

Technical Review Report
Recreational Boating, Tourism and Cruise Ships Technical Working Group (TWG)
Peer Review Submission: Economic Impacts of Water Levels on the Upper Great Lakes
and
MIRACCO, International Upper Great Lakes Study: Recreational Boating Final Report

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Summary

These comments apply to both reports. The primary comment relates to the objective of the studies, and how the studies met stated objectives. The terms of reference are referred to on page 3 but are not included in the reports. However, both reports do state objectives as follows:

- (1) Two performance indicators are (page 4):
 - (a) Number of unusable marina slips resulting from water level fluctuations based on surveys of boat slips in 17 zones around the Great Lakes excluding Lake Ontario.
 - (b) Economic impact of fluctuating water levels on marina operators within the Great Lakes Basin excluding Lake Ontario.
- (2) Assess the vulnerability of the Upper Great Lakes marina industry to fluctuations in water levels one meter up and down from the long term average during the boating season.

Objective (1)(a) has been achieved, but objectives (1)(b) and (2) have not. The surveys provide data for a subset of marinas in the basin, but the methodology and data for the industry does not exist to extrapolate or estimate aggregate economic impacts for all marinas in the basin as a whole.

Statements within both reports confirm this limitation. The disclaimer box on page 12 which introduces the section on economic damages states: “The focus of this section is to identify potential slip loss and economic losses associated with those incapacitated slips, and not to provide a measure of most likely economic impact.” The reference to economic impact likely refers to basin wide economic impact on the marina industry. On page 30, the introduction to the economic damages section states: “These estimates apply only to those marinas that participated in the survey, and thus should not be taken as a complete representation of all commercial marinas on each lake”.

For the results of these studies to have utility for policy making purposes, an estimate of basin wide damages for the marina industry would be necessary. However, without direct access to the terms of reference, it is not possible to confirm this conclusion.

It is not possible to evaluate how the sample could be used to extrapolate results to the industry as a whole. The sample sites, 17 areas of study (AOS) “...were chosen to represent significant regions of the upper Great Lakes recreational boating and tourism industries”. (page 4). Specific criteria included ecological status and susceptibility to fluctuating water levels. To achieve a

basin-wide perspective, the choice of regions should be comprehensive to include all the shoreline.

To achieve a basin-wide perspective, a comprehensive inventory of marinas and facilities would be necessary. The studies recommend this as well. (page 16). Perhaps this was beyond the terms of reference and budget for the study. It is recommended that first steps be taken to create a data base from sources such as the census, industry publications, and business directories such as Hoovers/Dun & Bradstreet. Census publications often cannot provide detailed business data due to confidentiality restrictions but are a reliable source on the size of the industry. Cross referencing with business directories which provide establishment data such as employment and sales, a data base can be developed and means to impute other data such as number of slips could be possible.

With a data base in place, it may be possible for the results of the studies to be placed in a context to be able to undertake additional research to arrive at an industry and basin wide assessment of damages from fluctuating water levels. The challenge will be to cross reference data on the industry with bathymetric conditions by region. Given the size of the basin complete information may never be possible due to time and budget constraints. But at least a count of establishments and secondary information on shoreline conditions could make it possible to simulate damages based upon the results of the studies.

Detailed Comments

The first report should be more specific in outlining important study parameters that are specified in the second report. The most important parameters that need more detailed treatment in the first report are the reference to water levels, which are 2009 levels, and the aggregate basin-wide expression of damages in dollars which are specified as Canadian dollars (with specific reference to exchange rates prevailing in 2009).

Page 6. "...not all marinas were surveyed due to time constraints." Were the marinas actually surveyed representative in some explicit ways of those that were not? This is important to judge the validity of the sample to express total impacts over all marinas in the region.

Page 10, and other pages in the second report. Dredging and dock modifications are capital improvements which have a project life greater than one year. As such, any capital investments should be amortized over their anticipated project life with an appropriate cost of capital. Adding the entire capital cost (rather than amortized cost) to increased operational costs would overestimate the extent of damages. Also increased operational costs may also be reduced in future low water events since structural adjustments may reduce increased operational costs.

Page 118 and pages following. Tables 50 and 51 indicate that the response rates for interviews with operators were very low in reporting damages and adaptations in actual cost terms to hypothetical reductions in water levels. Given the low response rate, the resulting damage estimates for each region may be subject to a large potential sampling error. This error may be offset with the use of historical adaptations cost data provided by the operators. In future follow-

up studies, a better approach would be to retain contractors familiar with marine construction in each area to provide estimates of potential damage.