

**Notes from the 16<sup>th</sup> Meeting of the  
International Upper Great Lakes Study Board**  
Crowne Plaza Hotel, 8000 Merriman Road, Romulus, MI 48174  
22-23 September 2010

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**Day 1 -**

**Welcome/Attendance:**

Board Members:

Gene Stakhiv, Ted Yuzyk, Jim Bruce, Jonathan Bulkeley, John Boland, Don Burn, Dave Powers, Jim Bredin

Managers:

Tony Eberhardt, Syed Moin

PFEG:

David Fay, Bill Werick

Others:

Mark Colosimo, Susan Daniel, John Nevin, Jeff Kart.

**Agenda is Attachment 1.**

**Action Items are displayed as **bold** and summarized in Attachment 2.**

**1. Design Exercise – Goals & Objectives for Selecting a Revised Plan(Bill Werick):**

- a. Outline of the work of each TWG and the progress each has made regarding establishing Performance Indicators for the SVM was given (see notes of the 10<sup>th</sup> LSR Task Team meeting for additional details).
  - i. Hydropower: Energy benefits linked to pricing (volatility). Recognize the real or potential reduction in fossil fuel electricity production and its adverse environmental effects; if more hydro is possible, more economic and environmental benefits.
  - ii. Com. Navigation: Using 2005 data which will undergo a sensitivity analysis. Need to fold in Canadian and overseas shipping and to confirm depths.
  - iii. Coastal: Flooding and shore protection PI in the SVM, but not erosion, since there is no perceived difference between plans. Low water impacts also considered.
  - iv. Ecosystems: PI from 11 sites (some others showing no discernable difference). Impacts identified along the northern shore of Lake St. Clair with low levels; but independent of plan performance.
  - v. Rec. Boating: There's no tourism PI since there's no correlation to water levels. Marinas and cruise ships included.
  - vi. M&I: Pumping costs associated with water withdrawals included.
  - vii. Plan PIs and Supply PIs, those that are associated with plan development and those that can indicate differences regarding hydroclimatic scenarios.
  - viii. Data, PIs, models, evaluations and decision criteria will be used to select plans.
  - ix. Consideration of new control structures to manage extreme conditions.
  - x. Need to complete fact sheets, metadata, etc.

- xi. FEMA has expressed interest in working with the Study Team regarding adaptive management.
- b. Draft Criteria:
  - i. Maintain Superior levels between 182.76 and 183.86 m.
  - ii. Minimize disproportional loss.
  - iii. Reduce M-H flooding and low water impacts.
  - iv. Increase hydropower and navigation benefits.
  - v. Minimize negative environmental impacts.
  - vi. Perform robustly under a variety of climate conditions.
  - vii. Note that the balancing rule (Criterion C) helps Lake Superior more than it helps Lakes Michigan-Huron. May be more useful to consider “correlation coefficients”.
- c. Six plans for Board consideration during the exercise:
  - i. Plan 1977-A as the basis of comparison.
  - ii. Pre-project flows.
  - iii. Plans 122C, 128, 129 and 130 all of which were “test” plans limited to pre-project flows at various Lake Superior water levels.
- d. Considering 10 centuries of conditions, the following were examined:
  - i. Historic supplies.
  - ii. Three wet centuries.
  - iii. Three average centuries.
  - iv. Three dry centuries.
- e. Discussion:
  - i. The Board members discussed in detail Plan 130 (since it balances levels and provides fairly high hydropower benefits) and Plan 129 (more emphasis on economics). A comment was made on Plan 129 regarding the need to differentiate the trends between lakes to determine performance.
  - ii. Need to decide if a decision would be based on the historic range or economic criteria – differences of which are likely to be small. Also to determine if data back to 1860 was considered, how do results change?
  - iii. Other criteria:
    - 1. Maximize net benefits and reduce vulnerability.
    - 2. Have to have key metrics for all interests, not just hydropower and commercial navigation.
    - 3. Net benefits are not so important as minimizing the maximum loss.
    - 4. More frequency damage curves.
  - iv. Need units when listing values for comparison (months, cm, etc.).
- f. Board report to PFEg on conclusions reached and suggestions for improving decision process:
  - i. Was enough data presented to make a practice decision? No.
  - ii. Eliminated some plans initially: PP, 122C, 128 based on economics.
  - iii. More information to help in decision:
    - 1. Need ecologic information.
    - 2. Decision was based on a stationary climate (historic record). An expanded range, additional scenarios would help.
    - 3. Things would change depending on when you start – initial conditions, warm-up period.
    - 4. Is a trade-off model realistic? Need information about all interests.

