

# Ripple Effects

Étude internationale sur le lac Ontario et le fleuve Saint-Laurent  
International Lake Ontario - St. Lawrence River Study

Volume 3, January 2003

The International Lake Ontario-St. Lawrence River Study was set in motion in 2000 by the International Joint Commission to assess and evaluate the Commission's Order of Approval used to regulate outflows from Lake Ontario through the St. Lawrence River. The current Order of Approval requires that the St. Lawrence Seaway Power Project be operated to meet certain conditions and criteria to protect the interests in both countries, including shoreline communities, commercial navigation and hydropower production. The Study is also evaluating the impacts of changing water levels on environmental factors, shore erosion, flood damages, recreational boating, and tourism. The Public Interest Advisory Group is a volunteer group appointed by the International Joint Commission to ensure effective communication between the public and the International Lake Ontario-St. Lawrence River Study Team. This newsletter is published by the Public Interest Advisory Group to help keep you informed about the Study.

## Contents

Opening Letter . . . . .	1
Public Meetings . . . . .	2
Current Regulation . . . . .	3
Recreational Boating . . . . .	4
Erosion . . . . .	5
Water Uses Group Needs Input . . . . .	5
Water Levels and Wetlands . . . . .	6
Study Announcements . . . . .	8
Team Arrivals . . . . .	9
Team Departures . . . . .	10

*Dear Friend of Lake Ontario and the St. Lawrence River,*

*The Public Interest Advisory Group (PIAG) has lost some of its members and gained new ones. We thank those people who have left for the time and energy that they have devoted to this Study.*

*We welcome Dr. Dan Barletta and Mr. Marcel Lussier, our new co-leads to the PIAG, and know that they will renew our confidence in our quest to meet with you, provide you with information about the progress of the Study, and receive your invaluable input.*

*The members of PIAG will also be increasing their liaison capability with the various Technical Working Groups. The Study has reached the point where we must have more information at our fingertips to continue our dialog with you. We also need to be sure the Technical Working Groups are aware of your concerns.*

*Anyone who would like to have a PIAG member give a presentation to his or her group is invited to contact the communication representative listed at the end of this brochure. The closest member of the PIAG will then be contacted regarding the invitation. We are very interested in reaching as many of you as possible.*

*Sincerely,*

**PIAG**

*Public Interest Advisory Group  
International Lake Ontario-St. Lawrence River Study*

# Public Meetings

The Public Interest Advisory Group held meetings in Sackets Harbor, Belleville, and Trois Rivieres in 2002. Because many of you indicated that you would like to hear from us more often, we intend that the Ripple Effects will be sent out quarterly beginning with this issue. Articles will be focused on how the Study is addressing your concerns.



Mr. James Quick expresses erosion concerns

Photo by Amanda Morelli



PIAG Co-leads meet with Study Team Members to discuss future work plans and budgets

Photo by Chris Stewart

One question that is asked regularly is how environmental issues, which do not easily have an economic value attached to them, will be weighed against other interests that can be assigned dollar values. This is a challenge for the Study and we are working on a way to balance these interests in the shared vision model that is being developed by the Plan Formulation and Evaluation Group.

Many of you have indicated that you are unhappy with extreme water level fluctuations, or the rate that the levels drop or rise. This is largely a product of varying water supplies that cannot be controlled by regulation.

At the Study Board annual meeting held in Ogdensburg in September, people with different perspectives expressed different concerns. The riparian homeowners generally favored lower levels to avoid flood damages and erosion. The marina/recreational boating interests favored higher levels. Elaine Kennedy acting PIAG co-lead in August explained, "...we won't be able to please everybody all the time, and I think that a little bit of reality has to stay with us as we go through this process, and try to find what will do the least amount of damage, and be the best for people as much as possible. But it won't be perfect all the time."

"One thing that's definitely going to come out of this work is that we're going to understand the Lake Ontario - St. Lawrence River system much better. We'll know where erosion is a factor, and we'll know where flooding has occurred. People will be able to use the information generated by the Study as a planning tool," said Tony Eberhardt, U.S. Study General Manager.

