Howell A Synopsis of Conditions at Nearshore Monitoring Sites in the Eastern Basin of Lake Erie from 1998-2010	K. Reid *et al.* Stock Assessment and Management in Data-poor Commercial Fisheries: Lake Nipigon Lake Whitefish	8:40
E.A. Stainsby and S. MacRitchie Lake Simcoe Watershed Climate Change Vulnerability Assessment: Water Quantity and Quality	M.R. Twiss *et al.* Saint Lawrence River Water Quality and Phytoplankton Across Environmental Gradients	E. Funnell Lake Simcoe Fish Community Objectives	9:00
BREAK			9:20

Wednesday May 16, 2012 (Morning)

	Theatre	Room F236	Room C119	Room D214
	6. Effects of Land Use on Nutrient Transport Through Aquatic Systems *Co-Chairs: Rebecca North, Mohamed Mohamed, Krista Chomicki, and Peter Dillon*	**33. Aquatic Invasive Species in the Great Lakes: Spread, Population Dynamics and Ecological Impact** *Co-Chairs: Alexander Karatayev and Lyubov Burlakova*	**49. Aquatic Habitat Restoration and Management in the Great Lakes** *Co-Chairs: John Farrell and Kevin Kapuscinski*	**41. Ecological Tracers in Great Lakes/St. Lawrence River Food Webs** *Co-Chairs: Tim Johnson, Aaron Fisk, and Gilbert Cabana*
Time	Presented by / Title	Presented by / Title	Presented by / Title	Presented by / Title
9:40	S.M. Raney and M.C. Eimers The Influence of Land Use Change on Stream Water Phosphorus Levels across Southern Ontario	M.T. Rowe and D.T. Zanatta Genetic Structure of the Fatmucket Mussel (*Lampsilis siliquoidea*) in the St. Clair River Delta and Tributaries: Effects of the *Dreissena* Invasion?	B.A. Murry *et al.* Effects of Restored Fish Passage on Food Web Properties: an Evaluation of New Rock Ramp Structures within the Saginaw River, MI Drainage	K.T. Alben *et al.* Use of Algal Pigments to Trace Food-Web Relationships Between Invertebrates and Fish in the Great Lakes
10:00	K.L. Stammler *et al.* Linking Long Term Trends in Stream Nutrient Concentrations and Changing Agricultural Practices in Southern Ontario	A.Y. Karatayev *et al.* Predicting the Zebra Mussels Spread: What Can We Learn From 200 Years of Continuous Invasion	D.H. Bennion *et al.* Future Directions of Fish Habitat Modeling in the Huron-Erie Corridor	D.J. Rowan A Dynamic Approach to Modelling Stable Carbon and Nitrogen Isotopes in Aquatic Foodwebs
10:20	T.L. Labencki and D. Boyd Intensive Event-Based Monitoring of Tributaries in the Hamilton Harbour Watersheds to Improve Nonpoint Source Nutrient Loading Estimates	W.C. Webster and D.G. Uzarski Impacts of Anthropogenic Disturbance on Coastal Wetland Vegetation	K.L. Kapuscinski and J.M. Farrell Selective Feeding Among Species of Submerged Aquatic Vegetation by a Non-native Cyprinid, the Rudd	G. Cabana *et al.* Measuring Trophic Linkages and Duration of Exposure of Large Mobile Fish to Municipal Effluents using N isotopes.
10:40	C. Wellen and G. Arhonditsis Quantifying the Effects of Land use on Non-Point Source Phosphorus Delivery to Hamilton Harbour: a Bayesian Modelling Approach	C.R. Blass *et al.* Fair or Fowl? Mute Swan Impacts on Great Lakes Coastal Wetlands	A. Secord *et al.* The St. Lawrence Natural Resource Damage Assessment Process and Potential Restoration Opportunities for the St. Lawrence River Ecosystem	J.M. Brush *et al.* Food Web Responses to Variable Flow Regimes in Boreal Rivers
12:10	**LUNCH—NAVCENTRE CAFETERIA**			

Wednesday May 16, 2012 (Morning)

Room D101	Room D117	Room A119	
37. Climate Change: Modelling, Vulnerability, Adaptation and Mitigation *Co-Chairs: Eleanor Stainsby, Scott MacRitchie, and Allan Douglas*	**10. Beach Water Quality and Human Health** *Co-Chairs: David Rockwell and Sonia Joshi*	**55. Fisheries Assessment and Management** *Chair: Alastair Mathers*	
Presented by / Title	Presented by / Title	Presented by / Title	Time
M. Ramin and G.B. Arhonditsis The Effects of Recycling Rates on Lake Ecosystem Dynamics	D.S. Francy *et al.* Developing and Implementing the Use of Predictive Models for Recreational Water Quality Throughout the Great Lakes	K.A. Tremblay The Anishinabek/Ontario Fisheries Resource Centre (A/OFRC) is Building Capacity Amongst First Nations Through Incorporating Scientific Method and Traditional Fishing Knowledge.	9:40
C.L. Tu *et al.* Developing a Tool to Assess the Risk of Climate Change to Natural System Elements in the Greater Toronto Area	A. Henry *et al.* Bathing Water Quality Monitoring: "Which Method for what Application?"	X. Zhu *et al.* Using Length-Weight Relation to Delineate Fish Population Status Synergized with Cumulative Anthropogenic Activities	10:00
S.M. MacRitchie *et al.* Implementation Frameworks for Climate Change Vulnerability Assessment	J.L. Kinzelman *et al.* Success in Employing New Analytical Methods, Without Site-Specific Epidemiological Studies, for the Regulation of Great Lakes Beach Water Quality - A Case Study from Racine, WI	M.R. Neff *et al.* Spatial and Temporal Trends of Total Lipid Content in Great Lakes Fish	10:20
A.G. Douglas *et al.* A Practitioner's Guide to Climate Change Adaptation in Ontario's Ecosystems	R.S. Brown *et al.* A New Technology for Rapid On-site Detection of *E. coli* for Beach Monitoring	T.A. Clement *et al.* Size Structure of Small Lake Fish Assemblages: The Role of Lake Size, Biodiversity, and Disturbance	10:40
LUNCH—NAVCENTRE CAFETERIA			12:10

