REPORT TO THE PRESIDENT ON THE IMPLEMENTATION OF THE GREAT LAKES EXECUTIVE ORDER

Prepared by:

The Great Lakes Interagency Task Force

October 28, 2005

Dear Chairman Connaughton:

As Chair of the Great Lakes Interagency Task Force, and on behalf of my fellow Task Force members, it is with great pleasure that I submit the enclosed report to the President summarizing the activities of the Great Lakes Interagency Task Force since its creation by Executive Order on May 18, 2004.

The goal of the Task Force, working through the guidance in the Executive Order, is to help restore and protect America's fourth seacoast by improving coordination and integration of the many relevant federal programs throughout the Great Lakes basin, and by harnessing the power of collaboration with our partners at the state, local and tribal levels, and in Congress. There are few who have the opportunity to work on a project of this size and importance. The restoration and protection of the Great Lakes not only affects the lives of people in the eight Great Lakes states, but the entire Western Hemisphere. The Great Lakes Interagency Task Force is proud to play a role in this effort and appreciates all those who have made contributions thus far.

We salute the President for his leadership and his commitment to preserving this great national treasure.

Sincerely,

Stephen L. Johnson

Table of Contents

The Great Lakes Basin

EXECUTIVE SUMMARY

Executive Order 13340 (E.O. or the Order) was signed on May 18, 2004, and established a Great Lakes Interagency Task Force (IATF, or the Task Force) and a Regional Working Group (RWG). The IATF meets regularly to carry out the directives of this Order, and the RWG has been meeting weekly via conference call to coordinate Great Lakes programs and projects, to share information pursuant to the Great Lakes, and to carry out other functions as required by this Order.

The first year of the Task Force was spent working on high priority issues needing interagency cooperation such as the Interagency Snakehead Response, the Illinois Sanitary and Ship Canal Dispersal Barrier, implementing the Legacy Act to clean up Areas of Concern, focusing on Lake Erie research priorities, continuing to coordinate with Canadian counterpart agencies, and identifying future areas where interagency coordination would improve the delivery of programs and decision-making in the Great Lakes Basin. Several of these urgent and pressing issues that are being addressed by the Task Force--including the Dispersal Barrier and Legacy Act--were highlighted in the U.S. Ocean Action Plan. These projects, along with more than 130 other interagency initiatives, have been documented in an Interagency Project Matrix that is being updated and used as a tool to promote improved management of Great Lakes programs.

Another priority was to establish a "Great Lakes Regional Collaboration of National Significance" (GLRC). The GLRC was launched in December of 2004 after considerable outreach and discussion with Great Lakes governmental partners at the state, local and tribal levels, key Great Lakes organizations, and stakeholders. The GLRC is governed by an Executive Committee that oversees the effort to develop a strategic plan for improving the Great Lakes ecosystem.

The Federal government strongly believes that this strategy should focus on what can be accomplished within current budget projections. All levels of government provide substantial resources to the Great Lakes. For instance, the Federal government alone expects to provide approximately $5 billion over the next ten years to Great Lakes water quality activities. The scope of the strategic plan should focus on prioritizing and coordinating these substantial resources across all of the Collaboration partners. The expected Federal funds, coordinated with more than $100 million provided annually by numerous State, local, and tribal government Great Lakes programs, will make measurable progress in protecting and restoring the region's ecosystems.

The current draft of the GLRC's strategic plan, released on July 7, 2005, does not take into account the ongoing Federal, state, tribal, and local investments in the Great Lakes and how to focus those substantial resources to maximize results. Instead, the GLRC proposed to rely almost entirely on new Federal funding, totaling approximately $3 billion annually, along with new legislation and programs to address identified problems.

The members of the Interagency Task Force have serious concerns with the direction of the GLRC's draft strategy, and strongly urge the GLRC to focus on improving the efficiency and

effectiveness of existing programs, based on likely spending levels and shared responsibilities. At this time, the IATF does not endorse the draft, but will work to improve it. The IATF is hopeful that, over the coming weeks, it can reach agreement with its GLRC partners on a shared strategic direction for Great Lakes restoration. This effort will help guide restoration activities at all levels of government and by the private sector over the coming years, and provide an important tool for the Administration and Congress to use to weigh competing priorities within the Federal budget.

The IATF has made several recommendations as part of this report. The first is that consideration be given to include other departments as part of the IATF and/or RWG. The second is that consideration be given to developing a future plan for the Collaboration and other work required by this Order.

INTRODUCTION

The Great Lakes constitute the largest system of fresh, surface water on Earth, containing roughly 20 percent of the world's fresh surface water supply. The Lakes serve as a source of drinking water for more than 30 million people, support the culture and life ways of native communities, form the backbone for billions of dollars in shipping, trade, and fishing, and provide food and recreational opportunities for millions of American and Canadian citizens. While there has been progress in restoring and improving the health of the Great Lakes, there are threats to the physical, biological, and chemical integrity that still remain. Governments and organizations have experienced successes along the way, but there has never been a coordinated effort to create an overarching strategy that all domestic parties could agree upon. Therefore, on May 18, 2004, President George W. Bush signed Executive Order 13340 (the E.O. or the Order).

The President's Order has two main elements. First, it lays the groundwork for improved coordination of natural resource management and environmental protection of the Great Lakes. This is accomplished by establishing a Cabinet-level Interagency Task Force and appointing the Administrator of the Environmental Protection Agency to lead it. The Task Force will help to ensure that all Federal programs in the Great Lakes are funding effective, coordinated, and environmentally sound activities.

Second, the Order initiates the creation of a Great Lakes "Regional Collaboration of National Significance" (GLRC) to bring hundreds of Federal, regional, State, local, tribal, and other interests together to discuss Great Lakes environmental issues. In support of this effort, the GLRC is drafting a strategy that will provide its opinions on how to best restore and protect the Great Lakes.

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The GLRC also will serve as a forum for addressing near-term regional issues that relate to the Great Lakes ecosystem. Additionally, the GLRC will create an oversight forum to coordinate and enhance implementation of the strategy mentioned above.

Interagency Task Force — Over the past 25 years, numerous programs at the Federal and State level, and in the private sector, have been created to care for the Great Lakes. In the Federal government alone there are approximately 140 programs. For many years, there has been a need to conduct an inventory of the Great Lakes programs and funding. For the very first time, the Interagency Task Force has begun the process of determining how Federal resources are being directed in the basin.

A number of bodies are providing leadership in the region to address environmental and resource management issues. The Task Force plans to provide more systematic collaboration and better integration of efforts overall. An example of how the Task Force can work: In late 2004, Governor Taft of Ohio alerted then EPA Administrator Leavitt of a complicated federal-state funding problem that threatened to derail a project critical to stopping the Asian Carp from entering the Great Lakes. An electronic barrier that would keep the carp out was in the process of being built, and funding for the project came up short. The problem was conveyed to the Task Force to help solve. The members came up with a plan to complete construction that included cooperation with state agencies, the Federal government, and the Congress.

Great Lakes Regional Collaboration of National Significance — The second part of the President's Executive Order directs the establishment of a Regional Collaboration of National Significance. From the beginning of this process, all participants agreed that successful regional collaborations of national significance should not be total creatures of the Federal government.

The Federal government's role is that of convener and full participant. Once convened, the collaboration must have an independent governance process and work plan.

Three years ago, it was complexity, frustration, and a desire to accelerate Great Lakes restoration that caused the Great Lakes Governors and Mayors to come together. They invited advocates, agencies, and industries to join them to accomplish what seemed an impossible task–to develop a blueprint for the Great Lakes. This "blueprint" contains nine priorities, eight of which are being utilized by the regional collaboration to draft action plans to address the needs of the Great Lakes. Those action plans will be the major elements of the Great Lakes Strategy to be finalized in December 2005.

The Federal government strongly believes that the strategic plan should focus on what can be accomplished within current budget projections, and has serious concerns with the Regional Collaboration's July 2005 draft. The vision is not to re-do, but to re-focus and re-prioritize efforts of all interested parties and yield results-oriented strategies aimed at molding, shaping, and formalizing the ongoing effort.

It took decades for the Great Lakes to reach their current state. It will take decades for the Lakes to fully recover. Different problems will have different response times, and it will take time for the ecosystem to respond. The important thing is that we are turning a corner and moving toward better coordinated efforts.

STATUS OF SPECIFIC REQUIREMENTS OF THE GREAT LAKES EXECUTIVE ORDER

The purpose of the IATF is set forth in Section 3 of the E.O. This section of the report is organized following the requirements of the E.O., and the status report on each requirement in the Order follows the heading and wording of the requirement in the Order. The report highlights activities of the IATF and RWG and is not meant to be a comprehensive report on Federal programs and activities on the Great Lakes.

ESTABLISHMENT OF A REGIONAL COLLABORATION OF NATIONAL SIGNIFICANCE

"Section (a) (I) Help convene and establish a process for collaboration among the members of the Task Force and the members of the Working Group that is established in paragraph b (ii) of this section, 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."

The GLRC has drafted a strategic plan to help set priorities and coordinate actions in the Great Lakes ecosystem. The GLRC intends to use the plan to help direct restoration activities at all levels of government and with a broad spectrum of stakeholders. The Federal government strongly believes that the strategic plan should focus on what can be accomplished within current budget projections, and encourages the GLRC find ways to improve the effectiveness and efficiency of current restoration activities at the Federal, state, local, and tribal levels.

The Conveners' Meeting held in Chicago, Illinois, on December 3, 2004, served as the kick-off of the GLRC. This meeting was attended by six of the Great Lakes Governors or their representatives, Members of Congress, Federal agency officials, representatives from Tribal nations, and many stakeholders. Former EPA Administrator Mike Leavitt spearheaded this effort and presided over the meeting. A Great Lakes "Declaration" of support for the effort and a "Framework" for the Great Lakes Regional Collaboration were developed, signed, and released by the Conveners (see Appendices C and D).

The GLRC is spearheaded by an Executive Committee, which is comprised of representatives from each governmental sector, including the Federal government, the states, the tribes, Congressional representatives, and representation from Great Lakes cities. The Chair of the IATF serves as the representative for the Federal agencies. Eight Strategy Teams were also formed at the Conveners' meeting and held their first meeting on December 3, 2004. The Strategy Teams received their charges based on eight priorities for the Great Lakes that were established by the Great Lakes Governors.

The Strategy Teams established are as follows:

1. Habitat/Species Strategy Team
"Enhance fish and wildlife by restoring and protecting coastal wetlands, fish, and wildlife habitats." Issues covered include, but are not limited to, restoration/protection of habitat, native species, fisheries, coastal areas, wetlands, healthy forests, the natural hydrologic cycles, biodiversity, and other critical natural features and areas.

2. Indicators and Information Strategy Team
"Standardize and enhance the methods by which information is collected, recorded, and shared within the region." Issues covered include, but are not limited to, indicators, monitoring, data standards, reporting of environmental information, Great Lakes Integrated Coastal Observing System (GLICOS), Lakewide Management Plans (LaMPs), and the State of the Lakes Ecosystem Conference (SOLEC) process. Emphasis will be on strengthening decision-support systems.

3. Persistent Bioaccumulative Toxics (PBT) Reduction Strategy Team
"Continue to reduce the introduction of PBTs into the Great Lakes ecosystem." Issues covered include, but are not limited to, reduction of toxic substances, pollution prevention, new chemicals of concern, air deposition and long range transport, Great Lakes Initiative (GLI), and fish consumption advisories.

4. Invasive Species Strategy Team
"Stop the introduction and spread of non-native aquatic invasive species." Issues covered include, but are not limited to, ballast water management, National Invasive Species Act/Non-indigenous Aquatic Nuisance Prevention and Control Act present and future implementation, the Illinois carp barriers and exploration of other potential barriers, rapid response protocols and strategies, prevention and mitigation procedures, outreach and education, and applied research.

5. Sustainable Development Strategy Team
"Adopt sustainable use practices that protect environmental resources and may enhance the recreational and commercial value of our Great Lakes." Issues covered include, but are not limited to, transportation, brownfields, land-use and preservation practices, waterfront restoration, economic viability as a function of environmental and natural resource protection.

6. Coastal Health Strategy Team
"Promote programs to protect human health against adverse effects of pollution in the Great Lakes ecosystem." Issues covered include, but are not limited to, beach closings, combined sewer overflows/sanitary sewer overflows, bacteria, and pathogen contamination.

7. Nonpoint Source Strategy Team
"Control pollution from diffuse sources into water, land, and air." Issues covered include, but are not limited to, buffer strips, Clean Water Act Section 319 requirements, total maximum daily load programs (TMDLs), agricultural practices, erosion, nutrients, coastal non-point pollution issues, storm water runoff, and conservation reserve programs.

8. Area of Concern (AOC) Restoration/ Sediments Strategy Team
"Restore to environmental health the Areas of Concern identified by the International Joint Commission as needing remediation." Issues covered include, but are not limited to, restoring the health of AOCs through the remedial action program, cleaning up contaminated sediments through the implementation of the Great Lakes Legacy Act and other authorities, and the delisting of AOCs.

In addition to the Strategy Team issues, several overarching issues were identified for special consideration. These include protecting human health, considering Tribal interests, and the need for research and monitoring.

COLLABORATION WITH CANADA

"Section (a) (ii) 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."

An invitation to participate in the GLRC was extended to Canadian partners during several bilateral meetings held between the former Chair of the IATF, Michael Leavitt, and Canadian counterparts. The Government of Canada views the Collaboration as primarily a U.S. domestic effort, but has pledged to take an active observer role on the Strategy Teams as well as the collaboration as a whole**.** They identified observers to participate early in the process and the Regional Collaboration continues to benefit from the involvement of Canadian federal and provincial observers as well as the International Joint Commission (IJC), a binational body.

The primary formal interface with Canada on Great Lakes issues exists through the U.S. State Department and other bilateral instruments and institutions as described below. These formal mechanisms continue to be used to coordinate programs and policies on the Great Lakes. Federal agencies use these mechanisms to coordinate with their Canadian counterpart agencies to ensure that priorities and strategic direction of binational programs are jointly set, new and emerging issues can benefit from a coordinated binational approach, and existing programs are harmonized and coordinated from a binational perspective.

Historically, the first recognition that the Great Lakes needed binational protection was in the Boundary Waters Treaty of l909. The Treaty established principles and mechanisms to resolve current disputes and prevent future disputes, primarily those concerning water quality and water quantity issues along the boundary between Canada and the United States.

Boundary Waters Treaty

The United States and Canada have developed a unique and effective way of preventing and resolving disputes of their shared waters on the Great Lakes and trans-boundary rivers. Because both countries recognized that each one is affected by the other's actions, they agreed to cooperatively manage these waters to protect them for future generations.

The Boundary Waters Treaty, signed on January 11, 1909, established the legal foundation and provides the guiding principles for the two countries to prevent and, if needed, resolve disputes. The Treaty also established the International Joint Commission (IJC) to assist governments in implementing the terms of the Treaty and in finding solutions to problems in these waters. The IJC has six members, three appointed by the U.S. President with the advice and approval of the Senate, and three appointed by the Governor in Council of Canada, on the advice of the Prime Minister.

U.S. - Canada Great Lakes Water Quality Agreement (GLWQA)

In l972, in response to reports that the Great Lakes were severely polluted and needed a high level binational effort to protect and manage the lakes, the GLWQA was established by both nations. First signed in 1972 and then renewed in 1978, the GLWQA expresses the commitment of both countries to restore and maintain the chemical, physical, and biological integrity of the Great Lakes Basin ecosystem, and includes a number of objectives and guidelines to achieve these goals. It also reaffirms the rights and obligations of Canada and the United States under the Boundary Waters Treaty of 1909. In 1987, a Protocol was signed amending the 1978 Agreement. The amendment strengthened the programs, practices, and technology described in the 1978 Agreement and increased accountability for their implementation. Timetables were set for implementation of specific programs.

The IJC has a standing reference to monitor and assess progress by the two nations under the terms of the GLWQA. The Agreement also calls upon the IJC to assist the Governments with joint programs under the Agreement, and provides for two binational boards–the Great Lakes Water Quality Board and the Great Lakes Science Advisory Board–to advise the Commission. EPA's National Program Manager for the Great Lakes is the U.S. Co-Chair of the Water Quality Board.

Article X of the Agreement specifies the commitments of the Parties to consultation and review. "The Parties (U.S. and Canada), 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." To facilitate this, the Parties established the Binational Executive Committee (BEC) a high-level forum composed of senior-level representatives of the U.S. and Canadian counterpart agencies who are accountable for delivering major programs and activities to fulfill the terms of the GLWQA. The BEC derives its mandate from the provisions of the GLWQA which relate broadly to notification, consultation, coordination, and joint activity.

