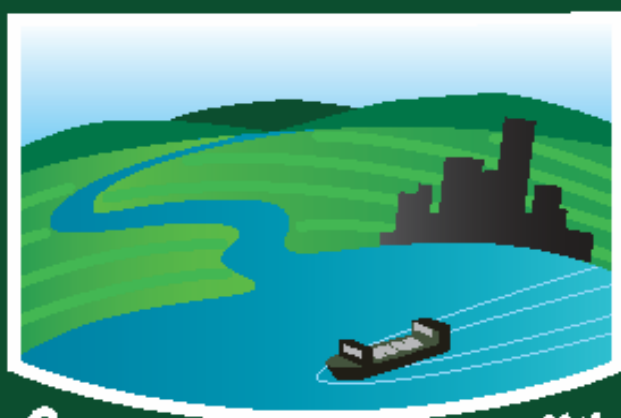


# 51st Annual Conference on Great Lakes Research

## IAGLR 2008



*Our Lakes, Our Community*

## Program

May 19<sup>th</sup> - 23<sup>rd</sup>, 2008

Trent University

Peterborough, Ontario, Canada



INTERNATIONAL ASSOCIATION FOR  
GREAT LAKES RESEARCH

TRENT UNIVERSITY 



# IAGLR 2008



**Conference Logo Design:**  
William Knight  
Trent University

This logo reflects on the theme of the 2008 conference, *Our Lakes, Our Community*. This theme recognizes the role that communities and community organizations play in protecting the quality and quantity of water, and the recreational and commercial value of the Great Lakes and how our stewardship of Great Lakes watersheds is connected to the health of the Great Lakes and of our communities.

# PROGRAM

International Association for Great Lakes Research

51<sup>st</sup> Annual Conference

*OUR LAKES, OUR COMMUNITY*

May 19-23<sup>rd</sup>, 2008

Institute for Watershed Science  
Trent University  
Peterborough, Ontario



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International Association for Great Lakes Research  
2205 Commonwealth Boulevard  
Ann Arbor, Michigan 48105

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We are proud of our contributions to Great Lakes research and restoration efforts, including:

- ◆ Lake Ontario PCB Modeling
- ◆ Lake Erie Hypoxia Forecasting
- ◆ Saginaw Bay Multi-Stressor Study
- ◆ Don River Restoration, Toronto

To learn about these and other **LimnoTech** projects, visit our *new* website at:

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501 Avis Drive  
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734.332.1200



*photo courtesy: Michael VanValkenburg & Associates*

**ORGANIZING COMMITTEE**  
51<sup>st</sup> Annual Conference

**"OUR LAKES, OUR COMMUNITY"**

**Site Chair**

**Chris Metcalfe**

Director, Institute for Watershed Science  
Professor, Environmental Resource Science  
Trent University

**Site Coordinator**

**Leslie Collins**

Institute for Watershed Science  
Trent University

**Program Chair**

**Patricia Chow-Fraser**

Professor, Department of Biology  
McMaster University

**Local Organizing Committee**

Chris Metcalfe Leslie Collins  
Mark Dzurko Brittany Cadence  
Eric Sager  
Trent University

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Ontario Ministry of Natural Resources

Thanks to:

Trent University Conference Services  
Institute for Watershed Science Staff  
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# Are You Seeking Funds For Your Great Lakes Research?

The Great Lakes Fishery Commission seeks high-quality research proposals.

Ecological, fishery, and human dimensions research is funded in three program areas:

1. **Fishery Research**: for achieving healthy Great Lakes ecosystems.
2. **Sea Lamprey Research**: to implement integrated pest management of sea lamprey.
3. **Science Transfer**: to communicate science to managers and others.



The process to submit a proposal is new and improved!

Visit online at:

[www.qlfc.org/research.php](http://www.qlfc.org/research.php)

While online, be sure to sign up to receive RFP notification.

## IAGLR SUSTAINING MEMBERS

Our deepest appreciation is extended to our annual  
**IAGLR Sustaining Members**

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

*U.S. Department of Commerce, NOAA*  
Great Lakes Environment Research Lab.  
2205 Commonwealth Blvd.  
Ann Arbor, Michigan 48105

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

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

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

IAGLR Sustaining Members receive multiple benefits!

---

If your institution is interested in ensuring the integrity and the longevity of the Association and its objectives, please consider joining our prestigious league of Sustaining Members.

\*proud sponsor of the annual Norman S. Baldwin Fishery Science Scholarship.





## CONFERENCE SPONSORS

Thank you to the following Sponsors for their financial support to host the 51<sup>st</sup> Conference on Great Lakes Research

### Major Sponsors! (\$5,000 and greater)

-  **Ontario** Ministry of Natural Resources  
Great Lakes Branch
-  **Ontario** Ministry of Natural Resources  
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### Contributing Sponsors (\$2,500 and greater)

-  Fisheries and Oceans  
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*science for a changing world*

### Supporting Sponsors (\$1000 and greater)

-  Fleming College  
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### Sponsors

Annis Water Resources Institute, Grand Valley State University  
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\* funds provided towards program book and abstract production



## CONFERENCE EXHIBITORS

Welcome to our Conference Exhibitors!

**AXYS Analytical Services Ltd.**  
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[www.axysanalytical.com](http://www.axysanalytical.com)

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[www.glfc.org](http://www.glfc.org)

**Hoskin Scientific Ltd.**  
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[www.hoskin.ca](http://www.hoskin.ca)

**NOAA, Center of Excellence for Great Lakes and Human Health**  
2205 Commonwealth Blvd.  
Ann Arbor, MI 48105  
[www.glerl.noaa.gov/res/Centers/HumanHealth](http://www.glerl.noaa.gov/res/Centers/HumanHealth)

**Quester Tangent**  
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300 Water Street  
Peterborough, ON K9J 8M5  
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Lands and Water Branch  
300 Water Street  
Peterborough, ON K9J 8M5  
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**U.S. Dept. of Commerce, NOAA\*^**  
*Great Lakes Environmental Research Lab*  
2205 Commonwealth Blvd.  
Ann Arbor, MI 48105  
[www.glerl.noaa.gov/](http://www.glerl.noaa.gov/)

Exhibits will be open daily

Please make them feel welcome by visiting their displays!

***A special thank you is extended to the Exhibitors as indicated:***

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## PLENARY SESSIONS

### Keynote Address, Tuesday, May 20th

Dr. Dean Jacobs,  
Executive Director  
Walpole Island First Nation Heritage Centre



Dean Jacobs is the Director of the Walpole Island Heritage Centre. Dean Jacobs is a former Chief of the Walpole Island First Nation. He also has served six elected terms as a Councillor on the WIFN Council of Three Fires. Dean was Wallaceburg Chamber of Commerce's Professional Business Person of the Year for 2004. He is a recipient of two honorary doctorate degrees and two eagle feathers. He has served on the Editorial Advisory Board for the Journal of the Ontario Historical Society. He was a member of the International Joint Commission's Council of Great Lakes Research Managers and was a charter member of the Ontario Round Table on Environment and Economy. In addition, Dean Jacobs is a former board member of the Ontario Heritage Foundation, Ontario Historical Society, and the Premier's Council.

For over 34 years Dean has worked on establishing and sustaining a community-based research program for the Walpole Island First Nation. Through his guidance, Walpole Island has been recognized, by international scholars, as having one of the best First Nation community research offices in Canada. In 1982, He was instrumental in enhancing community-based research capabilities by implementing a socio-economic and environmental research program called Nin.Da.Waab.Jig. In 1989, he became the founding Director of the Walpole Island Heritage Centre. In 1995, the Walpole Island First Nation received the "We the Peoples: 50 Communities Award" from the Friends of the United Nations for their exemplary record in environmental research and sustainable development. In 1992, the Governor General of Canada conferred upon Dean the Commemorative Medal for the 125th Anniversary of the Confederation of Canada in recognition of significant contribution to compatriots, community, and Canada. In 1997, the Walpole Island Heritage Centre was selected by Department of Indian Affairs and Northern Development as a "First Nations Effective Practices" site. In 1976, Dean became the first Canadian Indian admitted to the Smithsonian Institution's American Indian Cultural Resources Training Program. He has been an expert witness in a number of hunting and fishing rights court cases and has also testified as an expert witness in environment and energy regulatory agency hearings. Dr. Jacobs currently specializes in negotiating land claims and the development of First Nations impacts and benefits agreements.

## Plenary Speaker, Wednesday, May 21st

**Dr. Al Kristofferson**

Manager, Lake Winnipeg Research Consortium



Al Kristofferson was born and raised in Gimli, Manitoba and educated at the University of Manitoba (Ph.D.). He has had a close association with Lake Winnipeg all his life. His great-grandfather and grandfather were both commercial fishermen on the lake and he has a number of relatives who are still in the industry today. As a child he spent his summers swimming and angling in the lake and has been a recreational sailor on Lake Winnipeg since 1972. In the early 1970's he worked for the Provincial Fisheries Department and completed his Masters Degree on the population structuring of lakewhitefish in Lake Winnipeg. He joined Canada's Department of Fisheries and Oceans in 1977 as a Fishery Management Biologist, working mainly on fisheries for Arctic char across the Canadian Arctic. He retired in October 2007 after 30 years of service. Al has a life-long love for Lake Winnipeg and is a founding member of the Lake Winnipeg Research Consortium Inc. He has coordinated its development since 1998. Presently, he is its Managing Director and plans to continue his involvement well into retirement.

### "The Lake Winnipeg Research Consortium Inc."

Lake Winnipeg is one of the least studied of the world's great lakes. It is the major geographical feature in central Canada and is of vital importance to the people of Manitoba. It generates over 100 million dollars in tourism each year and supports a commercial fishery with an average annual landed value of 20 million dollars. The majority of the over 1000 commercial fishers are Aboriginal and, in addition to its economic importance to them, the lake is of great spiritual importance as well. The commercial fishery was closed for over a year in the late 1960's when high levels of mercury were detected in some commercial fish species. The sources have since been dealt with and mercury contamination is no longer a problem in the lake. However, the lake now faces the serious threats of cultural eutrophication, exotic species and climate change. These developments clearly pointed to the need for a dedicated research initiative to address the situation and prevent future problems from developing. The Red River flood of 1997, with its massive influx of flood water to the lake's south basin, served to heighten government's awareness of the need for this research. To that end, the Lake Winnipeg Research Consortium (LWRC) was founded in August 1998 and incorporated in August 2001.

The LWRC is a nonprofit organization. At present, 32 partners comprise the LWRC, including academia, government, First Nations, industry and recreational interests. By working together as a community, we can protect our great lake now and for future generations to come.

## Plenary Speaker, Thursday, May 22nd

### **Rick Findlay**

Director, Water Programme, Pollution Probe



Rick Findlay is Director of the Water Programme of Pollution Probe, one of Canada's longest established non-profit environmental groups. Rick also leads the Ottawa office of Pollution Probe.

Rick joined Pollution Probe in 1998 after serving for six years as Chief of the Climate Change team with Environment Canada. His position previous to that was Director of the Ontario Round Table on Environment and Economy, where Rick developed a deep respect for the principles of sustainable development and a commitment to helping achieve it through the multi-sectoral process of creating a sustainable development strategy for the Province of Ontario.

Rick joined Environment Canada in 1977, where he was responsible for the project that created the widely replicated Blue Box recycling program and for activities in Canada concerning toxic pollution of the Niagara River in the 1980's.

Prior to that, Rick worked for five years as a project engineer with a Canadian Company doing water and wastewater process engineering. Rick has over 30 years of experience in business, government and institutional positions, and now the non-government sector. His experience ranges from project engineering to policy development.

Rick is currently serving as a member of boards, task forces and advisory panels, including Member of the Board of Directors of the Canadian Water Network, one of the National Networks of Centres of Excellence;

Rick has a Bachelors of Applied Science degree (Chemical Engineering) from Queen's University at Kingston, Ontario, Canada.

### "Sustaining the Sweetwater Seas: A New Vision for the Great Lakes"

The Great Lakes Futures Roundtable is an informal bi-national community of individuals who have developed a Vision for the Great Lakes St. Lawrence region that suggests a new approach to achieving the goals we all seek; a robust ecosystem along with strong economic, social and cultural systems. Great Lakes governance will need to adapt in order to achieve the shifts that will be necessary to protect and sustain this vital community of communities.

## SPECIAL EVENTS

### Banquet Speaker, Wednesday, May 21<sup>st</sup>

**Dr. Roberta Bondar**

**Astronaut, Neurologist, Photographer, Chancellor of Trent University**



As the world's first neurologist in space, Dr. Roberta Bondar is globally recognized for her pioneering contribution in space medicine research. Aboard the Discovery mission STS-42 in 1992, she conducted experiments in the shuttle's first international microgravity laboratory.

For more than a decade at NASA Dr. Bondar headed an international research team, continuing to find new connections between astronauts recovering from the microgravity of space and neurological illnesses here on Earth such as stroke and Parkinson's disease. Her techniques have been used in clinical studies at the B. I. Deaconess Medical Center, a teaching hospital of Harvard Medical School and at the University of New Mexico.

A true renaissance woman, Dr. Bondar is an acclaimed photographer of the natural wonders of our planet. She is the author of four best-selling photo essay books featuring her stunning photography of the Earth. Roberta's photographs of the deserts in the American Southwest and the Canadian Arctic became a well received exhibition entitled *The Deserts of North America*.

UNESCO has announced 2008 through 2010 as the International Years of the Planet and Dr. Roberta Bondar has been named the Honorary Patron for Canada.

As a space scientist and neurologist Dr. Roberta Bondar is a much sought-after speaker who makes exciting connections between how our brains adapt in space and how we can adapt to constantly-changing business environments here on Earth. With innovative ideas about how to navigate in uncharted territory, she offers her abilities as a leader and visionary to corporations and organizations throughout North America. Dr. Bondar demonstrates the adaptive thinking necessary for changing perspectives in our contemporary world.

In 2007 the Ontario Government appointed Dr. Bondar to chair the Working Committee on Environmental Education, to strengthen environmental education in the curriculum of elementary and secondary schools. The Committee presented the report and all 32 of their recommendations are being implemented in 2008.

Dr. Bondar has been recognized with the NASA Space Medal, inducted into the Canadian Medical Hall of Fame and into the International Women's Forum Hall of Fame for her pioneering research in space medicine. In addition, she has received 24 honorary doctorates from Canadian and American universities. In 2003 TIME magazine named her among North America's best explorers.

Currently, Dr. Bondar is in her second term as Chancellor of Trent University in Peterborough, Ontario and she continues photographing the extremes of our planet.

# The David Sheperd Family Lecture Series and Trent University

present

## Robert F. Kennedy Jr. “Our Environmental Destiny”



Robert F. Kennedy Jr.'s reputation as a resolute defender of the environment stems from a litany of successful legal actions. Mr. Kennedy was named one of *Time* magazine's "Heroes for the Planet" for his success in helping Riverkeeper lead the fight to restore the Hudson River. The group's achievement helped spawn more than 160 Waterkeeper organizations across the globe.

Mr. Kennedy serves as senior attorney for the Natural Resources Defense Council, chief prosecuting attorney for the Hudson Riverkeeper and president of Waterkeeper Alliance. He is also a clinical professor and supervising attorney at Pace University School

of Law's Environmental Litigation Clinic and is co-host of *Ring of Fire* on Air America Radio. Earlier in his career, he served as assistant district attorney in New York City.

He has worked on environmental issues across the Americas, and has assisted several indigenous tribes in Latin America and Canada in successfully negotiating treaties protecting traditional homelands. He is credited with leading the fight to protect New York City's water supply. The New York City watershed agreement, which he negotiated on behalf of environmentalists and New York City watershed consumers, is regarded as an international model in stakeholder consensus negotiations and sustainable development. He also helped lead the fight to turn back the anti-environmental legislation during the 104th Congress.

Among Mr. Kennedy's published books are the *New York Times* bestseller *Crimes Against Nature* (2004); *The Riverkeepers* (1997); and *Judge Frank M. Johnson Jr: A Biography* (1977). His articles have appeared in the *New York Times*, the *Washington Post*, the *Los Angeles Times*, the *Wall Street Journal*, *Newsweek*, *Rolling Stone*, *Atlantic Monthly*, *Esquire*, *The Nation*, *Outside* magazine, the *Village Voice*, and many other publications. His award-winning articles have been included in anthologies of America's best crime writing, best political writing and best science writing.

Mr. Kennedy is a graduate of Harvard University. He studied at the London School of Economics and received his law degree from the University of Virginia Law School. Following graduation, he attended Pace University School of Law, where he was awarded a master's degree in environmental law.

