



July 9, 2010

## **Great Lakes Water Quality Agreement (GLWQA or Agreement) Revisions**

### **Comments Regarding Considerations Identified by Canada and U.S. Negotiators Pertaining to Amended Agreement Language**

#### **Governance**

The Great Lakes Water Quality Agreement (GLWQA or Agreement) has served as a guiding document for water quality management within the Great Lakes Basin for several decades. Since the most recent (1987) revision, environmental management programs that pertain to the Great Lakes within both Canada and the U.S. have matured substantially. The Parties to the Agreement (the governments of Canada and the United States) have worked together to achieve much progress during this time period. As a result, though needs remain, the nature of these needs have changed. Any revised GLWQA that the Parties view as necessary to address the water quality needs of the Great Lakes Basin should be based on the following Principles, Governing Concepts, and Tools:

- The GLWQA should be structured entirely as a visionary document and not include or attempt to set specific targets or limits regarding any attributes or parameters.
- A primary role of the GLWQA should be the binational coordination of Great Lakes programs between the Parties as well as their governing partners, the Great Lakes states and provinces.
- The Agreement must recognize the sovereignty of each of the Parties (the federal governments) as well as that of the states/provinces.
- Many concerns regarding water quality in the Great Lakes are also national or global issues. Agreement provisions must recognize and be consistent with national and international approaches to these issues. In particular the Agreement should not include non-defined or vague language such as “virtual elimination” or “zero discharge”. To the extent that the Parties see the need to describe reduction objectives in revised GLWQA language, more commonly used word such as that used in the Stockholm Convention regarding persistent toxic substances should be used. (i.e., the Parties will pursue “*the goal of their continuing minimization and, where feasible, ultimate elimination*” [of persistent, bioaccumulating, toxic substances])

- The GLWQA should establish a stakeholder based management agenda for the Great Lakes, making provisions for the organized participation of the many stakeholders who rely on and have interests in Great Lakes water resources.
- The Agreement must be multi-stressor based with priorities established on the basis of which stressors drive impacts on Great Lakes water quality. The GLWQA should not be centered on any one particular stressor or area of interest, but provide a framework that empowers and enables the Parties to evaluate the roles of various stressors and develop prioritized and coordinated means for addressing them.
- The GLWQA should specify that management action decision making exercised by the Parties is to be risk based and that science must guide actions. Coordinated assessments of water quality by the Parties, similar to those made through the SOLEC (State of the Lakes Ecosystem Conference) process, should continue and be ordered by the Agreement.
- The Agreement should establish that Great Lakes science must be vetted, coordinated, and include participation of qualified stakeholders.
- Progress, both that accomplished in the past and what will come in the future, must be acknowledged by the Parties.
- In recognition of the sovereignty of the Parties, the role of the International Joint Commission (IJC) must be one of observance with a charge to provide comments and recommendations to the Parties regarding pursuit of Agreement goals and objectives.

Thank you for the opportunity to provide these comments. Answers to the specific questions which the governments have asked for stakeholder responses follow.

### **1. Participation in Binational Management Process**

With regard to the structure and role of the Binational Executive Committee (BEC) CGLI recommends the following:

- For improved coordination in pursuit of Agreement goals and objectives, as well as enhanced accountability, the GLWQA should clearly establish the BEC as the Agreement operational body.
- BEC membership should consist of senior officials of the U.S. and Canadian Federal, governments. Formal advisory committees should be established to enable participate by the State and Provincial agency leadership that have jurisdiction over Great Lakes resources.
- Additional stakeholders including municipal governments, tribes, environmental NGOs, industry, and others should be invited to participate in additional advisory panels also established under the Agreement. The panels should be tasked to provide information and comments regarding Great Lakes programs, issues, and management actions for consideration by BEC members.

- The scope of BEC coordination activities should include setting priorities for recommended science pursuits and management actions by the jurisdictions. The GLWQA should specify that the relative importance of multiple stressors, from an ecosystem health perspective, must guide the BEC priority setting process.

