

MAKING THE CONNECTION:
TRIBUTARIES AND
WETLANDS
CORNWALL, ON CANADA

CONFERENCE PROGRAM
MAY 15-17, 2007

DAY I
TUESDAY MAY 15TH, 2007

14TH ANNUAL INTERNATIONAL
CONFERENCE ON
THE ST. LAWRENCE RIVER / GREAT LAKES ECOSYSTEM
MAKING THE CONNECTION: TRIBUTARIES AND WETLANDS

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| | Room Location: NAVCANADA THEATRE | |
| 1:00 | Opening Ceremonies - Traditional Opening F. Henry Lickers, Mohawk Council of Akwesasne Jeff Ridal, Executive Director, St. Lawrence River Institute of Environmental Sciences Words of Welcome Mayor Bob Kilger, City of Cornwall | |
| 1:20 | Opening Panel Ontario Ministry of Environment Panel Discussion Title: The Clean Water Act, 2006: the Road to Implementation, Ministry of Environment and Conservation Authorities | |
| | Room A119 | Room A121 |
| | Clean Water Act as a Catalyst for Land-Use Information Chaired by Ian Parish Ontario Ministry of Environment | Constructed Wetlands for Waste Water Treatment Chaired by James Higgins, Director, Ecological Engineering Jacques Whitford Ltd |
| 2:20 | Overview Source Water Protection, Ian Parrish , (Ontario Ministry of the Environment) | High-Rate Ammonia Removal in Aerated Engineered Wetlands, S. Wallace, J. Higgins , (Jacques Whitford Ltd) A. Crolla, C. Kinsley. Bachand, and S. Verkuilj |
| 2:40 | Source Water Protection Assessment Inputs As Province-Wide Geospatial Layers, Anne Trudell (Ontario Ministry of Natural Resources) | Treatment Wetland for Water Quality and Habitat Improvement at a Decommissioned Phosphate Fertilizer Site in Ontario, John Pries , (CH2M HILL); Jon Shaw, DMG; and Mike Orban, DMG |
| 3:00 | Conservation Authorities Common Internet Mapping Application, Chris Wilkinson et al. (Conservation Ontario) | A Recycled Media Aerated On-Site Sewage Treatment System, Jamie Baker Pelletier , (The Thompson Rosemount Group Inc.) John St. Marseille, and Bruce Anderson |
| 3:20 | Break | Break |
| 3:40 | Managing Shared Watersheds at Pollution Probe, Seanna Davidson , (Pollution Probe) | Experience from the Field – Lessons Learned from the Construction and Operation of Small Scale Wetlands in Minnesota, Mark O. Liner , (North American Wetland Engineering, Inc.) |
| 4:00 | Discussion | Cold Climate Vertical Subsurface Flow Constructed Wetlands for Treating Agricultural Wastewater – The Aqua Wetland System, Lloyd Rozema , M.Sc., Andrew Hellebust, P.Eng. |

| DAY 1 TUESDAY MAY 15TH, 2007 | |
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| | Room Location: NAVCANADA THEATRE |
| | Environmental Justice Chaired by Dr. Roger Needham, University of Ottawa |
| 4:20 | Source Water Protection and Public Participation: The Need to Evaluate Process Architecture, Natasha L. Crane (University of Ottawa) Roger D. Needham |
| 4:40 | Vague And Insecure Property Rights, Water Resource Management And The Unwitting Complicity Of Academics, Politicians, Planners And Managers, Roger D. Needham , (University of Ottawa) |
| 5:00 | Environmental Justice, Rural Affairs and The Interruption of Source Water Protection, Mélanie Robin , (University of Ottawa) Roger D. Needham |
| 5:20 | Social (Cash Bar) |
| 6:15 | Dinner—NavCanada Cafeteria or on your own (Cafeteria closes at 7:15pm) |
| 7:00 | NavCanada Theatre Open Public Session The Effects of Governmental Legislation on Agriculture and Landowner Rights Moderator: Walter Oggerli Chris Attema, Water quality Specialist , Ontario Cattlemen's, Ontario Sheep, and Ontario Pork Martin Lang, President of Glengarry Federation of Agriculture Shawn McRae, President of Glengarry Landowners Association Dr. Roger Needham, University of Ottawa |