The Public Interest Advisory Group's 2003 meetings will be held in Brockville and Toronto, Ontario; in the Lake St. Louis area, Quebec; Sodus Bay and Wilson, New York; and on Akwesasne lands.



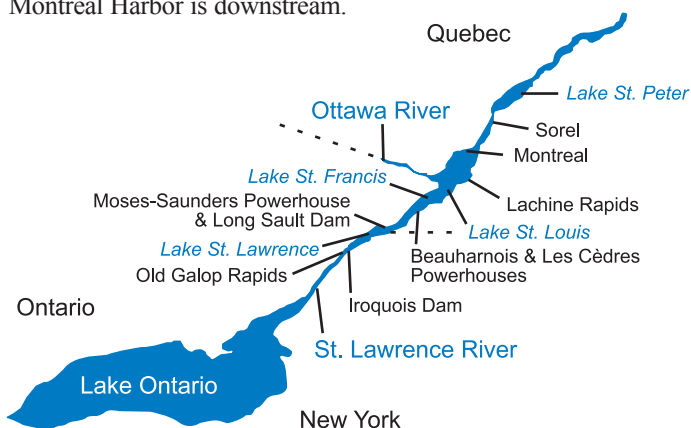
Captain Donald Metzger, St. Lawrence Seaway Pilots' Association, voices concerns at the PIAG meeting in Sackets Harbor, NY

Photo by Amanda Morelli

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# Current Regulation of Outflows from Lake Ontario through the St. Lawrence River *Dr. Tony Eberhardt, U.S. Study General Manager*

In April 1952, after years of debate on joint United States-Canadian participation, the Canadian government proposed an all-Canadian seaway and a joint Ontario-New York power project. In May 1954, Congress authorized U.S. participation in the project. The St. Lawrence Seaway and Power Project was completed on June 26, 1959, utilizing an enlarged channel to move commercial navigation from the Atlantic Ocean to the Great Lakes and the change in water surface elevation to generate hydropower. The project extends from Ogdensburg to Massena, New York/ Cornwall, Ontario, for a distance of 45 miles (72 kilometers). Major features are the Robert Moses-Robert H. Saunders Power Dam; the Long Sault Dam, which acts as an overflow structure for flows larger than the powerhouse design; and the Iroquois Dam, which is primarily used to help with ice formation. Three navigation locks that bypass these dams are the Iroquois, Eisenhower and Snell Locks. Downstream of this international project are the Melocheville, Beauharnois, Cote St. Catherine and St. Lambert Locks. A new in-river reservoir, Lake St. Lawrence, which begins at Iroquois and extends nearly 30 miles (50 kilometers), was created as the forebay of the Moses-Saunders Power House near Massena. Downstream from Moses-Saunders is Lake St. Francis, which serves as the reservoir for the Cedars Generating Station and the Beauharnois Powerhouse, two hydropower plants that pre-date the Seaway Project. Storage on Lake St. Francis is very limited due to requirements to maintain its level within a narrow range. Below the Beauharnois-Cedars complex, Lake St. Louis is the next portion of the river and Montreal Harbor is downstream.



Being within international waters, the construction of the hydropower project was approved by an Order issued by the International Joint Commission (IJC). The IJC Order also specified design and operational requirements to accommodate the Seaway. Prior to the completion of the project, regulation plans were being contemplated. The International St. Lawrence River Board of Control was created by the IJC in November 1953 to perform studies to determine the best rules for regulating Lake Ontario outflows and water levels. The Board was also charged with making decisions whether the outflows called for by a regulation plan should be released or if deviations from a plan are required.

Between 1955 and 1963, a regulation plan was developed and refined for Lake Ontario. The Plan was developed within the framework set by the guiding principles of the Boundary Waters

Treaty, giving precedence to uses for domestic and sanitary purposes, navigation and hydropower. Substantial flood damages occurred in the early 1950s due to high levels on the lake and, as a result, methods, which would provide a measure of flood control, were included in the Plan. During 1960, low levels in Montreal Harbor occurred and the plan was revised to reduce the number of times that these levels occurred. The present plan, which has been used by the St. Lawrence Board since 1963, is referred to as Plan 1958-D.

