



**Public Interest Advisory Group**

9:00 a.m. – 4:30 p.m. EDT, Thursday, August 20, 2009

Type of Meeting: Face-to-Face

Meeting Facilitators: James Bruce/Kay Felt

Invitees: All PIAG Members & Study Team

Location: Waterfront Inn and Conference Center, Sault Ste. Marie, ON

## MINUTES

### **I. Roll Call**

Present from PIAG: Kay Felt, James Bruce, James Anderson, Kate Bartter, Doug Cuddy, Richard Hibma, Kenneth Higgs, David Irish, John Jackson, Donald Marles, Mary Muter, Roger Smithe (Regrets from: William Hryb, David Powers, Alan Steinman, Dan Tadjerson, Dan Thomas, Jeff Vito, James Weakley).

Present from Study Team: Ted Yuzyk, Syed Moin, David Fay, Wendy Leger, John Nevin, and Jill Wingfield

### **II. Minutes Approval**

The minutes from the face to face meeting held on April 7, 2009 in Ypsilanti, Michigan, were approved.

### **III. Lake Superior Regulation Plan and Evaluation Framework Overview**

David Fay, Co-Lead for the Lake Superior Task Team (LSTT), provided an update on their recent activities. LSTT work was on-going while the St. Clair River portion of the Study was being conducted and is expected to be completed in early 2012. The Technical Working Groups (TWGs) are gathering data and identifying investigators to develop the “performance indicators” which will be used to evaluate the regulation plans. To date, three methodological peer reviews have been submitted: Plan Evaluation and Formulation (April 20), Economic Sectors (July 21) and Ecosystems (July 22).

#### Background

The Boundary Waters Treaty of 1909 (Treaty) provides the authority for Lake Superior flow regulation. The Treaty established the International Joint Commission (IJC) and granted the IJC the authority to issue Orders of Approval for projects on boundary waters. The Treaty also lists a priority of water uses: water for domestic and sanitary purposes is given the highest priority followed by uses for navigation, and then power and irrigation. The Treaty also recognizes that protection must be given to existing uses. In 1914, the IJC issued the original Orders of Approval to hydropower applicants that governed use of Lake Superior water; these Orders set out conditions for regulation and specified a range of levels for Lake Superior. Supplementary orders were issued in 1979 that required lakes Michigan-Huron levels, in addition to Lake Superior levels, be considered in Lake Superior outflow regulation. Today, the Lake Superior Board of Control specifies the outflow on a monthly basis using the IJC approved 1977-A plan. Plan 1977-A considers the levels in Lakes Superior and Michigan-Huron and has been in use since 1990.

The monthly mean flow in the St. Marys River is distributed to meet a set of priorities. First on the list of priorities is use of the water for municipal domestic and industrial purposes. Operation of the navigation locks is next, along with environmental/fishery requirements for the rapids. The remaining amount of available water is then allocated to hydropower (shared equally between the two countries). If this

amount is greater than the capacities of the hydropower plants, then the excess is released through the compensating works.

### Study Plan

The Study directive calls for the Study Board to review the existing operation plan for regulating Lake Superior outflow, evaluate all affected interest groups, and, if appropriate, recommend improvements to the regulation plan and revisions to the Orders of Approval.

The methodology that will be used to improve the regulation plans is as follows:

- Develop a water balance (routing) model for the system;
- Select hydrologic “scenarios” (e.g. historical, climate change);
- Plan formulators will begin an iterative process:
  - Set objectives (water level or flow criteria);
  - Develop/revise regulation plan;
  - Simulate response of regulation to supplies (levels and flows); and
  - Use the performance indicators to evaluate each plan to assess the distribution of benefits.
  - Repeat ...

This process will allow the Study to examine the influence of various regulation plans on the upper lakes system. Since future hydrology cannot be known with certainty, a variety of plausible hydroclimate scenarios will be run through the model regulation plans to determine the impacts of different levels and flows on interests including shipping, coastal processes, ecosystem health, recreational boating and tourism, municipal/industrial water use and hydropower.

