

Notes from the Sixth Study Board Meeting

Springfield Hilton
6550 Loisdale Road, Springfield, VA
29-31 January 2008

1. Welcome/Attendance:

Board Members:

Jim Bredin, Jim Bruce, Jonathan Bulkley, Don Burn, Kay Felt (by phone during Items 1 through 5 and in person during Items 8 through 13), Jon Gee, Gene Stakhiv, Ted Yuzyk

Managers:

Tony Eberhardt, Syed Moin

IJC Advisors:

Mark Colosimo, Paul Pilon

PIO:

Tom Black, John Nevin (by phone during Item 13)

TWG & TT Leads:

Dick Bartz, David Fay, Debbie Lee, Wendy Leger (by phone during Item 5), Jim Nicholas, Mike Shantz & Scott Thieme (by phone during Item 9a), Bill Werick

Note: Action Items are displayed as bold and summarized in Attachment 4.

The agenda was reviewed and IPR was moved forward to Item 2.

Jim Bredin suggested adding an item to discuss the St. Clair River Integration Report (Feb. 2009) - Timelines, responsibility, etc. (Final Agenda is Attachment 1).

2. Independent Peer Review (Paul Pilon):

- a. Managed by the American Society of Civil Engineers (ASCE) and Canadian Water Resources Association (CWRA)
- b. Four types of review:
 - i. methodological (7 per team) - review;
 - ii. sub-product review (15 per team) – smaller aspects requiring peer review;
 - iii. synthesis product reviews (9) – reports/ major review;
 - iv. final product reviews (1 for each team)
- c. Distribution of review between St. Clair & Lake Superior Task Teams: Year 1- 75%,25%, Year 2 – 60%,40%, Year 3 – 10%, 90%, Year 4 – 0%, 100%, respectively.
- d. Overall cost: \$275,000
- e. First review/ meeting in Port Huron, Michigan on February 21, 2008 in conjunction with St. Clair Task Team/ Hydraulic Dimensional Modelling Workshop.
- f. Discussion: There may be areas where investigations will be breaking new ground, but in most cases standard techniques will be used. However, boundaries of review have been set to remain within the limits of the budget. Jon Gee and Jim Bruce cautioned that the number of reviews might be excessive especially in view of the tightened timeframe for the St. Clair Task Team. Ted Yuzyk supported the notion that the template has been set for a thorough review. Gene Stakhiv – There is a great deal of flexibility within the contract, so specific reviews can be identified as the group proceeds. The contract

specifics are the responsibility of the IJC. Flexibility is written into the contract. Paul Pilon – not only a peer review, but there is also an advisory role – reviewers can hear the dialogue and provide suggestions/ understand logic (World Bank Model).

- g. Template to be used was described and the following question will be included (wording like): “What part of any of this methodological approach do you have a concern about?”.

3. Review Status of Action Items from Minutes of Meeting #5 (Tony Eberhardt & Syed Moin):

- a. Steve Rose & Paul King-Fisher were approved by the Board as U.S. and Canadian Hydropower Leads.
- b. The remediation and dredging fact sheet is nearly complete by Syed Moin.
- c. A common spreadsheet will be complete when SharePoint is implemented.
- d. A letter was sent by IJC to the Canadian Department of Foreign Affairs and International Trade (DFAIT) and the U.S. Department of State (DOS) for clarification regarding the Study mandate on remediation actions, but a reply has not yet been received.
- e. A letter was sent to Vice Admiral Conrad Lautenbacher, Undersecretary of Commerce for Oceans and Atmosphere and National Oceanic and Atmospheric Administration (NOAA), on January 10, 2008 regarding Jeff Oyler’s participation as U.S. Co-Lead of the Surveying and Monitoring TWG. No response has been received to date, but if one is provided, it will likely propose another NOAA person. A decision will have to be made at that time to choose the proposed person or look for someone else. A NOAA person, however, is preferred.
- f. Syed Moin continues to pursue the proposal for the Canadian Hydrologic Centre (CHC) to develop a 2D/3D Telemac model to visualize system hydraulics.