\*Sponsored by the David Sheperd Family Endowment Fund and Trent University

## SCHEDULED EVENTS

### Monday, May 19<sup>th</sup>

6:00 pm-9:00 pm

Welcome Reception  
Gzowski College Dining Hall (Robinson Hall)

### Tuesday, May 20<sup>th</sup>

10:30 am-11:20 am

Opening Ceremonies  
Wenjack Theatre, Otonabee College

11:20 am-12:00 pm

Keynote Address: Dr. Dean Jacobs  
Executive Director, Walpole Island First Nation Natural  
Heritage Centre

12:00 pm-1:20pm

Publications Committee Lunch  
Gzowski College Room 345

5:00 pm-6:30 pm

Poster Session and Mixer  
Great Hall, Champlain College

7:30 pm-9:00 pm

Graduate Student Mixer and Pub Crawl  
Splice Restaurant, Downtown Peterborough  
Buses Provided!

### Wednesday, May 21<sup>st</sup>

11:20 am-12:00 pm

Plenary Presentation: Dr. Al Kristofferson,  
Managing Director, Lake Winnipeg Research Consortium  
"Our Lakes Our Community, The Lake Winnipeg Research  
Consortium Inc."

12:00pm-1:20pm

IAGLR Business Lunch

7:00pm-10:00pm

IAGLR Annual Banquet  
Guest Speaker: Dr. Roberta Bondar  
"Between the Sheets, Lakes from Space"  
Silent Auction in Support of Student Scholarships



**Thursday, May 22<sup>nd</sup>**

11:20am-12:00pm

Plenary Presentation: Rick Findlay,  
Director, Water Programme, Pollution Probe  
"Sustaining the Sweetwater Seas: A New Vision for the  
Great Lakes"

5:30pm-7:00pm

IAGLR Barbeque  
Great Hall and Riverside, Champlain College

7:30pm-8:30pm

David Sheperd Family Lecture Series special presentation  
Robert F. Kennedy Jr.  
"Our Environmental Destiny"  
Peterborough Memorial Centre

**Friday, May 23<sup>rd</sup>**

3:00pm-5:00pm

IAGLR CAN/AM Hockey Game  
Evinrude Centre  
In support of IAGLR Scholarship Fund

## CONFERENCE OVERVIEW

### Tuesday, May 20

- 8:20 a.m. - 10:20 a.m. **Ecosystem approaches to managing Great Lakes aquatic resources: conceptual and practical methods**  
*Room Rm 203*
- 8:20 a.m. - 10:20 a.m. **Trends in Legacy and Emerging Contaminants in Great Lakes Fish and Wildlife**  
*Room Rm 114*
- 8:20 a.m. - 10:20 a.m. **Avian Ecology and Research**  
*Room Science Lecture Hall*
- 8:20 a.m. - 10:20 a.m. **Development of models for ecosystem forecasting in Lake Erie**  
*Room Wenjack Theatre*
- 8:40 a.m. - 10:20 a.m. **Sustaining Involvement - The role of the NGO in the RAP process**  
*Room Rm 117*
- 8:40 a.m. - 10:20 a.m. **Remote Sensing, Visualization, and Spatial Data Applications for the Great Lakes**  
*Room Rm 115*
- 1:20 p.m. - 4:40 p.m. **Restoring and Delisting Areas of Concern: local community engagement is the key**  
*Room Rm 117*
- 1:20 p.m. - 5:00 p.m. **Remote Sensing, Visualization, and Spatial Data Applications for the Great Lakes**  
*Room Rm 115*
- 1:20 p.m. - 3:00 p.m. **Ecosystem approaches to managing Great Lakes aquatic resources: conceptual and practical methods**  
*Room Rm 203*
- 1:20 p.m. - 5:40 p.m. **Trends in Legacy and Emerging Contaminants in Great Lakes Fish and Wildlife**  
*Room Rm 114*
- 1:20 p.m. - 5:20 p.m. **Aquatic invasive species in the Great Lakes watershed**  
*Room Science Lecture Hall*
- 1:20 p.m. - 4:20 p.m. **Development of models for ecosystem forecasting in Lake Erie**  
*Room Wenjack Theatre*
- 3:20 p.m. - 5:40 p.m. **Physical processes and fish recruitment in the world's Great Lakes**  
*Room Rm 203*

## Wednesday, May 21

- 8:20 a.m. - 10:00 a.m. **Environmental and economic indicators**  
*Room Rm 117*
- 8:20 a.m. - 11:20 a.m. **Progress with Watershed Planning in the Great Lakes Basin**  
*Room Rm 115*
- 8:20 a.m. - 11:20 a.m. **Nuisance Algae in the Great Lakes: Causes, consequences and future directions**  
*Room Wenjack Theatre*
- 9:00 a.m. - 11:20 a.m. **Assessing and Improving Monitoring Programs in the Great Lakes**  
*Room Rm 114*
- 9:00 a.m. - 11:20 a.m. **Aquatic invasive species in the Great Lakes watershed**  
*Room Science Lecture Hall*
- 10:20 a.m. - 11:20 a.m. **Determination of the water balance, its components and impacts for Great Lakes**  
*Room Rm 203*
- 10:20 a.m. - 11:20 a.m. **Great Lakes Wetlands: advances in mapping, assessment, ecology and restoration**  
*Room Rm 117*
- 1:20 p.m. - 5:00 p.m. **Great Lakes Wetlands: advances in mapping, assessment, ecology and restoration**  
*Room Rm 117*
- 1:20 p.m. - 4:40 p.m. **Human health risks associated with recreational activities and drinking water quality**  
*Room Rm 115*
- 1:20 p.m. - 3:00 p.m. **Determination of the water balance, its components and impacts for Great Lakes**  
*Room Rm 203*
- 1:20 p.m. - 4:20 p.m. **Assessing and Improving Monitoring Programs in the Great Lakes**  
*Room Rm 114*
- 1:20 p.m. - 3:00 p.m. **Aquatic invasive species in the Great Lakes watershed**  
*Room Science Lecture Hall*
- 1:20 p.m. - 5:20 p.m. **Nuisance Algae in the Great Lakes: Causes, consequences and future directions**  
*Room Wenjack Theatre*
- 3:20 p.m. - 5:20 p.m. **Natural systems in an urban environment**  
*Room Rm 203*
- 3:20 p.m. - 5:20 p.m. **Restoration of Nearshore Habitats & Species**  
*Room Science Lecture Hall*

## Thursday, May 22

- 8:20 a.m. - 11:20 a.m. **Physical limnology and physical-chemical-biological coupling in lakes**  
*Room Rm 117*
- 8:20 a.m. - 11:20 a.m. **Health Indicators for the Great Lakes Water Quality Agreement**  
*Room Rm 115*
- 8:20 a.m. - 11:20 a.m. **Natural systems in an urban environment**  
*Room Rm 203*
- 8:20 a.m. - 11:20 a.m. **Lake Simcoe**  
*Room Science Lecture Hall*
- 10:20 a.m. - 11:20 a.m. **Ecology and Management of Great Lakes Fish Populations**  
*Room Wenjack Theatre*
- 1:20 p.m. - 5:00 p.m. **Physical limnology and physical-chemical-biological coupling in lakes**  
*Room Rm 117*
- 1:20 p.m. - 3:00 p.m. **Health Indicators for the Great Lakes Water Quality Agreement**  
*Room Rm 115*
- 1:20 p.m. - 5:00 p.m. **Watershed Contributions to Chemical Contamination in the Great Lakes**  
*Room Rm 203*
- 1:20 p.m. - 5:20 p.m. **Dreissenids in North America: 20 Years of Consequences**  
*Room Rm 114*
- 1:20 p.m. - 5:20 p.m. **Lake Simcoe**  
*Room Wenjack Theatre*
- 1:20 p.m. - 5:40 p.m. **Ecology and Management of Great Lakes Fish Populations**  
*Room Science Lecture Hall*

## Friday, May 23

- 8:20 a.m. - 12:00 p.m. **Physical limnology and physical-chemical-biological coupling in lakes**  
*Room Rm 117*
- 8:20 a.m. - 12:00 p.m. **Building Toward a Science Strategy for the Great Lakes Basin under the Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement**  
*Room Rm 115*
- 8:20 a.m. - 10:00 a.m. **Watershed Contributions to Chemical Contamination in the Great Lakes**  
*Room Rm 203*
- 8:20 a.m. - 12:00 p.m. **Dreissenids in North America: 20 Years of Consequences**  
*Room Rm 114*
- 8:20 a.m. - 11:40 a.m. **General Contributions**  
*Room Science Lecture Hall*
- 9:00 a.m. - 11:00 a.m. **Ecology and Management of Great Lakes Fish Populations**  
*Room Wenjack Theatre*
- 10:20 a.m. - 12:00 p.m. **Fish disease ecology in the Great Lakes**  
*Room Rm 203*
- 1:20 p.m. - 2:00 p.m. **Physical limnology and physical-chemical-biological coupling in lakes**  
*Room Rm 117*
- 1:20 p.m. - 2:40 p.m. **Fish disease ecology in the Great Lakes**  
*Room Rm 203*

## SESSIONS BY DAY

**Tuesday, May 20**

	<u>Rm 117</u> Gzowski College	<u>Rm 115</u> Gzowski College	<u>Rm 203</u> Otonabee College
	<p><b>Sustaining Involvement - The role of the NGO in the RAP process</b> <i>Co-Chairs: Lisa Tulen and Derek Coronado</i></p>	<p><b>Remote Sensing, Visualization, and Spatial Data Applications for the Great Lakes</b> <i>Co-Chairs: George Leshkevich and Barry Lesht</i></p>	<p><b>Ecosystem approaches to managing Great Lakes aquatic resources: conceptual and practical methods</b> <i>Co-Chairs: Emily Cloyd and Jack Manno</i></p>
Time	Presented by / Title	Presented by / Title	Presented by / Title
8:20 a.m.			<p><u>C. Masson</u> The Great Lakes Gordian Knot: Governance for Aquatic Ecosystem Health, Integrity and Risk Management</p>
8:40 a.m.	<p><u>P.L. Weghorst et al.</u> Exploring Great Lakes Controversies with High School Students</p>	<p><u>D.M. O'Donnell et al.</u> Spectral Measurements of Absorption, Beam Attenuation and Backscattering Coefficients, and Remote Sensing Reflectance in Lake Ontario and Lake Erie</p>	<p><u>C. McLaughlin</u> Is Natural Resources Management in the Great Lakes Pathological?</p>
9:00 a.m.	<p><u>S. Simoliunas et al.</u> The Mirage of Public Involvement</p>	<p><u>F. Peng et al.</u> Individual Particle Analysis of Suspended Minerogenic Particles in Lake Erie: Implications to Water Clarity and Remote Sensing</p>	<p><u>J.P. Manno and G. Krantzberg</u> Toward a Management and Accountability Structure for the GL Ecosystem</p>
9:20 a.m.	<p><u>L.A. Tulen and D. Coronado</u> The role of the NGO in the Detroit River RAP</p>	<p><u>M.G. Perkins et al.</u> Patterns of Light Absorption in the West Basin of Lake Erie</p>	<p><u>E.T. Cloyd and J.P. Manno</u> Ecosystem approaches to managing the Great Lakes: conceptual and practical differences</p>
9:40 a.m.	<p><u>J.J. Ridal and M.B.C. Hickey</u> The Role of NGOs in the RAP process: The Evolution of the St. Lawrence River Institute of Environmental Sciences in the St. Lawrence River (Cornwall) RAP.</p>	<p><u>S.W. Effler et al.</u> Minerogenic Particles and Light Scattering in Lake Ontario and Pursuit of Optical Closure</p>	<p><u>E. LaPlante et al.</u> Illuminating the Great Lakes: LaMPs as the Model for Ecosystem Management</p>
10:00 a.m.	<p><u>J.A. Jackson</u> The Experience of Ontario Activists in the RAP Process</p>	<p><u>R.A. Shuchman et al.</u> Development of a Robust Hydro-optical Model for the Great Lakes for the Extraction of Chlorophyll, Dissolved Organic Carbon and Suspended Minerals from MODIS Satellite Data</p>	<p><u>J.L. Frye</u> The Blue Flag Canada Program: An ecosystem based approach to managing the Great Lakes and coastal ecosystems</p>
10:20 a.m.	<b>BREAK</b>		
10:30 a.m.	<b>Conference Opening Ceremonies, Wenjack Theatre, Otonabee College</b>		

## Tuesday, May 20

<u>Rm 114</u> <u>Gzowski College</u>	<u>Science Lecture Hall</u> <u>Otonabee College</u>	<u>Wenjack Theatre</u> <u>Otonabee College</u>	
<p><b>Trends in Legacy and Emerging Contaminants in Great Lakes Fish and Wildlife</b> <i>Co-Chairs: James Pagano, Thomas Holsen, Michael Milligan, and Bernard Crimmins</i></p>	<p><b>Avian Ecology and Research</b> <i>Chair: Nancy Seefelt</i></p>	<p><b>Development of models for ecosystem forecasting in Lake Erie</b> <i>Co-Chairs: Joseph DePinto, Tomas Hook, and Don Scavia</i></p>	
Presented by / Title	Presented by / Title	Presented by / Title	Time
<p><u>D. Lembcke et al.</u> Use of Semi Permeable Membrane Devices to measure the bioconcentration potential of Dichlorodiphenyltrichloroethane (DDT) in the Holland Marsh, Lake Simcoe</p>	<p><u>N.E. Seefelt</u> Comparing Decadal Census Trends and Yearly Variation in the Abundance and Distribution of Breeding Double-crested Cormorants: the Importance of Monitoring a Managed Species</p>	<p><u>D. Beletsky and D.J. Schwab</u> Modeling thermal structure in Lake Erie</p>	8:20 a.m.
<p><u>J.J. Pagano</u> Utilization of Salmonid Eggs as Bioindicators of Organohalogen Pollutants in Lake Ontario</p>	<p><u>J.P. Ludwig</u> Evidence for source sink regions in the Great Lakes Caspian Tern Population 1966 - 1995.</p>	<p><u>D.K. Rucinski et al.</u> Long-Term Application of a Climate-Driven Dissolved Oxygen Model for the Central Basin of Lake Erie</p>	8:40 a.m.
<p><u>M.L. Diamond et al.</u> Lipid declines in fish due to freezing</p>	<p><u>D.J. Moore et al.</u> Competition within tree- and ground-nesting guilds and serial replacement of species at Great Lakes waterbird colonies.</p>	<p><u>D.K. Rucinski et al.</u> Development and Application of 1D Eutrophication Models for the Central Basin of Lake Erie</p>	9:00 a.m.
<p><u>M.S. Milligan et al.</u> Analysis of PCDD/F and WHO Coplanar PCB's in Great Lakes Fish</p>	<p><u>C. Pekarik et al.</u> Population trends for colonial waterbirds nesting on the detroit river, lake Erie and the niagara river during the last three decades, 1976-2007.</p>	<p><u>E.L. Jones et al.</u> Three-dimensional modelling of lake-wide nutrient and chlorophyll dynamics in Lake Erie using ELCOM-CAEDYM</p>	9:20 a.m.
<p><u>B. Crimmins et al.</u> Great Lakes Fish Monitoring Program: Toxaphene results using GC-MS/MS</p>	<p><u>G.D. Campbell et al.</u> Canadian Experience - Type E Botulism in Fish-eating Birds on the Lower Great Lakes: A Consequence of Invading Alien Species?</p>	<p><u>S.W. Wilhelm et al.</u> Winter Assessment of Microbial Biomass and Metabolism (WAMBAM): A First Look at Winter Pelagic Biology in Lake Erie and the Implications of Climate Change.</p>	9:40 a.m.
<p><u>E. Smith et al.</u> Developing Analytical Methodology for P, B and T substances - a systematic process for identification of important chemicals in the Great Lakes basin.</p>	<p><u>D. Derbyshire et al.</u> Bird Study in Canada's Largest City: A Balance of Fundamental Research and Education at Tommy Thompson Park Bird Research Station</p>	<p><u>C.C. Clevinger et al.</u> Causes of hypoxia in Lake Erie: Potential role of nitrification</p>	10:00 a.m.
<b>BREAK</b>			10:20 a.m.
<b>Conference Opening Ceremonies, Wenjack Theatre, Otonabee College</b>			10:30 a.m.

