

GOVERNANCE WEBINAR DISCUSSION ITEMS

Background

Given that the GLWQA was last amended in 1987, both Canada and the United States recognize the importance of examining governance aspects outlined in the GLWQA.

PARTICIPATION IN BINATIONAL MANAGEMENT PROCESS

Article X of the GLWQA specifies the commitments of the Parties to consultation and Review including – “The Parties, in cooperation with State and Provincial Governments, shall meet twice a year to coordinate their respective work plans with regard to the implementation of this Agreement and to evaluate progress made”.

In response to this commitment, the Parties have established the Binational Executive Committee (BEC). The BEC is a discussion forum composed of senior-level representatives of Canadian and U.S. federal, state, and provincial agencies who are accountable for delivering major programs and activities that respond to the terms of the GLWQA. Decision-making in BEC is based on consensus. BEC meets twice a year or as required to:

- set priorities and strategic direction for binational programming in the basin;*
- coordinate binational programs and activities;*
- respond to new and emerging issues on the Great Lakes including tasking existing or creating new working groups to undertake designated activities;*
- provide input to the Parties’ evaluation of progress under the GLWQA; and,*
- provide advice, comment or other input for the preparation of various binational reports and presentations.*

During the GLWQA Review a number of people suggested that the BEC should be expanded to include municipalities, Tribes, First Nations and Métis on the grounds that they too were responsible for delivery of programs which contribute to the achievement of GLWQA objectives. It was therefore suggested that they should have a more prominent role in the decision-making process. However, increasing the membership of BEC to include all Great Lakes basin municipalities, Tribes, First Nations and Métis could increase the BEC membership into the hundreds.

The following are some potential binational mechanisms to oversee the implementation of the GLWQA for consideration.

- Currently, federal, provincial and state agencies responsible for implementing programs relevant to achieving the goals of the GLWQA participate in the binational executive committee, which is an information sharing and coordination forum.

GOVERNANCE WEBINAR DISCUSSION ITEMS

- Federal, provincial and state agencies responsible for decision-making and implementing programs relevant to achieving the goals of the GLWQA could continue to participate in a binational executive committee, but the role could be strengthened to include responsibility for setting priorities for science and action and agreeing on strategies and targets to address Great Lakes issues.
- The focus of the binational executive committee could be maintained but membership expanded to include others responsible for decision-making and program implementation of programs relevant to achieving the goals of the GLWQA, including municipalities and local governments, Tribes, First Nations and Métis.
- Membership of the binational executive committee could be expanded to include others responsible for decision-making and program implementation relevant to achieving the goals of the GLWQA, including municipalities and local governments, Tribes, First Nations and Métis, and the role could be strengthened to include responsibility for setting priorities for science and action and agreeing on strategies and targets to address Great Lakes issues.

PRINCIPLES, GOVERNING CONCEPTS, AND TOOLS APPLICABLE TO IMPLEMENTATION OF THE GLWQA

During the GLWQA Review a large number of people suggested including principles or concepts, implicitly or explicitly, to govern the implementation of the GLWQA.

Among the list of principles, governing concepts, and tools, the following have been suggested for consideration (please note that the suggested definitions used below are for informing and guiding discussions only; they do not represent definitions accepted by or agreed to by the governments of Canada or the United States):

1. Accountability - remain accountable to citizens by establishing clear goals, results and commitments for this Agreement and reporting regularly on progress in relation to environmental conditions.
2. Adaptive Management – incorporate systematic processes for continually improving management policies and practices by learning from the outcomes of previously employed policies and practices.
3. Binational cooperation – equal participation of nations and free exchange of information
4. Collaboration, Cooperation and Engagement – acknowledge the important role of public engagement by ensuring that decision-making processes incorporate consideration of public opinions and advice, and provide the Great Lakes-St Lawrence River basin community with meaningful opportunities to consult, to advise and to participate directly in activities that support the Agreement.

