

# ORAL PRESENTATIONS

Monday, February 9<sup>th</sup>, 2004

Main Mall		
<b>07:45</b>	<ul style="list-style-type: none"> <li>• Registration</li> <li>• Poster Installation</li> </ul>	
Plenary Session: Auditorium		
<b>08:30</b>	<b>Welcome to the National Water Research Institute: Dr. John H. Carey, Director General, National Water Research Institute</b>	
<b>08:35</b>	<b>Opening Remarks: Dr. Yves Comeau, President, Canadian Association on Water Quality</b>	
<b>08:45</b>	<b>Plenary: Dr. Jim A. Nicell, Associate Professor, Department of Civil Engineering and Applied Mechanics, McGill University "Environmental Applications of Enzymes: Opportunities and Obstacles"</b>	
Room	Session 1 – Auditorium	Session 2 – North/South Seminar Room
Theme	<b>Wastewater</b> Chair: JIM A. NICELL Associate Professor McGill University	<b>Drinking Water</b> Chair: SUSAN B. WATSON Research Scientist National Water Research Institute
<b>09:30</b>	Development of Bioreactors for the Treatment of Colored Industrial Effluents <u>D. K. SHARMA *</u> , M. SINGH, H. S. SAINI, B. S. CHADHA, AND S. S. CHIMMNI	Dhaka's Waterways: "Save the Buriganga River Program" <u>P.A. GRAY</u> , T.A. BONIN, AND M.F. AHMED
<b>09:55</b>	Releases of Pharmaceuticals and Personal Care Products by Selected Ontario Sewage Treatment Plants L. LISHMAN, K. SARAFIN, <u>S. A. SMYTH</u> , J. TOITO, T. PEART, B. LEE, M. SERVOS, AND P. SETO	Probing the Ramsey Lake Watershed <u>G.A. SPIERS</u> , A. LOCK, F. PREVOST, D. PEARSON, B. HOSTETLER, AND J. RAY
<b>10:20</b>	Performance of an Anaerobic Baffled Reactor for Olive Mill Oil Wastewater Treatment <u>M. S. KHABBAZ *</u> , M. VOSSOUGH, AND M. SHAKERI	Taste and Odour Outbreaks in N.W. Lake Ontario: Physical, Chemical and Biological Drivers <u>S. WATSON</u> , T. HOWELL, M. CHARLTON, M. SKAFEL, R. YERUBANDI, C. MARVIN, B. BROWNLEE, L. HEINTSCH, J. MILNE, AND G. MACINNIS
10:45 Health Break – Main Mall		
<b>11:00</b>	Combined Peracetic Acid-UV Disinfection Process for a Physicochemical Effluent X. DONG AND <u>R. GEHR</u>	Pilot Scale Investigation of the Removal of Geosmin and MIB by Granular Activated Carbon Filtration <u>S. NDIONGUE</u> , W.B. ANDERSON, A. TADWALKAR, J. RUDNICKAS, S. PILLAI, AND P. HUCK
<b>11:25</b>	Unified Theory for Endogenous Decay in Aerobic Digestion <u>C. ESKICIOGLU *</u> , R. L. DROSTE, AND A. TAEBI	TerraQSAR™ — LOGP — A PNN-Based Octanol/Water Partition Coefficient Computation Program for PCs <u>K.L.E. KAISER</u>
<b>11:50</b>	Biosorption of Pentachlorophenol by Fungal Biomass <u>T. MATHIALAGAN *</u> , AND T. VIRARAGHAVAN	
12:15 Lunch – Main Mall		