## Tuesday, May 20

11:20 a.m.	<b><u>KEYNOTE SPEAKER: DR. DEAN JACOBS</u></b> <b><u>Executive Director, Walpole Island First Nation Natural Heritage Centre</u></b> <b><u>Wenjack Theatre</u></b>
12:00 p.m.	LUNCH Otonabee and Gzowski College Dining Rooms (meal cards required)

	<u>Rm 117</u> <u>Gzowski College</u>	<u>Rm 115</u> <u>Gzowski College</u>	<u>Rm 203</u> <u>Otonabee College</u>
	<b>Restoring and Delisting Areas of Concern: local community engagement is the key</b> <i>Co-Chairs: Susan Humphrey and Vicki Thomas</i>	<b>Remote Sensing, Visualization, and Spatial Data Applications for the Great Lakes</b> <i>Co-Chairs: George Leshkevich and Barry Lesht</i>	<b>Ecosystem approaches to managing Great Lakes aquatic resources: conceptual and practical methods</b> <i>Co-Chairs: Emily Cloyd and Jack Manno</i>
Time	Presented by / Title	Presented by / Title	Presented by / Title
1:20 p.m.	<u>J. Marsden</u> and M. Elster Remedial Action Plans for Great Lakes Areas of Concern: Status, Current Issues and Delisting Outlook	<u>P.L. Weghorst et al.</u> Monitoring Lake Erie Chlorophyll-a Concentration with MODIS: An Assessment of Two Algorithms	D.T. Kraus and <u>D.F. Klein</u> A Biodiversity Conservation Strategy for Lake Ontario
1:40 p.m.	<u>G. Krantzberg</u> Civic Engagement in Delisting Areas of Concern	<u>G.K. McCullough et al.</u> Using ship-borne spectral remote sensing reflectance data to compare accuracy of chlorophyll determinations by MODIS, MERIS and VIIRS satellite-borne sensors over a highly eutrophic lake, Lake Winnipeg, Manitoba, Canada	<u>K.M. Stewart</u> Freshwater Protected Areas (FPAs), Great Lakes and elsewhere
2:00 p.m.	<u>B.M. Fox</u> Conservation Authorities and the engagement of the Watershed Community in Canadian AOCs	<u>C.E. Binding et al.</u> Suspended Particulate Matter in Lake Erie Derived from MODIS Aquatic Colour Imagery.	<u>K.J. Hedges et al.</u> Aquatic Protected Areas in the Great Lakes: Inventory, Evaluation and GAP Analysis
2:20 p.m.	<u>P.K. Kovalcik</u> Muskegon Lake, Ruddiman Creek and Nearby Shoreline Ecological Restoration Master Plan: Using Stakeholder Involvement to Derive the Goals and Objectives for Addressing Beneficial Use Impairments in an Area of Concern	<u>L.K. Liversedge</u> Turbidity Mapping and Prediction in Glacial Lakes	<u>S.R. Parker</u> A Legacy in a Sweetwater Sea: Experience from Canada's First National Marine Conservation Area.
2:40 p.m.	<u>J.D. Hudson</u> From Toxic Soup to 'Sleeping with the Enemy: How a Stakeholder Approach Helped Hamilton Harbour Become a Model for Community Engagement	<u>J.L. Lekki et al.</u> Update on Great Lakes Hyperspectral Water Quality Instrument Suite for Airborne monitoring of Algal Blooms	<u>S. Jessen</u> and E. Ferrari Establishing an Aquatic Protected Areas Network in the Great Lakes
3:00 p.m.	<b>BREAK</b>		



## Tuesday, May 20

11:20 a.m.	<b>KEYNOTE SPEAKER: DR. DEAN JACOBS</b> <b><u>Executive Director, Walpole Island First Nation Natural Heritage Centre</u></b> <b><u>Wenjack Theatre</u></b>
12:00 p.m.	LUNCH Otonabee and Gzowski College Dining Rooms (meal cards required)

<u>Rm 114</u> <u>Gzowski College</u>	<u>Science Lecture Hall</u> <u>Otonabee College</u>	<u>Wenjack Theatre</u> <u>Otonabee College</u>	
<b>Trends in Legacy and Emerging Contaminants in Great Lakes Fish and Wildlife</b> <i>Co-Chairs: James Pagano, Thomas Holsen, Michael Milligan, and Bernard Crimmins</i>	<b>Aquatic invasive species in the Great Lakes watershed</b> <i>Co-Chairs: Michael Fox and Lynda Corkum</i>	<b>Development of models for ecosystem forecasting in Lake Erie</b> <i>Co-Chairs: Joseph DePinto, Tomas Hook, and Don Scavia</i>	
Presented by / Title	Presented by / Title	Presented by / Title	Time
<u>R. Razavi et al.</u> Does gas bubbling from sediments increase the transfer of mercury to aquatic food webs?	<u>E.A. Sopkovich et al.</u> Temporal and Spatial Population Genetic Structure of the Eurasian Round Goby: Invasion Patterns in the Great Lakes	<u>S.A. Ludsin et al.</u> Historical exploration of hypoxia effects on fish recruitment and production in Lake Erie	1:20 p.m.
<u>M. Fathi et al.</u> Benthic flux of total mercury (THg) and methyl mercury (MeHg) between contaminated sediments and the overlying water column in the St. Lawrence River near Cornwall, Ontario	<u>C.A. Stepien et al.</u> New Names, Evolutionary Resolution, and Founding Sources for Exotic Great Lakes Gobies	<u>S.B. Brandt et al.</u> Spatially-Explicit Growth Predictions to Assess Habitat Quality of Walleye during Hypoxia in Lake Erie	1:40 p.m.
<u>R.A. Lavoie et al.</u> Insights on the distribution of mercury in a Gulf of St. Lawrence food web from stable nitrogen and carbon isotope analysis	<u>L.D. Corkum et al.</u> Fish Assemblages and Environmental Factors Associated with Gobiids in the Huron-Erie Corridor	<u>J.J. Roberts et al.</u> Bioenergetics Model to Explore the Effects of Hypoxia on Yellow Perch Habitat Quality in Lake Erie's Central Basin.	2:00 p.m.
<u>E.J. DeLong et al.</u> Analysing a long-term environmental dataset: Fish tissue mercury burden trends in Ontario	<u>D.J. Jude et al.</u> Synergistic Effects of Ponto-Caspian Invasive Species on Warm-water Stream Fish Fauna in Southern Michigan	<u>H. Han and D. Allan</u> Phosphorus Loading to Lake Erie Watersheds: A Mass Balance Approach	2:20 p.m.
<u>C.E. Hebert et al.</u> Ecological tracers reveal pathways of contaminant transfer to avian predators	<u>L.F.G. Gutowsky et al.</u> The Distribution, Movement and Life History of Round Gobies in the Trent River: A Dynamic Invasive Population in its Expansion Phase	<u>C. DeMarchi et al.</u> Performances of the Distributed Large Basin Runoff Model for Different Watersheds in the Great Lake Basin	2:40 p.m.
<b>BREAK</b>			3:00 p.m.

**Tuesday, May 20**

	Rm 117 <u>Gzowski College</u>	Rm 115 <u>Gzowski College</u>	Rm 203 Otonabee College
	<b>Restoring and Delisting Areas of Concern: local community engagement is the key</b> <i>Co-Chairs: Susan Humphrey and Vicki Thomas</i>	<b>Remote Sensing, Visualization, and Spatial Data Applications for the Great Lakes</b> <i>Co-Chairs: George Leshkevich and Barry Lesht</i>	<b>Physical processes and fish recruitment in the world's Great Lakes</b> <i>Co-Chairs: Stuart Ludsin and Ralph Smith</i>
Time	Presented by / Title	Presented by / Title	Presented by / Title
3:20 p.m.	<u>K. Sherman</u> Severn Sound Remedial Action Plan: five years after de-listing	<u>Y. Zhu</u> and A. Vodacek Monitoring Inland Water Quality using MODIS and WASP-Lite Data	<u>D.M. Mason et al.</u> Physical processes and fish recruitment in the World's Great Lakes
3:40 p.m.	<u>G.W. Peterson et al.</u> Sustainable Development and Restoration Opportunities at AOC Sites	S.V. Nghiem and <u>G. Leshkevich</u> Using Satellite Scatterometer Data to Map and Monitor Variations in Great Lakes Ice Cover	<u>S.D. Mackey et al.</u> Preliminary Assessment of Lake Trout Spawning Habitat in the Eastern Basin of Lake Erie
4:00 p.m.	<u>A.D. Freeman</u> and K.E. Montgomery Involvement in the Toronto and Region Remedial Action Plan	<u>J.M. Preston</u> and G.J. Wyatt Acoustic remote sensing and classification of sediments	<u>C.G. Wellington et al.</u> Physical and Biological Factors Influencing Foraging Success of Age-0 Yellow Perch
4:20 p.m.	<u>L.M. Cargnelli</u> and T. Briggs Delisting the Wheatley Harbour Area of Concern	<u>H. Yu et al.</u> Comparing Two Methods for Estimating Relative Abundance Index of Yellow Perch ( <i>Perca flavescens</i> ) by Standardization and Interpolation from Fishery-independent Survey Data in Lake Erie	<u>J.M. Reichert et al.</u> River plume effects on yellow perch growth, survival, and recruitment in Lake Erie
4:40 p.m.		<u>G. Leshkevich</u> and S. Liu CoastWatch Great Lakes Program Update: 2008	<u>Y.M. Zhao et al.</u> A Biophysical Model of Lake Erie Walleye Explains Inter-annual Variations in Recruitment
5:00 p.m.			<u>T.O. Hook et al.</u> A linked hydrodynamic and individual-based model to simulate alewife recruitment in Lake Michigan
5:20 p.m.			<u>E.S. Rutherford et al.</u> Effects of Urban Development in the Muskegon River Watershed on growth, survival and potential recruitment of a Lake Michigan steelhead population: results of a multi-modeling approach

## Tuesday, May 20

<u>Rm 114</u> <u>Gzowski College</u>	<u>Science Lecture Hall</u> <u>Otonabee College</u>	<u>Wenjack Theatre</u> <u>Otonabee College</u>	
<p><b>Trends in Legacy and Emerging Contaminants in Great Lakes Fish and Wildlife</b> <i>Co-Chairs: James Pagano, Thomas Holsen, Michael Milligan, and Bernard Crimmins</i></p>	<p><b>Aquatic invasive species in the Great Lakes watershed</b> <i>Co-Chairs: Michael Fox and Lynda Corkum</i></p>	<p><b>Development of models for ecosystem forecasting in Lake Erie</b> <i>Co-Chairs: Joseph DePinto, Tomas Hook, and Don Scavia</i></p>	
Presented by / Title	Presented by / Title	Presented by / Title	Time
<p><u>D.V. Weseloh et al.</u> Spatial and temporal trends in legacy contaminants in Great Lakes Herring Gulls, 1974-2005</p>	<p><u>J. Pouloupoulos</u> and <u>L.M. Campbell</u> Analysis of archived fish from Lakes Nipigon, Simcoe and Champlain to assess impacts of exotic fish species on food webs and Hg biomagnification</p>	<p><u>D.M. Dolan et al.</u> Updated Total Phosphorus Load Estimates for Lake Erie , 2005-2007</p>	3:20 p.m.
<p><u>W.W. Bowerman et al.</u> Trends of Contaminants and Effects in Bald Eagles from Michigan, 1986-2007</p>	<p><u>D.C. Chapman</u> Effects of bighead and silver carp on invaded environments.</p>	<p><u>R.P. Richards et al.</u> Record-setting Phosphorus Loads from Agricultural Watersheds in Ohio</p>	3:40 p.m.
<p><u>L.M. Campbell et al.</u> Food web contaminant trends in Great and large lakes of the world</p>	<p><u>N. Miljkovic</u> Analyses of morphological variation in the gobiid <i>Neogobius melanostomus</i> – a comparison of populations from original European and invaded Northamerican habitats</p>	<p><u>D.C. Rockwell et al.</u> Long-Term Trends of Great Lakes Chloride</p>	4:00 p.m.
<p><u>P. Helm et al.</u> Concentration Trends of Past- and Current-Use POPs in Lake Trout from the Great Lakes</p>	<p><u>C.M. Pennuto et al.</u> Seasonal Abundance and Summer Energy Consumption by Round Gobies (<i>Apollonia melanostoma</i>) in Lake Erie Tributary Streams.</p>		4:20 p.m.
<p><u>E.M. Verhamme et al.</u> Application of LOTOX2 for the development of a PCB TMDL for Lake Ontario</p>	<p><u>L.A. Velez-Espino et al.</u> Invasion dynamics of round goby (<i>Neogobius melanostomus</i>) in Hamilton Harbour, Lake Ontario</p>		4:40 p.m.
<p><u>N.K. Diep</u> and <u>D. Boyd</u> Polychlorinated Biphenyl (PCB) Contamination in Wheatley Harbour Area of Concern</p>	<p><u>J. Perdue</u> and <u>M.G. Fox</u> Age determination in the round goby; comparison of scales and otoliths</p>		5:00 p.m.
<p><u>P. Fuchsman et al.</u> Innovative Evaluation of Risks to Mink from PCBs in Muddy Creek, Wheatley Harbour Area of Concern, Lake Erie, Ontario</p>			5:20 p.m.

### Wednesday, May 21

	<u>Rm 117</u> Gzowski College	<u>Rm 115</u> Gzowski College	<u>Rm 203</u> Otonabee College
	<b>Environmental and economic indicators</b> <i>Chair: Patricia Chow-Fraser</i>	<b>Progress with Watershed Planning in the Great Lakes Basin</b> <i>Chair: Patrick Lawrence</i>	<b>Determination of the water balance, its components and impacts for Great Lakes</b> <i>Chair: Roger Gauthier</i>
Time	Presented by / Title	Presented by / Title	Presented by / Title
8:20 a.m.	<u>S.R. Hensler et al.</u> Documentation of the Incidences of Herniations in Great Lakes Copepods	<u>S.B. Dierks</u> The Triple Bottom Line in Watershed Planning: The River Raisin Watershed Management Plan	
8:40 a.m.	<u>J.D. Rothlisberger et al.</u> Ship-borne NIS Diminish Ecosystem Services of the Great Lakes: A Structured Expert Judgment Study	<u>A.F. da Silva</u> and E.J. Szarleta-Yancy Citizen Participation in Watershed Management: Northwest Indiana as a Case Study	
9:00 a.m.	<u>J.J.H. Ciborowski</u> and K.R. Sherman Benthic Invertebrate Community Composition in Severn Sound, (Georgian Bay) Lake Huron – 2007.	<u>H. Simpson et al.</u> The Ontario Environmental Farm Plan - A Case Study of a Successful Community Water Resource Stewardship Program	
9:20 a.m.	<u>E.T. Howell</u> Influence of a small agriculturally-dominated watershed on the nearshore of SE Lake Huron	<u>S.M. Del Granado et al.</u> The Development and Use of Predictive Models in Great Lakes Decision-Making: An Interdisciplinary Synthesis	
9:40 a.m.	<u>T.P. Hollenhorst et al.</u> An Integrated, Watershed Based, Anthropogenic Stressor Gradient for the Great Lakes	<u>T.A. Dahl</u> and J.P. Selegean The Right Tool for the Job: Creating a Full Suite of Models to Help the Clinton River Watershed Decrease Sediment Loading	
10:00 a.m.	<b>BREAK</b>		

### Wednesday, May 21

<u>Rm 114</u> <u>Gzowski College</u>	<u>Science Lecture Hall</u> <u>Otonabee College</u>	<u>Wenjack Theatre</u> <u>Otonabee College</u>	
<b>Assessing and Improving Monitoring Programs in the Great Lakes</b> <i>Co-Chairs: Martin Stapanian and Jean Adams</i>	<b>Aquatic invasive species in the Great Lakes watershed</b> <i>Co-Chairs: Michael Fox and Lynda Corkum</i>	<b>Nuisance Algae in the Great Lakes: Causes, consequences and future directions</b> <i>Co-Chairs: Juli Dyble and Gary Fahnenstiel</i>	
Presented by / Title	Presented by / Title	Presented by / Title	Time
		<u>J. Dyble et al.</u> Cyanobacterial HABs in the Great Lakes: environmental stressors, genetic diversity and impacts on human health	8:20 a.m.
		<u>G.L. Boyer et al.</u> Analysis of Cyanobacteria Toxins in Lake Champlain; What this tells us about Harmful Algal Blooms in Other Large Lake Ecosystems.	8:40 a.m.
<u>O.E. Johannsson et al.</u> Large Lake Monitoring: Assessment of Key Links in the Food Web	<u>B.F. Lantry et al.</u> Occurrence of the Great Lake's Most Recent Invader, <i>Hemimysis anomala</i> , in the diet of fishes in southeastern Lake Ontario	<u>M.F. Satchwell et al.</u> Using the Microcystin <i>mcyA</i> Gene to Track Toxin Movement in Northern Lake Champlain	9:00 a.m.
<u>N.E. Dobiesz</u> and N.P. Lester The importance of long term datasets: A case study from the Great Lakes	<u>J.M. Questel et al.</u> Genetic Determination of the Origin of <i>Hemimysis anomala</i> in Lake Ontario	<u>C.J. Allender</u> and S.W. Wilhelm Identifying the source of unknown microcystin genes and predicting microcystin variants by linking multi-gene diversity within uncultured individual cyanobacteria	9:20 a.m.
<u>D.G. Uzarski et al.</u> Status and Trends of Great Lakes Coastal Wetland Health: A Basin Wide Monitoring Plan	<u>K.L. Bowen et al.</u> Monitoring the spread of the invasive crustacean <i>Hemimysis anomala</i> in the Great Lakes	<u>E.D. Rogers et al.</u> Global Gene Expression in Larval Zebrafish Exposed to <i>Microcystis aeruginosa</i> : More Than Just Microcystin	9:40 a.m.
<b>BREAK</b>			10:00 a.m.