GOVERNANCE WEBINAR DISCUSSION ITEMS

5. Cumulative impacts – strategies should be developed which consider stresses acting on water quality and the health of aquatic ecosystem individually and in combination
6. Ecosystem Approach - make decisions recognize the interdependence of land, air, water and living organisms, including humans, and that seek to maximize benefits to the entire Great Lakes ecosystem without degrading downstream ecosystem of the St Lawrence River in the Province of Quebec.
7. Pollution Prevention - use processes, practices, materials, products, substances or energy that avoid or minimize the creation of pollutants and waste in order to reduce the overall risk to the environment or human health.
8. Prevention (protection from degradation) – seek to restore environmental quality which has become degraded and to prevent degradation of environmental quality in areas which have not been degraded.
9. Restoration – develop strategies and actions which contribute to initiation or acceleration of the recovery of an ecosystem with respect to its health, integrity and sustainability.
10. Science-Based Management – decision-making will be based on best available science, research and knowledge including traditional ecological knowledge.
11. Sustainability - social, economic and environmental factors will be taken into consideration to ensure that actions taken to meet the needs of the present generation do not compromise the ability of future generations to meet their own needs.
12. Transparency - relevant information, activities, decisions, and issues that arise are shared with participants and the public in a timely way.

Other principles, governing concepts, and tools may be suggested and discussed during the webinar.

REVIEW OF THE GLWQA

Article X of the GLWQA states that: “The Parties shall conduct a comprehensive review of the operation and effectiveness of this Agreement following every third biennial report of the Commission required under Article VII of this Agreement. “ However, since the GLWQA was last amended in 1987, stakeholders have often urged the Parties to focus on implementing rather than reviewing the GLWQA. In the current Review cycle that was not the case. Stakeholders including the International Joint Commission (IJC), municipalities, industry, non-government organizations and the public, urged the Parties to conduct a comprehensive review of the GLWQA.

The following are potential frequencies for review of the GLWQA for consideration:

- Maintain the current six-year review cycle.

GOVERNANCE WEBINAR DISCUSSION ITEMS

- Maintain the review of GLWQA on a six-year basis, but allow for scope of review to be determined by the Parties based on public input.
- Decrease the frequency of reviews to once every 9 or 12 years.

LAKEWIDE MANAGEMENT PLANS

Annex 2 commits the Governments to the development of Lakewide Management Plans: “The Parties, in consultation with State and Provincial Governments, shall develop and implement Lakewide Management Plans for open lake waters... Such Plans shall be designed to reduce loadings of Critical Pollutants in order to restore beneficial uses...”

Since the GLWQA was last amended in 1987 the role of Lakewide Management Plans has expanded to include issues other than loadings of critical pollutants, and areas other than the open waters of the lakes.

The following are potential roles for the Lakewide Management Plans in relation to the implementation of the GLWQA for consideration:

- Continue to use Lakewide Management Plans to address all stresses on the chemical, physical and biological integrity of the waters of the Great Lakes, where these are best addressed on a lake-specific basis.
- Continue to use Lakewide Management Plans to address all stresses on the chemical, physical and biological integrity of the waters of the Great Lakes, where these are best addressed on a lake-specific basis, and extend this same approach to include nearshore zones and the connecting channels.

AREAS OF CONCERN

Binationally, there has been a strong commitment to restore Areas of Concern (AOC). To date, three AOCs have been de-listed and one area is in recovery. Much progress has been made to address Beneficial Use Impairments in the remaining AOCs.

The following are potential changes to the goals and approaches to restore environmental quality in designated Areas of Concern for consideration:

- Retain the current focus on restoring “beneficial uses” of the environment as defined by the GLWQA and complete the job started in 1987 in the remaining Areas of Concern. This would involve no changes to the GLWQA.
- Retain the current focus on restoring “beneficial uses” of the environment and complete the job started in 1987 in the remaining Areas of Concern, but make process changes to streamline reporting and better recognize progress in

GOVERNANCE WEBINAR DISCUSSION ITEMS

restoring Areas of Concern. Examples of process changes include: relaxing the requirement for separate report preparation for problem identification, assessment of potential solutions, and verification of restoration of beneficial uses; allowing delisting of individual use impairments as they are restored; and recognizing as “Areas in Recovery” those areas where all remedial actions have been completed and monitoring is in progress to assess restoration of beneficial uses through natural recovery processes.