Wednesday May 16, 2012 (Afternoon)

	Theatre	Room F236	Room C119	Room D214
	6. Effects of Land Use on Nutrient Transport Through Aquatic Systems *Co-Chairs: Rebecca North, Mohamed Mohamed, Krista Chomicki, and Peter Dillon*	**33. Aquatic Invasive Species in the Great Lakes: Spread, Population Dynamics and Ecological Impact** *Co-Chairs: Alexander Karatayev and Lyubov Burlakova*	**26. Great Lakes Phytoplankton and Benthic Algae in a Changing Ecosystem** *Co-Chairs: Ralph Smith and Susan Watson*	**41. Ecological Tracers in Great Lakes/St. Lawrence River Food Webs** *Co-Chairs: Tim Johnson, Aaron Fisk, and Gilbert Cabana*
Time	Presented by / Title	Presented by / Title	Presented by / Title	Presented by / Title
1:40	R.B. Confesor *et al.* Modeling Sediment and Nutrient Exports From Lake Erie Watersheds	D. Mason *et al.* Modeling Larval Fish Feeding, Growth and Potential Recruitment in the Newly Illuminated, Spatially Complex Food Web of Lake Michigan	R.P. Richards *et al.* Maumee River Hydrology and Nutrient Loading in Relation to a Major Cyanobacteria Bloom in the Western Basin of Lake Erie, 2011	S.A. Fera *et al.* Using Stable Isotopes to Analyze Dreissenid-Induced Changes in the Feeding Habits of Lake Whitefish in the Great Lakes
2:00	A.M. Flynn *et al.* Representing Ephemeral Gully Erosion in SWAT: Implications for Modeling Agricultural Management Practices in the Maumee River Watershed	J.L. Withers *et al.* Examining Spatiotemporal Overlap and Potential Consumptive Demand of First-Feeding Larval Yellow Perch, Larval Alewife, and Predatory Zooplankton Within Nearshore Lake Michigan	J.D. Chaffin and T.B. Bridgeman The Re-eutrophication of Lake Erie: Should We Target Nitrogen?	D.O. Evans *et al.* Stable Isotopes Reveal Shifts in Energy Flow to Benthic Invertebrates and Inshore Fishes Following Invasion of Dreissenid Mussels in a Large Lake Ecosystem.
2:20	L.F. Leon *et al.* Watershed & Lake Water Quality Modeling in Lake Winnipeg	S.A.C. Marklevitz and Y.E. Morbey Niche Overlap Between Hatchery and Wild Origin Adult Chinook Salmon in Lake Huron	A.M. Michalak *et al.* The 2011 Algal Bloom in Lake Erie: A Conceptual Model of an Extreme Event	B.A. Turschak and H.A. Bootsma Food Web Changes in Lake Michigan as Revealed by Stable C and N Isotopes
2:40	R.R. Essig *et al.* Temporal and Spatial Variations of Nutrient Loading from Southern Lake Michigan	K. Pagnucco and A. Ricciardi In the Driver's Seat? Disentangling the Influence of Abiotic Factors and Round Gobies (Neogobius melanostomus) on the Composition of Macroinvertebrate Communities in the St. Lawrence River	A.S. Chiandet and R.K. Sherman Long Term Changes in the Phytoplankton Community of Severn Sound in Response to Environmental Change	J.B. Brush *et al.* Stable Isotopes, Consumer Trophic Position and Food Chain Length in Eastern Lake Ontario: Implications for Ecosystem Management Within the LaurentiaGreat n Lakes
3:00	L. Weiss *et al.* Using the Wind Erosion Prediction System (WEPS) to Model Atmospheric Sources of PM10 within the Lake Simcoe Airshed		B.J. Althouse *et al.* The Contribution of Benthic and Pelagic Autotrophy to Whole Ecosystem Primary Production Along a Gradient of Light, Nutrients and Zebra Mussel (*Dreissena polymorpha*) Density in Green Bay, Lake Michigan	S.A. Rush *et al.* Stable Isotopes Reveal Short-Term Retention of Hatchery-Derived Diet in Lake Ontario Lake Trout
3:20	**BREAK**			

Wednesday May 16, 2012 (Afternoon)

Room D101	Room D117	Room A119	Room A121	
36. Large Lake Climate in a Global Context *Co-Chairs: Brent Lofgren and Jia Wang*	**10. Beach Water Quality and Human Health** *Co-Chairs: David Rockwell and Sonia Joshi*	**46. From RAPs to a Nearshore Governance Framework** *Co-Chairs: Gail Krantzberg and Chris McLaughlin*	**31. Yellow Perch in the Great Lakes - St. Lawrence River System : Recent Responses to Different Stressors and Management Decisions** *Co-Chairs: Pierre Dumont and Yves Mailhot*	
Presented by / Title	Presented by / Title	Presented by / Title	Presented by / Title	Time
J. Wang and X. Bai Atmospheric Teleconnection Patterns Associated with Severe and Least Ice Cover in the Great Lakes, 1963-2011	J. Haley *et al.* Bacterial Monitoring at St. Lawrence River Public Swimming Beaches	V.K.S. Breidenbach *et al.* Developing an Implementation Framework for Delisting the St. Louis River AOC - And Beyond	L.N. Ivan *et al.* Potential Influence of Body Size, Stock, and Overwinter Prey Consumption on Egg Size and Fecundity of Yellow Perch	1:40
A. Fujisaki *et al.* Interannual Variability of Ice-Circulation Coupled System in Lake Erie	N.L. Booth *et al.* EnDDaT: Enabling New Sophistication and Efficient Data Access for Beach Water -Quality Forecasts	G. Krantzberg and C. Mclaughlin From Remedial Action Plans to a Nearshore Governance Framework	Z.S. Feiner *et al.* Temporal and Spatial Trends in Reproductive Life History Traits of Yellow Perch in the Great Lakes	2:00
X. Bai and J. Wang Modeling Thermal Structure and General Circulation in the Great Lakes with FVCOM	A.D. Gronewold and R.L. Wolpert Moving Beyond the MPN and CFU: Novel Applications of Statistical Models to Improve Beach Water Quality Monitoring and Modeling	Previous Presentation Continued	J.D. Dub *et al.* Spatiotemporal Variation in Size-At-Age of Juvenile Yellow Perch and Effects of Size-Selective Mortality on Year-Class Strength in Lake Michigan	2:20
J.C. Phillips and G.A. McKinley Learning from the Global Oceans: The Ecological Impact of CO_2 Acidification of Lake Superior and Lake Michigan	A.A. Ritzenthaler *et al.* Developing Bacterial Watershed Fate and Transport Models in "Data-Limited" Tributaries	Previous Presentation Continued	P. Brodeur *et al.* Status of the Yellow Perch Stock and Fishery in Lake Saint-Pierre in 2012: Where do we go from here?	2:40
K.D. Holman *et al.* Influence of the Laurentian Great Lakes on Regional Climate	K.D. Barnswell *et al.* Increased Accuracy in Predicting Water Quality at Swimming Beaches Using a Time Adjusted Environmental Model	Previous Presentation Continued	P.A. Spear *et al.* Investigations into Oxidative Stress, Antioxidants and Retinoids in Brown Bullheads, Yellow Perch, and American Bullfrogs in the Yamaska River and Lake Saint-Pierre.	3:00
BREAK				3:20