The review operation is focused on flow releases and is not considering infrastructure or physical changes to control structures in Sault Ste. Marie. Further, the group will be working under the assumption that there will be no additional changes to the channels when evaluating Lake Superior regulation plans. The group will, however, consider separately the possibility of works in the St. Clair or Niagara rivers to address climate change.

The first thing the Plan Evaluation Group (PEG) did was to develop several “fencepost” regulation plans for Lake Superior; these plans represent the extreme ranges of what is possible with the existing control structures. These models showed that it is possible – although maybe not feasible – to maintain Lake Superior at a fairly constant level, or to have more extreme fluctuations in order to meet other objectives. The fencepost plan developed with the aim of reducing the variability of Michigan-Huron levels, however, showed that water levels in Michigan-Huron could not be nearly as tightly regulated as Lake Superior levels; that is, the effect of various Lake Superior flow regulations plans on Lake Michigan and Huron is much less than on Lake Superior.

Six Technical Working Groups (TWGs) operate under the LSTT with a specific area of focus. Each of the groups is responsible for developing performance indicators to be used to evaluate the effects of alternative regulation plans on their interest. The Coastal Processes TWG is examining issues such as flood damages, erosion, shoreline protection maintenance, and low water impacts. The Ecosystem TWG is focusing on the effects of various water level regimes on ecosystem indicators (vegetation, fishes, birds, mammals, amphibians, reptiles, etc.). Transportation costs are the prime area of study for the Commercial Navigation TWG. The Recreational Boating and Tourism TWGs are examining the net

benefits lost or gained by recreational boaters and the tourism sector under various water level scenarios. The value of energy produced and the predictability of flows is the focus of the Hydroelectric Power TWG. The Municipal and Industrial Water Supply TWG is focusing on the water supply infrastructure costs avoided under different water level scenarios.

To effectively evaluate each proposed regulation plan, each of the TWGs is developing “performance indicators,” that allow for quantifying the impacts of various level/flow regimes. The plans will each be evaluated following the methodology outlined above and the LSTT will then recommend several alternatives to the Board for consideration. The Study Board directed the LSTT to base the evaluation of the new regulation plan on current climate (including projected water supply extremes) and quantifiable impacts from Study sites (note: not necessarily economic impacts). The Board also directed the LSTT to develop an adaptive management strategy to address future uncertainty concerning climate variation and change (see Item IV).

#### Schedule

While the St. Clair River Study was ongoing, the LSTT and TWGs were getting organized and developing their methodologies. Most of the TWGs have finalized (or are near finalizing) their methodologies. Currently, and throughout the coming year (2009-2010), the TWGs will be conducting performance indicator research and collecting data. By September 2010, it is expected that the performance indicators will be complete and incorporated into the evaluation model. The Plan Evaluation and Formulation groups are currently developing alternative plan architectures, hydroclimate scenarios, and evaluation models. Draft regulation plan(s) are expected to be selected and a draft report for public consultation issued in the spring or summer of 2011. In the fall of 2011, the plan(s) may be revised based on public comments and a final set of regulation plan(s) will be selected by Board. A final report will be developed after the Board selects the final regulation plan(s). In early 2012, the final report will be delivered to the IJC. This proposed schedule is subject to Board approval.

#### Summary

Given that an exhaustive assessment would require a data collection and modeling effort that would cost far more and take far longer than the budget and schedule for the Study would allow, it is possible that the uncertainty in the indicators developed under the current Study plan may be greater than the differences between the consequences of any two plans. However, a combination of plan water level analysis and economic and environmental assessments should be sufficient to rank plans.

#### **IV. Adaptive Management**

Wendy Leger provided an overview of the proposed development of an adaptive management strategy to address climate change within the existing framework of the Study.

The directive from the Study Board to the Lake Superior Task Team (LSTT) was to “...assess the need for changes in the Order or regulation plan to meet the contemporary and emerging needs, interests, and preferences for managing the system in a sustainable manner, including under climate change scenarios; and evaluate any options to improve regulation.” The Study Board initially directed the LSTT to use a 20 to 50 year planning horizon to estimate the expected future impacts of climate change and economic forecasts to evaluate potential regulation plans. Based on this evaluation, the Plan Evaluation Group (PEG) would then try to evaluate and formulate the best regulation plan(s) to address existing and future conditions in a sustainable manner.