ADDRESSING THE NEARSHORE ZONE

Governments at all levels are taking action to address environmental threats in the Great Lakes basin, but despite these actions, the nearshore zone of the Great Lakes has been identified as being under particular ecological stress. Key stressors include:

- *Biological (e.g. waterborne pathogens, fecal micro-organisms, cladophora, non-native mussels and other invasive species, harmful algae blooms and fish and wildlife diseases);*
- *Physical (e.g. sediment resuspension/transport, climate change, water levels);*
- *Chemical (e.g. toxics); and,*
- *Human Activities (e.g. nutrients, population growth, land use change, shoreline development, shoreline hardening, shoreline structures, beach mining).*

Definitions of the nearshore zone differ, but generally it is the area of bays, inlets and shallow waters where we get our drinking water, send our wastewater and that we use for recreation.

The following are potential approaches for assessing the health of the nearshore zone and establishing priorities for action for consideration:

- The current GLWQA contains a framework of 14 “beneficial use impairments” which were used to identify the most severely degraded areas in the Great Lakes which were then designated as Areas of Concern and addressed through the development and implementation of Remedial Action Plans. The GLWQA could apply the beneficial use impairment model to other nearshore areas to determine priorities for remedial action.
- Around the globe, progress is being made in relation to development of methodologies and tools for cumulative effects assessment which integrate the effects of multiple stresses on the environment. Some people point to this work as a major step forward in application of the “ecosystem” approach to environmental management. The GLWQA could adopt a cumulative effects assessment approach to addressing the nearshore zone.
- The focus of GLWQA is by and large on restoration of environmental quality; however, some people think that the focus should be expanded to address both

GOVERNANCE WEBINAR DISCUSSION ITEMS

restoration of degraded areas and protection of areas of particular value. The GLWQA could adopt an approach to addressing the nearshore which addresses both restoration and protection.

- Nearshore issues could be addressed on an individual, issue specific basis, with no framework for assessing nearshore health on a comprehensive basis.

WEBINAR DISCUSSION ITEM ON TOXIC SUBSTANCES

Background

Both Canada and the United States recognize that improperly managed chemicals pose unacceptable risks to health and the environment in their jurisdictions. Both countries are committed to managing chemicals effectively and reducing risks from chemicals to acceptable levels. While certain persistent toxic substances (PTS) have been significantly reduced in the Great Lakes Basin Ecosystem over the past 30 years, they continue to be present at levels above those considered safe for humans and wildlife, warranting fish consumption advisories in all five Lakes and Connecting Channels. Toxic substances are a core element of the GLWQA but the provisions are very outdated.

PRINCIPLES OF TOXIC CHEMICAL MANAGEMENT

“Virtual Elimination” and “Zero Discharge” are guiding philosophies that are applied to the prevention of pollution from toxic chemicals that pose the greatest risk to environmental and human health.

“Virtual Elimination” appears in a number of different contexts and is applied in various ways, making it a difficult concept to understand. For example, generally it applies to the reduction of emissions (releases) of persistent toxic substances; but the idea of applying it also to the removal of these chemicals from the environment after release often occurs during discussions of virtual elimination. There are also different criteria for defining persistence.

The concept of “Virtual Elimination” is stated in the Agreement (Article II) ...as the policy of the Parties that:

- (a) The discharge of toxic substances in toxic amounts be prohibited and the discharge of any or all persistent toxic substances be virtually eliminated... .*

And by Annex 12(2) whereby regulatory strategies for controlling or preventing the input of persistent toxic substances shall be adopted in accordance with the General Principles:

- (i) The intent of programs specified in this Annex is to virtually eliminate the input of persistent toxic substances in order to protect human health and to ensure the continued health and productivity of living aquatic resources and human use thereof;*
- (ii) The philosophy adopted for control of inputs of persistent toxic substances shall be zero discharge; and*
- (iii) The reduction in the generation of contaminants, particularly persistent toxic substances, either through the reduction of the total volume or quantity of waste or through the reduction of the toxicity of waste, or both, shall wherever possible, be encouraged.*

WEBINAR DISCUSSION ITEM ON TOXIC SUBSTANCES

The following are some considerations for the amendments to the Great Lakes Water Quality Agreement.

- Retain/distinguish the concepts of "Virtual Elimination" and "Zero Discharge" as guiding philosophies rather than definitions
- Replace the terms with clear plain language describing how the Parties intend to risk manage toxic chemicals
- Other?

