

**Redesigning the Governance Structure of the Great
Lakes:**
**A Report to the Great Lakes and St. Lawrence Cities
Initiative**

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A. EXECUTIVE SUMMARY

Background

The Great Lakes are natural resource of extremely great value to both the governments of Canada and the United States of America – as well as all the communities on both sides of the border that rely on the lakes for their livelihood and recreation. In 1909 the Boundary Waters Treaty was created with the goal of preventing and resolving disputes concerning quantity and quality of water shared at the boundary between Canada and the United States. Since then, there has been a proliferation of several agreements as well as the creation of several bodies, each designed to combat a particular environmental issue affecting the Great Lakes region. This narrowly focused and gradual approach not only shows some lack of foresight in addressing the ecosystem as a whole, but in its creation, it has also given rise to a situation where coordination between all the stand alone bodies and agreements is extremely difficult, and this can be seen by looking at the organizational structure depicted in appendix A.

Even though there have been some improvements in water quality since the signing of the Great Lakes Water Quality Act (GLWQA) in 1972, there are concerns that the current structure would not be responsive enough to deal effectively with emerging threats to the ecosystem.

Problems of the Current Structure

The main concerns about the existing governing arrangement can be broken down into two general areas

- A lack of accountability
- Unnecessarily complex structure and poor coordination

From a review of the agreements and documents that inform the environmental management of the ecosystem, one finds that there is very little in terms of accountability or enforceability mechanisms in most of the contract documents. One also finds that this is one of the main concerns voiced by professionals associated with the environmental protection of this resource.

The overlapping jurisdictions of many of the operating bodies associated with Great Lakes also creates an atmosphere where departments and programs work in inefficient competition with one another rather than in a coordinated manner that would be more beneficial to all stakeholders.

Development of Alternatives

In coming up with solutions to problems associated with the existing structure, we generated three alternatives.

Alternative 1: Modification Option

This is basically a modification of the existing structure. It attempts to fold up some redundancies as well as also creating more effective links between existing structures. This alternative is designed with the understanding that dramatic

revisions could pose significant problems in actual implementation and could face significant resistance from agencies trying to maintain their turf

Alternative 2: HELCOM Option

This alternative was created with the idea of adopting the desirable features from other successful natural resource sharing agreements. In this case the agreement that seemed to be most successful and most applicable to the problems facing the Great Lakes, was the contract between the countries sharing the Baltic Sea (an agreement otherwise known as The Helsinki Convention – HELCOM). This option essentially represents an entirely new beginning and we develop it in a sort of ideal vacuum that allows the dismantling of virtually all the existing institutional infrastructure, and the creation of new bodies with significantly different mandates.

Alternative 3: Hybrid Option

The third option tries to blend elements of the first two alternatives and in doing so, combines the need for drastic change with a bit more realism; whereas significant change might be necessary for the Great Lakes, it would also be prudent to take advantage of already existing physical and institutional infrastructure that would be useful going forward.

Rational Behind the Development of Alternatives

To the extent possible, we attempted to develop structures that were more binational in nature. More localized approaches to organization were emphasized in the hopes that regional cooperation might bypass national political economy issues that have stymied binational cooperation so far.

We also proposed the empowerment of high level central actors – charged with the responsibility of ensuring all objectives are met – with appropriate executive powers to coordinate and control all relevant programs associated with protecting the Great Lakes environment. Included in this empowerment scheme, would be the granting of budgeting discretion to these central actors who will then use that power to offer performance incentives to all departments and programs under their supervision.

All the alternative proposals offered, required a leap of logic that granted the Boundary Waters Treaty (BWT) and subsequent agreements such as the Great Lakes Water Quality Act (GLWQA), and bodies such as the International Joint Commission (IJC), the legal power to override the significant political stumbling blocks that currently exist. This was an almost necessary assumption to make if any proposal was to be advanced. However, once made, we find that it allows for the creation of a fairly simpler picture and therefore we conclude that this area is the critical focal point for any serious discussion of reorganizing the governing structure of the Great Lakes.

B. OVERVIEW OF THE GREAT LAKES GOVERNANCE STRUCTURE

1. The Great Lakes

The Great Lakes basin is home to more than thirty million people. The Great Lakes – deep fresh water seas – are the largest system of surface freshwater on the Earth, spanning about 800 miles and containing about 20% of the world's surface freshwater, and more than 90% of the surface freshwater in the U.S. The total shoreline (U.S. and Canadian, including connecting channels and islands) is more than 10,000 miles, or about 40% of the earth's circumference.

The Great Lakes basin holds major urbanized areas that are home to more than one-tenth of the population of the U.S. and one-quarter of the population of Canada (a total of more than 33 million people who rely on the Great Lakes watershed as a source of drinking water. Not only that, the basin contains many thriving, ecologically rich areas. The ecosystem includes such diverse elements as northern evergreen forests, deciduous forests, tall grass and lake plain prairies, sandy barrens, dunes, and coastal wetlands. Over thirty of the basin's biological communities and over 100 species are globally rare or found only in the Great Lakes basin.

The wealth of natural resources has long made the region a heartland of both the U.S. and Canadian industrial economy. Economic activity in the Great Lakes basin exceeds \$200 billion a year, and the Region generates more than 50 percent of the total U.S. manufacturing output. About one-third of the Great Lakes basin's land is in agricultural use. The eight Great Lakes States account for 30% of nationwide agricultural sales, a \$45 billion industry. The international shipping trade annually transports 50 million tons of cargo through the Great Lakes. Main commodities are grain, iron ore, coal, coke, and petroleum products. Almost 50% of this cargo travels to and from oversea ports, especially Europe, the Middle East, and Africa.

Recreation is also an important part of the economy. The annual value of the commercial and sport fishery is estimated at over \$4.5 billion. The eight Great Lakes States have about 3.7 million registered recreational boats, or about one-third of the Nation's total. The 600-plus State parks in the Region accommodate more than 250 million visitors each year. It has been estimated that nearly 5.5 million hunters spend more than \$2.6 billion annually.

The economic potential of the Great Lakes region is closely tied to the health of the ecosystem. The challenge of Great Lakes environmental protection and natural resource management is to balance the use of the resources of this unique ecosystem with its protection, restoration, and conservation.

Given the importance of the Great Lakes to the region, The United States and Canada have been working since the beginning of the 20th century, independently and jointly, in order to address past and current environmental impacts to the Great Lakes ecology and to the entire region.

2. Framework of the Great Lakes Governance Structure

The current governance structure of the Great Lakes is the product of several agreements, acts, laws and other tools created to manage different environmental issues concerning the ecosystem.

The following chart is a chronologic enumeration of these agreements and tools also indicating whether the agreements/bodies are binational or national (United States or Canada) in character.

Year	Character	Agreement
1909	Binational	The Boundary Waters Treaty
1954	Binational	Convention on Great Lakes Fisheries
1955	National U.S.	The Great Lakes Basin Compact
1956	National Canada	Great Lakes Fisheries Act
1972	National U.S.	The Great Lakes Water Quality Agreement
1972	National Canada	Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem
1976	National Canada	Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem Renewal
1978	National U.S.	The Great Lakes Water Quality Agreement Amendment
1982	National Canada	Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem Renewal
1983	National U.S.	The Great Lakes Water Quality Agreement Amendment
1983	National U.S.	Council of Great Lakes Governors
1985	Binational	The Great Lakes Charter
1986	National Canada	Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem Renewal
1987	National U.S.	The Great Lakes Water Quality Agreement Protocol
1989	National Canada	The St. Lawrence Plan – Phase I
1990	National U.S.	Great Lakes Critical Programs Act
1991	Binational	Binational Executive Committee
1991	Binational	Great Lakes Air Quality Agreement
1992	National U.S.	Joint Federal/State 5-Year Strategy Protecting the Great Lakes
1994	National Canada	Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem Renewal
1994	National	The St. Lawrence Plan – Phase II

	Canada	
1995	Binational	Great Lakes Binational Toxic Strategy
1998	National Canada	The St. Lawrence Plan – Phase III
2001	Binational	The Great Lakes Charter Annex
2002	National Canada	Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem Renewal
2002	National U.S.	Great Lakes Legacy Act
2002	National U.S.	Great Lakes Strategy
2004	National U.S.	Presidential Executive Order – Great Lakes Interagency Task Force
2004	National U.S.	Presidential Executive Order – Great Lakes Regional Collaboration of National Significance
2004	National U.S.	Framework for the Great Lakes Regional Collaboration
2005	National Canada	The St. Lawrence Plan for Sustainable Development
2005	National U.S.	Great Lakes Regional Collaboration Strategy to Restore and Protect the Great Lakes

While this is not a comprehensive list, it outlines the critical drivers currently used in managing the Great Lakes watershed. A more detailed breakdown of the functions of each body/agreement is provided below with even further detail provided in the appendix B.

C. COMPOSITION AND FUNCTIONS OF THE CURRENT STRUCTURE

1. The Boundary Waters Treaty (BWT) – The International Joint Commission (IJC)

This treaty provides the principles and mechanisms to help resolve disputes and to prevent future ones, primarily those concerning the use of water, water quantity and water quality, along the boundary between Canada and the United States.

The International Joint Commission, composed of three commissioners on the part of the United States and three commissioners on the part of Canada, was created to accomplish the purpose of the Treaty.