<b>Room</b>		<b>Session 3 – North/South Seminar Room</b>
<b>Theme</b>	<b>Wastewater</b> Chair: YVES COMEAU Professor École Polytechnique de Montréal	<b>Sediments</b> Chair: MICHAEL ZARULL Project Chief National Water Research Institute
<b>13:15</b>	Impact of Redox Potential and Protozoan Predation on Nitrification in Activated Sludge <u>Y. LEE AND J. A. OLESZKIEWICZ</u>	Opportunities, Needs and Strategic Direction for Research on Flocculation in Natural and Engineered Systems <u>I. G. DROPPA, G.G. LEPPARD, S.N. LISS, AND T.G. MILLIGAN</u>
<b>13:40</b>	Model Optimisation for BAF Systems <u>X. LE TALLEC, K. HELLESHØJ SØRENSEN, AND P. GILLES</u>	Unique Tools for Determining the Geometry of Contaminated Sediments <u>J. (HANS) BIBERHOFER</u>
<b>14:05</b>	Two-Stage Low Sludge Production Process for the Treatment of Municipal Wastewater <u>L. BOURQUE*</u> , L. KHAROUNE, AND Y.COMEAU	Comparison of Mercury and Lead Sediment Concentrations in Lake Ontario (1968-1998) and Lake Erie (1971-1997/98) Using a GIS-Based Kriging Approach <u>M. DENNIS*</u> AND K.W. FORSYTHE
<b>14:30</b>	<b>Health break</b>	
<b>Room</b>	<b>Session 4 – Auditorium</b>	
	<b>Drinking Water: Waterborne Pathogens</b> Chair: TOM EDGE Research Scientist National Water Research Institute	
<b>14:45</b>	Coliforms Give Me Gas <u>M. H. BRODSKY</u>	Assessing the Biological Impact of Contaminated Sediments: Peninsula Harbour, Lake Superior: Case Study <u>D. MILANI AND L. GRAPENTINE</u>
<b>15:10</b>	Changes in Drinking Water Treatment: What Are the Effects on Microbial Water Quality in the Distribution System? <u>S. SPRINGTHORPE, S. A. SATTAR, AND M. PRYOR</u>	Reductions in Detroit River Area Sediment PCB Levels <u>M. ZARULL J. HARTIG, AND T.M. HEIDTKE</u>
<b>15:35</b>	DNA Microarray Fingerprinting of Microbial Communities in Commercial Microbial Biotechnology Products for Water Treatment. <u>T. EDGE, J. DUBOIS, S. HILL, L.S. ENGLAND, L. MASSON, J.T. TREVORS, AND R. BROUSSEAU</u>	
<b>16:00</b>	<b>Poster Reception/Pre-meeting Break – Main Mall</b>	
<b>16:30</b>	<b>CAWQ Annual General Meeting – Auditorium</b>	

\* Competing for the Philip H. Jones Award

Tuesday, February 10<sup>th</sup>, 2004

Main Mall		
07:30	• Registration	
Room	Session 1 – Auditorium	Session 2 – North/South Seminar Room
<b>Theme</b>	<b>Groundwater: Quality and Quantity</b> Chair: NATHALIE ROSS Research Scientist National Water Research Institute	<b>Storm Water and CSOs</b> Chair: SANDRA KOK Senior Program Engineer Great Lake Sustainability Fund
<b>08:00</b>	Use of Stable Isotopes to Assess Groundwater Discharge within the Grand River Watershed <u>S. DAY</u> , A. PIGGOTT, J. GIBSON, P. LAPCEVIC, AND F. LONGSTAFFE	Water Pollution Analysis for the City of Sarnia <u>J. LI</u>
<b>08:25</b>	The Current Understanding of Microbial Transport in Saturated Subsurface Environments, and Directions for Future Research <u>Q. ZHENG *</u> , S.E. DICKSON, AND Y. GUO	Investigations of Sediment Quality at a Stormwater Management Facility in Toronto using Benthic Techniques <u>Q. ROCHFORT</u> , L. GRAPENTINE, AND J. MARSALEK
<b>08:50</b>	Geochemical Mechanisms Controlling Acid Generation, Acid Neutralization and Metal Attenuation at the East Tailings Management Area, Lynn Lake, Manitoba. <u>M.R. GUNSINGER*</u> , C.J. PTACEK, D.W. BLOWES, AND J.L. JAMBOR	Feasibility of Stormwater Treatment by Conventional and Lamellar Settling with and without Polymeric Flocculant Addition J. WOOD, M. YANG, Q. ROCHFORT, P. CHESSIE, J. MARSALEK, <u>P. SETO</u> , AND S. KOK
<b>09:15</b>	The Qanat Discharge and Ground Water Table Changes under Water Spreading Impact in Part of the Zanzan Plain, Iran <u>F. B. MOVAHHED</u>	Simulation of Flow and Sediment Transport in a Combined Sewer Overflow (CSO) Storage and Treatment Facility <u>C. HE</u> , J. MARSALEK, Q. ROCHFORT, AND K. KRISHNAPPAN
09:40 Health Break – Main Mall		
<b>Theme</b>	<b>Groundwater Remediation</b> Chair: NATHALIE ROSS Research Scientist National Water Research Institute	
<b>10:00</b>	The Effect of Biofilm Development on Solute Diffusion in Low Permeability Rock <u>A.M.CHARBONNEAU *</u> , K.S.NOVAKOWSKI, AND N.ROSS	The Use of Ballasted Flocculation (ACTIFLO <sup>®</sup> process) for Combined Sewer Overflow (CSO) Treatment <u>S. LAJOIE</u> , C. DESJARDINS, J. BEAUDET, C. SCOTT, AND B. GAGNÉ
<b>10:25</b>	Characterizing Biofilm Development in Fractured Bedrock Using Hydraulic Testing and Point Dilution <u>G. BICKERTON</u> , N. ROSS, AND J. VORALEK	Benefits and Application of Real Time Control for Sewer Systems <u>H. COLAS</u> , M. PLEAU, AND A. CHARRON
<b>10:50</b>	Laboratory Evaluation of Zero-Valent Iron Mixtures for Use in Permeable Reactive Barriers for Treatment of Acid Mine Drainage <u>M.B.J. LINDSAY*</u> , C.J. PTACEK, AND D.W. BLOWES	

