The Comment Period is now closed. The Great Lakes-St. Lawrence River Adaptive Management Task Team would like to thank all those who have contributed comments on the draft Adaptive Management Plan. We very much appreciate the input received and the Task Team will carefully consider all comments as they work towards a final draft for submission to the International Joint Commission at the end of May.

Record of comments:

Full Name: John Jackson, Great Lakes United

City:Â Kitchener

State / Province:Â Ontario

Subject:Â Comments on Adaptive Management Proposal

We support the development and implementation of an adaptive management framework to prepare us for future extreme water level situations to address climate change impacts.However, we have two major concerns with this proposal.1) It is overwhelmingly focused on monitoring, risk assessment, information management, and outreach and engagement instead of protective and preventive actions. The references to actions seem almost like a sideline instead of the core purpose of the approach. To truly be of value, the adaptive management plan must focus on determining what actions we should start taking now in order to reduce the future impacts of extreme water conditions.

2) It is also critical that we develop a restoration strategy around water levels. We are already seeing serious degradation of the environment because of changes in water levels. The damage to wetlands in Georgian Bay is just one example of this. What actions can we take to restore changes in water levels that have happened as a result of human disruption of the Great Lakes system? For example, what actions can we take to make up for the impacts that dredging of the St. Clair River over the past century has had on water levels and flows in the upper lakes? We should not just accept that we and nature have to live with the consequences of human disruption. Instead, we should pursue restoration to the extent feasible.

In addition, we are alarmed that the IJC has still not provided its recommendations to the governments and the public on what actions should be taken as a result of the work that was carried out by the Upper Great Lakes Study Board over a five-year period. Nine months have passed since the IJC completed its consultations on that work and the IJC has failed to make its recommendations. In the meantime, the water levels continue to fall. Environment Canada predicts that Lake Michigan-Huron could reach record lows this summer. We need the IJCâ€™s recommendations for action now.

Full Name: Philippe Chenard, Policy and Program Manager

City: Chicago

State / Province:Â Illinois

Subject:Â Great Lakes and St. Lawrence Cities Initiative Comments

Upload a File (jpg, png, bmp, pdf, doc):Â IJC-AM-Plan-GLSLCI-Comments-April-15-2013.pdf

Full Name: Dr. Daniel Barletta

City: Greece

State / Province:Â New York

Subject: issues with draft report

1. Found the first error in the AM report. On page 4, it states that only one plan came out of the ISLOSLR study. As you know there were three plans proposed. I am not sure but i sispect the same is true for the IUGLS. The an formulator for the ISLOSLR "environmental plan " happens to be the US chair for this AM plan.2. , the draft states that the advisory group to the task team will only be listed in the final report. This is not does add to transparency of the plan development. Who is part of this group? I can only see the possibility of some bias involving this plan development especially if I turns out that only environmental groups were the advisers!3. Page 3, 1st paragraph. There is a reference that low water leads to encroachment of development in the near-shore. With the regulations in place esp. in New York State this statement by the Task group is in appropriate it only continues the untruth belief that riparian build purposely in the flood plane esp on Lake Ontario. The neighborhood I live in has a history going back at least to 1887.4. Page 19, 1st paragraph there is reference to new orders of approval. if it pertains to AM plan that is okay but at present the current plans do not have any revised orders of approval at least none that has been made public. If this is being contemplated they should be released.5. Page 20, environmental performance indicators. Of the 4 listed 3 have been shown by LORA to be affected by more than water levels. In bird communities, like the Black Tern, there may be migration changes that have affects their abundance on Lake Ontario-St. Lawrence rive. Wetland vegetation is also affected by new invasive species Narrow leaf cattails being replaced by phragmites. Muskrats are affects my the no bag limit on hunting in NYS (over-hunting), The FEPS model has been shown to have inaccurate estmilates on costs housing values and shore protection among others

4. Happened across this abstract: http://www.sciencedirect.com/science/article/pii/S0380133010000559 with this statement "Competing effects of shifting precipitation and warmer temperatures suggest little change in Great Lake levels over much of the century until the end of the century," which seems to be in conflict with the results suggested by the Adaptive Management plan that the IJC is pushing.

The last issue is the costs. We have a State/Country that in bankrupt or at least runs enormous deficits. This process will just create another layer of bureaucracy that people we need to deal with to protection their homes and properties.

Full Name: Brian Smith

City: Buffalo

State / Province: NY

Subject:Â Adaptive Management Plan Comments

AUDUBON NEW YORK * CITIZENS CAMPAIGN FOR THE ENVIRONMENT * SAVE THE RIVERApril 15, 2013International Joint Commission

Adaptive Management Task Team

2000 L Street, NW

Suite #615

Washington, DC 20440RE: Adaptive Management Plan for Addressing Extreme Water LevelsDear Commissioners of the International Joint Commission:Audubon New York, Citizens Campaign for the Environment, and Save the River (the organizations) are writing to express their support for the proposed adaptive management plan for extreme water levels. Collectively, the organizations work to engage their membership and the public on issues impacting the Great Lakes and St. Lawrence River.

The organizations are encouraged by the task teamâ€™s proposal and the IJCâ€™s charge to create the task team. Adaptive management is a central part of addressing our changing climate. The Great Lakes-St. Lawrence River system is a dynamic ecosystem that for too long has been stymied by antiquated water level management. The organizations believe that a Great Lakes-St. Lawrence River ecosystem-wide adaptive management plan is prudent in addressing the overall health and long-term sustainability of the ecosystem.

At the heart of adaptive management is a focus on science and real data that can potentially give the IJC and other decision-makers better information that can positively impact the Great Lakes-St. Lawrence ecosystem. The organizations believe that an adaptive management strategy tied to science and real time data are a central piece of adopting an effective adaptive management strategy, which is essential to comprehensive Great Lakes-St. Lawrence ecosystem management.

The organizations are supportive of the creation of the GLSLR Levels Board and the Adaptive Management Committee as a part of the larger water levels management strategy. The organizations agree that these bodies can and should provide a mechanism to disseminate important information about the health and management of the larger ecosystem. Additionally, the organizations are hopeful that the incorporation of these committees will achieve their intended purpose of providing better real time response to improve the effectiveness of levels regulations plans.

Finally, the organizations, as representatives of New Yorkers, strongly encourage the adoption of Plan Bv7 for Lake Ontario-St. Lawrence River system. The organizations do not believe that the incorporation of an ecosystem-wide adaptive management strategy should be adopted in lieu of the long-awaited levels management plan for Lake Ontario-St. Lawrence River. The organizations believe that an updated plan that fully incorporates the IJCâ€™s objective of a system-wide adaptive management strategy will aid the IJCâ€™s goals and of course be the most beneficial to the health and long-term sustainability of the Lake Ontario-St. Lawrence River system. The organizations applaud the IJC and the Task Team for tackling an important issue, which is changing how we look at the Great Lakes-St. Lawrence River system in light of climate change and the 21st century.

Thank you for the opportunity to comment.

Sincerely,

Sean Mahar, Director of Government Relations and Communications

Audubon NY

Brian Smith, Program & Communications Director

Citizens Campaign for the Environment

Lee Willbanks, Executive Director

Save The River

Full Name: Jim Olson and Liz Kirkwood

City:Â Traverse City

State / Province: MI

Subject:Â FLOW Comment On Draft Adaptive Management Plan for Addressing Extreme Water Levels and Public Trust Principles

Before the International Joint CommissionComment to the International Joint Commission

OnDraft Adaptive Management Plan for Addressing Extreme Water Levels and Public Trust PrinciplesOffice of the International Joint Commission

Ottawa, CanadaAndOffice of the International Joint Commission

Washington, D.C.Submitted by James M. Olson and Elizabeth R. KirkwoodOn Behalf of FLOW (â€œFor Love Of Waterâ€ •)

April 15, 2013

Summary and Purpose

This comment on the International Joint Commissionâ€™s (â€œIJCâ€ •) Adaptive Management Plan for Addressing Extreme Water Levels Draft explains how public trust principlesâ€”long recognized in the Great Lakes and their connecting and tributary watersâ€”embody adaptive and dynamic solutions to address extreme water level changes and related impacts or conditions. Courts in both the United States and Canada have adopted these legal principles of the public trust doctrine, which provide a valuable decision-making tool or method for evaluating and selecting iterative or dynamic solutions to water level changes, impacts, and conditions in the Great Lakes.

Systemic threats and impacts on flows, levels, ecosystem, and private and public use and enjoyment of the Great Lakes boundary waters pose complex and multi-layered challenges for solutions and adaptive responses. The inevitable, although uncertain, influence of climate changeâ€”now and throughout this centuryâ€”increase the magnitude of these challenges manifold. Based on our analysis and evaluation to date, FLOW submits that the sound application of public trust principles by the IJC and the proposed Levels Advisory Board (â€œLABâ€ •) would (1) enhance the application of adaptive management tools for evaluating and addressing extreme water levels and related impacts and conditions, and (2) assure the long-term integrity of both the quality and quantity of these waters, the ecosystem, and public and private uses.

I. Background on Water Levels and Systemic Threats to the Great Lakes

In the last few decades, lower water levels in both the lower Great Lakes and St. Lawrence River (Lake Erie, Lake Ontario, Niagara River, and St. Lawrence River) and the Upper Lakes (Lake Superior, Lake Michigan-Huron, and Lake St. Clair) have led to greater risks, costs, and overall basin-wide impacts. This has exacerbated conflicts between users and adversely affected the integrity of these ecosystems.

The prolonged period of low water levels seen in the lower and upper Great Lakes poses severe threats to wetlands, fish and aquatic habitat, shipping and navigation, boating, recreation, power generation, and private and public riparian shorelines. The effects of climate change on the hydrologic cycle (such as increased air and water temperatures, glacial and Arctic ice melt, ice melt over Greenland, diminished ice cover in the Great Lakes, more frequent dramatic storms or drought, and increased evapotranspiration rates) have resulted in dramatically lower water levels in the Great Lakes. Lower water levels, in turn, result in acute and chronic impacts on the conditions surrounding the water quantity and quality of the Great Lakes.

Extreme water levels reduce shipping, interfere with harbors, rivers, and navigation, and cause adverse impacts to wetlands, aquatic habitat, fish spawning, and all forms of water-dependent recreation, including boating, fishing, and swimming access and beaches. In addition, exposed bottomlands can: (1) impair riparian and public uses and values including loss of shore wetlands and plants and introduction of invasive species, and (2) undermine economic stability of communities dependent on tourism and commerce.

Virtually all of the previously listed uses and water-dependent natural features, such as wetlands and aquatic habitat, are protected uses and water resources under the principles of the public trust doctrine. Moreover, under public trust principles, these uses and water resources enjoy a preferred or higher level of protection than other water uses, such as diversions or consumptive uses that promote non-public trust activities or non-riparian uses applied outside the watershed, or committed to upland activities not related to the use of the surface of one of the Great Lakes.

However, even these enumerated public trust protected uses or interests may be in conflict with each other because of extreme changes in water levels. These enumerated public trust uses may be in conflict within one of the watersheds of the Great Lakes or with other protected public trust uses in the Great Lakes Basin. For example, the 2012 report of the Upper Great Lakes Study Board examined the tension and competing interests between protecting the fishing (sturgeon) habitat and shipping in the St. Clair River and Lake St. Clair and mitigating fishing, navigation, shipping, wetlands and habitat losses in Lake Michigan-Huron.