WATER QUALITY OBJECTIVES

The Review noted that the Agreement is not currently designed to evolve or be readily updated concerning the specific objectives noted in Article IV and Annex 1. It was noted that there are numerous discrepancies between the specific objectives in Annex 1 and the national, provincial or state criteria, including objectives or guidelines of Canada and the U.S. that have more recently been developed. The majority of specific objectives do not reflect the current knowledge base, advancements in analytical methods, or modern approaches to developing water quality criteria.

It is therefore recognized that these objectives are out-of-date and demonstrates the importance of being adaptive so that the Agreement remains up-to-date ("evergreen").

Also, it must be recognized that current approaches to developing water quality guidelines, the resultant guidelines and their application, vary among agencies in the Great Lakes Basin.

The following are some considerations for the amendments to the Great Lakes Water Quality Agreement.

- Substance-specific objectives could be established independently by relevant jurisdictions for application to the Great Lakes Basin would be considered by the Parties to develop and implement programs and other measures to address toxic substance issues.
- Establish substance-specific objectives, which are specific to the Great Lakes and based on Great Lakes science
- Establish ecosystem objectives specific to the Great Lakes
- Other?

TOXIC SUBSTANCE MANAGEMENT

The current GLWQA commits the Parties to research, monitoring and assessment activities and to utilizing this information as a basis for decision-making in relation to Areas of Concern and Lakewide Management Plans for Critical Pollutants.

WEBINAR DISCUSSION ITEM ON TOXIC SUBSTANCES

The Review noted in particular that the Parties 1) should consider how non-persistent but continuously-available toxic substances are addressed; and, 2) should consider a commitment to monitor for substances of emerging concern as called for in Part 5 of Annex 12 (Early Warning System).

The following are some considerations for the amendments to the Great Lakes Water Quality Agreement:

- Reference in the Agreement the existing national programs and binational programs to manage toxic substances
- Include commitments to develop a binational framework to identify and implement risk management strategies for emerging and re-emerging, persistent or continuously-available (pseudo-persistent) toxic substances
- Include commitments for cooperative monitoring, research and surveillance to inform risk management of the success of implemented measures and the need for further action
- Include commitments for monitoring and research to identify emerging issues due to emerging and re-emerging persistent and pseudo-persistent toxic substances
- Other?

WEBINAR DISCUSSION ITEM ON AQUATIC INVASIVE SPECIES

Background

The continued introduction of invasive species is one of the most significant threats to biodiversity. Currently there is no binational mechanism to deal with this threat comprehensively. The review of the GLWQA indicated that because aquatic invasive species (AIS) can have known impacts on both water quality and Beneficial Uses the issue falls within the scope of the Agreement. In addition, managing the impacts of harmful invasive species once established is a major challenge and the economic impacts are significant.

SCOPE

The recent review of the Great Lakes Water Quality Agreement noted the significant environmental and economic damages caused by AIS. AIS can degrade water quality by increasing turbidity, concentrating toxins, and altering nutrient/energy flows within the food web. AIS may be extremely difficult to control or impossible to eliminate once established. They are one of the leading causes of impairments of biological integrity in the Great Lakes.

The following are some considerations for the amendments to the Great Lakes Water Quality Agreement related to the scope of AIS efforts under a new Agreement:

- Address invasive species known to impact water quality.
- Address all aquatic invasive species that impact the biological integrity of the lakes.
- Address all aquatic and terrestrial invasive species within the Great Lakes basin.
- Also consider invasive species that are a threat to enter the Great Lakes through canals, rivers, and waterways.

ACTIONS

The only mention of AIS in the current agreement can be found in Annex 6, 1 (b) and Annex 17, 2 (i). Both references refer only in general terms to the need for research to determine the threat of AIS in ballast water to the Great lakes ecosystem and the impacts of AIS on fish and wildlife populations and habitat. There is no discussion of prevention or control in either annex and no discussion of pathways other than ballast water. The review of the GLWQA did not make suggestions as to the specifics of implementing binational actions within a revised agreement.

Prevention is the primary focus of AIS efforts. To be effective, threats need to be identified at an early stage when prevention and control actions are still possible. A science-based risk assessment of the species and pathways provides an early warning of potential threats to the Great Lakes and helps guide management actions that will

WEBINAR DISCUSSION ITEM ON AQUATIC INVASIVE SPECIES

prevent AIS introductions. Rapid response actions could eliminate small infestations before they become established. Additional actions can help reduce the impacts of species that are already established in the Great Lakes.