With regard to the role of the International Joint Commission (IJC) it is important to recognize that the Parties have established significant water quality legislation and programs since the original GLWQA was signed. Consequently the nature of the need for third party monitoring of the progress under the GLWQA has evolved from monitoring the status of the Great Lakes to one of identifying gaps in governance and coordination between the Parties. Therefore, the CGLI recommends:

- That the IJC Windsor Office be charged with monitoring the effectiveness of the BEC and other coordinating mechanisms utilized for obtaining GLWQA goals and objectives – including LaMPs, the Binational Toxics Strategy, etc. and recommending efficiency and effectiveness improvements to the Parties.

## **2. Principles, Governing Concepts, and Tools applicable to Implementing the GLWQA**

CGLI provides the following comments regarding the principles, governing concepts, and tools proposed by the governments of Canada and the United States:

1. Accountability – CGLI urges the governments to pursue accountability with the citizens through open and transparent stakeholder processes that provide participation in establishing goals, opportunity for comments, and the assessment of progress. Stakeholder engagement and cooperative participation, modeled after that which has been successfully utilized in the Great Lakes Binational Toxics Strategy, is recommended for all aspects of Agreement implementation.
2. Adaptive Management – Corrective actions based on science-based evaluation of ecosystem status and outcomes should be a part of every Great Lakes management action. In addition to policies and practices, adaptive management actions should apply to priorities as well. The focus of management actions must always be directed towards the more prominent ecosystem impact factors. Pursuit of an adaptive management policy must carry with it a commitment to support that practice with a strong science-based surveillance and monitoring program.
3. Binational Cooperation – The Agreement should establish that its primary function is to establish the mandate that all sectors in both Canada and the United States have opportunities to participate in the development of Great Lakes management actions. Agreement language should establish that an important aspect of this binational partnership is the coordination of programs and activities directed toward addressing Agreement goals and objectives.

4. Collaboration, Cooperation and Engagement – The GLWQA should acknowledge the importance of Regional stakeholder engagement in all aspects of Great Lakes management activities. Specific provisions for establishing stakeholder participation should be a part of each GLWQA section, article, and annex.
5. Cumulative Impacts – The GLWQA should establish that a multi-stressor assessment approach should be used to identify the relative importance of factors that impact the Great Lakes.
6. Ecosystem Approach – The Agreement should be ecosystem focused and address factors that impact the physical, biological, and chemical integrity of the Great Lakes. The scope should not be limited to, or favor, one or a few stressors over others. All stressors should be considered to establish management priorities and needs.
7. Pollution Prevention – Pollution prevention is an important concept and pursuit, but must be coupled with the understanding and assessment of risk elements in order to establish management action priorities.
8. Prevention (protection from degradation) – Resource managers should apply multi-stressor and risk prioritization principles to decisions regarding prevention and restoration.
9. Restoration – Resource managers should apply multi-stressor and risk prioritization principles to decisions regarding prevention and restoration.
10. Science-Based Management – The Agreement should provide for multi-stakeholder participation in design, application, and interpretation of science used to assess and guide ecosystem management, protection, and restoration.
11. Sustainability – The GLWQA should become a roadmap to sustainability for the Great Lakes Basin and include elements that support all three of the pillars of sustainability – economic, social, and environmental health and well-being.
12. Transparency – Utilizing a stakeholder based GLWQA model will ensure transparency.

### **3. Review of the GLWQA**

Regarding a review cycle for the GLWQA, CGLI observes that:

- The six-year review cycle meshes well with the triennial science review schedule recently established by the Parties for the Great Lakes assessment process.
- The Parties should be given the flexibility to determine the needed or appropriate scope of review at each cycle.

### **4. Lakewide Management Plans**

Lakewide Management Plans (LaMPs) should continue to be used to apply GLWQA goals and objectives to specific areas within each of the Great Lakes. To accommodate this, the Agreement should:

- Specify that LaMP organizations such as Forums and other implementing groups be multi-stakeholder based.
- Establish that lakewide management efforts are to be scientifically supported multi-stressor based actions, addressing physical, biological, and chemical integrity needs on a prioritized basis.
- Provide for development of goals, objectives, and status targets that are specific for each Lake and management areas within each Lake using a multi-stakeholder approach.