Since 1986, the IJC has commissioned studies, and developed and recommended plans to address these problems, most notably by the International Levels Study Board Report in 1993.

In 1993, the Study Board issued the 1993 International Levels Study Board Report entitled Survey and Analysis of IJC Water Levels and Plans of the Lower and Upper Great Lakes. The 1993 report called for more data and study on emerging water level issues, which resulted in a number of additional studies on the lower Great Lakes, Lake Michigan-Huron, Lake Ontario, St. Lawrence River, and St. Lawrence power projects. In 1999, the IJC conducted its own â€œAd Hoc Studyâ€• (1999), noting concern for wetlands and increasing invasive species from more frequent drops in water levels, which resulted in reduced fish and waterfowl habitat, reproduction, and reduced contaminant filtration for the lakes.

A. Lower Lakes and St. Lawrence Bv7 Plan

Prompted by increasing concern from users, associated impacts from global warming, and recent extreme water levels, the IJCâ€”through its lower and upper lakes Water Level Boardsâ€”has developed and proposed plans to improve ecosystem protection and certain public trust uses and balanced these uses to minimize threatened harms to other public or riparian uses. For example, in 2006 a Lower Lakes Study proposed a plan for Lake Ontario and the St. Lawrence River. After further study, comment, and evaluation, the Lower Lakes Study proposed the Bv7 Plan, which â€œstrives to return the Ontario-St. Lawrence system to a more natural hydrological regime,â€• while â€œallowing a wide spectrum of interests to sustain minimal negative impacts.â€• The Bv7 Plan offers a balancing of competing interests by: maintaining some benefits for wetlands, fish habitat, reducing the extent of invasive species, and minimizing impacts on hydropower, navigation, riparian landowners, and recreational boaters. However, the outcomes of balancing these competing interests may never be certain, given the complexity of dynamic factors and parameters.

B. Upper Lakes Studies and Plan

In 2005, the Upper Lakes Study for the Review of the Regulation of Outflows from Lake Superior sought answers for improvements to control structures, better knowledge of physical processes, and other regulatory measures. The study looked at several factors that affect water levels, such as inflows, outflows, diversions and consumptive uses, glacial rebounding, subsidence, and conveyance capacity downstream of Lake Michigan-Huron (St. Clair River). In the end, the study called for more data related to these complex hydrological factors, such as over-lake precipitation rates, changes in demography and ecology from climate change, and more advanced computer modeling to test the system under various potential conditions.

In 2012, the Upper Great Lakes Study (â€œUGLSâ€•) Board issued its report, Lake Superior: Addressing Uncertainty in the Upper Great Lakes Water Levels, that aimed to determine (1) the potential effects to water and climate due to climate change, and (2) whether the current Plan 1977-A satisfactorily addressed needs of several areas of interest affected by climate change, including, in the following order: domestic, municipal, and industrial use; navigation; hydropower generation; coastal zones, and recreational boating and tourism. The 2012 study concluded that a â€œmore robustâ€• regulation plan could be implemented that accounted for climate change impacts and continue to provide benefits to the various interests equivalent to Plan 1977-A. However, the study also concluded that it was unlikely Lake Superior could be lowered to help address other water level impacts, such as those in Georgian Bay, through â€œmulti-lakeâ€• approaches (meaning balancing or optimizing interests on Lake Superior, Michigan-Huron, and Lake St. Clair). In other words, the study found that the problems in Lake Michigan-Huron must not be solved or ameliorated by sacrificing similar interests in Lake Superior.

Both the 2012 UGLS Board report and the Lower Lakes Study Boardâ€™s Bv7 Plan evaluated and attempted to address impacts of climate change by maintaining the current levels of Lake Superior and, as nearly as possible, Lake Ontario. Due to long-term low water levels in Lake Michigan-Huron for more than a decade, citizens, communities, and other interests have raised serious concerns over loss of wetlands, boating and tourism, fish habitat and fishing. As these lakes continue to drop in level, these effects will increasingly affect these uses, ecosystems, and communities, calling for new solutions to address falling water levels.

C. Proposed Draft Adaptive Management Plan for the Great Lakes

In 2012 as a response to increasingly extreme water level changes, the Upper Great Lakes Study Board concluded and recommended to the IJC that a more dynamic approach was needed to address record lows in Lake Michigan-Huron and on a wide scale throughout the Great Lakes to look at ways to address impacts from more extreme water levels, both high and low, based on predictions on global warming and climate change. The IJC established the Adaptive Management Task Team in 2012, which developed the draft Adaptive Management Plan for Addressing Extreme Water Levels that is now under review for and circulated for public comment.

The draft Adaptive Management Plan recognizes two ways to address water levels: (1) managing water levels through dams or other structures, and (2) by managing how we respond to the impacts of those water level changes. These control strategies are not immediately responsive and do not offer a more comprehensive approach to governance to address the conditions or impacts. Moreover, the other optionsâ€”addressing impacts through actions like dredging or simply demanding acceptance of these conditions as a â€œnew normalâ€• â€”are often unduly narrow or temporary.

The Task Team has recommended a new governance structure and approach that is supplemental to existing structure and boards through creation of Board of Control Adaptive Management Committee to oversee assessment and evaluation of Regulatory Controls of Water Level from Lake Superior and Lake Ontario. It has also recommended a Levels Advisory Board (â€œLABâ€•) to guide the IJC and stakeholders toward a broader collaborative approach and to support activities beyond traditional or innovative lake level regulation techniques or responses. The LAB would seek to find solutions that are more dynamic, iterative, and manageable in scope, and would provide tools, methods, and standards to evaluate, decide, and implement on-going solutions and adaptation to changing extreme water level conditions or impacts. In doing so, the LAB would seek to achieve the following seven (7) goals:

1. Improve understanding of changes in climate and water levels.

2. Improve understanding of risks associated with changing water levels.

3. Improve forecasting tools for changes in climate and water supply.

4. Provide tools for developing and evaluating alternatives to address water levels.

5. Develop and measure performance indicators to evaluate solutions to water level issues.

6. Ensure critical water level-related information is readily available.

7. Engage stakeholders and affected users and interests on water-related issues.

II. Legal and Policy Framework

The International Joint Commissionâ€”governed by the authority of the Boundary Water Treaty of 1909, the Great Lakes Water Quality Agreement and its own Guiding Principlesâ€”has studied and made decisions or recommendations regarding managing and controlling the flows and levels of the Great Lakes boundary waters throughout its institutional history. In making these important decisions for this

international water basin, the IJC has followed and emphasized its mandate to ensure the integrity of the ecosystem of the Great Lakes. In doing so, it has been guided by mandatory standards in the Treaty, its own Guiding Principles, the Great Lakes Water Quality Agreement and its mandate to protect the integrity of the ecosystem of the Great Lakes.

Moreover, as described below, the courts of both the United States and Canada have common law principles regarding water use and management that includes a recognition of the public trust doctrine, which, under the law of both countries, prohibits alienation or subordination and/or interference or material harm to certain basic public uses that depend on flows, levels, conditions, and quality of navigable waters like the Great Lakes, and their natural resources.

A. Boundary Waters Treaty of 1909

Article III of the Boundary Waters Treaty prohibits new â€œuses, obstructions, or diversions affecting the natural level or flow of boundary watersâ€• on either side of the international boundary except by authority of both Canada and the United States and the approval of the IJC.

Article IV authorizes the IJC to protect boundary waters from â€œpollutionâ€¦ on either side to the injury of the other.â€•

Article VIII vests the IJC with authority to approve obstructions, uses, or diversions that may affect flows and levels. Each country has equal rights in the use of these waters without disturbance of existing uses or diminishment of the â€œamount available for use.â€•

However, IJC decisions must follow an order of preference for the following uses:

â€¢ domestic and sanitary purposes

â€¢ navigation

â€¢ hydroelectric power

â€¢ irrigation

Moreover, this order of preference â€œshall not apply to or disturb any existing uses of boundary waters on either side of the boundary.â€• Additionally, uses or divisions of water are basically treated equal unless subject to one of the above preferences.

Finally, the IJC may implement protective or remedial measures, and may condition such measures on provisions for protection against injury or compensation for injury of â€œany interests on either side of the boundary.â€•

B. IJC Guiding Principles

The IJC has adopted and added a set of Guiding Principles to apply to its decision-making process such that it can anticipate and prevent disputes between the two countries, and assist in the protection of flows, levels, and the environment. To further achieve its dispute resolution role, the IJC has adopted a principle to follow the â€œconcept of sustainable development,â€• an â€œecosystem approachâ€• as required by the Great Lakes Water Quality Agreement, sound science, and the â€œprecautionary principleâ€¦ in the absence of scientific consensus where prudence is essential to protect the public welfare.â€•

C. Public Trust Principles

Public trust principles can be traced from Rome to the present, through both civil law systems, like in France and Spain, to the common law systems of both Canada and the United States. As a result of the Magna Carta of 1215 and the heritage of Roman Justinian codes that deemed water a jus publicum, a limitation was established on the Crownâ€™s broad powers over public waters and natural resources of a special or unique character that served substantial public needs. This limitation, later noted by the courts, came to be known as the public trust doctrine. As a result, generally the waters of the Great Lakes are in the public domain in the name of the Crown in Canada and held or owned by the sovereign state for the benefit and welfare of its citizens in the United States.

In 1892, the United States Supreme Court in Illinois Central Rail Road Co. v. Illinois, ruled that all of the Great Lakes were subject to the public trust doctrine and a navigational servitude in favor of the federal government. Today, the courts in all eight Great Lakes states in the United States and the two Canadian provinces surrounding this water basin have recognized the public trust doctrine either expressly by naming the Great Lakes and the connected or tributary waters subject to a public trust or through application of the publicâ€™s paramount right and use of public or navigable waters. More recently, the Canadian courts have begun to recognize the potential for public trust principles, and several Canadian water law and policy experts have urged the adoption of public trust principles by the courts or the

provincial governments. Canadian national and provincial governments have also begun to explore the incorporation of public trust principles into specific water and natural resource laws. The doctrine has also applied to protect common bodies of water from abuse or private control by the courts of other countries.

The basic public trust principles that apply to navigable waters like the Great Lakes, connecting waters, and tributary waters can be summarized as follows:

1. Public trust waters and protected uses cannot be alienated by government and may never be transferred or controlled for private purposes; that is, a public purpose is required.

2. A proposed diversion or use cannot materially impair the flow, level, integrity, or quality of public trust water, tributary water, or public trust resources or protected public uses.

3. Governments have a duty to account for approval of a diversion or use by making duly recorded findings based on adequate information to assure that there is no unlawful alienation or transfer for private purpose and no material impairment of public trust waters or uses.

4. The substantial value of public trust waters, natural resources, and uses is presumed, and the burden of proof is on those who seek to use or alter the public trust commons or uses.

5. There is no â€œde minimisâ€• harm that is exempt from the public trust doctrine. “Nibbling” or cumulative effects must be accounted for and considered.