## Existing Criteria within Regulation Plan 1958-D

- (a) "The regulated outflow from Lake Ontario from 1 April to 15 December shall be such as not to reduce the minimum level of Montreal Harbour below that which would have occurred in the past"
- (b) "The regulated winter outflows from Lake Ontario from 15 December to 31 March shall be as large as feasible and shall be maintained so that the difficulties of winter operations are minimized"
- (c) "The regulated outflow from Lake Ontario during the annual spring break-up in Montreal Harbour and in the river downstream shall not be greater than would have occurred assuming supplies of the past"
- (d) "The regulated outflow from Lake Ontario during the annual flood discharge from the Ottawa River shall not be greater than would have occurred assuming supplies of the past"
- (e) "Consistent with other requirements, the minimum regulated outflows from Lake Ontario shall be such as to secure the maximum dependable flow for power"
- (f) "Consistent with other requirements, the maximum regulated outflow from Lake Ontario shall be maintained as low as possible to reduce channel excavation to a minimum"
- (g) "Consistent with other requirements, the levels of Lake Ontario shall be regulated for the benefit of property owners on the shores of Lake Ontario in the United States and Canada so as to reduce the extremes of stage which have been experienced"
- (h) "The regulated monthly mean level of Lake Ontario shall not exceed elevation 247.29 feet (75.37 metres) with the supplies of the past"
- (i) "Under regulation, the frequency of occurrences of monthly mean elevations of approximately 246.29 feet (75.07 metres) and higher on Lake Ontario shall be less than would have occurred in the past"
- (j) "The regulated level of Lake Ontario on 1 April shall not be lower than elevation 243.29 feet (74.15 metres). The regulated monthly mean level of the lake from 1 April to 30 November shall be maintained at or above elevation 243.29 feet (74.15 metres)"
- (k) "When supplies are less than supplies of the past, all possible relief shall be provided to commercial navigation and hydropower. When supplies are greater than supplies of the past, all possible relief shall be provided to riparian interests"

Plan 1958-D uses the end of week lake level and water supply indicators to determine outflows. In order to store water during various times of the year, seasonal adjustments are applied to the outflows specified. The plan has outflow limitations, which were included to assist navigation, stimulate ice formation, provide minimum outflows for hydropower and not result in outflows higher or lower than occurred prior to development of the project. There are also eleven guidelines, or criteria (see Criteria on previous page), which pertain to levels and outflows during certain times of the year for riparian, navigation and hydropower interests. The criteria set upper and lower levels for shoreline interests (riparians) on Lake Ontario. The development of Plan 1958-D was based on historic data from 1860 through 1954. The developers recognized that conditions would likely occur which would be more or less extreme than this historic data set. In view of this, they included Criterion (k), which specifies that if water supplies are greater than those on which the Plan was based, all possible relief should be provided to riparian interests upstream and downstream of the Moses-Saunders Powerhouse. If supplies are less than experienced during 1860-1954 recorded conditions, all possible relief should be provided to commercial navigation and hydropower. Unlike the other criteria, which are automatically in place, the Board must identify Criterion (k) conditions and operations within its guidelines, and recommend that Criterion (k) be invoked and revoked by the IJC. The Board then develops outflow regulation strategies to deal with these unusual situations.