Wednesday May 16, 2012 (Afternoon)

	Theatre	Room F236	Room C119	Room D214
	6. Effects of Land Use on Nutrient Transport Through Aquatic Systems *Co-Chairs: Rebecca North, Mohamed Mohamed, Krista Chomicki, and Peter Dillon*	**52. Review and Recommendations for Addressing Nearshore Issues - International Joint Commission: 2009-2011 Priority Cycle** *Co-Chairs: John Wilson and Saad Jasim*	**26. Great Lakes Phytoplankton and Benthic Algae in a Changing Ecosystem** *Co-Chairs: Ralph Smith and Susan Watson*	**41. Ecological Tracers in Great Lakes/St. Lawrence River Food Webs** *Co-Chairs: Tim Johnson, Aaron Fisk, and Gilbert Cabana*
Time	Presented by / Title	Presented by / Title	Presented by / Title	Presented by / Title
3:40	M.M. Gordon and A.S. McNaught Effects of Best Management Practices and Agricultural Land Use on Water Quality of the North Branch Chippewa River, Isabella County, Michigan	S.Y. Jasim *et al.* Assessing the Effectiveness of Wastewater Treatment for the Removal of Chemicals of Emerging Concern	D.H. Schuberg *et al.* Algal Community Composition in Response to Spatial and Temporal Physico-Chemical Gradients Within an Emergent Great Lakes Coastal Wetland of Northern Lake Michigan	G.D. Haffner *et al.* Quality of Quantity: Energetic Condition of Great Lakes Rainbow Smelt From 1989 to 2009 and Considerations for Top Predator Bioenergetics
4:00	B.L. Upsdell *et al.* Evaluating Rural Best Management Practices in Huron County	R.S. Bejankiwar *et al.* Risks and Benefits of Fish Consumption	J.V. DePinto *et al.* Modeling Analysis of the Response of Microcystis and Cladophora Growth in Saginaw Bay to Phosphorus Loading and Dreissenid Density	P.R. McKenna *et al.* Exploring Spatial Variability in Lake Trout Diets Throughout the Upper Laurentian Great Lakes - Stomach Content vs. Fatty Acid Signatures.
4:20	S.J. Sweeney *et al.* Healthy Great Lakes Supported by Healthy Watersheds: Monitoring Agricultural Activity Field-by-Field in Rural Ontario	M.J. Burrows Binational Aquatic Invasive Species Detection and Response - Assessment of Monitoring, Response and Planning Efforts	A.I. Dayton *et al.* Phosphorus Accumulation over Dreissenid Beds: Impact on *Cladophora*	G. Paterson *et al.* Fatty Acids as Indicators of Resource Quality and Habitat Partitioning in Lake Ontario Forage Fish Species
4:40	A. Singh *et al.* Background On-Near-Offshore Water Quality of Lake Ontario under Credit Valley Conservation Authority's Jurisdiction	J.E. Wilson Nuisance and Harmful Algae	K.H. Wyatt *et al.* Effects of Nutrients on the Release and Utilization of DOC from *Cladophora glomerata* in Lake Michigan	A.S. Happel *et al.* Exploring Spatiotemporal Trends in Juvenile Yellow Perch Diets Through Fatty Acid Signatures and Stomach Contents
5:00	M. Mohamed and K.L. Stammer Loadings and Concentrations of Nutrients, Suspended Solids, and E. coli in Agricultural Watersheds of Southwestern Ontario and their Relationship to Land Use	R.S. Bejankiwar *et al.* Microbiological Quality of Great Lakes Beaches and Recreational Waters	B. Raoof *et al.* The Effects of Nutrient and Light Availability on Phototrophic Organisms from Lake Superior.	J.M. Sawyer *et al.* Evaluating the Transfer and Accumulation of Polychlorinated Biphenyls (PCBs) and Polyunsaturated Fatty Acids (PUFAs) through the Bay of Quinte's Food Web
6:00	Cocktail (Marc Garneau room)			
7:00	Evening Banquet (Campbell Hall)			

Wednesday May 16, 2012 (Afternoon)