6. Government has a continuing duty to determine that there will be no impairment or harm to the flows, levels, quality, and integrity of public trust waters, uses, and ecosystem before it approves or denies a governmental or private action. This duty requires the collection of data and information necessary for long-term planning sufficient to satisfy the solemn and perpetual trust responsibility, and affected interests and citizens as beneficiaries can institute administrative or judicial actions, as a last resort, to enforce public trust duties or apply public trust limitations that protect the integrity of the whole.

7. Government as trustee and affected interests must balance competing uses such that the public trust is not impaired and public trust uses are not subordinated to private uses. Private uses, while lawful if reasonable, or the jus privatum, are correlative but cannot override the jus publicum or public trust in these waters, natural resources, or the public uses dependent on them. Generally, the uses are accommodated provided, however, that the uses of public trust waters and ecosystem are not significantly harmed and the paramount public right to public uses is not subordinated or impaired.

These principles are consistent with and complement the Boundary Waters Treaty, the history of decisions, orders, references, and recommendations of the IJC. Moreover, public trust principles are consistent with the ecosystem goal of the 2012 Great Lakes Water Quality Agreement and Guiding Principles of the IJC. Thus, the remainder of this comment demonstrates how public trust principles would better equip the IJC, its water level study boards, and state, local governments, and other

stakeholders to find practical, workable solutions to extreme water level conditions or impacts without compromising the integrity of quantity and quality of the waters and ecosystem of the Great Lakes Basin.

III. The Application of Public Trust Principles Will Provide Tools and Standards for Evaluation and Decisions to Address and Find Solutions to Great Lakes Extreme Water Level Changes, and Empower the IJC and Stakeholders to Better Participate and Engage on Water Level Issues.

This section demonstrates how the public trust principles as enumerated in Section II.C support the goals of the IJCâ€™s adaptive management plan by (1) empowering or enhancing the engagement of all stakeholders, (2) gathering and sharing improved knowledge and risk information on water level-related data, and finally (3) providing better criteria and standards for evaluating and making decisions in this century about extreme water levelsâ€”both high and lowâ€”in the Great Lakes. Ultimately, the advantage of adopting and applying public trust principles to manage the waters of the Great Lakes is that these principles provide greater flexibility in managing and responding to the impacts of extreme water level changes than traditional dams and other regulated structures alone. In addition, public trust principles would connect climate change issues to water because the long-term impacts of greenhouse gases may be addressed under the purview of its significant effect on water levels, so that climate change issues subsequently fall within the authority, or at least reference provisions, of the Border Waters Treaty and IJC.

A. LAB Goals 1-3 â€“ Understanding the Scientific Data and Modeling

To implement an effective adaptive management plan that responds to extreme water levels, the LAB would dedicate much of its time towards improving the understanding of: the impacts of climate change and water levels (Goal 1), the associated risks with changing water levels (Goal 2), and the tools for forecasting changes in climate and water change (Goal 3). For purposes of this comment only, these important and clearly defined goals are discussed collectively to demonstrate how public trust principles would apply.

Returning to the public trust principles once again, the government has an affirmative duty to â€œaccount for a diversionâ€• (Principle 3) and â€œdetermine that there will be no impairment or harm to the flows, levels, quality, and integrity of public trust watersâ€¦â€• (Principle 6). In order to make these strategic decisions and understand the impacts of extreme water levels, however, the government must gather and share critical information over time and assess the information with state-of-the-art tools. Thus, as part of any decision-making about public trust waters, the government has a duty to citizens as the beneficiaries of the shared water resource to understand and to base its decisions on complex scientific data and information. In other words, these three scientifically rigorous goals of LABâ€™s work are also integral

to applying the public trust and ensuring the protection of both the ecosystem and the protected water uses.

In addition, climate changeâ€"through increased evaporation rates and diminished precipitation ratesâ€"represents the largest water diversion out of the Great Lakes. Climate change, in other words, is dramatically lowering water levels in the basin. Moreover, climate change violates the public trust because it materially impairs the flow, level, integrity, and quality of the Great Lakes as a public trust resource with protected public uses as described under Principle 2. Accordingly, the bi-national governments as trustees of the Great Lakes have a continuing duty to protect the public trust waters and understand the impacts of climate change on water levels through measures such as the ones IJC is proposing in its draft Adaptive Management Plan.

B. LAB Goals 4 and 5 â€“ Evaluating Decision Tools for Addressing Water Level Issues

Drawing on this improved data and understanding about the impacts of climate change on water levels, LAB would provide tools for developing and evaluating options (Goal 4), and develop and measure performance indicators to evaluate solutions for addressing water level issues (Goal 5). To achieve these goals, LAB could readily rely on public trust principles as a basis for developing specific evaluation tools that link to performance indicators and result in equitable solutions for addressing extreme water levels. Public trust principles, by their very nature, offer a dynamic and flexible framework to consider and evaluate that support sustainable environmental, economic, and social needs, both now and under changing future conditions.

Such an approach is crucial given that the effects of climate change on water levels are demanding a sophisticated, complex multi-level management approach to optimize the benefits both common and unique to the lakes and their connecting waters. Moreover, public trust principles, if adopted along with other Guiding Principles followed by the IJC, would provide some outside limits to assure that the process has some direction, as opposed to one that is without some fundamental guidelines regarding water levels. Because protected public trust uses are most often at the core of serious impacts from extreme changes in water levels (except for the erosion of private riparian property related to high water levels), it is intuitive that public trust principles guide decision-making to protect these uses.

Public trust principle 7 on balancing competing uses and ensuring that public trust resources and uses are not impaired rests at the heart of evaluating complex scientific information and the needs of competing water uses in the Great Lakes. For example, in September 2012, FLOW demonstrated the application of this very principle in our comments to the IJC on Water Level Plans for the Great Lakes and Public Trust Principles and expanded discussion of â€œLake-Sideâ€• versus â€œGreat-Lakes-wideâ€• approaches to

water levels in the Upper Great Lakes and Lower Great Lakes Plans. In addition, FLOW analyzed the intra-basin issues in Lake Michigan-Huron and discussed how the IJC could apply the public trust principles to equitably balance the competing interests between the Georgian Bay wetlands and the St. Clair River sturgeon fishery habitat. Related to this balancing issue, FLOW examined the potential impact of proposed structures in the St. Clair River to elevate water levels in the Lake Michigan-Huron.

While the current IJC Regulation Plans and their ability to regulate extreme water levels are constrained by dams and other structures, the adoption of public trust principles in conjunction with existing IJC authority under the Guiding Principles and the Boundary Waters Treaty enables a wider range of options to be considered, including emergency iterative or temporary multi-lake approaches to managing water levels in the Great Lakes. By adopting public trust principles to complement these existing sources of authority, the IJC and the LAB could also consider intra-basin diversions or transfers, including slowing down inflow and outflow rates from one intra-lakes basin to another, as possible options for evaluating water levels issues. It should be noted that in the past, the idea of additional transfers from Lake Superior has been rejected or at the very least discouraged. Public trust principles may well support this historical idea, but at the same time it would encourage consideration of water levels, impacts and conditions on a Basin-Wide evaluation to at least bring into play notions of fairness and equity in the exercise of regulatory controls by the IJC and its boards. In turn, this would encourage greater engagement and participation by a wider group of stakeholders, but without interfering with the IJC's final authority to make decisions affecting levels or related issues of harm or pollution of the water and ecosystem.

C. LAB Goals 6 and 7 â€“ Engaging Stakeholders & Ensuring Available Data For Decision-Making

Essential to LABâ€™s success is engaging stakeholders and ensuring critical water-level related information. According to the IJC, managing extreme water levels in the Great Lakes through traditional dams or other structures alone is proving too difficult given the uncertainty of climate change effects. Public trust principles 6 and 7â€”where governments have a duty to collect data for long-term planning and balancing competing interestsâ€”could greatly aid LAB and the IJC in meeting their goals by engaging stakeholders, gathering and disseminating critical data, and balancing equities to ensure that the paramount public right to public uses is not subordinated or impaired. Moreover, when governments or other interests hesitate sharing information or funding the collection and gathering of data and information necessary to restore and guard against extreme water level impacts and conditions, the public trust informational duty and its related principle of burden of proof (similar to precautionary principle) would call for open sharing and sufficient data and information. In the absence of sharing obtaining critical information, decisions would have to favor a course of action that protected public trust uses, as well as the waters and aquatic resources and habitat on which they depend.

Finding consensus will inherently require compromise; this we know. However, what the public trust principles adds is an important body of existing law that has already established criteria and standards to evaluate competing public trust uses and reach final decisions to protect the shared water resource.

To further elaborate on principle 7, balancing competing interests is important because the public trust authorizes, if not requires, proposed actions by IJC or state governments or stakeholders to honor the integrity of public trust waters and competing public trust uses where decisions are difficult. Difficult decisions could include the need for emergency or temporary solutions such as multi-lake or Great Lakes-wide strategies when necessary, and where some interests collide. The public trust principles maintain that some interests are paramount to other non-public trust uses or interests that are not within the Basin or a watershed. However, in some cases, even where all competing uses are protected by the public trust or are other lawful water uses, or are simply correlative, the public trust demands that these interests are equitably balanced so long as the whole of the ecosystem and waters of the Basin are not seriously harmed or subordinated.

Balancing of otherwise appropriate public uses must (1) not compromise the whole in so far as feasible, and (2) must be viewed in cooperation with other public trust uses, so that each use or interest, or each lake basin, absorbs some of the loss or change from extreme water level, and some of the benefits, basically implementing a â€œparityâ€• or â€œequitable useâ€• principle in these situations. The caveat is that the compromise cannot destroy or impair the long-term integrity of quantity and quality of water itself, per public trust principle 1. This principle, of course, is also consistent with the IJC's charge under the Boundary Waters Treaty and the power vested in it by the 2012 Great Lakes Water Quality Agreement. All stakeholdersâ€"including the IJC, federal agencies in both countries, state governments as trustees, cities, businesses, and citizens as beneficiariesâ€"have a fundamental right to insist that the public trust interests in the waters and their habitats and ecosystem are sustained for present and future generations.

IV. Conclusion

FLOW commends the IJC for recognizing and acting upon the urgent need to respond to the challenges of climate change in a flexible and adaptive manner. The LABâ€™s purpose, to look for and implement transformative, iterative management solutions, is a necessary step towards improving upon the legal boundaries and regulations for governing the economic, social, and environmental outcomes of extreme water level impacts on the Great Lakes. This proposed adaptive management draft plan demonstrates the IJCâ€™s commitment to creating a system of governance in the Great Lakes Basin that can equitably and actively balance competing user interests and preserve the integrity of the hydrological system and its dependent ecosystems in the context of the uncertainty and variability brought on by climate change.