4. Great Lakes Observing System (GLOS) Meeting (Ted Yuzyk):

- a. The meeting held in Windsor on January 22, 2008 with members of GLOS was discussed.
- b. GLOS agreed to work collaboratively with the IUGLS Board.
- c. Roger Gauthier of GLOS mentioned on-going efforts to pursue 3-D modelling regarding tracing contaminants in a select part of the St. Clair River. GLOS is funding Dave Holtshlag to develop this model. This work may be utilized by the Study if it is available by the end of September 2008. It would be subject to peer review as all other methods and models.
- d. Roger is also drafting a letter for the Great Lakes Commission requesting that the Detroit District, Corps of Engineers investigate structures that could be placed in the St. Clair River to compensate for past dredging.

5. Plan Evaluation Group (PEG) Update (Bill Werick):

1. Described possible decision support structure. Criteria for assessing plans will be developed by the Study Board.
2. Consider uncertainty, risk and usefulness
3. Board should:
 - i. Start to identify key decisions
 - ii. Establish criteria and decision processes
 - iii. Work with TWGs to develop planning objectives

- iv. PEG will interview Study Board members to facilitate the compilation and comparison of Board thinking
 - v. Develop narratives on how technical studies will be used to make Board decisions
 - vi. Need to address the “key science” questions developed by the Board at Sault Ste Marie as listed on page 3 of the Strategic Framework Report (Attachment 2).
 - vii. Need interaction with the Task Teams to ensure that they have an opportunity to communicate any concerns or questions they may have to the Board and to see that they are being addressed through their work plans.
4. Demonstration was made of a “Mock Board Room” that showed rough estimates of the economic impacts of different regulation plans under various hydro-climatic conditions. This model used information from the Lake Ontario-St. Lawrence River Study to roughly estimate the economic effects as a result of different water levels. The preliminary estimates showed that the different hydrologic climates resulted in greater differences in levels and impacts than for the few fencepost plans available thus far.
 5. Start the practice decisions with a preliminary analysis of fencepost plans in spring 2008.
 6. Circle of influence workshops – with PIAG and focus groups

6. Information Management – SharePoint Server (John Yee):

- a. Demonstration given showing capabilities.
- b. John Yee will set up usernames and passwords for those wishing to enter data and information.**
- c. Suggestion made to provide a framework to show where things can be found. John Yee is working toward having the Organization Chart be the first information displayed.
- d. Documents can be locked – but anything you can view, you can download.
- e. Chuck Southam & Nanette Noorbakhsh should be first to be able to access the system.
- f. John Yee will perform training for the system.**

7. Status of Funding (Tony Eberhardt & Syed Moin):

- a. Canadian funds are now in place. There is an overarching Memorandum of Understanding (MOU) with presently six annexes.
- b. In U.S., there is a steady stream of funding.

8. Report from St. Clair Task Team (Syed Moin):

- a. Data Verification TWG:
 - i. Rating curve review – to address concerns that rating curves are not reflecting conditions. In US, using curves developed in the 1980s, Canada more current (updated in 2000). Seeking to clarify the issue - \$75,200 US (2 projects). Dr. Art Schmidt of University of Illinois (looking at 1962 and after). 6-month project. Two additional projects to consider relationships in the St. Marys and Niagara Rivers (\$25K) – All work was approved by the Board. **(Need a flow chart showing the synthesis and the answers that the research is providing and progress reports should be provided for all projects – Syed Moin).****

- ii. Lake to Lake Fall – 3 projects: Check the compilation of data (\$15K US & \$3 K Cdn) (Proceeding and already approved). Select hourly data. Compile a table of data adjustments.
- iii. Glacial isostatic adjustment (GIA) investigation to determine the extent of this as a factor in lake level differences – funds already provided, work nearing completion
- iv. 1954 bathymetry data extraction to build a base case for channel changes – Funds provided to U.S. Army Corps of Engineers, Detroit District and work nearing completion.
- v. Collection of historical dredging data for the St. Clair and Detroit Rivers - Funds provided to U.S. Army Corps of Engineers, Detroit District
- vi. Net Basin Supply (NBS) data being compiled back further than 1962
- vii. Net Total Supply (NTS) being addressed from previous work

b. Surveys and Monitoring TWG (Jim Nicholas):

Three acoustic Doppler velocity meter (ADV) gauges specifically – St. Marys, St. Clair & Niagara. St. Marys location being determined. Have set April 2008 as a goal for installation. St. Clair gauge in place – need to collect field data to see if flow values can be determined. Niagara – determine whether an acoustic gauge can provide needed information or if current rating is adequate. Opinion is Detroit River location for acoustics would be better. Question remains – should an international gauge be established at Niagara?