2. Convention On Great Lakes Fisheries Between The United States And Canada – Great Lakes Fishery Commission (GLFC)

The purpose of this convention was the eradication or minimization of the populations of the sea lamprey in the Convention Area. For that purpose, the Convention provides

research and recommendations to aid in the management of Great Lakes fisheries and to control and eradicate sea lamprey.

3. The Great Lakes Basin Compact – Great Lakes Commission (GLC)

The purposes of this compact are, through means of joint or cooperative action, to promote the orderly, integrated, and comprehensive development, use, and conservation of the water resources of the Great Lakes Basin. The Great Lakes Basin Compact created an agency called The Great Lakes Commission.

4. Great Lakes Fishery Act

The Great Lakes Fishery Act sets forth the procedures for carrying out programs under the Convention on Great Lakes Fisheries between the United States and Canada.

5. Canada-Ontario Agreement Respecting The Great Lakes Basin Ecosystem

The Canada-Ontario Agreements of 1972, 1976, 1982, 1986, 1994 and 2002 are the federal-provincial agreement that supports the restoration and protection of the Great Lakes Basin Ecosystem. The Agreement between the governments of Canada and Ontario outlines how the two governments will cooperate and coordinate their efforts to restore, protect and conserve the Great Lakes basin ecosystem.

6. The Great Lakes Water Quality Agreement (GLWQA)

The Great Lakes Water Quality Agreement (GLWQA) is a formal international agreement between United States and Canada, first signed in 1972 and amended in 1978, 1983 and 1987, that reflects the two countries' commitment to resolve a wide range of water quality issues facing the Great Lakes and the international section of the St. Lawrence River.

The International Joint Commission will assist in the implementation of this Agreement. For this purpose, the Commission carries out its responsibilities utilizing principally the services of the Water Quality Board and the Science Advisory Board.

7. 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 Great Lakes Water Quality Agreement.

8. Council Of Great Lakes Governors (CGLG)

The Council of Great Lakes Governors is a non-partisan partnership of the Governors of the eight Great Lakes States - Illinois, Indiana, Michigan, Minnesota, New York, Ohio,

Pennsylvania, and Wisconsin. In 1983, the region's Governors joined forces to create the Council and tackle the severe environmental and economic challenges then facing the citizens of their States.

9. The Great Lakes Charter

Signed by the Great Lakes States and Provinces - the States of Illinois, Indiana, Michigan, Minnesota, New York, Ohio, and Wisconsin, the Commonwealth of Pennsylvania, and the Provinces of Ontario and Quebec. Its propose was to conserve the levels and flows of the Great Lakes and their tributary and connecting waters.

10. The St. Lawrence Plan (1989, 1994, 1998 And 2005)

The agreements of 1989, 1994, 1998 and 2005 reached between the governments of Canada and Québec initially dealt with major sources of pollution and contamination of the St. Lawrence River. Then collaboration between governments concentrated on protecting biodiversity and ecosystem health. Subsequent phases targeted agriculture and, more recently, navigation, a concern of several riverside communities.

11. Great Lakes Critical Programs Act

This Act specifies the mechanisms needed in order to implement key provisions on the Great Lakes Water Quality Agreement.

12. Great Lakes Air Quality Agreement

This 1991 Agreement between the U.S. and Canada provides a mechanism to address shared concerns for trans-boundary air pollution.

13. The Joint Federal/State 5-Year Strategy Protecting The Great Lakes

With this strategy, the U.S. States, tribes, and federal agencies responsible for environmental protection and resource management in the Great Lakes Basin commit to achieving specific environmental goals through a full range of coordinated activities.

14. Great Lakes Binational Toxic Strategy

This Canada - United States Strategy is the collaborative process by which Environment Canada and the United States Environmental Protection Agency, in consultation with other federal departments and agencies, Great Lakes states, the Province of Ontario, Tribes, and First Nations, will work in cooperation with their public and private partners toward the goal of virtual elimination of persistent toxic substances resulting from human activity, particularly those which bioaccumulate from the Great Lakes Basin.

15. The Great Lakes Charter Annex - A Supplementary Agreement To The Great Lakes Charter

The purpose of the charter was to develop an enhanced water management system that was simple, durable, efficient, and retained and respect for authority within the Basin.

16. Great Lakes Legacy Act

This was enacted to grant the Administrator of the Environmental Protection Agency the authority to carry out projects and conduct research for remediation of sediment contamination in areas of concern in the Great Lakes.

17. Great Lakes Strategy

The Great Lakes Strategy 2002 is a forum of senior-level representatives from the U.S. Federal, State, and Tribal governmental agencies that share responsibility for environmental protection and natural resources management of the Great Lakes.

18. Presidential Executive Order - Great Lakes Interagency Task Force

Establishment of the Great Lakes Interagency Task Force by the U.S. Presidential Executive Order 13340 of May 18th, 2004. With EPA as the lead, the Task Force brings together 10 agency and cabinet officers tasked to provide strategic direction on federal Great Lakes policy.

19. Presidential Executive Order - Great Lakes Regional Collaboration Of National Significance (GLRC)

The Presidential Executive Order 13340 promoted the formation of a Regional Collaboration of National Significance for the Great Lakes. The Federal Government will partner with the Great Lakes States, tribal and local governments, communities, and other interests to establish a regional collaboration to address U.S. nationally significant environmental and natural resource issues involving the Great Lakes.

20. Framework For The Great Lakes Regional Collaboration

This Framework establishes the structure, functions and objectives of the Great Lakes Regional Collaboration of National Significance.

21. Great Lakes Regional Collaboration Strategy To Restore And Protect The Great Lakes

This strategy provides the full range of recommendations, options, and ideas generated by the Eight Strategy Teams, each focusing on a different issue affecting the Great Lakes basin. The Strategy Teams considered the overarching issues of human health, tribal interests and perspectives, and research, and factored them in to the extent possible. The

Strategy Teams worked to characterize the problems faced in the Great Lakes, and to establish goals and milestones.

D. PROBLEMS WITH THE CURRENT STRUCTURE

The problems with the current structure can be broken down into two main areas

- Lack of accountability
- Structure complexity and poor coordination

1. Accountability

This has been sighted by many professionals involved with the Great Lakes as the single most critical flaw of the current governing and management structure. In fact the issue of accountability was the single theme focused on by the International Joint Commission in its 13th Biennial Report dated December 2006.

Even though quite a number of the goals laid out in the agreements signed by the contracting parties would definitely be beneficial to the environmental integrity of the Great Lakes, the actual physical follow up required to achieve the stated goals has been poor at most levels. In a lot of the cases when objectives have not been met, little can be done to punish the noncompliant parties. In some cases, the monitoring of progress is so poor, that it is difficult to ascertain whether the objectives have been met at all.

With the poor enforcement, the existing agreements have begun to lose credibility and authoritative legitimacy. This might have lead to the tacit circumvention of existing agreements and the creation of new ones that seek to serve some of the purposes that already operational agreements have failed to serve.

2. Complexity and Coordination

From looking at the blown out organizational chart (**appendix A1**), one can see that the existing structure appears to be unnecessarily complex. Whereas there are some linkages between some of the organizations created, the picture painted seems to show a lack of centrality as well as the obvious difficulty one would encounter in trying to create consensus, or trying to coordinate programs. This problem however might not be as severe on the Canadian side where the provinces of Ontario and Quebec have greater internal autonomy from the Canadian Federal Government to carry out their programs with a single focus that better reflects priorities at a more localized level.

The proliferation of all these ‘stand alone’ agreements over time indicates that there has been a largely piecemeal approach to dealing with the environmental issues affecting the Great Lakes and this probably a testament to the fact that the management of this resource has been carried out with little foresight in the past. While it is true that the more recent agreements and bodies created have more of an ecosystem management approach (e.g. the Great Lakes Strategy and subsequent versions of the Canada Ontario Agreement), many of the already existing bodies have narrow foci. So even though they

may have been designed to be effective in their own areas of expertise, coordination with other issue areas remains difficult.

Allied to the issue of accountability, the creation of so many agencies that have overlapping jurisdictions precipitates an environment in which specific responsibility is difficult to assign and subsequently to monitor and evaluate. Furthermore, some of the bodies depicted here, serve duplicative functions and without consolidation of such redundancies, economies of scale are not exploited – not to mention the possibility that programs act in competition with one another or perhaps even at cross odds. Whereas these inefficiencies might be tolerable now, they might pose a serious liability in the future if the environmental threats facing the Great Lakes continue to grow.

E. DEVELOPMENT OF ALTERNATIVES

In coming up with solutions to solve some of the problems with the existing structure, we came up with three alternatives.

Alternative 1: Modification Option

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Alternative 2: HELCOM Option

This alternative was created with the idea of adopting the desirable features from other successful natural resource sharing agreements. In this case the agreement that seemed to be most successful and most applicable to the problems facing the Great Lakes, was the contract between the countries sharing the Baltic Sea (an agreement otherwise known as The Helsinki Convention – HELCOM). With this alternative, it is assumed that dramatic changes can be effected and we develop this model in the sort of ideal vacuum that allows the dismantling of virtually all the existing institutional infrastructure, and the creation of new bodies with significantly different mandates. This option essentially represents an entirely new beginning.

Alternative 3: Hybrid Option

The third option tries to blend elements the first two alternatives and in doing so, combines the need for drastic change with a bit more realism; whereas significant change might be necessary for the Great Lakes, it would also be prudent to take advantage of already existing physical and institutional infrastructure that would be useful going forward.