Public trust principles can undoubtedly augment this draft plan as an overarching framework to guide the planning, decision-making, and dissemination processes enumerated throughout this draft plan. The adoption of public trust principles as a working set of criteria, or more appropriately as an addition to the IJCâ€™s â€œGuiding Principles,â€• would greatly serve the IJC and the LAB in addressing the uncertainties associated with climate change and the potential for extreme water levels and their related impacts. Specifically, these principles would:

1. provide an existing legal framework to govern conflicts over protected public trust uses, such as fishing, navigation, swimming, boating, ecological values, within a watershed or throughout the entire Great Lakes basin;

2. promote equity balancing and collaboration among protected public trust uses;

3. offer a temporary or emergency strategy, such as multi-lake regulation, that is limited or prohibited under existing Regulation Plans;

4. augment and strengthen the very intent and purpose of an adaptive management plan, which demands lake level solutions that are sometimes outside the bounds of existing Regulation Plans; and

5. provide additional authority for governments and stakeholders to become more engaged or request other interested persons to become more engaged in the process.

Notably, the collaborative and holistic approach of this draft Adaptive Management Plan reinforces the public trust principles that ultimately exist to preserve the integrity of the Great Lakes for all users, in perpetuity. FLOW encourages the IJC to affirm these public trust principles unequivocally in this draft plan to ensure that each iteration of adaptive management practices throughout the Basin provides just and equitable outcomes for all users of these great waters.

Your consideration of our views are most appreciated.

Respectfully submitted,

James M. Olson, Chair

Elizabeth R. Kirkwood, Executive Director

Upload a File (jpg, png, bmp, pdf, doc):Â 2013-04-15-Adaptive-Mgmt-Comments-FINAL.pdf

Full Name: Bonnie Fox

City:Â Newmarket

State / Province: Ontario

Subject:Â Conservation Ontario’s Comments on Draft AM Plan

Upload a File (jpg, png, bmp, pdf, doc):Â CO_Comments_AM_Plan.pdf

Full Name: Andrew Raddant

City:Â Boston

State / Province: MA

Subject:Â U.S. Department of the Interior comments on the Task Team’s An Adaptive Management Plan for Addressing Extreme Water Levels

Upload a File (jpg, png, bmp, pdf, doc):Â AM_Plan_Comments-DOI.pdf

Full Name: OFAH

City:Â Peterborough

State / Province: Ontario

Subject:Â Adaptive Management Plan – Comments

Upload a File (jpg, png, bmp, pdf, doc):Â OFAH_response_AM.pdf

Full Name: Bob Dunn

City:Â Cedarville Bay

State / Province:Â Michigan

Commercial Shipping created Lake Michigan/Huron's excessive outflow … over-dredging the entry into the St. Clair River (without installing it's authorized & funded Compensation Structures in the upper SC River). Dredge baby dredge is their philosophy.

Michigan's DEQ Submerged Lands Division's job is to protect Michigan State Bottomland for future generations enjoyment.

As our wetlands dry up from unregulated low water, turning into mud-flats full of invasive vegetation, is our state government

fulfilling their job responsibility? Has Governor Snyder even questioned the excessive outflow of Michigan water into Ohio …

giving Ohio10 billion excessive gallons of Michigan Water every day? If this was oil, Rick would look at this problem in a whole

differing light. Commercial shipping created this problem. Do you think shipping will fix the problem, or Michigan protect our

Water? My guess is they will not fix this problem … yet will allow more invasive species to hitch a ride into our waters.

Bob Dunn

Les Cheneaux Islands Waterways Restoration

(Member of: Restore Our Water-International)

Full Name: David Naftzger

City:Â Chicago

State / Province:Â Illinois

Subject:Â Council of Great Lakes Governors comments

Upload a File (jpg, png, bmp, pdf, doc):Â Naftzger-comments-on-draft-AM-plan-4-15-13.pdf

Full Name: Michael Stoll, Les Cheneaux Watershed

City:Â Cedarville

State / Province:Â Michigan

Subject:Â AMP,LAB,Modeling,Economic and Bathymetric data,Action times

I believe in the AMP plan and especially in the Pilot project access.However:

1. There is no room in the Pilot process for Entrepreneurial spirit to develop a pilot project that isn't "sanctioned"

by the LAB. i.e. local community effort that is funded, scientific, purposefull and collaborative, gets "wacked"

because they are not an "approved" Pilot project.2. There is not appeal process anywhere in the AMP, for appeal at any level.!3. While several "models" have been made of water levels, atmospheric status, etc. what makes the

the AMP think it can make an all "encompassing" model for low water / high water predictions?

Especially with just a $1Mil budget…. when NOAA spends billions and uses Cray computers to

"sort-a" get it right!4. The role of economics is completely left out of the AMP. What does a foot of water level change

do to: small communities, States, Provinces, and the national economy. It seems to me that

economic impact drives the decision process….Check out Maslow's hierarchy of needs……5. I am an engineer, a scientist and a PE and the role of scientific facts plays very large in my

decision process for change. I have search the Web far and wide for Scientific facts on the

issues of low water, St. Clair dredging, scouring, level control, etc. and find very little information

of high scientific value.

Sea / Lake technology for highly advanced, 3 D, flow, etc. annalysis exist today and are advancing

VERY rapidly. I see no dramatic thrust for technoly use in the AMP.6. If the IJC, AMP, LAB, and the St. Clair Pilot could see a full 3D model, with Flow, video data, etc the

story would change dramatically about remediation.7. Why did Full Bathymetric studies of the St. Clair get left out of the budget estimates and only mentioned

the "leaving out" as a foot note?? To me "not in the budget = not being done" !!8. The AMP / Pilots must stress Technology and Economics,… political and business school rhetoric come later.9. There does not seem to be a sense of urgency in the AMP. Time lines are missing, "Pert" charts / decision

trees are missing, expected outcomes in $'s are missing, alternate courses of action are missing, etc. As an

MBA grad, I expect a "Business" plan with "time lined" courses of action.10. In the Les Cheneaux Islands, Northern Lake Huron, Cedarville, Michigan there are about 250 out of 800

boat houses / docks that are useless this summer (2013) and will prevent about 150 families from coming

to Cedarville this summer. Say $5,000 per family, not spent in Cedarville, times 150 families = $750,000

not spent in Cedarville this summer ! That equals business closures, un-employment = hard times.

Remember these are ISLANDS, not automobile drive to islands!11. See attached pictures…. my boat house is the inside boat bow Pix… with about 4″ of water ! A 1950

Chris Craft “high and dry” for the summer. !!

Upload a File (jpg, png, bmp, pdf, doc):Â Calvin-and-Hobbs-E-meeting.jpg

Full Name: Dennis McGrath

City:Â Lansing

State / Province:Â Michigan

Subject:Â Adaptive Management Plan

Thank you for the opportunity to review and comment on the draft â€œBuilding Collaboration Across the Great Lakes â€“ St. Lawrence River System: An Adaptive Management Plan for Addressing Extreme Water Levelsâ€• , and the recommendations presented by this report.The Nature Conservancy (TNC) applauds the International Joint Commission for proposing a whole system, climate change resilience strategy for the Great Lakes. We support your basin-wide approach because it emphasizes governmental and stakeholder collaboration, is science-driven, outcome-based, and advocates for an adaptive management strategy for water level regulation and sustainable shorelines. For over two decades, TNC has applied adaptive management principles to our conservation work. We strongly support the need for flexibility to address dynamic conditions, particularly the occasional extreme water levels that are difficult to predict with confidence.We also support the recognition of a wider suite of interests in lake levels, particularly the inclusion of ecosystems, tourism, and recreational boating in these discussions. Such a broadening of perspective lays a solid foundation for balancing uses and implementing water level management approaches that mimic more natural flows and fluctuations.Balancing various interests begins with acknowledgement and understanding of the interactions among these highly-related interests. Functional ecological systems provide services that facilitate attainment of the other interests; for example, healthy coastal habitats can play a role in reducing coastal hazards such as erosion and flooding, in turn helping to protect people and property. This type of assessment parallels efforts of TNC and others. The Conservancy is currently involved in a multi-objective planning effort in Western Lake Erie to document and pursue both ecological and sociocultural goals. Projects such as Western Lake Erie are indicative of our interest in participating in pilot projects, such as those discussed in the draft document, to test and refine an adaptive approach to living with our shorelines.We particularly applaud the Commissionâ€™s approach to resilient shorelines that relies on more than engineered solutions, and views nature as a partner rather than an adversary. We must recognize the critical role of natural variation in water levels in shaping and maintaining a Great Lakes shoreline. Similar to tides on the ocean shore, the natural ebb and flow of water levels in a Great Lake builds beaches and maintains healthy, diverse

wetlands.For this reason, we urge the Commission to proceed with the implementation of new water level regulation plans for Lake Ontario-St. Lawrence and for Lake Superior, in parallel with the important approach to adaptive management outlined in the draft document. While the document notes that regulation cannot prevent extreme water levels and the unsatisfactory outcomes to property and infrastructure, it must be noted that regulation can have demonstrable, beneficial impacts on ecosystem functions with benefits to everyone.

Sincerely,

Dennis McGrath

Great Lakes Project Director

Full Name: Roger Gauthier

City:Â Cheboygan

State / Province:Â Michigan

Subject:Â Draft Great Lakes Regional Adaptive Management Plan

The following comments are provided in my capacity as the Chair of Restore Our Water International (ROWI). ROWI was recently formed as an umbrella group of stakeholder organizations to advocate for restoration of a natural water level range across the Great Lakes. Our specific immediate emphasis is to push governments to restore natural conveyance conditions in the St. Clair River that have caused unnecessary economic and environmental losses during the current 14-year long low water crisis on Lakes Michigan and Huron.Understanding the impacts of climate change involves very complex science, especially when one attempts to use global climate change models with coarse resolution to determine impacts on a regional scale for the Great Lakes. At best the impacts are gross estimates, but we know that loss of ice cover and the resulting increase in evaporation rates are highly significant for Lakes Michigan and Huron. We agree that adaptive management planning would be useful for reacting to the impacts of climate change.At no time, however, should adaptive management be used as a surrogate for the restoration of the natural water level ranges on Lakes Michigan and Huron that have been lowered by water loss caused by increased conveyance capacity in the St. Clair River. That conveyance increase has been a significant factor over the last fourteen years of crisis low water levels on these lakes.The U.S. and Canadian governments must now, confronted by climate change impacts, develop the ability to retain water in all the Great Lakes. Currently Lakes Michigan and Huron are suffering from the double blow of climate change and uncompensated anthropogenic changes to the conveyance of the St. Clair River. Local adaptive management is the antithesis of a bi-national federal solution to this ongoing loss of water from these two important lakes. We believe that one coordinated Great Lakes water quantity management board is needed as called for in the AMP. This board, however, must first have a mandate to responsibly restore natural water level fluctuations on Lakes Michigan and Huron for the short- and long-term benefit of all the Great Lakes. The existing two Control Boards should be folded into this new basin-wide Board.