Room D101	Room D117	Room A121	
36. Large Lake Climate in a Global Context *Co-Chairs: Brent Lofgren and Jia Wang*	**10. Beach Water Quality and Human Health** *Co-Chairs: David Rockwell and Sonia Joshi*	**47. Great Lakes/St. Lawrence River Basin Sustainable Water Resources Agreement and Great Lakes/St. Lawrence River Basin Water Resources Compact: Linking Science and Policy to Improve Protections for Regional Water Resources** *Chair: Caroline Anderson*	
Presented by / Title	Presented by / Title	Presented by / Title	Time
J.D. Lenters *et al.* Rapid Warming of the World's Largest Lake: Do the Offshore Buoys Provide a "Whole-lake" Perspective?	D.C. Rockwell *et al.* Beach Water Quality Management Decision Support Systems for Forecasting Probability of Exceeding *E. coli* Levels	P.R. Johnson Assessing Cumulative Water Use Impacts for the Great Lakes-St. Lawrence River Basin.	3:40
B. Music *et al.* Future Great Lakes/St-Lawrence Hydrological Conditions as Projected by an Ensemble of RCM Simulations	Z. Ge *et al.* Validation of Empirical Models for Beach Water Quality across Years: A Case Study at Ogden Dunes	C. Anderson *et al.* Sustainable use of Quebec's Water Sources Within the Context of the Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement	4:00
V. Bennington *et al.* How Will the Laurentian Great Lake Water Levels Respond to Climate Change? A Regional Climate Modeling Study	Y.F. Stokes *et al.* The Impact of Summer Gull Management Programs on *Escherichia coli* Levels at Two Chicago Beaches	J.F. Cyr *et al.* Assessing the Hydrological Impact of Climate Change on the Quebec Part of the St. Lawrence River Subwatersheds	4:20
M. Xu *et al.* Comparison of Two Lake Models Implemented in CWRF	S. Weicksel *et al.* The Preferences for and Values of Changes in Water Quality at Great Lakes Beaches in Michigan	A.C. Parent *et al.* Climate Analogues as Guides for a Water Conservation Adaptation Study to Climate Change	4:40
B.M. Lofgren Seasonal Characteristics of Climate Change Projections in the Great Lakes Basin Using CHARM	F. Lupi *et al.* Great Lakes Beaches: Who Goes and How Often?	D.K. Phenicie *et al.* Water Footprint Pilots at Four Great Lakes Industrial Facilities	5:00
Cocktail (Marc Garneau)			6:00
Evening Banquet (Campbell hall)			7:00

Thursday, May 17, 2012 (Morning)

	Theatre	Room F236	Room C119	Room D214
	20. Native Species Protection and Restoration in the Great Lakes: Progress and Issues *Co-Chairs: Tom Stewart and Chris Wilson*	**34. Risk Assessment and Response to Aquatic Invasive Species** *Co-Chairs: Jeff Brinsmead and Brenda Koenig*	**17. Mercury Sources, Cycling and Bioaccumulation in the Great Lakes** *Co-Chairs: David Lean, David Krabbenhoft, and Reed Harris*	**23. Coastal Zone Ecology** *Co-Chairs: Jon Midwood, Amanda Fracz, Maja Cvetkovic, and Agnes Richards*
Time	Presented by / Title	Presented by / Title	Presented by / Title	Presented by / Title
8:00	M.S. Poos *et al.* Incorporating Rates of Catastrophes into Models of Population Viability for Species at Risk of Extinction **CANCELLED**	R.J. Snyder *et al.* Evaluating Ponto-Caspian Fishes for Risk of Great Lakes Invasion	A.L.M. Ethier *et al.* Overview and Application (Lake Ontario) of a Hg Lake Model (HERMES).	E.A. Blukacz-Richards *et al.* Coastal Wetland Vegetation Considerations for Lake Ontario Water Level Regulation Adaptive Management
8:20	D.A. Woolnough and J.L. Bergner Imperiled Species: Declines Can Be Masked by Community Changes	A.J. Fusaro *et al.* Assessment of High Risk Potential Great Lakes Invaders Using GLANSIS	Previous Presentation Continued	J.J. Sherman *et al.* A Comparison of Abiotic and Biotic Parameters of Diked and Adjacent Open Wetland Complexes of the Erie Marsh Preserve
8:40	D.T. Zanatta *et al.* Patterns of Post-Glacial Colonization for Freshwater Mussels (Unionidae) in the Great Lakes	F. Chan *et al.* Risk Assessment for Ship-Mediated Introductions of Aquatic Nonindigenous Species to the Great Lakes and St. Lawrence River Region	C.R. Lessard *et al.* Predicting and Hindcasting Mercury Dynamics in the St. Lawrence River, Cornwall, Ontario.	J.P. Gathman and T.M. Burton Comparing the Influences of Water-level Change and Plant-community Composition on the Fish and Invertebrate Community of a Lake Huron Coastal Wetland
9:00	A.M. Smart *et al.* Ecological Requirements of Wild Rice (*Zizania spp.*) in Michigan	R.P. Keller *et al.* Linking Environmental Conditions and Ship Transport to Estimate Invasive Species Transport to the Great Lakes Across the Global Shipping Network	R.A. Abma and G.D. Haffner Mercury Bioaccumulation in Lake Trout Reflects Non-Steady State Dynamics	S.D. Mackey *et al.* Shallow Water Bathymetry and SAV Distribution in Penetang Bay, Lake Huron, ON: Demonstration of a Remotely Operated Vessel for Environmental Research (ROVER)
9:20	**BREAK** (Marc Garneau & A –Section)			

Thursday, May 17, 2012 (Morning)

Room D101	Room D117	Room A119	
38. Interactions Between Climate and the Energy and Water Balance of Lakes and Their Watersheds *Co-Chairs: John Lenters, Peter Blanken, Andrew Gronewold, and Christopher Spence*	**51. Managing Flows and Levels in the Great Lakes/St. Lawrence River System for Today and Tomorrow** *Co-Chairs: Cindy Warwick, Wendy Leger, and David Fay*	**45. Education and Outreach** *Chair: Rochelle Sturtevant*	
Presented by / Title	Presented by / Title	Presented by / Title	Time
J.L. Ryder and T.A. Dahl Non-Stationarity in Key Hydrologic Components of Michigan's Lower Peninsula	T.A. Dahl *et al.* Regulating Lake Superior - Past and Future	R. Hyde *et al.* State of the Great Lakes in Ten Minutes	8:00
J.F. Walker *et al.* Estimating Climate Change Impacts on Streamflow in the Lake Michigan Basin Using the USGS PRMS Watershed Model	D.M. Fay and W. Werick Dealing with Climate Variability and Change in Lake Superior Regulation Plan Selection	S.L. Cherwaty-Pergentile *et al.* The Success of SOLEC and State of the Great Lakes Reporting	8:20
A.D. Gronewold *et al.* Accommodating Precipitation Estimate Bias and Uncertainty in Large Lake-Dominated Basins	M. Asadzadeh *et al.* A New Rule Curve Based Regulation Plan for Lake Superior	S.A. Hawkins Mid-Life Crisis: How the Toronto and Region RAP got its Communications Groove Back	8:40
L.M. Fry and A.D. Gronewold Development of a Regional Parameter Estimation Model for a Basin-Wide Recalibration of the Large Basin Runoff Model	P.M. Moody and C.M. Brown Evaluation of Lake Superior Outflow Regulation Plans Using Robustness and Climate Informed Risk	A. Sandström and J. Norrgård Participatory Research: Bridging the Gap Between Scientists and Stakeholders in Inland Fisheries? CANCELLED	9:00
BREAK (Marc Garneau and A-section)			9:20

