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Volume 1, No. 2

LATEST WATER NEWS

July 2008

Snow melt, heavy rains help raise Great Lakes water levels

Following a winter of above-average snowfall and recent heavy rains in the region, water levels are rising throughout the Great Lakes. According to reports from Environment Canada and the U.S. Army Corps of Engineers, water supplies to the basins of all of the Upper Great Lakes were well above average for June, near average during May, and above average for April, resulting in fairly dramatic increases in water levels.

As of the beginning of July 2008, Lake Superior is 38 centimeters (15 inches) higher than one year ago. The level of Michigan-Huron is 16 cm (6.3 in) above last year. Likewise,

Lake St. Clair is 15 cm (5.9 in) higher than a year ago while Lake Erie is 14 cm (5.5 in) higher. **(See page 7)**

Despite the recent rises in lake levels, Superior and Michigan-Huron are still below their respective long-term averages (1918-2007) but at or slightly above chart datum.

At the beginning of July, Michigan-Huron is 36 cm (14 in) below its long-term average but is 46 cm (18.1 in) above the 1964 record low for this time of year. Lake Superior is 13 cm (5 in) below its beginning of the month average but 48 cm (19 in) above the record low set in 1926.

More than 250 turn out for public meetings in three Michigan cities

More than 250 people attended a second round of public meetings sponsored by the International Upper Great Lakes Study this spring in Michigan. On April 28 in Bay City, April 29 in Port Huron, and May 3 in Muskegon, members of the Study Board and Public Interest Advisory Group (PIAG) provided a Study overview, discussed historical water level trends, received public comment, and answered questions.

PIAG U.S. Co-Chair Kay Felt outlined Study objectives, outreach efforts and the crucial role of public input. Joining her were Canadian PIAG Co-Chair Dr. James Bruce, who provided expertise regarding weather and climate change; and U.S. Study Board Co-Chair Dr. Eugene Stakhiv, who reviewed past and current Great Lakes water levels, and explained how scientists are seeking to answer the Study's key scientific questions. U.S. Study Board member Jim Bredin of the Michigan Department of Environmental Quality answered questions related to water use and the state permitting process.

Attendees included riparian property owners, boaters, anglers, marina operators, environmentalists, research scientists, clean water activists, land use experts, state and local government officials, representatives of the tourism industry, and other businesses closely associated with the



At an IUGLS public meeting in Thunder Bay, Ontario are, from left, Ted Yuzyk, Study Board Co-Chair; Don Marles, PIAG; Jim Bruce, PIAG Co-Chair; John Nevin, IJC policy advisor; Jeff Vito, PIAG; and Bill Hryb, PIAG.

lakes. U.S. Senators Debbie Stabenow and Carl Levin, and U.S. Rep. Peter Hoekstra sent staff members.

Public comments and concerns varied by location. In the meeting at City Hall in Bay City, attended by 120 people, many questions and comments centered on the "muck" problem in Saginaw Bay, i.e., mud, rotting algae and other decomposing organic matter that accumulate on beaches and restrict use of shoreline property.

(See "Public Comment" on page 3)

Key IUGL Study leader among Nobel Peace Prize Honorees

Hydrometeorologist and climatologist Dr. James Bruce, who serves on the International Upper Great Lakes Study Board and as co-chair of the Public Interest Advisory Group, was invited to join 24 fellow scientists from the Intergovernmental Panel on Climate Change (IPCC) in Oslo, Norway, late last year where they were presented with the Nobel Peace Prize. He was the only Canadian in the delegation.

“I’ve always been proud of the work IPCC has done and the positive influence it’s had.”
– Jim Bruce, PIAG Co-Chair

The Committee chose to honor the IPCC with the prize for their rigorous and comprehensive assessments of climate change research, and former Vice President Al Gore for his involvement in promoting public awareness of the issue. The Committee considered that addressing climate change will contribute to world peace and human well-being.

LONG CAREER

Jim Bruce has been hard at work on climatology and hydrological issues for decades. In fact, he played a key role in convening the very first meeting of the IPCC in Geneva, Switzerland, in November 1988, attended by about 80 experts. The organization now has more than 3,000 participants working to assess the science and to evaluate the risks of climate change caused by human activity. He later co-chaired one of the three working groups and served as a review editor for the 2001 and 2007 reports.