## **5. Areas of Concern**

AOC restoration should continue and include the following:

- Retain the beneficial use restoration approach.
- Utilize risk-based principles when setting and evaluating beneficial use and ecosystem restoration endpoints.
- Streamline reporting and enhance utilization of initiatives and incentives provided by the Parties such as Great Lakes Legacy Act provisions.
- Establish “Areas in Recovery” as an appropriate designation for areas where remedial actions have been completed or established as areas of natural recovery. This would significantly aid the reporting of progress on restoration of Areas of Concern (AOCs) and Beneficial Use Impairments (BUIs).

## **6. Addressing the Nearshore Zone**

The GLWQA should address nearshore zone issues in the following ways:

- A specific definition of the “nearshore zone” should be provided. In doing so, the jurisdictional sovereignty of the States, Provinces, and Federal governments should be noted and recognized.
- Since the GLWQA was last revised, substantial progress has been made in the clean-up of contaminated sediments and the restoration of critical habitats. While Agreement-based AOC and RAP processes have had a role in the oversight processes under which these actions have proceeded, most of this work – if not all - has been (and should continue to be) done under the provisions of contemporary State, Provincial, or Federal laws and regulations. The Agreement must recognize and not duplicate or compete with these laws and regulations. GLWQA provisions regarding the “nearshore zone” should defer to the State, Provincial, and Federal regimes for management of restoration activities.
- A primary benefit that could be served by “nearshore zone” provisions within the Agreement would be a monitoring and reporting element that would aid progress tracking.

### **Nutrients**

#### **1a. and 1b. Targets**

Since the current version of the GLWQA was written, there have been major changes in laws and regulations in both Canada and the U.S. that address nutrients and other contaminants. In Canada, the Canada Wide Standards process and Provincial regulatory frameworks establish standards for these contaminants that are specifically designed to be protective on a place-based basis. In the U.S., the Clean Water Act mandates that states identify impaired waters through their “303 d” lists and institute Total Maximum Daily Load (TMDL) provisions that address the impairments. These processes in both Canada and the U.S. include extensive stakeholder participation opportunities. In recognition of these now existing programs in both countries, the GLWQA should not set specific targets for particular nutrients or other specific contaminants. Instead, the Agreement should:

- Establish narrative objectives regarding water quality – including those that relate to algal blooms and other water quality attributes.
- Provide for expert panels, including stakeholders who should be seated as panel members, charged to work with scientists and managers to establish local goals, objectives, and targets concerning nutrients. Separate panels should be established for each particular Great Lake area in which specific or individual management provisions are needed to meet GLWQA objectives.
- In pursuit of a sustainability agenda, the Agreement should specify that socio-economic factors be part of the basis for management decisions made by the expert panels.
- It must be recognized that wastewater treatment processes require a precise nutrient balance in order to function properly. It will be necessary to evaluate options beyond limitations on treated effluent discharges to address some load management needs.

## **2. Action**

The Agreement should:

- Establish a bi-national nutrient task force that coordinates planning, expert panel activities (including the establishment of place based targets), and reporting of status and progress.
- Targets should not be a part of the Agreement, but established, and modified periodically as needed via expert panels in areas of need.

## **Toxic Substances**

### **1. Principles of Toxic Chemical Management**

Since the current version of the GLWQA was written, there have been major changes in laws and regulations in both Canada and the U.S. that address toxic substances and other contaminants. In Canada, the Canada Wide Standards process and Provincial regulatory frameworks establish standards for these contaminants that are specifically designed to be protective on a place-based basis. In the U.S., the Clean Water Act mandates implementation of specific toxic substance criteria setting (the so-called GLI criteria), “reasonable potential”

determination procedures (to establish whether or not the special Great Lakes Initiative (GLI) criteria will be protected), and GLI specific Total Maximum Daily Load (TMDL) procedures. These processes in both Canada and the U.S. include extensive stakeholder participation opportunities. In recognition of these now existing programs in both countries, the GLWQA should not set specific targets for toxics substances or other contaminants.

The “virtual elimination” and “zero discharge” concepts are vague and controversial. While they have served a function of getting us to talk about and act on the need to address toxics issues in the Basin, these terms have outlived their usefulness.