- iv. Study Board will decide by consensus.

**2. Legal Aspects pertaining to formulation/selecting alternatives (Susan Daniel & Gavin Murphy-by phone):**

- a. Encourage an on-going dialogue between Study Board and Legal Advisors;
- b. Jim Chandler agreed to continue with assistance;
- c. Directive doesn't constrain evaluations, but need to show a clear comparison between alternatives and existing plan, criteria and conditions in the BWT;
  - i. Think outside-the-box, but need to be consistent with previous comparisons.
  - ii. Compare with 1955 rule of 49, Plan 77-A and period of record from 1900 - 2008.
  - iii. Can consider any periods for hydroclimatic supplies.
  - iv. If range is different, need to determine economic impacts so that claims of adverse impacts can be assessed. International Immunity Law makes the IJC immune from prosecution.
- d. Boundary Water Treaty, Article VIII:
  - i. Consider order of precedence;
  - ii. Issue of indemnity of interests for injuries;
  - iii. Public opportunity to be heard.
- e. Regarding a somewhat tiered approach:
  - i. Regulation of the existing structure and operations to address climate change to 2030; orders of approval could be amended. This could include provisions regarding the authority to deviate.
  - ii. Difficult to amend orders for conditions that may result beyond 2030 involving future structures.
- f. A framework for deviations can be drafted and incorporated in a revised order.
- g. October 29, 1979 Supplemental Orders of Approval is a good document to use as a framework for proposed changes.
- h. Question: If you go beyond the range established within the historic range, is the Board subject to indemnification of potential damages? Answer: The damages would have to be determined and assessed.
- i. **Develop a short paper with questions of the Legal Advisors. Bill Werick will write the first draft.**

**3. International Gauges (Ted Yuzyk):**

- a. Request has been made by the Study Board that the governments fund the 4 international river gauges and 2 evaporation gauges after the Study.
- b. Request has been made to governments by the IJC to fund these proposed International Gauging Stations.
- c. GLOS has requested funding for the evaporation gauges after the Study.
- d. **Board approved the release of the letter. Ted Yuzyk will forward the letter to the IJC.**

**4. Contextual Narratives (Gene & Ted):**

- a. **The scope of work will be re-sent to the TWGs identifying the need to include an assessment of the trends to 2050 (Gene to write memo).** Show connections to the three economic scenarios, vulnerabilities and adaptability to water.

- b. **Bill Werick is writing a summary document of the Contextual Narratives for next Study Board meeting on how they affect decisions.**
- c. **Board should provide comments on concerns on each Contextual Narrative Synopsis paper which will be provided back to the authors (Tony Eberhardt to coordinate).**
- d. The purpose of the documents is to put into context each of the interests to help the Study Board in their decision process. Once they're in good order, they will be sent to PIAG and also to the industries for their assessment. One (probably Hydropower) will be complete for the PIAG meeting; others for November Board meeting.
- e. **Ted Yuzyk to contract Tom Shillington to draft synopsis and integrate this into a draft Chapter 2 of the Final Report.**
- f. Other discussion regarding TWG deliverables templates:
  - i. Short synopsis of the Contextual Narratives;
  - ii. Fact sheets for PI (from ILOSLRS);
  - iii. Metadata (example of government form shown).

