



## ***Maritime Water Resources Symposium: Watershed Health, Planning and Management***

*August 21-23, 2008*



Hosted by:

*The Nova Scotia Branch of the Canadian Water Resources Association  
in partnership with:*

*Applied Geomatics Research Group,  
Nova Scotia Community College,  
The Province of Nova Scotia,  
Halifax Regional Municipality,  
Sackville Rivers Association.*

THE SYMPOSIUM is aimed at those with an active interest in the sustainable management, protection, monitoring, research, development and regulation of watersheds and water resources in Eastern Maritime Canada. There will be two days of presentations and break out discussions dealing with current water resources topics within the Atlantic Canada context. Information gathered and lessons learned at the symposium will aid the Province of Nova Scotia in developing a Provincial Water Strategy, and assist the Nova Scotia Community College in focusing its watershed research towards the needs of Atlantic Canada communities and businesses.

KEYNOTE SPEAKERS will provide international and national perspectives on water resources policy and management. Our opening Keynote Speaker is Dr. Gordon Young, a highly respected water resources researcher since 1968 and presently the President-elect of the Int. Assoc. of Hydrological Sciences. Gordon has taken a leading role in several international initiatives, and will provide the global perspective from his most recent position as Co-ordinator, United Nations World Water Assessment Programme. Our second keynote speaker is Sonya Meek, the National President of the Canadian Water Resources Association and Manager of the Watershed Planning Group in the Toronto and Region Conservation Authority's Ecology Division. Sonya will present on the CWRA collaborative initiative that has led to recommendations for the development and implementation of a National Water Strategy for Canada. The two keynote papers will be followed by presentations from leading figures in the Nova Scotia water resources community detailing current Provincial, Municipal and Community-based efforts to improve policy, management and development practices within the region.

SYMPOSIUM WEB SITE AND CONTACT:

[http://www.cwra.org/branches/Nova\\_Scotia/Symposium\\_2008.aspx](http://www.cwra.org/branches/Nova_Scotia/Symposium_2008.aspx)

Contact Dr Chris Hopkinson for further information:

[Chris.hopkinson@nsc.ca](mailto:Chris.hopkinson@nsc.ca)

Tel: 902 825 5424

## REGISTRATION AND COSTS:

Online registration is available at the following link until August 15<sup>th</sup>. After August 15<sup>th</sup>, all registration will be on site.

<https://www.cwra.org/services/NSSymposium/NSSymposiumRegistration.aspx>

Early bird registration pricing (below) is available on line until August 1<sup>st</sup>. After this date, the rates will increase to those listed in brackets.

a) General registration	\$100.00 (\$150)*
b) Members of CWRA	\$50.00 (\$75)
c) Student registration	\$25.00 (\$40)*
d) Student Members of CWRA	\$15.00 (\$25)

### Optional:

- Annapolis Valley winery field trip \$30
- Scakville River trails \$10

All costs are subject to HST (13%)

\* Non-member registration includes a half year membership of CWRA

## VENUE AND ACCOMMODATIONS:

The symposium will be held at the new Nova Scotia Community College, Waterfront Campus in Dartmouth. This recently completed campus looks out over the spectacular Halifax Harbour and incorporates many 'green' and sustainable technologies in its modern construction.

NSCC Waterfront Campus, 80 Mawioni Place, Dartmouth, NS B2Y 0A5

[http://www.nsc.ca/about\\_nsc/locations/waterfront.asp](http://www.nsc.ca/about_nsc/locations/waterfront.asp)

There are several hotels, bed and breakfasts, and motels within close proximity of the symposium venue. A listing is available at the following link:

[http://agrg.cogs.nsc.ca/news\\_and\\_events/HOTELS\\_IN\\_DARTMOUTH.pdf](http://agrg.cogs.nsc.ca/news_and_events/HOTELS_IN_DARTMOUTH.pdf)

## SOCIAL EVENTS AND CATERING

Included as part of the registration, refreshment breaks with coffee and muffins will be provided, along with lunch time sandwiches and juice. We have an exciting social calendar planned for the symposium so don't miss out on these opportunities to meet and network with colleagues.

### Poster / exhibit reception:

Thursday 21<sup>st</sup> August 3:30 pm – Waterfront campus Atrium Hors D'Oeuvres, coffee and juice will be served.