Dr. James Bruce

Dr. Bruce has worn many hats during his 50-year professional career. He worked for Environment Canada for 37 years, and helped draft the first Great Lakes Water Quality Agreement in 1972, and its 1978 update. He was founding Director of the Canada Centre for Inland Waters, Burlington, Ontario, and later served as Assistant Deputy Minister of the Atmospheric Environment Service.

PAST COMMENDATIONS

This is certainly not the first time Dr. Bruce has been recognized for his contributions to science and policy development. Other honors include:

- the International Meteorological Organization Prize given by the World Meteorological Organization for “exceptional worldwide contributions in meteorology and hydrology,”
- elected Fellow of the Royal Society of Canada,
- Officer of the Order of Canada 1997, and
- honorary doctorates from McMaster University and Waterloo University.

Jim Bruce was born in Toronto and has lived in Canada all his life except for 1986-89 when he resided in Geneva, Switzerland, while serving as Deputy Secretary General of the World Meteorological Organization. He and his wife Ruth have four children and seven grandchildren.

With state approval completed, congressional action is next for Great Lakes-St. Lawrence Basin Water Resources Compact

The Great Lakes-St. Lawrence River Basin Water Resources Compact is drawing nearer to implementation now that all eight participating states have ratified the agreement. Congressional consent to the Compact is the next step, and both presumptive major party presidential candidates support it, said Peter Johnson, program director with the Council of Great Lakes Governors.

To complement the Compact, there is also an accord among the eight states and two Canadian provinces — the Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement — with basically the same provisions. Both Ontario and Quebec have approved the Agreement.

The Compact bans diversions of Great Lakes water with very limited exceptions for communities that straddle the Basin divide, communities in counties that straddle the Basin divide, and intra-Basin transfers. Any such diversions must meet stringent requirements including return flow back to the lake watershed from which the water was taken.

The Compact is expected to promote sustainable water use — encouraging conservation and efficiency measures as well as economic growth.

In a flurry of activity in late June and early July, the governors of Ohio, Pennsylvania and Michigan signed legislation ratifying the Compact, following action by their respective state legislatures. The governors of Minnesota, Illinois, Indiana, New York and Wisconsin had already given their approval.

The Compact is expected to promote sustainable water use — encouraging conservation and efficiency measures as well as economic growth. Sustainable use is central to the Compact and Agreement.

Without the right management policies, diversions and unsustainable uses in the Basin could ultimately have costly ecological and economic impacts on the Great Lakes. For example, low levels have negative and expensive consequences both for shippers who are unable to fully load their vessels with cargo and for municipal water systems that may need to relocate water pipes into deeper water.

Public Comment (Cont. from Page 1)

Other topics included frustration with state and federal permitting processes and the effects of dredging in the St. Clair River prior to 1962. A few people suggested too much time and money are devoted to studies rather than to specific actions to solve problems. However, others addressed the importance of understanding the science, especially the implications of climate change, before taking action. There was also discussion of the need to reduce nutrient pollution in runoff to Lake Michigan.

More than 60 people at the Acheson Ventures Great Lakes Maritime Center in Port Huron asked questions about the Great Lakes Compact and its ramifications, also commenting on the devastation of past high water levels and concerns that mitigation in the St. Clair River could foster a repeat of such conditions. In addition, the discussion included the impact of human activities on river depth and flow.

Many of the 75 people attending the Muskegon meeting discussed harmful nonnative species and the current adverse impact of low water levels on recreational boating and local businesses. Several stated they hoped the level of Lake Michigan could be kept as close to the long-term average as possible, and that care should be taken



Local residents with a wide range of interests attended the May 3 public meeting in Muskegon, Michigan.

to avoid policies that would allow dramatic fluctuations. Others stressed that natural variation in low and high water is necessary to renew the ecosystem. There was also curiosity about the effects of manmade structures on lake levels, and whether such structures had been considered for locations other than the St. Clair River. In Muskegon, the meeting was hosted by PIAG member Dr. Alan Steinman at Grand Valley State University's Annis Water Resources Institute, where he is the director.

Public meetings set for August 9-12 in Ontario

The International Upper Great Lakes Study has scheduled five public meetings in the Georgian Bay region of Lake Huron, offering residents the opportunity to learn about the Study, express their opinions, and ask questions of Study experts.

Saturday, August 9 — 9-11 a.m. at Royal Canadian Legion No. 177, Vankoughnet St. East, Little Current, Ontario.