The BEC meets twice a year to set priorities and strategic direction for binational programming in the basin, to coordinate binational programs and activities, to respond to new and emerging issues on the Great Lakes, to task existing–or create new–work groups to undertake designated activities, to evaluate progress, and to ensure accountability for achieving commitments under the GLWQA. In addition to the BEC, there are Lakewide Management Planning Committees, or their equivalent, on each of the lakes. There are also binational coordination efforts on Lake St.

Clair, as well as the five binational Areas of Concern/Remedial Action Plan groups which operate under Annex 2 of the GLWQA.

The Great Lakes Fishery Commission (GLFC)

The Great Lakes Fishery Commission was established by the 1955 Canadian/U.S. Convention on Great Lakes Fisheries. The Commission coordinates fisheries research, controls the invasive sea lamprey, and facilitates cooperative fishery management among the state, provincial, tribal, and Federal management agencies. The Commission has two major responsibilities:

1. To develop coordinated programs of research on the Great Lakes and, on the basis of the findings, to recommend measures which will permit the maximum sustained productivity of stocks of fish of common concern; and
2. To formulate and implement a program to eradicate, or minimize, sea lamprey populations in the Great Lakes.

The efforts of the GLFC are guided by the Joint Strategic Plan for Management of Great Lakes Fisheries. The Plan is a cooperative agreement among state, provincial, tribal, and Federal governments on Great Lakes fisheries management. It includes procedures for establishing fish community objectives for each lake and is implemented by individual fisheries management jurisdictions. The Commission's Lake Committees—made up of state, provincial, and two intertribal fishery agencies—are the "action arms" of the Joint Strategic Plan. The Lake Committees and the Council of Lake Committees have addressed a wide variety of issues critical to a healthy Great Lakes ecosystem. Their decisions have become part of the guiding framework for future fishery and environmental management in the basin.

Canada – U.S. Joint Marine Pollution Contingency Plan (CANUSLAK)

Article VI(1)(i) of the Great Lakes Water Quality Agreement requires the Canadian and U. S. Coast Guards to maintain a Canada-United States Joint Marine Contingency Plan in accordance with Annex 9 of the GLWQA. The purpose of the CANUSLAK Annex to the Canada-U.S. Joint Marine Pollution Contingency Plan is to provide a coordinated system for responding to discharges or threat of discharges of pollutants in the contiguous waters of interest between Canada and the United States. This is accomplished by supplementing the existing national response systems of each Party for the Great Lakes and St. Lawrence River areas covered by the Joint Marine Plan. The Joint Canada/United States Marine Pollution Contingency Plan, when invoked, will provide the mechanism for Canada/U.S. cooperation in response to spills based upon the responsibilities of the Canadian and U.S. Coast Guards set out in the National Contingency Plan and in the U.S. National Oil and Hazardous Substances Contingency Plan.

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 and is implemented by the U.S. EPA and Environment Canada. This Agreement established a formal and flexible method of addressing trans-boundary air pollution and paved the way for cooperation on a variety of air quality issues. While the initial focus of the Agreement was on acid rain, the two nations recently 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, including regular communication, exchange of information, and consultation and settlement of issues of concern.

A bilateral Air Quality Committee is responsible for coordinating the overall implementation of the Agreement. Two subcommittees—Program Monitoring and Reporting, and Scientific Cooperation—meet annually with the Air Quality Committee and carry out yearly activities. The two nations prepare a joint progress report every two years and conduct a regular five-year review and assessment of the Agreement.

North American Waterfowl Management Plan

Recognizing the importance of waterfowl and wetlands to North Americans and the need for international cooperation to help in the recovery of a shared resource, the Canadian and United States Governments developed a strategy to restore waterfowl populations through habitat protection, restoration, and enhancement. The strategy was documented in the North American Waterfowl Management Plan signed in 1986 by the Canadian Minister of the Environment and the United States' Secretary of the Interior. With its update in 1994, Mexico became a signatory to the Plan.

The Plan is innovative because its perspective is international in scope, but its implementation functions at the regional level. Its success is dependent upon the strength of partnerships, called Joint Ventures, involving Federal, state, provincial, tribal, and local governments, businesses, conservation organizations, and individual citizens. The Joint Ventures develop implementation plans focusing on specific areas identified in the Plan.

The Great Lakes-St. Lawrence Seaway Study

The United States Army Corps of Engineers (USACE), U.S. Department of Transportation, and U.S. Fish & Wildlife Service are working in partnership with Transport Canada and Environment Canada on a study to evaluate the engineering, economic, and environmental conditions of the Great Lakes and St. Lawrence Seaway System. This information will determine the requirements to maintain the integrity of the navigation system and environmental sustainability of the waterway for the next fifty years. It is anticipated the study will also evaluate other factors such as modal integration, trade facilitation, congestion mitigation, and overall sustainable transportation.

Engineering investigations of the locks on the system are ongoing, and development of engineering and economic models has begun. Bi-national environmental teams are in the process of characterizing key resources and researching navigation related impacts to these resources.

EFFORTS TO FOSTER CONSISTENT FEDERAL POLICIES

"Section 3 (a) (iii) 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."

The Task Force has been successful in gathering the resources of the Federal agencies involved and directing them towards high priority issues requiring focused and collaborative action. A number of these issues were included in the U.S. Ocean Action Plan, including the Chicago Sanitary and Ship Canal Aquatic Nuisance Species Dispersal Barrier, the Great Lakes Legacy Act, and the Great Lakes component of the Global Earth Observing System of Systems (GEOSS). As a direct result of Task Force involvement, these issues that were highlighted by the Administration as requiring a greater dedication of effort have received and are benefiting from greater attention and increased coordination.

DEVELOPING OUTCOME BASED GOALS

"Section 3 (a) (iv) 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 IATF, in conjunction with the Great Lakes Regional Collaboration, is working to develop outcome-based goals for the Great Lakes that will help the Federal government and partners assess their work and track progress.

Some of the information guiding this work includes:

- Restoration Priorities of the Great Lakes Governors
- The Great Lakes Strategy of 2002
- The "Joint Strategic Plan for the Management of the Great Lakes Fisheries"
- The Great Lakes Binational Toxics Strategy
- Lakewide Management Plans
- Remedial Action Plans for Areas of Concern
- Great Lakes Commission's Great Lakes Program to Ensure Environmental and Economic Prosperity
- Great Lakes United's "Citizens' Agenda to Restore the Great Lakes - St. Lawrence River Ecosystem"
- The Nature Conservancy's Conservation Blueprint for the Great Lakes
- Great Lakes Fisheries Resources Study

The Collaboration will articulate how governmental and non-governmental partners will work along both geographic and issue-specific lines to use their authorities and resources to address shared environmental priorities. Science-based indicators will be used to measure progress towards these shared priorities.

EXCHANGING INFORMATION

"Section (a) (v) Exchange information regarding policies, strategies, projects, and activities of the agencies represented on the Task Force related to the Great Lakes system."

Several methods have been employed to exchange information among the IATF agencies. These include early development of a web site where information can be posted and shared by members of the Interagency Task Force and Regional Working Group. Additional web pages have been created for use by all members of the Issue Area Strategy Teams who are writing the strategic plan.

The RWG conducts weekly conference calls to share information and to coordinate joint government action projects. The agencies cooperated to create an inventory in the form of a Federal Projects Matrix of existing and proposed multi-agency Great Lakes projects which are currently being updated, analyzed, and prioritized. This is being used as a planning tool to provide better coordination, to assess progress of Federal actions, to identify barriers that need to be overcome, and to select high priority initiatives where improved coordination should take place.

In addition to these, the agencies are increasing coordination and cooperation on a variety of interagency projects involving data sharing, biological planning and evaluation, and the use of integrated decision support methodologies. These projects will foster moving beyond real time communication to exchanges that will assist all stakeholders, as well as governments at all levels, in prioritizing activities and taking informed actions. Some of these initiatives are discussed in the next sections of the report below.

COORDINATING GOVERNMENT ACTION

"Section 3 (a) (vi) Work to coordinate government action associated with the Great Lakes system."

The Executive Order established a framework for ensuring federal coordination. The Task Force, with assistance from the Regional Working Group, identified key high priority projects needing Federal coordination during the 2004-2005 timeframe. The following activities were identified and coordinated with either Task Force and/or RWG participation.

Chicago Sanitary and Ship Canal Aquatic Nuisance Species Dispersal Barrier

The U.S. Army Corps of Engineers (USACE) continues to lead an interagency effort to prevent the migration of invasive species into the Great Lakes by constructing electrical barriers on the Chicago Sanitary and Ship Canal (CSSC). The CSSC is a man-made waterway that provides a hydraulic connection and transportation link between the Great Lakes and the Mississippi River Basin. As non-indigenous aquatic species use the CSSC to move from the Mississippi River to the Great Lakes, and vice versa, they prey on native species and compete for food, living space, and spawning areas. Currently, the largest concern is the potential movement of Asian Carp into Lake Michigan.

A demonstration barrier on the CSSC was constructed under the National Invasive Species Act and has been in operation since April 2002. This barrier is formed of steel cables that are secured to the bottom of the canal. A low-voltage, pulsing DC current is sent through the cables, creating an electric field in the water. The electric field is uncomfortable for fish and they do not swim across it. The electric field is safe in case of human contact. The demonstration barrier has been monitored and evaluated for performance and safety in collaboration with the EPA, Fish & Wildlife Service, Coast Guard, Illinois River Carriers Association, the Great Lakes Fishery Commission, as well as State and local agencies.

In 2004, the USACE, in partnership with the State of Illinois, initiated construction of a permanent barrier approximately 1,000 feet from the demonstration barrier. The permanent barrier has several design improvements based on the experience with the demonstration barrier that will allow greater flexibility and protection. The design consists of two identical "sub-barriers." Each "sub-barrier" will have a separate control house and set of underwater electrical arrays. The "sub-barriers" will create overlapping electric fields that will improve the barrier's effectiveness. It will also be possible to turn off one "sub-barrier" for maintenance while the other remains operational. The USACE has worked through the Great Lakes Interagency Task Force to coordinate with Federal agencies on this critical project.

Injurious Wildlife Listing of Several Asian Carp Species under the Lacey Act

Several species of Asian Carp, including black carp, silver carp, and big head carp, are being considered for listing as "injurious wildlife" in order to help reduce the likelihood of their introduction into the Great Lakes basin and ecosystem. A decision to list these carp would prohibit the importation and interstate transport of diploid and triploid carp, gametes and eggs. Injurious wildlife are defined as those species and offspring and eggs that are injurious to the interests of human beings, agriculture, horticulture, forestry, wildlife, or wildlife resources of the United States. Wild mammals, wild birds, fish, mollusks, crustaceans, amphibians, and reptiles are the only organisms that can be added to the injurious wildlife list. Permits may be granted for the importation or transportation of live specimens of injurious wildlife and their offspring or eggs for bona fide scientific, medical, educational, or zoological purposes.

Great Lakes Legacy Act Implementation

Although discharges of toxic substances to the Great Lakes have been reduced in the last 20 years, persistent high concentrations of contaminants in the bottom sediments of rivers and harbors have raised considerable concern about potential risk to aquatic organisms, wildlife, and humans. As a result, advisories against fish consumption are in place in most locations around the Great Lakes. The problem harbor and tributary areas in the Great Lakes basin have been identified and labeled as Areas of Concern (AOC), with 31 of these AOCs located on the U.S. side of the Great Lakes.

To address the problem of contaminated sediment in the Great Lakes, the Great Lakes Legacy Act of 2002 (the Legacy Act) was passed by Congress and signed into law by the President on November 27, 2002. The Act authorizes $270 million in funding over five years beginning in fiscal year 2004 to help with the remediation of contaminated sediment. Congress appropriated $10 million in FY 2004, $22 million in FY 2005, and approximately $30 million in FY06 to implement this new program.

The EPA's Great Lakes National Program Office was designated to administer the funds available through the Legacy Act. To date, fourteen project proposals totaling $80 million have been submitted to the EPA for consideration to receive Legacy Act funding. The first Legacy Act project, the Black Lagoon (in the Detroit River, Trenton, MI), was started in 2004. A Project Agreement for the second Legacy Act project was signed on June 13, 2005 to address sediment contamination in the Hog Island Inlet in the St. Louis River, Superior, WI, where more than 40,000 cubic yards of contaminated sediment is waiting to be cleaned up. The third Legacy Act project, Ruddiman Creek and Pond in Muskegon, Michigan, was launched in August, 2005, to remediate approximately 80,000 cubic yards of contaminated sediment.

The Legacy Act is being managed to draw upon the expertise of personnel from multiple agencies in the Federal government, including the USACE, NOAA, USFWS and EPA, all of whom assist with technical project review. This will foster improved coordination and cooperation among agencies with respect to sediment cleanups in the Great Lakes. For actual Legacy Act project implementation, the EPA will draw upon the expertise of Army Corps of Engineers project managers and EPA Superfund project managers, as well as sediment experts from GLNPO. Continuous efforts are being made to leverage resources by "dovetailing" planning and implementation of Legacy Act projects with projects performed under other agency (or EPA) programs and/or authorities.

The first project to receive funding under the Legacy Act is at The Black Lagoon, in the Detroit River AOC. Approximately 90,000 cubic yards of contaminated sediments are slated for removal via dredging. The construction is being conducted by a private contractor, with 65 percent of payment from the EPA and 35 percent from the Michigan Department of Environmental Quality, the non-Federal project sponsor. During project planning, the USACE was responsible for development of the project design, specifications, and drawings. They are currently providing oversight of the on-site contractor and are providing technical support to EPA on a regular basis. The sediments are being disposed of in the USACE operated confined disposal facility at Pointe Mouillee, constructed by the USACE in 1981 to provide for the environmentally sound management of contaminated sediments dredged from the Detroit and

Rouge River navigation channels. The project has been well-received by the community, and there are tentative local plans to revitalize the site by building a recreational marina.

Experience has shown that significant resources and time are required to plan and design a contaminated sediment cleanup before it can be implemented by the Legacy Act or other programs. The USACE has provided engineering and technical support to Remedial Action Plans at 17 of the 31 U.S. Areas of Concern under the authority of Section 401 of the Water Resources Development Act of 1990, as amended. The EPA also provides assistance to assess AOCs and help design these cleanups. Both agencies are working closely to coordinate these efforts to make them complementary. The USFWS and NOAA identify opportunities for habitat restoration incidental to sediment remediation projects. There will be numerous opportunities for other forms of interagency coordination and cooperation in the upcoming years to implement the Legacy Act. The outcome will be better projects, and value-added use of the resources provided for this new program.

Interagency Snakehead Response Effort

On October 9, 2004, a Northern Snakehead fish was captured at Burnham Harbor, Cook County, Illinois, in Lake Michigan. Snakehead fish are not native to the U.S., and more than 50,000 Snakehead fish of several species were imported from 1997-2002 for sale in the live food and aquarium trades. Since October 4, 2002, all species of Snakehead fish are listed as injurious under the Lacey Act, which banned importation into the United States and interstate transportation of any live Snakehead fish or viable eggs without a permit. Since 2002, Illinois has banned Snakehead fish importation, transportation, and release in that state. Those regulations are intended to reduce the risk of additional introductions of Snakehead fish into the Great Lakes. If the Northern Snakehead found in Burnham Harbor was released in the Illinois waters of Lake Michigan within the previous two years, its possession and release were illegal. If the fish was transported from another state to Illinois within the past two years, that activity violated the Lacey Act.

The Northern Snakehead is capable of reproduction in the Great Lakes basin. If self-sustaining populations are established, portions of them might spread and develop populations elsewhere in Lake Michigan and the other Great Lakes. Established populations of Northern Snakehead could prey on, and compete with native fishes, and those ecological interactions could result in drastic reductions in abundances of native species.

The RWG formed a Snakehead Rapid Response Team (SRRT) to coordinate surveys of the abundance and distribution of the northern snakehead in Burnham Harbor. The lead agency in this initiative is the Illinois Department of Natural Resources (IDNR). Other entities that provided support to this initiative included the City of Chicago (City), Chicago Field Museum, Maritime Administration, NOAA, NPS, USACE, USCG, DOT, USEPA, USFWS, USFS, and USGS.

The IDNR coordinated surveys by the USACE and the City during October 19-22, 2004, to assess abundance and distribution of Northern Snakehead in Burnham Harbor. Those surveys resulted in no additional captures of Northern Snakeheads. During 2005, the IDNR will conduct

surveys in Burnham Harbor and other similar areas of the Illinois waters of Lake Michigan and cooperating agencies will conduct surveys throughout Lake Michigan. All cooperators will alert the SRRT to collections of Snakehead fish.