1. Working Assumptions

In the development of our proposed alternatives, we had to make some simplifying assumptions and generalizations to provide our options with some theoretic traction.

Building Around the BWT, GLWQA and IJC

Among the most important of these assumptions was a leap of logic that granted the Boundary Waters Treaty (BWT) and subsequent agreements such as the Great Lakes Water Quality Act (GLWQA), and bodies such as the International Joint Commission (IJC), the legal power to override the significant political economy issues that currently exist. This was an almost necessary assumption to make if any proposal was to be advanced. Once made, we believe it allows for the creation of a fairly simpler picture and therefore conclude that this area is the critical focal point for any serious discussion of restructuring.

The selection of the BWT, GLWQA and the IJC as seed agreements and organizations to build upon was not random. The BWT is the original *binational* agreement initially intended to address issues between the US and Canada related to the Great Lakes.

Furthermore, suggestions have been made¹ that the GLWQA provides a framework from which both governments can engage in an effort to manage the Great Lakes ecosystem. As it stands, the agreement informs three other currently critical documents governing the actions of both US and Canadian federal agencies related to the Great Lakes – the Great Lakes Strategy, the Canada-Ontario Agreement, and the St. Lawrence Plan.

Finally, based on the GLWQA Governance and Institutions Review Report, it is believed that many professionals involved with the Great Lakes management view the IJC as an important binational mechanism. Ironically, it was also discovered during our research, that the HELCOM structure – which was the basis of our second proposed alternative – was originally designed based on the IJC structure that existed at the time of its creation, and for these reasons it is selected as the organization to build on.

Plans Developed By Lake

One feature common in all the alternatives we present, is that the organizational structure ultimately terminates at the managing committees/groups assigned to each respective Lake as well as one for the St. Lawrence Seaway. The idea here is to pool communities with common interests together and create project consensus and coordination at what we perceive to be a more manageable level. Similar to the development of the Lakewide Management Plans (LaMPs), the managing committees will develop even more encompassing management plans that cover more than just water quality issues.

¹ Sproul-Jones 2002. *The Restoration of the Great Lakes*. University of British Columbia Press

Eight Broad Issue Areas

The Great Lakes Regional Collaboration devised eight issue areas that we believe to broadly encompass any issue in the management of the Great Lakes ecosystem.

These issue areas are listed as:

- Nonpoint Source Pollution
- Persistent Bioaccumulative Toxics (PBT) Reduction
- Invasive Species
- Habitat/Species
- Area of Concern (AOC) Restoration/ Sediments
- Indicators and Information
- Sustainable Development
- Coastal Health

With the exception of the Indicators and Information group, we believe that strategy teams formed along these lines would work well in preparing comprehensive work plans for each individual lake's ecosystem and they will thus form the first line of work plan development and execution.

For independent monitoring unallied to any particular region, we believe that indicators and information should be set aside from the rest of the strategy teams and could be merged with, or modeled in a manner similar to the current States of the Lakes Ecosystem Conference (SOLEC) to provide overall monitoring of progress achieved.

F. PROPOSED ALTERNATIVES

1. Modification Option

As already mentioned, this option looks to utilize most of the existing structure. As you can see from Figure 1, the first notable modification to this structure is that the Great Lakes Water Quality Agreement will be the main document that informs all programs related to the Great Lakes.

Another notable modification is the elimination of the Binational Executive Committee (BEC). In its place we propose the installation of two management positions directly below the International Joint Commission (IJC). The two managers would be high level executive appointees selected from the ranks of the US Environmental Protection Agency and Environment Canada and they would be charged with the responsibility of ensuring that the directives of the International Joint Commission (empowered by a revised and stronger Boundary Waters Treaty)² are followed. These two position are vestiges of the BEC co chair positions that were staffed by representatives of EC and EPA but they will now be provided with actual power to achieve set objectives and they will also be evaluated accordingly by their level of success in achieving those aforementioned objectives.

² See Working Assumptions in section D for explanation

So whereas other federal programs specific to the Great Lakes will continue to operated within their current agency and departmental frameworks, they will still be guided and coordinated ultimately by the same document (ultimately the GLWQA) and will be coordinated by the EPA and EC and therefore also ultimately under the stewardship of the EC and EPA managers.

A supremely important feature of this alternative are the Lake Management Committees that borrow from the current Lakewide Management Plan (LaMP) system. Because this is already a binational process that focuses on each lake as an even smaller region in the Great Lakes area, we propose that these be the sites from which work programs are developed. Using seven of the eight issue areas (Indicators and Information is excluded), programs developed should achieve regional consensus in a manner that is consistent with the ecosystem management paradigm. This will also necessitate the creation of an additional Management Committee to represent the interests of the St. Lawrence Seaway. From here, these programs will be submitted to the IJC for final approval. The IJC will make their determination with the help of a technical advisory office that is comprised of the consolidation of the Water Quality Board, Science Advisory Board, and the Council of Great Lakes Research Managers³. We believe it is necessary to leave the monitoring and evaluation process out of this sub-regional level so as to ensure impartiality of reporting of results.

As already alluded to, the monitoring and assessment portion is left outside of the sub regional level. This group shall consist of a modification of the currently independent SOLEC group and other officials from both Indicators and Information Strategy team on the U.S. side, as well as similar officials from the Canadian side. It is they who would be charged with all evaluations from which the EC and EPA managers as well as the IJC will be able to determine the level of progress made.

As has been noted by many, municipal, city and state governments play a large role in implementation of programs pivotal to the environmental integrity of the Great Lakes particularly in the areas of wastewater treatment, stormwater management, agricultural runoff etc. With the assumption that a revamped GLWQA will inform the environment statutes of the local governments involved – and it is in their interests to ensure consistency with the GLWQA – then we believe that automatically these local governments should continue to commit the same resources but now with improved coordination, and with some kind of supervision from the EC and EPA managers. Also, the concerns of these local governments should not only be reflected from the LaMP stages but will be further communicated to the managers on a more continuous basis as they will also hold an advisory role to the managers. Other advisory roles to the managers would be assigned to members of the Tribal Councils, Experts in Academia, Environmental Interest Groups, and so on.

The final notable feature of this alternative is the role that budgets will play in providing better accountability. Both the EC and EPA managers will have control of the budgets involved in financing the LaMP plans. Furthermore, for those agencies and governments

³ See appendix B, pg 32-33

for which they do not exert direct influence, the promise of *additional* federal funds to be distributed at their discretion can be used as an incentive to manage the performance of the other agencies. The drawback to this method of control is that as it stands, there have already been complaints that federal dollars are never sufficient or even close to sufficient when it comes to addressing the environmental problems associated with the Great Lakes. However if the current trend of growing concern for the environment continues, then this last issue might become less problematic in the future.

The issue of turf wars between agencies will also be another significant obstacle to hurdle and even more so when one considers that under this proposal, the actions of other agencies will be influenced by the EPA. This is why the force of executive order is almost absolutely necessary but even then, there is no guarantee that all agencies will simply comply.