Saturday, August 9 — 3-5 p.m., Stockey Centre, 2 Bay St., Parry Sound, Ontario.

Monday, August 11 — 7-9 p.m., North Simcoe Sports and Recreation Centre, 527 Len Self Boulevard, Midland, Ontario.

Tuesday, August 12 — 2-4 p.m., Royal Canadian Legion, 490 Ontario St., Collingwood, Ontario.

Tuesday, August 12 — 7-9 p.m., Bayshore Community Centre, 1900 Third Ave. East, Owen Sound, Ontario.

A "Circles of Influence" workshop followed the Muskegon meeting, providing an opportunity for several area stakeholders to provide input to help Study analysts identify and clarify public values, preferences, and priorities with regard to Great Lakes water levels. Other workshops are being planned.

The meetings generated considerable publicity in newspapers, on local TV, and on radio. Nearly 300 people attended a third round of meetings held in late June in Thunder Bay, Ontario and Duluth Minnesota as well as in Sturgeon Bay and Mequon, Wisconsin. Look for more detailed reports on those meetings as well as the PowerPoint presentations at www.iugls.org. See adjacent schedule for details on public meetings to be held around Georgian Bay, August 9-12.

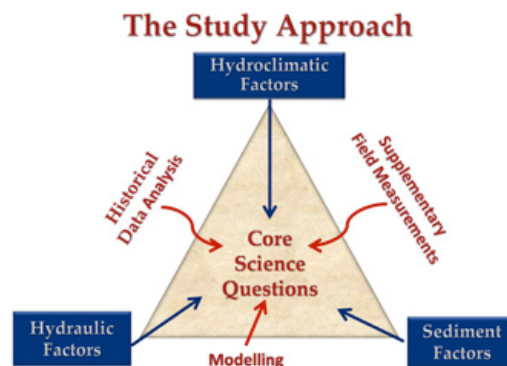
Understanding St. Clair River issue is crucial to Phase I of Study

By Ted Yuzyk and Syed Moin

One of the key objectives in the IJC directive to the Study Board is determining whether St. Clair River conveyance capacity — the amount of flow the river is capable of moving — has been increasing as a result of ongoing stream bed erosion, as theorized by Baird & Associates (2005). A comprehensive scientific assessment of this question requires examination of three key factors influencing the volume of channel flow: hydroclimatic, hydraulic and sediment.

As shown in this graphic, the charge of the St. Clair River Task Team is to develop models, analyze historical data, and collect supplementary field measurements related to all three factors. By looking at the problem from many perspectives, the Study is examining all possible contributing physical factors affecting river conveyance. This will allow the scientists to understand interrelationships and reduce the uncertainty associated with Study findings.

Put together the Greek words for "water" and "pipe" and the result is hydraulics. So, if we look at the St. Clair River as a big water pipe, the Study is trying to understand if that pipe is getting bigger or if water is flowing faster, or both (and if less water is making it to the pipe in the first place). For example, to determine if the pipe is getting bigger because of erosion, a survey of the upper reach of the St. Clair River was conducted last year, which is being compared to earlier surveys.



Combined with other new data, Study scientists will be assessing whether the river bed has reached a new equilibrium and is stable or is continuing to erode. Just as important, they will examine the implications for conveyance capacity, not just today, but looking back into the past and forward into the future.

(See "St. Clair Task Team" on page 4)

St. Clair Task Team (Continued from Page 3)

The Study is using several one-dimensional and two-dimensional models to assess the conveyance issue and understand how much sediment enters the river, is deposited on the riverbed and ultimately flows out into Lake St. Clair and beyond. The application of alternate models will help Task Team researchers better understand the hydraulics and sediment budget of the system while also boosting confidence in the findings. Once all this information is assessed, there will be consideration of whether three dimensional modeling is required for any specific stretch of the river. These models will also help clarify the roles and relative importance of dredging, shoreline hardening, and ship sinkings may have had on the movement of water and sediment in the river since the 1960s. In addition, as a result of the Independent Peer Review, work is also underway to

model and assess the impact of ice (or lack thereof) in the river channel and of changes in vegetation.

Finally, work is progressing to better estimate net basin supply, the water budget, and the resulting impact on water levels in Lake Michigan-Huron and Erie. The knowledge gained from such hydroclimatic analysis, along with a better understanding of the St. Clair River, will be pivotal to any discussions regarding possible remedial actions.