The long-term seasonal variation in Lake Ontario levels is usually about 20 inches (0.5 meters). The lake typically reaches its lowest level in late November and then gradually rises over the winter and more sharply in response to spring runoff, peaking in June. Of

the Great Lakes, Ontario has the greatest seasonal variation since it is receiving water from all of the other lakes and its own basin. It also has the earliest peak. In a typical year, after the end of the navigation season, water temperatures in the St. Lawrence River near the Moses-Saunders Powerhouse and downstream are at or near the freezing point. Outflows are reduced substantially at this time to encourage ice formation in the river upstream of Montreal. The reduced flows and reduced velocities enable a strong and smooth ice cover to form. Once the cover is established, outflows are gradually increased. Navigation resumes around April 1st. In mid-to late spring, runoff from melting snow (freshet) on the Ottawa River basin occurs. This large river system flows into the St. Lawrence River at Montreal. During this freshet period, St. Lawrence River flows are often reduced to prevent flooding around Montreal. Once the Ottawa River freshet declines, Lake Ontario outflows are increased to prevent Lake Ontario levels from rising above the upper limit set in Plan 1958-D. In the fall, outflows are specified, which will provide adequate depths for navigation through the river and in Montreal Harbor as ships leave the system toward the end of the navigation season. Although not specifically addressed in the regulation plan, attempts are made to maintain St. Lawrence River water levels that will be adequate for recreational boaters. This interest becomes a concern especially during late summer and early fall in the St. Lawrence River from the Thousand Islands through to Montreal. Also, when Lake Ontario outflows are high, levels can drop in the Lake St. Lawrence area above the powerhouse, creating low water problems at marinas in that part of the river and occasionally at municipal water intakes.

## Recreational Boating Sails On

*Jonathan Brown, Co-lead Recreational Boating Technical Work Group*

The Recreational Boating Technical Work Group completed an inventory of marinas and yacht clubs in operation along the New York portions of the Lake Ontario and St. Lawrence River shoreline this summer. To be included in the survey, a business had to have ten or more slips for rent either seasonally or overnight, and the business had to be accessible to the public. Interviews were completed with 159 marinas and yacht clubs. A similar survey was conducted last summer at marinas and yacht clubs on the Canadian side of these waters.

During the interview, operators were asked about the services they provide and the impacts of changing water levels on their operations. Water depth measurements from slips and docks were taken at each marina to help identify the range of water levels at which each marina could operate without incurring economic losses. High and low water level fluctuations after which marina owners begin to have economic losses or costs, and estimates of these costs as water levels rise or fall further from the point where initial losses occur, were also determined.

A survey of boaters using Lake Ontario and the St. Lawrence River was conducted this fall. Boaters registered in New York State were screened to find out if they use these waters and then asked to complete surveys to identify how water level fluctuations impact them. [If you were asked to participate in this survey, please respond. The information you provide will be valuable to the Study.](#)



Boats sitting in silt during low water in August of 2001 in North Sandy Pond area

*Photo by Jonathan Brown*

The Recreational Boating Technical Work Group will analyze the results of both surveys to produce overall estimates of losses to marinas, losses in boating opportunities, and losses in tourism-related revenues to local communities due to excessive high and low water levels. This information will be used to define water level-impact relationship performance indicators and ultimately measure how and to what extent recreational boating is either positively or negatively affected by changing water levels or flows. Based on these water level/impact relationships, new criteria for regulation can be developed addressing the needs of boaters. The Plan Formulation and Evaluation Group will use these water level/impact relationships combined with those submitted by the other interest groups to develop alternative regulation plans with consideration to each group's criteria for regulation. It is expected that through this process, new regulation criteria and a plan will be developed that will better meet the needs of all interests.

# Erosion *Tom Bender, Co-lead Coastal Processes Technical Work Group*

The Coastal Processes Technical Work Group is investigating the impacts of water level fluctuations along Lake Ontario and the St. Lawrence River paying particular attention to erosion and flood processes. The most challenging part of this work will be to show how erosion occurs as a result of a large number of variables including water levels, bluff and near shore geology, storms and human influences. While it may be apparent that storms and high water levels produce much of the visibly active erosion, there are things going on even during low water conditions that contribute to erosion. For example, during low water, waves break further offshore and often erode and scour the lake bottom at that location. This in turn results in more wave energy reaching the shore during the next cycle of high water. Also during low water, some sedimentary rock and clay shorelines that are normally underwater can become exposed to more rapid weathering processes including freezing and thawing.