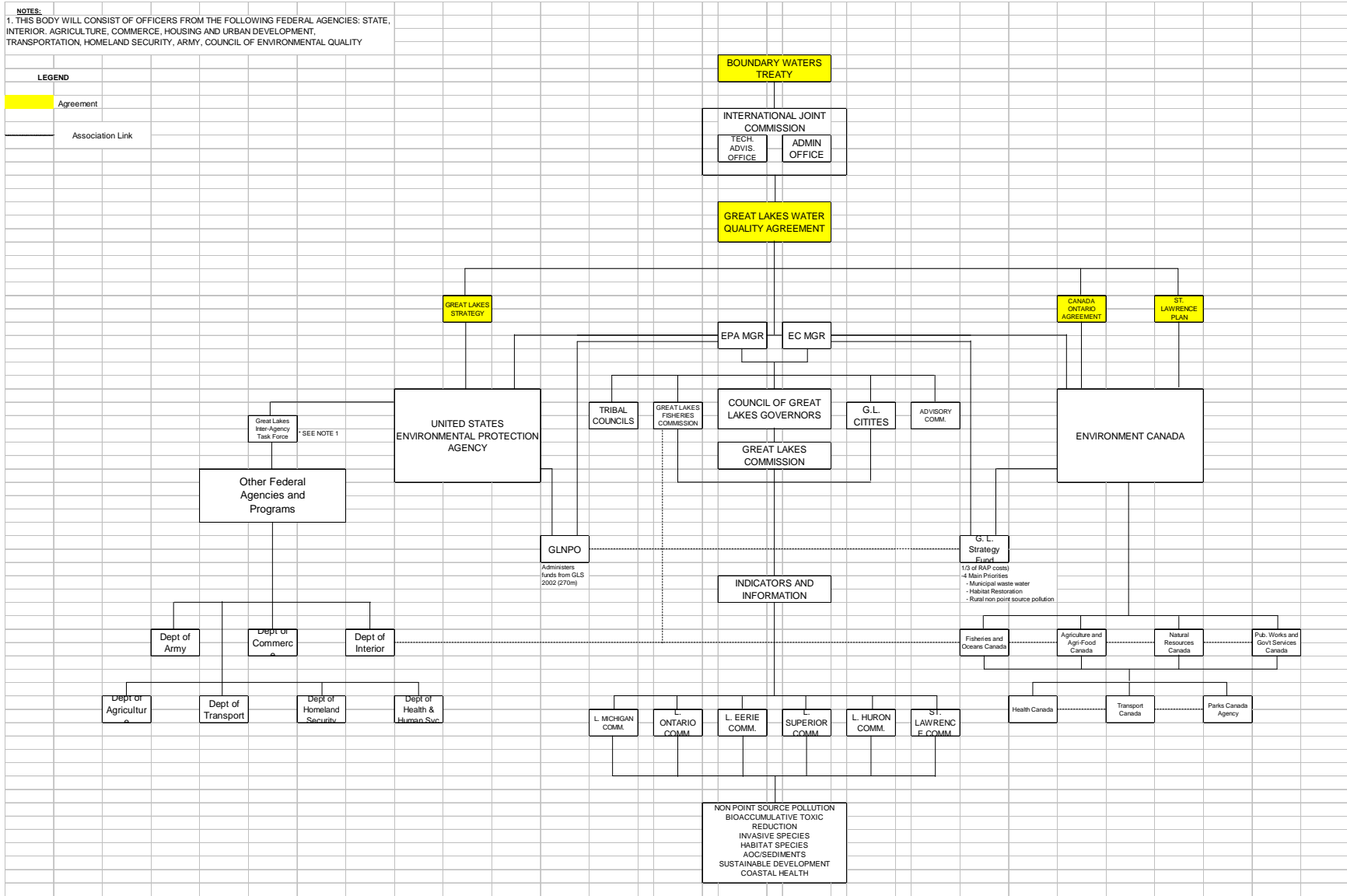


Figure 1: Organizational Structure of the Modification Option

2. HELCOM Option

The following alternate proposal for the governance structure of the Great Lakes is based on what is perceived to be one of the more successful international structures of management of natural resources: the Helsinki Commission.

(a). Organization of HELCOM

The Helsinki Convention for the Protection of the Marine Environment of the Baltic Sea Area was first signed in 1974 and then renewed in 1992. The purpose of the Convention is the protection of the marine environment of the Baltic Sea from all sources of pollution and the restoration and safeguard of its ecological balance, through intergovernmental co-operation between Denmark, Estonia, the European Community, Finland, Germany, Latvia, Lithuania, Poland, Russia and Sweden, which are the Contracting Parties of the Convention. The governing body of the Helsinki Convention is the Helsinki Commission or HELCOM, which works as follows:

- An **environmental policy maker** for the Baltic Sea area developing common environmental objectives and actions.
- An **environmental focal point** providing information about (i) the state of/trends in the marine environment; (ii) the efficiency of measures to protect it and (iii) common initiatives and positions which can form the basis for decision-making in other international forums.
- A **body** for developing, according to the specific needs of the Baltic Sea, Recommendations of its own and Recommendations supplementary to measures imposed by other international organizations.
- A **supervisory body** dedicated to ensuring that HELCOM environmental standards are fully implemented by all parties throughout the Baltic Sea and its catchments.
- A **coordinating body**, ascertaining multilateral response in case of major maritime incidents.

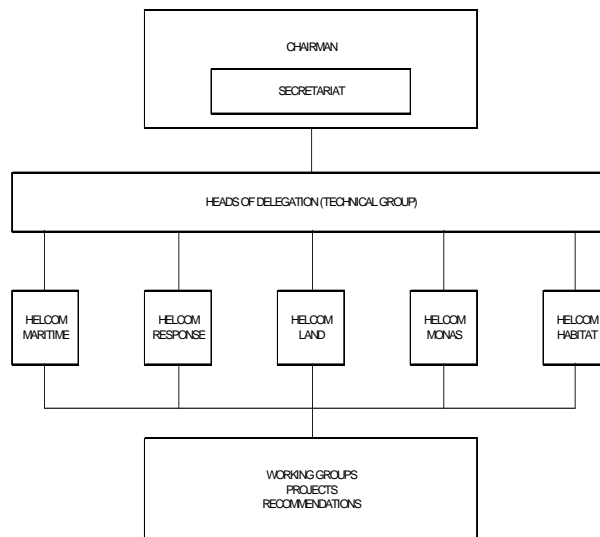


Figure 2. Organizational Structure of HELCOM

The Commission is at the top of the structure, the contracting parties (Denmark, Estonia, the European Community, Finland, Germany, Latvia, Lithuania, Poland, Russia and Sweden) elect a Chairman. The chairmanship rotates between the contracting parties every two years, according to their alphabetical order in English. Each contracting party to the Convention also sends a delegation consisting of representatives, alternate representatives, experts and advisers that constitute the rest of the Commission.

Upon convocation by the Chairman the Commission shall hold a regular meeting at least once a year, and at ministerial level at least once every three years, unless the Heads of Delegation decide otherwise.

The primary function of this stage of the organizational structure is the unanimous adoption of recommendations and projects for the protection of the marine environment already approved by the secondary level of the organization's hierarchy named the Head of Delegations. After the approval of recommendations, the governments of the contracting parties must implement these directives into their respective national programs and national legislation.

The Head of Delegations – who act as a technical group – are in charge of the revision and approval of the recommendations and projects proposed by the Five Working Groups. Once approved, those recommendations and projects will be subsequently presented to the Chairman and the Commission. Head of Delegations shall normally meet twice a year, unless decide otherwise.

At the bottom of the structure, the five main groups carry out the main task of the HELCOM. The five main groups are responsible for the elaboration of the recommendations and projects (policies and strategies) as well as their implementation. They also, propose issues for discussion at the meetings of the Heads of Delegations, where decisions are made.

The five groups address different aspects of HELCOM's work in preventing pollution and protecting the Baltic marine environment:

- The Monitoring and Assessment Group (HELCOM MONAS)
- The Land-based Pollution Group (HELCOM LAND)
- The Nature Protection and Biodiversity Group (HELCOM HABITAT)
- The Maritime Group (HELCOM MARITIME)
- The Response Group (HELCOM RESPONSE)

The HELCOM's recommendations and projects are established to provide an adaptive and flexible system for dealing with specific issues from a more thematic perspective. These recommendations and projects are to be implemented by the contracting parties through their national legislation. Since the beginning of the 1980s HELCOM has adopted some 200 HELCOM Recommendations for the protection of the Baltic Sea.

Another important duty of HELCOM is to follow up the implementation of the Convention and HELCOM recommendations.

(b). The Advantages of the HELCOM

The enforceability of the projects and recommendations approved by the HELCOM which are to be implemented by the contracting parties through their national legislation. Moreover, the HELCOM follows up the implementation of the Convention and recommendations and projects in the contracting parties' internal legislation.

The existence of a well organized hierarchy within the HELCOM structure. At the bottom, the technical area composed by the Five Main Groups and the Head of Delegations is in charge of the development of technical goals, procedures, implementing structures, measures and monitoring of the action plans that will be submitted for its approval and respective implementation in each contracting parties. At the top, the contracting parties that have not only the political power to approve, release and follow up the implementation of the action plans but also the financial power required to finance the work of the entire Commission.

The work of each of the Five Main Groups is developed without any preference or particular interest of any contracting party. The Baltic Sea is viewed as one water body bordered by one party.

The existence of a successful accountability framework with specific measurable results, clear determination of the actors and time limits, clear result-oriented goals and actions, and result reporting procedures. The projects and recommendations of the HELCOM are developed following each of the cited steps of the accountability framework. Even more, the Monitoring and Assessment Group complements this accountability framework ensuring that HELCOM's monitoring programmes are efficiently used through horizontal co-ordination between the Commission's five main groups.

Our proposal basically duplicates the HELCOM structure to the extent possible, and incorporates some existing structures of the Great Lakes. The proposed structure is organized as shown below in Figure 3.

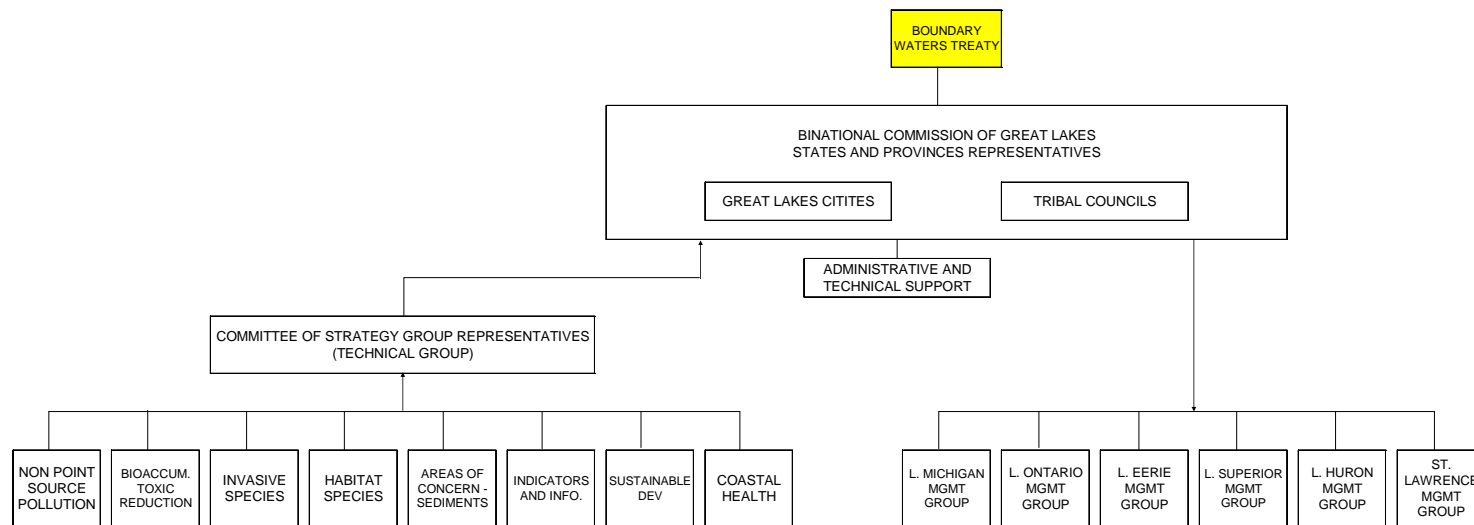


Figure 3: Organizational Structure of HELCOM Option

(c). Adapting HELCOM to the Great Lakes

The Boundary Waters Treaty will once again provide the core for this new structure which will be made up of four basic levels that will work in a manner similar to that of HELCOM's organization.