Putting it all together, there are 24 projects underway that will provide answers to the scientific questions raised so far. These analyses will be completed late this fall and a draft report on the St. Clair River is targeted for completion in February 2009.

*Ted Yuzyk is Canadian co-chair of the IUGL Study Board.
Syed Moin is Canadian co-manager of IUGLS.*

Lake Superior Task Team: Technical Work Groups play key role

By Tony Eberhardt and David Fay, U.S. and Canadian Lake Superior Regulation Task Team Leaders

The Lake Superior Regulation Task Team continues to gather data and information needed to evaluate possible revisions to the outflow management plan for Lake Superior. Two of the five Great Lakes have control structures to regulate their outflows: Lake Superior, since 1916; and Lake Ontario, since 1960. The present outflow regulation plan for Lake Superior, Plan 1977-A, has been in use since June 1990. The plan is

TWGs will be working with the Plan Evaluation Group (PEG) to help develop potential new plans that provide net benefits to the ecosystem and the economy without disproportionate loss to any interest. Following is an explanation of each TWG's focus and scope of activities:

Municipal, Industrial and Domestic Water Uses TWG

An extensive inventory of water intakes and wastewater outfalls is underway to identify key characteristics and the impact of low and high water levels on these facilities. The TWG will also initiate a study of consumptive uses and water demands within the Upper Great Lakes basin.

Commercial Navigation TWG

There are several existing databases of vessel movements and operating costs, as well as numerous models that use these data to estimate variations in vessel operating costs based on the magnitude and timing of changing Great Lakes water levels. Initial activities will focus on updating and/or modifying the databases to reflect the metrics required for the Study, as well as adapting existing models using the data to generate information regarding costs and benefits to navigation needed for the development of alternative regulation plans.

Hydropower TWG

Initial activities of this TWG include collecting baseline data and information and establishing the performance of the hydropower facilities under various level and flow conditions.

Ecosystem TWG

Changes in water levels can have a profound impact on the ecosystem, particularly in sensitive coastal wetland areas, where species diversity can be enhanced by a more natural wide variation between high and low water levels. The Ecosystem TWG will evaluate an inventory of key and endangered species around the Great Lakes to determine how they are affected by fluctuating lake levels and outflows. Initial activities will also include collection of data on shoreline habitat such as bathymetry, wetland type/extent, and island inventories in locations around the lakes.

(See "LAKE SUPERIOR TASK TEAM" on Page 6)



The Lake Superior Regulation Task Team must balance the varied needs and interests of diverse stakeholders whose lives and livelihoods are affected by lake levels.

“systemic,” meaning the outflows are made from Lake Superior considering the Great Lakes as a system, i.e., assessing conditions on Lakes Huron and Michigan as well as Superior.

The Boundary Waters Treaty of 1909 specifies an order of precedence for the various water using interests: domestic and sanitary; commercial navigation; and hydropower and irrigation. Given the many changes over the past century, the Study is also considering other vital interests: ecosystem and environment; coastal zone (riparians); and recreational boating and tourism.

Technical Work Groups (TWGs) have been created with experts from Canada and the United States to determine how each interest will be affected by the existing and potential new plans especially in the context of climate change. These

Commercial navigation TWG focuses on importance of normal water levels

By William Hryb

The shipping industry adage “ships float on paper, not water” has long been a tongue in cheek expression poking fun at the maze of paperwork inundating ship owners and operators. Of course, ships float on water, but recent wide fluctuations in water levels from extreme highs to near record lows have sounded alarm bells for the industry.

Climate change is on the radar screen for the commercial shipping industry, which transports almost 40 million tons of cargo through the Great Lakes system annually, stoking 40 percent of the U.S. manufacturing economy and fueling one-third of Canada’s industrial output. Clearly, extended periods of low water levels could have enormous and negative repercussions on the North American economy.



With oil prices skyrocketing, all transportation modes are under the microscope. Trucking in particular has been hit hard, providing further impetus to the idea that waterborne transportation is the best way to transport goods and commodities in huge quantities. Shipping industry officials believe that there are both economic and environmental reasons to encourage the use of marine transport and these factors should be taken into account when decisions are made at all levels. In addition, port officials recognize that changes in water levels will have different impacts depending on depths of their harbors. However, loss of depths in critical areas of the St. Marys River as a result of climate change would be of great concern.