- Attempts to define these terms have demonstrated how difficult it is to interpret or make practical use of them. The time spent trying to understand them and agree on their meaning could be better used for addressing real needs.
- Though the terms have been defined in Canadian standards, they are not defined in U.S. law. Any subsequent definition of these terms by either government is likely to be inconsistent with the other Party.
- But, importantly, much has changed regarding awareness and management of persistent toxic substances since the GLWQA was last revised. Global initiatives, as well as those being pursued by the Parties, appropriately focus priority attention on persistent, bioaccumulative, and toxic (PBT) substances and are addressing them. A newly revised GLWQA should recognize and be consistent with these programs principally the Stockholm Convention. GLWQA text regarding “virtual elimination” and “zero discharge” should be replaced with the Stockholm Convention language regarding persistent organic pollutants (POPs). i.e., the Parties will pursue “*the goal of their continuing minimization and, where feasible, ultimate elimination*” (of substances) designate in paragraph 1.A. of Annex 1 of the Agreement. The key principle of toxic chemical management under the amended Agreement should be reducing the risks posed by PBT substances in the environment. These must be viewed proportional to the risk a characterized by scientifically-sound population-level risk assessments based on the weight of evidence where the selected risk reduction approach:
  - Is based on the best available scientific, economic, and other technical information,
  - Is feasible, with benefits reasonably related to costs,
  - Allows for voluntary and other non-regulatory risk management options,
  - Provides for public participation,
  - Takes into account political, social, legal, and cultural considerations, and
  - Can be evaluated upon implementation to demonstrate effectiveness.

- Any revisions to the list of toxic chemicals subject to the Agreement should be limited to those that are persistent (as defined in paragraph 1(b) of Annex D of the Stockholm Convention) **and** bioaccumulative (as defined in paragraph 1(c) of Annex D of the Stockholm Convention), **and** toxic.
- Similarly the terms “precautionary principle,” “precautionary approach,” or similar wording should not become part of GLWQA language. Though Canadian law may provide a definition of “precautionary principle,” U.S. law does not and interpretations vary, are subject to speculation and debate, and therefore cannot serve a useful purpose. Precaution is already built into the systems in use by the Parties through the application of uncertainty factors in the development of water quality criteria and in other environmental protection standard setting processes.

## **2. Water Quality Objectives**

The GLWQA should be drafted as an overarching document that avoids specific objectives or target reductions that can become outdated. To the extent that specificity is required, such provisions should:

- Be consistent with National policies regarding toxics
- Recognize that the Parties are sovereign governments and defer to the powers and authorities of each of the Parties
- Provide a structure for the Parties to coordinate individual and cooperative activities related to specific issues of importance to the Great Lakes ecosystem
- Include stakeholder involvement opportunities

## **3. Toxic Substances Management**

The Great Lakes Region, largely because of the existing Agreement, currently has in place excellent coordination provisions and structures. A revised GLWQA should continue to commit the Parties to maintain formal coordination avenues and specify that toxic management provisions/processes must include full stakeholder involvement. While the Agreement should acknowledge the need for coordinated production, maintenance, and distribution of toxics data, the Agreement should not include toxic substance lists. National repositories for this information (maintained independently by each Party) should be relied on to host the data. No new Great Lakes repository should be advocated within the GLWQA. Should the Parties identify Basin specific needs that are placed in the Agreement, the following points should be considered:

- The Basin is rich in technical and scientific resources that can produce data on chemicals of concern. These resources can be, and should be, utilized. However, this work should be coordinated through the National programs used by each Party to assess chemical persistence, bioaccumulation potential, and toxicity properties. This is necessary to ensure consistency with National protocols.

- Any revisions to the list of toxic substances subject to the Agreement should be limited to those that are persistent (as defined in paragraph 1(b) of Annex D of the Stockholm Convention) **and** bioaccumulative (as defined in paragraph 1(c) of Annex D of the Stockholm Convention) **and**, toxic.
- Utilization of toxicity information developed by the Parties through National programs should be made more accessible to Basin researchers and stakeholders.
- A GLWQA provision that specifies that the Parties are to establish links to National toxics programs that are easily accessible to Basin governments, stakeholders, and interested parties is likely to be the most useful outcome.