Huron-Erie Corridor Initiative

The Huron-Erie Corridor (HEC) Initiative has been launched by the U.S. Geological Survey Great Lakes Science Center (GLSC) to address high priority research issues affecting aquatic resources and environments in the HEC. The HEC includes the waters of the St. Clair River, Lake St. Clair, the Detroit River, and western Lake Erie. This is an area of great economic, ecological, and societal value to the Great Lakes region as well as the nation. Conflicting uses of the HEC waters for waste disposal, water withdrawals, shoreline development, shipping, recreation, and fishing have placed increasing pressure on this ecosystem. The purpose of the HEC Initiative is to create relevant new science to better address these issues and meet the science needs of fisheries and aquatic resource managers in the HEC. A workshop in February of 2005 brought together scientists, managers, and other stakeholders to identify and prioritize research issues and develop research strategies for the HEC. It was determined that the primary research focus of the HEC Initiative should be the restoration of habitats that are required to meet the growth and reproductive needs of fish and wildlife in the HEC. This will be addressed initially through analysis of historic HEC research and data, examination of habitat function, and identification of potential roadblocks to successful restoration. Partners in this effort include the U.S. Fish and Wildlife Service, U.S. Environmental Protection Agency, Walpole Island First Nation, Department of Fisheries and Oceans Canada, Ontario Ministry of Natural Resources, Michigan Department of Natural Resources, Ohio Department of Natural Resources, universities, non-governmental organizations, and private industry, and in coordination with the Lake Erie Millennium Network.

In addition, in collaboration with its partners, the GLSC has been conducting research to gather information needed for the successful restoration of a remnant population of native lake sturgeon near Belle Isle in the Detroit River. Pre-construction assessments using egg mats to collect fish eggs revealed only walleye spawning in this area and a small number of walleye eggs were collected. The sturgeon spawning habitat was created in 2004. GLSC and USFWS scientists are currently assessing the created habitat and have found seven species of fish have spawned on the constructed habitat, and spawning-ready adults of four species have been caught in gill nets. These findings strongly suggest that numerous fish species spawn in the Detroit River and lend urgency to the need for restoration and creation of fish spawning habitat in the HEC. Key partners in this effort include USFWS, Michigan Sea Grant, Great Lakes Fishery Trust, and DTE Energy.

FEDERAL SCIENTIFIC RESEARCH PROGRAMS ON THE GREAT LAKES

"Section 3 (a) (vii) Ensure coordinated Federal scientific and other research associated with the Great Lakes system."

The challenges facing the Great Lakes community are complex and interrelated. Addressing the multiple challenges requires a strong, well-focused research program. Scientifically sound management decisions based on fundamental ecosystem understanding and reliable facts about human health and the environment are the keys to success. The Great Lakes community is fortunate to have numerous federal, tribal, state, provincial, and university research organizations that are poised to fill these scientific needs.

One such organization is the International Joint Commission's Council of Great Lakes Research Managers (CGLRM), which has a responsibility to identify binational research priorities and emerging issues relative to the Great Lakes Water Quality Agreement. In addition, the Council produces an annual Great Lakes Research Inventory. The information produced by the Council is used to identify scientific knowledge gaps that limit the ability of Great Lakes managers to meet specific goals of the GLWQA. The research priorities and Great Lakes Research Inventory can assist Federal, tribal, state, provincial, academic institutions, and funding organizations in developing research objectives for the Great Lakes. In addition, the Inventory is informing the work of the GLRC with respect to the overarching issue of identifying research priorities as part of the strategic planning process.

Many agencies that are members of the IATF conduct or fund research that addresses their mission-specific priorities. Through communication and collaboration, information is developed that provides the science-based decision-making framework for the management goals and key objectives that are identified as part of the strategic planning process. An example of interagency cooperation on a research area is illustrated below and represents a high priority for the IATF and the RWG.

Lake Erie Science and Research

Lake Erie is the warmest and shallowest of the Great Lakes. As a result, it quickly responds to changing biological conditions and environmental insults. Environmental agencies and academic researchers have focused attention on this lake due to a periodic low oxygen level–or "dead zone"–in the central basin of Lake Erie. External loading of phosphorus (a nutrient) was identified as the main factor leading to the dead zone in the lake. The phosphorus acted as a fertilizer, causing an explosion of algae growth which subsequently died. As the dead algae began rotting, it used up the oxygen in the water creating the dead zone. The worst conditions experienced in the 1960s and 1970s were mitigated through significant action on the parts of the U.S. and Canadian governments to upgrade sewage treatment plants, ban phosphorus in household detergents, and improve agricultural nutrient management practices.

Phosphorus concentrations decreased and oxygen levels increased throughout the 1980s and early 1990s. In 1999, EPA scientists, examining data from their long term monitoring program, detected a disturbing increase in phosphorus levels and reduced oxygen in the central basin. The Lake Erie Millennium network was formed in late 1999 by two universities, USEPA, and Environment Canada as a forum for coordinating governmental and academic efforts to study the Lake Erie dead zone and develop appropriate science-based management actions.

Lake Erie science and research has significantly advanced though federal partnerships. Researchers soon will release the results of the Lake Erie Supplemental Study, a $2 million cooperative project to investigate Lake Erie's problems. A binational group of 17 scientists from Federal and state government, and universities will report on enhancements made during the 2002 field season supported by USEPA-GLNPO and its research vessel the R/V Lake Guardian.

In addition, NOAA's Great Lakes Environmental Research Laboratory (GLERL), in collaboration with researchers in the U.S. and Canada, initiated a related effort, the International Field Years on Lake Erie (IFYLE). Lake-wide surveys will enhance sampling of Lake Erie's dead zone and additional research will focus on harmful algal blooms, oxygen depletion (hypoxia/anoxia), fish production, physics, and food webs. Several federal and academic organizations have pooled resources for a total of $5 million in support of IFYLE.

IFYLE is one of the largest, most comprehensive Lake Erie research field programs ever conducted and is a collaborative effort with scores of researchers in both the U.S. and Canada. It began in May, 2005 with a series of lake-wide ship cruises with field and lab work continuing through October 2005. Given the emphasis on understanding the duration and extent of Lake Erie's dead zone (seasonally hypoxia/anoxic zone), more sampling will be conducted in the central basin. The whole-lake research effort will focus primarily on issues related to: 1) algal blooms; 2) oxygen depletion (hypoxia/anoxia); and 3) fish production, physics and food webs**.**

Major partners in this effort include Environment Canada (NWRI), which is deploying numerous moorings in Lake Erie to provide physical data (e.g., temperature, currents, dissolved oxygen, turbidity) for this study, as well as the Ontario Ministry of Natural Resources, Ohio Department of Natural Resources, Michigan Department of Natural Resources, Pennsylvania Fish and Boat Commission, New York State Department of Environmental Conservation, and the U.S. Geological Survey. This project also is being coordinated closely with the Lake Erie Lakewide Management Plan (LaMP), the Lake Erie Millennium Network, and several large-scale, ongoing Lake Erie investigations involving both Canadian and the U.S. researchers.

GLOBAL EARTH OBSERVING SYSTEM OF SYSTEMS (GEOSS) FOR THE GREAT LAKES

"Section 3 (a) (viii) Ensure coordinated government development and implementation of the Great Lakes portion of the Global Earth Observation System of Systems."

At the April 2004 Earth Observation Summit II held in Tokyo, Japan, the U.S. and more than 50 nations formally adopted a ten-year implementation plan for a Global Earth Observation System. This Global Earth Observation System of Systems or GEOSS will help all nations involved produce and manage their information in a way that benefits the environment as well as humanity.

The Great Lakes Regional Collaboration assigned the "Indicators and Information Strategy Team" the task of creating a coordinated approach for developing the Great Lakes portion of

GEOSS. The team is currently investigating the degree to which existing observing systems and monitoring networks can be incorporated into GEOSS. Refinements and enhancements to ongoing efforts are also being explored. The team has identified several observing systems and monitoring networks at various stages of development that are likely to be key pieces of the Great Lakes portion of GEOSS, including:

- The Earth Observing System (EOS) is the centerpiece of NASA's Earth Science Enterprise (ESE). It is composed of a series of satellites, a science component, and a data system supporting a coordinated series of polar-orbiting and low inclination satellites for long-term global observations of the land surface, biosphere, solid Earth, atmosphere, and oceans.
- The Great Lakes Observing System (GLOS) is one of eleven regional nodes of the U.S. national Integrated Ocean Observing System (IOOS) initiative currently under development. Components of the GLOS system will include buoy systems, coastal and riverine sensors, satellite observations, field measurements, ship observations, airborne observations, computer models, ecological forecasts, education, atmospheric measurements, and information integration. It will provide access to information on the climate, meteorology, hydrology, hydrodynamics, chemistry, geology, biology and human activities that affect the Great Lakes, their interconnecting waterways and the St. Lawrence River.
- The Integrated Atmospheric Deposition Network (IADN) was established by the United States and Canada for conducting air and precipitation monitoring in the Great Lakes basin. IADN fulfills the monitoring and surveillance requirements of Annex 15 of the Great Lakes Water Quality Agreement by measuring concentrations and calculating atmospheric loadings of persistent bioaccumulative toxic substances (PBTs) to the Great Lakes.

A three-agency subgroup of the Regional Working Group consisting of EPA, NOAA, and USGS, has been established to guide and coordinate Federal efforts to establish the Great Lakes portion of GEOSS. These agencies initiated discussions with their Canadian counterparts at the March 2005 Binational Executive Committee (BEC) meeting. Canada and the U.S reported on their proposed approach for implementing GEOSS for the Great Lakes and an agreement was made to coordinate efforts. The BEC member agencies also agreed that increased Canadian participation on the "Indicators and Information Strategy Team" of the Great Lakes Regional Collaboration would help ensure a coordinated binational approach.

PROVIDING ASSISTANCE AND SUPPORT TO AGENCIES REPRESENTED ON THE TASK FORCE

"Section 3 (a) (ix) Provide assistance and support to agencies represented on the Task Force in their activities related to the Great Lakes system."

As required in the Executive Order, EPA, along with the member Federal agencies, has provided significant assistance and support to the Interagency Task Force, the Regional Working Group,

the White House Council on Environmental Quality, and the Office of the EPA Administrator in the carrying out the requirements of the E.O. EPA supported the launch of the Regional Collaboration as well, and will continue providing assistance for this effort. EPA's Office of the Administrator and the Great Lakes National Program Office are the central points of contact. Federal agencies are participating in the work of the Strategy Teams and, in some cases, are performing the roles of co-chairing the teams.

The agencies also participated in an effort to collect data on federal environmental and infrastructure spending in the Great Lakes basin region for FY 2004. This information provides a broad snapshot of the Federal government's commitment to the Great Lakes and will help the IATF and RWG to coordinate resources to ensure that funds are being directed to the highest priorities. Appendix E provides the results of this inventory.

RECOMMENDATIONS

"Section 3 (a) (x) Submit a report to the President by May 31, 2005, and thereafter as appropriate, that summarizes the activities of the Task Force and provides any recommendations that would, in the judgment of the Task Force, advance the policy set forth in Section 1 of this order."

The purpose of this section of the Report is to provide recommendations to the President that will enhance cooperation in discharging the directives of this Order, and assist in improving interagency implementation of its intent.

The IATF and the RWG have examined the membership of the agencies that are included in the Executive Order and would like to note that there are two Federal Cabinet-level Agencies having responsibilities for Great Lakes programs or other related activities that are not currently included in the Order. Consideration should be given to whether these agencies might be invited to participate in the IATF. A description of these Agencies and their role in the Great Lakes follows.

Agency for Toxic Substances and Disease Registry

The mission of the Agency for Toxic Substances and Disease Registry (ATSDR), as an agency of the U.S. Department of Health and Human Services, is to serve the public by using the best science, taking responsive public health actions, and providing trusted health information to prevent harmful exposures and disease related to toxic substances.

As the lead public health agency responsible for implementing the health-related provisions of Superfund (the Comprehensive Environmental Response, Compensation and Liability Act of 1980), ATSDR is charged with assessing health hazards at specific hazardous waste sites, helping to prevent or reduce exposure and the illnesses that result, and increasing knowledge and understanding of the health effects that may result from exposure to hazardous substances. Many of these sights are located in the Great Lakes basin, including some which are the principle stressors in an AOC.

Since 1992 ATSDR has operated the Great Lakes Human Health Effects Research Program (GLHHERP) which is designed to characterize exposure to contaminants via consumption of Great Lakes fish and investigate the potential for short- and long-term adverse health effects. GLHHERP's goals are to identify human populations residing in the Great Lakes basin that may be at risk because of their contact with chemical contaminants present in one or more of the Great Lakes, and to prevent any adverse health effects. It is designed to investigate and characterize the association between the consumption of contaminated Great Lakes fish and short- and long-term harmful health effects.

Food and Drug Administration (FDA)

The FDA, in partnership with the USEPA, issues fish consumption advice regarding commercially sold fish. In recent years, the FDA and the EPA have been working more closely on fish consumption issues. There are currently more than 1,500 fish advisories in the Great Lakes basin, issued by Federal and State authorities. Fish consumption is an important part of the diet and lifestyle in the Great Lakes, particularly among Native American populations and the Hmong immigrant group. It is important that FDA continues to partner with EPA and the eight Great Lakes states to insure that fish consumption advice is consistent, easily understood, and reaches the appropriate target audiences in a timely manner. Therefore, FDA should be considered for membership on the IATF and RWG. Currently, national advice does not always mirror local advice. The States and Tribes are working with EPA and FDA on these issues. An example of FDA-EPA joint efforts follows.

In March 2004, the FDA and the USEPA released updated advice to women who may become pregnant, pregnant women, nursing mothers, and young children to avoid some types of fish and eat fish and shellfish that are lower in mercury. The advice focuses primarily on commercial fish bought in stores and sold in restaurants, but there is a recreational fish component to the advice as well. The updated advice suggests that consumers should check local advisories about the safety of fish caught by family and friends in local lakes, rivers, and coastal areas. If no advice is available, it is recommended that a person may eat up to six ounces (one average meal) per week of fish caught from local waters, if no other fish is consumed during that week. In the Great Lakes basin, all of the waters have state or tribal fish consumption advice. Consumers of recreational fish must refer to both the local fish consumption advice as well as the national advice when consuming commercial fish.

Challenges in Coordinating and Funding Interagency Cooperation

The IATF, with assistance from EPA, has worked with the Council on Environmental Quality to develop a Charter pursuant to CEQ's Office of Environmental Quality's Management Fund, to facilitate interagency financing of ongoing work for high priority IATF actions. These activities may include the cost to administer the E.O., such as overseeing and reporting on progress on implementing the Strategic Plan, or development and maintenance of web sites and/or outreach materials.

CONCLUSION

Since the Great Lakes Executive Order was signed, the members of the Federal Interagency Task Force have begun the important work of improving coordination among their many programs in the Great Lakes Basin. This effort holds the potential for more efficient and effective delivery of Federal programs and resources in the Great Lakes region. In addition, hundreds of people from throughout the Great Lakes community began the complex task of developing the strategy that will protect and restore the Great Lakes ecosystem for this generation and those to come. No one disputes the enormity of the task or the commitment of those pursuing these goals. The most difficult work is ahead, but it brings with it the promise and reward of a cleaner, healthier Great Lakes. As we move forward, additional progress reports will be filed as appropriate.

APPENDIX A: LIST OF ACRONYMS

AOC	Area of Concern
BEC	Binational Executive Committee
CEQ	Council on Environmental Quality
CGLRM	Council of Great Lakes Research Managers
DOT	Department of Transportation
EO	Great Lakes Executive Order 13340
EPA	U.S. Environmental Protection Agency
FWS	U.S. Fish and Wildlife Service
GEOSS	Global Earth Observing System of Systems
GLDT	Great Lakes Dredging Team
GLERL	Great Lakes Environmental Research Laboratory
GLICOS	Great Lakes Integrated Coastal Observing System
GLNPO	Great Lakes National Program Office
GLOS	Great Lakes Observing System
GLRC	Great Lakes Regional Collaboration
GLWQA	Great Lakes Water Quality Agreement
HUD	Department of Housing and Urban Development
IATF	Interagency Task Force
IDNR	Illinois Department of Natural Resources
IFYLE	International Field Years on Lake Erie
IJC	International Joint Commission
IOSS	Integrated Ocean Observing System
LaMPs	Lakewide Management Plans
NOAA	National Oceanic and Atmospheric Administration
NPS	National Park Service
NRCS	Natural Resources Conservation Service
RAP	Remedial Action Plan
RWG	Regional Working Group
SOLEC	State of the Lakes Ecosystem Conference
SRRT	Snakehead Rapid Response Team
USACE	U.S. Army Corps of Engineers
USCG	U.S. Coast Guard
USGS	U.S. Geological Survey

Appendix B

Regional Collaboration: Interagency Task Force Executive Order

EXECUTIVE ORDER

May 18, 2004

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ESTABLISHMENT OF GREAT LAKES INTERAGENCY TASK FORCE AND PROMOTION OF A REGIONAL COLLABORATION OF NATIONAL SIGNIFICANCE FOR THE GREAT LAKES

By the authority vested in me as President by the Constitution and the laws of the United States of America, and to help establish a regional collaboration of national significance for the Great Lakes, it is hereby ordered as follows:

Section 1. **Policy**. The Great Lakes are a national treasure constituting the largest freshwater system in the world. The United States and Canada have made great progress addressing past and current environmental impacts to the Great Lakes ecology. The Federal Government is committed to making progress on the many significant challenges that remain. Along with numerous State, tribal, and local programs, over 140 Federal programs help fund and implement environmental restoration and management activities throughout the Great Lakes system. A number of intergovernmental bodies are providing leadership in the region to address environmental and resource management issues in the Great Lakes system. These activities would benefit substantially from more systematic collaboration and better integration of effort. It is the policy of the Federal Government to support local and regional efforts to address environmental challenges and to encourage local citizen and community stewardship. To this end, 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 nationally significant environmental and natural resource issues involving the Great Lakes. It is the further policy of the Federal Government that its executive departments and agencies will ensure that their programs are funding effective, coordinated, and environmentally sound activities in the Great Lakes system.