### Wednesday, May 21

	<u>Rm 117</u> Gzowski College	<u>Rm 115</u> Gzowski College	<u>Rm 203</u> Otonabee College
	<p><b>Great Lakes Wetlands: advances in mapping, assessment, ecology and restoration</b> <i>Co-Chairs: Brian Potter and Pat Chow-Fraser</i></p>	<p><b>Progress with Watershed Planning in the Great Lakes Basin</b> <i>Chair: Patrick Lawrence</i></p>	<p><b>Determination of the water balance, its components and impacts for Great Lakes</b> <i>Chair: Roger Gauthier</i></p>
Time	Presented by / Title	Presented by / Title	Presented by / Title
10:20 a.m.	<p><u>D. Shrestha et al.</u> The effects of temperature and plants in simulated Arctic treatment wetland</p>	<p><u>D. Young et al.</u> Turning Recommendations Into Actions - The Humber River Watershed Plan</p>	<p><u>J.P. Bruce</u> Water Levels of the Upper Great Lakes</p>
10:40 a.m.	<p><u>J.M. Gilbert and B. Locke</u> Ecological Assessments of Canadian Lake Erie Coastal Wetlands Identify Threats and Required Remediation Strategies</p>	<p><u>K.E. Montgomery and A.D. Freeman</u> Aligning Remedial Action Plans with Watershed Plans, it is a good idea?</p>	<p><u>C.A. Stow et al.</u> Analysis of Water Level Changes in Lakes Michigan and Huron</p>
11:00 a.m.	<p><u>S.N. Yantsis and P. Chow-Fraser</u> Understanding zooplankton distribution and plant associations in Georgian Bay</p>	<p><u>P.L. Lawrence</u> Twenty Years Later: Reflections on the Great Lakes RAP Experience for Watershed Planning in the Maumee Area of Concern 1987 to 2007</p>	<p><u>J.D. Lenters</u> Long-term Trends in the Seasonal Water Balance of Lakes Erie and Michigan-Huron: Is There a "Disconnect" at the St. Clair River?</p>
11:20 a.m.	<p><b><u>PLENARY PRESENTATION: Dr. Al Kristofferson</u></b>  <b><u>Managing Director, Lake Winnipeg Research Consortium</u></b>  <b><u>"Our Lakes, Our Community: Lake Winnipeg Research Consortium Inc."</u></b></p> <p style="text-align: center;"><b><u>Wenjack Theatre</u></b></p>		
12:00 p.m.	<p>LUNCH Otonabee and Gzowski College Dining Halls (meal cards required)</p>		

### Wednesday, May 21

<u>Rm 114</u> <u>Gzowski College</u>	<u>Science Lecture Hall</u> <u>Otonabee College</u>	<u>Wenjack Theatre</u> <u>Otonabee College</u>	
<b>Assessing and Improving Monitoring Programs in the Great Lakes</b> <i>Co-Chairs: Martin Stapanian and Jean Adams</i>	<b>Aquatic invasive species in the Great Lakes watershed</b> <i>Co-Chairs: Michael Fox and Lynda Corkum</i>	<b>Nuisance Algae in the Great Lakes: Causes, consequences and future directions</b> <i>Co-Chairs: Juli Dyble and Gary Fahnenstiel</i>	
Presented by / Title	Presented by / Title	Presented by / Title	Time
<u>C.K. Minns et al.</u> Modelling Great Lakes Surface Temperatures and Predicting Future Values with Climate Change	<u>B.L. Bodamer and J.M. Bossenbroek</u> Wetlands as Barriers: Effects of vegetated waterways on the downstream dispersal of zebra mussels ( <i>Dreissena polymorpha</i> )	<u>J. Hagar et al.</u> Detection and quantification of cyanobacteria and microcystin in recreational waters of two west Michigan Lakes: Muskegon Lake and Bear Lake using three different methodologies	10:20 a.m.
<u>P.M. Yurista et al.</u> Lake Superior zooplankton LOPC biomass prediction compares well with a probability based net survey	<u>A.Y. Karatayev et al.</u> How Freshwater Macroinvertebrate Invaders Differ From Native Species	<u>A.E. Poste et al.</u> Microcystin in Water and Fish from East African Lakes	10:40 a.m.
<u>D.J. McDonell et al.</u> Demonstrating the Ecological Benefits of Habitat Restoration in the Canadian Areas of Concern Using Breeding Bird Atlas Data	<u>W.L. Chadderton et al.</u> Intervention Strategies for Limiting the Spread of Aquatic Invasive Species by Recreational Boaters	<u>T.T. Wynne et al.</u> Cyanobacterial Monitoring System for Lake Erie	11:00 a.m.
<b><u>PLENARY PRESENTATION: Dr. Al Kristofferson</u></b> <b><u>Managing Director, Lake Winnipeg Research Consortium</u></b> <b><u>“Our Lakes, Our Community: Lake Winnipeg Research Consortium Inc.”</u></b>  <b><u>Wenjack Theatre</u></b>			11:20 a.m.
LUNCH Otonabee and Gzowski College Dining Halls (meal cards required)			12:00 p.m.

### Wednesday, May 21

	<u>Rm 117</u> <u>Gzowski College</u>	<u>Rm 115</u> <u>Gzowski College</u>	<u>Rm 203</u> Otonabee College
	<b>Great Lakes Wetlands: advances in mapping, assessment, ecology and restoration</b> <i>Co-Chairs: Brian Potter and Pat Chow-Fraser</i>	<b>Human health risks associated with recreational activities and drinking water quality</b> <i>Co-Chairs: Sonia Joseph and Stephen Brandt</i>	<b>Determination of the water balance, its components and impacts for Great Lakes</b> <i>Chair: Roger Gauthier</i>
Time	Presented by / Title	Presented by / Title	Presented by / Title
1:20 p.m.	<u>E.K. McGauley</u> Wetlands that Work: A Comparative Assessment of the Ecological Potential of Treatment Wetlands Using Macroinvertebrate Indicators	<u>D.C. Rockwell</u> and H. Wirick An Overview of the 2007 Pilot Sanitary Surveys.	<u>B.M. Lofgren</u> Atmospheric and Hydrologic Impacts of Increased Greenhouse Gases on the Great Lakes Simulated Using CHARM2
1:40 p.m.	<u>M.J. Cooper et al.</u> Invertebrate Biomass and Community Composition in the Muskegon River Drowned River Mouth Wetland: Variability Throughout the Growing Season	<u>T.S. Hunter et al.</u> Forecasting Grand River (Michigan) discharge and pollution loads	<u>C. DeMarchi</u> Estimating Over-Lake Precipitation: Traditional Approaches and Alternative Methodologies
2:00 p.m.	<u>R. De Catanzaro</u> and P. Chow-Fraser Use of ecological indices to predict occurrence and abundance of turtle species in Great Lakes coastal marshes	<u>E. Gungor et al.</u> Dynamics of the Grand River Plume Entering Lake Michigan	M.M. McPherson and <u>T.A. Dahl</u> Modeling the Routing of Water Through the Upper Great Lakes Using HEC-RAS
2:20 p.m.	<u>M. Cvetkovic</u> and P. Chow-Fraser Relative importance of biotic and abiotic factors affecting species composition of the fish communities in coastal wetlands of eastern Georgian Bay	<u>N. Nekouee et al.</u> 3D Numerical Prediction of the Grand River Plume	<u>M.S. White et al.</u> Characterizing water level fluctuations in large lakes of Ontario
2:40 p.m.	<u>L.D. Bouvier et al.</u> Relating Species Traits to Habitat Characteristics in Coastal Wetlands of the Lower Great Lakes	<u>T.A. Edge et al.</u> Occurrence of waterborne pathogens at offshore drinking water intakes in Lake Ontario	<u>M.P. Stainton et al.</u> Effects of Climate Change on Phosphorous and Nitrogen Loading to Lake Winnipeg
3:00 p.m.	<b>BREAK</b>		



### Wednesday, May 21

<u>Rm 114</u> <u>Gzowski College</u>	<u>Science Lecture Hall</u> <u>Otonabee College</u>	<u>Wenjack Theatre</u> <u>Otonabee College</u>	
<p><b>Assessing and Improving Monitoring Programs in the Great Lakes</b> <i>Co-Chairs: Martin Stapanian and Jean Adams</i></p>	<p><b>Aquatic invasive species in the Great Lakes watershed</b> <i>Co-Chairs: Michael Fox and Lynda Corkum</i></p>	<p><b>Nuisance Algae in the Great Lakes: Causes, consequences and future directions</b> <i>Co-Chairs: Juli Dyble and Gary Fahnenstiel</i></p>	
Presented by / Title	Presented by / Title	Presented by / Title	Time
<p><u>M.A. Stapanian et al.</u> Summer and autumn abundances of young-of-year yellow perch and walleye: Time of day matters</p>	<p><u>R.A. Sturtevant et al.</u> Recent History of Great Lakes Saltwater Vessel Traffic, Delivery of Ballast Water, and the Effect of Ballast Water Exchange on Aquatic Species Invasions</p>	<p><u>M.A. Evans and E. Litchman</u> Physical and biological controls on abundance of <i>Microcystis</i>, a harmful algal bloom (HAB) species</p>	1:20 p.m.
<p><u>M.A. Stapanian et al.</u> Diel Shift in Young-of-year Yellow Perch: Association with Increased Oligotrophication</p>	<p><u>B. Miller et al.</u> Great Lakes Regional Research Information Network - Lake Michigan</p>	<p><u>L.A. Molot et al.</u> Iron Regulation of Bloom Forming Cyanobacteria Abundance</p>	1:40 p.m.
<p><u>P.M. Kocovsky et al.</u> Evaluating Sampling Regimens for Indices of Yellow Perch Abundance in Lake Erie</p>	<p><u>W.H. Nelson et al.</u> An evaluation of viability assays using a continuous imaging particle analyzer (FlowCAM®) for ballast water analysis and regulatory compliance</p>	<p><u>J.D. Chaffin et al.</u> Quantification of <i>Microcystis</i> sp. blooms in western Lake Erie (2002-2007) and relation to tributary flow.</p>	2:00 p.m.
<p><u>G.B. Yunker et al.</u> Evaluation of Single-Pass Electrofishing and Rapid Habitat Assessment for Monitoring a Species-at-Risk Stream Fish, Redside Dace (<i>Clinostomus elongatus</i>)</p>	<p><u>A. Drake et al.</u> Quantifying the Spread of Aquatic Invasive Species, Genes and Pathogens: The Baitfish Industry in Ontario as a Model Pathway</p>	<p><u>H.J. Kling et al.</u> Succession of Phytoplankton in Lake Winnipeg 2003-2007</p>	2:20 p.m.
<p>G.J.A. Hansen and <u>M.L. Jones</u> A Comparison of Two Methods of Larval Sea Lamprey (<i>Petromyzon marinus</i>) Assessment in the Great Lakes: How Much Information Is Needed to Effectively Rank Streams for Treatment?</p>	<p><u>O. Birceanu et al.</u> Different Effects of TFM on Gill Function and Toxicity in Larval Sea Lamprey (<i>Petromyzon marinus</i>) Compared to Rainbow Trout (<i>Oncorhynchus mykiss</i>)</p>	<p><u>J.A. Berges et al.</u> Are nuisance blooms of benthic algae reshaping nearshore silica cycling in Lake Michigan?</p>	2:40 p.m.
<b>BREAK</b>			3:00 p.m.

### Wednesday, May 21

	<u>Rm 117</u> Gzowski College	<u>Rm 115</u> Gzowski College	<u>Rm 203</u> Otonabee College
	<p><b>Great Lakes Wetlands: advances in mapping, assessment, ecology and restoration</b> <i>Co-Chairs: Brian Potter and Pat Chow-Fraser</i></p>	<p><b>Human health risks associated with recreational activities and drinking water quality</b> <i>Co-Chairs: Sonia Joseph and Stephen Brandt</i></p>	<p><b>Natural systems in an urban environment</b> <i>Chair: Brent Wootton</i></p>
Time	Presented by / Title	Presented by / Title	Presented by / Title
3:20 p.m.	<p><u>T. Hurley</u> and P. Chow-Fraser Fish community changes associated with water-level decline in wetlands of Severn Sound, Georgian Bay</p>	<p><u>S.J. Choc</u> <i>et al.</i> <i>Escherichia coli</i> and Sediment Load Monitoring in Berger Ditch with Implications for Reduction of Water Quality Advisories at Maumee Bay State Park, Oregon, Ohio</p>	<p><u>R.F. Marek</u> <i>et al.</i> Assessment of Surficial Sediment Hydroxylated PCBs in the Indiana Harbor and Ship Canal</p>
3:40 p.m.	<p><u>L.A. Smith</u> and P. Chow-Fraser Monitoring Wetland Birds in Great Lakes Coastal Marshes</p>	<p><u>R.E. Hicks</u> <i>et al.</i> Waterfowl Abundance is not a Reliable Predictor of the Dominant Avian Source or Levels of Fecal Indicator Bacteria at Lake Superior Beaches</p>	<p>K.C. Hornbuckle and <u>A. Martinez</u> PCBs in Surficial Sediments in East Chicago, Indiana</p>
4:00 p.m.	<p><u>J.D. Midwood</u> and P. Chow-Fraser Automated approach using Definiens Developer 7.0 for classification of aquatic vegetation in the coastal wetlands of Georgian Bay</p>	<p><u>G.A. Meek</u> and A.S. Crowe Role of Groundwater-Lake Interaction on <i>E. coli</i> Levels at Beaches of the Great Lakes</p>	<p><u>S.S. LeBlond</u> <i>et al.</i> Metal Contamination Sources and Fate within the Rideau River Waterway</p>
4:20 p.m.	<p><u>D. Rokitnicki-Wojcik</u> and P. Chow-Fraser Use of logic-based decision tree analysis and IKONOS imagery to classify coastal high marsh and inland wetland vegetation</p>	<p><u>A.S. Crowe</u> and V. Balakrishnan Antibiotics in Groundwater below Beaches of the Great Lakes</p>	<p><u>D. Hu</u> <i>et al.</i> Prevalence and Distribution of Atmospheric Polychlorinated Biphenyls in Chicago</p>
4:40 p.m.	<p><u>S.K. Parnanen</u> Using Regional Coastal Wetland Monitoring to Support Restoration and/or Adaptive Management at a Site Level</p>		<p><u>K. McDonald</u> and R. Toning Tommy Thompson Park – Toronto's Urban Wilderness</p>
5:00 p.m.			<p><u>D.A. Woolnough</u> <i>et al.</i> Transitions from Agricultural to Urban Ecosystems: A Nutrient Approach</p>