ROWI believes, however, that more governance is not needed, nor do we believe that existing agency budgets need to be increased to effectively manage these resources. Any additional funding must be directed toward fixing St. Clair River increased conveyance.ROWI supports the principles and intent of the proposed AMP considering the prospective severity of climate change impacts to the Great Lakes region at large. Any plan developed, however, needs to first address implementing flexible outflow control structures in the St. Clair River to restore an equitable water level balance upstream and downstream. When such ecological justice is restored to Lakes Michigan and Huron, the water levels of all the Great Lakes can be managed responsibly in the best interests of all their inhabitants, the ecosystem and commercial operations.ROWI would like to provide the following specific comments related to the information provided during your recent webinars:1. There is no compelling argument to create new governance for Great Lakes water quantity management. There are now too many Great Lakes governance entities in place dealing with these issues. The public is at a loss to understand the overlapping jurisdictions and responsibilities. Currently there is no oversight of the outflow for Lakes Michigan and Huron, but there are two Control Boards for the other Great Lakes that monitor and measure outflows on an hourly basis for Lakes Superior and Ontario. It is clear that all the lakes deserve careful oversight and monitoring. One coordinated water quantity management board is all that is needed.2. The pilot project concept, as presented, lacks sufficient specificity and detail on their locations, objectives and anticipated results. For these reasons, it is difficult to justify expenditure of limited funds for these activities.3. The Shared Vision Modeling as currently developed had little utility in the conduct of the International Upper Lakes Study. The concept behind this type of methodology is valid but the requisite economic and economic data and simulation/forecasting models are sorely lacking in detail and coverage to use this tool effectively for any meaningful analysis. Hence, funding for this particular effort cannot be justified at this time.Thank you for the opportunity to provide comments on this important proposed endeavor. Respectfully, Roger Gauthier, Chair, Restore Our Water International, Inc.

Full Name: Manitoulin Area Stewardship Council

City:Â Manitoulin Island

State / Province: Ontario

Subject:Â Comment on Draft Report

Comments on the

Draft Adaptive Management Plan,

Building Collaboration Across the Great Lakesâ€”St. Lawrence River System.

April 7, 2013The Manitoulin Area Stewardship Council (MASC) appreciates this opportunity to comment on the Draft Adaptive Management Plan, Building Collaboration Across the Great Lakesâ€”St. Lawrence River System.MASCâ€™s mission is: â€œto educate, promote, and support community-based stewardship of natural resources in the Manitoulin Area, and to provide community based guidance for

the good management, enhancement, and utilization of healthy, sustainable, aquatic and terrestrial ecosystems.â€• MASC works closely with Island communities, First Nations, and other organizations such as Manitoulin Streams, the Ontario Federation of Anglers and Hunters (OFAH) and local fish and game clubs. To some extent it serves as the ecological and environmental voice of Manitoulin and the surrounding area.Manitoulin Island is the largest freshwater island in the world, and as islanders we know with absolute certainty that our lives, our fortunes, and our sacred places are utterly dependent on the surrounding sweet-water sea. But while Manitoulin is in certain respects unique, it is representative, and our concerns are shared by many others: along the North Channel, in the Cheneaux Islands, the Straights, Traverse Bay, the Bays De Noc, Washington Island, Green Bay, Georgian Bay, and around much of the shoreline of Michigan/Huron.For all of us the current water level situation is dire, and the future looks terrifying. We look to the International Joint Commission for help in preventing what is threatening to be an environmental and economic catastrophe.ï •¶

Initial observations:â€¢ The water level situation in Lake Michigan/Huron (M/H) is unnatural. While all the lakes are low at present, M/H is almost two feet lower than the others. Dredging and resulting erosion in the St. Clair River have lowered the level of M/H by approximately two feet.â€¢ Climate change is changing the Great Lakesâ€"warmer water, less ice cover, greater evaporation, flashier precipitation, etc. While the Draft Adaptive Management Plan says that â€œwe should not be too presumptuous about our ability to predict the effects of climate change,â€• there seems to be little support in the scientific community for the idea that the Great Lakes basin will experience wetter, colder conditions leading to increased supply and retention. Net basin supply has been trending downward since 1999. The IUGLS report suggests an 85% likelihood of increased dryness and continuing water decline.â€¢ A return to historically high levels is unlikely. While impossible to prove, there seems to have been a climactic shift or tipping point right around the turn of the century when the level of M/H fell below the long-term average. The normal rebound has not occurred, a record low has been reached, and continued decline looks likely in spite of a relatively cold and wet winter. Furthermore, extremely high levels, should they ever recur, are, though painful and expensive, less costly and less damaging overall than record low levels. It is also easier to develop adaptive management plans and, over time, to implement adaptations, when dealing with high water. For the IJC to ignore the present crisis because of a remote and less damaging threat is not fair or reasonable.â€¢ The IJCâ€™s Water Levels Fact Sheet of March, 2013 states that, â€œWater level extremes can be addressed in two waysâ€"either by managing water levels through dams or other structures, or by managing how we respond to the impacts of those water level changes.â€• The implication here is that with adaptive management, regulatory structures might not be necessary. While â€œadaptive management is not the same as adaptation,â€• adaptation is a significant component of adaptive management, and adaptation can be construed as a reactive strategy rather than a proactive one.ï •¶Comments specific to the Draft Adaptive Management PlanMASC finds much in the plan that is sensible, and promising. We see great potential benefit in system-wide monitoring and modelling, information management, collaboration, and outreach. We do, however, have concern with several statements or provisions. And we wish to recommend several modifications or adjustments.â€¢ The statement is made that â€œthe IUGLS Board recognized that the solution for damage reduction [due to extreme low water in M/H] lies with further water level and flow management through constructing new structures in the system and/or better management of the costal zoneâ€¦â€• We fail to see how the word â€œorâ€• can be included in this statement. In other words, we maintain that there is no equivalence between managing levels and flows through regulatory structures, and, for example, beach or

wetland â€œpilot projects.â€ • â€¢ The statement is made that â€œan adaptive management process might be used to trigger future study or implementation decisions for new structures. Nevertheless, exploratory institutional and technical analyses during the IUGLS indicate that new structures and required construction processes are costly, can be controversial, and may take years or even decades to complete.â€ • If an adaptive management process facilitates implementation decisions, then the process would seem promising. If it means only â€œbetter costal and floodplain management,â€ • then it is, in our opinion, a distraction from and evasion of the real problem.There is no real reason that regulatory structures would take decades to complete. The IJC already has authority to order compensation for past St. Clair River dredging. An adaptive management process of pilot projects and iterative research would in all likelihood lengthen the time between the current crisis and relief.The assertion that new structures and construction processes are costly begs the question, â€œcompared to what?â€ • The State of Michigan recently allocated $21 million for dredging in select harbors around the state. This is a temporary and ecologically questionable solution and it represents only a fraction of the dredging that will be needed around the M/H basin. Already the costs associated with extreme low water are accumulatingâ€”besides dredging: reduced cargoes, declines in tourism, declines in recreational and commercial fishing, falling property values, and the like. Many billions of dollars are at stake.It is cheaper to fix the problem at its source rather than to try to adapt at thousands of locations around the M/H basin. Canadian and American governments would split the cost of remediation, making it not only affordable but miniscule compared to the cost of doing nothing.â€¢ The Manitoulin Area Stewardship Council believes that the LOSLR plan and approach has great merit. It applies the principles of adaptive management to an important body of water, and it strives to regulate it in the most natural way possible.

While water levels in the lake and river are primarily determined by natural factors such as precipitation and runoff, the regulation of water levels and flows has provided great benefits to those who live, work and recreate in the Lake Ontario St. Lawrence River (LOSLR) basin.

The proposed new and more balanced approach to flow management seeks to create more natural water levels in the lake and river while continuing to provide the basin community with substantial benefits. At the same time, some groups and communities would see some changes to the benefits they receive under the current plan.

Plan Bv7 attempts to more closely follow natural patterns of water levels and flows than the current regulation plan. Compared to the current plan, it allows more variability in water levels from year to year on Lake Ontario and the upper St. Lawrence River in order to improve the health and diversity of coastal wetlands. Compared to the natural state, it substantially reduces the frequency and duration of extreme water levels throughout the Lake Ontario-St. Lawrence River system to nearly the same degree as the current plan.

Of course, regulation here is possible because of the existence of a regulatory structure. MASC believes LOSLR should be a model for an approach to the entire Great Lakes basin.

â€¢ The Manitoulin Area Stewardship Council requests that, as part of its information gathering efforts, the Adaptive Management process include investigation of the impact of such factors as hydraulic fracturing, high capacity wells, and water mining within the Great Lakes basin. We further request that water conservation strategies and programs from small to large scale be included in the investigation.

We know that climate change may alter the Great Lakes beyond recognitionâ€”may for all intents and purposes destroy them, and that we have to adapt to whatever eventuality. However, we also believe that since the problems facing the Lakes are anthropogenic, they are by and large repairable. We believe that the best science and the best engineering must be applied with the utmost integrity across the Great Lakes basin. We see the Adaptive Management Plan as an important component of that effort. That effort, however, must begin with or lead quickly to restoration of M/H to something like its natural state. We believe there must be control structures established at both St Clair and Niagara (joining those already in existence at Superior and the St. Lawrence) and that a Michigan/Huron Board should be established to join the Superior, St. Lawrence, and Niagara Boards.

Respectfully,

Manitoulin Area Stewardship Council

The Manitoulin Area Stewardship Council is a member organization of Ontario Stewardship

www.manitoulinsteward.org

Full Name: Melissa Menerey

City:Â Columbus

State / Province: Ohio

Subject:Â General Comments on the Adaptive Management Plan

-The extreme water levels should be monitored and I think the general adaptive management approach is a step to achieve that end. Currently, the plan seems vague on how monitoring and implementation will be achieved.-I would like to see more evidence of stakeholder buy in. I think some of the Risk Assessment concerns would dovetail nicely with some of the research that is being undertaken by the

Greta Lakes Coastal Flood Study.-Inclusion of some efforts that are currently being undertaken by NGO, Universities, Government Agencies, First Nations, etc. would make the case that stakeholders are already concerned and taking action and show that the Adaptive management Plan is a good forum to bring those studies together.- A little more detail pertaining to the pilot studies would be appreciated. How will the communities be notified about the opportunity to undertake these pilot studies? Will there be any funding available to help facilitate these pilot studies?-My main concern with the proposed Adaptive Management Plan is funding and how the coordinating agencies would provide staff and funding to support this great undertaking.-If at all possible an extended comment time would be appreciated.

Full Name: Michael Fleszar

City:Â Sandy Creek

State / Province:Â New York

Subject:Â AMP

We would need models of the AMP plan over the last 10 years to properly evaluate the results of the plan. Since 1958DD, we have averaged 2 inches higher level on Lake Ontario than the period from 1918 to 1960. We have also had increased high levels after 1958 DD. Will this plan further increase levels? Plan 1958DD passed legislation allowing man to control the levels of Lake Ontario with the primary purpose of protecting shoreline properties, that has not occurred.

Full Name: Victoria Harbour

State / Province: Ontario

Subject:Â AMP

I am a waterfront home owner on Georgian Bay . The AMP speaks of monitoring systems. I have been monitoring Sturgeon Bay that is part of Georgian Bay for close to 2o years right from my front window . Since the over-dredging on the St.Clair River began and the ensuing drought that began that year and continued until 2004 the water has never come back. What was once 6 ft. of water at my dock is now 2 ft. of water that is 600 yds away on a good day.To get to that water you have to walk through 8 ft. high phragmites plants that have destroyed our wetlands. I have read the report and I am thoroughly disappointed that it barely touched on the fact the Lake Michigan , which is experiencing low water levels that affect 8 states and the Mississippi basin and Lake Huron and Georgian Bay who is also experiencing low water levels that are impacting on our environments and our entire way of life.