### Historical pubs of Halifax tour:

Friday August 22<sup>nd</sup> 7pm – a guided tour of the world famous pubs of Halifax provided by regional hydrologist, Doug Stiff

### Field trip to Annapolis Valley vineyard and a hike around Grand Pre :

Saturday 23<sup>rd</sup> August 8:30am – a trip to the Grand Pre winery for a tasting of some local Annapolis Valley wine selections, lunch at the winery and a guided hike over the historical Acadian dykes. (~\$30 – contact Chris for details: [chris.hopkinson@nsc.ca](mailto:chris.hopkinson@nsc.ca))

## DAY 1 – Thursday, August 21

8:00 to 9:00	<b>Registration (Atrium)</b>	
9:00	<b>Introductions</b> <b>Chris Hopkinson &amp; Joan McArthur-Blair</b>	
9:15	<b>Keynote</b> <b>Gordon Young, IAHS President-elect</b> Assessing, monitoring and setting targets: the work of the United Nations in fresh water.	
9:55	<b>Maureen Ryan, HRM</b> Watershed Planning; the Halifax Regional Municipality perspective	
10:20 to 10:40	<b>BREAK</b>	
	<b>Concurrent Sessions</b>	
10:40 to 12:00	<b>#1 (Rm 3526)</b> <b>Governance and Sustainable Watershed Development (Chair: Doug Stiff)</b>	<b>#2 (Rm 4524)</b> <b>Water Quality Issues, Stewardship and Outreach (Chair: Larry Bell)</b>
10:40	<b>Raymond Parker</b> The Avon peninsula as a lens on watershed management in Nova Scotia: A community view	<b>Lee Hynes</b> An investigation of bacterial persistence and transport within the subsurface environment in the Thomas Brook Watershed
11:00	<b>Andy Sharpe</b> A watershed under stress: Planning for change in the Annapolis Valley	<b>Andrew Sinclair</b> Investigation of nutrient Loading in a post-agricultural watershed: municipal and rural impacts on water quality
11:20	<b>Laura Cervoni</b> Implementing integrated water resources management: The importance of cross-scale considerations and local conditions	<b>Hany Abdelhady</b> Role of mature intracellular forms (MIFs) of <i>Legionella pneumophila</i> , a water-borne pathogen, in the transmission of Legionnaires' Disease (LD).
11:40	<b>Denis Parent (Margaret Burke)</b> Automated water quality monitoring in Atlantic Canada – Applications of this innovative monitoring technique	<b>Sarah Haverstock</b> Quantifying the kinetics of dissolved organic carbon photo-oxidation in freshwater lakes
12:00 to 1:00	<b>LUNCH (Cafeteria)</b>	
	<b>Concurrent Sessions</b>	
1:00 to 2:00	<b>#3</b> <b>Governance and Sustainable Watershed Development</b>	<b>#4</b> <b>Water Quality Issues, Stewardship and Outreach (con't)</b>
1:00	<b>Fred Baechler</b> Defining hydrological regions and districts to aid water management within the Bras D'Or lakes	<b>Walter Scott</b> Sackville River Fish Friends and River Rangers experimental stewardship education programs
1:20	<b>Hans Peterson</b> The biology of drinking water	<b>Walter Regan</b> Sackville River Watershed; 20 years of Restoring a Dead Watershed to A Sustainable Healthy Watershed
1:40	<b>Scott Lister</b> Annapolis Valley surface water withdrawal pilot project outcomes	<b>Tracy Webb</b> Educating about water; SDWF experiential water outreach programs (Grades K-12)
2:00 to 2:20	<b>BREAK</b>	
	<b>Concurrent Discussions</b>	
2:20 to 3:30	<b>Discussion A:</b> <b>Policy, Planning, Management in Atlantic Canada</b>	<b>Discussion B:</b> <b>Stewardship, Education and Outreach</b>
3:30 to 6:00	<b>Poster Session and Reception (Atrium)</b>	