### Wednesday, May 21

<u>Rm 114</u> <u>Gzowski College</u>	<u>Science Lecture Hall</u> <u>Otonabee College</u>	<u>Wenjack Theatre</u> <u>Otonabee College</u>	
<p><b>Assessing and Improving Monitoring Programs in the Great Lakes</b> <i>Co-Chairs: Martin Stapanian and Jean Adams</i></p>	<p><b>Restoration of Nearshore Habitats &amp; Species</b> <i>Co-Chairs: Eric Sager and Chris Wilson</i></p>	<p><b>Nuisance Algae in the Great Lakes: Causes, consequences and future directions</b> <i>Co-Chairs: Juli Dyble and Gary Fahnenstiel</i></p>	
Presented by / Title	Presented by / Title	Presented by / Title	Time
<p><u>T.B. Johnson</u> <i>et al.</i> Nearshore, small fish monitoring in the Great Lakes basin</p>	<p><u>R.J. Bobrowski</u> <i>et al.</i> Survival, Growth and Emigration of Stocked Atlantic Salmon in Lake Ontario Streams</p>	<p><u>T.B. Bridgeman</u> and W.V. Sigler <i>Lyngbya wollei</i> Blooms in Western Lake Erie 2006-2007</p>	3:20 p.m.
<p><u>S.C. Riley</u> and E.F. Roseman Deepwater demersal fish community collapse in Lake Huron: implications for monitoring of Great Lakes fish communities.</p>	<p><u>P.A. Ryan</u> and T. MacDougall Habitat Objectives to Support Rehabilitation of Percids in Lake Effect Zones of Lake Erie and Detroit R Corridor</p>	<p><u>S.B. Watson</u> <i>et al.</i> Cyanobacterial Impairments In The Great Lakes-St. Lawrence River: Benthic Fingerprints Of Anthropogenic Activity</p>	3:40 p.m.
<p><u>D.L. Yule</u> <i>et al.</i> Development of a New Lake-wide Multiple Gear Survey Design to Assess Status and Trends of the Lake Superior Fish Community</p>	<p><u>S. Usjak</u> and J.D.S. Witt Genetic Differentiation of Diporeia Populations in the Laurentian Great Lakes: Implications for Conservation and Management</p>	<p><u>R.R. Redisker</u> <i>et al.</i> <i>Cylindrospermopsis raciborskii</i> in West Michigan Drowned River Mouth Lakes</p>	4:00 p.m.
	<p><u>D.G. Fitzgerald</u> <i>et al.</i> Expansion of Submerged Aquatic Vegetation in Lakes and Rivers Across The Great Lakes Basin: Evidence For Increased Water Clarity and a New Management Challenge</p>	<p><u>M.R. Gretz</u> and D.S. Domozych It's Only a Matter of Time: When Will the Diatom <i>Didymosphenia geminata</i> Become a Nuisance Alga in the Great Lakes Basin?</p>	4:20 p.m.
	<p><u>R.D. McCulloch</u> <i>et al.</i> Innovative Methods in Riverbank Stability Characterization: Classification of the Tittabawassee and Saginaw River Banks</p>	<p><u>T.F. Bidleman</u> <i>et al.</i> Chiral Taste and Odour Compounds in the St. Lawrence River and Lake Ontario</p>	4:40 p.m.
	<p><u>R. Toninger</u> and K. McDonald Shoreline Restoration at Tommy Thompson Park: A Case Study of Essential Habitat Creation</p>	<p><u>S.B. Watson</u> <i>et al.</i> Cyanobacterial Impairments Following Remediation in a Eutrophic Area of Concern: Bay of Quinte, Lake Ontario</p>	5:00 p.m.

## Thursday, May 22

	<u>Rm 117</u> <u>Gzowski College</u>	<u>Rm 115</u> <u>Gzowski College</u>	<u>Rm 203</u> Otonabee College
	<b>Physical limnology and physical-chemical-biological coupling in lakes</b> <i>Co-Chairs: Dmitry Beletsky, Chin Wu, and George Arhonditsis</i>	<b>Health Indicators for the Great Lakes Water Quality Agreement</b> <i>Co-Chairs: David Carpenter, Christopher De Rosa, Michael Gilbertson, and Tom Muir</i>	<b>Natural systems in an urban environment</b> <i>Chair: Brent Wootton</i>
Time	Presented by / Title	Presented by / Title	Presented by / Title
8:00 a.m.			
8:20 a.m.	<u>B.G. Ludewig</u> and J.A. Austin Upwelling in idealized stratified lakes	<u>T.A. Muir</u> On the Need for Health Indicators for the Great Lakes Water Quality Agreement	<u>R.R. Rediske et al.</u> Integrated Nutrient Assessment of Bear Lake, Michigan
8:40 a.m.	<u>C.D. Troy et al.</u> Hydrodynamic modeling of large stratified lakes	<u>M. Gilbertson</u> Effects of Diversionary Reframing on the Selection of GLWQA Indicators	D.J. Gefell and <u>D.J. Hughes</u> An Integrated Assessment of Water Quality in Onondaga Creek, Syracuse, New York
9:00 a.m.	<u>J. Wang et al.</u> Developing Great Lake Ice Model (GLIM) using CIOM (Coupled Ice-Ocean Model) in Lake Erie	<u>P.W. Stewart et al.</u> Intelligence (IQ) in Children Exposed to PCBs, MeHg and other contaminants in the Great Lakes	<u>N.F. Manning</u> Hydrology and Plant Community Alterations in Wetlands of the Cuyahoga Valley National Park
9:20 a.m.	<u>V.T. Nguyen et al.</u> Numerical simulation of nonlinear internal waves generated by wind forcing over a surface of the Lake Erie	<u>D.O. Carpenter</u> Health effects of PCB exposure at Akwesasne	<u>A.S. Chiandet</u> and M.A. Xenopoulos Determinants of Water Quality and Plankton Communities in Urban Stormwater Ponds of the Laurentian Great Lakes Basin
9:40 a.m.	<u>Q. Liao et al.</u> In-Situ PIV Measurement of Turbulent Flow Structures over a Mussel Bed in Lake Michigan	<u>N.A. Nadia Abdelouahab et al.</u> Gender differences in the effects of organochlorines, mercury and lead on thyroid hormone levels in lakeside communities of Quebec (Canada)	<u>M.S. Poos et al.</u> Using meta-population viability analysis to quantify risks of urbanization on two populations of redbreast dace ( <i>Clinostomus elongatus</i> )
10:00 a.m.	<b>BREAK</b>		

**Thursday, May 22**

<u>Rm 114</u> <u>Gzowski College</u>	<u>Science Lecture Hall</u> <u>Otonabee College</u>	<u>Wenjack Theatre</u> <u>Otonabee College</u>	
	<b>Ecology and Management of Great Lakes Fish Populations</b> <i>Chair: Scott McNaught</i>	<b>Lake Simcoe</b> <i>Co-Chairs: Stephanie Guildford, Jenny Winter, David Depew, and Tedy Ozersky</i>	
Presented by / Title	Presented by / Title	Presented by / Title	Time
			8:00 a.m.
		<u>J.G. Winter et al.</u> Trends in the Water Chemistry of Lake Simcoe over Three Decades and Changes in Phytoplankton Community Composition	8:20 a.m.
		<u>R.J. Baldwin and M. Walters</u> Lake Simcoe Assimilative Capacity Study (ACS) – Growth Management through Informed Decision Making	8:40 a.m.
		<u>R.J. Baldwin et al.</u> Natural Heritage Planning in the Lake Simcoe Basin – A Foundation for Science, Research and Planning	9:00 a.m.
		<u>F. Duckett et al.</u> Numerical Modeling in Support of Source Water Protection Zone Delineation on Lake Simcoe	9:20 a.m.
		<u>B. Gharabaghi et al.</u> Atmospheric Sources of Phosphorous to Lake Simcoe	9:40 a.m.
<b>BREAK</b>			10:00 a.m.

## Thursday, May 22

	<u>Rm 117</u> <u>Gzowski College</u>	<u>Rm 115</u> <u>Gzowski College</u>	<u>Rm 203</u> Otonabee College
	<b>Physical limnology and physical-chemical-biological coupling in lakes</b> <i>Co-Chairs: Dmitry Beletsky, Chin Wu, and George Arhonditsis</i>	<b>Health Indicators for the Great Lakes Water Quality Agreement</b> <i>Co-Chairs: David Carpenter, Christopher De Rosa, Michael Gilbertson, and Tom Muir</i>	<b>Natural systems in an urban environment</b> <i>Chair: Brent Wootton</i>
Time	Presented by / Title	Presented by / Title	Presented by / Title
10:20 a.m.	<u>Q. Lu et al.</u> 3D Hydrodynamic Modeling in Huron and Erie Corridor (HEC)	<u>D.S. Henshel</u> and A. Da Silva Using Landscape Scale Modeling as a Tool to Assess Potential Health Indicators	<u>P.J. Steen et al.</u> Variation in the effect of urbanization on Michigan and Wisconsin stream fish: How can good fish communities exist in urban areas?
10:40 a.m.	<u>E.J. Anderson et al.</u> An Operational 2-Dimensional Hydrodynamic Model of the St. Clair-Detroit River Waterway: Implementation into the Great Lakes Forecasting System (GLFS)	<u>J.P. Ludwig</u> Survival and Recruitment in Double-crested Cormorants from the Upper Great Lakes 1977-2007: Relationships with contaminants.	<u>C.A. Bach</u> Toronto Waterfront Aquatic Habitat Restoration Strategy
11:00 a.m.	<u>D. Beletsky et al.</u> Nested grid circulation modeling in southern Lake Michigan	<u>D.S. Henshel</u> and D.W. Sparks Developing Avian Delisting Criteria for the Great Lakes AOCs	<u>T.J. Dekker et al.</u> Integrating Hydrology, Ecology and River Geomorphology into Urban Landscape Design: The Lower Don Lands Naturalization Project
11:20 a.m.	<b><u>PLENARY PRESENTATION: Rick Findlay</u></b> <b><u>Director, Water Programme, Pollution Probe</u></b> <b><u>“Sustaining the Sweetwater Seas”</u></b>  <b><u>Wenjack Theatre</u></b>		
12:00 p.m.	LUNCH Otonabee and Gzowski College Dining Halls (meal cards required)		

**Thursday, May 22**

<u>Rm 114</u> <u>Gzowski College</u>	<u>Science Lecture Hall</u> <u>Otonabee College</u>	<u>Wenjack Theatre</u> <u>Otonabee College</u>	
	<b>Ecology and Management of Great Lakes Fish Populations</b> <i>Chair: Scott McNaught</i>	<b>Lake Simcoe</b> <i>Co-Chairs: Stephanie Guildford, Jenny Winter, David Depew, and Tedy Ozersky</i>	
Presented by / Title	Presented by / Title	Presented by / Title	Time
	<u>A.E. Haponski et al.</u> Molecular and Biogeographic Resolution of Cryptic Taxa in the Greenside Darter <i>Etheostoma blennioides</i> Complex	<u>S.J. Guildford et al.</u> Seasonal and spatial trends in TP and Chlorophyll in Lake Simcoe: Impact of dreissenids?	10:20 a.m.
	<u>T. Bollin et al.</u> Genetic Divergence Patterns of the Rainbow Darter <i>Etheostoma caeruleum</i> : A Watershed Analysis using Mitochondrial DNA Sequences and Nuclear Microsatellites	<u>C.F.M. Lewis et al.</u> Lake Simcoe Sediment Architecture: Evidence for a Lowstand During Early Holocene Dry Climate	10:40 a.m.
	<u>J.A. Banda and C.A. Stepien</u> A temporal analysis of walleye genetic stock structure	<u>D.L. Rodé and R. Quinlan</u> A paleolimnological reconstruction of historical Lake Simcoe cold-water fish habitat	11:00 a.m.
<b><u>PLENARY PRESENTATION: Rick Findlay</u></b> <b><u>Director, Water Programme, Pollution Probe</u></b> <b><u>“Sustaining the Sweetwater Seas”</u></b>			11:20 a.m.
<b><u>Wenjack Theatre</u></b>			
LUNCH Otonabee and Gzowski College Dining Halls (meal cards required)			12:00 p.m.

## Thursday, May 22

	<u>Rm 117</u> Gzowski College	<u>Rm 115</u> Gzowski College	<u>Rm 203</u> Otonabee College
	<b>Physical limnology and physical-chemical-biological coupling in lakes</b> <i>Co-Chairs: Dmitry Beletsky, Chin Wu, and George Arhonditsis</i>	<b>Health Indicators for the Great Lakes Water Quality Agreement</b> <i>Co-Chairs: David Carpenter, Christopher De Rosa, Michael Gilbertson, and Tom Muir</i>	<b>Watershed Contributions to Chemical Contamination in the Great Lakes</b> <i>Co-Chairs: Paul Helm and Chris Marvin</i>
Time	Presented by / Title	Presented by / Title	Presented by / Title
1:20 p.m.	<u>R.R. Yerubandi</u> <i>et al.</i> Application of a numerical model for circulation and thermal structure in Hamilton Harbour	<u>W.W. Bowerman</u> and G.A. Fox Analysis of Wildlife Indicators to Measure Impaired Reproduction and Deformities	<u>W.G. Booty</u> and G.S. Bowan The Determination of Stream Loadings and the Identification of Sources of Contaminants Along the North Shore of Lake Ontario
1:40 p.m.	<u>M.G. Wells</u> <i>et al.</i> Residence timescales and the underlying hydrodynamic processes in Frenchman's Bay, a Lake Ontario coastal embayment.	<u>P. Martin</u> <i>et al.</i> Assessment of beneficial use impairments in a model amphibian, northern leopard frogs, in the St. Clair Area of Concern	<u>V. Pileggi</u> <i>et al.</i> A Survey of Ontario Sewage Treatment Plant Discharges and Landfill Leachates in the Great Lakes Basin
2:00 p.m.	<u>L. Boegman</u> <i>et al.</i> Modeling Lake Ontario Hydrodynamics: Performance of Basin-Scale and Nearshore Simulations	<u>J. Sherry</u> <i>et al.</i> Are Fish in the St. Clair River Exposed to Environmental Estrogens?	<u>J.L.A. Hood</u> and W.D. Taylor Significance of riverine macrophytes as a sink for watershed derived phosphorus loading to lake Erie
2:20 p.m.	<u>C.D. Troy</u> <i>et al.</i> Richardson Number Measurements in Breaking Internal Waves	<u>J. Sherry</u> <i>et al.</i> Is the thyroid status of wild-fish impaired in the Lake Erie Areas of Concern?	<u>H.F. Wilson</u> and M.A. Xenopoulos Landscape determinants of DOC concentration and character in streams of the Laurentian Great Lakes Basin
2:40 p.m.	<u>C.H. Wu</u> <i>et al.</i> Study of Potential Erosion in Lower Sheboygan River	<u>G. Soucy</u> <i>et al.</i> Evaluating the potential health impacts of multi-compound emissions within the Great Lakes – St. Lawrence region	<u>C. DeMarchi</u> <i>et al.</i> Sediment and Nutrient Load Simulation for the Saginaw Bay AIF
3:00 p.m.	<b>BREAK</b>		



## Thursday, May 22

<u>Rm 114</u> <u>Gzowski College</u>	<u>Science Lecture Hall</u> <u>Otonabee College</u>	<u>Wenjack Theatre</u> <u>Otonabee College</u>	
<b>Dreissenids in North America: 20 Years of Consequences</b> <i>Co-Chairs: David F. Reid, Thomas Nalepa, and Henry A. Vanderploeg</i>	<b>Ecology and Management of Great Lakes Fish Populations</b> <i>Chair: Scott McNaught</i>	<b>Lake Simcoe</b> <i>Co-Chairs: Stephanie Guildford, Jenny Winter, David Depew, and Tedy Ozersky</i>	
Presented by / Title	Presented by / Title	Presented by / Title	Time
<u>D.F. Reid</u> and D. Wilkinson The Zebra Mussel: Catalyst for National Policy on Aquatic Invasive Species	<u>M.A. Koops</u> <i>et al.</i> Implications of Ecosystem Change for the Life History of Lake Whitefish	<u>F.J. Longstaffe</u> <i>et al.</i> Stable Isotope Evidence for Groundwater Seepage into Kempenfelt Bay, Lake Simcoe	1:20 p.m.
<u>J.S. Nalbone</u> Stopping the Next Zebra Mussel: 20 Years Later, Policy Gaps Remain	<u>J.E. Marsden</u> <i>et al.</i> Lake Whitefish and Zebra Mussels in Lake Champlain: One Up, One Down, No Connection?	<u>E.A. Stainsby</u> <i>et al.</i> Trends in the Thermal Dynamics of Lake Simcoe from 1971 to 2007	1:40 p.m.
<u>H.J. MacIsaac</u> Developments in Invasion Ecology	<u>J.E. Ryman</u> <i>et al.</i> Spatial and temporal analysis of Hamilton Harbour food web components using $\delta^{15}\text{N}$ and $\delta^{13}\text{C}$	<u>D.O. Evans</u> <i>et al.</i> Hypolimnetic Temperature and Dissolved Oxygen in Lake Simcoe Before and After Invasion by Zebra Mussels and Implications for Lake Trout	2:00 p.m.
<u>A. Ricciardi</u> Ecological distinctiveness as a driver of exotic species impacts: bivalves as a case study	<u>C.E. Lumb</u> <i>et al.</i> Distribution and Abundance of Small-Bodied Fishes in Lake Winnipeg	<u>J.K.L. La Rose</u> <i>et al.</i> Historical Trends and Current Status of the Lake Simcoe Coldwater fish Community	2:20 p.m.
<u>T.F. Nalepa</u> A Chronological Perspective on Ecological Impacts of Dreissenids in the Great Lakes: Some Expected and Unexpected Outcomes	<u>B. T.J. Stewart</u> <i>et al.</i> Invasive species disruption of the Lake Ontario food web affects alewife diet, production and consumption of zooplankton and <i>Mysis relicta</i>	<u>W. Metcalfe</u> <i>et al.</i> Assessing Nearshore Small-Fish Community Biodiversity in Lake Simcoe	2:40 p.m.
<b>BREAK</b>			3:00 p.m.