Both of these lakes are un- regulated and yet the report chose to focus on the regulated Great Lakes who are not in great peril.

While the St. Clair dredging plan was in place and the work had already began the U.S. Army Core of Engineers stated that sills must be put in place in order to directly or indirectly control the water flow. Environment Canada did not feel it was necessary to implement this costly plan and debated with the U.S.A.C.of E. for ten years until the plan fell by the wayside. This debate cost millions of dollars and somewhat had the outcome of this costly report . Nothing was done then and we are paying for the consequences . How much more must we pay to get our wetlands and all that it implies to get our environment back. When will we get our tourist and boating industry back .Georgian Bay and the Mississippi basin are already experiencing commerce shipping problems that in turn is affecting agriculture shipping .Dredging may be the short term answer to some of these problems but not in the long run.

These low water level that are affecting Michigan ,Huron and Georgian Bay is perilous to our very way of life and commerce .You are concerned with environmental concerns should these sills be installed? Too late we are already experiencing that catastrophe and more .All I have to do is look out my front door. Where was the board looking from?

How much more money is the next round of studies and adaptive mangament cost. Can you guarantee and good outcome like the

Sirrea Club international, that is partnering with the U.S. army core of engineers, is guaranteeing ? Doing nothing is unacceptable .

Doing nothing will put the U.S, states and Ontario into a recession that will spread across both countries . Go ask these states and province if they think this is possible and you will see that they are people just like me who are not going to subject ourselves to another management plan while we lose everything we have.

Full Name: MarLynn Ohlfs

City:Â Green Bay

State / Province:Â Wisconsin

Subject:Â Water levels

I will support anyone who will not just “address” the Great Lakes water levels, but will do something about it! Reading the information, I wonder what “future extreme water levels” and “state-of-the-art tools” are. My suggestion would be that someone in this newly formed group visit Green Bay, take the time to walk outside to view the Fox River/Green Bay and associated harbors, shipping docks and new islands appearing each day with their own “state-of-the-art tools” (eyes). You will see the extreme water levels are NOW, TODAY, and the only thing we will see in the “future” is mud and dead fish and the future is dangerously close at hand.

My understanding is that it is not climate change that is causing this but primarily a dredging mistake in the St. Clair River and a problem with a channel/river in Illinois. Was it the goal of those events to take the largest fresh water lakes in the world from the Great Lakes to a Great Lake? Will our grandchildren only be able to see pictures of what once was due to neglect, bad decisions and interminable studies where correction seems to be a fleeting thought? Good Lord, what does it take for the powers that be to take responsibility?

Full Name: Robert A. Dunn

City:Â Cedarville

State / Province: MI

Subject:Â Do-Nothing ???

The IJC Upper Great Lakes Study Cost = $17,000,000 ….. to recommend “DO NOTHING and ADAPT” ???? Do something constructive.

Put COMPENSATING STRUCTURES IN BOTH THE ST. CLAIR RIVER AS WELL AS THE NIAGARA RIVER … to curtail and control

the excess outflow of our water (without downstream impact). We have lost 21″ of our Lake M/H water thus far, and continue to convey an excess outflow of 10 billion gallons each day, from man-made dredging. Scientists knew dredging for commercial shipping would increase

the outflow.

It is time to correct this man-made problem, as well as the ballast water/invasive species problems. Commercial shipping brought us Zebra Mussels, Eurasian WaterMilfoil, Eurasian Cattails, and Phragmites. As we speak, what flavor do you suppose the Ocean Salties are bringing

into our lake waters this year?

Respectfully,

Robert A. Dunn

Les Cheneaux Islands Waterways Restoration

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Full Name: Gerald VandeVusse

City:Â Cedarville

State / Province: MI

Subject:Â Adaptive Management Strategy

It's ridiculous that you would adapt a "Do Nothing" approach when there is a solution to correcting the excessive water loss down the St Clair River. This problem was caused by over-dredging, and now we are now losing over ONE BILLION gallons in excess of the normal flow each and every day. The USACE has a solution, and it needs to be implemented. Those of us who live on Lakes Huron and Michigan are sick of seeing our water and property values go down the river to Lakes St Clair and Erie.

Full Name: Marianna "Yana" DeMyer

City: Lena

State / Province:Â Wisconsin

Subject:Â Recipe for NON ACTION – where is the URGENCY

The document I just tried to read is almost impossible to get through – - and I am a pretty patient reader. Yes, yes, I know this is "a complex this issue is with so many governmental groups involved". I have direct experience as a citizen group member of multiple DNR/IJC projects, over 9 years, so I know! But to study and assess and coordinate at the level this document attempts to address is a recipe for complete inability to take action, and swiftly, which is what is needed here.When you want to stop a bath tub from emptying, you close the main drain. We need to cut through all this hyperbole and head this thing upstairs to more powerful political leaders, with gonads, to quit assessing and studying things, and take action. 1)Find out what the top three main drains are, 2) Do something about it. Everyone values, enjoys and or works on the waters of our beautiful lakes – boaters, fishermen and women, shipping companies, tourists -not to mention all the wetlands and habitat for our fish and wildlife.3) How about we ask the question "who would be opposed to doing something about this quickly?" I don't think you'd get much opposition. We hear about bazilllions being spent every day on things that don't touch our immediate lives. I say we'd all agree to quit funding other things by 1% and find the money to fix the problem.So my comment, is that this plan attempts to do too much, with too many agencies. If you go this route it will take 5 years before anything actually gets done and by then many folks will just be plain out of business. Simplify, simplify, simplify! If this thing were put to a public vote it would get passed tomorrow.

Full Name: Douglas Wells

City:Â Cedarville

State / Province:Â Michigan

Subject:Â Long-term lake levels

In the 48 years I've been alive the lake levels have fluctuated widely, the previous low being my birth year of 1964. Certainly a range of levels can be expected from precipitation, in-flow and out-flow from connecting bodies of water. Unfortunately the situation of our dire low levels seems to be clearly attributable to the out-flows through the St. Clair River more than anything else though the drought of the past few years has not helped. The fact that it is mostly a man-made phenomenon engenders both anger but also the hope that if we created it we can also repair it but action must happen NOW!! We can't wait around another 10 years until we've lost so much water we can never recover to historical average levels.Clearly there is momentum now to make a decision but the right decision in my view and most others is to lower the out-flow from the St. Clair River and repair the damage of over-dredging. This isn't just an issue of summer residents wanting to use their boats, it's an economic issue of small towns dying on the vine from lack of summer business which is often 80-90% of their yearly income.Please do the right thing and do it NOW!Thank youDouglas Wells

Full Name: Rick Kofler

City:Â Green Bay

State / Province:Â Wisconsin

Subject:Â Great lakes water levels

The low water levels on the Great Lakes is causing a major loss in shipping, tourism / boating revenues, billions is the number that has been quoted! There are launch ramps that are unusable due to the low waters, millions being spent on extra dredging. Tourists locations are closing down because of lack of boating access to docks! The list goes on and on! It is time something gets done, not waste years discussing the issue! If the hole in the St Croix river is part of the problem, the. It needs to be repaired!Thank you,

Rick

Full Name: Robb & Carrie Collins

City: Green Bay

State / Province:Â Wisconsin

Subject:Â Compensating Structures

This is a very simple issue. The St. Clair river was dredged, and outflows increased. Though there are natural fluctuations, the outflows from Lake Huron are at increased levels. Man should have never messed with Mother Nature, but now that we have, compensating structures should be installed to bring outflows back to pre-dredge levels.Failure to act will destroy the economy of Michgan & Wisconsin, which relies so much on tourism, and the health of our lakes! We just copyed what Jason Dunn from cedarville Mi. posted this is how we feel.

Full Name: Paul F. Haffner

City:Â Cincinnati

State / Province: Ohio

Subject:Â Adaptive Management Plan – lake Huron water levels

I have vacationed in the Les Cheneaux Islands, MI for 44 wonderful summers. I've seen water over the dock and dealt with dock extensions as well. But the last 15 years has been a constant battle against low-water. As the owner of a classic, 1929 Hackercraft runabout with an inboard engine, my Dad fretted over whether he would have enough water in the boathouse every winter since approximately 1996. We elected not to put the boat in a couple of those summers and I made the same decision last year. As of October 2012, we literally had nothing but sand in our boathouse. This situation has never existed before – not even in the extremely low waters of the early 1960′s (before my time) or 2000′s. I am already convinced there will be no opportunity to put the boat in this summer. This is an extremely disappointing fact of life for me. I give this as a simple example of the individual impact of the much broader problem. I am one of many "islanders" across the UP and elsewhere in Canada and US that is staring down the stark truth that we could very well be "high and dry" in a few short years. The impact on the good citizens and communities in Michigan dependent on tourism/vacationers and fishing is obviously dramatic and you've heard from those interests I know.

Water is flowing out of Lake Huron/Michigan at an alarming rate and no winter snow/ice will ever be enough to compensate. I have accepted dock extensions as a way of life — it used to be a once every 25-30 year occurrence. What I cannot accept is a boatwell full of sand. Please take some action to restore our water to at least a working level. Thanks, Paul F. Haffner

Full Name: Harald Simon

City:Â Mindemoya

State / Province: Ontario

Subject:Â IJC Adaptive Management Plan (AMP)

This draft AMP is prolonging direct physical action that has to be taken now – namely the other option open for consideration by the IJC being “managing water levels through dams or other structures. More meetings and gathering of information with the AMP side steps many the current issues as the possible loss of the Tobermory to South Baymouth ferry service due to low water levels at the South Baymouth entrance or spending a huge sum to further blast and deepen the channel for which the funding source is uncertain. Another local Manitoulin Island in industry employing many people, the Lafarge quarry at the west end is only able to load ships at lower capacities due to their not being able to access other Lake Huron Michigan terminals suffering low water levels, thereby jeopardizing these two large segment of the local economy. Some serious decisions for concrete action must be taken now. Please consider these elements when the IJC makes further recommendations. Thanks for your kind attension to my concerns and looking forward to your timely response.

Full Name:Â Heinrich Naumann

City:Â Waubaushene

State / Province: Ontario

Please change the 30 day review period to 90 days, this is a large document, and we would need more time to review.