| DAY 2 WEDNESDAY MAY 16TH, 2007 MORNING | | |
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| | Room: Theatre | Room: A 119 |
| | Special Session Protecting Lake Ontario Drinking Water -hosted by the Collaborative Study to Protect Lake Ontario Drinking Water Moderator, Larry Moore, Ontario Clean Water Agency | Practical Considerations on the Role of Wetlands and other Natural Heritage Features as an Important Barrier in Source Water Protection Chaired by Angus Norman, Ontario Ministry of Natural Resources |
| 8:20 | Introduction | Overview Of The Role Of Wetlands, Woodlands and Riparian Zones as an Important Barrier in Source Water Protection, Angus Norman , (Ontario Ministry of Natural Resources) |
| 8:40 | The Collaborative – Purpose, Structure and Objectives, Larry Moore , (Ontario Clean Water Agency) | Watershed Based Wetland Conservation Planning, Owen Steele , (Ducks Unlimited Canada) and James Holland |
| 9:00 | Lake Ontario Water Utilities – Understanding the Source, Ron Motum , (Region of Durham) | Healthy Ecosystems = Healthy Communities – Ensure Source Water Protection and Safe Drinking Water, Dave Richards , (Ontario Ministry of Natural Resources) |
| 9:20 | Lake Ontario – Currents, Temperature and Other Physical Information, Ram Yerubandi , (Environment Canada) | Alternative Land Use Services (Alus): An Ecosystem Approach to Wetland Conservation on Agricultural Landscapes, Bob Bailey , (Delta Waterfowl Foundation) |
| 9:40 | Break | Break |
| 10:00 | Lake Ontario - Chemical and Biological Hazards to Drinking Water, Susan Watson , (Environment Canada) | Utilizing Remote Sensing Tools to Carry out Efficient Wetland Mapping on the Landscape, Adam Hogg , (Ministry of Natural Resources) |
| 10:20 | Lake Ontario Tributaries – Loadings and Hazards Gary Bowen , (Toronto Region Conservation Authority) | Water Quality Assessment And Biodiversity Change Detection Using High-Resolution Ikonos Satellite Imagery for the Bayview Wetland, Ontario, William Pain , Kevin Hall, (Queen’s University) |
| 10:40 | Great Lakes Intakes Vulnerability Assessment: Examining Different Approaches to Establishing the IPZ- 2, Vulnerability Assessment, Critical Data Gaps and Challenges in Subsequent Assessment Phases with Examples from Lake Ontario and Other Great Lakes, John Langan , (Stantec Consulting) | Achieving Source Water Protection Benefits Related to Wetlands and Other Natural Features through Landowner Interaction and Engagement Tara Borwick , (Ontario Federation of Anglers & Hunters) and Ontario Headwaters Restoration Initiative Team Member |
| 11:00 | Discussion | Economic and Environmental Evaluation of a Wetland Restoration and Retention Beneficial Management Practice, Stacey Hay , (Ducks Unlimited Canada) and Shane Gabor |
| 11:30 | Marc Garneau Room Luncheon with guest speaker: Erik Veldman, Pollution Probe— <i>A New Vision and Strategy for the Great Lakes</i> | |