In the Lake Ontario-St. Lawrence River Study, regulation plans were assessed under four different climate change scenarios: 1) not as warm, but wet; 2) warm and wet; 3) not as warm, but dry; and 4) warm and dry. Each scenario resulted in approximate 30-year trends. This was done as a kind of sensitivity analysis to test the robustness of the plans under climate change. The plans were not developed to respond to climate change. In the IUGLS, Plan 1977A has been run using the warm/dry climate change scenario as a preliminary analysis. In the test of this one climate change scenario both Lakes Superior and Michigan-Huron frequently fell well below their chart datums.

There is a degree of uncertainty in each climate change model and none perform uniformly well across all variables. In addition, probability can't be measured from the models; that is, prediction of the most likely scenario is not possible. In the near-term, trends in levels may not be evident.

The Study Board determined that because the uncertainty surrounding economic and environmental conditions and climate change negates the ability to develop defensible estimates of expected future impacts, the Study will not attempt to optimize a plan for future conditions. The Study will, however, test plans with possible future water supplies to assure that the plans won't fail and will focus on the marginal differences between regulation plans. In addition, an adaptive management group will be developed to design adaptive management programs starting now to deal with future uncertainty.

#### Adaptive Management

Adaptive management is defined as "...a structured, iterative process of optimal decision-making in the face of uncertainty, aiming to reduce uncertainty via system monitoring."

In September 2008, the Study Board determined that climate change should be addressed through adaptive management. In February 2009, a draft scope of work was presented to the Study Board by the PEG and the Board asked the PEG to lead the development of an Adaptive Management Strategy. In June 2009, an adaptive management workshop was held in Windsor, Ontario. The goal of the workshop was to develop guidance for the Study Board on the Adaptive Management strategy for the Upper Great Lakes Study by "...bringing together climate experts and resource managers to critically consider and debate what purpose could be served by a proposed two part strategy:

1. To adapt regulation rules in the future as conditions change
2. To provide information on climate changes and water levels so that others could adapt their behavior and policies."

As a result of the workshop, the PEG was advised to reverse the traditional approach of using "best-guess scenarios" by using a bottom-up approach instead. Under this approach, the group would first select water levels or supplies that would cause trouble and then ask climatologists if they are plausible, rather than first guessing at plausible water level scenarios and then determining if they would be problematic.

Based on the results of workshop, a revised strategy will be presented to the Study Board at their upcoming September meeting. Elements of the revised strategy are below (note: as of 20 August 2009, this revised strategy had not been approved by the Study Board but most of the strategy received Board approval 9-10 Sept).

1. Developing coping zone definitions. The PEG will first assess "acceptable" levels and then determine what the "coping zone" is for each interest group. The entire Great Lakes region,

however, has developed around historical levels so it is also essential to identify critical “thresholds.”

2. Develop water supply sequences. These sequences will range from preferred to coping to extreme regimes.
3. Investigate the ability to forecast hydrologic shifts.
4. Develop socio-economic and environmental scenarios that might change how levels are managed.
5. Develop adaptive regulation strategies.
6. Evaluate the ability to influence levels and flows through new structures.
7. Evaluate and rank adaptive regulation strategies.
8. Identify water level problems that regulation can’t address [then, start thinking about what actions can be taken from a shoreline management perspective, shipping perspective, etc.]
9. Identify long-term monitoring and modeling requirements.
10. Conduct an institutional analysis [from a regulation standpoint, this will help to determine what is necessary in terms of data, information, resources and institutional arrangements; from a non-regulatory standpoint, responsible agencies will be identified].
11. Develop adaptive management plans for regulation and non-regulation response.

A number of challenges must be overcome as the PEG continues to refine the adaptive management strategy; namely, this element was not a specific part of the IUGLS mandate so it must be worked into the Plan of Study. This will require some changes in allocation of Study funds with the understanding that the greatest risk of adaptive management is a lack of funding. In addition, cooperation of bi-national organizations at various levels as well as stakeholder involvement is vital for long-term success. Finally, the fact that adaptive management is an on-going initiative which requires commitment can make it a hard sell.