Full Name:Â Caroline Kerr

City:Â Thousand Island Park

State / Province:Â New York

Subject:Â Adaptive Management Plan

I am a part time resident of Thousand Island Park, a long time supporter of Save the River and otherwise an interested citizen. The draft Adaptive Management Plan is a great attempt to provide a vehicle to respond to changing water levels in an increasingly effective manner. The collection of ongoing data to provide feedback for the various strategies that can be shared system wide should improve efficacy in a way not currently possible. This will require working across the many traditional boundaries that divide us. Two nations, various states and 2 provinces as well as a sprawling collection of agencies, offices, NGOs and private enterprises will all need to work together to deal with issues of this magnitude. The model of developing consensus, sharing control and creatively solving problems offers many opportunities to save money by sharing information, staff and tools as well as providing a forum to pull communities together to deal with these complex problems.I was impressed with the emphasis on natural ecosystem needs and the identification of particular indicator species. I am certainly not qualified to judge

the appropriateness of these indicators. I do wonder if the same species will best serve this purpose in such a sprawling and diverse system or if they should be tailored to the different lakes and rivers involved. In the portion of the plan addressing ecosystem issues there was reference to managing invasives, which is clearly best done by preventing them in the first place. In my experience, the role of recreational boating has not been taken seriously enough in this area. A great deal of attention has been paid to commercial boat traffic and their role, but not to the critters carried on poorly washed boats, trailers and motors that move from one waterway to another. The current fight against Hydrilla in the Cayuga Lake inlet (NY State) is a great example of the threat posed by recreational boaters.My major concern is that the lack of political will to put money into community needs in the United States will prevent necessary funds from being provided to launch this initiative. This past summerâ€™s closure of parts of the Mississippi to commercial traffic, MAY provide sufficient motivation. We do not seem inclined to spend money on any community needs at this point in our history. While this plan appears to make good use of existing resources, it will clearly need some additional funds.A second concern is the lack of any reference to industrial water withdrawals. At this point that may not be an issue, however a couple of beverage plants or a gas field using hydrofracking could significantly impact the recharge rate of the system. Such withdrawals may not come from any of the Great Lakes, connecting waterways or the St. Lawrence but from feeder waterways. The work being done by the Susquehanna River Commission (US) to monitor water withdrawals to maintain the health of the Susquehanna River and Chesapeake Bay is a great model of what can be done to manage withdrawals system wide.In the Pilot Webinar, the presenters clearly expected most pilots to be area responses to ongoing stubborn environmental impacts that communities have been unable to remediate. Some parts of the Great Lakes-St. Lawrence water system have been spared the worst impacts to date. This offers a wonderful opportunity for preventative educational pilots that help residents understand the likely impacts that may be suffered in the future and then make and implement plans to mitigate these impacts and maybe even avoid the worst impacts. Restoring wetlands, avoiding development in lowlands, modifying how docks and other water structures are made, etc. are all among the strategies that could be identified by a community as useful in avoiding problems. Minimizing the role of recreational boaters in spreading invasives and preventing same is another great example of an issue well suited to an educational approach. While invasives will not cause or prevent extreme water events, maintaining the environmental health of the waterway will help it absorb the assaults of such events with minimal harm. Such educational pilots would certainly be far cheaper to implement than a later intervention.Finally, I hope that this new organizational system will collect and share a diverse library of materials. Some of them would likely be quite technical and of use primarily by organizations involved in this work. Others could be intended for public education and yet others as templates for implementation. Public education documents might be good articles about boating and invasives, the limitations on what dam water flow management can do to mitigate extreme water events, brochures on topics such as flood insurance, dock design for changing water levels, etc.. Templates for implementation might include zoning ordinances regarding lowland development, tax incentives for wetland restoration and so on.I hope that this initiative moves quickly forward. There is not a lot of time to spare in effectively dealing with these problems. I certainly agree that it would be â€œsweetâ€• if the Canadian and US governments gave this work official approval of some kind. The MoveOn.org petition system might be considered for use in developing American public support for such an initiative. Congratulations on work well done!

Full Name:Â Rex L. LaMore

City:Â Lansing

State / Province:Â MI

Subject:Â The plan lacks any commitment to prevention

The plan lacks any commitment to preventing extreme water level fluctuations. The plan should at a minimum seek to prevent water level fluctuations once causes have been identified.

Full Name:Â Barb Hodgins

City:Â Town of Ajax

State / Province:Â Ontario

Subject:Â Draft AMP for Addressing Extreme Water Levels

Good day,The Town of Ajax is a Great Lakes coastal community situated on the north shore of Lake Ontario. Previously, staff comments were submitted about Plan Bv7 and its implications to increased flooding and erosion along the Town's waterfront. We received the draft AMP for review via the Great Lakes and St. Lawrence Cities Initiative in mid-March; otherwise, we would have been unaware of this initiative.As an initial comment, I would suggest that the comment period be extended formally at least until the end of May – to allow for proper review and preparation of comments from the public, municipal Councils and other interested parties.Based on the 30-day period and our present work plan, Town staff did not have sufficient time to prepare a staff report. However, please be aware that a staff report is now being prepared for consideration by Committee and Council before the end of May. Anticipating that the staff report will be endorsed, Council's resolution and the report would be submitted to the IJC and its Task Team before the end of May.We sincerely trust that no decisions will be made about the AMP without first receiving and considering Ajax Council's recommendation and staff comments.Thank you. Please contact me if you have any questions.Barb Hodgins, MCIP, RPP

Senior Policy Planner

905-619-2529 x 3247

barb.hodgins@ajax.ca

Full Name:Â Jeb Head

City:Â Hessel

State / Province:Â Michigan

Subject:Â Low water

I believe that the studies on this issue are conclusive. The over-dredging and subsequent erosion in the St. Claire River in the 1960′s has created a man-made out-flow dynamic that is the main cause of the drop in water level. While the level will fluctuate, the long term drop will be catastrophic both economically and ecologically. The water will continue to drop leaving coastline properties inoperable. Michigan suffers from high unemployment and a weak economy. It is in the top 10% of states in terms of population decline. The Great Lake coastline is Michigan's most precious natural asset and the location of it's most valuable property. Tourism is a pillar of the Michigan economy. In 10 years, the inaction and denial and wait-and-see politics will be seen as historic in its negative consequences. Deliberate and comprhensive action is urgent.

Full Name: Jason Dunn

City:Â Cedarville

State / Province:Â MI

Subject:Â Compensating Structures

This is a very simple issue. The St. Clair river was dredged, and outflows increased. Though there are natural fluctuations, the outflows from Lake Huron are at increased levels. Man should have never messed with Mother Nature, but now that we have, compensating structures should be installed to bring outflows back to pre-dredge levels.Failure to act will destroy the economy of Michigan, which relies so much on tourism, and the health of our lakes!

Full Name:Â Douglas Heuck

City:Â Pittsburgh

State / Province:Â Pa

Subject:Â Lake Huron water levels

For 51 straight summers, I have travelled to Michiganâ€™s Upper Peninsula to sail, fish, swim and enjoy the beautiful waters of the Les Cheneaux Islands. There have been high water years, when we built catwalks above our docks, and low water years when our docks towered above the boats tied to them.Now, however, we face something weâ€™ve never seen â€“ shockingly low water that leaves us unable to reach those docks at all. Increasingly large sections of area are simply drying up, and we fear for the future of communities like ours across Lake Huron, Lake Michigan and Georgian Bay.It used to be that the scientifically inclined among us would explain that the water levels followed general cycles. But whatever patterns existed for the 10,000 years since glaciers created the Great Lakes began to change in 1910 when the U.S. Army Corps. of Engineers began dredging a deeper commercial shipping channel at Port Huron. The Corps. dredged again in 1933, deepening the channel to 22 feet, and in 1962 the Corps. dredged a third time, cutting through the natural sand and gravel bar at the sound end of Lake Huron that acted as a natural barrier restricting outflow from the lake.The 1962 dredging deepened the channel flowing out of Lake Huron and into the St. Clair River to 27 feet. Unfortunately, however, it also set off a disastrous process that has essentially pulled the plug on Lake Huron and Lake Michigan. The dredging disturbed the bottom so much that the passage has eroded beyond anyoneâ€™s expectations. It is now up to 70 feet deep, and estimates indicate that an extra 10 billion gallons of fresh water leak from Lake Huron every day.These unintended effects have resulted in a broad array of crises and irreversible damage across the â€œmiddleâ€• Great Lakes, which are more than 30 inches below historic averages and deteriorating rapidly. Since July alone, water levels in the Les Cheneaux Islands have dropped 18 inches to the lowest levels ever recorded.Taken together, Lake Michigan and Lake Huron represent the largest recreational asset in the Midwest, and perhaps in America. While there is no figure on the dollar amount that Lake Michigan and Lake Huron tourism brings to the federal government and to the four states â€“ Wisconsin, Illinois, Indiana and Michigan â€“ that surround the two lakes, it is difficult to overestimate the economic importance of the lakes to the region and the nation.In this short space, itâ€™s impossible to describe the aggregate impact of this building environmental and economic disaster on the 15 million people who live in the cities and communities along the 5,467 miles of Lake Michigan and Lake Huron shoreline. However, we can get a glimpse by looking at the tiny community I visit each summer. Home to about 2,200 year-round residents, population roughly triples in the summer, as visitors come from across the nation to enjoy the 36 islands and the protected bays and channels. The waters and islands of Les Cheneaux provide the economic foundation for the little towns of Cedarville and Hessel in Clark Township, Michigan.That foundation, however, is crumbling. Historically low water and the resulting unprecedented penetration of sunlight have led to a proliferation of invasive weeds. The combination is choking the areaâ€™s bays and channels and threatening all water-related recreation. Island residents can no longer reach their docks; cruising boats must bypass the islands; and vast areas of our bays and channels can no longer be navigated for any purpose.If current conditions persist and trends continue, an inexorable logic of economic collapse will accelerate: Property values will plummet; tax bases will evaporate; jobs will disappear; and high percentages of local residents and summer residents

alike will leave the area.Lake levels are overseen by The International Joint Commission; its Upper Great Lakes Study Board has recommended â€œdoing nothing.â€ • The IJC Commissioners have yet to decide whether to accept this recommendation, but large numbers of citizens spoke at their summer hearings, imploring the Commissioners to â€œRestore Our Water.â€ • The thousands of people organizing across the nation and in Canada believe that that the costs of the â€œdo nothingâ€ • approach prove that it is untenable. Those costs are already in the billions of dollars, as ships carry loads that are 25 percent less. Marinas, harbors and communities across the lakes face huge dredging costs. And the likelihood is great that financial institutions will simply cease to lend for dredging — a strategy that has no successful end in sight.The Corps of Engineers recognized the inherent dangers of its dredging and in the early 1960s designed a series of sills (compensating structures) that could reduce the flow of water from the lakes. The 1970s, however, brought a period of cold winters with heavy snow and increased lake ice. Lake levels rose and before the erosion began, the project to construct the sills was abandoned. Those compensating sills were part of a bi-national agreement and a condition of the 1962 dredging; and that agreement has not been withdrawn â€“ only the funding for the sills.When lake levels began to dramatically drop in the late 1990s, the Georgian Bay Association in Ontario, began an extensive study of the cause. Their work has continued, unabated and as a result many other groups have joined the effort. These groups commissioned two extensive and well-respected engineering studies, which confirm that the dredging and subsequent erosion has caused the levels of Lakes Huron and Michigan to drop significantly. The studies further conclude that building compensating structures, such as the sills, would gradually increase water levels in Lakes Huron and Michigan by at least 10 inches with minimal and temporary downstream impact of two-three inches. Another major benefit of this would be stabilization of the St. Clair Riverbed.In the past eight months, new reports about the shrinking lakes are appearing with increasing regularity, as recognition of this environmental and economic crisis spreads.