<b>11:15</b>	Containments' Formation and their Impact on Groundwater Quality <u>M. ELEKTOROWICZ</u> , R. CHIFRINA, AND R. HASNAWI	
<b>11:40</b>	<b>Lunch – Main Mall</b>	
	<b>Session 3 - Auditorium</b>	
<b>Theme</b>	<b>Surface Water</b> CoChairs: PATRICIA CHAMBERS JOANNE PARROTT Research Scientists National Water Research Institute	
<b>12:40</b>	Thermal Bar Evolution and Attached Algae, Western Lake Ontario <u>M. G SKAFEL</u> , R R YERUBANDI, AND M. N CHARLTON	
<b>13:05</b>	Cyanobacterial Toxins in the Lake Winnipeg Watershed and their Implications Regarding Eutrophication <u>C.R. HERBERT*</u> , H.J. KLING, J. DAHLMAN, AND M.P. STANTON	
<b>13:30</b>	Iron-Stimulated Growth and Toxin Production of <i>Microcystis Novacekii</i> UAM 250 <u>H. LI</u> , T. MURPHY, J. GUO, T. PARR, AND L. MILLER	
<b>13:55</b>	<b>Health Break – Main Mall</b>	
<b>14:10</b>	An ELISA for Cutthroat Trout ( <i>Oncorhynchus Clarki</i> ) Vitellogenin (Vg) and its Use to Assess the Estrogenic Impacts of Agricultural Runoff in a B.C. Watershed <u>J. SHERRY</u> , T. HOOEY, S. SYLVESTRE, M. SEKELA, T. TUOMINEN, P. HANSEN, AND B. HOCK	
<b>14:35</b>	Using an Airborne Laser Remote Sensing System (Lidar) for Pollution Detection and Point Source Location an the Great Lakes and Associated Watersheds – A 2003 Case Study <u>A. VOROBIEV</u> AND M. FRIZZELL	
<b>15:00</b>	Sensitivity of HSPF Model to Land Use Data of Different Scale <u>I. ISKRA*</u> AND R. L. DROSTE	
<b>15:25</b>	<b>Auditorium: Philip H. Jones Award and concluding remarks by Dr. John H. Carey</b>	

\* Competing for the Philip H. Jones Award

**POSTER DISPLAYS  
(MAIN MALL)**

**Poster displays are available in the Main Mall on both Monday, February 9, and Tuesday, February 10. The authors will be in attendance at their posters during the Poster Social on Monday, February 9 at 16:00.**

**Session Theme – GROUNDWATER: QUALITY, QUANTITY AND REMEDIATION**

Remediation of a Cold-Climate Petroleum Spill in Moose Factory, Ontario  
G. BICKERTON, D.R. VAN STEMPVOORT, J. VORALEK, AND S. LESAGE

Stability of a Nutrient-Starved Biofilm in a Limestone Fracture  
F. CASTEGNIER, N. ROSS, R.P. CHAPUIS, L. DESCHÊNES, AND R. SAMSON

Biofilm Development in a Planar Fracture: Effects of a BTEX/Ethanol-Contaminated Groundwater  
P. GRANDE, N. ROSS, H. STEER, AND J.F. BARKER

Peculiarities of Arsenic Removal by Ion Exchange  
A.K. M SAIDUZ ZAMAN

**Session Theme – SURFACE WATER**

Laboratory and Field Validation of Elimination Kinetics and Accumulation of Organochlorines in *Elliptio Complanata* and Semi-Permeable Membrane Devices (SPMDS)  
S. O’ROURKE, G.D. HAFFNER, AND K.G. DROUILLARD

**Session Theme – SEDIMENTS**

In Situ Sediment Treatment in Hong Kong  
J. GUO, T. MURPHY, AND L. CHAN

Small-Scale In Situ Sediment Treatments  
T. MURPHY

**Session Theme – WASTEWATER**

Innovative Leachate Treatment Technology  
D. GAGNON, H. HANEY, H.C. LAVALLÉE, AND C. DANEAULT

Precipitation of Hexavalent Chromium from an Electroplating Wastewater by Electrocoagulation  
S. KULAC AND I.A. SENGIL

NOTE: There will be a number of commercial exhibits in the Main Mall, including:

- AssayNet Canada Inc.
- Brightwell Technologies
- Hanson Pipe & Products Canada, Inc
- IDEXX Laboratories