This table was provided by Jim Bruce and provides a more simplified view of the steps involved in adaptive management. The PEG planned to take these steps into consideration and revise the above list somewhat before going to the Study Board in September (refer to the Sept 8, 2009 Adaptive Management Work Plan).

**Risk-Based Guide for Alberta Municipalities**

Step 1: Getting started	Define the hazards and vulnerabilities and potential management implications
Step2: Preliminary analysis	Develop risk scenarios and a preliminary analysis of their probabilities and consequences
Step 3: Risk estimation	Assign appropriate levels of frequency to each event in the risk scenario Calculate the expected loss or other consequence for each risk scenario
Step 4: Risk Evaluation	Evaluate the risks in terms of costs, benefits and acceptability
Step 5: Risk Controls and Adaptation Decisions	Identify and evaluate feasible adaptation or risk control options, in terms of costs, effectiveness, stakeholder acceptance and other criteria

Step 6: Implementation and Monitoring	Develop a feasible outline implementation plan Establish an effective monitoring and review program
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Discussion

Several PIAG members expressed caution about presenting this topic as it is very technical. It is important to remember that the role of PIAG is to present this to the public; therefore, simplification of some of the concepts would be appreciated.

When the Study Board does the next round of legislative visits, this may be one of the most important points to communicate.

**V. Comments on the Progress of the TWGs from PIAG liaisons**

Coastal TWG, Roger Smith

The Coastal TWG has budget restraints that affect the selection of Study sites. A site should be “representative” of the shoreline; however, the “representative” site may not have the best data. The TWG leaders are sensitive to this and have asked for input from TWG members and PIAG members in site selection.

Two of the TWGs – Ecosystem and Coastal – are not able to quantify impacts of various plans; rating curves will be used instead. There is concern that when presenting the final report to the public, it will be confusing and perhaps frustrating that various approaches were used by the TWGs when discussing the impacts of various plans.

As part of the work plan, the Coastal TWG will determine the impact of low/high-water scenarios on shoreline structures (e.g. sea walls); however, regulatory requirements can be prohibitive in both countries. Therefore, the PIAG liaisons have asked the Coastal TWG to also assess the regulatory requirements for construction of shoreline structures in both countries.

Coastal TWG, Jim Anderson

Members of the public are going to want to see that “their” shoreline is represented in the sample sites. This will be a challenge to communicate to the public. PIAG representatives will be working with the Coastal TWG to make sure this occurs.

Even though it is not currently in the work plan, the Coastal and Ecosystem TWG should do some type of economic assessment. Even if it is a minor assessment, such as an order of magnitude, this attempt needs to be made because having that information will certainly help communicate the outcomes of the Study to the public. [Wendy Leger stated that the economists working with the Study have also expressed concern on this issue and are working with the Coastal TWG to revise the current strategy].

Ecosystem TWG, John Jackson

As certain parts of the Study are being revised (i.e. inclusion of the St. Marys River studies and Adaptive Management) additional work is being added to already short budgets. The TWGs need to communicate this to the Board; the Board needs to thoroughly discuss these potential limitations and the resulting impact on the outcome of the Study with the IJC.

Very little is heard about Lake Erie at the TWG meetings and that causes concern. [Syed Moin explained that changes in the regulation plan have very little impact on Lake Erie so the TWGs haven't been asked to focus on it very much. However, with respect to climate change and adaptive management, it will be critical to include Lake Erie in the assessments.]

#### Hydraulic TWG, Mary Muter

The group has not met in quite some time. [Syed Moin stated that the Hydraulic TWG will not be as active during the Lake Superior portion of the Study. The Study Team will work with affected PIAG members to reassign them to more active TWGs].

#### Water Uses TWG, Don Marles

The Water Uses TWG is a very active, productive, hard-working group. So far, the work is going well and the group is progressing along at a good pace.