**Thursday, May 22**

	<u>Rm 117</u> Gzowski College	<u>Rm 115</u> Gzowski College	<u>Rm 203</u> Otonabee College
	<p><b>Physical limnology and physical-chemical-biological coupling in lakes</b>  <i>Co-Chairs: Dmitry Beletsky, Chin Wu, and George Arhonditsis</i></p>	<p><b>Health Indicators for the Great Lakes Water Quality Agreement</b>  <i>Co-Chairs: David Carpenter, Christopher De Rosa, Michael Gilbertson, and Tom Muir</i></p>	<p><b>Watershed Contributions to Chemical Contamination in the Great Lakes</b>  <i>Co-Chairs: Paul Helm and Chris Marvin</i></p>
Time	Presented by / Title	Presented by / Title	Presented by / Title
3:20 p.m.	<p><u>V. Bennington</u> <i>et al.</i>            Climate Impacts on the Circulation and Thermal Structure in Lake Superior</p>		<p><u>E.W. Murphy</u> <i>et al.</i>            Pharmaceuticals and Personal Care Products (PPCPs), Hormones, and Alkylphenol Ethoxylates (APEs) in the North Shore Channel of the Chicago River - Part 1: <i>Concentrations in Fish Tissue and Analysis of Reproductive Impairment</i></p>
3:40 p.m.	<p><u>J.A. Austin</u>            Observed increases in Wind Speed over Lake Superior</p>		<p><u>C.M. Zuccarino-Crowe</u> <i>et al.</i>            Pharmaceuticals and Personal Care Products (PPCPs), Hormones, and Alkylphenol Ethoxylates (APEs) in the North Shore Channel of the Chicago River – Part II: <i>Concentrations in Effluent and the Receiving Stream</i></p>
4:00 p.m.	<p><u>N. Atilla</u> <i>et al.</i>            The Carbon Budget of Lake Superior: First Results from the CyCLes Project</p>		<p><u>H. Li</u> <i>et al.</i>            Monitoring Nearshore Contamination in Lake Ontario and Lake Erie Using Polar Passive (POCIS) Samplers</p>
4:20 p.m.	<p><u>N.R. Urban</u> <i>et al.</i>            CO<sub>2</sub> Fluxes Across the Lake Superior Surface: Coupling of Physics, Chemistry and Biology</p>		<p><u>T.L. Labencki</u> and D. Boyd            PCB Contributions to Hamilton Harbour</p>
4:40 p.m.	<p>B.V. Yadav and <u>J.F. Atkinson</u>            Circulation and Mixing in Lake Champlain</p>		<p><u>L.E. Melymuk</u> <i>et al.</i>            Comparison of Chemical Profiles in Urban Rivers during Base Flow and Storm Events</p>

**Thursday, May 22**

<u>Rm 114</u> <u>Gzowski College</u>	<u>Science Lecture Hall</u> <u>Otonabee College</u>	<u>Wenjack Theatre</u> <u>Otonabee College</u>	
<p><b>Dreissenids in North America: 20 Years of Consequences</b> <i>Co-Chairs: David F. Reid, Thomas Nalepa, and Henry A. Vanderploeg</i></p>	<p><b>Ecology and Management of Great Lakes Fish Populations</b> <i>Chair: Scott McNaught</i></p>	<p><b>Lake Simcoe</b> <i>Co-Chairs: Stephanie Guildford, Jenny Winter, David Depew, and Tedy Ozersky</i></p>	
Presented by / Title	Presented by / Title	Presented by / Title	Time
<p><u>C.R. O'Neill</u> Operational and Economic Impacts of Zebra Mussels on Great Lakes Water-Dependent Infrastructure</p>	<p><u>M.S. Ridgway et al.</u> Using Hydroacoustics to Infer Spatial Patterns of Lake Huron Coastal Pelagic Fish</p>	<p><u>S.P. Bhavsar et al.</u> Temporal Trends of Legacy Contaminants in Lake Simcoe Fish</p>	3:20 p.m.
<p><u>D.O. Kelch</u> and <u>F.L. Snyder</u> Twenty Years Post-Invasion: Overview of Impacts from <i>Dreissenids</i> on Recreational Users in Lake Erie</p>	<p><u>O.T. Gorman et al.</u> Population Trends in Lake Herring (<i>Coregonus artedii</i>) in the Apostle Islands Region of Lake Superior, 1974-2007</p>	<p><u>K. Mason</u> and <u>D.O. Evans</u> The influence of predation by crayfish on over-wintering lake trout eggs and recruitment success in Lake Simcoe</p>	3:40 p.m.
<p><u>C.Y. Swinehart et al.</u> Reflections on Outreach In Uncharted Waters: How the discovery of zebra mussels in the Great Lakes has changed public outreach and involvement in the region.</p>	<p><u>K.A. Kayle</u> Population Dynamics of Steelhead in Lake Erie</p>	<p><u>A.J. Skinner et al.</u> Invasion history of zebra mussels in Lake Simcoe</p>	4:00 p.m.
<p><u>D.F. Reid</u> Oregon Public Broadcasting Video: The Silent Invasion: Quagga Mussels (Lake Mead).</p>	<p><u>G. Paterson et al.</u> Latitudinal and temporal declines in Great Lakes lake trout energy densities</p>	<p><u>T. Ozersky et al.</u> Post-dreissenid changes in Lake Simcoe's crayfish community</p>	4:20 p.m.
<p><u>A.N. Cohen</u> and <u>R.A. Moll</u> Quagga Mussel Invasion West of the 100th Meridian</p>	<p><u>B.A.F. Turner et al.</u> Salmonid cannibalism in Lake Ontario: testing the predator curtain hypothesis</p>	<p><u>A. Houben et al.</u> Benthic Algal Nutrient Dynamics within Lake Simcoe</p>	4:40 p.m.
<p><u>C. Johns</u> Total Cadmium, Copper and Zinc in Zebra Mussels of the Upper St Lawrence River, 1994 through 2005</p>	<p><u>X. Zhu et al.</u> Reconstruction of biomass trends of American eel <i>Anguilla rostrata</i>, population in Lake Ontario and upper St. Lawrence River, 1959-2004</p>	<p><u>D.C. Depew et al.</u> Macrophytes in Cooks Bay: Effects on water quality and nutrient cycling</p>	5:00 p.m.
	<p><u>T.M. Neeson et al.</u> River Network Structure Influences Sea Lamprey Distribution in a Simple Model</p>		5:20 p.m.

**Friday, May 23**

	<u>Rm 117</u> Gzowski College	<u>Rm 115</u> Gzowski College	<u>Rm 203</u> Otonabee College
	<p><b>Physical limnology and physical-chemical-biological coupling in lakes</b>  <i>Co-Chairs: Dmitry Beletsky, Chin Wu, and George Arhonditsis</i></p>	<p><b>Building Toward a Science Strategy for the Great Lakes Basin under the Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement</b>  <i>Chair: Rob Messervey</i></p>	<p><b>Watershed Contributions to Chemical Contamination in the Great Lakes</b>  <i>Co-Chairs: Paul Helm and Chris Marvin</i></p>
Time	Presented by / Title	Presented by / Title	Presented by / Title
8:20 a.m.	<p><u>J.F. Atkinson</u> and J.A. Austin                      Particle Tracking Applications to Link Physical and Biogeochemical Transport</p>	<p>H.W. Reeves and <u>J.R. Nicholas</u>                      Water Availability and Use in the Great Lakes Basin</p>	<p><u>B.F. Scott</u> <i>et al.</i>                      PFAs in Lakes Erie and Superior and their Tributaries</p>
8:40 a.m.	<p><u>M.R. Twiss</u> <i>et al.</i>                      The CACHE: A Unique Limnological Feature in Ice Covered Lake Erie</p>	<p><u>A. Mayer</u> <i>et al.</i>                      Modeling and Analyzing the Use, Efficiency, Value, and Governance of Water in the Great Lakes Region through an Integrated Approach</p>	<p><u>M. Venier</u> and R.A. Hites                      Brominated Flame Retardant and Dioxin Concentrations on the Shores of the Great Lakes</p>
9:00 a.m.	<p><u>J.C. May</u> <i>et al.</i>                      Total Areal Extent of Anoxia within the Central Basin of Lake Erie 1997-2007: a Geographic Information System (GIS) Based Analysis</p>	<p><u>B. Hodgins</u> <i>et al.</i>                      Challenges of Developing Adaptive Environmental Regulatory Policy</p>	<p><u>X. Zhang</u> <i>et al.</i>                      Estimation PBDEs' emission from sources in the indoor environment</p>
9:20 a.m.	<p><u>W.J. Edwards</u> <i>et al.</i>                      Oxygen dynamics within Chironomus spp. burrows and the potential impact on Lake Erie central basin seasonal hypoxia</p>	<p><u>S. Chiblow</u>                      Engaging Ontario's First Nations in Scientific and Water Policy Initiatives</p>	<p><u>T.F. Bidleman</u> <i>et al.</i>                      Chiral Current Used Pesticides In Ontario Streams And The Great Lakes</p>
9:40 a.m.	<p><u>K.A. Krieger</u> <i>et al.</i>                      Nearshore Hypoxia in Lake Erie's Central Basin: a Proposed Lake Quality Indicator</p>	<p><u>M. Deleary</u> <i>et al.</i>                      Ontario First Nations Perspectives on the Science Strategy of the Great Lakes - St. Lawrence River Basin Sustainable Water Resources Agreement</p>	<p><u>A.E. Dove</u>                      Trace Organic Contaminants in the Open Waters of the Laurentian Great Lakes - How Low Can We Go?</p>
10:00 a.m.	<b>BREAK</b>		

## Friday, May 23

<u>Rm 114</u> <u>Gzowski College</u>	<u>Science Lecture Hall</u> <u>Otonabee College</u>	<u>Wenjack Theatre</u> <u>Otonabee College</u>	
<b>Dreissenids in North America: 20 Years of Consequences</b> <i>Co-Chairs: David F. Reid, Thomas Nalepa, and Henry A. Vanderploeg</i>	<b>General Contributions</b> <i>Chair: Patricia Chow-Fraser</i>	<b>Ecology and Management of Great Lakes Fish Populations</b> <i>Chair: Scott McNaught</i>	
Presented by / Title	Presented by / Title	Presented by / Title	Time
<u>H.A. Vanderploeg et al.</u> Dreissenids as nearshore and offshore engineers: predicting direct and indirect effects of mussels on pelagic food webs	<u>S.A. Bortone et al.</u> Recent Trends in Great Lakes Research: Information for Those Who Suffer from Lake Envy!		8:20 a.m.
<u>L.E. Burlakova and A.Y. Karatayev</u> The Effect Of Zebra Mussel Invasion On Benthic Communities In North American And European Lakes	<u>J.W. Johnston et al.</u> How do ancient shorelines help in regulation efforts of the upper Great Lakes?		8:40 a.m.
<u>K.M. DeVanna and C.M. Mayer</u> <i>Hexagenia</i> use of <i>Dreissena</i> -colonized habitat: Opposing effects of hypoxia and fish predation	<u>W.T. Kline and A.R. Lashaway</u> Rapid Shifts in the Great Lakes Region's Cloud Cover associated with the approach of Winter	<u>H. Wang et al.</u> Inter-stock variation of maturation schedules of walleye in the Great Lakes region	9:00 a.m.
<u>B. Zhu et al.</u> Local and Lake-wide Effects of Dreissenids on Nitrogen and Phosphorus Cycling in Lakes	<u>R.A. Shuchman et al.</u> Automated Lagrangian Water-Quality Assessment System (ALWAS)	<u>K.B. Reid et al.</u> Bioeconomic Risk Assessment of the Lake Erie Walleye Commercial Fishery	9:20 a.m.
<u>R.P. Barbiero et al.</u> An Overview of Possible Dreissenid Impacts in the Offshore Waters of the Great Lakes	<u>H.J. Carrick et al.</u> Remnants of the spring diatom bloom may regulate hypoxia in Lake Erie	<u>K.B. Reid et al.</u> Risk Assessment of Alternative Initial Allocations of Lake Erie Walleye Using Catch at Age Simulation and a Bayesian Approach to Uncertain Stock-recruit Dynamics	9:40 a.m.
<b>BREAK</b>			10:00 a.m.

**Friday, May 23**

	<u>Rm 117</u> Gzowski College	<u>Rm 115</u> Gzowski College	<u>Rm 203</u> Otonabee College
	<b>Physical limnology and physical-chemical-biological coupling in lakes</b> <i>Co-Chairs: Dmitry Beletsky, Chin Wu, and George Arhonditsis</i>	<b>Building Toward a Science Strategy for the Great Lakes Basin under the Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement</b> <i>Chair: Rob Messervey</i>	<b>Fish disease ecology in the Great Lakes</b> <i>Co-Chairs: Stephen Riley and John Dettmers</i>
Time	Presented by / Title	Presented by / Title	Presented by / Title
10:20 a.m.	<u>L.F. Leon</u> <i>et al.</i> Simulating Water Quality in Eastern Lake Erie for Coupled Modelling	<u>D. Dumoulin</u> Calculating the Consumptive Use of Water Withdrawals in the Great Lakes Basin – Status of current methodologies and recommendations for enhancement	<u>S.C. Riley</u> <i>et al.</i> Fish health and ecosystem dysfunction in the Great Lakes
10:40 a.m.	<u>G.B. Arhonditsis</u> <i>et al.</i> Effects of climate change on freshwater ecosystem dynamics	<u>L. Milford</u> <i>et al.</i> A Tiered Water Budget Approach	<u>J.I. Tsao</u> <i>et al.</i> Epidemiological models can guide fish health research and management: bacterial kidney disease in free-swimming fish
11:00 a.m.	<u>S.T. Kendall</u> <i>et al.</i> Physical-Chemical Characterization of a Nearshore Submerged Sinkhole Ecosystem in Lake Huron	<u>S.M. Damaia</u> and K. Todd Lflow - A Data Collection and Analysis Package to Support Low Streamflow Surveys	<u>D.E. Tillitt</u> <i>et al.</i> A review of the occurrence and consequences of thiaminase in the Great Lakes ecosystem
11:20 a.m.	<u>T.G. Sanders</u> <i>et al.</i> An Ecological and Stable Isotope Study of Food Web Linkages in Submerged Vent Ecosystems of Lake Huron	<u>L.E. Kaminski</u> <i>et al.</i> Case Studies of Successful Public Sector Water Conservation Strategies: Technologies and Practices for Conserving Water	<u>E.F. Fenichel</u> <i>et al.</i> How Many Fish to Screen – No Easy Answer
11:40 a.m.	<u>B.A. Biddanda</u> <i>et al.</i> Submerged Sinkhole Ecosystems of Lake Huron: Insights into System Metabolism	L.A. Wojnarowski and <u>J. Jonas</u> Developing Water Conservation and Efficiency Objectives for the Great Lakes Basin	<u>M.L. Jones</u> <i>et al.</i> Natural mortality patterns in Lake Huron and Michigan lake whitefish populations
12:00 p.m.	<b>LUNCH</b>		

## Friday, May 23

<u>Rm 114</u> <u>Gzowski College</u>	<u>Science Lecture Hall</u> <u>Otonabee College</u>	<u>Wenjack Theatre</u> <u>Otonabee College</u>	
<b>Dreissenids in North America: 20 Years of Consequences</b> <i>Co-Chairs: David F. Reid, Thomas Nalepa, and Henry A. Vanderploeg</i>	<b>General Contributions</b> <i>Chair: Patricia Chow-Fraser</i>	<b>Ecology and Management of Great Lakes Fish Populations</b> <i>Chair: Scott McNaught</i>	
Presented by / Title	Presented by / Title	Presented by / Title	Time
<u>D.A. Culver</u> and <u>J.D. Conroy</u> Twenty years of Dreissena on western basin Lake Erie hard substrate – why is there any phytoplankton left?	<u>J. Gerlofsma et al.</u> Abundance and Population Dynamics of <i>Mysis relicta</i> in Lake Huron 2007	<u>E.K. Joshua et al.</u> Physiological response of air-breathing perch ( <i>Anabas testudineus</i> Bloch) to coconut husk retting effluent from Lake Paravur of southern India	10:20 a.m.
<u>L. Boegman et al.</u> Coupling between stratification, mixing and dreissenid grazing impacts in western Lake Erie	<u>M. Finch et al.</u> Population Dynamics of Eastern Sand Darter ( <i>Ammocrypta pellucida</i> ) on the lower Thames River, Ontario	<u>M.C.S. Peter et al.</u> Mechanism of stress tolerance in fishes living in coconut husk retting ground of Lake Paravur in south India	10:40 a.m.
<u>S. Adlerstein et al.</u> Zebra mussel impacts on the lower food web in Saginaw Bay, Lake Huron: 1990-1996.	<u>P.J. Joosse et al.</u> Agri-environmental research for water protection		11:00 a.m.
<u>J.V. DePinto et al.</u> Cladophora and open-water “desertification”: Do Dreissenids play a role?			11:20 a.m.
<u>H.A. Vanderploeg et al.</u> Dreissenids in North America: 20 Years of Consequences - Synthesis And Open Discussion			11:40 a.m.
<b>LUNCH</b>			12:00 p.m.