Starting from the bottom up (and in the direction of the flow of information shown in figure 3 above), there will be eight issue groups⁴ which will elaborate a full range of recommendations, projects, options, and ideas relevant to its area of expertise and submit them formally to the Committee of Strategy Group Representatives for approval. These eight groups will be:

- Nonpoint Source Pollution Group
- Persistent Bioaccumulative Toxics (PBT) Reduction Group
- Invasive Species Group
- Habitat Species Group
- Area of Concern (AOC) Restoration Sediment Group
- Indicators and Information Group
- Sustainable Development Group
- Coastal Health Group

The Committee of Strategy Group Representatives will be a technical group comprised of representatives from each issue area, and it will be in charge of the revision and approval of the recommendations and projects elaborated by the Eight Working Groups. The idea at this level would be to coordinate, consolidate (where possible) and streamline proposed projects in a manner consistent with the ecosystem management idea. Once approved, those recommendations and projects will be subsequently submitted to the Binational Commission for final and official approval.

The Binational Commission of Great Lakes States and Provinces Representatives (which will also include the Great Lakes Cities and the Tribal Council) will be at the top of the organization. Each contracting party (the eight U.S. States and the two Canadian provinces) will nominate a high level representative to the Commission and as a group, they will decide which projects and recommendations previously approved by the Committee of Strategy Group Representatives, will be adopted by the Commission and subsequently implemented by each of the contracting parties. The Commission will be assisted by an administrative and technical body which will work as an advisory committee. The approved projects would then be executed by each Lake Management Group as directed.

The Lake Management Groups would be structured similar to the Management Committees discussed in alternative 1 (also see Working Assumptions in section D for more detail) and would be responsible for carrying out the objectives outlined by the Commission.

⁴ See Working Assumptions in section D for explanation

(d.) Points to Consider

There are some characteristics of HELCOM's operating procedures that need to be highlighted and considered before broad application to the Great Lakes region.

The major difference with the Great Lakes Region is the existence of a supranational structure governing the Baltic Sea Region. The enlargement of the European Union has radically changed the political environment of the Baltic region. By May 2004, eight out of the nine countries bordering on the Baltic were members of the European Community. This situation has improved the protection of the marine environment, thanks to the wider implementation of the European Union legislation into the member's countries.

More recently, the European Community has been working with the objective of creating and implementing equal environment standards to be adopted by all the member countries of the EU. Moreover the European Community has been threatening the member countries that have not met and implemented those standards and directives with lawsuits.

However, it must also be highlighted that even before the creation of the European Community, HELCOM's had existed for more than two decades, and had managed to secure the cooperation of countries with widely differing political and economic backgrounds through the pursuit of a common purpose.

Another difference is the budget of the HELCOM. Each contracting party contributes an equal amount of funds that are only used to cover HELCOM's administrative costs. Each contracting party is then responsible to internally generate the funds necessary to implement the HELCOM recommendations and project passed by the Commission and adopted in its respective legislation.

Around the Baltic Sea Region exist different organizations that were created with the objective to protect and develop this area. The Council of the Baltic Sea States, The Agenda 21 for the Baltic Sea region (Baltic 21) among others, are political, economical and even developmental organizations composed by representatives of the government of the Baltic Sea States as well as the European Commission that address wider issues for the region than that of the HELCOM, for example Agriculture, Energy, Forests, Industry, Education among others. Although HELCOM is a strategic partner of the Council and member of the Agenda 21 it is a completely separate organization with its own rules and procedures.

3. Hybrid Option

As already mentioned, this option tries to combine the desirable features of the first two alternatives and thus tries to mix the need for drastic change with a bit more realism, taking advantage of already existing physical and institutional infrastructure.

In this alternative, both US and Canadian federal involvement has been reorganized; federal programs related to the Great Lakes are now focused through the relevant regional and local

offices – for instance, the relevant USDA regional offices would be absorbed into the respective Lake Management Groups and the same with EPA, US Fish and Wildlife etc.

Overall direction would still be determined by the IJC through an almost similar mechanism noted in alternative 1. The respective Lake Management Groups – expanded to include and assimilate relevant federal programs and departments – will still provide their list of recommended projects and programs but rather than have these recommendations go straight to the IJC as in alternative 1, there will be an additional phase of recommendation approval carried out by the Joint Technical Commission comprised of both US and Canadian and federal program representatives.

The Joint Technical Commission should consist of representatives from the seven issue areas with no affiliations to any region. It would also consist of representatives of federal departments and programs similarly unaffiliated with any Great Lakes region, and it is through this body that deliberation and consensus of project recommendation will be carried out. The idea here is that additional practicality would be added to the recommendation process due to the fact that representatives from the federal programs would be able to inform the work plan development process as to actual budget feasibility based on each department's annual budget granted by its respective federal government.

This third option also utilizes the same EPA and EC manager positions mentioned in alternative 1, however in this case, local government bodies comprised of representatives from the state, municipal, city, and tribal council levels, will not only be included in the selection process of the managers, but will also have the power as a collective group to influence the directives generated by the IJC. This collective function would be somewhat similar to the Binational Commission of Great Lakes States and Provinces that was presented in alternative 2 and their collective concerns should be reflected in IJC proposals and communicated to the EPA and EC managers under less formal conditions.

Similar to alternative 1, this option utilizes budgets once again as a carrot and stick in ensuring accountability and enforcement as shown below in figure 4.