The supply of sand and gravel to a shoreline is also an important factor in controlling erosion. Few people realize that most beaches are the direct result of shoreline erosion, and without erosion the sands and gravels that make up many beaches would slowly disappear. The loss of the beach results in more direct wave attack to the bluffs, and erosion again is accelerated. In other words, nature tries to make up for what is lost, which illustrates the delicate balance between erosion and the natural protection that beaches provide. An example of this is when a structure is built to trap sand along the shoreline, such as a groin or offshore breakwater. The structure may benefit the area where sand collects, but the “downdrift” shoreline becomes starved and often experiences accelerated erosion. Another example is the effect that revetments and seawalls have on beaches. Since these structures halt the erosion of the sands and gravels that would normally become available as beach building materials, further degradation of downdrift beaches occurs.



Erosion of high bluffs along the south shore of Lake Ontario

The Coastal Processes Group is also evaluating flooding impacts along the lake and river shorelines. Fortunately, the understanding of flood processes is much less complicated and there are fewer areas of flooding compared to areas of erosion.

Based on the results of the above analyses, both the positive and negative impacts to shoreline property will be evaluated for a range of potential regulation plans. The results will then be coordinated with the Plan Formulation and Evaluation Group and evaluated with the results of the other technical work groups.

## Water Uses Group Needs Input

The Domestic, Industrial, and Municipal Water Uses Technical Work Group is studying the impacts of water level fluctuations on water intakes, sanitary sewers, septic systems, and water treatment facilities. This includes investigating the impacts of varying water levels on near-shore wells along the lake and river. The Group is gathering information on the extent and severity of the impacts on near-shore wells for further evaluation.

*If you have a shore well on the Lake or River and are experiencing problems related to levels, please contact the Study office(s).*



Remains of Trolley Line along former Barrier Beach looking across Braddock Bay

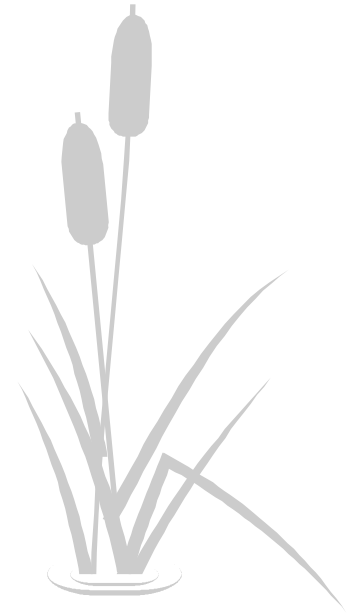
# A Coordinated Approach to Investigate the Relationships between Lake Ontario Water Levels and Wetlands

*Douglas A. Wilcox, Ph.D., PWS • U.S. Geological Survey – Great Lakes Science Center*



South Colwell Pond, a barrier beach wetland

Photo by Douglas Wilcox



Water-level fluctuations are a natural phenomenon in the Great Lakes due to natural climatic variability. Wetland plant communities, which provide habitat for a multitude of invertebrates, amphibians, reptiles, fish, birds, and mammals, have evolved to adapt to water-level changes that occur on several scales. Regulation of lake levels alters the dynamics of plant communities, however, and gives a competitive advantage to some species at the expense of others. In Lake Ontario, the change is most evident where cattails have replaced natural sedge/grass communities and reduced habitat diversity.

Wetland researchers from the United States and Canada are conducting a joint study for the Environmental Technical Work Group that will evaluate the effects of regulation by mapping changes in wetland vegetation using aerial photographs of selected sites across a span of years from pre-regulation to the present. Sixteen sites in the U.S. and sixteen sites in Canada are split evenly by geomorphic type: open embayment, protected embayment, barrier-beach, and drowned river mouth. The sites extend from the lake to the upper portion of the St. Lawrence River. Vegetation maps derived from older photographs will also serve to characterize the pre-regulation plant communities and serve as the target for efforts to develop new regulation criteria and a plan that might allow more natural conditions to return.