Sec. **2**. **Definitions**. For purposes of this order:

(a) "Great Lakes" means Lake Ontario, Lake Erie, Lake Huron (including Lake Saint Clair), Lake Michigan, and Lake Superior, and the connecting channels (Saint Marys River, Saint Clair River, Detroit River, Niagara River, and Saint Lawrence River to the Canadian Border).

(b) "Great Lakes system" means all the streams, rivers, lakes, and other bodies of water within the drainage basin of the Great Lakes.

Sec. **3**. **Great Lakes Interagency Task Force**.

(a) Task Force Purpose. To further the policy described in section 1 of this order, there is established, within the Environmental Protection Agency for administrative purposes, the "Great Lakes Interagency Task Force" (Task Force) to:

(i) Help convene and establish a process for collaboration among the members of the Task Force and the members of the Working Group that is established in paragraph b(ii) of this section, 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.

(ii) 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.

(iii) 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.

(iv) 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.

(v) Exchange information regarding policies, strategies, projects, and activities of the agencies represented on the Task Force related to the Great Lakes system.

(vi) Work to coordinate government action associated with the Great Lakes system.

(vii) Ensure coordinated Federal scientific and other research associated with the Great Lakes system.

(viii) Ensure coordinated government development and implementation of the Great Lakes portion of the Global Earth Observation System of Systems.

(ix) Provide assistance and support to agencies represented on the Task Force in their activities related to the Great Lakes system.

(x) Submit a report to the President by May 31, 2005, and thereafter as appropriate, that summarizes the activities of the Task Force and provides any recommendations that would, in the judgment of the Task Force, advance the policy set forth in section 1 of this order.

(b) Membership and Operation.

(i) 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, and the Chairman of the Council on Environmental Quality. A member of the Task Force may designate, to perform the Task Force functions of the member, any person who is part of the member's department, agency, or office and who is either an officer of the United States appointed by the President or a full-time employee serving in a position with pay equal to or greater than the minimum rate payable for GS-15 of the General Schedule. The Task Force shall report to the President through the Chairman of the Council on Environmental Quality.

(ii) The Task Force shall establish a "Great Lakes Regional Working Group" (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 including: the Great Lakes National Program Office of the Environmental Protection Agency; the United States Fish and Wildlife Service, National Park Service, and United States Geological Survey within the Department of the Interior; the Natural Resources Conservation Service and the Forest Service of the Department of Agriculture; the National Oceanic and Atmospheric Administration of the Department of Commerce, the Department of Housing and Urban Development; the Department of Transportation; the Coast Guard within the Department of Homeland Security; and the Army Corps of Engineers within the Department of the Army. The Working Group will coordinate and make recommendations on how to implement the policies, strategies, projects, and priorities of the Task Force.

(c) Management Principles for Regional Collaboration of National Significance. To further the policy described in section 1, the Task Force shall recognize and apply key principles and foster conditions to ensure successful collaboration. To that end, the Environmental Protection Agency will coordinate the development of a set of principles of successful collaboration.

Sec. **4**. **Great Lakes National Program Office**. 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. The Great Lakes National Program Manager shall serve as chair of the Working Group.

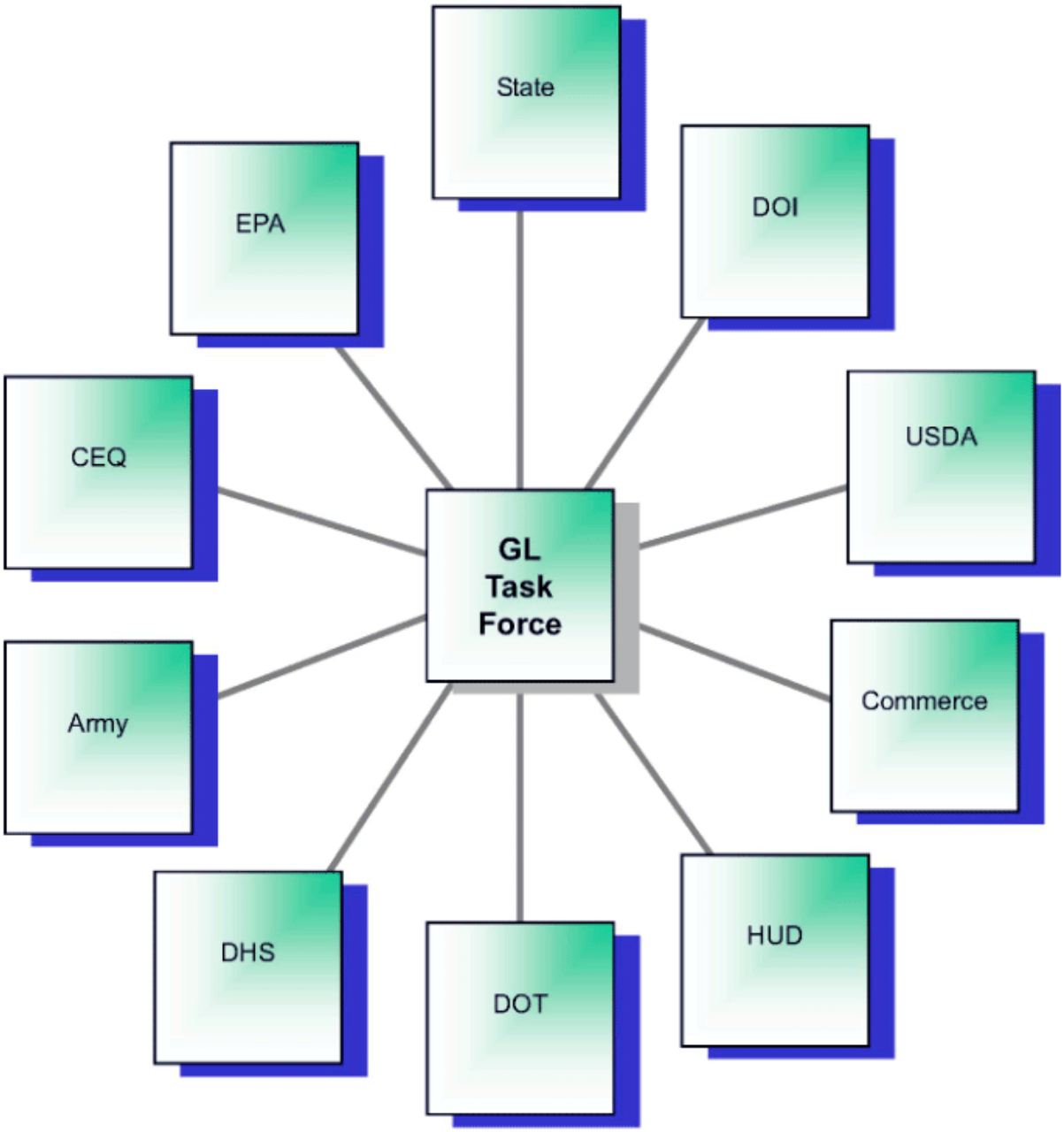
Sec. **5**. **Preservation of Authority**. Nothing in this order shall be construed to impair or otherwise affect the functions of the Director of the Office of Management and Budget relating to budget, administrative, regulatory, and legislative proposals. Nothing in this order shall be construed to affect the statutory authority or obligations of any Federal agency or any bi-national agreement with Canada.

Sec. **6**. **Judicial Review**. This order is intended only to improve the internal management of the Federal Government and is not intended to, and does not, create any right, benefit, or trust responsibility, substantive or procedural, enforceable at law or in equity by a party against the United States, its departments, agencies, instrumentalities or entities, its officers or employees, or any other person.

THE WHITE HOUSE,

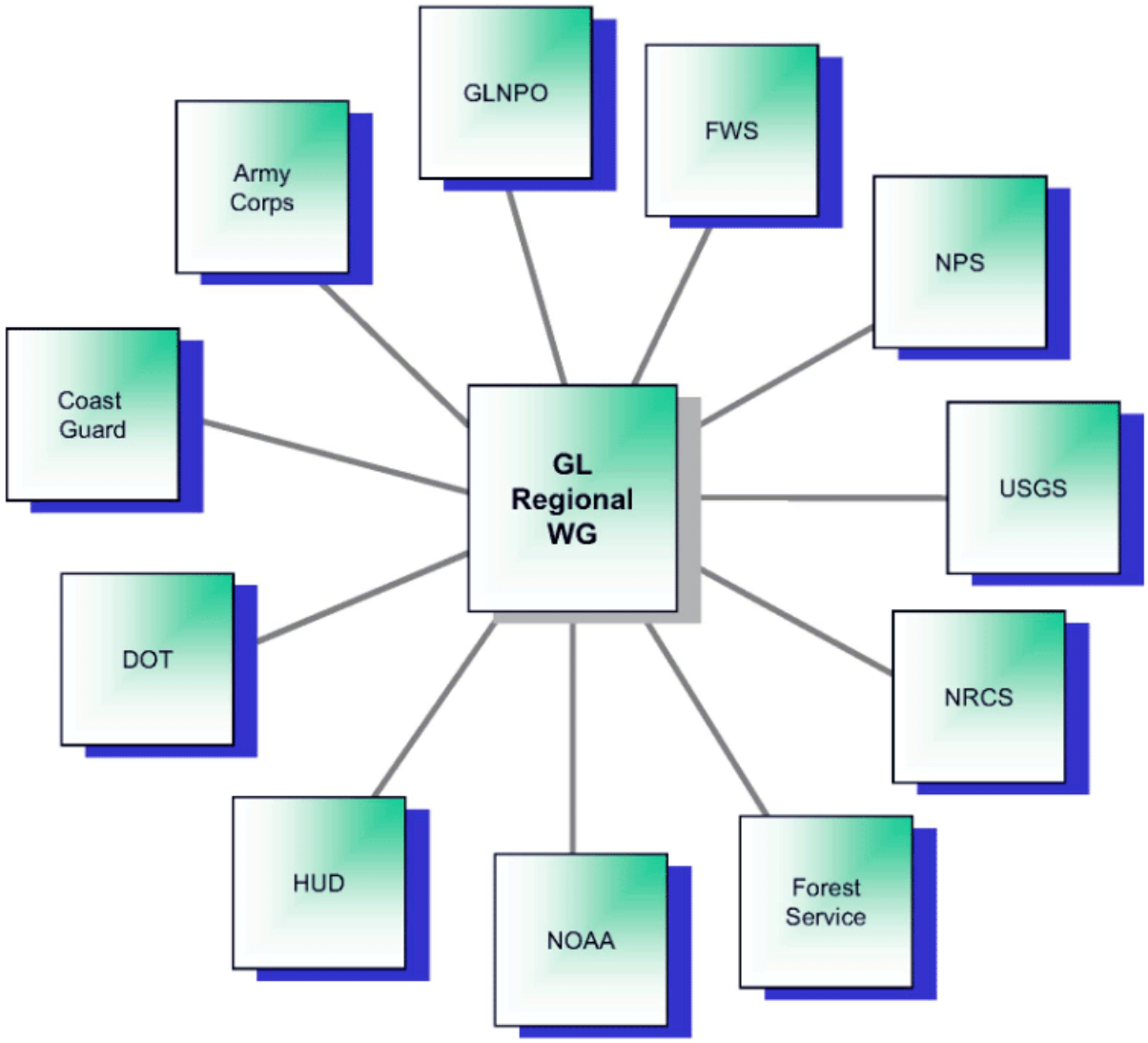
/s/ George W. Bush

Figure 1



Great Lakes Interagency Task Force

Figure 2



Great Lakes Regional Working Group

Appendix C

Great Lakes Declaration

Protecting and Restoring the Great Lakes through a
Regional Collaboration of National Significance

We, the Conveners of the Great Lakes Regional Collaboration, established on December 3, 2004, in Chicago, Illinois, in acknowledgement of Executive Order 13340 signed by President George W. Bush on May 18, 2004:

1. Recognize that the Great Lakes are an international treasure which contain about 20 percent of the earth's fresh surface water, support the culture and life ways of native communities, provide drinking water to millions of people, and form the backbone for billions of dollars in shipping, trade, fishing and recreation;

2. Recognize that the Great Lakes Water Quality Agreement of 1978, as amended by protocol signed November 18, 1987, the Convention on Great Lakes Fisheries of 1954, and other regional multi-jurisdictional agreements with Canada, commit the United States and Canada to restore and maintain the chemical, physical and biological integrity of the Great Lakes ecosystem, including the adoption of common objectives and cooperative programs;

3. Recognize that while there has been progress in restoring and improving the health of the Great Lakes ecosystem, there are still tremendous threats to the physical, biological and chemical integrity of the ecosystem;

4. Note that citizens, as well as many federal, state, and local agencies, Tribes, elected officials, and stakeholder groups, including the environmental nongovernmental organizations, industry groups, and the agricultural community, serve a vital role in protecting the Great Lakes ecosystem;

5. Acknowledge that numerous multi-governmental and non-governmental stakeholder networks have demonstrated a long history of effectively collaborating on a variety of complex regional and local ecosystem protection and restoration efforts; and

6. Affirm the need for leaders in the region, including Great Lakes Governors, federal agency heads, Members of the Great Lakes Congressional Delegation, Great Lakes mayors and Tribal leaders, building upon the extensive regional efforts to date, to collaboratively work together and with the Great Lakes community toward a common goal of protecting and restoring the Great Lakes ecosystem in order to address the new and continuing challenges and ensure a healthy ecosystem for future generations.

Hereby, consistent with the laws applicable to our respective jurisdictions, pledge our support for the development of a widely understood and broadly supported strategy including actions to further protect and restore the Great Lakes ecosystem through the Great Lakes Regional collaboration process.

Appendix D

FRAMEWORK FOR THE GREAT LAKES REGIONAL COLLABORATION

I. Introduction

The Great Lakes - Superior, Michigan, Huron, Erie, and Ontario - are an international treasure, constituting the largest system of fresh, surface water on Earth, containing roughly 20 percent of the world's fresh water supply. In addition to their natural beauty, the Great Lakes serve as a source of drinking water for more than 30 million people, support the culture and life ways of native communities, form the backbone for billions of dollars in shipping, trade, and fishing, and provide food and recreational opportunities for millions of American and Canadian citizens.

While there has been progress in restoring and improving the health of the Great Lakes ecosystem, there are still tremendous threats to the physical, biological and chemical integrity of the ecosystem. The environmental problems in the Great Lakes ecosystem have become increasingly complex over the years. The myriad of jurisdictions and programs with responsibility for the Lakes is similarly complex. According to an April 2003 Government Accountability Office Report, the governmental presence overseeing this international resource includes two countries, numerous Tribes and First Nations, more than 140 federal programs, and numerous city and state programs, all dealing with environmental restoration activities in the Great Lakes Basin. While, these organizations have experienced individual opportunities for successes during the last 30 years, there is no overarching strategy to deliver coordinated restoration and protection efforts in the future.

Multiple efforts have been taken to move toward a coordinated approach to Great Lakes ecosystem protection and restoration. In October 2003, the Great Lakes Governors of Ohio, Pennsylvania, Michigan, Minnesota, Wisconsin, New York, Illinois, and Indiana identified nine critical environmental issues worthy of national attention. These priorities listed by the Governors have since been adopted by the Great Lakes Mayors and ratified by the Great Lakes Commission. Several members of the Congressional delegation have also been actively pursuing coordinated restoration goals.

In May 2004, President Bush signed Executive Order 13340 creating a cabinet level Task Force to bring an unprecedented level of collaboration and coordination to accelerate protection and restoration of this national and internationally significant resource**.** Recognizing that efforts to protect and enhance the ecosystem must go beyond the federal government, the Executive Order also calls for the convening of a Regional Collaboration of National Significance to facilitate collaboration among the U.S. federal government, the Great Lakes states, local communities, Tribes, and other interests in the Great Lakes region as well as Canada.

II. Purpose of this Document

The purpose of this Framework is to establish the Great Lakes Regional Collaboration to enhance the U.S. efforts to restore and protect the Great Lakes ecosystem. It will also support the United States' commitments under the Great Lakes Water Quality Agreement, as amended by protocol in 1987, the Convention on the Great Lakes Fisheries of 1954, and other regional multi-jurisdictional agreements with Canada. This Framework creates the process by which the Great Lakes Regional Collaboration (GLRC) will operate, identifies who will be involved in the GLRC, and defines the final deliverable the GLRC intends to produce.