Thursday, May 17, 2012 (Morning)

	Theatre	Room F236	Room C119	Room D214
	20. Native Species Protection and Restoration in the Great Lakes: Progress and Issues *Co-Chairs: Tom Stewart and Chris Wilson*	**34. Risk Assessment and Response to Aquatic Invasive Species** *Co-Chairs: Jeff Brinsmead and Brenda Koenig*	**17. Mercury Sources, Cycling and Bioaccumulation in the Great Lakes** *Co-Chairs: David Lean, David Krabbenhoft, and Reed Harris*	**23. Coastal Zone Ecology** *Co-Chairs: Jon Midwood, Amanda Fracz, Maja Cvetkovic, and Agnes Richards*
Time	Presented by / Title	Presented by / Title	Presented by / Title	Presented by / Title
9:40	M. Connerton and T.J. Stewart A Strategic Plan For The Reestablishment Of Native Deepwater Ciscoes In Lake Ontario	E. Rutherford *et al.* Assessing Risk of Asian Carp Invasion and Impacts on Great Lakes Food Webs and Fisheries	J. Li *et al.* Mercury in the Sediments and Food Web of the Detroit River	J.D. Midwood and P. Chow-Fraser Movement of Northern Pike (*Esox lucius*) among Coastal Marshes of Eastern Georgian Bay, Lake Huron
10:00	C.J. Robinson Benefits and Challenges of Partnerships in Native Species Restoration Programs - Ontario's Lake Ontario Atlantic Salmon Example	J.K. Brinsmead *et al.* One of These Things is not Like the Others - Prevalence of Non-target Species in Commercial Baitfish in Ontario	S. Hamelin *et al.* Methylmercury Production in the Littoral Zone of the St. Lawrence River: Who is Responsible?	J.P.M. Leblanc and P. Chow-Fraser Muskellunge (*Esox masquinongy*) Spawning and Nursery Habitat Use in Spatially Distinct Regions of Georgian Bay with Emphasis on Water Level Declines
10:20	J. Gobin and E.S. Dunlop The Effects of Gear Selectivity from the Lake Huron Commercial Fishery on the Evolution of Lake Whitefish Maturation Schedules	E. Weisz and E. Stanley Responding to the Threat of Aquatic Invasive Species in Lake Simcoe - a Pathway-Based Approach	M. Mahmood *et al.* Temporal Mercury Trends in Lake Erie Fish Communities: A Dynamic Linear Modelling Analysis	R.J. Christensen *et al.* Comparing the Movement Characteristics of Blanding's Turtles (*Emydoidea blandingii*) in two Coastal Eco-Regions of Ontario with Contrasting Habitat Features
10:40	A.E. Ecclestone From Extirpation to Detection and Research; Examining the Distribution and Movement Patterns of Lake Sturgeon (Acipenser fulvescens) in the White River, a Northeastern Lake Superior Tributary in Pukaskwa National Park	C.R. Middaugh *et al.* Effects of Lampricides on Target and Non-Target Species: from Metabolite Changes to Ecological Consequences	J.J. Ridal *et al.* Fish Mercury Contamination in Lake St. Francis, St. Lawrence River (Ontario and Quebec) Canada: Trends, Patterns and the Source Conundrum.	C. Markle *et al.* Changes in Habitat Use by the Blanding's Turtle (*Emydoidea blandingii*) over an Active Season on Beausoleil Island, Georgian Bay Islands National Park.
12:00	**LUNCH—**NavCentre Cafeteria			

Thursday, May 17, 2012 (Morning)

Room D101	Room D117	Room A119	
38. Interactions Between Climate and the Energy and Water Balance of Lakes and Their Watersheds *Co-Chairs: John Lenters, Peter Blanken, Andrew Gronewold, and Christopher Spence*	**51. Managing Flows and Levels in the Great Lakes/St. Lawrence River System for Today and Tomorrow** *Co-Chairs: Cindy Warwick, Wendy Leger, and David Fay*	**45. Education and Outreach** *Chair: Rochelle Sturtevant*	
Presented by / Title	Presented by / Title	Presented by / Title	Time
K. Van Cleave *et al.* Seasonal Variability in Sensible and Latent Heat Fluxes Over Lake Superior: Direct Observations From a Nearshore Eddy Covariance Station	R.J. Caldwell and D.M. Fay Simulation of Recent Lake Ontario Outflow Regulation Using Plan Bv7	K.K. Mulvaney *et al.* Information Needs and the Organizational Network of Great Lakes Fisheries Management	9:40
P.D. Blanken *et al.* A Comparison of Simultaneous Measurements of the Surface Energy Balance on Lakes Superior and Huron	C.A. Warwick The International Joint Commission: Managing Flows and Levels in the 21st Century	L.A. Cartwright *et al.* The Importance of Volunteer Training and Avian Identification Ability on the Results of Great Lakes Marsh Monitoring Program Bird Surveys	10:00
C. Spence *et al.* Changes in Autumn and Spring Climate Led to Increases in Lake Superior Evaporation	J.G. Trowbridge Experts, Stakeholders, and Decision Makers: Who Owns the Process and Outcomes? **CANCELLED**	L.J. Blume *et al.* GLRI Quality Program - Empowering GLRI Collaborators	10:20
J.D. Lenters *et al.* Sensitivity of Arctic Thaw Lakes to Climate Change: An Energy Balance Case Study of Emaiksoun Lake (Barrow, Alaska)	W.P. Leger and J. Read An Adaptive Management Approach for Addressing Future Extreme Water Levels and Flows for the Great Lakes-St. Lawrence River		10:40
LUNCH– NavCentre Cafeteria			12:00