The wall of cattails at Stoney Creek, a drowned-river-mouth wetland

Photo by Douglas Wilcox

Quantitative studies of the plant communities will also be conducted in the field at the selected study sites by sampling along transects that follow elevation contours with specific past histories of flooding (i.e., differing number of years since last flooded or dewatered).

*A computer model that has been developed will use these data, topographic/bathymetric maps of the wetlands, and projected water levels that would result from possible new regulation plans to predict the relative area of wetland that will be in each vegetation type under each new plan. The predictions will be compared to the targets set for each of the four geomorphic types and will also be used by researchers studying amphibians, fish, birds, and muskrats to evaluate potential changes in habitat.*

In addition, updated wetland inventories are being developed for the entire lake and upper river, and all wetlands will be assigned to one of the four geomorphic types. After the selected sites have been studied, the results will be extended to the entire system using the inventory. The results of all studies will be used by the Environmental Technical Work Group to develop the set of performance indicators that would most benefit the ecosystems of Lake Ontario and the St. Lawrence River. These indicators will be provided to the Plan Formulation and Evaluation Group for use in evaluation of alternative regulation criteria and plans.



**Braddock Bay - an open embayment wetland**

Photo by Douglas Wilcox



**Brush Creek, a drowned-river-mouth wetland**

Photo by Douglas Wilcox



**Goose Bay, a protected embayment**

Photo by Douglas Wilcox

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# Study Announcements

The Common Data Needs Group has been responsible for collecting and updating basic shoreline data and information for the Lake Ontario-St. Lawrence River System. Now that most of this information has been gathered, this group has been renamed the Information Management Technical Work Group. They are responsible for making the vast amounts of information gathered available to the technical work groups for use and analysis and for developing and implementing an Information Management Strategy for the Study. The leads for this Group are **Roger Gauthier** in the U.S. and **Ian Gillespie** in Canada.

The Plan Formulation and Evaluation Group is a new group formed to integrate all work performed during the Study. They are responsible for developing the tools and procedures needed for the Study to make recommendations to the International Joint Commission. **Wendy Leger**, former Canadian co-lead to the Common Data Needs Work Group, has been appointed as the Canadian lead for this group. She will be working with **Bill Werick**, U.S. Lead for the group. Bill is also a member of the Hydrologic and Hydraulic Technical Work Group.

## Reports Available

Although it is too early to discuss results, great progress has been made in the first two years of the International Lake Ontario-St. Lawrence River Study. Areas of concern have been identified and information is being gathered to move the Study towards its goal of making a recommendation to the International Joint Commission for new criteria and plans for regulation of outflows from Lake Ontario through the St. Lawrence River.

*The Study has nine technical work groups, six of which are investigating various areas of interest: coastal erosion and flooding, commercial navigation, power generation, recreational boating and tourism, water use interests, and environmental factors.*

The Coastal Group developed a framework for a flood and erosion prediction system during the first year. The Commercial Navigation Group has collected data on commercial vessels, voyages, cargo carried, and ports. The Hydrology and Hydraulics Group are developing models to simulate levels, flows and other hydraulic conditions that would result from various regulation plans with different scenarios. The Power Generation Group is developing a report describing the state of the industry in terms of present and future trends, market factors, and effects of climate change.

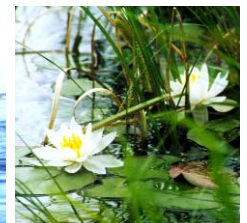
The marina survey performed by the Recreational Boating Group this past summer is complete. They are now working on a survey of New York State registered boaters that use Lake Ontario and the St. Lawrence River. The Water Uses Group is studying the impacts of water level variations on industrial, municipal, and domestic water intakes and treatment facilities. The Environmental Technical Work Group identified 46 different wetland sites for ecosystem study.

The Common Data Needs technical work group had the daunting task of gathering information needed by all of the groups. The information needed to be in a format every group could use and accessible to the groups.