The Circle of Influence Workshop held in Sault Ste. Marie this summer was not very well attended. In part, this was likely because the invitations did not clearly explain what a "Circle of Influence" is. In the future, these invitations need to be clearer. Those that did attend very clearly agreed that there was far too much water going through the hydropower facilities and not enough going through the rapids. That message, however, has not been clearly communicated to the hydropower TWG and it needs to be.

#### Commercial Navigation TWG, William Hryb

[Note: comments submitted via email]

"At the IUGLS joint meeting I attended in June, I had the opportunity to hear from a composite group of hard working TWG members covering the five areas of the Study including my constituency 'Commercial Navigation'... Sitting in with all the TWG leads and advisory groups provided me with a broad and valuable scope in understanding the 'whole picture'. I will emphasize again that we are all inextricably linked and the success of the Study depends on that understanding.

"My commendations to Ralph Moulton and David Wright for carrying the 'ball' and providing the attendees with a forthright presentation. In addition I thank Capt. Don Weliecke, President of Western Great Lakes Pilot Association who attended the meeting offering his expertise on ships transiting the St. Marys River."

## **VI. St. Clair River Report: update on status of report and peer review**

### Peer Reviews

The turnaround has been considerably slower than was initially planned. To date, six of the eight key reports that were sent to the peer reviews have been received; the remaining two should be received shortly. The main draft report is also under review and the Board is awaiting comments.

The peer review comments received to date have been generally supportive with nothing specifically noted that affects the findings or conclusions. Comprehensive responses are being prepared by the TWGs and Study to address all of the peer reviewers' comments.

The October 1 deadline for the final report is contingent on receiving the outstanding peer reviews. If the reviews are not received by the end of August, it will not be possible for the Board to meet the October 1 deadline and the Board will request an extension from the IJC.

### Additional Studies

Four additional studies were conducted this summer:

- A comprehensive scientific uncertainty assessment was completed to address the sensitivities of using different assumptions and techniques.
- In addition, a report has been produced that synthesizes the maintenance dredging volumes in St. Clair and Detroit Rivers.
- Impacts of navigation were also being assessed. Currently, the Study is awaiting an assessment of the potential of ships to disturb bed sediments or influence bed features.
- Finally, the Study expert opinion on the impacts of the ice jam was solicited.

### Report Status

The design layout is currently being finalized. A draft report cover was circulated for input from PIAG. In general, PIAG members agreed a caption was necessary to describe the image on the front.

Revisions of the early chapters have already begun. Key meetings with Study Team, Task Team leads, and Study Board have been lined up for the next several months.

### Next steps

The Study Team and TWG leads will be working to revise the report to: address comments from peer reviewers, integrate findings from the recent studies; and, incorporate the public perspective into the final report. Once all of the revisions are complete, the Study Board will finalize the main report and the executive summary. The report will then be submitted to the IJC and, as previously discussed; the IJC will likely hold formal hearings to solicit public comment.

## **VII. Summary of Public Comment Period**

Jill Wingfield provided an update on the many consultation opportunities that occurred throughout the summer. A number of briefings [both face-to-face and using online conferencing technology] were held at the time of the draft report release for government agencies and for various groups including the U.S. Great Lakes Interagency Task Force, Council of Great Lakes Governors, Great Lakes and St. Lawrence and Cities Initiative, non-government organizations, and members of the press.

The Study Board also provided in-depth briefings and received comments at 17 public meetings held throughout the upper Great Lakes basin May – July 2009. Prior to each public meeting, significant effort was made to inform the public in the relevant area about the meeting; local newspapers, radio and television stations, community and environmental organizations, and government representatives were contacted. Information collected from the response forms handed out at each meeting will help guide future outreach efforts to improve effectiveness.

The response forms, while not a random sample, are a useful planning and evaluation tool. Many of the questions addressed meeting logistics, which will help improve future public meetings. Other questions addressed respondents' primary concerns and feelings regarding the Study process, findings, and recommendations. In general, the feedback on the response forms reflects a different perspective than what was portrayed at many of the public meetings. More than half (52%) of the public meeting attendees are confident the objectives of the Study will be achieved while only 11% are either minimally or not at all certain the objectives will be achieved (29% are uncertain and 8% did not respond.) A full report on the results and interpretations is available.