Thursday, May 17, 2012 (Afternoon)

	Theatre	Room F236	Room C119	Room D214
	20. Native Species Protection and Restoration in the Great Lakes: Progress and Issues *Co-Chairs: Tom Stewart and Chris Wilson*	**34. Risk Assessment and Response to Aquatic Invasive Species** *Co-Chairs: Jeff Brinsmead and Brenda Koenig*	**22. Changing Face of Harmful Algal Blooms** *Co-Chairs: Greg Boyer and Sue Watson*	**23. Coastal Zone Ecology** *Co-Chairs: Jon Midwood, Amanda Fracz, Maja Cvetkovic, and Agnes Richards*
Time	Presented by / Title	Presented by / Title	Presented by / Title	Presented by / Title
1:20 p.m.	N. Vachon *et al.* 25 Years of Research, Management and Protection of an Endangered Freshwater Fish: the Copper Redhorse	Open Session	R.P. Stumpf *et al.* 10 Years of Variation in Cyanobacteria Blooms in Lake Erie	R.L. Wheeler and D.G. Uzarski Spatial Variation of Macroinvertebrate Communities Within Two Emergent Plant Zones of Great Lakes Coastal Wetlands
1:40	M.B.C. Hickey Distribution and Breeding Biology of the Threatened Cutlip Minnow	D.M. Modley Asian Clam *(Corbicula fluminea)* Rapid Response and Ongoing Management in Lake George, NY	G.L. Boyer *et al.* Toxic Cyanobacteria Blooms in Lake Ontario, NY: History and Current Status	A.A. Bozimowski *et al.* Invertebrate Co-occurrence Patterns in the Wetlands of Northern and Eastern Lake Michigan: the Interaction of the Harsh-Benign Hypothesis and Community Assembly Rules
2:00	B.A. Manny *et al.* Occurrence of the Endangered Northern Madtom in the Detroit River	D.D. White and J.A. Jung Controlling an Alien Species at Voyageur Provincial Park: The Invasive Water Chestnut	D. Levesque *et al.* Factors Controlling *Lyngbya wollei* Biomass in Lake St. Louis (St. Lawrence River)	D.P. Coulter *et al.* Fish Habitat Suitability and Growth Response in Dynamic Environments of Nearshore Lake Michigan
2:20	C.C. Wilson and K.M. Wozney Genetic Assessment of Muskellunge Restoration Efforts in Georgian Bay (Spanish River) and Lake Simcoe	J.M. Gilbert *Phragmites australis*: A Significant Threat to Laurentian Great Lakes Wetlands	K.A. Perri and G.L. Boyer Cyanobacterial Prescence, Water Quality, and Toxicity in Sodus Bay, New York	B.F. Henning and J.M. Farrell Does Physical Habitat Influence Fish Assemblage Structure in Open and Protected Embayments within the Thousand Islands Region of Upper St. Lawrence River?
2:40	A. Mathers *et al.* American Eel in the Lake Ontario - Upper St. Lawrence River Ecosystem.	J.E. Bronnenhuber *et al.* Testing the Efficacy of Environmental DNA Monitoring for Detecting Aquatic Invasive and Endangered Species in Ontario	L.A. Molot *et al.* Can the Lessons of Lake 227 be Applied to the Management of Other Eutrophic Systems?	M. Cvetkovic *et al.* Investigating the Factors Influencing Fish Community Composition and Population in Coastal Wetlands of Eastern Georgian Bay
3:00	**BREAK** (Marc Garneau & A-section)			

Thursday, May 17, 2012 (Afternoon)

Room D101	Room D117	Room A119	
11. Eutrophication Management in the Great Lakes: Past, Present and Future *Co-Chairs: Steven Chapra and David Dolan*	**51. Managing Flows and Levels in the Great Lakes/St. Lawrence River System for Today and Tomorrow** *Co-Chairs: Cindy Warwick, Wendy Leger, and David Fay*	**44. Watching Our Waters: Observing Systems and More in the Great Lakes/St. Lawrence Basin** *Co-Chairs: Theodore Slawecki and Joanne Hamel*	
Presented by / Title	Presented by / Title	Presented by / Title	Time
V. Richardson and A. Dove Keeping up with the Times - Year-Round Nutrient Loading Measurements in Canadian Lake Erie Tributaries	S. Martin *et al.* Real-Time and Mid-Term Predictive Application of Habitat Models of the St. Lawrence River	T.A.D. Slawecki *et al.* Data Management and Communications (DMAC) for Observing Systems	1:20 p.m.
D.M. Dolan *et al.* Analysis of Interlake Mass Loading Trends of Major Ions and Nutrients Via Great Lakes Interconnecting Channels	M. Manolidis and N. Katopodes Modeling the Release of River Ice Jams and their Impact on Riverbed Scouring	J. Hamel Improving Data Access through Cooperation: A Canadian Inter-jurisdictional Model and Observatory Concept	1:40
S.C. Chapra and D.M. Dolan GL2K: A Mass-Balance Modeling Framework for Simulating Long-Term Trends of Great Lakes Water Quality	J.K. Bruxer Evaluating the Feasibility and Impacts of Restoring Lake Michigan-Huron Water Levels	S.T. Kendall *et al.* Lessons Learned from Management, Quality Control, and Dissemination of Buoy Observatory Data.	2:00
M.D. Rowe *et al.* Modeling the Sensitivity of Primary Production in Lake Michigan to Nutrient Loads With and Without Dreissenid Mussels	S. Razavi *et al.* Evaluation of New Control Structures in the Great Lakes for Better Managing Water Levels in Future	T.J. Dekker and E.M. Verhamme Industry Perspective on Real-Time Buoys: Cook Nuclear Plant	2:20
M.T. Auer *et al.* Feeding the Beast: Temporal Scale, Cladophora and the Nearshore Phosphorus Shunt	K. Ponnambalam *et al.* Great Lakes Water Level Regulation Using Risk-Based Optimization Methods	D. Boutin The National Hydro Network (NHN) a Tool to Manage Water Resources	2:40
BREAK (Marc Garneau & A-section)			3:00

Thursday, May 17, 2012 (Afternoon)