The Canadian groups — now along with rapidly growing numbers of Americans â€“ are presenting information to the International Joint Commission and the Army Corps of Engineers in an effort to persuade them of the wisdom in re-authorizing sill construction. The Canadian groups also are enlisting the support of their Federal and Provincial Governments. We need to do the same with Congress and our State governments.Whether you live on or visit the Great Lakes, whether you have a business that depends on the lakes, or whether you are simply aware of the increasing value of fresh water to our nation, I encourage you to become part of the growing effort to preserve one of our planetâ€™s most unique and precious resources â€“ the Great Lakes.

Full Name:Â Robert A. Dunn

City:Â Cedarville

State / Province:Â MI

Subject:Â ”RESTORATION is a part of ADAPTIVE MANAGEMENT”

Over-dredging of Lake Huron to satisfy commercial shipping created “accelerated conveyance” of Lake Michigan/Huron water downstream.River & Harbor Act of 1930 – The 1930 U.S. authorization. (River

and Harbor Act of July 3. 1930), for dredging a 25-foot deep channel provided for the construction of a series of submerged weirs and other measures to compensate for the lowering effect of the channel deepening.River & Harbor Act of 1956 – Congress authorized and funded. (U.S. Senate Document. 71, 84th Congress, First Session: PL 434, March 21. 1956. and PL641 July 2. 1956 'Civil Functions Appropriations Acti"), a 27 foot project throughout the system (Detroit River Lake St. Clair, St. Clair River and St. Marys River). The Act also called for constructing compensating works to assure that the lakes would not be adversely affected !!USACE and IJC admit to a loss of Lake Michigan/Huron water of 21 inches, from dredging without compensation, and subsequent river bottom erosion. Current accelerated conveyance of Michigan water downstream is approximately 10-Billion Excess Gallons Every Day.

If this was oil, you can be damn sure 10 billion gallons would not be given away every day.UGLS acknowledged feasibility of restoring the natural flows within the lower Great Lakes."It is time to return water levels to a historic healthy range, and stop giving our water away".Sincerely yours,Robert A. Dunn, Co-chair

Les Cheneaux Islands Waterways Restoration

361 Meridian Street

Cedarville, MI 49719

906/484-3394

Full Name:Â Tod Wright

City:Â Oliphant

State / Province:Â Ontario

Subject:Â Adaptive Management Plan

Having live on the shore of Lake Huron for 64 years I have experienced both the highs and lows of water levels. I have always felt that, up until recently, far and away the majority of change in lake water levels was attributable to long term normal fluctuations in evaporation and precipitation.I can recall the fear mongering in the summer and fall of 1986 when forecasts called for considerably higher levels (than the already record highs) in the future. Today it is hard to balance those comments with Lake Huron down almost 2 metres in the short span of 27 years.I have no issue with measuring and monitoring. However I believe that we are now beyond that stage. I do not feel that we should have permanent solutions (locks and or dams) to absolute levels as this can lead to degradation of wetlands without the normal water level fluctuations allowing historic draw down and recharge cycles. We have seen this on Lake Ontario where such historic wetlands as Cootes Paradise on the western end of Lake Ontario or the Second Marsh at Oshawa lost their integrity without normal water level fluctuation.It is difficult to quantify the water level changes over the past two decades that might be attributable to climate change. Yes increased winter evaporation due to open waters throughout the winter is surely one major cause of lower levels.However

in my opinion some steps must be taken to slow or turn the decline in lakes Michigan and Huron. Time for action, not monitoring and measuring. I am afraid that this adaptive management plan may get bogged down in questions rather than proactively taking solutions.Tod Wright

Lake Huron shore line owner

Full Name:Â Rob Evans

City:Â Amberley Beach on the shores of Lake Huron

State / Province:Â Ontario, Canada

Subject:Â Impact of US Army Corp of Engineers work enlarging the throat of water leaving Lake Huron

What concrete measures are being adopted to redress the man-induced lower water-level damage caused by the above-cited actions?

Full Name;Â Larry J. Robson, M.D.

City:Â Saugatuck

State / Province: Michigan

Subject:Â Draft Adaptive Management Plan

The Great Lakes Coalition is an alliance of several thousand lakeshore property owners

who are concerned that, when the next cycle of high lake levels occurs, it will once again

result in flooding, damages, and beach and bluff erosion with the threat of our homes

falling over the bluff.The Coalition strongly supports the draft Adaptive Management Plan as the best way to

prepare for extreme levelsâ€”both highs and lows. A continuing process for monitoring,

modeling, analysis, and collaboration offers the best approach to understanding level fluctuations and anticipating responses to them. It would certainly be premature to rush into a project such as controlling the St. Clair River flow when you have identified thirty-three critical tasks in sections B1.1 through B2.6 that would provide valuable information for the assessment of ideas like that.However, we would respectfully offer several suggestions for the AM plan. We believe that Lakes Michigan/Huron are just as important as Lake Superior. In fact, the level of Lakes Michigan/Huron is controlledâ€"albeit indirectly, because whatever is done to control Lake Superior does in fact affect the level of Lakes Michigan/Huron. Therefore, we suggest that assessments of the ecosystem, the socio-economic interests, and the regulation plans in sections A1 through A3 give equal consideration to impacts on Lakes Michigan/Huron as they do to Lakes Superior and Ontario. Shorelines are more densely populated along Lakes Michigan/Huron than along Lake Superior.We also hope the final plan provides an opportunity for public input, especially during the assessment process. We like the idea of a Great Lakes-St. Lawrence River Levels Advisory Board (LAB) and hope that there will be permanent representatives on it from the various interest groups. The Coalition would appreciate having one of our directors appointed to it.Finally, the Coalition volunteers to help identify suitable sites for a Pilot program on the Lake Michigan shoreline when the next cycle of high water provides the opportunity for meaningful data collection and evaluation.Sincerely yours,

Larry J. Robson, M.D.

President

Michigan/Lake Michigan Chapter

Great Lakes Coalition

P.O. Box 429

Saugatuck, MI 49453

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Letter-to-IJC-Adaptive-Management-4.1.13.pdf

Full Name:Â Ric Curtis

City:Â Pier Cove, Fennville

State / Province: Michigan

Subject:Â Adaptive Management Plan

Thank you for the opportunity to comment.I am blessed to be in my sixth decade living on Lake Michigan's east shoreline, Michigan's west coast. I personally remember lake-level record lows set in 1964: As well, high water levels set 22 years later in 1986. Low in 1964 to high in 1986, 22 years later; low again in 2012, now, 26 years later. Lower levels hurt shipping and boating interests, etc. Higher levels hurt homeowners and other structural features, etc. Every few years… Its always something isn't it?Not just homeowners but all motivated stakeholders communicated with the IJC throughout last summer in completing the IJC's 'Upper Great Lakes' long-term study. The message I received, from the study and the public hearings, was to: Not seek huge amounts of government funding in an attempt to decide whose interests should be served by implementing broad-based water-level projects, of questionable effectiveness, in attempts at controlling the huge natural processes.The study was thorough. Academically, politically and scientifically it was quite rigorous. The study of water levels in the Great Lakes watershed, commissioned by the IJC, clearly recommended local, adaptive management measures (i.e. dredge or sea-wall only when and where needed, etc.) as the most sensible, affordable and practical approach toward serving the several and separate interests affected by the Great Lakes water-levels. A wise study.The current draft, 'Building Collaboration Across the Great Lakes â€" St. Lawrence River System', is 100% on target and on task with the study findings and the public commentary to the findings to which I am aware. To anticipate, locally, both high and low lake-level extremes over time and to locally manage the impacts of flooding, overspilling, undercutting or conversely grounding, habitat loss, etc. IS the proper approach throughout the Great Lakes Watershed. Efforts to gather and share critical information over time toward developing, creating, and improving adaptation-strategies best serves the Watershed in total. Current low-levels require vigilant oversight of potential encroachment of development in the near-shore areas.As the massive complexities of the natural systems affecting the watershed are reduced into the simplicity of repetitively run and conveniently revised computer models, caution should be paramount toward distinguishing causation from correlation. Stakeholders' (including the model builders, not to mention homeowners) emotions quickly run to results affirming personal predispositions with potential political implications – particularly funding. Pilot adaptive management projects working to practice, experience, and improve lateral and horizontal communications to assure two-way effective sustainable understanding of needs, interests and effects are a clear strength of the AM Plan.In closing I strongly endorse the call for governments to provide a formal standing reference for addressing on-going water level related issues through adaptive management (from the closing paragraph of the Draft).Again, thank you for the opportunity to comment.

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Comments-regarding-Adaptive-Management-Plan1.pdf

Full Name:Â Jonathan W. Bulkley

City:Â Ann Arbor

State / Province:Â Michigan

Subject:Â Independent and Objective Peer Review and documentation Computer Models

There appear to be a large number of computer models to be utilized in the AM effort. Based upon the unfortunate experience* with the shared vision model (SVM) in the UGLAB effort, I urge that ANY computer model to be utilized by the AM Team be subject to an Independent and objective Peer Review PRIOR to the model being utilized by the AM Team. In addition, I urge that sufficient documentation of ANY computer model to be utilized by the AM team have sufficient documentation available PRIOR to its use to explain its obectives, its logic, and its limitations together with examples that enable the reader to have a clear understanding of the inpiuts required and the results obtained from the operation of the model utilizing the inputs to the model.

Full Name:Â Tim Carroll

City: Fulton

State / Province: NY

Subject:Â Extend comment period for adaptive management plan

As you are aware, the issue of proposed lake level regulation was of concern to many individuals and interest groups here in Oswego County. By virtue of its location along the southeast shore of Lake Ontario, with many extensive sand dunes, coastal wetlands, bays, bluffs, a busy commercial harbor in Oswego, and 740 highly valued lakeshore property parcels, Oswego County will likely experience the most significant impacts of this plan. The public meetings regarding plan Bv7 were well attended in this area, and many divergent concerns and views were strongly expressed.The Oswego County Environmental Management Council feels this comment period on the draft Adaptive Management Plan is far too short for us to give adequate consideration to the implications of the plan.As an appointed advisory board to County and local elected representatives on environmental matters, it is our duty to carefully consider the environmental and economic costs and benefits of the draft plan. Given the very complex nature of the adaptive management plan, we need to solicit as much input as possible from local representatives. The 30 day comment period is clearly insufficient for us to meet our mandate.We therefore request that the comment period be extended to a minimum of 90 days so that we can give the

draft thorough consideration and provide the IJC with useful feedback.Thank you very much.Sincerely,Tim Carroll

Chair, Oswego County Environmental Management Council

46 East Bridge Street

Oswego, NY 13126

Full Name:Â Chris Tertinek

City:Â Sodus Point

State / Province:Â NY

Subject:Â AMP & Bv7

I am the Mayor of the Village of Sodus Point. It is a low lying community on the south shore of Lake Ontario. Will the AMP have any impact on the Bv7 plan the IJC is threatening us with? The issue is that when the existing level plan (58DD – attempted level control range of 4.0 feet) is overlaid the water levels of the past 100 years, flooding occurs every 20 years. When the Bv7 plan (flow based with no level limits) is overlaid it is projected to flood every 6 2/3 years. We need something that the AMP or some other plan/program will give us.Thank you.

Full Name:Â Dalton Foster

City:Â Massena

State / Province:Â NY

Subject:Â Comment on Draft Task Team Report

IGLSLR-Task-Team-Report.doc