Whether or not a substance is regarded as an “emerging,” re-emerging or persistent/continuously-available (pseudo-persistent) “toxic substance” must be based on application of best science. The term “pseudo-persistent” should be avoided. It is not defined in current U.S. or Canadian laws or regulations. Use of this confusing term can undermine the appropriate priority on persistent and bioaccumulative and toxic (PBT) substances. Further, the purpose of the water quality criteria setting processes in use by both of the Agreement Parties is to establish appropriate limits on concentrations of individual contaminants regardless of their duration in the water column.

Binational policy should reflect utilization of the science. The binational Great Lakes Basin is unique in available expertise for establishing chemical priorities. This expertise includes excellent Canadian and U.S. governmental agency scientists, world class academic institutions, technology based industries/companies, science focused conservation advocates, and other capable and interested parties. These varied interests, points of view, and important capabilities should all be utilized to establish Basin-specific priorities on a subset of PBT substances selected for management in the Basin. These actions should proceed through a protocol that calls for:

- Reliance on risk assessment and risk management principles for policy direction and decision making.
  - Risk assessment should characterize the risk posed by the PBT substance in the setting via scientifically-sound methods to calculate population-level risk based on the weight of the evidence.
  - Risk management should be based on the results of the risk assessment; provide risk reduction where needed; be based on the best available scientific, economic, and other technical information; be feasible with benefits reasonably related to costs; allow for voluntary and other non-regulatory management options; provide for public participation; take into account political, social, legal, and cultural considerations; and able to be evaluated upon implementation to demonstrate effectiveness.

- Open stakeholder based processes
- Recognition of the significant progress that has been made in the area of toxic substance management by both Parties
- Science based decision making
- Evaluation of science derived information through peer review and experimental result replication processes
- Adaptive management based decisions that utilize information derived through the scientific process
- Recognition that multiple stressors affect the ecosystem and must be addressed holistically on a prioritized basis relative to their individual risks and potential for impacts.
- Appropriate regulatory precaution guided by science and risk-based assessments and information. Separate Agreement precautionary provisions are unneeded since uncertainty factors that are consistently applied through water quality criteria and other environmental protection standard setting processes assure application of appropriate precaution.

### **Ship-Source Pollution**

#### **1. Air Emissions**

Air emissions from ships is a transportation related matter best left for management under on-going national programs, including appropriate exemptions for Great Lakes vessels as provided by the national programs.

#### **2. Managing Ship-Source Discharges and Emissions**

These matters are best left for management under on-going national programs.

#### **3. Scientific Studies**

Regional expertise regarding Great Lakes shipping should be utilized in national program decision-making processes.

### **Science Coordination**

#### **1. Science Collaboration and Coordination**

The Great Lakes Region is home to excellent Canadian and U.S. governmental agency scientists, world class academic institutions, technology-based industries/companies, science focused conservation advocates, and other capable and interested parties. The varied capabilities, interests, and points of view produced by these experts should be utilized to direct Basin-specific management decisions, status assessment and public reporting efforts. The GLWQA should establish that the full range of these science resources, including those of stakeholders, are to be utilized within organizations such as the International Joint Commission's Science Advisory Board, Council of Great Lakes Research Managers, and others.

### **Aquatic Invasive Species**

## **1. Scope**

The GLWQA revisions must address aquatic invasive species. However, actions to prevent, respond, control and/or adapt to invaders must reflect the needs of all sectors that rely on Great Lakes resources and remain consistent with the need for continued and enhanced sustainable development within the Region. It is also important to understand the reality of the effectiveness of each of the action categories. Invasive species prevention is important but cannot be assumed to be truly effective. Response requires a significantly improved monitoring and detection system – and still has a real possibility of not being effective. Control measures for each biological threat can be effective but has proven to be very expensive. Control must be developed only after priorities have been established that include careful review of all implications. Adaptation to the reality of the presence of aquatic invasive species – both existing and potential – is unavoidable, deserving of significant work, and should be included in the GLWQA. In addition:

- Recommendations and policies should be consistent with the need for healthy ecosystems, strong social systems, and a robust economy –for the entire Region.
- Control policies and implementation measures for invasive species need to be largely developed at the Basin level for most species with such widespread distribution potential. Then they can be extended as appropriate to more local jurisdictions for implementation.
- Great Lakes industrial, commercial, and agricultural activities must retain access to water-based transportation routes if they are to remain competitive with other Regions – within North America and indeed the world.
- Current Great Lakes invasive species management practices are fragmented and restricted in scope to those within separate Lakewide Management Groups or separate State/Provincial/Federal agencies. A more highly coordinated Regional “home” for managing the invasive species issue is needed.