Public comments were also solicited throughout the 90-day comment period (extended from 60 days). The Study Board is working with the Technical Working Groups to review each comment and prepare appropriate responses. Public comments and responses will also be posted on the Study website. PIAG members requested that the comments submitted by the public be made available to them. The Board will check the IJC policy on sharing these comments and address concerns regarding the privacy rights of those who submitted comments.

A report on the public consultation process, *What We Heard*, is currently being prepared for review by PIAG. This report will be transmitted to the Study Board and the IJC. This report will outline the objectives of the public consultation process as well as the myriad consultation opportunities and activities that occurred during the 90-day comment period. Key issues that were identified during the various consultation opportunities will be outlined; the report will present areas where there was consensus as well as areas where there was no consensus. John Nevin is currently working on the draft of this report and will send it to PIAG members soon.

There was significant discussion about the public consultation method used as the turnout at the public meetings (400 people) is not a representative sample. While this is true, it does not mean that responses we heard are inconsequential. The report, however, must also address the comments that we didn't hear – those of the “silent majority.” Did people not attend the meeting or submit comments because they're supportive or because this issue is not important to them? These questions are a critical component of a comprehensive report on the public consultation process.

Efforts to increase participation at the next round of public meetings must be made; while the response forms indicate that newspapers are still an important means of outreach, other social marketing tools must be explored.

## **VIII. Frequently Asked Questions**

John Nevin provided an overview of the types of questions/comments received during the public consultation process. There were four main categories of questions/comments received: science, process, policy and mandate. Questions concerning the science mainly addressed 3D modelling, the Baird report, quality of the data used, and uncertainty. In addition, many groups have incorrectly stated that the increased flow down the St. Clair River equals approximately an additional 6 billion gallons of water per day; this misinformation was often cited in comments from the public. The Study Board is currently working on a fact sheet to explain why this statement is incorrect. Process questions primarily addressed the availability of the technical reports, the decision to release the draft report prior to the peer reviews being completed, and the ability of the public to comment prior to the IJC making recommendations to governments. There were also a number of requests to hold public meetings in Wisconsin on Lake Michigan, which the Study did. Questions concerning policy focused chiefly on the Study Board's recommendation to not remediate at this time. In addition, many questions addressed the “threshold” at which remediation would occur. The Study Board was also questioned extensively about the mandate; mostly the Board was asked why the Study did not examine previous dredging, sand and gravel mining, and water lost from the Chicago diversion. Questions were also raised about the distinction between natural and human induced changes on the St. Clair River.

To date, technical questions have been forwarded on to the appropriate TWGs. Responses will be sent directly to the individual or organization that submitted the comments. Once the responses are complete, the questions and accompanying Study response will be posted on the website.

There was a significant amount of discussion about the public comments and the role of the PIAG in addressing the comments. The role of the PIAG is not to evaluate the science; rather PIAG should use these questions and comments to advise the Board on how to improve communications with the public.

#### **IX. What have you heard from your constituent groups?**

Al Steinman submitted comments via email. In talking with citizens, scientists and colleagues around the basin, Al heard that in general, people found the presentation to be overly technical and long. Dissatisfaction with the content and delivery of responses to questions was also expressed by some. In addition, the ice jam explanation appeared to be one of convenience, not of actual data. Despite the presentation, the concurrence of conveyance results from the different approaches was actually not very close; the results showed a wide variance, but because the numbers were so low to begin with, the absolute differences appeared low. The relative differences, however, were quite high. Hence, the premise behind the conclusions is inappropriate. Despite the above concerns, there was general appreciation of the process and the ability to provide feedback.

Jim Anderson stated that Ontario has a new Deputy Minister of Labor, Virginia West; she was formerly the Deputy Minister of the Environment. The Study Board is urged to brief her on the Study.

Ken Higgs asked if the Study provided an update at the last Great Lakes and St. Lawrence Cities Initiative Meeting. [John Nevin responded that while there was not a presentation at their last meeting, they did receive a briefing during the week when the draft report was released.]