	Theatre	Room F236	Room C119	Room D214
	20. Native Species Protection and Restoration in the Great Lakes: Progress and Issues *Co-Chairs: Tom Stewart and Chris Wilson*	**13. Assessment of Progress Made Towards Restoring and Maintaining Great Lakes Water Quality Since 1987** *Chair: Victor Serveiss*	**22. Changing Face of Harmful Algal Blooms** *Co-Chairs: Greg Boyer and Sue Watson*	**27. Wetlands Services: Diversity, Productivity and Aesthetics of St. Lawrence and Great Lakes Shorelines** *Chair: Christiane Hudon*
Time	Presented by / Title	Presented by / Title	Presented by / Title	Presented by / Title
3:20	C.V. Holden and J.M. Casselman Otolith Isotopic Analysis of the American Eel (*Anguilla rostrata*): Investigating the Role of Activity and Otolith Growth in Estimating Otolith Î´^{18}O Thermal History	V.B. Serveiss Overview of Assessment of Progress Session	A. Zastepa *et al.* Degradation of Particulate and Dissolved Microcystin-LA from a Senescing *Microcystis* bloom *in vitro* and *in situ*	C. Hudon Wetlands Services : An Overview of Diversity, Productivity and Aesthetics of Lake Saint-Pierre (St. Lawrence River, Quebec, Canada).
3:40	M.H.M. Lloyst *et al.* Distribution and habitat associations in stocked American Eels, Anguilla Rostrata, in the Bay of Quinte and Upper Saint Lawrence River	D.W. Schloesser and V.B. Serveiss Burrowing Mayfly: A Sentinel Water Quality Indicator for Nearshore Waters of the Great Lakes.	A.G. Stone *et al.* From Sensors to Drivers: Understanding Potential Drivers of Algal Blooms Using in-situ Fluorescence Measurements as a Response Variable	L. Tall *et al.* Multiscale Effects of the Hydrology and Environmental Variables on Macroinvertebrates in Wetlands of the Lake Saint-Pierre, St. Lawrence River
4:00	X. Zhu *et al.* Exploration of Bayesian Statistical State-Space Model to Assess American Eel Biomass Dynamics and Precautionary Management Significance in the Upper St. Lawrence River -Lake Ontario System	G.G. Lauenstein *et al.* What Mussels Tell us of the Water Quality in the Great Lakes: Results from Two Decades of Contaminant Monitoring by NOAA's Mussel Watch Program	M.J. McCarthy *et al.* Water Column and Sediment -Water Interface Nitrogen Transformations in Missisquoi Bay, Lake Champlain: a Preliminary Nitrogen Budget	A.H. Bramburger and E.E. Gaiser From Everglades to Alvars: Karstic Wetlands as Indicators of Environmental Change
4:20	R.S. Brown *et al.* Spatial and Temporal Trends of Dioxin Like Compounds in American Eels	T. Greenberg *et al.* Satellite Monitoring of Great Lakes Water Clarity - Trends Emerging from Three Decades of Aquatic Colour Satellite Data.	S.B. Watson *et al.* Algal Bloom Response and Risk Management: On-Site Response Tools	M.J. Cooper *et al.* Nitrogen and Phosphorus Conditions and Nutrient Limitation in Coastal Wetlands of Lakes Michigan and Huron
4:40	J.A. Stacey *et al.* Characterization and Comparison of American Eel (*Anguilla rostrata*) Diets in Two Stocking Locations in Lake Ontario and the Upper St. Lawrence River	C. Masson "To Restore and Maintain:" A Value Proposition for the 1987 GLWQA	Y. Shimoda *et al.* Modelling Cyanobacteria Dominance: How Useful are the Complex Mathematical Models?	B.K. Grunert and E.H. Tyner Restoring an Urban Wetland: Lessons on Strategy
5:00	NavTheatre—Traditional Native Closing—Thank you IAGLR delegates for attending!			

Thursday, May 17, 2012 (Afternoon)

Room D101	Room D117	Room A119	
11. Eutrophication Management in the Great Lakes: Past, Present and Future *Co-Chairs: Steven Chapra and David Dolan*	**4. Reservoir Capacity and Sediment Loading Investigations: Implications for Dam Removal** *Co-Chairs: Carol Miller, Jim Selegean, and Calvin Creech*	**44. Watching Our Waters: Observing Systems and More in the Great Lakes/St. Lawrence Basin** *Co-Chairs: Theodore Slawecki and Joanne Hamel*	
Presented by / Title	Presented by / Title	Presented by / Title	Time
D.M. Blersch *et al.* Assessment of Benthic Algal Cultivation for Phosphorus Recapture in the Lower Great Lakes	C.J. Miller *et al.* Anthropogenic Impacts on Sediment Production in Great Lakes Watersheds	E.J. Anderson *et al.* Upper St. Lawrence River Forecasting System: Real-Time Conditions and Forecasts of Water Levels and Currents	3:20
E.M. Verhamme *et al.* Long Term Phosphorus Management in Missisquoi Bay, Lake Champlain	A. Kumar *et al.* Sediment Dynamics in Three Dams in Michigan and Indiana Using excess ^{210}Pb and ^{137}Cs as Chronometers	C.N. Brooks *et al.* A Water Monitoring and Information System for Lake Superior: A Web Portal with Real-Time Buoy and Vessel Data for Climate and Ecosystem Studies	3:40
R.P. Barbiero *et al.* Convergence of the Lower Food Web in Lakes Huron, Michigan and Superior	M.S. Riedel *et al.* Managing Legacy Sediment Deposits for Removal of Three Dams on the Boardman River, Tributary to Lake Michigan	M.S. Islam *et al.* Use of an Environmental Observatory to Characterize Contaminant Transport in a Riverine Superfund Site	4:00
G.B. Arhonditsis *et al.* Towards the Development of an Integrated Modelling Framework in the Hamilton Harbour: A Bayesian Synthesis of Empirical Knowledge and Model Predictions	M. Baskaran *et al.* Reconstruction of Landuse Changes Using Carbon and Nitrogen Isotopes in Sediment Cores from Dams in Michigan	M.E. Palmer *et al.* Temporal Coherence of Great Lakes Water Quality	4:20
N.T. Schock *et al.* Stream/Drainage Ditch Impacts on Great Lakes Coastal Wetland Macroinvertebrate Community Composition	J. Barkach *et al.* Practical Aspects of Sediment Sampling and Bathymetric Data Collection to Support Sediment Yield and Dam Capacity Studies in Great Lakes Watershed		4:40
NavTheatre Traditional Native Closing—Thank you IAGLR delegates for attending!			5:00