The following elements of a program to address AIS focused on prevention are under consideration.

Prevention

- Risk assessments of species and pathways to identify potential threats of introduction and impacts;
- Risk management actions to prevent potential threats of introduction and impact
- Outreach and communication

Rapid Response

- Early detection/monitoring surveillance to detect species before they become widely established;
- Rapid response/control activities to eliminate and/or stop the spread of new invaders;

Management

- Ongoing control/management to address species already present
- Research to find ways to further minimize impacts of species already present

MANAGEMENT FRAMEWORK

The need for a binational governance model to deal specifically with an AIS binational action plan under a revised GLWQA is being considered. The GLWQA review suggested that a revised GLWQA could serve as the organizing vehicle to deal with AIS binationally. The GLWQA review did not deal specifically with a management framework other than suggesting the creation of a separate annex for AIS but did suggest the U.S. Great Lakes Regional Collaboration Strategy and its Aquatic Invasive Species appendix should be taken into account. There could also be existing action plans in either or both countries that could serve as models for an AIS annex in a revised Agreement.

The following are some considerations for the amendments to the Great Lakes Water Quality Agreement related to managing AIS under a new Agreement.

- Both countries identify priorities for action through a binational forum and address separately through existing or new domestic action.
- Canada and the U.S. develop priorities and strategies for addressing AIS through a binational action plan and address separately through existing or new domestic action.
- In addition to either of the above, Canada and the U.S. implement new binational programs or activities where feasible, in addition to existing domestic ones, to address elements of an AIS program.

WEBINAR DISCUSSION ITEM ON CLIMATE CHANGE IMPACTS

Background

Currently, the GLWQA does not address the impacts of climate change. During the GLWQA Review period, there was general agreement that the GLWQA should be revised to specifically address pressing threats to the Great Lakes, including the impacts of climate change. Recommendations included the need to understand and predict future climate changes in the Great Lakes system including, an assessment of potential impacts and vulnerabilities. It was also recommended that climate change impacts information be provided to support informed environmental decision-making.

CLIMATE CHANGE MODELS

Consideration is being given to binational cooperation to ensure increased understanding of climate change impacts on the Great Lakes, including commitments to:

- Develop or enhance climate models to better predict changes in regional climate.
- Develop or enhance models to predict the impacts of changes in climate to the chemical, physical and biological processes of the Great Lakes.
- Enhanced monitoring to validate model predictions.

INTEGRATING CLIMATE CHANGE IMPACTS INTO THE GLWQA

Consideration is being given to ways that existing or future GLWQA programs and measures can take climate change impacts into account.

- Include a statement of principle that climate change impacts should be taken into account.
- Include language in each appropriate Article or Annex to guide the incorporation of climate change impacts into GLWQA programs and measures.
- Include a separate section of the Agreement to provide a strategic direction on climate change impacts on Great Lakes water quality.

ENABLING OTHER LEVELS OF GOVERNMENT AND NON-GOVERNMENTAL PARTIES

Consideration is being given to means by which the GLWQA might enable other levels of government and non-governmental parties to address the impacts of climate change on Great Lakes water quality.

- Communicate modeling outputs and provide other information and tools to other levels of government and non-governmental parties to help them address climate change impacts.
- Provide other levels of governments opportunities to help guide modeling efforts.

WEBINAR DISCUSSION ITEM ON SCIENCE COORDINATION

Background

Science coordination is not mentioned in Annex 11 (Surveillance and Monitoring) or Annex 17 (Research and Development) of the existing Agreement. The GLWQA Review did identify that Annexes 11 & 17 should address the need for coordination and collaboration to a greater extent.

SCIENCE COLLABORATION AND COORDINATION

Enhanced collaborative and coordinated binational science supporting the objectives of the Agreement would increase efficiency and effectiveness of science delivery and better inform decision-making related to the Agreement.

The following are some considerations for the amendments to the Great Lakes Water Quality Agreement.