Don Marles reported that based on what he has heard constituents in the Sault Ste. Marie area are happy because Lake Superior levels are up. Don also heard similar reports from folks on Blind River (Georgian Bay).

Dick Hibma stated that things have been very quiet. As there is no immediate crisis, there is also less concern from the public.

Mary Muter explained that the people of Georgian Bay are concerned that an opportunity may be missed. Even though water levels are up, it's not time to ignore the last ten years. The people of Georgian Bay want a flexible structure put in and they want outflows measured.

David Irish reported that people in Western Michigan – even those that didn't attend the public meetings – seemed convinced that the primary influential factor is climate.

Roger Smithe reported that the comments he has heard from those that have read the summary report are generally positive as they feel that the science is quite thorough.

Kay Felt said that overall, things are generally quiet in southeast Michigan. Kay has heard concerns being expressed by members of the public about the potential downstream effects of a structure in the St. Clair River.

John Jackson had no comments to report from constituents. He did recommend, however, that the next PIAG agenda should have an item in which we assess current PIAG roles on TWGs as some of the TWGs are less active now that the St. Clair River Study is done.

Ken Higgs, Kate Bartter and David Irish had no additional comments above what was already presented.

## **X. Round Table**

Roger Smithe was surprised by the comments about TWGs not involving members of PIAG because that is certainly not the case with the Coastal TWG. It is important to note though that PIAG members understand that their role with the TWG is to be one of an intermediary between the TWG and the public; PIAG members are not scientists and should defer to the TWG members on questions of science.

Jim Anderson asked Jill Wingfield and John Nevin to examine using new communication and marketing tools and to report on these at the next PIAG meeting.

Doug Cuddy is concerned about the change in head between Lake Huron and Lake Erie. If Lake Huron reaches historical highs, that would pose a severe flood risk for Lake Erie. Doug asked if this has been discussed at the Board level. Most of this Study has looked at lake levels from a “low-level” perspective; however, as Lake Huron levels have been dropping, Lake Erie has stayed around its average. What will happen if Lake Huron hits high levels?

Ken Higgs stated that at some point during the Lake Superior portion of the Study, we may arrive at a decision to put remedial measures in the St. Clair River. It is imperative to take into account all of the downstream effects. [Note: current models go down to the Niagara River.]

Kate Bartter requested information on TWG membership. Syed Moin will send a note to the PIAG with information about accessing files on SharePoint.

Mary Muter reiterated that an opportunity is being missed and as Ralph Pentland wrote in his report, we need to get started now because it will take time to evaluate options and come to consensus about what to do. Mary also read a statement from Roger Gauthier, a retired engineer with the Army Corps and Great Lakes Commission that essentially endorsed the findings in the Baird Report. [Note: As members of the Study Board had departed by this time, PIAG members were frustrated with the timing of this statement.]

Dick Hibma remarked that there is a continued arrogance that we can control the water levels in the system and that we know enough about the system to do this. There is an overly simplistic view of a very complex system and we, as the PIAG, must work to overcome that public misconception.

Don Marles said the Study and PIAG are doing a number of positive activities. There are some things that the Board and PIAG can improve on; for example, Don has not been made aware of any activity or work being done by the Water Use TWG since the joint meeting of the Commercial Navigation,

Ecosystems, Hydropower, and Recreational Boating and Tourism TWGs on June 16-17, 200 in Sault Ste. Marie, ON and MI and feels that more communication is required. Don is pleased to be reappointed for another term to work on these issues.

Bill Hryb expects to see an increased interest in Thunder Bay as the Study enters the Lake Superior portion. However, as water levels are currently above chart datum, public attention to the Study will likely be diminished. A comprehensive communication plan with media exposure to spark the general public's interest in the overall Study will be required. Even though we have a savvy community base, marketing the Study progress effectively with timely reports is essential. Commercial navigation interests have been briefed on Study progress and findings to date. Fear that a knee jerk reaction by legislators can impose obtrusive regulations that can have a deleterious effect on marine commerce in the Great Lakes basin remains. The IUGLS has the responsibility to make sure that this does not happen as livelihoods of countless families who derive a livelihood from commercial navigation is at stake.