c. Hydraulic Modelling TWG (Syed Moin):

- i. 1-D model verification and calibration is being performed by Jason Giovannetone. Once verified, it will be handed over to Dave Holtschlag. Work should be complete by May 2008.
- ii. 2-D model – being done in Burlington and should be done in March 2008
- iii. 2-D modelling - Terry Fortin of CHC using Telemac model and should be done by March 2009 (Fort Gracett (Lake Huron outlet) to Fort Erie, Ontario).
- iv. 3-D modelling – **Jim Nicholas and Syed Moin will prepare a strategy paper on the topic.** This is a starting point, but an outside expert should also provide an assessment. A workshop on modelling will be held in Port Huron, Michigan on February 20-21, 2008. Suggestion made to invite outside experts (e.g., Fay Hicks) to observe presentations. **Syed Moin and Tony Eberhardt will look for such an expert and will provide funding for workshop participation.** The independent peer review group will be present at the Hydraulic Modelers workshop and have their own meeting in Port Huron on the afternoon of February 21, 2008.
- v. Hydraulic model for flow estimation – depends on findings of Art Schmidt.
- vi. Ice effects – Steve Daly to perform ice models, **funds will be made available after a Scope of Work is approved - Tony Eberhardt to follow-up.**

d. Sediment Studies (Syed Moin):

- i. Krish Krishnappan will provide a report of his completed work.
 - ii. Port Huron hydraulic modelling workshop (February 20-21, 2008) is tied to sediment transport.
 - iii. Proposal provided by U.S. Army Corps of Engineers, Detroit District regarding bed composition. This will be reviewed in conjunction with work proposal by Peter Ashmore for similar work
- e. Hydroclimatic Proposals (Debbie Lee):
 - i. Information to be developed and used for both Task Teams
 - ii. Best estimates of NBS, assessment of trends, climate change and stochastic scenarios
 - iii. Head-to-head comparison of approaches (residual, component, coupled regional models, direct observations, Intergovernmental Panel on Climate Change (IPCC) IV General Circulation Model)
 - iv. Researchers: Drs. Lofgren, DeMarchi, Quinn, Blanken, McKay, Fortin, Spence and Ouarda
 - v. Project Status Report Templates provided. Need to revise to include a paragraph describing projects.
 - vi. Proposals:
 - 1. Sensitivity Analysis of NBS Components – Frank Quinn, \$30K US, completion three months after notice to proceed.
 - 2. Comparative analysis of NBS – Drs. Brent Lofgren, Carlo DeMarchi, Vincent Fortin & Murray MacKay, \$300 K US and \$565 K Cdn. U.S. complete in 18 months, Canadian work complete in 36 months with interim reports provided. Models from this work will result in tools that can be used to predict water supply conditions for and beyond the Study.
 - 3. Measure of evaporation (eddy covariance) – Chris Spence & Peter Blanken, \$40K per site, daily estimates beginning in May 2008 (through 2011) for Superior. Sites being determined for Michigan-Huron for 2009 installation. GLOS is also trying to purchase sensors for buoys. **The proposal provided by Dr. Jay Austin will be revisited by Debbie Lee and Al Pietroniro and related work being performed by John Gibbons will be considered** (on-going regardless of Study involvement).
 - 4. Statistical analysis – Taha Ouarda, \$75 K. Work during the first 12-months of the Study to develop stochastic models of NBS, Bayesian analyses and teleconnections. He should connect with other experts.
 - 5. All proposals approved by the Board. Templates for projects will be put on SharePoint for Board availability.
- 9. Report from Lake Superior Task Team (Tony Eberhardt):
 - a. Coastal Processes TWG - Year 1 Work Plan (\$86 K) was approved by the Study Board. The TWG will consider impacts of high and low levels.