The signing of this Framework document signifies the convening of the GLRC. Signatories become Members of the Great Lakes Regional Collaboration and participate in the GLRC by the principles and structure laid out in this Framework document. By signing, Members demonstrate a serious commitment to meaningful participation in the Collaboration, with an emphasis on thoughtful discussion, collaborative problem-solving, a respect for diversity of opinion, and a common desire for progress in the Great Lakes ecosystem. The signing of this document indicates commitment to participate in the GLRC according to the Framework. Any signatory may withdraw from the process at any time if they choose to do so.

III. Practical Goals of the GLRC

The GLRC is a means by which ideas are communicated, decisions are made and a strategy is written. The GLRC will focus its energy on three important goals. First, it will develop a Great Lakes Restoration and Protection Strategy (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 (Strategy Teams; see Section IV. C.). Second, the GLRC will serve as a forum for addressing near-term regional issues that relate to Great Lakes ecosystem protection and restoration. Third, the GLRC will create an oversight forum to coordinate and enhance implementation of the Strategy.

IV. Description of Great Lakes Regional Collaboration Structure:

A. Broad and Meaningful Participation

The Great Lakes Regional Collaboration is designed as an inclusive process with opportunities for participation by all entities with an interest in the protection and restoration of the Great Lakes ecosystem. Entity participation is defined by the following levels:

1) <u>GLRC Members</u>:

The GLRC Members are the eight Great Lakes Governors, Great Lakes Mayors, the nine federal cabinet-level officials who make up the federal Great Lakes Interagency Task Force (Task Force), Tribal leaders, and Members of the Great Lakes Congressional Delegation (Congressional Delegation).

2) <u>Executive Committee</u>:

The Executive Committee is made up of individuals designated as the spokesperson for each of the GLRC Member constituencies. These spokespersons are:

(a) The Chair of federal Great Lakes Interagency Task Force speaking for the nine federal cabinet-level officials.

(b) The Chair(s) of Council of Great Lakes Governors speaking for the eight Great Lakes Governors.

(c) The Chair of Great Lakes Cities Initiative speaking for the Great Lakes Mayors.

(d) A Tribal Spokesperson(s) – The Tribal Spokesperson will vary based on meeting location and topic of discussion. To ensure continuity, the Tribes will utilize the U.S. Environmental Protection Agency's American Indian Environmental Office as the central point of coordination and information sharing. In addition, Tribes will be responsible for continuity in participation on the Executive Committee.

(e) A Congressional Delegation Spokesperson(s) – The Congressional Delegation will provide one permanent Spokesperson from the Great Lakes Congressional Task Force and any additional representatives as the Congressional Delegation sees fit. The Congressional Delegation will be responsible for ensuring continuity of participation on the Executive Committee.

3) <u>Technical Advisors</u>:

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 (see Section IV. B. 2. for a description of the Executive Committee).

4) <u>Participants</u>:

Participants are representatives of non-governmental stakeholder organizations or other interest groups or entities that register to participate in the Strategy Team process (see Sections IV. B. 4. and IV. C.).

5) <u>Observers</u>:

Canadian Federal, Provincial and local government representatives as well as First Nations may be invited to be Observers, as appropriate. Others may be invited to be Observers as well.

B. Roles

1) <u>GLRC Members</u>

GLRC Members will convene a "Members' Table" at Summit I and Summit II (see Section VII.) that will make the final decisions in the GLRC. A GLRC principal Member will have decision-making authority, but will express his or her view through a Member(s) who serves as the spokesperson for his or her Member constituency. For example, the federal government's perspective will be expressed by the Chair of the Great Lakes Interagency Task Force. GLRC Members will also have the opportunity to register to participate on different Strategy Teams. The GLRC Members will be responsible for approving any changes in the composition and membership of the Executive Committee (see Section IV. A. 2. and IV. B. 2.)

2) <u>The Executive Committee will</u>:

(a) Actively encourage regional stakeholder participation to ensure that a broad range of interests are considered as the Strategy is developed.

(b) Oversee the development of the Strategy and provide a forum for decision-making on process issues, and provide quick feedback and direction on policy issues that arise in the Strategy Teams.

(c) Distill policy questions and raise difficult decisions and disputes to the GLRC Members' Table, for final decision, as appropriate.

(d) Make recommendations to the GLRC Members on all aspects of the collaboration.

(e) Approve any changes to the Framework at any point in the GLRC process, if deemed necessary.

The Executive Committee will operate by a consensus process that parallels the process described in Section V. A.

3) <u>Technical Advisors</u>

Technical advisors may register to participate in Strategy Teams and, if chosen by the Executive Committee, may serve as Chairs to the Strategy Teams. The Executive Committee and Strategy Teams can also seek input, advice, and support from these technical advisors, as needed.

4) <u>Participants</u>

Participants include those representatives of organizations or entities that register to participate and commit to meaningful participation in the Strategy Teams (as described in Section IV. C.) with an emphasis on thoughtful discussion, collaborative problem solving, a respect for diversity of opinion, and a common desire for progress in the Great Lakes, according to this Framework.

5) <u>Observers</u>

Observers will be welcome to attend Summit I and Summit II and to provide input on the Draft Strategy. The Executive Committee may decide to invite observers to attend other meetings as well.

C. Key Areas for Great Lakes Restoration and Protection – Issue Area Strategy Teams

1) <u>Overview</u>

The Strategy Teams will be responsible for examining and providing recommendations on specific issues within the Great Lakes ecosystem to the Executive Committee. The Executive Committee and the Members of the Great Lakes Regional Collaboration expect each Strategy Team to meet as necessary to develop a draft recommended strategic action plan that is supported by a series of specific action items/recommendations to address the issue in a coordinated and effective manner. The Executive Committee will oversee the combining of these draft strategic action plans into one draft comprehensive strategy that will be provided to the GLRC Members for review and consideration prior to the Great Lakes Regional Collaboration Summit I. The Executive Committee will also coordinate the incorporation of public comments into the Strategy and will provide a revised draft Strategy to the GLRC Members for review and consideration prior to the GLRC Summit II (see Section VII. B.).

The Strategy Teams in Section IV.C. 4. were established using the October 1, 2003 Council of Great Lakes Governors' priorities, which were later adopted by the Great Lakes Mayors, as a starting point. As the Great Lakes Regional Collaboration evolves, so may these Strategy Teams, and the need may arise to add, combine, revise, or replace the Strategy Teams.

The first priority in the October 1, 2003 Council of Great Lakes Governors document addresses water use and diversion issues. This priority is being addressed through on-going binational efforts to implement the Great Lakes Charter Annex of 2001, and will not be dealt with by the Strategy Teams.

2) <u>Overarching Issues</u>

The second of the priorities listed in the October 2003 document – to promote programs to protect human health against adverse effects of pollution in the Great Lakes ecosystem – is of paramount importance to each Strategy Team. For this reason, a separate Strategy Team for human health was not established, but instead GLRC Members expect that each Strategy Team will explicitly consider

and address human health impacts and priorities, as appropriate, when developing its section of the Great Lakes Strategy. Similarly, unique Tribal interests and perspectives are of great importance to each of the Strategy Teams. Accordingly, the GLRC Members expect that each Strategy Team will explicitly consider the Tribal rights, interests, governmental infrastructure and programs involved in the issue being considered, and will identify priorities and strategies that relate to the health, welfare, and culture of Tribal communities.

A third issue that is important to each of the Strategy Teams is the need for research and monitoring. Each Strategy Team should explicitly consider such needs and coordinate all issue-specific recommendations through the Indicators and Information Strategy Team.

The Executive Committee will identify a liaison for each of these overarching issues. These individuals will be responsible for ensuring the Strategy Teams are consistently and adequately taking human health, Tribal interests and perspectives, and research and monitoring into consideration.

3) <u>Operation of Issue Area Strategy Teams</u>

(a) Strategy Team Chairs

The Chairs of the Strategy Teams will be individuals representing the GLRC Members or individuals considered technical advisors as defined under Section IV. A. 3. These chairs or co-chairs will be selected by the Executive Committee. Each team with a federal employee co-chair(s) will have a non-federal co-chair(s).

(b) Role of Strategy Team Chairs

The Chairs of the Strategy Teams will be responsible for overall management of their Strategy Team. Specifically, they will:

(i) Provide leadership for meetings and conference calls.
(ii) Set call and meeting agendas.
(iii) Preside over the development of the strategic actions plans ensuring that the document is developed in a format consistent with the structural outline provided by the Executive Committee.
(iv) Elevate unresolved issues and disputes to the Executive Committee.
(v) Approve draft materials.
(vi) Give presentations, as needed.
(vii) Establish a “drafting committee” made up of a representative group of Strategy Team participants.

(c) Decision-making process

The Strategy Teams will operate by a consensus process that parallels the process described in Section V.A. The Strategy Team Chairs will be the Presiders of the Strategy Team meetings and will be responsible for determining when a consensus has or has not been reached. In addition, the Strategy Team Chairs will be responsible for identifying when a resolution or compromise cannot be reached on an issue and elevating that issue to the Executive Committee for direction. Any participant or group of participants with a dissenting opinion, whether they have voiced that opinion actively or have remained silent, may issue that opinion in writing to accompany the recommendation provided to the Executive Committee.

(d) Public access to Strategy Team information and meetings

To the extent practicable and by appropriate means, the GLRC Members intend that:

(i) the public will have access to information about the Strategy Teams
(ii) the public will have an opportunity to observe full Strategy Team meetings.

4) <u>Issue Area Strategy Teams</u>

(a) Nonpoint Source Strategy Team

(i) Addresses Governors' Priority: "Control pollution from diffuse sources into water, land and air."
(ii) Issues to be covered include, but are not limited to: buffer strips, Clean Water Act Section 319 requirements, total maximum daily load programs (TMDLs), agricultural practices, erosion, nutrients, coastal nonpoint pollution issues, stormwater runoff, and conservation reserve programs.

(b) Persistent Bioaccumulative Toxics (PBT) Reduction Strategy Team

(i) Addresses Governors' Priority: "Continue to reduce the introduction of PBTs into the Great Lakes ecosystem."
(ii) Issues to be covered include, but are not limited to: reduction of toxic substances, pollution prevention, new chemicals of concern, air deposition and long range transport, Great Lakes Initiative and fish consumption advisories.

(c) Invasive Species Strategy Team

(i) Addresses Governors' Priority: "Stop the introduction and spread of non-native aquatic invasive species."

(ii) Issues to be covered include, but are not limited to: ballast water management, National Invasive Species Act/Nonindigenous Aquatic Nuisance Prevention and Control Act present and future implementation, the Illinois carp barriers and exploration of other potential barriers, rapid response protocols and strategies, prevention and mitigation procedures, outreach and education, and applied research.

(d) Habitat/Species Strategy Team

(i) Addresses Governors' Priority: "Enhance fish and wildlife by restoring and protecting coastal wetlands, fish and wildlife habitats."

(ii) Issues to be covered include, but are not limited to: restoration/protection of habitat, native species, fisheries, coastal areas, wetlands, healthy forests, the natural hydrologic cycles, biodiversity, and other critical natural features and areas.

(e) Area of Concern (AOC) Restoration/ Sediments Strategy Team

(i) Addresses Governors' Priority: "Restore to environmental health the Areas of Concern identified by the International Joint Commission as needing remediation."

(ii) Issues to be covered include, but are not limited to: restoring the health of AOCs through the remedial action program, cleaning up contaminated sediments through the implementation of the Great Lakes Legacy Act and other authorities, and delisting of AOCs.

(f) Indicators and Information Strategy Team

(i) Addresses Governors' Priority: "Standardize and enhance the methods by which information is collected, recorded and shared within the region."

(ii) Issues to be covered include, but are not limited to: indicators, monitoring, data standards, reporting of environmental information, Great Lakes Integrated Coastal Observing System (GLICOS), Lakewide Management Plans (LaMPs), and the State of the Lakes Ecosystem Conference (SOLEC) process. Emphasis will be on strengthening decision-support systems.

(g) Sustainable Development

(i) Addresses Governors' Priority: "Adopt sustainable use practices that protect environmental resources and may enhance the recreational and commercial value of our Great Lakes."
(ii) Issues to be covered include, but are not limited to: transportation, brownfields, land-use and preservation practices, waterfront restoration, and economic viability as a function of environmental and natural resource protection.

(h) Coastal Health Strategy Team - Although human health will be explicitly addressed, as appropriate, in the Strategy Teams above, there are several specific coastal issues that can very directly impact human health.

(i) Addresses Governors' Priority: "Promote programs to protect human health against adverse effects of pollution in the Great Lakes ecosystem."
(ii) Issues to be covered include, but are not limited to: beach closings, combined sewer overflows (CSO), sanitary sewer overflows (SSO), bacteria and pathogen contamination.

V. GLRC Decision Framework

A. Decision-Making Process **-** The GLRC will operate based on a consensus process.

1) <u>Definition of Consensus</u>

For purposes of this Framework, consensus is generally accepted agreement without a majority vote. Consensus does not require unanimity. In other words, if there is a lack of active or voiced opposition on a decision and the Members are willing to let the decision move forward, consensus has been reached.

2) <u>Implementation of consensus process</u>

The GLRC Members Table will serve as the venue for resolving disputes elevated by the Executive Committee, and for reaching final decisions for action. Final decisions will be made when "consensus" is reached. The presider(s) of the meeting will determine, based on the discussion, whether and when a broad consensus has been reached and an action may move forward. Under this model, an action may move forward when:

- There is unanimous support by the GLRC Members,
- There is significant support and lack of active or voiced opposition, or
- There is significant support with minimal active or voiced opposition (dissenting opinion).

Any Member or group of Members with a dissenting opinion, whether they have voiced that opinion actively or have remained silent, may issue that opinion in

writing and present it to the GLRC Member Table for consideration and inclusion as an appendix in any final report that is issued.

3) Mechanism for expressing support or opposition at the Member Table ("Spokesperson Model")

Although all Members will be present at Summit I and II, views expressed at the Members Table will be expressed by "spokespersons." Should an issue arise that is specific to any one Member who is not designated as the spokesperson, he or she may step in to support the spokesperson. The spokesperson model will be organized as follows: governors (organized by Council of Great Lakes Governors), cabinet officials (organized by Great Lakes Interagency Task Force), Mayors (organized by the Great Lakes Cities Initiative), Tribal leaders (Organized by a Tribal Caucus), and Members of Congress (Organized by Congressional Great Lakes Task Force). Each spokesperson will be responsible for obtaining consensus within their Member constituency and organizing its position before the consensus view is sought and recorded at Summit I and Summit II (see Section VII. A.).

4) Options for Members opposing final action

At any point when there is a decision to move forward (i.e. presiders declare broad consensus), anyone with a dissenting opinion, whether they have voiced that opinion actively or have remained silent, may:

a) issue that opinion in writing to accompany the recommendation; or
b) withdraw from the Great Lakes Regional Collaboration.

5) Congressional Delegation Role

GLRC Members from the Congressional Delegation will serve a special function in the GLRC. Specifically, Members of Congress will serve in a "special advisory" role on the Executive Committee and at the GLRC Members Table. The Congressional Delegation will be Members of the GLRC but will not "vote" or act to support or block a consensus position. Members of Congress will continue to have access to the process at all levels (Strategy Teams, Executive Committee, and Members' Table) and will have the ability to participate and provide advice at all stages of the process.

VI. Support for the Great Lakes Regional Collaboration

A. Administrative Coordinator

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.

Role: The Administrative Coordinator will:

(a) Maintain a record of all registered participants and members in the GLRC.
(b) Facilitate communication with participants and members, including electronic communication, conference calls, and web presence, as appropriate.
(c) Oversee public communications.
(d) Organize, facilitate, and staff meetings and conference calls of Members, the Executive Committee, and the Strategy Teams.
(e) Provide support for the production of the work products of the Strategy Teams and Executive Committee.
(f) Monitor whether the Executive Committee and Strategy Teams operate within the budget limits approved by the Executive Committee.

Support:

When a federal agency agrees to serve as the Administrative Coordinator, the agency may provide contract support for that function in cooperation with other federal partners in the GLRC. When a non-federal partner assumes the role of Administrative Coordinator, the non-federal partner may carry out that function with financial assistance from the other non-federal participants as described in Section VI. B. 2.

B. Non-Federal Facilitator:

The Executive Committee will provide guidance to a Non-Federal Facilitator who will support non-federal participation in Great Lakes Regional Collaboration process. The Non-Federal Facilitator will serve in its normal substantive role in the GLRC process and will also assume additional responsibility for financial aspects of the GLRC Strategy development process.