## 5. Communication and PIAG Update (John Nevin & Jeff Kart):

- a. Jeff Kart was introduced as an assistant hired to aid in PIAG communication efforts. He is updating the web site with articles, will coordinate information for quarterly newsletters and other communication material, and establish PIAG facebook and twitter.
- b. Key messages were proposed and will be revised and supplemented.
- c. Plan to work with PIAG to engage stakeholder groups, providing presentations, etc.
- d. Notational Schedule:
  - i. Monthly updates;
  - ii. Quarterly newsletter;
  - iii. Late October – release consultant's report/ recommendation regarding governance;
  - iv. Mid-late January – release mini-report on various water restoration scenarios;
  - v. Late spring – public meetings to provide information and to receive initial feedback.
  - vi. Other venues for communication will be pursued, such as Society of Environmental Journalists and Great Lakes Cities Initiatives.
- e. PIAG meeting in Thunder Bay on October 27<sup>th</sup>. Agenda will include PFEG to discuss how PI and other factors are being considered in plan evaluation. Also include a discussion of restoration investigations.

## 6. Semi-Annual

- a. Deadline to send draft progress report to Mark Colosimo & Paul Pilon– Fri., October 1<sup>st</sup>.
- b. Board comments:
  - i. Are we considering invasive species? Mention in Ecosystem section – phragmites in Lake St. Clair, but only if work on this happened since April. Include map of Lake St. Clair (Scudder). **Tony Eberhardt to send Dennis Albert report to Board.**
  - ii. Add a section on schedule of remaining activities.
  - iii. Mention new PIAG members.

- iv. Information on restoration. Attach letters to progress report.
- v. Beef-up AMG section.
- c. Issues to discuss with Commission:
  - i. Designation of International Gauging Stations;
  - ii. AMG – clarity on how to move forward. IJC involvement at a higher level with agencies;
  - iii. Legal Issues – explanation of how we plan to proceed. This is the advice we’ve received, so this is how we’re interpreting it;
  - iv. Restoration of Levels;
  - v. Challenge of collecting potentially sensitive data;
  - vi. Public dialogue – the proposed plan for next summer’s public meetings to provide information on study progress and preliminary results and receive and respond to comments as an “information only” item.

## 7. Financial Updates

- a. Canada: In FY10, \$1.521K committed, 509K spent, \$7.847M to this point.
- b. US: To date, \$6.84M committed of the \$7.8M provided.

## 8. Independent Peer Review

- a. Proposed Product Reviews:
  - i. Economic analysis of Coastal Process: Low water impacts – Dec. 1, 2010;
  - ii. Hydropower: Pricing – Jan. 5, 2011;
  - iii. IERM – Feb. 1, 2011;
  - iv. St. Marys River for Ecological Restoration – Feb. 1, 2011
  - v. Rec. Boating impact analysis – Feb. 1, 2011
  - vi. AMG – Feb. 1, 2011
  - vii. Hydroclimate: Stochastic – Feb. 1, 2011
  - viii. Hydroclimate: Climate Change – Mar. 1, 2011
- b. All will be complete by June 2011, prior to public meetings.
- c. **The Board will provide names of suggested reviewers by October 1<sup>st</sup>.**

## 9. Schedule of Remaining Study Activities:

- a. TWG activities:
  - i. PI and Fact Sheets – Dec. 2010;
  - ii. Final TWG reports – need format, deadlines, key findings. Could have Tom Shillington help with writing. 15-20 pager with references to other documents. Need a template – assumptions, methodologies, lessons learned.  
**Requirements will be provided to TWGs. Ted Yuzyk will prepare a template and timeline.**

## 10. Next Meetings:

- a. Nov. 30 (noon) to Dec. 2 (noon) in Windsor.
- b. Feb. 22-24 in Windsor.
- c. April in DC around spring appearance.
- d. Mid- to late-June in Bay City, MI.