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Poster Sessions by Day

Monday, May 14

Display Number	Hypoxia in the Great Lakes: Detection and Prediction
50	SHERMAN, R.K. and CHIANDET, A.S. Changes in Hypolimnetic Chemistry with the Onset of Summer Hypoxia in Honey Harbour, Georgian Bay
Display Number	**Multi-media Assessment of Toxics in the Great Lakes 2012**
1	CHANG, F., PAGANO, J.J., CRIMMINS, B.S., MILLIGAN, M.S., XIA, X., HOPKE, P.K., and HOLSEN, T.M. Temporal Trends of Polychlorinated Biphenyls and Organochlorine Pesticides in Great Lakes Fish, 1999-2009
2	KHAIRY, M., LOHMANN, R., ADELMAN, D., and MUIR, D. Trends of PBTs in Air and Water Across Lakes Erie and Ontario
3	OMARA, M., HOLSEN, T.M., XIA, X., CRIMMINS, B.S., and HOPKE, P.K. An Improved Sampling Methodology for the Measurement of Dissolved Hydrophobic Organic Contaminants using PoraPak Rxn RP Resin and Accelerated Solvent Extraction
4	VET, R., BLUKACZ-RICHARDS, E.A., SUKLOFF, B., and BLANCHARD, P. Statistical Analysis of PM2.5 Instrument Comparison
Display Number	**The Past, Present and Future of the Ottawa River**
75	MILLER, A., CHAPUT, T., WILLS, A., and LEE, D.R. Chalk River Laboratories has little effect on concentrations of cesium-137, strontium-90 and mercury in game fish

Display Number	Physical Processes in Lakes
51	CHOI, J.M., TROY, C.D., HAWLEY, N., and MCCORMICK, M. Seasonal Variation of Poincare Waves and Vortex Mode in Southern Lake Michigan
52	SAFAIE, A., JALILVAND, E., and SEDIGHI, A. Investigating the Seiche Phenomenon in Lake Michigan Using GIS
Display Number	**Chip Weseloh Tribute Session - 35 Years of Great Lakes Wildlife Research**
43	WESELOH, C., ADAMS, C., DOBBYN, S., DOBBIE, T., FARQUHAR III, J., HARPER, L., HEBERT, C., MATHERS, A., MAZZOCHI, I., MCDONALD, K., MOORE, D., QUINN, J., SHERMAN, D., SHUTT, L., TONINGER, R., TYERMAN, D., and RIDGWAY, M. Effects of Management and Habitat Change on Trends in Nest Counts of Double-Crested Cormorants in the Lower Great Lakes, 1979-2011
Display Number	**Atlantic Salmon Restoration - Tools and Techniques, Challenges and Solutions, Partnerships and Progress**
39	NEFF, B.D., PITCHER, T.E., PERES-NETO, P.R., HEATH, D.D., and WILSON, C.C. Conservation and the Architecture of Fitness of Atlantic Salmon: Reintroduction into Lake Ontario
40	PRITCHARD, C.L. In-stream Atlantic Salmon Eyed-Egg Incubation Techniques

Tuesday, May 15

Display Number	The History of Water Pollution Issues in the St. Lawrence River
5	GRAHAM, A.T. and HODSON, P.V. Evidence of Pesticide Use at Expo 67 from St. Lawrence River Sediment Core
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19	HRYCIK, A.R., SIMONIN, P.W., RUDSTAM, L.G., PIENTKA, B., and PARRISH, D.L. Ecology of the Opossum Shrimp, *Mysis diluviana*, in Lake Champlain
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54	MUNAWAR, M., FITZPATRICK, M., NIBLOCK, H., and BOWEN, K. A Spatial Assessment of the Planktonic Food Web of the Bay of Quinte, Lake Ontario, 2010
55	ROZON, R.M. and SHORT, S.M. Diversity and Dynamics of Algal Viruses in the Bay of Quinte
56	WATKINS, J.M., RUDSTAM, L.G., and CRABTREE, D. Reduced Whiting Events in Lake Ontario: Has Material Flux to the Profundal Benthos Declined?
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62	LOH, P.S., MOLOT, L.A., and NURNBERG, G.K. Release Rates of Phosphorus and Iron from Deep and Shallow Sediments in Lake Simcoe, Winnipeg and Hamilton Harbour During Anoxic Incubation
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8	HELM, P., MUSCALU, A., SHEN, L., REINER, E., TENCIC, A., KOLIC, T., BODEN, A., MORSE, D., MACPHERSON, K., and BRINDLE, I. Monitoring for Hydrophobic Contaminants in Urban-Impacted Nearshore Waters of the Great Lakes Using Polyethylene Passive Samplers

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24	PEREZ-FUENTETAJA, A. and ANKRAH, B.A. Feeding Ecology of the Round Goby in Lake Erie and in an Invaded Stream
25	TRUMPICKAS, J., DOLSON, R., HANNIKAINEN, P., LA ROSE, J., LANGLEY, T., LIDDLE, G., and ROBILLARD, M. Characteristics of the Round Goby Population of Lake Simcoe
26	TULUMELLO, B.L., BURLAKOVA, L.E., and KARATAYEV, A.Y. Estimating the Change in Weight of *Dreissena polymorpha* and *Dreissena r. bugensis* Fixed in Ethanol
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36	VANDERGOOT, C.S., KRAUS, R.T., KOCOVSKY, P.M., ZINN, L.J., and ROGERS, M.W. Comparative Analysis of Three Experimental Gill Nets Used to Assess Lake Erie Walleye
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13	WATSON, S.B., KLING, H.J., HERBERT, C., HENDZEL, L., BOYER, G.L., and KOTAK, B. Cyanobacterial Blooms In Lake Winnipeg And Lake Of The Woods: Toxins, Nutrient Status And Species Composition

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