An integral part of the Study is the Public Interest Advisory Group. The volunteer group was appointed by the IJC to ensure effective communication between the public and the International Lake Ontario-St. Lawrence River Study Team. During the group's first year they gave over 30 presentations to various stakeholder groups helping to create an awareness of the Study and passing the concerns of the public along to the Study Team. A summary of the group's activities and comments and concerns raised to the Public Interest Advisory Group by the public have been included in their Year 1 Report.

As the Study progresses, preferences of the stakeholders in each of the interest groups will be defined. A shared vision model developed by the Plan Formulation and Evaluation Group will be used to evaluate the effectiveness of a new regulation plan based on those preferences. "Because the Lake Ontario-St. Lawrence River System is so complex, it will be difficult to please all interests at all times," said Dr. Tony Eberhardt, U.S. General Manager for the Study. "But the shared vision model will allow all interests to participate and help shape the new regulation plan."

Copies of the first year progress reports for the Study and the Public Interest Advisory Group are available on the Study website at [www.losl.org](http://www.losl.org) or by written request to the communication representative in the Study office(s). If you have not already requested copies, please fill out the form on the back of this newsletter to request either or both of the reports. Once you have reviewed the reports, we would appreciate receiving your comments. It is important to us to be aware of your concerns and incorporate your concerns into the Study.



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



# Team Arrivals

## New Study Board Member

We welcome **Jim Snyder** to the Study Board. Jim brings a great deal of experience regarding environmental issues on the St. Lawrence River to the Study. He is currently working with the St. Regis Mohawk Tribe Environment Division on various projects and studies including the Snye Marsh Project, the Atlantic Salmon Project, a fluoride study and the Spottail Shiner Study. Jim did extensive work with the Akwesasne Task Force on the Environment during the 1999 New York Power Authority Study of the St. Lawrence River.

## New Public Interest Advisory Group Members

We would also like to welcome the following new members to the Public Interest Advisory Group.

**Marcel Lussier** is the new Canadian Co-lead for the Public Interest Advisory Group. A graduate in civil engineering and Master of applied sciences, Marcel, in addition to his extended knowledge in sanitary engineering, has experience in municipal engineering, and in the improvement and the protection of the environment. He retired from Hydro-Québec after a 22-year career as an environmental engineer. In addition to his environmental background related to hydro-electric production, his expertise includes the treatment of used and fresh water in power plants, and contaminants.

**Larry Field** is the Waterfront Specialist for the Toronto and Region Conservation Authority responsible for some 46 km (approximately 29 miles) of the Lake Ontario shoreline from the City of Mississauga in the Region of Peel to the Ajax/Whitby border in the Region of Durham. He has over 18 years of waterfront experience in the implementation of the Lake Ontario Waterfront Development Program and the Shoreline Management Program. Larry is pleased to have the opportunity to participate on the PIAG as we further the understanding of comprehensive shoreline management.

**Michel Gagné** is currently the Director for Fresh Water Production for the city of Montreal, which provides 1.8 million people with fresh water. He graduated in Chemical Engineering from *l'École Polytechnique de Montréal* (1976), where

he also finished his Masters in Environmental Engineering (1982). He also holds a degree in Administration (1978). By being involved with the PIAG, Michel hopes to present Montreal's point of view in regard to raw water provision for their seven fresh water production factories.

**Jon Montan** is a senior-level planner with the St. Lawrence County Planning Office, having been employed there since 1979. He is primarily responsible for addressing environmental and natural resource issues as the lead staff person for the County's Environmental Management Council. Jon is a graduate of St. Lawrence University (B.S. Biology) and Utah State University (M.S. Wildlife Ecology). He has used his education in science over the years to study a wide variety of environmental and scientific topics ranging across the spectrum from solid and hazardous waste management to low-altitude military flights to nuisance beaver control. Currently he is the County's lead staff person for Geographic Information System (GIS) use and development

**Scott Tripoli** is a lifetime resident of the eastern Lake Ontario shore and currently owns property with lake rights to the sand banks north of Sandy Pond. Scott is a boater and fisherman with interests in environmental issues affecting the basin including the St. Lawrence River, which he frequents. Scott's vocation as a Mechanical Engineer includes working in the Power and Energy industries where his company has designed, installed, repaired and upgraded hydroelectric turbines and generators including those at the Robert Moses-Robert H. Saunders Power Dam. He currently works in the energy services industry where they supply electricity for the wholesale and retail deregulated energy market.