## Friday, May 23

	Rm 117 <u>Gzowski College</u>	Rm 115 <u>Gzowski College</u>	Rm 203 Otonabee College
	<b>Physical limnology and physical-chemical-biological coupling in lakes</b> <i>Co-Chairs: Dmitry Beletsky, Chin Wu, and George Arhonditsis</i>		<b>Fish disease ecology in the Great Lakes</b> <i>Co-Chairs: Stephen Riley and John Dettmers</i>
Time	Presented by / Title	Presented by / Title	Presented by / Title
1:20 p.m.	<u>L.A. Rukhovets</u> <i>et al.</i> The influence of climate changes and antropogenic loading on Lake Ladoga ecosystem		<u>M.E. Wright</u> and J.S. Lumsden Surveillance for viral hemorrhagic septicemia virus (VHS) in wild fish populations in Ontario
1:40 p.m.	<u>N. Filatov</u> <i>et al.</i> Ladoga and Onego--Great European Lakes: Investigations of Effects of Global Changes on Ecosystem Dynamics		<u>J.A. Hoyle</u> <i>et al.</i> Response of Freshwater Drum to a Disease Outbreak in Lake Ontario
2:00 p.m.			<u>J.L. Shutt</u> <i>et al.</i> Impacts of Exposure to Type E Botulism on the Health of Colonial Waterbird Populations in Eastern Lake Ontario.
2:20 p.m.			<u>D.J. Taillon</u> and M.E. Wright Responding to a Large-Scale Fish Die-off: Kawartha Lakes Carp 2007
3:00 p.m.	<b>CONFERENCE PROGRAM ADJOURNS</b>		



## POSTER SESSION

### **Nuisance Algae in the Great Lakes: Causes, consequences and future directions**

LASHAWAY, A.R. and CARRICK, H.J.

Diatom Rejuvenation and Hypoxia in Lake Erie

LOWES, C.I. and YOUNG, E.B.

Alternative Sources of Phosphorus for Freshwater Cyanobacteria and Lake Michigan Phytoplankton

PAVLAC, M.M. and BOYER, G.L.

Monitoring Cyanobacteria in the Lower Great Lakes Using Continuous Real-time Fluorescence

SAXTON, M.A., TRUITT, D.B., MCKAY, R.M.L., BOURBONNIERE, R.A., and WILHELM, S.W.

Defining the Role(s) of Phosphorus in Promoting Toxic Cyanobacterial Blooms

THOMAS, S.P., JONES, J., PERSHYN, C., ALLEN, E., GREENE, M., MIHUC, T.B., SATCHWELL, M.F., and BOYER, G.L.

A Geospatial Mapping Method to Detect Lake Champlain Cyanobacteria Blooms

### **Aquatic invasive species in the Great Lakes watershed**

ARCAGNI, M., ARRIBÉRE, M., CAMPBELL, L., KYSER, K., KLASSEN, K., and RIBEIRO GUEVARA, S.

The role of native *Galaxias maculatus* in a food web with introduced North American salmonids (Nahuel Huapi National Park, Argentina)

JAMES, L.A.H., ARNOTT, S.E., and CASSELMAN, J.M.

Effect of the invasive predator, *Bythotrephes longimanus*, on growth of fishes in Ontario shield lakes

LIEBIG, J.R., VANDERPLOEG, H.A., POTHOVEN, S.A., CAVALETTO, J.F., KRUEGER, D., MASON, D., LANG, G.A., PANGLE, K., PICHLOVÁ, R., and PEACOR, S.

Interactions of the Invasive Predatory Cladocerans, *Bythotrephes longimanus* and *Cercopagis pengoi*, with zooplankton and fish along an onshore-offshore transect in southern Lake Michigan

OLSON, A. and FREELAND, J.R.

Hybridization facilitates cattail invasions around the Great Lakes.

PAUL, J. and FREELAND, J.R.

Invasive Phragmites in the Great Lakes region. II. Population genetics of invasive and native lineages, and the role of local adaptation.

VACHON, N. and FREELAND, J.R.

Invasive Phragmites in the Great Lakes region. I. Emerging evidence on the relationship between environmental variables and invasion potential.

## **Avian Ecology and Research**

LAKFARD, S. and FRASER, G.S.

Nesting Ecology of Common Terns at Tommy Thompson Park, Toronto, Ontario

MIKODA, P., WESELOH, D.V., and PEKARIK, C.

Satellite tracking of breeding Great Black-backed Gulls from eastern Lake Ontario.

SEEFELT, N.E. and SHAW, H.L.

Initial Development of an Avian Monitoring Site at the Central Michigan University Biological Station on Beaver Island

## **Ecology and Management of Great Lakes Fish Populations**

COLLINGSWORTH, P.D. and MARSCHALL, E.A.

Yellow perch spawning behavior in the western basin of Lake Erie

FAGAN, K.M., KOOPS, M., ARTS, M.T., SUTTON, T.M., and POWER, M.

The effects of trophic disruption on the diet and condition of lake whitefish

MARKLEVITZ, S.A.C., MORBEY, Y.E., and FRYER, B.J.

The differentiation of Chinook salmon in natal streams of Lake Huron: the use of otolith microchemistry as a natural tag

MCDONALD, E.A., MCNAUGHT, A.S., and ROSEMAN, E.

Susceptibility of Larval Fish to Entrainment in the Detroit River

MORBEY, Y.E., ANDERSON, D.M., and HENDERSON, B.A.

Progress Towards the Rehabilitation of Lake Trout (*Salvelinus namaycush*) in South Bay, Lake Huron

NEESON, T.M., ADLERSTEIN, S.A., and WILEY, M.J.

Regression Tree Modeling of Sea Lamprey Ammocoete Habitat in Michigan Rivers  
Lake Simcoe

KING, J.W., SHUMCHENIA, E.J., MOE, H., LEWIS, C.F.M., SLATTERY, S.R., GOODYEAR, D.R., and KILGOUR, B.

Characterizing habitat in Kempenfelt Bay, Lake Simcoe

ONI, S.K., OUELLETTE, J.C., FUTTER, M.N., and DILLON, P.J.

Modelling DOC Fluxes and Runoff Changes in Pefferlaw River Watershed - A study of Climate Change Impact

## **Trends in Legacy and Emerging Contaminants in Great Lakes Fish and Wildlife**

GEWURTZ, S.B., HELM, P.A., CROZIER, P.W., REINER, E., HOWELL, T.E., and MARVIN, C.H.

Spatial and Temporal trends of Perfluorinated Compounds in Sediments and Surface Waters of the Great Lakes

HOLSEN, T.M., CRIMMINS, B., and MAYER, M.

Great Lakes Fish Monitoring Program: Mercury

MARTIN, P., SVERKO, E., and BARRETT, G.

Current-Use Flame Retardants in the Eggs and Plasma of American Kestrels (*Falco sparverius*) from Southern Ontario.

OPFER, S.E., FARVER, J.R., MINER, J.G., and KRIEGER, K.

Sediment Heavy Metal and Burrowing Mayfly Distribution in Western Lake Erie

### **Watershed Contributions to Chemical Contamination in the Great Lakes**

BYER, J., STRUGER, J., KLAUNN, P., and SVERKO, E.

Analytical Evaluation of the ELISA Method as a Water Quality Monitoring Tool for Surface Water Samples

BYER, J., STRUGER, J., KLAUNN, P., SVERKO, E., and TODD, A.

Large Scale Field Utilization of the ELISA Method as a Water Quality Monitoring Tool for Surface Water Samples in Ontario

GRABUSKI, J.M., CAGAMPAN, S.J., STRUGER, J., and RONDEAU, B.

Automated Solid Phase Extraction of Sulfonyl ureas and Related Herbicides in Fortified Water and Natural Water Samples Using LC-ESI/MS/MS

ROSSO, N., WOOTTON, B., METCALFE, C., and ANDERSON, B.

Assessing the ability of treatment wetlands to mitigate contaminants from wood waste leachate

SHEN, L., GEWURTZ, S., REINER, E., KOLIC, T., MACPHERSON, K., BURNISTON, D., HOWELL, T., HELM, P., BRINDLE, I., and MARVIN, C.

PBDEs in Surficial Sediments of Lakes Superior, Huron and Michigan

### **Human health risks associated with recreational activities and drinking water quality**

FANG, T., CAMPBELL, L., WANG, Y.X., COLE, L., and CHAN, W.W.

Assessing human exposure from mercury in fish from east China lakes

MCNINCH, R.M., VERHOUGSTRAETE, M.P., and ROSE, J.B.

Using fecal indicator, source tracking and GIS tools to assess fecal contamination in Michigan's waters

Assessing and Improving Monitoring Programs in the Great Lakes

KRAMKOWSKI-EPNER, V. and CULOTTI, J.

Is *C. elegans* a promising bioindicator for water quality studies? Examining its use in Toronto river systems

### **Physical limnology and physical-chemical-biological coupling in lakes**

TROY, C.D.

Evaluation of low-cost thermistor chains for vertical temperature measurement

### **Remote Sensing, Visualization, and Spatial Data Applications for the Great Lakes**

KREMENS, R.L., DRAKE, R., HOVEY, A., BOVE, G.E., and TOMKINS-TINCH, C.H.

Inexpensive Buoys for Environmental Education and River Water Quality Assessment

O'DONNELL, D.M., QUARING, G.F., SPADA, M.E., EFFLER, S.W., and LESHKEVICH, G.A.

An Optics Survey of the Western Basin of Lake Erie

OUELLETTE, J.C., DILLON, P.J., and AHERNE, J.

Spatial Landscape-Scale Modelling of Dissolved Organic Carbon (DOC) Flux in the Lake Simcoe Watershed

**Determination of the water balance, its components and impacts for Great Lakes**

CHATTERJEE, A., DEMARCHI, C., and MICHALAK, A.M.

Improving Estimation of Over-Lake Precipitation – An Application to Lake Erie

KAO, Y., DE MARCHI, C., ADLERSTEIN, S.A., and WILEY, M.J.

Comparison of Two Hydrological Models Used in the Great Lakes Basin

**Natural systems in an urban environment**

MARCUS, M.A. and FROST, P.C.

Suitability of urban pond ecosystems for zooplankton growth

MURPHY, S.C., COLLINS, N.C., and DOKA, S.E.

Seasonal and interannual variation in growth rates of pumpkinseed and largemouth bass in Lake Ontario Embayments

General Contributions

ADAMS, J.M., HINCHEY, E.K., HORVATIN, P.J., and WARREN, G.J.

U.S. EPA Great Lakes National Program Office Nearshore Monitoring using the Triaxus Towed Instrument Platform

CAVALETTO, J.F. and VANDERPLOEG, H.A.

Effect of hypolimnetic oxygen concentration on vertical migration and abundance of zooplankton in the central basin of Lake Erie

FOY, H.D., WILSON, H.W., and XENOPOULOS, M.A.

Variations in Leaf Litter Decomposition Rates of Riparian and Crop Plants in Streams Along an Agricultural Gradient

HANSON, A.M., YOUNG, E.B., and BERGES, J.A.

Viruses in Lake Michigan: Examining the virus community and the role of viruses in the phosphorus cycle

KAMINSKI, L.E., CRANE, T.R., and OVERMIER, G.L.

Potential Impacts of Increased Corn Production for Ethanol in the Great Lakes-St. Lawrence River Region

LICHTKOPPLER, F., SNYDER, F., and RIESEN, K.

Results of the 2006 Ohio Lake Erie Charter Captains Survey

MARCARELLO, K.T., CLEVINGER, C.C., BADE, D.L., and HEATH, R.T.

Alkaline Phosphatase Activity as an Indicator of P-Limitation in Sandusky Bay/Subbasin

OZERSKY, T., BARTON, D.R., HECKY, R.E., and GUILDFORD, S.J.

Nutrient flux through invasive mussels: dreissenids as a benthic- pelagic nutrient linkage

PAYTON, A., WATSON, S.B., ELSBURY, K., and KENDALL, C.

## Phosphate Sources and Cycling in Lake Erie an Isotope Signatures Approach

POTHOVEN, S.A. and NALEPA, T.F.  
Fish diets and condition in Lake Huron

STURTEVANT, R.A. and REID, D.F.  
GLANSIS: The Great Lakes Nonindigenous Aquatic Species Information System

WARREN, G.J., HORVATIN, P.J., and ROCKWELL, D.C.  
Where have all the Daphnia gone?

ZHANG, J., CIBOROWSKI, J.J.H., DROUILLARD, K.G., and HAFFNER, G.D.  
Zoobenthic Community Indicators of Sediment Contamination in the L. Huron- L. Erie Corridor: Application of the Reference-Degraded Continuum Multivariate Approach

### **“GREEN” INITIATIVES AT THE 51<sup>ST</sup> CONFERENCE AT TRENT UNIVERSITY**

Trent University has implemented a number of green initiatives with respect to the 51<sup>st</sup> annual IALGR conference. These include:

- Providing the conference abstract book on reusable USB flash drives to save paper
- Providing a reusable small tote for the “conference bag”
- Working with our food services providers to have as much of the conference food sourced locally.
  - The beef and chicken served at the banquet are both locally produced
  - All milk is locally produced
  - Sourcing of food products from as close to Ontario as possible for those items not available locally.
- Use of biodegradable plastics and fully recyclable materials for the BBQ
- Composting of food wastes
- Materials printed on recycled paper
- Provision for mass transportation for conference attendees to and from their hotels and special events.