| DAY 2 WEDNESDAY MAY 16TH, 2007 AFTERNOON | | |
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| | Room: Theatre | Room: A119 |
| | Watershed Modeling Chaired by Douglas Graham, DHI | Restoration and Protection of Tributaries and Wetlands to Improve Aquatic Habitats and Water Quality - Chaired by Sandra Skog, Great Lakes Sustainability, Environment Canada |
| 1:10 | Introduction | Introduction |
| 1:20 | An attempt at Conceptual Understanding of the WaterBudget for Trent River Watershed, Shan Mugalingam (Trent Conservation Coalition) Glenda Rodgers, Ali Sajid | Land use Impacts on Stream Fish in Southern Ontario, Bruce Kilgour (Stantec Consulting Ltd.) Les Stanfield |
| 1:40 | Regional Groundwater Budget for Eastern Ontario Using a Simple GIS Model., M.J.L. Robin , (University of Ottawa) and B. Daneshfar | The Black Sturgeon River Dam: A Barrier to the Rehabilitation of Black Bay Walleye, P. Furlong , (Ontario Ministry of Natural Resources) R.F. Foster, P.J. Colby. M. Friday |
| 2:00 | Water Budget Uncertainty in Integrated, Distributed Groundwater-surface Water Modeling, Douglas Graham (DHI Software Products) | An Assessment of Waring Creek and its Potential for Brook Trout Restoration, Andrew Mack and Margetson, (Quinte Conservation & Prince Edwards Stewardship Council) |
| 2:20 | Jock River Modeling Using Mike11, Ferdous Ahmed (Rideau Valley Conservation Authority) | Lake Sturgeon Spawning Habitat Enhancement through Flow Manipulation, Mike Friday (Ontario Ministry of Natural Resources) |
| 2:40 | Break | Break |
| 3:00 | Modeling Water Control Structures of Lower Rideau River Using Mike11, Ferdous Ahmed (Rideau Valley Conservation Authority) | Ontario Wetland Habitat Fund - Lessons Learned, Lynn McIntyre (Wildlife Habitat Canada) |
| 3:20 | A Hydrodynamics Study of Lake Ontario and the Upper St Lawrence River, Erin Hall (Queen's University) L. Boegman, R. Yerubandi, K.Hall, | Coastal Wetland Enhancement within the St. Lawrence River Area of Concern, Chris Critoph (Raisin Region Conservation Authority) |
| 3:40 | Lake Ontario Regulation Plan C: Local-Basin Approach, John Ching (Ontario Power Generation) | Coastal Marsh Restoration at Royal Botanical Gardens, Tÿs Theÿsmeÿer (Royal Botanical Gardens) |
| 4:00 | Discussion | Discussion |
| 4:30 -6:00 pm | NavCanada Theatre Lounge SPIRITS AND SCIENCE POSTER AND EXHIBITOR SESSION (Cash Bar) | |
| 6:30 | Marc Garneau Room Evening Banquet with Keynote Speaker—Dr. Stuart Bunn, Griffith University, Australia - Making the Connection between Healthy Waterways and Healthy Catchments | |
| | <i>Piano by Robert Lemieux</i> | |

DAY 2
WEDNESDAY MAY 16TH, 2007
POSTERS / EXHIBITORS
4:30 - 6:00 PM

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| | Location: Upper and lower lounge |
| | Durham Region Coastal Wetland Monitoring Project: 5-Year Trends and Status. Satu Pernanen and Greg Grabas , Central Lake Ontario Conservation |
| | Evolutionary, Ecological And Ethical Narratives Of Lake Ontario, C. Masson , FreshWater Consulting |
| | Provincial Borehole Database Anne Trudell , Ontario Ministry of Natural Resources |
| | Phytoplankton Communities Along A Transition Zone: Brandy Brook And The St. Lawrence River Matthew R. Williams, Michael R. Twiss , Great Rivers Center, Clarkson University |
| | Baseflow And Fish Passage Within The Watersheds Of The Greater Toronto Area Paul Villard , Jennifer Haslett and Ryan Ness |
| | JR. SCIENTIST-LOCAL SCIENCE FAIR WINNERS |
| | I Don't See Any Greenhouse Lauren Heuvel , Tagwi Secondary School |
| | Power the Wind, Waheson Lazore , Ahkwesahsne Mohawk School |
| | Is the Grass Greener on the Smokey Side, Jake Bloomfield , Viscount Alexander School |