## New Study Liaison

**Russ Trowbridge** is on loan from the U.S. State Department as the International Joint Commission - Washington lead staff for the Study. Russ is a career Foreign Service Officer who has served in the U.S. embassies in Greece, Gabon (Central Africa), the Czech Republic, Norway, and the Consulate General in Hong Kong. He

has also worked extensively with Sudan, Russia, the Baltic States, and Bosnia. He has specialized in economics, including energy, international finance, trade and investment disputes and treaty negotiations, and post-Communist economic reconstruction. Immediately prior to joining the IJC, he served as the U.S. Economic Advisor for Implementation of the Bosnia Peace Plan. He very much looks forward to working with the Study, and hopes it will be somewhat less contentious than some of his recent assignments.

## New Public Information Officer

**Arianne Matte** is acting as the Public Information Officer in the Canadian Secretariat office. She holds a Bachelor of Journalism degree from Carleton University, and has worked in media relations with the Games of la Francophonie and Biathlon Canada. She was newsletter editor at Human Resources Development Canada and on the editing team for Minister David Anderson at Environment Canada. Arianne's hobby is to write and direct for theatre and she currently is the President of Productions Nemesis theatre company.

## New Technical Work Group Leads

**Ian Gillespie** is welcomed as the new Canadian Co-lead for the Information Management Technical Work Group. He has been employed in the field of mapping and geographic information systems within the private and public sectors in Ontario for the past sixteen years. Ian is actively involved with the Study, helping to assemble and coordinate the management of geospatial data for the Technical Working Group on behalf of Environment Canada. In cooperation with his Provincial and U.S. counterparts involved in the Study, Ian has helped to design and implement standards and methodologies to better manage and share the growing information holdings generated by the Study.

**Brad Parker** is on secondment to the International Joint Commission from the Canadian Environmental Assessment Agency in Ottawa. One of the tasks that Brad has been assigned is the Canadian Co-Chair of the Environmental Technical Work Group. Brad has a broad

## Team Departures

background in the evaluation of large environmentally sensitive projects across Canada. As Director of Project Assessment at the Agency, he was responsible for the coordination of environmental assessments for a variety of power generation projects, roads, pipelines and mines. Brad has also worked as an environmental studies specialist for Ontario Hydro and as a fisheries biologist in the private sector. He looks forward to the challenges of this program and to discussions with all persons, groups and organizations that have an interest in the environment of Lake Ontario and the St. Lawrence River.

An engineer for close to thirty years, **Serge St-Martin** is now the Canadian Co-lead for the Recreational Boating & Tourism Technical Work Group. He has spent most of his professional career with Hydro-Québec, and is an avid recreational boater. Since 1976, he has been involved in the Canadian Power and Sail Squadrons (CPS). He taught coastal and celestial navigation for eight years and served in ten different positions at the Squadron, District and National levels. He is the Secretary of the Quebec Boating Council since 2001.

*Welcome everyone!*

We sincerely wish to thank the following participants for all of the time and hard work that they provided to the Study. We appreciate you!

**Dalton Foster**  
**R. Shawn Martini**  
**Amanda Morelli**  
**Fred Parkinson**  
**Mike Scanlin**  
**Sally Sessler**  
**Bea Schermerhorn**

*Thank you!*



## Next Issue

*Our next issue will include a review of the progress made by the Commercial Navigation Technical Work Group.*

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*Please share this newsletter with a friend. If someone would like to be added to our mailing list to receive future editions of this newsletter, please ask them to contact us.*

## Contacting Us

If you are interested in sharing your concerns about water levels in Lake Ontario and the St. Lawrence River, would like to receive more information about the Study, or would like to participate in one of our meetings, please contact the communication representative in your country.

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