## DAY 2 – Friday, August 22

8:00 to 9:00	<b>Registration (Atrium)</b>	
9:00	<b>Introduction</b> <b>Larry Bell</b>	
9:10	<b>Keynote</b> <b>Sonya Meek, CWRA President</b> National context for watershed management	
9:50	<b>Jessica Paterson, NSE</b> Towards a water resources management strategy for Nova Scotia	
10:20 to 10:40	<b>BREAK</b>	
	<b>Concurrent Sessions</b>	
10:40 to 12:00	<b>#5 (Rm 3526)</b> <b>Emerging and Advanced Water Resources Technologies</b> (Chair: Chris Hopkinson)	<b>#6 (Rm 4524)</b> <b>Watershed Health – Monitoring Issues</b> (Chair: Cathy Conrad)
10:40	<b>Larry Bell</b> Utilizing Biomimicry and Natural Processes to Process Wastewater and Decontaminate Water and Soil	<b>Cathy Conrad</b> Environmental stewardship and watershed monitoring in Nova Scotia: A review of community-based monitoring
11:00	<b>Leah Boutillier</b> Performance of constructed wetlands used for domestic wastewater treatment in a cold climate	<b>Doug Stiff</b> Development of a surface water budget, for a high-density agricultural watershed, in NS and its application to monitoring and compliance
11:20	<b>Koreen Millard</b> Assessing impacts of barriers to American eel in the Maritimes: a GIS approach	<b>Jocelyne Rankin</b> The role of community-based watershed monitoring groups on decision-making in Nova Scotia
11:40	<b>Kevin Garroway</b> Assessing model accuracy of high resolution topographic indices for soil surface saturation mapping	<b>Annette Tobin</b> Emerging technologies using real-time water quality monitoring in Newfoundland and Labrador
12:00 to 1:20	<b>LUNCH (and CWRA-NS Chapter AGM 12:15 – 1:15)</b>	
	<b>Concurrent Sessions</b>	
1:20 to 2:00	<b>#7</b> <b>Emerging and Advanced Water Resources Technologies (con't)</b>	<b>#8</b> <b>Watershed Health – Lakes and Coastal Environments</b>
1:20	<b>Chris Hopkinson</b> Adoption of LiDAR for water resources research in Atlantic Canada	<b>Tony Bowron</b> Rapid Recolonization of Halophytic Vegetation Following Restoration of an Upper Bay of Fundy Salt Marsh
1:40	<b>Tim Webster</b> High resolution DEMs for landscape evolution and water resources studies	<b>Ian Spooner</b> The Effect of Climate Change on the Thermal Regime of Stratified Lakes in Nova Scotia
2:00	<b>Alexandre Vorobiev</b> Water quality assessment using active hyperspectral lidar	<b>Bruce Hatcher</b> Land-ocean interactions of Canada's inland sea
2:20	<b>Robert Maher</b> A proposal to develop watershed quality management tools	<b>Brenda Kelly</b> Protecting Canadian Lakes from Mine Waste
2:40 to 3:00	<b>BREAK</b>	
	<b>Concurrent Discussions</b>	
3:00 to 4:00	<b>Discussion C:</b> <b>Watershed Assessment Technology - Atlantic Canada Opportunities</b>	<b>Discussion D:</b> <b>Monitoring Watershed Health</b>
4:00 to 5:00	<b>Wrap Up (Theatre)</b> <b>synthesis of discussion sessions - awards</b>	
7:00	<b>Historic Pubs of Halifax – Tour – Start Halifax ferry terminal</b>	

### Poster Presentations (Atrium)

<b>Katie Campbell</b>	Nitrate Fate and Transport in the Thomas Brook Watershed
<b>Janice Wilson</b>	Field Scale Assessment of Sloping Sand Filters for On-Site Wastewater Treatment
<b>Celia Lima</b>	Packing a powerful punch: The interaction of <i>Legionella</i> and <i>Tetrahymena</i> in water systems.
<b>Megan Henley</b>	Groundwater-surface water interactions; a key component in watershed health
<b>Michael Haverstock</b>	Initial assessment of a wetland-reservoir drainage water treatment and reuse system in Nova Scotia
<b>Erica Underwood</b>	Saltwater intrusion effects in a coastal aquifer, Wolfville Nova Scotia
<b>Laura Chasmer</b>	An applied approach to locating hydro-meteorological instrumentation in varying landcover types
<b>Raymond Jahncke</b>	Analysis of the McIntosh Run watershed characteristics
<b>Tony Bowron</b>	Learning to crawl before learning to walk - Macro- & meso-tidal wetland restoration in Nova Scotia.

### NSCC Waterfront Campus

#### Room Key:

	<b>Theatre (capacity 150)</b>
	<b>Atrium</b>
	<b>Cafeteria</b>
	<b>Rm 3526 (capacity 60)</b>
	<b>Rm 4524 (capacity 31)</b>

43 presentations (34 oral/9 poster) + 4 discussion sessions