At a public meeting held in Thunder Bay on June 17, Study officials from both Ottawa and Washington had the opportunity to detail the various scientific investigations underway to answer questions regarding possible physical changes in the St. Clair River that may be affecting levels in the Upper Great Lakes. Ironically, a deluge of rain in the region and extensive flooding put a damper on attendance but more than 25 people engaged in a spirited question and answer period following the presentation. (See page 1 photo)

The Commercial Navigation Technical Work Group held its first meeting March 27-28 in Burlington, Ontario, where they discussed existing information sources and evaluation methods for the Study. A two-year work plan will focus on

developing the metrics and performance indicators associated with commercial navigation. At the end of the term, a shared vision model will be incorporated into an initial draft narrative focusing on the impacts that are difficult to model or quantify. Climate change scenarios will likely be included in these models, with Ralph Moulton and Dave Wright heading the Commercial Navigation TWG.

Using existing databases of historic vessel movements associated with the timing of lake levels throughout the system, models will estimate or hypothesize vessel operation costs. The tool will benefit ship owners and operators in planning ahead in an extremely cost-sensitive industry. Indeed, the initial plan for the Commercial Navigation TWG is to assess the extent to which various issues, such as prolonged low water levels, might affect the marine industry. The possibility of long-lasting low water and reduced loads could result in a shift to other modes of transportation — a prospect few in the industry want to entertain because of the serious implications.

A key concern of navigation interests is the unpredictability of outcomes due to climate change, and there is a fear that negative impacts are more likely. This is because reduced ice cover, while beneficial to shipping, causes additional evaporation, which lowers lake levels.

Industry analysts stress that the Upper Great Lakes and their connecting channels are part of a larger system that stretches from the St. Lawrence River to Lake Superior. Any restrictions at one location govern the whole system. That’s why it is vitally important that lessons learned from the Lake Ontario-St. Lawrence Study be applied to IUGLS so that all costs and benefits are accounted for as alternative regulation plans are evaluated. Shipping interests also believe strongly that communication among all stakeholders is paramount so that a management regime can be developed that provides benefits for all combined with flexibility to adapt to changing conditions.

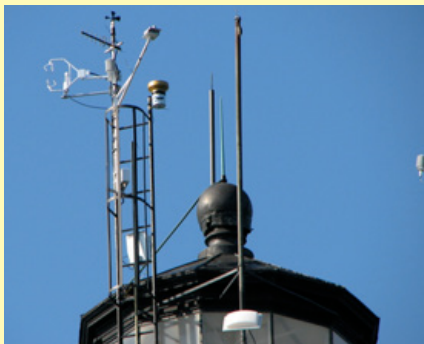
Stakeholders in the vital marine industry have a tremendous interest in the vitality and integrity of water related issues. The IUGLS will undoubtedly give the shipping industry some valuable insights and recommendations after its conclusion. The reality is that the industry is headed for uncharted waters, and the sooner it sets its course, the better.

In particular, Port of Thunder Bay officials and user groups are looking forward to the Study’s findings and conclusions. In years to come, many unknown challenges face this vital gateway to the west and east of the North American continent, but one result is certain, the Study will help the Port prepare for the future.

Hryb, a member of PIAG, is general manager of Lakehead Shipping Co. Ltd., Thunder Bay, Ontario.

Study measures evaporation over Great Lakes for the first time

Evaporation is a critical component of the water balance of the Great Lakes and especially for Lake Superior, the deepest and largest lake. A better understanding of the evaporative process over Lake Superior is needed because it may be a major cause of the recent low water levels. Uncertainty about future climate conditions and variability also underscores the need for more accurate and reliable evaporation data.



Researchers have mounted sensors atop the 125-year-old Stannard Rock Lighthouse in Lake Superior to collect evaporation data.

Photos by Chris Spence



accuracy of current estimation techniques. This will be incorporated into current models to improve predictions of the lake's future water budget and subsequently how water levels are managed. The program's legacy will be a reduction in the uncertainty of current and future evaporation estimates.

The Study is appreciative of the efforts of the Michigan State Historical Preservation Office for granting permission for the researchers to place the equipment on the 125-year-old lighthouse. The

U.S. Coast Guard also deserves credit for facilitating the authorizations needed so that Study scientists could gain access to the lighthouse. Plans call for installation of similar measuring devices in Lake Michigan or Lake Huron. Contact Dr. Spence at chris.spence@ec.gc.ca or Dr. Peter Blanken, blanken@colorado.edu, for more information.