Role:

(a) Receive funds from federal and non-federal participants in the GLRC to facilitate the on-going operation of the Great Lakes Regional Collaboration, including face-to-face meetings, Summits I and II, and other needs, as appropriate.
(b) Provide support for research, studies, and investigation lending to the development of the Strategy through the GLRC process. Provide periodic reports to the Executive Committee.

Support:

The Non-Federal Facilitator may receive funds from all members of the GLRC, including the Great Lakes Governors, Great Lakes Mayors, Tribes, Congressional Delegation and federal partners.

VII. Roadmap for GLRC

It is the goal of the GLRC Members to follow an aggressive schedule for action. The 12-month process outlined below will culminate in the development and ratification of a Great Lakes Restoration and Protection Strategy. In the six months following the Conveners meeting in Chicago on December 3, 2004, the Strategy Teams will work to develop their strategic action plans that will then be combined to form a draft of the Great Lakes Restoration and Protection Strategy (draft Strategy).

A. Great Lakes Regional Collaboration Summit I

Summit I of the GLRC Members will be scheduled for the summer of 2005. At this Summit, the Executive Committee will present the draft Strategy to the Members of the GLRC for resolution of final issues and adoption. The draft Strategy will then be circulated for broad public review and revised, as appropriate.

B. Great Lakes Regional Collaboration Summit II

Summit II of the GLRC Members will be scheduled for the winter of 2005. Invitees to the summit will include the GLRC Members as well as the broader universe of conveners invited to participate in the December 2004 Conveners Meeting. At this Summit, the Executive Committee will present a revised draft Strategy to the GLRC Members for issue resolution and adoption. At this time, other organizations, including the technical advisors, participants, and observers will also be invited to endorse the Strategy.

C. Coalition and Implementation Phase

It is the vision of the GLRC Members that once the Strategy is adopted at Summit II, the Members will undertake an effort to build broad support for implementing the actions and policies identified in the Strategy. The GLRC Members also support the development of a process to ensure ongoing coordination of the Members' activities regarding the Great Lakes ecosystem. However, the GLRC Members themselves will determine whether its continued existence will be valuable in advancing the goals of Great Lakes ecosystem protection and restoration.

D. Public Access to Summit I and Summit II

To the extent practicable and by appropriate means, the GLRC Members intend that

1) The public will have access to information presented to the GLRC Members at Summit I and Summit II
2) The public will have an opportunity to comment on the draft Strategy adopted by the GLRC Members at Summit I
3) The public will have an opportunity to observe Summit I and Summit II.

VIII. Intent of the Framework

A. The provisions of this Framework are not binding on the signatories or any other person. This Framework is not intended to, and does not create any right, benefit, or trust responsibility, substantive or procedural, enforceable at law of in equity any person against any of the signatories, their governments, offices, or organizations, or any other person.

B. Nothing in this Framework affects the authority or obligations of the signatories or their governments, offices, or organizations, or any bi-national agreement with Canada.

C. The signatories of this Framework acknowledge that participation in the Framework is subject to funding availability and applicable legal requirements of their respective jurisdictions, governments, offices, and organizations. Financial transactions necessary to carry out specific projects under the Framework will be in accordance with applicable laws, regulations, and procedures, and will be subject to separate agreements.

By signing this Framework, I hereby commit to meaningful participation in the Great Lakes Regional Collaboration, with an emphasis on thoughtful discussion, collaborative problem solving, a respect for diversity of missions, authority, and opinions, and a common desire for progress in the Great Lakes ecosystem. I further commit to participate in accordance with this Great Lakes Regional Collaboration Framework.

Appendix E

Federal Great Lakes Budget and Program Inventory

Introduction

As part of the Great Lakes Interagency Task Force's Report to the President on implementing Executive Order 13340, the Great Lakes Budget and Program Inventory (the Inventory) is designed to demonstrate the broad scope of the Federal government's involvement in the Great Lakes region. In addition, the Inventory serves as an informational tool to help Federal departments and agencies implement components of the Executive Order (EO). The EO contains several provisions to improve coordination of the more than 140 Federal programs that help fund and implement environmental restoration and management activities throughout the Great Lakes region. This information will provide a broad snapshot of the Federal government's commitment to the Great Lakes and will help the Interagency Task Force and Regional Working Group to coordinate resources to ensure that funds are being directed to the highest priorities.

The Inventory consists of three levels of information. Level 1 contains quantitative resource data about programs that have a direct impact on the water quality of the Great Lakes. Examples of Level 1 programs include: the Environmental Protection Agency's Great Lakes Legacy Act program; the Department of Agriculture's Environmental Quality Incentives Program; and the National Oceanic and Atmospheric Administration's Coastal Zone Management grant program.

Level 2 includes qualitative descriptions of programs that lack a direct water quality connection, but are beneficial to the Great Lakes ecosystem more broadly. Examples include: the U.S. Department of Agriculture's Wildlife Habitat Incentives Program (under the Natural Resource Conservation Service) and Forestry Research (under the U.S. Forest Service); the Department of the Interior's Great Lakes Exotic Plant Team (under the National Park Service), the Migratory Birds program (under the U.S. Fish & Wildlife Service), and Geographic Analysis and Monitoring (under the U.S. Geological Survey); and the Department of Transportation's Wetlands and Wildlife Mitigation program (under the Federal Aviation Administration).

Level 3 includes qualitative descriptions of programs under the agencies and departments identified in the EO that lack clear water quality and broader ecosystem benefits, but are beneficial to the Great Lakes region. Examples of Level 3 programs include the U.S. Army Corps of Engineers' Great Lakes Navigational System, the Department of Homeland Security's Domestic Fisheries Enforcement program (under the U.S. Coast Guard), and the Environmental Protection Agency's Brownfields program.

Level 1 – Great Lakes Water Quality Funding

This table lists the Fiscal Year (FY) 2004 Enacted funding levels for programs of the nine Executive Order departments and agencies which directly benefit Great Lakes water quality. Cumulatively, these Federal programs invested over half a billion dollars in FY 2004 funds to improve water quality in the Great Lakes.

Great Lakes Water Quality Crosscut

(Dollars in Millions)

	FY 2004 Enacted
DEPARTMENT OF AGRICULTURE (USDA)	
Farm Service Agency	
Conservation Reserve Program	$64.1
Forest Service	
Capital Improvement and Maintenance	$6.0
Forest Legacy	$3.0
Forest Stewardship	$6.0
Knutsen-Vandenberg Fund	$1.0
Land and Water Conservation Fund	$1.0
National Forest System	$1.0
Roads and Trails Fund*	$1.0
Natural Resources Conservation Service	
Conservation Operations	$38.0
Environmental Quality Incentives Program	$38.0
Great Lakes Basin Program	$3.0
Watershed and Flood Prevention Operations	$1.0
Wetlands Reserve Program	$19.0
Rural Development	
Water / Wastewater Loans and Grants	$34.0
Subtotal, USDA	**$216.1**
DEPARTMENT OF THE ARMY	
Army Corps of Engineers	
Aquatic Ecosystem Restoration	$3.5
Aquatic Plant Control Research	$0.2
Beneficial Use of Dredged Material	$0.1
Dispersal Barrier Demonstration	$0.7
Environmental Dredging	$1.3
Environmental Infrastructure	$7.6
Great Lakes Fishery and Ecosystem Restoration	$0.7
Planning Assistance to States	$0.6
Remedial Action Plan Assistance	$1.0
Restoration of Environmental Quality	$2.0

Sediment Transport Models	$1.0
Wetlands Permitting	$10.8
Subtotal, Corps	**$29.4**
DEPARTMENT OF COMMERCE	
National Oceanic and Atmospheric Administration	
Ballast Water Demonstrations	$0.5
Coastal Zone Management Grants	$14.0
Great Lakes Environmental Research Laboratory	$8.7
Great Lakes Satellite Remote Sensing Program (CoastWatch)	$0.1
National Center for Coastal Ocean Science - ECOHAB	$0.1
National Center for Coastal Ocean Science – MERHAB*	$0.0
National Center for Coastal Ocean Science - Natl. Status and Trends*	$0.0
NMAO charter vessel for Algal Bloom projects*	$0.0
NMAO charter vessel for Sea Grants projects*	$0.0
Nonpoint Pollution Control Implementation Grants	$1.2
Oceans and Human Health - NOAA Center of Excellence	$2.1
Old Woman Creek National Estuarine Research Reserve	$1.0
Sea Grants to Great Lakes States	$11.0
Weather and Air Quality Research / Air Resources Laboratory	$0.1
Subtotal, Dept. of Commerce – NOAA	**$38.8**
ENVIRONMENTAL PROTECTION AGENCY (EPA)	
Office of Air and Radiation	
Great Waters Program	$1.0
Section 105 Clean Air Grants	$1.0
Office of Research and Development	
Invasive Species Research	$0.5
Office of Water	
Clean Water State Revolving Fund	$154.0
Great Lakes Legacy Program	$10.0
Great Lakes National Program Office	$15.0
Great Lakes Remedial Action / Lakewide Management Plans	$3.0
Section 106 Clean Water Grants	$15.0
Section 319 Nonpoint Source Grants	$7.0
Targeted Watershed Grants	$1.0
Water Quality Cooperative Agreements	$0.0
Wetlands State Grants	$1.0
Subtotal, EPA	**$208.5**
DEPARTMENT OF HOMELAND SECURITY	
Coast Guard	
Domestic Fisheries Enforcement	$0.1
Marine Environmental Protection	$3.7

Oil Spill Response and Claims	$1.4
Subtotal, CG	**$5.2**
DEPARTMENT OF THE INTERIOR (DOI)	
Fish and Wildlife Service	
Habitat Restoration Projects	$1.0
National Wildlife Refuge System	$8.7
U.S. Geological Survey	
Bioinformatics	$0.9
Contaminant Biology Program	$0.3
Cooperative Water Program	$3.6
Ecosystem Program	$1.2
Fisheries Program	$2.3
Ground Water Resources Program	$0.2
Global Climate Change Program	$0.2
Hydrologic Networks and Analysis	$0.1
Invasive Species Program	$0.4
National Streamflow Information Program	$0.2
National Water Quality Assessment Program	$1.9
Status and Trends of Biological Resources Program	$3.0
Toxic Substances Hydrology	$0.4
National Park Service	
Competitive Park Projects (Water Management Plans)	$0.2
Vital Sign Water Quality Monitoring	$0.3
Subtotal, DOI	**$24.9**
DEPARTMENT OF STATE (STATE)	
Western Hemisphere Affairs Bureau	
International Joint Commission	$1.0
Subtotal, State	**$1.0**
TOTAL, ALL AGENCIES	$523.9

*indicates program funding level is less that $100k

Level 2 Programs – Great Lakes Ecosystem Benefits

Level 2 of the Great Lakes Budget and Program Inventory provides qualitative descriptions of programs that lack a direct water quality connection, but benefit the Great Lakes ecosystem more broadly. Information is presented alphabetically by **department/agency** – bureau – *program*.

Listing of Great Lakes Level 2 Programs

Department of Agriculture

Animal and Plant Health Inspection Service

- *Asian Longhorned Beetle Eradication*
- *Emerald Ash Borer*

Forest Service

- *Cooperative Fire Program*
- *Economic Action Programs*
- *Forest Health and Protection Program*
- *Forestry Research Stations and Programs*

Natural Resources Conservation Service

- *Conservation Security Program*
- *Grassland Reserve Program*
- *Resource Conservation and Development Program*
- *Wildlife Habitat Incentives Program*

Rural Development

- *Renewable Energy Systems/Energy Efficiency Improvements Loan and Grant Program*

Department of the Army

Army Corps of Engineers

- *Confined Disposal Facilities*
- *Dredging Operations Environmental Research*

Department of Commerce

National Oceanic and Atmospheric Administration

- *Emergency Response Program (HAZMAT) – Great Lakes component*
- *Great Lakes Marine Weather Services*
- *Habitat Program – Great Lakes component*
- *Landscape Characterization and Restoration Program*
- *National Water Level Observing Program*

Environmental Protection Agency

Office of Prevention, Pesticides, and Toxic Substances

- *Toxic Substances Control Act Program*

Office of Research and Development

- *Research – Bioaccumulative Chemicals and Nutrient Loading*
- *Research – Ecosystem Modeling and Forecasting*
- *Research – Environmental Indicators*
- *Research – Grants*
- *Research – Nearshore Monitoring and Assessment*
- *Research – Non-indigenous Species*

Office of Water

- *BEACH Grants*
- *Drinking Water Programs*
- *Drinking Water State Revolving Fund (DWSRF)*
- *Public Water System Supervision (PWSS) Program*
- *Surface Water Protection*
- *Underground Injection Control (UIC) Program*

Department of Homeland Security

Coast Guard

- *MARPOL Annex VI Program*
- *Shore Protection Act (SPA) Program*

Department of the Interior

Fish and Wildlife Service

- *Detroit River International Wildlife Refuge*
- *Endangered Species Program*
- *Great Lakes Basin Ecosystem Team*
- *Great Lakes Coastal Program*
- *Great Lakes Fish and Wildlife Restoration*
- *Law Enforcement Program*
- *Migratory Bird Management Program*
- *National Fish Hatcheries – Great Lakes Operations*
- *National Wetlands Inventory*
- *Natural Resources Damage Assessment Program*
- *North American Waterfowl Management Plan and National Fish Habitat Initiative*
- *Partners for Fish and Wildlife Program*
- *Sea Lamprey Management Program*

U.S. Geological Survey

- *Geographic Analysis and Monitoring Program*

Bureau of Indian Affairs

- *Circle of Flight Wetlands Program*

National Park Service

- *Great Lakes Exotic Plant Team*
- *Great Lakes Inventory and Monitoring Project*
- *Great Lakes Park Resource Management Operations*

Department of State

Bureau of Oceans and International Environmental Scientific Affairs

- *Great Lakes Fishery Commission*

Department of Transportation

Federal Aviation Administration

- *Wetland and Wildlife Mitigation*

Federal Highway Administration

- *Highway Environmental Research*
- *National Highway System*
- *Surface Transportation Program*
- *Transportation Enhancements*

Maritime Administration

- *Ballast Water Research*

Pipeline Safety and Hazardous Materials Administration
- *Pipeline Integrity*

St. Lawrence Seaway Development Corporation
- *Ballast Water Management*

Department of Agriculture http://www.usda.gov/

Animal and Plant Health Inspection Service http://www.aphis.usda.gov/

Program: Asian Longhorned Beetle Eradication
Description: The Asian Longhorned Beetle (ALB) is a large invasive pest introduced from China on wood packaging. ALB infest a wide range of host trees with devastating effects on tree stands include those in the urban environment. The ALB eradication program began in the late 1990s in New York State and Illinois, and expanded into a small portion of New Jersey in Fiscal Year 2003. It involves APHIS, the Forest Service, and State cooperators. The Illinois program area is within the boundaries of the Great Lakes Basin, in Chicago. This program's goal is to eliminate the ALB from the United States and prevent future introductions. The program consists of survey, regulatory, and control activities. Surveys determine the size of the outbreak, and the sites requiring regulatory and control activities. Regulatory activities prevent artificial ALB spread from infested areas. Control activities involve tree removal and destruction to eliminate the pest, and a combination of biological, cultural, and chemical methods. APHIS is primarily responsible for survey, chemical control, environmental monitoring, data management, and technology enhancement.

Program: Emerald Ash Borer
Description: Emerald Ash Borer (EAB) is an exotic foreign invasive pest that has infested and killed an estimated 8-10 million ash trees in the United States since it entered the country. APHIS has been cooperating with the affected States, including Michigan, Ohio, Indiana, Maryland, and Virginia, since May 2003 to address EAB. Program surveys in 2004 resulted in an increase of the regulated area from 5,400 square miles to approximately 41,000 square miles, with the largest affected area located in Michigan's Lower Peninsula. The program's primary objective is to protect forest products industries, the ash component in our forests and park lands, access to ash by Native American peoples for cultural purposes, and the quality of the urban environments from the destructive effects of EAB. The program will continue to use the existing survey and eradication tools available, namely a combination of visual and trap tree survey methods and tree removal at detection sites. The program will also work to reduce ash density in general in the gateway areas by matching landowners with sawmills in their areas that are willing to purchase and process ash trees.

Forest Service http://www.fs.fed.us/

Program: Cooperative Fire Program
Description: Originally created in the 1920s, the purpose of the overall program is to protect state and private lands from wildland fires by providing protection and management assistance to all forest landowners. Current program focus is on treatment of hazardous fuels, particularly where forestlands are intermingled with human habitation (wildland/urban interface), to prevent uncontrolled damaging wildfires and to help restore native vegetation adapted to local ecosystems. This helps maintain water quality and minimizes excessive flooding in tributaries feeding the Great Lakes. Protection from catastrophic fire along with healthy, restored vegetation assures the forests continue to filter pollutants from air and water, store water and nutrients, protect soils, flood plains, and streams feeding the Great Lakes.