EXHIBITORS

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| <p style="text-align: center;">Ontario Ministry of the Environment Source Protection Implementation, Drinking Water Program Management Branch (DWPMB) Contact: Katie Fairman (416)-326-6454, (613)-548-6919 www.ene.gov.on.ca</p> | <p style="text-align: center;">Ministry of Agriculture, Food and Rural Affairs 1 Stone Road West Guelph ON N1G 4Y2 Tel: 519-826-3559 Fax: 519-826-3259 1-888-466-2372 www.omafra.gov.on.ca</p> |
| <p style="text-align: center;">Ontario Ministry of Natural Resources 300 Water St. Peterborough, ON K9J 8M5 Tel: (705) 755-5012 Contact: Tracy Sorrill Email: tracy.sorrill@ontario.ca www.mnr.gov.on.ca</p> | <p style="text-align: center;">Wildlife Supply Co. 95 Botsford Place Buffalo, NY 14216 USA Tel: (716) 877-9518 Contact: Carol Q Welsh Email: goto@wildco.com www.wildco.com/</p> |
| <p style="text-align: center;">Great Lakes United 3388 rue Adam Montreal, QC H1W 1Y1 Tel: (514) 396-3333 Contact: Marianne Guilmette Email: guilmarianne@hotmail.com www.glu.org/</p> | <p style="text-align: center;">Environment Canada / Great Lakes Sustainability Fund 867 Lakeshore Road Burlington, ON L7R 4A6 Contact: Sandra Skog Tel : (905) 336-6428 Email: sandra.skog@ec.gc.ca www.sustainabilityfund.gc.ca</p> |
| <p style="text-align: center;">Hoskins Scientific Ltd. 4210 Morris Drive Burlington, ON L7L 5L6 Contact: Derek McKeown Tel: 613-388-9226 Email: dmckeown@hoskin.ca www.hoskin.ca</p> | <p style="text-align: center;">Centre for Alternative Wastewater Treatment Fleming College 200 Albert St. P.O. Box 8000 Lindsay, ON K9V 5E6 Contact: Dr. Brent Wootton Tel: 705-324-9144 Email: bwootton@flemingc.on.ca www.flemingc.on.ca/CAWT/</p> |
| <p style="text-align: center;">Ontario Power Generation Ottawa/St. Lawrence Plant Group Ontario Power Generation Contact:Linda Halliday APR Public Affairs Officer Tel: 613/932-3072 x3304 Email: Linda.Halliday@opg.com www.opg.com</p> | |

| DAY 3 THURSDAY MAY 17TH, 2007 MORNING | | |
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| | Room: Theatre | Room: A 119 |
| | Groundwater Vulnerability and Groundwater/Surface-water Interactions Chaired by Michel Robin, University of Ottawa & Brewster Conant Jr. University of Waterloo | Tributary Impacts on Near shore Water Quality in the Great Lakes and the St. Lawrence River - Chaired by Jeff Ridal, St. Lawrence River Institute & Michael Twiss, Clarkson University |
| 8:00 | Estimating Groundwater Discharge Through Clayey Streambed Deposits of the Raisin River Using Streambed Temperatures, Brewster Conant Jr. , (University of Waterloo) Dalton McGuinty Jr., Michel J.L. Robin | Phytoplankton Community Composition and Health Measured Using Fluorimetric Techniques Along Water Quality Gradients in New York Tributaries to Lake Ontario, Michael R. Twiss (Clarkson University) Ian R. MacLeod |
| 8:20 | Identifying Groundwater Discharge in Rivers of Eastern Ontario Bustros-Lussier, E. (University of Ottawa) M.J.L. Robin, Conant Jr., B. | Evaluation of the Influence of Groundwater, Nutrients and Flow on Algal Biomass and Accrual on the Raisin River, ON, Canada, Lieserl M. E. Woods , (University of Ottawa), Frances R Pick, . Michel J.L.Robin, |
| 8:40 | Vulnerability Mapping for Multiple Wells with Respect to Potential Contaminant Sources within the CaptureZone, R. Rahman (University of Waterloo), E.O.Frind, D.L. Rudolph, N.R.Thomson, J.W. Molson | Factors Contributing To Elevated Levels of Methyl and Total Mercury in the Raisin River Watershed, Serena Maharaj (University of Ottawa) Emmanuel Yumvihoze, Jeff Ridal, David Lean |
| 9:00 | A Fifty Year Forensic Analysis of Watershed Change, Steve Usher (Gartner Lee Limited) B.Neary, H. Zhang, D. Bloomfield, T. LaChapelle | Do Rivers Have a Contaminant Memory? Adrian Unc (New Mexico State University) Paul Sharpe, Susan Springthorpe, Michael J. Goss, Jahnnis PitydelCid, Syed Sattar |
| 9:20 | Break | Break |
| 9:40 | Field Scale Effects of Nutrient Reductions on Soil Water and Groundwater Quality Beneath an Agricultural Field, Brewster Conant Jr. (University of Waterloo), Jason, Cole, David L. Rudolph | Hg Biomagnification in the St. Lawrence River at Cornwall – the Benthic Pathway, Elizabeth Yanch , (Queen’s University) P.V. Hodson, L.M. Campbell |
| 10:00 | Soil Erosion and Runoff Contributing Source Area Modelling at the “Within-Field” Scale in the Kerry’s Creek Watershed of Ontario, S.J. Sweeney (Ontario Ministry of Agriculture, Food and Rural Affairs) , J.D. Aspinall | Role Of Gas Evasion From Contaminated Sediments As A Mechanism Of Mercury Transfer To Aquatic Biota, Roxanne Razavi , (Queen’s University) Linda M. Campbell, Peter V. Hodson, Jeff Ridal |
| 10:20 | Stretch Break | Stretch Break |