Currently, evaporation is modeled by the National Oceanic and Atmospheric Agency's Great Lakes Environmental Research Laboratory, but scientists have not been able to collect data over the lakes in order to calibrate and/or verify the model outputs. As a result, the margin of error for evaporation estimates may be as much as plus or minus 25 percent. Just to provide a context for how important these numbers are, the average daily evaporation rate for Lake Superior is estimated at approximately 41 billion gallons (bgd) or 155 billion liters per day. During the winter months, it may be twice that daily volume. On the other hand, the Chicago diversion is 2 bgd (7.6 billion liters), and the total consumptive water use by all water users around the lakes was estimated recently by the U.S. Geological Survey to be roughly 4.2 bgd (16 billion liters).

Reducing the margin of error is a key reason Dr. Christopher Spence and Newell Hedstrom, both of Environment Canada, installed evaporation monitoring instrumentation at Stannard Rock Lighthouse in Lake Superior, 72 km (45 miles) north of Marquette, Michigan. The new instrumentation, the first of its kind on the Great Lakes, is part of a two-year field program to make direct measurements of evaporation over Lake Superior. The instrumentation takes high frequency measurements of vertical wind and water vapor pressure. Evaporation can be calculated directly by determining how these two components vary with one another.

In addition, complementary weather measurements being made at Stannard Rock will include rainfall, horizontal wind speed, wind direction, air temperature, relative humidity, incoming solar and long wave radiation, and water temperature. Data from the field program will be used in conjunction with weather buoy measurements, satellite imagery and climate model data to extrapolate evaporation measurements across the entire surface of Lake Superior. The compiled data will generate information to demonstrate the predominant mechanisms controlling evaporation from Lake Superior.

Study managers recognize that this project will measure only evaporation in the immediate area; however the data will provide valuable information needed to assess the

PEER REVIEWERS ENDORSE STUDY STRATEGIES AND WORKPLAN

During two in-depth sessions, independent peer reviewers from American and Canadian professional scientific societies were very supportive of both the Hydraulic and Sediment Modeling Strategy and the Hydrology and Climate Modeling Strategy used by the St. Clair River Task Team. More information about the peer review process and the findings of the reviewers is available at www.ijc.org.

LAKE SUPERIOR TASK TEAM (continued from page 4)