## 11. Roundtable:

- a. **Need to provide a copy of Tourism Report to John Nevin. Syed Moin will send.**

- b. Need to decide the protocol regarding Commissioner attendance at Board meetings. May impact openness. Include in appearance questions.
- c. **Data access policy statement for web site –Action Item for Ted Yuzyk.**



## Study Board 16<sup>th</sup> Meeting

September 22-23, 2010

Crowne Plaza Hotel, 8000 Merriman Road, Romulus, MI 48174  
(734) 729-2600

### Agenda

#### Objectives:

- Decision Exercise
- Discussion of Study Progress
- Preparation for Meeting with the IJC at the Fall Appearance

#### Day 1 – Wednesday, Sept. 22, 2010

Item	Time	Topic	Lead
0	8:30 – 9:00	Arrivals	
1a	9:00 – 10:15	Decision Exercise – Goals & Objectives for selecting a revised plan	Werick
	<b>10:15– 10:30</b>	<b>Health Break</b>	
1b	10:30– 12:00	Continuation of Decision Exercise	Study Board / Werick
	<b>12:00 – 1:00</b>	<b>Working Lunch</b>	
1c	1:00 – 2:00	Board evaluation and feedback	Boland
2	2:00 – 3:30	Legal aspects pertaining to formulating/ selecting an alternative	Susan Daniels/ Gavin Murphy
	<b>3:30 – 3:45</b>	<b>Health Break</b>	
3	3:45 – 4:15	International Gauging Stations – protocol for continuation beyond the Study	Yuzyk
4	4:15 – 4:45	Board's perspective on Contextual Narratives	Stakhiv/Yuzyk

5	4:45 – 5:30	Update on PIAG/ Communication Activities	Powers/ Bruce/ Nevin
	<b>5:30</b>	<b>End of Day 1</b>	

**Day 2 – Thursday, Sept. 23, 2010**

<b>Item</b>	<b>Time</b>	<b>Topic</b>	<b>Lead</b>
6	8:30 – 9:30	Semi-annual Progress Report and Presentation to the IJC	Yuzyk/ Stakhiv
7	9:30 – 10:00	Financial Update	Moin/ Eberhardt
	<b>10:00 – 10:15</b>	<b>Health Break</b>	
8	10:15 – 11:00	Sub-Product Peer Reviews	Yuzyk
9	11:00 – 11:30	Schedule of remaining Study activities	Eberhardt/ Moin
10	11:30 – 12:00	Next meeting – Windsor, Ont.: Nov. 29 – Dec. 1	Stakhiv/ Yuzyk
	<b>12:00</b>	<b>End of Day 2</b>	



## Action Items from 16<sup>th</sup> Study Board Meeting – Romulus, Michigan

No.	Description of Action Item:	Action Lead:	Due by:
1	Short paper with questions of the Legal Advisors to be developed.	Bill Werick	Nov. 15
2	Letter regarding designation and funding of gauges beyond the Study to be forwarded to the IJC.	Ted Yuzyk	Oct. 1
3a	<u>Contextual Narratives</u> : Memo to be written and scope of work to be re-sent to the TWGs identifying the need to include an assessment of the trends to 2050.	Gene Stakhiv	Oct. 8
3b	<u>Contextual Narratives</u> : Summary document of the Contextual Narratives to be written for next Study Board meeting.	Bill Werick	Nov. 15
3c	<u>Contextual Narratives</u> : Board to review and comment on each Contextual Narrative Synopsis paper and comments will be provided back to the authors.	Study Board/ Tony Eberhardt	Oct. 15
3d	<u>Contextual Narratives</u> : Six documents to be synthesized into a concise paper than can serve as a draft Chapter 2 of the Final Report.	Tom Shillington with Mark Dunning and CN authors	Dec. 31
4	Dr. Dennis Albert's Inventory of Great Lakes Ecological Species to be sent to the Board.	Tony Eberhardt	Oct. 8
5	Board to provide names of suggested independent peer reviewers to Study Team.	Study Board	Oct. 15
6	Template and timeline of final reporting requirements will be provided to TWGs.	Ted Yuzyk	Oct. 31
7	Tourism Report prepared for the Rec. Boating TWG to be provided to John Nevin.	Syed Moin	Oct. 1
8	Data access policy statement for web site to be developed.	Ted Yuzyk	Oct. 15