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| DAY 3 THURSDAY MAY 17TH, 2007 MORNING | | |
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| | Room: Theatre | Room: A119 |
| | Aquatic Habitats and Exotic Species Chaired by Pierre Magnan, Université du Québec à Trois-Rivières | Emerging Contaminants in Water Supplies Chaired by Saad Jasim, Walkerton Clean Water Centre |
| 10:30 | Monitoring Wetland Area And Invasive Plant Species Along The St. Lawrence River: Current State and Recent Evolution, Martin Jean , (Environment Canada) Guy Létourneau | The Effect of Ozone on Removal of Pharmaceuticals and Pesticides in Detroit River Water, Saad Jasim (Walkerton Clean Water Centre) |
| 10:50 | Chinese Mitten Crab: A New Species in the St. Lawrence River, Yves De Lafontaine , Environment Canada) Richard Calvé, Jean-Marie Sévigny Guy Verreault Simon Despatie | Pharmaceuticals and Personal Care Products (PPCPs) and Endocrine Disrupting Compounds (EDCs) in Water and their Removal by Novel Membranes, Anne-Marie Garand-Sheridan (University of Ottawa) A. Westgate R.M. Narbaitz T.Matsuura S. Jasim , S. Tabe |
| 11:10 | Do Alien Fish Species Escape Their Parasites: Examples from the St. Lawrence River Basin, Andrée Gendron , (Environment Canada) David J. Marcoglies, David Cone, Pierre Dumont | Removal and Transformation of PPCPs and EDCs Detected in the Detroit River using Ozonation Process, Shahram Tabe , (Ministry of the Environment) Rajesh Seth, Paul Yang, Linda Schweitzer, Chaoyan Yue Saad Jasim, Xiaoming Zhao, Chunyan Hao |
| 11:30 | Invasive Wetlands Plants Campaign, Hélène Godmaire , (Union Saint-Laurent Grands Lacs) | The Persistence Of Estrogens In The Aquatic Environment: Sewage Treatment And UVB Degradation, J.M Blais (University of Ottawa), S.K. Atkinson, V.L. Marlatt, D.R.S. Lean, J. Ridal, V.L.Trudeau, |
| 11:50 | Traditional Closing— F. Henry Lickers, Mohawk Council of Akwesasne | |
| 12:00 (noon) | A light lunch will be served—Theatre Lounge | |