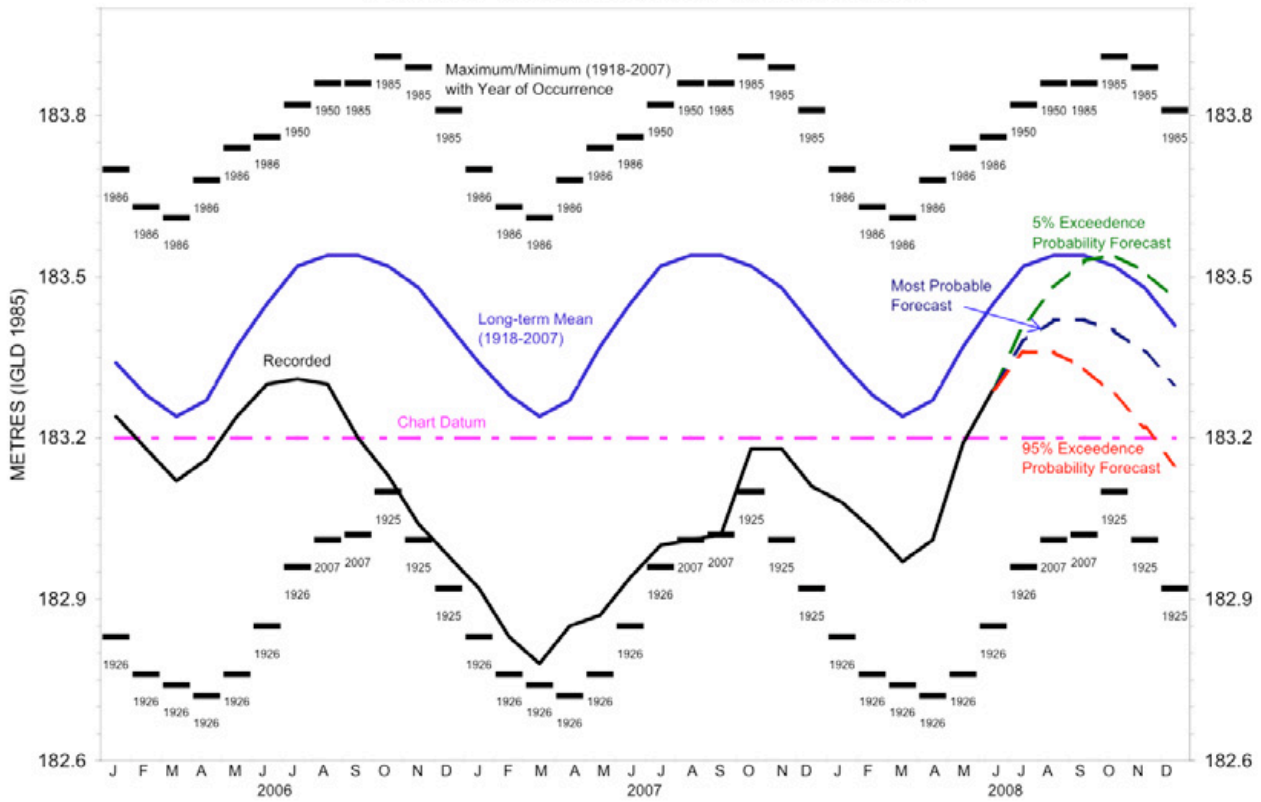
Coastal Zone TWG

This interest consists of public and private shoreline property owners and public users of the shore zone and adjacent lands. The TWG defines the current sensitivity of the coastal zone interest to changes in water levels. Coastal zone sensitivities to water level changes can include changes in physical processes — erosion and accretion rates, for example — as well as changes in economic impacts to users due to flooding, loss of property to erosion, failure and replacement of shore protection structures, and low water impacts such as decreased user access.

Recreational Boating, Cruise Ships and Tourism TWG

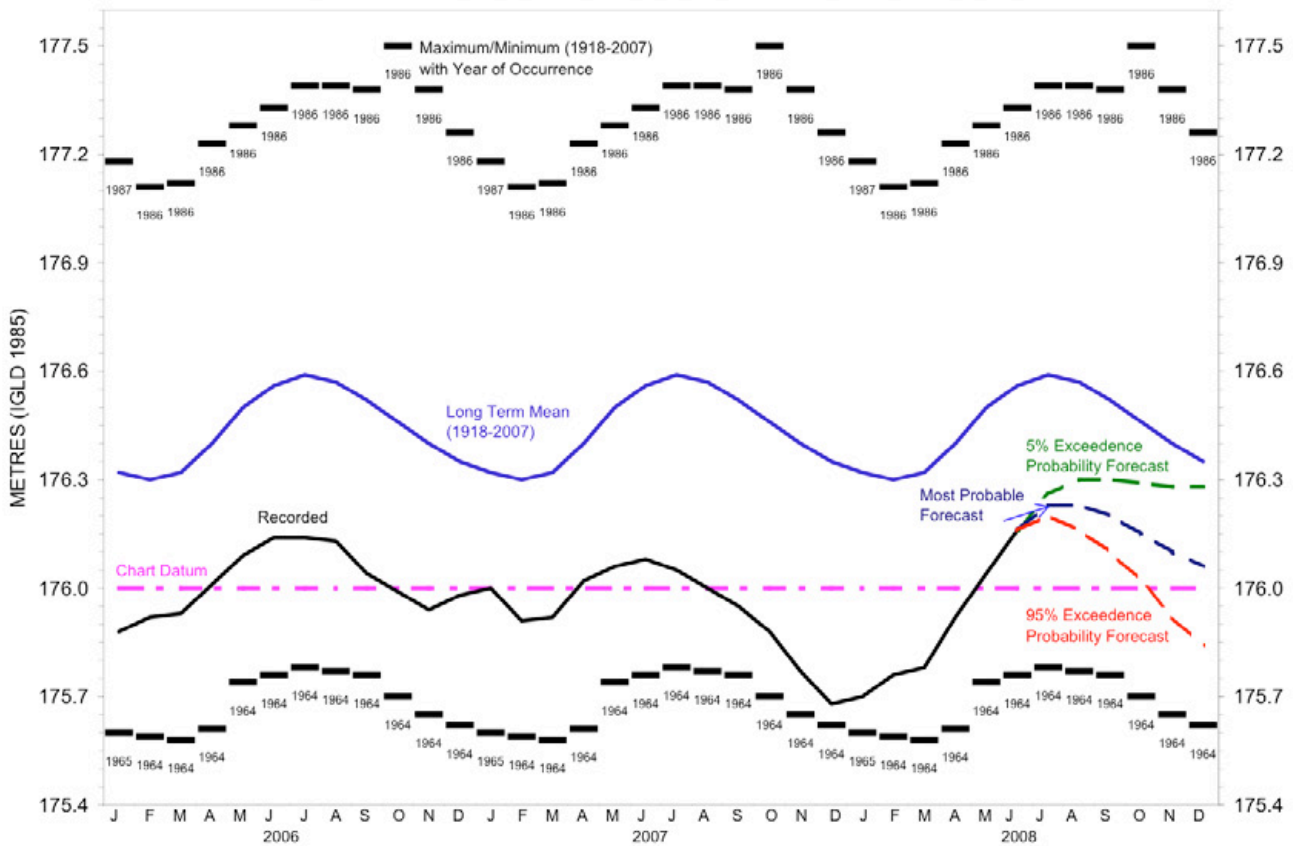
The TWG will evaluate and assess the current state of recreational boating, the cruise ship industry and tourism on the Upper Great Lakes, and then project potential impacts due to changes in water levels. Initial activities include a search of pertinent literature, measurement of water depths in key commercial and private marinas, identification of Great Lakes boaters, and review of U.S. and Canadian survey information and databases.