Program: Economic Action Programs
Description: Develop and enhance rural community vitality, resiliency, and economic opportunities within a sustainable natural resource framework. An increased number of vital rural communities are able to exercise effective civic capacity and community resiliency in the face of ongoing change. Many of these rural, resource-dependent communities are also Great Lakes shoreline occupants. For long-term success of Great Lakes restoration, communities economically dependent on natural resources must have the ways and means to healthy, sustainable economies, while also providing health and sustainability for the resources on which they rely.

Program: Forest Health and Protection
Description: This program was created in 1947, with current program activities having begun in 1978 as a coordinated effort among Federal, State, and local entities for the management of forest health on non-Federal forested lands. While initial programs targeted insect and disease problems, modern program funds activities work to sustain healthy forest conditions on many fronts, including control of non-native invasive plant and animal species on the land and in the water. Forested lands in the Great Lakes watershed are largely non-Federal and include tributaries, wetlands, and inland lakes. By filtering pollutants from air and water, storing water and nutrients, protecting soils, flood plains, and streams, and providing aesthetic and other human needs, healthy forests bring significant benefits down stream to the Great Lakes themselves.

Program: Forestry Research Stations and Programs
Description: Research program includes:

1. Two major Research Stations that service the Great Lakes basin with many small laboratory sites within the affected States.
2. Forest Products Laboratory in Madison, WI that performs basic and applied research applicable worldwide regarding: forestry; range; wildlife/fisheries; watershed management; fire sciences

Riparian research and management guideline development have been a hallmark of Forest Service research in the Great Lakes area. Research results are applicable across all ownerships, public and private. Key benefits are prevention of excessive erosion and sedimentation from managed lands as well as moderating runoff and downstream flooding.

Natural Resources Conservation Service http://www.nrcs.usda.gov/

Program: Conservation Security Program (CSP)
Description: CSP is a voluntary program that provides financial and technical assistance to promote the conservation and improvement of soil, water, air, energy, plant and animal life, and other conservation purposes on Tribal and private working lands. Working lands include cropland, grassland, prairie land, improved pasture, and range land, as well as forested land that is an incidental part of an agriculture operation. The program is available in all 50 States, the Caribbean Area and the Pacific Basin area and provides equitable access to benefits to all producers, regardless of size of operation, crops produced, or geographic location.

Program: Grassland Reserve Program
Description: The Grassland Reserve Program (GRP) is a voluntary program offering landowners the opportunity to protect, restore, and enhance grasslands on their property. The Natural Resources Conservation Service, Farm Service Agency and Forest Service are coordinating implementation of GRP, which helps landowners restore and protect grassland, rangeland, pastureland, shrubland and certain other lands and provides assistance for rehabilitating grasslands. The program will conserve vulnerable grasslands from conversion to cropland or other uses and conserve valuable grasslands by helping

maintain viable ranching operations. Grasslands make up the largest land cover on America's private lands. Privately-owned grasslands and shrublands cover more than 525 million acres in the United States.

Program: Resources Conservation and Development Program
Description: The purpose of the Resource Conservation and Development (RC&D) program is to accelerate the conservation, development and utilization of natural resources, improve the general level of economic activity, and to enhance the environment and standard of living in designated RC&D areas. It improves the capability of State, Tribal and local units of government and local nonprofit organizations in rural areas to plan, develop, and carry out programs for resource conservation and development. The program also establishes or improves coordination systems in rural areas. Current program objectives focus on improvement of quality of life achieved through natural resources conservation and community development which leads to sustainable communities, prudent use (development), and the management and conservation of natural resources. RC&D areas are locally sponsored areas designated by the Secretary of Agriculture for RC&D technical and financial assistance program funds.

Program: Wildlife Habitat Incentives Program
Description: The Wildlife Habitat Incentives Program (WHIP) is a voluntary program for people who want to develop and improve wildlife habitat primarily on private land. Through WHIP USDA's Natural Resources Conservation Service provides both technical assistance and up to 75 percent cost-share assistance to establish and improve fish and wildlife habitat. WHIP agreements between NRCS and the participant generally last from 5 to 10 years from the date the agreement is signed. By targeting wildlife habitat projects on all lands and aquatic areas, WHIP provides assistance to conservation minded landowners who are unable to meet the specific eligibility requirements of other USDA conservation programs. The Farm Security and Rural Investment Act of 2002 reauthorized WHIP as a voluntary approach to improving wildlife habitat in our Nation.

Rural Development http://www.rurdev.usda.gov/

Program: Renewable Energy Systems/Energy Efficiency Improvements Loan and Grant Program
Description: The Renewable Energy Systems/Energy Efficiency Improvements Program provides financial assistance to agricultural producers and rural small businesses for the purpose of purchasing and installing renewable energy systems and energy efficiency improvements in rural areas. Financial assistance to any single entity may be provided as a direct loan, a guaranteed loan, or a grant, or a combination of a loan and grant.

Department of the Army http://www.army.mil/

Army Corps of Engineers http://www.usace.army.mil/

Program: Confined Disposal Facilities (CDFs)
Description: The Corps has designed, constructed and/or operated 45 confined disposal facilities (CDFs) around the Great Lakes for the disposal of contaminated sediments dredged from Federal navigation projects at a Federal cost of $300 million (construction costs unadjusted for inflation). These CDFs have enabled the Corps to remove and safely manage over 90 million cubic yards of contaminated sediments from Great Lakes harbors and channels in the past forty years. More than 70 million cubic yards of these contaminated sediments were dredged from Areas of Concern. In a report to Congress (USACE/USEPA 2004), the Corps and the Environmental Protection Agency (EPA) provided an assessment of the cumulative impacts of these CDFs on the Great Lakes ecosystem which concluded that the overwhelming impacts were positive. The report is available online at www.lrd.usace.army.mil/navigation/glnavigation/

Program: Dredging Operations and Environmental Research (DOER)
Description: DOER is one of several existing and previous programs managed by the Corps that has conducted applied research on the environmental impacts of dredging and the management of dredged material. A substantial body of research has been conducted under these programs on the planning, design construction, operation and monitoring of confined disposal facilities (CDFs) for contaminated sediments, including numerous studies within the Great Lakes. This program is currently conducting investigations on "dredging windows" which restrict the timing of dredging and technologies for beneficial use of dredged material. These two issues are priorities of the Great Lakes Dredging Team. For more information, go to the DOER web site at http://el.erdc.usace.army.mil/dots/doer/doer.html

Department of Commerce http://www.commerce.gov/

National Oceanic and Atmospheric Administration http://www.noaa.gov/

Program: Emergency Response Program (HAZMAT) – Great Lakes component
Description: The NOAA Emergency Response Program conducts activities to reduce risks to coastal habitats and resources from oil and hazardous chemical spills by providing critical advice on science and natural resource issues to the Unified Command during responses to coastal oil and hazardous materials spills. The program also develops tools such as spill-related software, national guidelines for spill cleanup, hydrodynamic and trajectory spill models that set a national standard for operational presentation of pollutant movement in the environment, publishing of a series of job aids to help improve the consistency and reliability of spill response actions. Training is provided to industry, local government, and Federal agency personnel in the scientific aspects of oil and chemical spill response.

Program: Great Lakes Marine Weather Services
Description: The National Weather Service (NWS) is a large part of NOAA's involvement in the Great Lakes Ecosystem. The contributions of the NWS include climate, water, and weather services. Through Public and Fire Weather Services, NWS provides forecast, warning, and response services to the nation for wildland fires, environmental hazard events, and land management activities. Through Marine Weather Services, NWS operates 10 Weather Forecast Offices (WFOs) operating 24/7 that provide weather and water forecasts, watches and warnings for the waters and communities surrounding the Great Lakes. Specific services include:

- Allow commercial shipping interests to plan the safest and most efficient means of navigating the Great Lakes waters.
- Assist recreational and commercial vessels in planning their activities.
- Assist near shore communities in recreational planning.
- Provide advance warning to minimize injury and minimize or mitigate hazardous weather damage from thunderstorms, waterspouts, blizzards, fog, lightning, rip currents, etc.
- Provide weather forecasting services to emergency managers at the Federal, State, and local levels for control, cleanup, and mitigation of damages due to hazmat spills.
- Provide weather, water level and wave height observations through our marine observation network that includes buoys and Coastal Marine Automated Network (CMAN) stations.

Program: Habitat Program – Great Lakes component
Description: In the Great Lakes and the Great Lakes Basin, NOAA's Habitat Program protects and restores habitats that support aquatic resources and is essential to the long-term health and sustainability of Great Lakes ecosystem. The program applies the latest science and technology to ensure that

ecosystem productivity, function, and services, such as recreational and commercial fishing and commerce provided by federal navigation channels, are protected and restored. The program promotes sound stewardship by coordinating with other federal, state, and tribal agencies, industry, and the public in planning and implementing restoration projects throughout the Great Lakes basin.

Program: Landscape Characterization and Restoration Program
Description: This program, managed by the Coastal Services Center, works with coastal management community to develop planning tools for resource management. These tools include habitat characterizations, which integrate the ecological and socioeconomic information that describes the physical environment, biological communities, human dimensions, and management issues effecting coastal regions. These characterizations use Internet technology and geospatial data to synthesize the information for management and planning. In the Great Lakes, the program is working with the Great Lakes Commission and a broad partnership of federal, state, provincial, and local government agencies to characterize a 10 mile buffer area around and including Lake St. Clair.

Program: National Water Level Observation Program – Great Lakes component
Description: NOAA's Center for Operational Oceanographic Products and Services (CO-OPS) is responsible for collecting water level data for the entire Great Lakes basin watershed (295,000 square miles), and for maintaining the International Great Lakes Datum of 1985 (IGLD 1985). In meeting these responsibilities, close coordination is maintained with other Federal Agencies and Canadian counterparts. Exchanges of water level data with Canada are made under treaties that require regulation of operations and support of cooperative power generation. The program provides a hydraulic vertical reference datum by which the governments of Canada and the United States manage water resources in the Great Lakes basin. International management of water resources in the Great Lakes basin is vital to ensuring the safety of the Lake's many users. The Great Lakes Program takes into account fluctuations of the Lakes' water levels and the outflows of rivers relative to: regulation, lake forecasting, shipping, international cooperative treaties and agreements, riparian interests, hydroelectric power generation, construction, dredging, litigation, and other water resources management and development activities.

Environmental Protection Agency http://www.epa.gov

Office Prevention, Pesticides, and Toxic Substances http://www.epa.gov/oppts

Program: Toxic Substances Control Act PCB Program
Description: Section 6(e) of the Toxic Substances Control Act (TSCA) mandates specific prohibitions and/or restrictions on the manufacture, processing, use and distribution in commerce of PCBs. PCBs are persistent, bioaccumulative, toxic chemicals that adversely impact the Great Lakes ecosystem. The focus of the TSCA PCB Program includes: reducing and eliminating the continued uses of PCBs; encouraging PCB cleanups and overseeing PCB remediation activities; continuing the safe management and disposal of PCB wastes; and ensuring the coordination of TSCA PCB activities with other Federal and State programs and U.S. international initiatives. The Program issues TSCA approvals for storage, R&D, disposal, and cleanup, with an emphasis on cleanup activities. Cleanups vary in complexity and can involve coordination with RCRA; Federal and State Superfund and other remedial programs; Federal facility environmental officials; and Agency Superfund representatives for the Brownfields Program.
Office of Research and Development http://www.epa.gov/ord

Program: Research - Bioaccumulative Chemicals and Nutrient Loading
Description: Chemical analysis of bioaccumulative chemicals in a linked set of water, sediment, food chain, and predatory fish samples from Lake Michigan, to provide a high quality data set for

understanding exposure and transfer of bioaccumulative chemicals in that system. Field and modeling research to examine relationships between human disturbances, landscape character, and coastal ecosystem quality. A principal focus is to define the expression of nutrient and habitat effects upon biology and coastal food webs. The overall goal is development of quantitative nutrient loading-biological/habitat response relationships.

Program: Research - Ecosystem Modeling and Forecasting
Description: Development and application of a multi-media, mass balance modeling framework for the Great Lakes, connecting channels, and associated watersheds. Results aid water quality managers in risk-based, remedial and regulatory decisions which can be further examined in an economic, benefit-cost analysis context.

Program: Research - Environmental Indicators

- Description: "The Use of Thermal Advanced Very High Resolution Radiometer (AVHRR) Imagery to Construct an Estimator of Seasonal Heat Budgets for Large Lakes in North America" - This research explores the use of annual and seasonal measurements of large lake surface temperatures as a new ecological indicator of the overall thermal content of those lakes.
- Description: "Using Landscape Metrics to Develop Indicators of Great Lakes Coastal Wetland Condition" - Describes the landscape setting relevant to a landscape (i.e., broad scale) approach; the quality, availability and cost of data, metrics, and indicators; and data analysis and presentation techniques relevant to these techniques.
- Description: "Using Landscape Metrics to Develop Indicators of Water Quality and Ecological Vulnerability for the Entire Great Lakes Basin" - The principal focus of this project is the mapping and interpretation of landscape scale (i.e., broad scale) ecological metrics among all of the contributing hydrologic units in the Great Lakes Basin, and regions of near-coastal land in the entire Great Lakes Basin.

Program: Research – Grants. The following list shows EPA research grants, which support the Great Lakes region.

- Development of Environmental Indicators of Condition, Integrity, and Sustainability in the Great Lakes Basin
- Protocols for Selection of Classification System and Reference Conditions: A Comparison of Methods
- Complex Interactions between Harmful Phytoplankton and Grazers - Variation in Zebra Mussel Effects across Nutrient Gradients
- Adaptive Management for Improved Water Quality in Multi-Use Watersheds
- Predicting the Identity, Spread, and Impact of Future Non-indigenous Species in the Great Lakes
- Natural and Anthropogenic Sources of Mercury to the Atmosphere - Global and Regional Contributions
- Speciated Atmospheric Mercury-Gas/Particle Partitioning, Transformations, and Source Characterization
- Models and Measurements for Investigating Atmospheric Transport and Photochemistry of Mercury
- Mercury Isotopes as Tracers of Sources, Cycling, and Deposition of Atmospheric Mercury

Program: Research - Nearshore Monitoring and Assessment
Description: Development of lake-wide monitoring designs for consistent and comprehensive reporting for Clean Water Act (CWA) requirements. The goal of the nearshore design and indicator effort for the past 4 years has been to develop the means to report on the condition of the whole of the lake and its coastal parts in one consistent framework to track trends in condition.

Program: Research - Non-indigenous Species

- Description: *Predicting the Invasibility of Non-indigenous Species* - This research is designed to use niche models (General Algorithms for Rule Set Prediction) to predict areas most vulnerable for invasion and to use modern genomics to develop rapid monitoring protocols to identify non-native species in ballast water and in aquatic systems.
- Description: *Regional Methods Initiative* - This is research to develop and implement screening methods that rely on molecular genetic profiling to define species assemblages and to identify target non-indigenous species (NIS) in ballast carried by commercial shipping traffic.
- Description: *Broad Scale Assessment of Invasive and Opportunistic Plant Species in Coastal Wetlands of the Laurentian Great Lakes* - The purpose for this project is to determine the ecological relationships between the presence and distribution of invasive/opportunistic plant species and landscape disturbance, using remote sensing and GIS techniques.

Office of Water http://www.epa.gov/water

Program: BEACH Grants
Description: The EPA BEACH grant program is a collaborative effort between EPA and States, territories, local governments, and Tribes to help ensure that recreational waters are safe for swimming. Congress created the program with the passage of the Beaches Environmental Assessment and Coastal Health Act (BEACH Act) in October 2000, with the goal of improving water quality testing at beaches and to help beach managers better inform the public when there are water quality problems. EPA awards grants to eligible coastal and Great Lakes States, territories, and Tribes using a grant allocation formula developed in 2002, in consultation with various States and organizations which considers three factors: 1) beach season length; 2) beach miles; and 3) beach use. The Beach program provides funding to Great Lakes States to improve water quality monitoring at Great Lakes beaches.

Program: Drinking Water Programs
Description: This program comprises the multiple-barrier approach to protecting public health from unsafe drinking water. Under this approach, EPA protects public health through: source water assessment and protection programs; promulgation of new or revised, scientifically sound and risk-based National Primary Drinking Water Regulations (NPDWRs); training, technical assistance, and financial assistance programs to enhance systems' capacity to comply with existing and new regulations; and the national implementation of NPDWRs by State and Tribal drinking water programs through regulatory, non-regulatory, and voluntary programs and policies to ensure safe drinking water.

Program: Drinking Water State Revolving Fund (DWSRF)
Description: The Safe Drinking Water Act, as amended in 1996, established the Drinking Water State Revolving Fund to make funds available to drinking water systems to finance infrastructure improvements across the country, including Great Lakes States. The program also emphasizes providing funds to small and disadvantaged communities and to programs that encourage pollution prevention as a tool for ensuring safe drinking water.