- Identify specific science activities supporting the objectives of the GLWQA, which will be the focus of science collaboration/coordination in a new Agreement.
- Address this in a new Agreement through a general commitment to work towards developing and enhancing science collaboration/coordination.
- Adopt an existing or new science collaboration/coordination management framework more formally in a new Agreement to manage this activity.

WEBINAR DISCUSSION ITEMS ON HABITAT AND SPECIES

Background

Habitats and species are not currently explicitly addressed in the Great Lakes Water Quality Agreement. During the GLWQA review, the Special Issues Working Group (SIWG) addressed biodiversity threats and responses, with specific reference to habitats and species. The SIWG recommended that a revised Agreement address the need for protection, conservation, and recovery of biodiversity as a factor in maintaining or improving water quality. Because biodiversity is recognized as a key driver of ecosystem processes related to maintenance and restoration of water quality, the SIWG also recommended that the status and trends of biodiversity be established as a key measure of water quality. Loss of species and populations and degradation of habitats, introduction of invasive alien species, climate change and introduction of toxic substances were identified as key stressors on the biological integrity of the waters of the Great Lakes Basin Ecosystem.

SCOPE

Recent advances in understanding of the value of ecosystem services have shown that areas with high natural biodiversity are more resilient to emerging drivers of change, with greater capacity to safeguard water quality and maintain life-supporting ecosystem services. In addition, the loss of habitat and species impedes the restoration and maintenance of water quality in the Great Lakes system. For example wetlands provide key ecosystem services by intercepting and filtering excess sediments, nutrients, pesticides and pathogens; absorbing and detoxifying human and industrial wastes; regulating water temperatures, reducing erosion and controlling floodwaters and thus make an important contribution to the restoration and maintenance of the quality of the water of Great Lakes Basin Ecosystem.

Given that the GLWQA currently does not address biodiversity, habitats and species or ecosystem services specifically, the following are some considerations as to how this issue might be addressed in a revised agreement.

- Do not address this issue through the GLWQA. Rely on jurisdictions around the Great Lakes to address species, habitats and other biodiversity issues individually or through coordination mechanisms other than the GLWQA.
- Add a new commitment to the GLWQA to maintain and restore habitats, species and ecosystem services supporting the chemical, physical, biological integrity of the waters of the Great Lakes.

WEBINAR DISCUSSION ITEMS ON HABITAT AND SPECIES

ACTIONS

If the maintenance and restoration of biological integrity of aquatic systems of the Great Lakes were to be addressed in an amended GLWQA, the following are examples of commitments that might be included:

- A commitment by the Parties to a broad principle such as “no net loss” of habitat or habitat function.
- A commitment by the Parties to develop science based targets for the restoration and conservation of aquatic and wetland habitat measured in acres / hectares for each lake basin.
- A commitment by the Parties to develop common priorities, targets, and coordinated strategies and action plans for the restoration and conservation of aquatic and wetland habitat.

MONITORING AND REPORTING

If addressed in an amended GLQWA, the following are some considerations for a commitment for binational assessment and monitoring:

- All species, habitats and ecosystem services which contribute to, or are key indicators of water quality, should be monitored and reported upon.
- Monitoring, assessment and reporting needs for only those species, habitats and ecosystem services that are relevant to address lake-specific impairments.

WEBINAR DISCUSSION ITEM ON NUTRIENTS

Background

In Lake Erie the re-occurrence of wide spread algae blooms has been observed in recent years. In Lakes Michigan, Huron and Ontario the algae problem is limited to the nearshore zones. Algae are not generally a problem in Lake Superior. Algae blooms are linked to excess nutrient loadings to the lakes resulting from urban and rural agricultural and non-agricultural sources. While there are many types of nutrients, it is generally understood that the algae problem in the Great Lakes is best addressed by limiting phosphorus.

TARGETS

The following are some considerations for how to establish targets in an amended GLWQA for the control of excess phosphorus loadings:

- Use best available science to establish a single target for phosphorus concentrations and apply throughout the Great Lakes.
- Use best available science to establish phosphorus targets concentrations specific to each lake.
- Use best available science to establish phosphorus targets concentrations specific to each lake and to specific areas within each lake including the nearshore zones.