## **2. Actions**

An ongoing, standing, binational forum seeking resolution to aquatic invasive species issues should be established. Actions taken within this forum should:

- Maximize use of existing science, identify gaps in the science, and pursue information to fill the gaps.
- Make use of pertinent economic information associated with both the impacts of invasive species as well as potential controls.
- Provide for use of Great Lakes water resources so as to take advantage of the full range of benefits available to the Region’s social and economic structure.
- Utilize benefits associated with waterborne transportation relative to reduction of the Region’s impacts on climate change and other environmental footprint elements.

- Action should be proportional to the posed threat, the immediacy of the threat, and its relative impact potential – all based on utilization of best available science.

### **3. Management Framework**

The Great Lakes system is an extremely valuable resource that must be protected from harmful vectors including non-endemic invasive species. In so doing however, it is of critical importance to enable the ongoing sustainable utilization of the resource for continued support of the Region’s social and economic base. The Great Lakes waterway infrastructure is an essential element in attaining the state of sustainability that we all seek for the Region. Thus we need to continue to find solutions that maximize protection of the biological integrity and recreational value of the Lakes while maintaining water-related commerce across/throughout the Lakes.

#### **Habitats and Species**

##### **1. Scope**

Management and protection of habitats and native species should be added to the scope of the GLWQA. As SOLEC assessments have pointed out, physical habitat shortcomings is one of the primary stressors on the Great Lakes ecosystem.

##### **2. Actions**

Agreement language should not attempt to set specific targets or objectives such as “no net loss.” Interpretation of these objectives is always difficult and gets in the way of making progress towards ecosystem improvement. Instead, the GLWQA should establish that protection and restoration of habitats and native species at the population or community level is a priority objective to be pursued through LaMP and other place specific initiatives. Such habitat protection would foster maintenance of normal reproducing populations of native species. These initiatives must be science based, reflect what goals can and should be set for each area, considering existing uses and other modifying factors, and provide for open stakeholder participation in the decision making and implementation processes.

##### **3. Monitoring and Reporting**

As with monitoring and reporting programs relating to other stressors, those pertaining to habitats and species must be comprehensive and robust. However, the interpretation of results must reflect objectives for the specific areas examined and take into consideration existing uses and other modifying factors. Assessment of ecological risks should be based on populations rather than on individual species. Opportunities for stakeholder review and comment of monitoring and reporting activities should be provided.

## **Climate Change Impacts**

The Agreement must address climate change effects monitoring and adaptation. At the same time, mitigation or stop-gap measures aimed at addressing anthropogenic activities characterized as causes of climate change must be addressed via global agreements and for a, perhaps as reflected in national legislation or policies of the two countries, which have yet to be developed. The GLWQA should not attempt to prejudge these policies or “assist” in this arena. To do so could quite likely put the Region in a non-competitive or other disadvantaged position relative to other areas. The Agreement must, however, address climate change effects monitoring and adaptation. In doing so, the following should be included:

### **1. Climate Change Models**

Comprehensive and accurate understanding of likely climate change impacts will be critical for Great Lakes resource planning. A coordinated Canada/U.S. approach is needed. In addition to model development, a robust monitoring program that tracks impacts and supports continued model refinement and development is needed.

### **2. Integrating Climate Change Impacts into the GLWQA**

A two pronged approach is needed within the GLWQA to address climate change impacts. First, a blanket statement of principle should acknowledge that climate change impacts will have to be considered as a part of all management actions. Next, a separate section of the Agreement that establishes the structure needed for binational climate change research and reporting functions for the Great Lakes Basin should be included.

### **3. Enabling Other Levels of Government and Non-Government Parties**

The coordinated binational effort to understand, predict, and track climate change impacts must be broad-based, open, and provide for two-way communications. Jurisdictions at all levels must be able to provide important information and guidance for program planning and receive assistance with impact assessment/output interpretations. These proceedings must also include stakeholders. Stakeholders have the ability to provide important information and technical assistance in the impact assessment process. They can also help distribute information to their constituents and the public at large.