- b. Commercial Navigation TWG – Year 1 Work Plan approved and funds of \$20K will become available for scoping meetings and travel, etc.
- c. Water Use TWG –
 - i. The water intake inventory will proceed with Canadian contractors. If Canadian contracting procedures are not in place by February 15th, consideration may be given to using some funding from that previously earmarked for Water Demand Studies (\$200 K).
 - ii. A proposal will be requested of Ben Dziegielewski to perform a qualitative review of the current demand situation and pressures in the future to 2040. Consumptive uses in the Great Lakes including amounts through bottled water will be addressed. He will review reports by Tate & Harris, IJC, Great Lakes Commission (GLC), U.S. Geological Survey (USGS), etc. The cost can not exceed \$50,000.
- d. Rec. Boating TWG - Year 1 Work Plan approved
 - i. Suggested Canadian members: Dr. Scott, Al Donaldson, Dr. Joppe
 - ii. PIAG may also be asked for suggestions for members
- e. Environmental TWG -
 - i. Sandra George had suggested members with “systemic” expertise and a smaller rather than larger “interest-based” group
 - ii. Possible US members: Donald L. Tilton of Ann Arbor (suggested by Jon Bulkley); also consider a rep. from US Environmental Protection Agency
 - iii. Possible Canadian members: Lloyd Mohr of Ministry of Natural Resources (suggested by Alan Chow), Patricia Chow-Fraser of McMaster University (suggested by Jim Bruce), she might also be considered as a consultant regarding fisheries, and Linda Mortsch of Environment Canada
 - iv. Wetland and fisheries in the St. Marys River should be considered. Dr. Mark Bain of Cornell University will be consulted (has done research on peaking & ponding for the Lake Superior Board of Control).
 - v. Dr. Alan Steinman, PIAG liaison, may also be asked to suggest members.
- f. Regarding questions raised at the Lake Superior Task Team Meeting:
 - i. TWGs are expected to develop economic relationships between water levels and their sectors. Economic metrics of environmental effects will be considered and are preferable, although such are not necessarily readily available. Bill Werick and other Plan Evaluation Group members will work with the TWGs to develop their Scopes of Work for Board consideration.
 - ii. Social impacts should also be considered.
 - iii. A 30-year planning horizon will be considered (2010 to 2040). All TWG are to refer to earlier IJC reports to see how many questions raised then were addressed.
 - iv. Impacts of climate change and variability should be addressed.

- v. Economic relationships between water levels and interests should be able to be used to evaluate the effects of water level regime changes due to:
 - 1. Different Lake Superior regulation plans,
 - 2. Climate variability and change, or
 - 3. Changes in St. Clair River conveyance (either increased or due to possible mitigation structures)
 At a minimum, regulation plan options need to be evaluated.
 - vi. Regarding possible needs for structural measures in St. Clair River, recommendations can be made in the final Study report.
 - vii. Feasibility of using Input-Output models should be considered for various interests.
 - viii. The effects of climate change on Great Lake water levels and the resulting socio-economic and environmental impacts should be estimated and communicated to the IJC and government partners. Potential for further flow regulation, and “landside” structural and policy measures to mitigate climate change effects should be listed.
- g. Regarding the Study-Wide Workshop, Team needs to refine its proposal for the meeting. It might be better to first have a St. Clair Task Team workshop with PIAG and Study Board (May/ June) with Lake Superior workshop to follow.

10. Integrated St. Clair Report (Feb. 2009): Ted Yuzyk suggested the following outline:

- i. Chapter 1 – Background/ History
- ii. Chapter 2 – Hydrologic Regime
- iii. Chapter 3 – Sediment Models
- iv. Chapter 4 – Hydroclimatic Scenarios
- v. Chapter 5 – Synthesis of factors in Chapters 2 – 5
- vi. Chapter 6 – Remedial Actions
- vii. Need to determine authors and begin work sooner than later.**

11. Summary of Projects/ Funding Decisions:

Lake Huron Outflow/ St. Clair River Task Team:

- \$75,400 to Dr. Art Schmidt to verify rating curves
- \$25,000 to U.S. Army Corps of Engineers, Detroit District to verify relationships on the St. Marys and Niagara Rivers but will likely either go to Dr. Schmidt or USGS

Hydroclimatic Group:

- All proposals approved totaling \$361,497 US and \$730,600 Cdn

Lake Superior Regulation Task Team:

- Coastal Work Plan for Year 1 (into Year 2) approved for \$86,400
- Water Uses TWG approval for a proposal to review consumptive uses by Ben Dziegielewski not to exceed \$50,000

- Rec. Boating and Commercial Navigation TWG approval to provide \$10,000 and \$20,000, respectively, for year 1 workshops and travel.

Tony Eberhardt and Syed Moin will notify investigators and provide funding.