The following are some considerations for whether or not to consider socio-economic factors in establishing targets for the control of excess phosphorus loadings in amendments to the Great Lakes Water Quality Agreement:

- Socio-economic factors should not be considered. Phosphorus targets should be based on best available science and should be set at levels that will eliminate excess algae development.
 - Socio-economic factors are important. Phosphorus targets should be set in relation to lake ecosystem objectives established based on consideration of social, economic, human health and environmental factors.
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ACTION

The following are some considerations for how an amended GLWQA may address the translation of targets into actions for the control of excess phosphorus loadings:

- Establish target concentrations for Phosphorus and commit the Parties to regularly report on progress on actions taken to meet these targets.

WEBINAR DISCUSSION ITEM ON NUTRIENTS

- Establish target concentrations for Phosphorus and commit the Parties to develop and report on the implementation of Phosphorus management plans.
- Establish target concentrations for Phosphorus and commit the Parties to develop and report on the implementation of Phosphorus management plans, with particular emphasis on actions in key watersheds.

WEBINAR DISCUSSION ITEM ON SHIP-SOURCE POLLUTION

Background

Requirements for the Parties under the current GLWQA related to ship-source and shipping-related discharges and emissions are specified in separate Annexes:

Annex 4 – Requirements for Oil and Hazardous substances discharges

Annex 5 – Garbage, Sewage and Cargo Residues

Annex 6 – The potential for discharge of Aquatic Invasive Species from ballast water is mentioned, as well as, the requirement to review and report on pollution from shipping sources, consult with the IJC and study any potential pollution problem from ships identified by the Parties

Annex 8 – sets out requirements for Onshore and Offshore Oil Handling Facilities but specifically exclude vessels

Annex 9 – sets out requirement for a joint contingency plan in response to oil spills

SHIP AIR EMISSIONS

The current GLWQA deals with the following ship-source discharges that could have negative effects upon the water quality of the Great Lakes: Annex 4 for Oil and Hazardous Pollution Substances; Annex 5 for Sewage and Garbage (Ship Generated Garbage and Cargo Residues); and Annex 6 for Invasive species in Ballast Water.

Both Canada and the United States have compatible regulations for the discharges that are identified in the current GLWQA that are based on International Conventions. Air pollution / emissions from ships as they would affect water quality are not currently included in the Shipping Annexes of the GLWQA, although both Canada and the U.S. have agreements in place to ensure that this source of pollution is regulated.

The following are some considerations for the amendments to the Great Lakes Water Quality Agreement.

- Not include air emissions from ships as it is not a water quality issue.
- Include air emissions from ships by either establishing new standards or by referencing in the Agreement existing national commitments to manage ship air emissions.

MANAGING SHIP-SOURCE DISCHARGES AND EMISSIONS

The current Annexes required both parties to have compatible regulations. The Parties' maritime agencies (United States Coast Guard, Transport Canada, and Canadian Coast Guard) have implemented this requirement. While not always exact, the regulatory

WEBINAR DISCUSSION ITEM ON SHIP-SOURCE POLLUTION

environment for all ship-source discharges and emissions included in the GLWQA to date has been both compatible and consistent.

Canada and the United States have been active internationally at the International Maritime Organization and the Great Lakes experience has driven many of the International regulatory processes. Both parties have ratified, or will ratify the majority of international ship source pollution prevention Conventions. Alternately, the U.S. has put in place an equivalent regulatory regime. The binational cooperation to date on ship-source discharges and emissions on the Great Lakes has been cited as a model for global practices - especially on the ballast water regulatory and enforcement regime.

The following are some considerations for the amendments to the Great Lakes Water Quality Agreement.

- The current binational structure in managing ship-source discharges and emissions via a compatible regulatory regime is appropriate.
- Other forms of managing ship-source discharges and emissions should be considered.

SCIENTIFIC STUDIES

The current GLWQA required “studies” to establish a basis for improved procedures for the abatement of discharges and emissions from shipping sources. Both parties have consistently used science-based decision-making (often joint or binational) as an input for the regulatory regime for ship-source discharges and emissions into the Great Lakes.

The following are some considerations for the amendments to the Great Lakes Water Quality Agreement.

- Existing mechanisms to provide science as a basis for improved procedures are sufficiently developed to address this issue.
- Existing mechanisms to provide science as a basis for improved procedures are sufficient, but would benefit from additional binational coordination processes