Respectfully Submitted

Jill Wingfield

# St. Marys River Conservation Action Plan

## **The Nature Conservancy**

Tina Hall with The Nature Conservancy (TNC) provided an overview of TNC's mission and operating philosophy. TNC is successful because it is a science-based organization that relies on strong collaboration with industry through "science driven protection." Conservation principles are guided by how the many threats to the ecosystem are addressed. TNC's conservation priorities are developed based on ecoregions. Great Lakes ecoregions include those areas that are under influence of, or impacted by, the Great Lakes. Within an ecoregion, TNC looks for areas of concentration of unique plants, animals, communities (includes both animals and plants) or water bodies (e.g. waterways, shorelines, rivers).

## **Background**

The St. Marys River Study was a one-year project with the goal to develop a "Conservation Action Plan" (a blueprint for conservation). This project was conducted by a team of graduate students at the University of Michigan's School of Natural Resources. The team primarily examined ongoing processes in the river and identified potential issues that may arise in the future.

The St. Marys River is the most ecologically intact of the five connecting channels in the Great Lakes region and has a diverse fish assemblage and high quality nearshore and terrestrial habitat. Navigation improvements, hydropower development and urban development have occurred in and along the banks of river. The St. Marys River has been designated as an Area of Concern (AOC) since 1985.

One of the biggest challenges of the project was that many natural resource agencies either have jurisdiction on the river or have a stake in the activities that are occurring in or along the river. Conservation partners include (but are not limited to): Michigan Department of Natural Resources, U.S. Fish and Wildlife Service, Ontario Ministry of Natural Resources, Lake Superior State University, Central Michigan University, Chippewa Ottawa Resource Authority, Bay Mills Indian Community, Sault Tribe of Chippewa Indians, Little Traverse Conservancy, and Bird Studies Canada.

## **Project Overview**

The vision for the St. Marys River Project is to "restore and maintain a healthy river system and adjacent high quality marsh, riparian forest, and openland habitats for the long-term viability of aquatic and terrestrial communities in the Great Lakes region, as well as to protect the ecosystem services they provide."

Conservation targets that have been identified as part of this project represent the full range of biological diversity in the St. Marys River. If effectively conserved, these targets will conserve biodiversity within the project area.

The seven conservation targets identified are:

Conservation Target 1: St. Marys River

Conservation Target 2: River Tributary Spawning Fish (9 species crucial to Great Lakes native fish assemblage)

Conservation Target 3: Great Lakes Marsh (area marshes are among the largest and most intact examples in the region)

Conservation Target 4: Non-Marsh Shoreline (partially vegetated coasts)

Conservation Target 5: Little Munuscong River (regionally important example of a clay lake plain and coldwater stream; drains the Great Lakes marsh to Munuscong Bay).

Conservation Target 6: Openland Breeding Bird Habitat (unique northern community)

Conservation Target 7: Migratory Bird Stopover Sites (St. Marys River is situated along both Mississippi and Atlantic flyways)

The project team conducted viability assessments to measure the overall “health” of the target. These assessments used a four-level measuring scale to rank each target: very good, good, fair and poor.

Conservation Target 1: St. Marys River = fair

Conservation Target 2: River Tributary Spawning Fish = fair

Conservation Target 3: Great Lakes Marsh = very good

Conservation Target 4: Non-Marsh Shoreline = good

Conservation Target 5: Little Munuscong River = good

Conservation Target 6: Openland Breeding Bird Habitat = good

Conservation Target 7: Migratory Bird Stopover Sites = good

The team then identified stressors to each conservation target. The main stressors were ranked for each conservation target and six key stressors or “critical threats” were identified: 1) shipping industry; 2) flow manipulation; 3) incompatible agricultural practices; 4) incompatible residential development; 5) invasive species; and 6) incompatible public lands management. For each threat, the direct and indirect impacts on each conservation target, affected stakeholders, and future objectives and strategies were identified.

Project outputs included a technical document [<http://www.snre.umich.edu/node/7512>] and a public summary for distribution.

As the Study moves forward, it may useful to engage several aquatic hydrologists from TNC that worked on this project.