12. Report from PIAG (Kay Felt & Jim Bruce):

- PIAG is planning a series of public meetings, the first of which will be at Grosse Pointe, Michigan on February 19th followed by a meeting of the Southeastern Michigan Council of Governments (SEMCOG) on February 20th – Gene Stakhiv, Ted Yuzyk, Jim Bruce and Kay Felt will attend. Jim Bruce and Gene Stakhiv will be interviewed by Grosse Pointe Public Television on February 20th.
- Jim Bruce has been invited to speak on the Study at a public meeting of the St. Clair Region Conservation Authority in Port Edward, Ontario at 1 pm on February 21st.
- Syed Moin will update a presentation that will be used at the public meetings, with variations specific to each location.
- All PIAG members are not expected to attend; only those in the vicinity.
- Efforts will continue to have First Nation representation from Canada. A PIAG position will be held open for their participation.
- The next meeting of PIAG will be through a teleconference on February 8th to discuss on-going activities and the “Circle of Influence” meetings.

13. Communications Plan (Tom Black):

- Proposed Study Logos were presented; one showing the upper Great Lakes with the Study name was received most favorably (Attachment 3).
- A Study newsletter is tentatively scheduled for release in late spring; it will require French translation.
- The IJC Windsor Office staff is providing study assistance to Tom Black regarding implementing the communications plan.
- The details of setting up the public meetings were described including advertisements, room arrangements, microphones, etc. It was agreed that there would be a means of transcribing the public comment and question-and-answer part of each public meeting, either by a stenographer/ court reporter being present or by having recordings made that could be transcribed. The general presentation slides will be on the Study website. It was encouraged that public locations, such as high school auditoriums and fire halls, be used to reduce costs.
- Banners showing details of TWG roles and activities should be investigated such as those that were developed for the ILOSLR Study. Arleen Kreuzsch will be contacted regarding the availability of tripods for such displays.
- A glossary of terms will be developed for distribution at public meetings.
- A copy of the ILOSLR Study “Summary of Summer 2005 Meetings, Comments Received and Survey Responses” will be sent to the Windsor Office.

14. Meeting Schedule (Tony Eberhardt):

- The St. Clair Task Team is conducting meetings in Port Huron as follows:
 - February 19-20 (noon to noon) – Task Team meeting

- ii. February 20-21 (noon to noon) – Hydraulic Modellers workshop
- iii. February 21 (1 to 5 pm) – Independent Review Panel meeting regarding St. Clair Task Team activities.
- b. The Study Board decided to post-pone a Study-wide workshop which was tentatively scheduled for the last week of April in lieu of individual TWG scoping workshops prior to that time. A future larger workshop may be held at a latter date.
- c. The next Study Board meetings is tentative scheduled for Windsor, Ontario on May 1st and 2nd, however, the date and location may change since it may create a conflict with PIAG public meetings in that area.

*Notes Prepared by Tony Eberhardt and Syed Moin
February 14, 2008*

International Upper Great Lakes Study

Study Board Meeting

Springfield Hilton
6550 Loisdale Road, Springfield, VA
January 29-31, 2008

Agenda

Day 1 – Tuesday, January 29, 2008

Item	Time	Topic	Lead
1	1:00 - 1:10	Welcome/ Review & Approve Agenda	Stakhiv/ Yuzyk
2	1:10 - 2:00	Independent Peer Review	Colosimo/ Pilon
3	2:00 - 2:30	Review Status of Action Items from Minutes of Meeting #5	Eberhardt/ Moin
	2:30 - 2:45	Health Break	
4	2:45 - 3:00	Report on meeting with GLOS	Yuzyk/ Stakhiv
5	3:00 - 4:00	Plan Evaluation Group Update	Werick/ Leger
6	4:00 - 5:00	Information Management – SharePoint Server	Yee

Day 2 – Wednesday, January 30, 2008

Item	Time	Topic	Lead
7	9:00 - 9:30	Status of Funding - General - Projects	Yuzyk/ Stakhiv/ Eberhardt/ Moin
8	9:30 - 10:30	Report from St. Clair Task Team - Membership update - Status of On-going Studies	Moin/ Nicholas
	10:30 - 10:45	Health Break	
8	10:45 - 12:30	Report from St. Clair Task Team (continued) - Preliminary findings - Proposals for new investigations - Proposals for hydrologic models	Moin/ Nicholas Lee/ Pietroniro
	12:30 - 1:30	Lunch	
9	1:30 - 2:30	Report from Lake Superior Task Team - Membership update - First Meeting – Jan 14-15	Eberhardt / Fay
	2:30 - 2:45	Health Break	
9	2:45 - 4:30	Report from L. Superior Task Team (continued) - Review of proposals	Eberhardt / Fay
10	4:30 - 5:00	Integrated St. Clair Report – writing, etc.	All