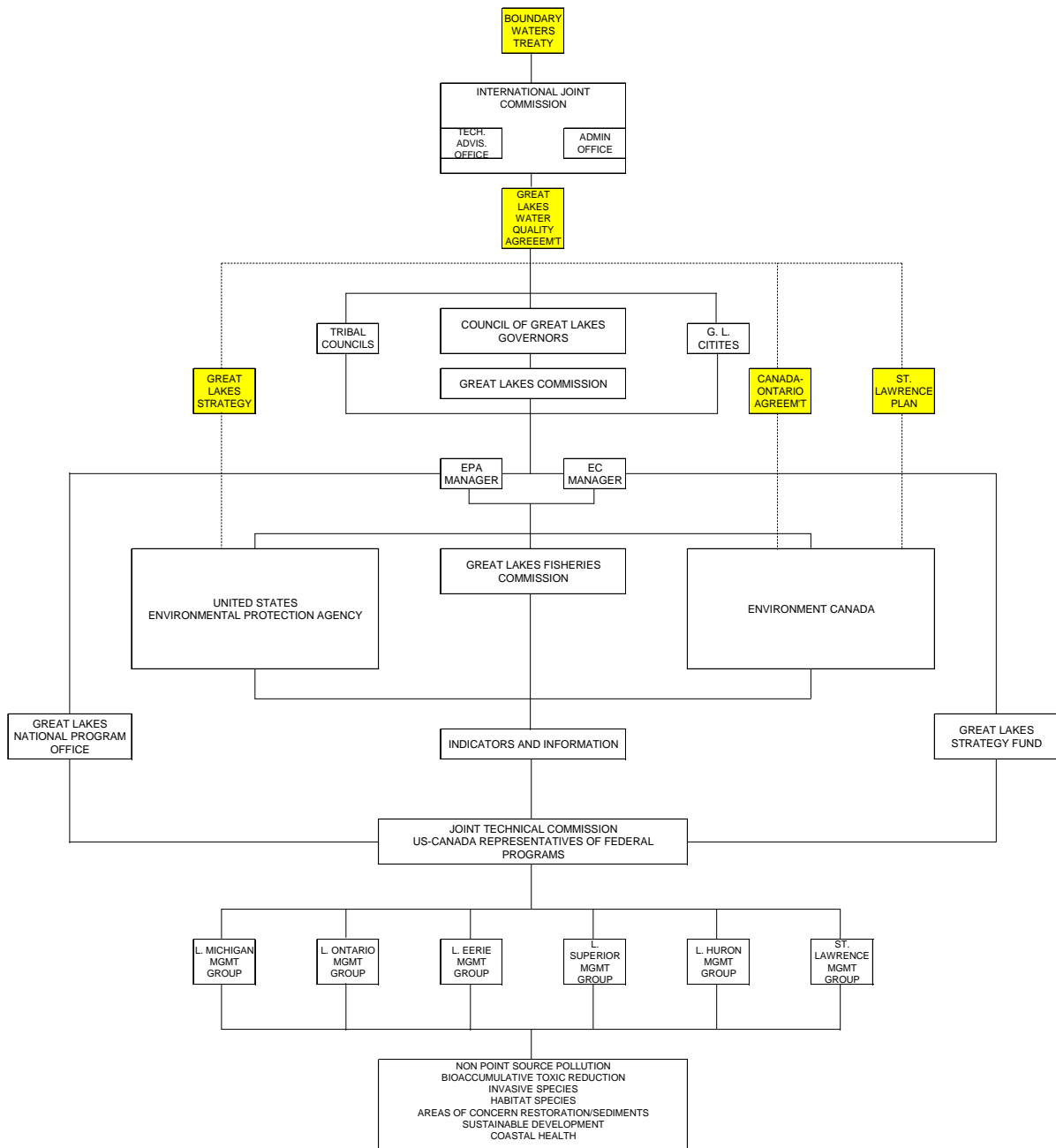


Figure 4: Organizational Structure of Hybrid Option

G. CONCLUDING REMARKS

When considering the alternatives presented above, one can and should ask whether there is a better way to effect the changes required to improve the current governing structure. Instead of spending time and money trying to reorganize, mightn't it be more prudent to instead increase the operating budgets of the existing programs? The task of trying to conceive an alternative governing structure to what currently exists now is not only extremely difficult but it is also easily undermined by the cynicism of practicality. Who or what provides the force that not only slows down the inertia of the current mode of operations, but also sets it off on a new path? With the situation threatening to entirely unravel in the future, all options – including reorganization – have to be explored, and this is what we have attempted to study.

There is a belief that the virtually spontaneous combustion of the Cuyahoga River and the 'death' of Lake Erie prompted the drafting of the GLWQA. As already admitted, our proposals require a non-trivial leap of logic that somehow results in reinvigorated and reformatted agreements between the U.S. and Canada and maybe it will require a similarly spectacular environmental mishap for this leap to occur. But over the last couple of years, there has also been a wave of growing concern for our environment, and this phenomenon has begun to provide environmental issues with the kind of political salience that may not have existed before. Additionally, if the local pressures to improve the current conditions increase, then even from electoral perspective, regional lawmakers could push the Great Lakes agenda onto the national stage and thus diminish the magnitude of the leap required.

Besides the idea of reconstituting the governance structure around the BWT, GLWQA and IJC, the other underlying principles that guided the development of our proposed alternatives included:

The empowerment of high level central actors measured by their performance in ensuring compliance and implementation of the necessary programs. The idea here is that with the right kind of political/executive backing, these czar-like positions would also harness personal career ambitions and in doing so, provide the much needed drive to ensure that all sub-organizations are coordinated and working together with due diligence to achieve the collective goal.

The use of budgetary power as both a carrot and stick in improving the accountability problems currently present. Even though it has been outside the scope of this study to devise precise budgetary mechanisms that could be employed towards this goal, we believe that at the very least, access to additional federal funds (to be distributed at the discretion of the two managers) could act as an incentive for all sub-organizations to achieve their respective objectives. This might require the establishment of baseline spending – founded on the standard operating procedures of the various departments – to be guaranteed annually and thereby ensuring that in the event of deliberative gridlock, the most basic operating and maintenance programs still remain funded.

The reorganization of project and program formulation to better reflect regional priorities.
By modifying and expanding the current LaMP process as the foundation for the development and execution of necessary projects for each lake, we believe that some of the political economy problems can be overcome and that even greater cooperation can be achieved as communities with more common interests work together to collectively solve their problems. This should allow for better agreement building at the most fundamental levels and coupled with better management at higher levels noted above, it should result in a situation where there is top down enforcement coupled with bottom up consensus building. In fact we believe that with this more focused local participation, national issues that might have previously undermined collaboration can be bypassed using this more regional cooperation.

APPENDIX A

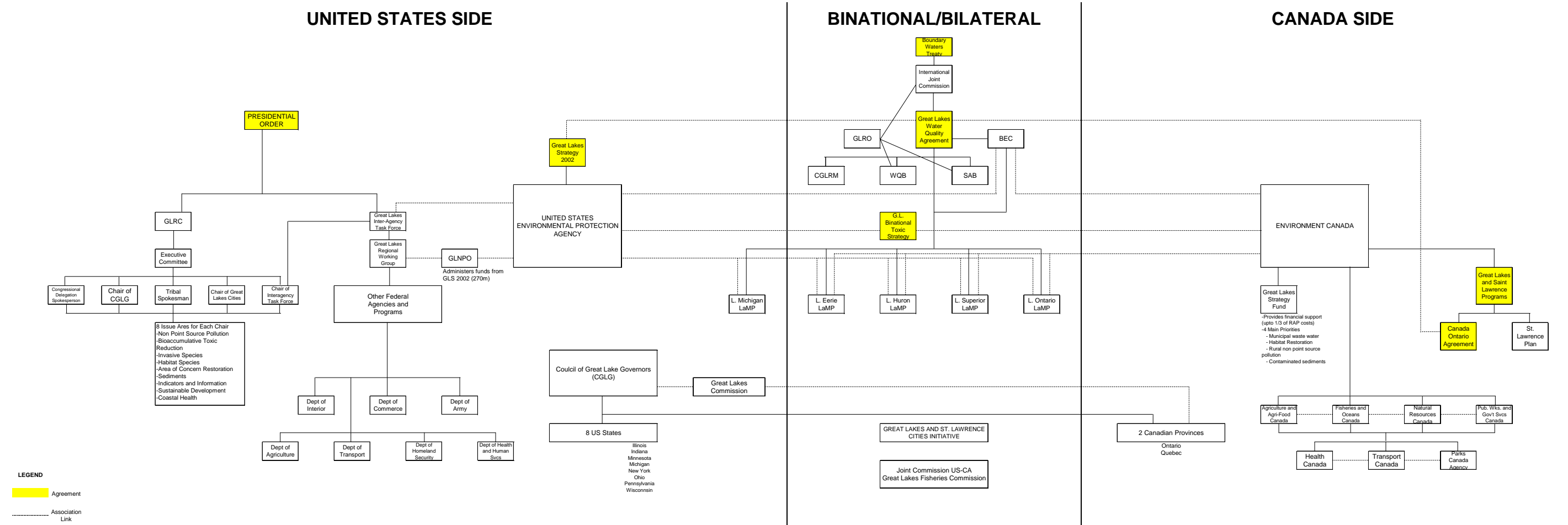


Figure A1: Existing Structure of Great Lakes Governance

APPENDIX B: DETAILED EXPLANATION OF SOME KEY BODIES

1. The Boundary Waters Treaty – The International Joint Commission

Purpose: This treaty provides the principles and mechanisms to help resolve disputes and to prevent future ones, primarily those concerning the use of water, water quantity and water quality, along the boundary between Canada and the United States.

The International Joint Commission, composed by three commissioners on the part of the United States and three commissioners on the part of Canada was created to accomplish the purpose of the Treaty. The main function of the International Joint Commission is to have jurisdiction over all cases involving the use or obstruction or diversion of the boundary waters.

2. Convention On Great Lakes Fisheries Between The United States And Canada – Great Lakes Fishery Commission

Purpose: the eradication or minimization of the populations of the sea lamprey in the Convention Area. For that purpose, the Convention provides research and recommendations to aid in the management of Great Lakes fisheries and to control and eradicate sea lamprey.

The Contracting Parties established the Great Lakes Fishery Commission, composed of a Canadian Section and a United States Section. Each Section is composed of not more than four members appointed by the respective Contracting Parties.

Functions of the Great Lakes Fishery Commission:

- Formulate a research program or programs designed to determine the need for measures to make possible the maximum sustained productivity of any stock of fish in the Convention Area.
- Formulate and implement a comprehensive program for the purpose of eradicating or minimizing the sea lamprey populations in the Convention Area.

3. The Great Lakes Basin Compact – Great Lakes Commission

Purposes: the purposes of this compact are, through means of joint or cooperative action:

- To promote the orderly, integrated, and comprehensive development, use, and conservation of the water resources of the Great Lakes Basin.
- To plan for the welfare and development of the water resources of the Great Lakes Basin as a whole as well as for those portions of the Great Lakes Basin which may have problems of special concern.
- To advise in securing and maintaining a proper balance among industrial, commercial, agricultural, water supply, residential, recreational, and other legitimate uses of the water resources of the Great Lakes Basin.

The Great Lakes Basin Compact created an agency called The Great Lakes Commission. The Commission is composed of not less than three nor more than five commissioners from each party state.

Functions of the Great Lakes Commission:

- Collect, correlate, interpret, and report on data relating to the water resources and the use thereof in the Basin or any portion thereof.
- Recommend methods for the orderly, efficient, and balanced development, use and conservation of the water resources of the Basin or any portion thereof to the party state and to any other governments or agencies having interests in or jurisdiction over the Basin or any portion thereof.
- Consider means of improving and maintaining the fisheries of the Basin or any portion thereof.
- Recommend policies relating to water resources including the institution and alteration of flood plain and other zoning laws, ordinances and regulations.
- Recommend uniform or other laws, ordinances, or regulations relating to the development, use and conservation of the Basin's water resources to the party states or any of them and to other governments, political subdivisions, and agencies of inter-governmental bodies having interests or in jurisdiction sufficient to affect conditions in the Basin or any portion thereof.
- Cooperate with the governments of the United States and of Canada, the party states and any public or private agencies or bodies having interests in or jurisdiction sufficient to affect the Basin or any portion thereof.