LAKE SUPERIOR MONTHLY MEAN LEVELS (Through 6/30/08)



SOURCE:
Great Lakes-St.
Lawrence
Regulation Office,
Environment
Canada; and
Detroit District,
U.S. Army Corps
of Engineers

LAKES MICHIGAN-HURON MONTHLY MEAN LEVELS (Through 6/30/08)



Former PIAG member Samuel Speck joins International Joint Commission

A resident of Worthington, Ohio, Samuel Speck served for eight years as Ohio's Director of Natural Resources. Prior to that he had been president of Muskingum College in New Concord, Ohio for over a decade. He also served as an associate director of the Federal Emergency Management Agency and as a member of the Ohio House and Senate for 13 years while on the Muskingum College faculty. While in office as Ohio's Director of Natural Resources, Dr. Speck served as a member and chair of the Ohio Lake Erie Commission and Great Lakes Commission.

He also served as chair of the Council of Great Lakes Governors and Premiers' Water Management Working Group, which developed the Great Lakes-St. Lawrence River Basin Water Resources Compact and Agreement. Most recently, Dr. Speck served as a member of the IUGLS Public Interest Advisory Group.

IJC appoints Boland to IUGLS Board

The International Joint Commission has approved the appointment of Dr. John Boland of the Johns Hopkins University to fill the remaining vacancy on the IUGLS Study Board. Dr. Boland is an engineer and an economist, specializing in water and energy resources, environmental economics, and public utility management.

Dr. Boland holds Bachelor of Electrical Engineering, Master of Science (governmental administration) and Doctor of Philosophy (environmental economics) degrees and is currently Professor Emeritus of Geography and Environmental Engineering and Research Professor in the Department of Earth and Planetary Sciences, both at the Johns Hopkins University, Baltimore, Maryland, where he has taught for more than 30 years.

To read about other IJC appointments, including that of Canadian Commissioner Pierre Trépanier, visit www.ijc.org.



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Key Contacts:

Canada

Dr. James Bruce — Co-Chair, PIAG, 613-731-5929

Ted Yuzyk — Co-Chair, Study Board, 613-992-5727

Dr. Syed Moin — Co-Manager, Study, 905-220-6742

United States

Kay Felt — Co-Chair, PIAG, 313-568-6700

Dr. Eugene Stakhiv — Co-Chair, Study Board, 703-428-8077

Dr. Anthony Eberhardt — Co-Manager, Study, 703-428-6291

Editorial Suggestions

Contact Editor Tom Black at 519-257-6706 or via e-mail at blackt@windsor.ijc.org.

CLARIFICATION - The table summarizing the impact of Great Lakes diversions on water levels published in the April issue of "On the Level" (Page 4) was incorrectly attributed to a 1985 IJC publication. The table values are actually adapted from "Living With The Lakes: Challenges and Opportunities - A Progress Report To The International Joint Commission, July 1989." The values provided may not coincide with those from other sources due to differences in the purposes and methods of their calculation.

International Upper Great Lakes Study

100 Ouellette Ave., Suite 800

Windsor, Ontario N9A 6T3

www.iugls.org