## **DRIVING DIRECTIONS AND MAPS**

### **From the Peace Bridge in Buffalo**

- Peace Bridge becomes QEW (Queen Elizabeth Way) W.
- Follow the QEW to the Highway 403 east exit
- Follow Highway 403 east to Highway 401 east
- Merge onto Highway 401 express east.
- Take Highway 401 east through Greater Toronto to Highway 115/35 N.
- Take the HWY-35/ HWY-115 exit, EXIT 436, toward Peterborough
- Follow detailed directions in Peterborough from section below

### **From Toronto**

- Take Highway 401 east to Highway 35/115
- Follow Highway 115 north
- At Peterborough, exit at The Parkway
- Continue on The Parkway until it ends at Clonsilla Avenue
- Turn right (east) at Clonsilla Avenue
- Clonsilla Avenue will become Charlotte Street
- Follow Charlotte Street into downtown Peterborough
- Turn left (north) at Water Street immediately following the clock tower (Market Hall)
- Continue north on Water Street for 6.5km
- Turn right on Nassau Mills Road
- Turn left on West Bank Drive for Conference Services, Blackburn Hall, Bata Library, Athletics Building, Champlain College, Lady Eaton College, and the Bookstore
- For the Science Complex, Wenjack Theatre, and Otonabee College continue past the 4 way stop to East Bank Drive (Nassau Mills Road becomes River Road) and turn right to the parking lots
- For Gzowski College go past 4 way stop and turn right on Pioneer Road to the University entrance

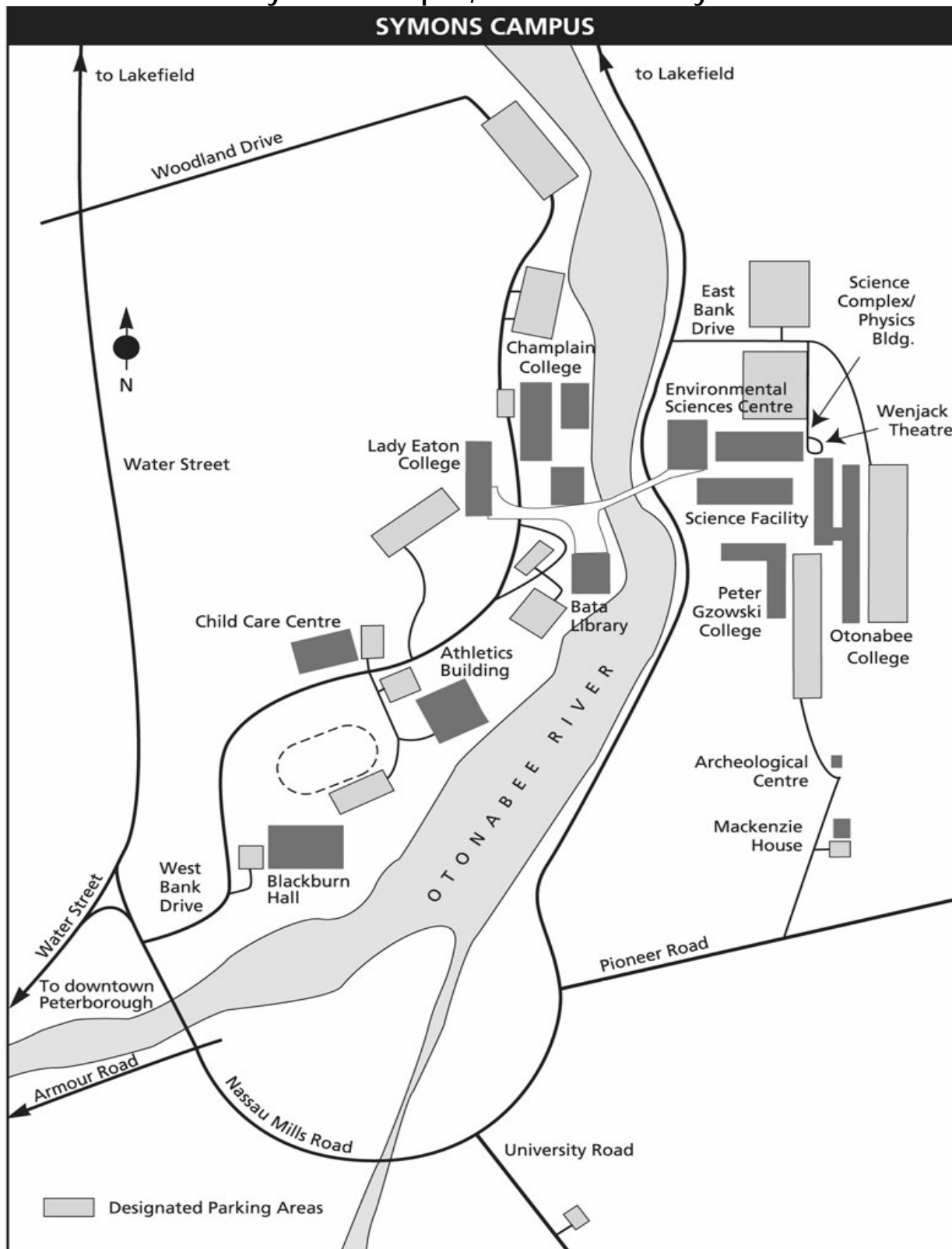
### **From Ottawa**

- Follow Highway 7 west (Lansdowne Street) to George Street
- Turn right (north) on George Street immediately following the Peterborough Memorial Centre
- Follow George Street as it turns right into Water Street at Sherbrooke Street
- Continue north on Water Street for approximately 7km
- Turn right on Nassau Mills Road
- Turn left on West Bank Drive for Conference Services, Blackburn Hall, Bata Library, Athletics Building, Champlain College, Lady Eaton College, and the Bookstore

- For the Science Complex, Wenjack Theatre, and Otonabee College continue past the 4 way stop to East Bank Drive (Nassau Mills Road becomes River Road) and turn right to the parking lots
- For Gzowski College go past 4 way stop and turn right on Pioneer Road to the University entrance

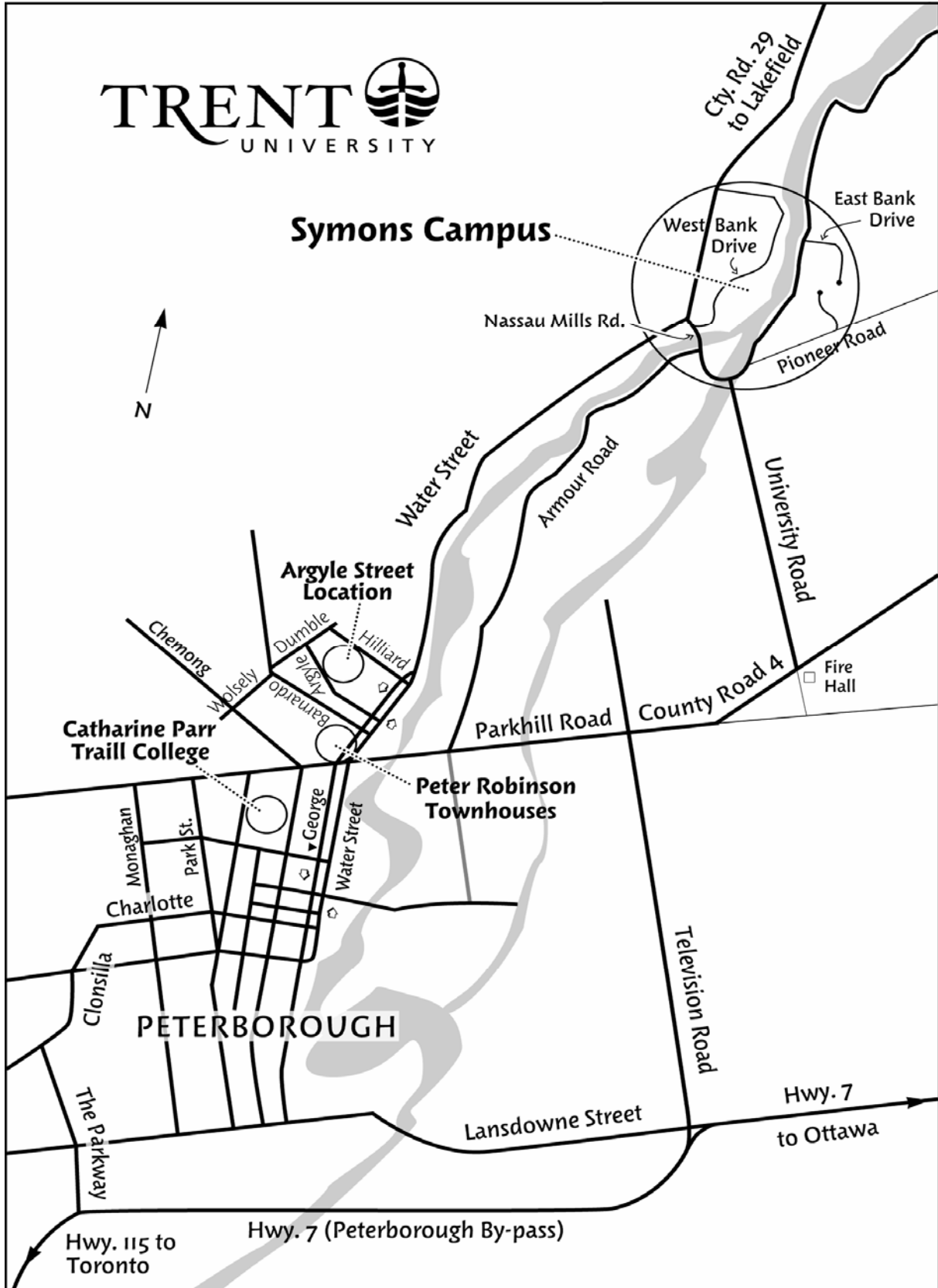
# CAMPUS MAP

## Symons Campus, Trent University



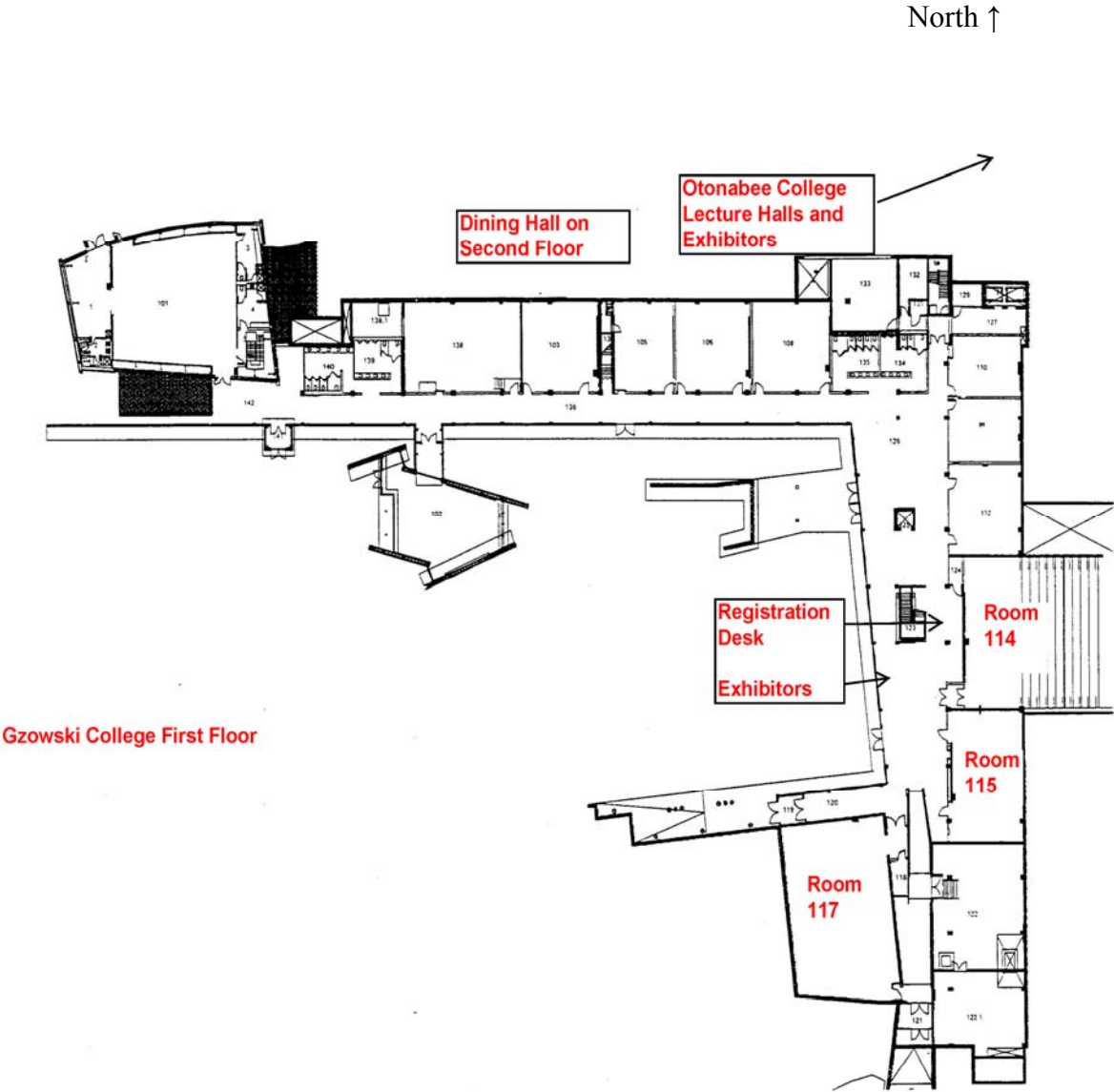


# LOCATION OF CAMPUS, PETERBOROUGH



# FLOOR PLAN OF GZOWSKI COLLEGE

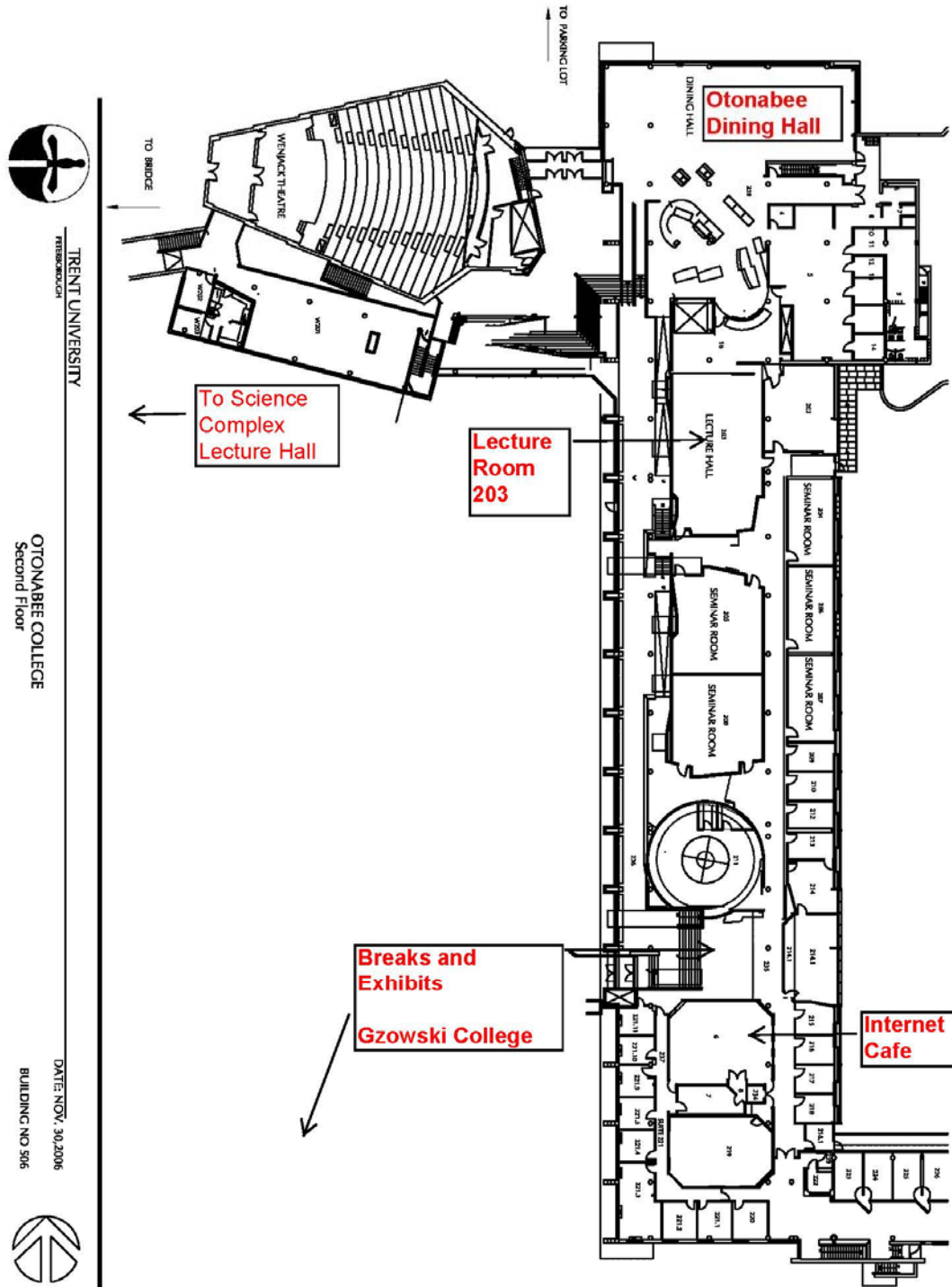
## Main Conference Floor



Gzowski College First Floor

# FLOOR PLAN OF OTONABEE COLLEGE

Main Floor



# *Mark your calendar for* **IAGLR 2009** at the University of Toledo



*May 18-22, 2009*



*Bridging Ecosystems and Environmental  
Health Across our Great Lakes*