4. Great Lakes Fishery Act

Purpose: The Great Lakes Fishery Act sets forth the procedures for carrying out programs under the Convention on Great Lakes Fisheries between the United States and Canada.

The United States is represented by four Commissioners appointed by the President and appoints an advisory committee for each of the Great Lakes, upon which committee each state bordering on the lake may be represented by not more than four members.

- The advisory committees will advise the U.S. section of the Great Lakes Fishery Commission by making comments, recommendations, and/or suggestions pertinent to the commission's duties.

5. Canada-Ontario Agreement Respecting The Great Lakes Basin Ecosystem

The Canada-Ontario Agreements of 1972, 1976, 1982, 1986, 1994 and 2002 are the federal-provincial agreement that supports the restoration and protection of the Great Lakes Basin

Ecosystem. The Agreement between the governments of Canada and Ontario outlines how the two governments will cooperate and coordinate their efforts to restore, protect and conserve the Great Lakes basin ecosystem.

Purposes:

- To control discharges of phosphorus in municipal sewage.
- To control toxic chemical pollution and runoff from both urban and agricultural lands.
- To strengthen the planning, cooperation and coordination in implementing actions to restore and protect the ecosystem – remedial action plans, to prevent and control pollution into the ecosystem, and to conserve species, populations and habitats in the Great Lakes Basin Ecosystem.
- To establish principles which will guide the actions of the Parties.
- To describe the development of Annexes, to respond to existing or emerging environmental issues or management functions.

6. The Great Lakes Water Quality Agreement

The Great Lakes Water Quality Agreement (GLWQA) is a formal international agreement between United States and Canada, first signed in 1972 and amended in 1978, 1983 and 1987, that reflects the two countries' commitment to resolve a wide range of water quality issues facing the Great Lakes and the international section of the St. Lawrence River.

Purposes:

- To control point-source pollution from industrial sources and sewage plants. Conventional pollutants, such as phosphorus and bacteria.
- To eliminate or reduce to the maximum extent practicable the discharge of pollutants into the Great Lakes. Toxic and hazardous polluting substances.
- To identify specific Areas of Concern or the most seriously polluted areas in the basin, and procedures for cleanup through the development and implementation of Remedial Action Plans.
- To prescribe principles and procedures to address critical pollutants in the open waters of the lakes by developing and implementing Lakewide Management Plans.

The International Joint Commission will assist in the implementation of this Agreement. For this purpose, the Commission carries out its responsibilities utilizing principally the services of the Water Quality Board and the Science Advisory Board.

Functions of the International Joint Commission:

- Collection, analysis and dissemination of data and information supplied by the Parties and State and Provincial Governments relating to the quality of the boundary waters of

the Great Lakes System and to pollution that enters the boundary waters from tributary waters and other sources.

- Tendering of advice and recommendations to the Parties and to the State and Provincial Governments on problems of and matters related to the quality of the boundary waters of the Great Lakes System.
- Provision of assistance in the coordination of the joint activities.

Great Lakes Water Quality Board:

This Board is the principal advisor to the International Joint Commission with regard to the exercise of all the function, powers and responsibilities assigned to the Commission.

The Board will be composed of an equal number of members from Canada and the United States, including representatives from the Parties and each of the State and Provincial Governments.

Functions of the Water Quality Board:

- Make recommendations on the development and implementation of programs to achieve the purpose of the Water Quality Agreement.
- Assemble and evaluate information evolving from such programs.
- Advise the Commission on the progress and effectiveness of such programs and submit appropriate recommendations.
- Undertake liaison and coordination between the institutions established under the Water Quality Agreement and other institutions and jurisdictions which may address concerns relevant to the Great Lakes Basin Ecosystem so as to ensure a comprehensive and coordinated approach to planning and to the resolution of problems, both current and anticipated.

Great Lakes Science Advisory Board:

This Board is the scientific advisor to the Commission and the Water Quality Board. The Science Advisory Board will be responsible for developing recommendations on all matters related to research and the development of scientific knowledge pertinent to the identification, evaluation and resolution of current and anticipated problems related to Great Lakes water quality.

The Science Advisory Board consists of managers of Great Lakes research programs and recognized experts on Great Lakes water quality problems and related fields.

Functions of the Science Advisory Board:

- Review scientific information in order to examine the impact and adequacy of research and the reliability of research results, and ensure the dissemination of such results; identify additional research requirements; identify specific research programs for which international cooperation is desirable.
- Seek analyses, assessments and recommendations from other scientific, professional, academic, governmental or intergovernmental organization relevant to Great Lake Basin Ecosystem research.

Great Lakes Regional Office of the International Joint Commission:

This Office will be headed by a Director who will be appointed by the Commission in consultation with the Parties and with the Co-Chairmen of the Boards.

Functions of the Great Lakes Office of the International Joint Commission:

- Provide administrative support and technical assistance for the Water Quality Board and the Science Advisory Board and their sub-organizations, to assist the Boards in discharging effectively the responsibilities, duties and functions assigned to them.

Council of Great Lakes Research Managers:

The Council brings the top research program managers together to discuss research findings, coordinate research and monitoring, and determine research needs to achieve the Agreement's goals.

International Air Quality Advisory Board:

This Board is comprised of academic and governmental researchers and managers, advises the Commission on transboundary air quality issues between the two countries, including those that affect Great Lakes water quality.

7. Binational Executive Committee

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 Great Lakes Water Quality Agreement.

Functions of the Binational Executive Committee:

- Sets priorities and strategic direction for binational programming in the basin.
- Coordinates binational programs and activities.

- Responds to new and emerging issues on the Great Lakes, including tasking existing or creating new working groups to undertake designated activities.

Structure of the Binational Executive Committee:

Secretariat:

The Secretariat provides strategic input to BEC and assists coordination and tracking of activities relating to the binational program and provisions of the Great Lakes Water Quality Agreement. The Secretariat is composed of the Directors of USEPA's Great Lakes National Program Office (GLNPO) and Environment Canada's Great Lakes and Corporate Affairs (GLCA) with the assistance of their respective staff.

Lake Committees:

Lake Committees are operational committees having management responsibilities for a variety of lakewide activities, such as the development of Lakewide Management Plans and associated workplans, securing and reporting commitments from participating agencies, and involving the public and other stakeholders.

Lake Committees will be formed for each of the Great Lakes, with representation from Canadian and U.S. environmental and natural resource management agencies having jurisdiction in the respective lakes.

Functions of the Lake Committees:

- Development of a Lakewide Management Plan.
- Development of ecosystem objectives.
- Liaison with the respective lake committees of the Great Lakes Fishery Commission on areas of mutual interest.
- Reviewing and coordinating lakewide monitoring and surveillance activities.

Working Groups:

Binational working groups will be established at the discretion of BEC to respond to particular tasks and outputs which would generally relate to basin-wide issues and needs.

8. Council Of Great Lakes Governors

The Council of Great Lakes Governors is a non-partisan partnership of the Governors of the eight Great Lakes States - Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania, and Wisconsin. In 1983, the region's Governors joined forces to create the Council and tackle the severe environmental and economic challenges then facing the citizens of their States. In more recent years, the Premiers of Ontario and Québec (associate members) have joined as with the Governors in advancing the high performance economy of the Great Lakes region.

Purposes:

- Coordination of the Great Lakes regional water policy.
- Improvement of the regional economy of the Great Lakes.
- Encouragement of the clean-up and redevelopment of brownfields throughout the region.
- Management of aquatic invasive species in the Great Lakes.

The Council is composed by a Boards of Directors - composed by a Director of each of the eight Great Lakes States from which a Chairman is elected - and a Associate Members - composed by the Premiers of the Provinces of Ontario and Quebec.

9. The Great Lakes Charter

Signed by the Great Lakes States and Provinces - the States of Illinois, Indiana, Michigan, Minnesota, New York, Ohio, and Wisconsin, the Commonwealth of Pennsylvania, and the Provinces of Ontario and Quebec.

Purpose:

- To conserve the levels and flows of the Great Lakes and their tributary and connecting waters.
- To protect and conserve the environmental balance of the Great Lakes Basin ecosystem.
- To provide for cooperative programs and management of the water resources of the Great Lakes Basin by the signatory States and Provinces.
- To make secure and protect present developments within the region;

The Charter created a Water Resources Management Committee composed of representatives appointed by the Governors and Premiers of each of the Great Lakes States and Provinces.

Functions of the Water Resources Management Committee:

- Identify specific common water data needs.
- Develop and design a system for the collection and exchange of comparable water resources management data.
- Recommend institutional arrangements to facilitate the exchange and maintenance of such information.

10. The St. Lawrence Plan (1989, 1994, 1998 And 2005)

The agreements of 1989, 1994, 1998 and 2005 reached between the governments of Canada and Québec initially dealt with major sources of pollution and contamination of the St. Lawrence River. Then collaboration between governments concentrated on protecting biodiversity and

ecosystem health. Subsequent phases targeted agriculture and, more recently, navigation, a concern of several riverside communities.

Purposes:

- The clean-up, protection, restoration and conservation of the St. Lawrence River and the development of environmental technology through sustainable development of its resources.
- The reduction of liquid toxic wastewater dumped into the environment and the elimination of persistent and biocumulative toxic substances dumped into the St. Lawrence River.
- The protection of ecosystem health, human health, and the involvement of riverside communities in the process of helping to make the St. Lawrence more accessible and recover its former uses.
- The sustainable development of the St. Lawrence River and the development of the concepts of ecological integrity, environmentally responsible economic activities, community commitment and informed, concerted and integrated governance of the St. Lawrence River.