Day 3 – Thursday, January 31, 2008

Item	Time	Topic	Lead
11	8:30 - 9:00	Summary of Projects/ Funding Decisions	Eberhardt/ Moin
12	9:00 – 10:00	Report from PIAG	Felt/ Bruce
	10:00 - 10:15	Health Break	
13	10:15 - 11:30	Communication Plan	Black/ Nevin
14	11:30 - 12:00	Meeting Schedule	Stakhiv/ Yuzyk

Key Science Questions (from “Strategic Framework and Work Plan”

dated October 17, 2007)

The Study Board developed a set of key science questions that need to be addressed, and which will guide the Task Teams and Technical Work Groups. The questions were developed to help the Technical Work Groups focus their activities and are:

1. Has the conveyance of the St. Clair River changed (since the sequence of dredging beginning in the 1920s)?
2. If so, identify and quantify the sources of change:
 - a. Isostatic adjustments,
 - b. Natural erosion,
 - c. Dredging (deepening & maintenance),
 - d. Localized events (ship & object sinking),
 - e. Hardening of shores, and
 - f. Sediment supply.
3. What impact has this had on relative levels of Lakes Superior, Huron & Erie?
4. Quantify the relative impacts of hydrological components for the recent period (1997-2007) changes in water levels?
 - a. Overlake and basin precipitation,
 - b. Overlake evaporation and evapotranspiration
 - c. Runoff
 - d. Diversions and consumptive uses
 - e. Other components of water budget
5. How has the spatial distribution of hydrological components changed in recent times (1997 to 2007)?
6. How much of these changes can be attributed to natural climate variability/climate change?
7. Given this knowledge, what would be a more robust regulation plan for Lake Superior?
8. What remedial actions could be taken to help in the regulation of the Upper Great Lakes?

Many of the issues raised in the Plan of Study, and associated science questions, required a higher degree of resolution than the existing data, models and methods are capable of delivering. Since much of the current information, and standard computational methods that have been developed over the decades to provide lake level information and projections by the Lake Superior Control Board are encumbered by various estimation techniques which involve an unacceptable degree of uncertainty. Thus, the Study is taking great care to consolidate the various data bases, adjust them to an updated set of reference benchmarks, and supplement the information wherever necessary, through focused data collection efforts (e.g., acoustic velocity meters, video monitoring, etc.) in order to reduce the uncertainties in the information base. This is a necessary prerequisite not only for providing a more reliable analytical basis for assessing the relative contributions of various physical changes to lake level fluctuations, but also for any formulation and evaluation of plans that will emerge out of the Study process.



Action Items from 6th Study Board Meeting – Springfield, VA

No.	Description of Action Item:	Action Lead:	Due by:
1	SharePoint Training and Utilization	John Yee/ Syed Moin	April 30
2	Flow chart showing St. Clair River TT projects and synthesis/ connections	Syed Moin	March 15
3	Strategy paper on hydraulic dimensional modelling	Syed Moin/ Jim Nicholas	February 15
4	Invitation of an outside expert regarding hydraulic dimensional modelling to the St. Clair workshop in Port Huron, MI	Syed Moin/ Tony Eberhardt	February 15
5	Ice modelling of the St. Clair and Detroit Rivers by Steve Daly – solicitation of revised scope of work	Tony Eberhardt	February 29
6	Reevaluate proposal provided by Jay Austin regarding over-lake evaporation and review related on-going work by John Gibbons	Debbie Lee/ Al Pietroniro/ Tony Eberhardt	March 15
7	Determination of authors for the St. Clair Report (Feb. 2009)	Ted Yuzyk/ Gene Stakhiv	March 15
8	Implementation of approved proposals and funding mechanisms	Syed Moin/ Tony Eberhardt	March 15
9	Material regarding public meetings from the Lake Ontario Study – request of Arlene Kreuzsch	Tony Eberhardt	February 29
10			
11			
12			