11. Great Lakes Critical Programs Act

Purpose: This Act specifies the mechanisms in order to implement key provisions on the Great Lakes Water Quality Agreement.

12. Great Lakes Air Quality Agreement

This 1991 Agreement between the U.S. and Canada provides a mechanism to address shared concerns for trans-boundary air pollution.

Purpose: Initially the focus of the Agreement was on acid rain. Recently, the two nations expanded cooperative efforts to control trans-boundary ground-level ozone and to conduct joint analyses on trans-boundary particulate matter. The main body of the Agreement lays out overall air quality objectives and specific requirements for both countries.

A bilateral Air Quality Committee and two subcommittees - Program Monitoring and Reporting, and Scientific Cooperation were created in order to implement the provisions of the Agreement.

13. The Joint Federal/State 5-Year Strategy Protecting The Great Lakes

With this strategy, the U.S. States, tribes, and federal agencies responsible for environmental protection and resource management in the Great Lakes Basin commit to achieving specific environmental goals through a full range of coordinated activities.

Purposes:

- Reduction of toxic substances.
- Protection and restoration of important habitats.
- Protection of human/ecosystem species health.

14. Great Lakes Binational Toxic Strategy

This Canada - United States Strategy is the collaborative process by which Environment Canada and the United States Environmental Protection Agency, in consultation with other federal departments and agencies, Great Lakes states, the Province of Ontario, Tribes, and First Nations, will work in cooperation with their public and private partners toward the goal of virtual elimination of persistent toxic substances resulting from human activity, particularly those which bioaccumulate from the Great Lakes Basin.

15. The Great Lakes Charter Annex - A Supplementary Agreement To The Great Lakes Charter

Purpose: the implementation of the Charter by developing an enhanced water management system that is simple, durable, efficient, retains and respects authority within the Basin.

16. Great Lakes Legacy Act

Purpose: to authorize the Administrator of the Environmental Protection Agency to carry out projects and conduct research for remediation of sediment contamination in areas of concern in the Great Lakes.

17. Great Lakes Strategy

The Great Lakes Strategy 2002 is a forum of senior-level representatives from the U.S. Federal, State, and Tribal governmental agencies that share responsibility for environmental protection and natural resources management of the Great Lakes.

Purposes:

- The reduction of toxic substances in the Great Lakes Basin Ecosystem, with an emphasis on persistent bioaccumulative toxic (PBTs) substances.
- The protection and restoration of the physical integrity of the Great Lakes, supporting habitats of healthy and diverse communities of plants, fish and other aquatic life, and wildlife in the Great Lakes Basin Ecosystem.
- The protection of human and biological health.
- The restoration and maintenance of diverse and self-sustaining populations of predominantly native fish and other aquatic life, wildlife, and plants in the Great Lakes Basin Ecosystem.
- The control and elimination of pathogens and the prevention of the introduction and spread of invasive species.
- The work of all the actors involve in the Great Lakes as an environmental community to establish effective programs, coordinate authorities and resources, report on progress, and hold forums for information exchange and collective decision-making.

18. Presidential Executive Order - Great Lakes Interagency Task Force

Establishment of the Great Lakes Interagency Task Force by the U.S. Presidential Executive Order 13340 of May 18th, 2004. With EPA as the lead, the Task Force brings together 10 agency and cabinet officers tasked to provide strategic direction on federal Great Lakes policy.

Purpose: The Great Lakes Interagency Task Force will address environmental and natural resource issues of national concern by improving coordination and integration of the many relevant federal programs throughout the Great Lakes basin, and by harnessing the power of collaboration with Governors, Mayors, Members of Congress, tribes, and citizens.

Functions of the Task Force:

- Help convene and establish a process for collaboration among the members of the Task Force and the members of the Working Group, with the Great Lakes States, local communities, tribes, regional bodies, and other interests in the Great Lakes region regarding policies, strategies, plans, programs, projects, activities, and priorities for the Great Lakes system.
- Collaborate with Canada and its provinces and with bi-national bodies involved in the Great Lakes region regarding policies, strategies, projects, and priorities for the Great Lakes system.
- Coordinate the development of consistent Federal policies, strategies, projects, and priorities for addressing the restoration and protection of the Great Lakes system and assisting in the appropriate management of the Great Lakes system.
- Develop outcome-based goals for the Great Lakes system relying upon, among other things, existing data and science-based indicators of water quality and related environmental factors. These goals shall focus on outcomes such as cleaner water, sustainable

fisheries, and biodiversity of the Great Lakes system and ensure that Federal policies, strategies, projects, and priorities support measurable results.

The Task Force shall consist exclusively of the following officers of the United States:

- The Administrator of the Environmental Protection Agency (who shall chair the Task Force)
- The Secretary of State
- The Secretary of the Interior
- The Secretary of Agriculture, the Secretary of Commerce
- The Secretary of Housing and Urban Development
- The Secretary of Transportation
- The Secretary of Homeland Security
- The Secretary of the Army
- The Chairman of the Council on Environmental Quality

The Task Force shall report to the President through the Chairman of the Council on Environmental Quality.

Great Lakes Regional Working Group:

Composed of the appropriate regional administrator or director with programmatic responsibility for the Great Lakes system for each agency represented on the Task Force.

The Great Lakes National Program Manager shall serve as chair of the Working Group. The Working Group will coordinate and make recommendations on how to implement the policies, strategies, projects, and priorities of the Task Force.

The Great Lakes National Program Office of the Environmental Protection Agency shall assist the Task Force and the Working Group in the performance of their functions.

19. Presidential Executive Order - Great Lakes Regional Collaboration Of National Significance

The Presidential Executive Order 13340 promoted the formation of a Regional Collaboration of National Significance for the Great Lakes. The Federal Government will partner with the Great Lakes States, tribal and local governments, communities, and other interests to establish a regional collaboration to address U.S. nationally significant environmental and natural resource issues involving the Great Lakes.

20. Framework For The Great Lakes Regional Collaboration

This Framework establishes the structure, functions and objectives of the Great Lakes Regional Collaboration of National Significance.

Objectives of the Great Lakes Regional Collaboration:

- It will develop a Great Lakes Restoration and Protection Strategy to inform future implementation of programs and funding throughout the region. This Strategy will build upon the extensive collaborative efforts already in place and will include specific action plans based on the recommendations provided by the Issue Area Strategy Teams.
- The GLRC will serve as a forum for addressing near-term regional issues that relate to Great Lakes ecosystem protection and restoration.
- The GLRC will create an oversight forum to coordinate and enhance implementation of the Strategy.

Great Lakes Regional Collaboration Members:

- The eight Great Lakes Governors
- The Great Lakes Mayors
- The nine federal cabinet-level officials who make up the federal Great Lakes Interagency Task Force
- Tribal leaders
- Members of the Great Lakes Congressional Delegation

Executive Committee:

The Executive Committee is made up of individuals designated as the spokesperson for each of the Great Lakes Regional Collaboration Member constituencies.

Technical Advisors:

Technical advisors are representatives of governmental and quasigovernmental bodies that have technical expertise regarding the Great Lakes ecosystem and that are not represented on the Executive Committee.

Issue Area Strategy Teams:

The Strategy Teams are responsible for examining and providing recommendations on specific issues within the Great Lakes ecosystem to the Executive Committee.

Issue Area Strategy Teams:

- **Nonpoint Source Strategy Team:** Priority: control pollution from diffuse sources into water, land and air.
- **Persistent Bioaccumulative Toxics (PBT) Reduction Strategy Team:** Priority: reduce the introduction of PBTs into the Great Lakes ecosystem.

- **Invasive Species Strategy Team:** Priority: stop the introduction and spread of non-native aquatic invasive species.
- **Habitat/Species Strategy Team:** Priority: enhance fish and wildlife by restoring and protecting coastal wetlands, fish and wildlife habitats.
- **Area of Concern (AOC) Restoration/ Sediments Strategy Team:** Priority: restore to environmental health the Areas of Concern identified by the International Joint Commission as needing remediation.
- **Indicators and Information Strategy Team:** Priority: standardize and enhance the methods by which information is collected, recorded and shared within the region.
- **Sustainable Development:** Priority: adopt sustainable use practices that protect environmental resources and may enhance the recreational and commercial value of the Great Lakes.
- **Coastal Health Strategy Team:** Priority: promote programs to protect human health against adverse effects of pollution in the Great Lakes ecosystem.

The Executive Committee may rely on an Administrative Coordinator to provide operational support for the GLRC Members Table, Executive Committee, and Issue Area Strategy Teams.

21. Great Lakes Regional Collaboration Strategy To Restore And Protect The Great Lakes

Purpose: This strategy provides the full range of recommendations, options, and ideas generated by the Eight Strategy Teams, each focusing on a different issue affecting the Great Lakes basin.

The work of the Strategy Teams includes many recommendations for action focused on the steps that should be taken over the next five years to proceed with restoration to achieve the greatest results. The actions identified by the Strategy Teams highlight the highest priorities recommended by the Teams for early implementation..

The Strategy Teams considered the overarching issues of human health, tribal interests and perspectives, and research, and factored them in to the extent possible. The Strategy Teams worked to characterize the problems faced in the Great Lakes, and to establish goals and milestones.