Program: Public Water System Supervision (PWSS) Program
Description: The fundamental goal of the PWSS program is to ensure that water systems comply with the National Primary Drinking Water Regulations and to provide financial assistance to eligible States and Tribes (for those that have Primary Enforcement Responsibility for the Public Water System Supervision Program), and for the conduct of their Public Water Systems Supervision (PWSS) Program. The program supports the major components of a State PWSS program which are: the development of State drinking water regulations; the development and maintenance of an inventory of public water systems throughout

the State; the development and maintenance of a database housing compliance information on public water systems; the conduct of sanitary surveys on the public water systems; the review of public water system plans and specifications; the provision of technical assistance to system managers and operators; a program to ensure that the public water systems keep their consumers informed about the quality of the water they are providing; the certification of laboratories that are allowed to perform the analysis of drinking water that will be used to determine compliance with the drinking water regulations; and the conduct of an enforcement program to ensure that the public water systems comply with all of the requirements. The PWSS Grant program supports Great Lakes States with primary enforcement authority to implement and enforce National Primary Drinking Water Regulations, which helps ensure the safety of drinking water resources, thereby protecting public health in the Great Lakes basin.

Program: Surface Water Protection
Description: The EPA Surface Water Protection Program, under the Clean Water Act, directly supports efforts to restore and improve the quality of the nation's rivers, lakes, and streams including water bodies in the Great Lakes basin. EPA uses a two-part strategy: implement core clean water programs, including innovations that apply programs on a watershed basis; and accelerate efforts to improve water quality on a watershed basis. EPA focuses its work with States, interstate agencies, Tribes and others in key areas including: water quality criteria and standards, effluent guidelines, cooling water intake regulations, analytical methods, water quality assessment and monitoring, national water quality data systems, watershed management planning, total maximum daily loads (TMDLs), National Pollutant Discharge Elimination System (NPDES), and non-point source pollution control programs. Implementing these efforts on water bodies in the Great Lakes basin will reduce contamination to the Great Lakes.

Program: Underground Injection Control (UIC) Program
Description: EPA works with States to control injection of hazardous substances and other waste to prevent contamination of underground sources of drinking water. The goals of the UIC Program are to prevent contamination by keeping injected fluids within the well and the intended injection zone, or in the case of injection of fluids directly or indirectly into an underground source drinking water (USDW), to require that injected fluids not cause a public water system to violate drinking water standards or otherwise adversely affect public health. These minimum requirements affect the sitting of an injection well, and the construction, operation, maintenance, monitoring, testing, and finally, the closure of the well. All injection wells require authorization under general rules or specific permits. The Underground Injection Control program provides assistance to all States including the Great Lakes States for such purposes as regulation reviews, program plan developments, inventory of injection facilities, data management, identification of aquifers, technical assistance and review, and permit approval and enforcement.

Department of Homeland Security http://www.dhs.gov/dhspublic/

Coast Guard http://www.uscg.mil/USCG.shtm

Program: MARPOL Annex VI
Description: Prevention of Air Pollution from Ships - the regulations in this annex (entry into force May 19, 2005) sets limits on sulfur oxide and nitrogen oxide emissions from ship exhausts and prohibit deliberate emissions of ozone depleting substances. Ships over 400 Gross Tons (ITC) engaged on

international voyages, i.e., entering the Great Lakes from a foreign port, must carry on board valid international certificates which may be accepted at foreign ports as prima facie evidence that the ship complies with the requirements of the Convention.

Program: Shore Protection Act of 1988
Description: Transportation of Municipal/Commercial Waste in Coastal Waters - Congress enacted the Shore Protection Act to prevent the disposing of trash, medical debris and other unsightly and potentially harmful materials into the coastal waters of the United States caused by poor waste management practices and procedures. The Shore Protection Act (SPA) assigned the Coast Guard general enforcement authority. The SPA assigned responsibility for formalizing guidance on waste handling procedures and creating an enforcement rulemaking to the Environmental Protection Agency (EPA). EPA investigators assist the Coast Guard by conducting records checks and monitoring compliance with environmental statutes and regulations.

Department of the Interior http://www.doi.gov/

Fish and Wildlife Service http://www.fws.gov/

Program: Detroit River International Wildlife Refuge
Description: The Detroit River International Wildlife Refuge, located in a Great Lakes Area of Concern, was established in 2001 and is the first international wildlife refuge in North America. The Refuge includes islands, wetlands, marshes, shoals, and riverfront lands along 18 miles of the Lower Detroit River, and protects and restores habitat for 29 species of waterfowl, 65 species of fish, and 300 species of migratory birds in Michigan and Canada. The Refuge demonstrates land-based conservation addressing both urban communities and wildlife habitat.

Program: Endangered Species Program
Description: This conservation and restoration program was created in 1973 to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved and to provide for the conservation of such endangered and threatened species. A recent survey of biological diversity identified 130 globally endangered or rare plant and animal species which inhabit the Great Lakes ecosystem. The Fish and Wildlife Service's Ecological Services Program, and Great Lakes Basin Ecosystem Team Endangered Species Committee are working in partnership to identify habitat focus area priorities, increase multi-partner coordination, developing conservation strategies, and implementing restoration and protection actions for Great Lakes species and habitats.

Program: Great Lakes Basin Ecosystem Team
Description: The Great Lakes Basin Ecosystem Team helps focus the resources from 43 Service Field Stations throughout the Great Lakes from two Service Regions, and all program areas for partnership initiatives to protect and restore Great Lakes natural resources. Through the Team, the Service and partners addresses landscape-scale resource conservation issues, and implement local on-the-ground actions. The Team has achieved considerable success in leading bi-national Great Lakes conservation initiatives, including for lake sturgeon restoration, islands conservation, public outreach, and Great Lakes decision support/geographic information systems. The Team is building on these successes and developing new partnership initiatives for a Great Lakes focus on coastal habitat restoration, invasive species control, endangered species recovery, enhancing sustainable fisheries, and migratory bird conservation. http://greatlakes.fws.gov/

Program: Great Lakes Coastal Program

Description: The U.S. Fish and Wildlife Service's Great Lakes Coastal Program is developing innovative partnerships with local and statewide land trusts and other conservation partners to identify and protect some of the most valuable fish and wildlife habitat and species in the Great Lakes basin. The program features non-regulatory, partnership-based efforts to achieve its mission of conserving healthy coastal ecosystems for the benefit of fish, wildlife and people. It accomplishes this through cooperative partnerships that identify, restore and protect habitat in priority coastal areas. The Coastal Program works with a variety of partners, including other Federal and State agencies, local and Tribal governments, businesses, conservation organizations and private landowners. http://greatlakes.fws.gov/glcoastal.htm

Program: Great Lakes Fish and Wildlife Restoration Program
Description: The Great Lakes Fish and Wildlife Restoration Act authorizes the coordination of interagency fish and wildlife restoration programs and activities, and utilization as a funding mechanism for cross-jurisdictional conservation efforts in the Great Lakes basin.

Program: Law Enforcement Program
Description: Working closely with partners, the Fish and Wildlife Service strives to stop illegal activities adversely impacting Great Lakes fish and wildlife resources, including: detecting and deterring crimes involving the illegal take, trade, and trafficking of protected species; investigating activities involving habitat destruction and environmental contaminants; and preventing the introduction of invasive species via international and intrastate travel and trade. Program personnel are positioned at strategic locations within the Great Lakes Basin. There are a number of Federal statues that provide authority to protect Great Lakes wildlife, the three principle ones are: Migratory Bird Treaty Act, Lacey Act and Amendments (injurious live wildlife, especially invasive species), and the Endangered Species Act – Convention on International Trade in Endangered and Threatened Species.

Program: Migratory Bird Management Program
Description: The Service has identified about 70 migratory bird species that are of special concern in the Great Lakes and protected, restored or enhanced more than 76,000 acres of Great Lakes bird habitat since 1990 through the Upper Mississippi River and Great Lakes Joint Venture and North American Wetlands Conservation Act. The Service's Great Lakes Basin Ecosystem Team has the lead for Great Lakes Strategy Action #62: Identifying a Continuum of Great Lakes Migratory Bird Stopover Sites and Critical Areas in Need of Restoration. Service biologists are also working with all partners from the U.S. and Canada to identify Great Lakes migratory bird conservation priorities, including for common habitat classifications, data sharing capability, and monitoring needs.

Program: National Fish Hatcheries – Great Lakes Operations
Description: This Service program began operation in 1950 to manage, produce, and stock native coaster brook trout and lake trout from native Great Lakes strains. This program is part of the interagency restoration programs coordinated through the Great Lakes Fishery Commission, and is based on a strategic plan for management of Great Lakes Fisheries.

Program: National Wetlands Inventory
Description: The Fish and Wildlife Service National Wetlands Inventory (NWI) has the primary responsibility for mapping and inventory of all the wetlands of the United States. The Emergency Wetlands Resources Act of 1986 and amendments to it in 1988 and 1992 define the responsibilities of the NWI, that include: determining, mapping, and inventorying the status, extent, characteristics and functions of wetland, riparian, deepwater and related aquatic habitats in priority areas to promote the understanding and conservation of these resources. NWI is the accepted U.S. Federal Standard for wetlands classification, mapping, and inventory. NWI is a national wetlands classification of wetlands that is served in a seamless Master Geodatabase. The NWI completes a periodic status and trends report

for wetlands of the United States and can do regional geographic status and trends when data are available, and has done so for the Great Lakes. In the Great Lakes the States of Minnesota, Illinois, Indiana, Pennsylvania, New York and the lower half of Michigan have digital data. The State of Ohio is in the process of being vectorized and should be available within the year. The State of Wisconsin is being converted to the NWI system and should be available within 18 months. Knowing where and what types of wetlands are currently on the landscape is important when targeting, planning and performing Great Lakes coastal restoration and protection projects. The Service is testing new NWI methodology in the Saginaw Bay watershed in Michigan for updating the NWI throughout the Great Lakes.

Program: Natural Resources Damage Assessment and Restoration
Description: The Fish and Wildlife Service is involved in Natural Resource Damage Assessment (NRDA), a process by which degraded habitats and resources degraded by contaminants and pollution are cleaned up and restored. The goals of NRDA are to restore the habitats and resources to the condition they would have been had the polluters not released hazardous substances, and to compensate the public for the loss of their use or enjoyment of natural resources. The polluters are required to pay for these activities under Federal laws and some State laws. Service contaminants biologists are working on several dozen NRDA cases in the upper Midwest and the Northeast, several of which are located in the Great Lakes U.S. Areas of Concern, including in the following, at which significant recent cleanup and restoration progress has been made: Fox River/Green Bay, Wisconsin; Grand Calumet River, Indiana; Kalamazoo River, Michigan; Saginaw River and Bay, Michigan; and Ashtabula River and Harbor, Ohio. http://www.fws.gov/midwest/nrda/

Program: North American Waterfowl Management Plan and National Fish Habitat Initiative
Description: The Fish and Wildlife Service and other partners have achieved measurable successes with the North American Waterfowl Management Plan, working in a Joint Venture in the Great Lakes basin toward clear habitat goals, yielding resource results and increased funding and support. Reflecting the success of this partnership effort, the Service is working in partnership with the International Association of Fish and Wildlife Agencies, the American Fisheries Society and the Sport Fishing and Boating Partnership Council on a National Fish Habitat Initiative modeled after the North American Waterfowl Management Plan. The National Fish Habitat Initiative could sere as the primary vehicle for coordinating aquatic habitat conservation programs in the Great Lakes.

Program: Partners for Fish and Wildlife Program
Description: The Fish and Wildlife Service's Partners for Fish and Wildlife Program is a voluntary habitat restoration program that began in 1987 to provide restoration expertise and financial assistance to private landowners, Tribes, and other conservation partners who voluntarily restore fish and wildlife habitat on their properties. Within the Great Lakes Basin, the program targets habitat for migratory birds, fish, and threatened or endangered species. Past accomplishments include the restoration of over 168 miles of Great Lakes tributary streams, 10,000+ acres of grasslands and wetlands that provide essential resting, nesting, and feeding habitats for migratory birds, and a variety of watershed restoration projects designed to improve Great Lakes water quality.
Program: Sea Lamprey Management Program
Description: The Fish and Wildlife Service's Sea Lamprey Control Program was established in 1956 to control sea lamprey in the Great Lakes Basin for the purpose of restoring a self-sustainable Great Lakes fishery. The Fish and Wildlife Service, along with the Department of Fisheries and Oceans Canada, share in this responsibility as agents of the Great Lakes Fishery Commission and work cooperatively with numerous Federal, provincial, State and Tribal agencies. Program goals are: Conduct ecologically sound and publicly acceptable integrated sea lamprey management; support fish community objectives for each of the Great Lakes; fulfill U.S. obligations under the 1954 Convention on Great Lakes Fisheries between U.S. and Canada; fulfill Service obligations under August 2000, U.S. District Court Consent Decree

covering fisheries in 1836 Treaty waters of Lake Huron, Superior, and Michigan; Treaty waters of Lake Huron, Superior and Michigan; rehabilitate Great Lakes fisheries by reducing sea lamprey population by 90 percent; and ensure protection of non-target species and the environment.

U.S. Geological Survey http://www.usgs.gov/

Program: Geographic Analysis and Monitoring Program
Description: The Geographic Analysis and Monitoring Program supports research on land resources in the Great Lakes region at a range of spatial and temporal scales to understand the rates, causes, and consequences of landscape change over time.

Bureau of Indian Affairs http://www.doi.gov/bureau-indian-affairs.html

Program: Circle of Flight Wetlands Program
Description: This Tribal and inter-Tribal grants program provides funding to Tribal governments to enhance wetlands and waterfowl habitat in the Great Lakes States of Wisconsin, Michigan and Minnesota. Examples of funded enhancement projects include wild rice planting and prairie lands restoration.

National Park Service http://www.nps.gov/

Program: Great Lakes Exotic Plant Team
Description: Exotic plants infest some 2.6 million acres in the national parks. Control of exotic species is one of the most significant land management issues facing national parks. Seventeen (17) Exotic Plant Management Teams (EPMT's) have been deployed throughout the country. The teams are a new weapon to combat exotic plants. The teams were modeled after the coordinated rapid response approach used in wild land fire fighting. The success of the EPMT derives from its ability to adapt to local conditions and needs, using weed science expertise and partnerships. In the Great Lakes, the focus is on exotic species affecting wetlands and dune systems.

Program: Great Lakes Inventory and Monitoring Project
Description: The Inventory and Monitoring Project provides science-based information on the status and trends of resources that serve as “vital signs” of the health of park ecosystems. The program provides funding and technical support to about 270 NPS units around the U.S., and is organized into 32 biome-based networks. The Great Lakes network includes nine parks in four States, representing the major freshwater ecosystem types in the upper Midwest. The current issues on which the Great Lakes network is focusing include aquatic invasive species, and the need for bathymetric & habitat data around shorelines.

Program: Great Lakes Park Resource Management Operations
Description: The resource management staff in the eight National Park units adjacent to the Great Lakes considers the health of the components of the ecosystem in day-to-day activities. The National Park Service management policies that relate to the treatment of resources are considered in nearly every phase of decision making. In an effort to keep the park resources in good condition, the staff incorporates the management policies in their work with State and local agencies and adjacent land owners on land use practices that are associated with terrestrial or aquatic resources.

Department of State http://www.state.gov

Bureau of Oceans and International Environmental Scientific Affairs http://www.state.gov/g/oes/

Program Title: Great Lakes Fishery Commission (GLFC)
Program Description: The Great Lakes Fishery Commission plays a critical role in the management of the Great Lakes fisheries. The GLFC upholds key bi-national obligations, undergirds the day-to-day work of State and provincial management agencies, and complements Federal efforts to rehabilitate the fishery. The GLFC employs a dynamic ecosystem approach to management and study of Great Lakes fish stocks, an approach that recognizes the shared nature of the resources and that cooperation is the key to ensuring a sustained fishery. The Commission works with Federal, provincial, State, and Tribal agencies to determine the most effective management measures, conduct and coordinate research, and publish the results of scientific work. Federal, provincial, State, and Tribal agencies rely upon the Commission's work as the foundation for the achievement of their fisheries objectives.

Department of Transportation http://www.dot.gov/

The Department of Transportation offers funding assistance to all States including states bordering the Great Lakes and local transportation agencies for programs that are beneficial to the region. States have been authorized to determine what activities they will use the funds that are allocated to them by formula each year. Those activities may include addressing environmental mitigation of highway runoff pollution, the reduction of vehicle-caused wildlife mortality, and the maintenance of habitat connectivity are eligible for funding assistance.

Federal Aviation Administration http://www.faa.gov

Program: Wetland and Wildlife Mitigation:
Description: Under the Airport Improvement Program, the Federal Aviation Administration (FAA) finances wetland mitigation to compensate for unavoidable impacts airport development projects cause. FAA has a Wetlands Banking Mitigation Strategy to FAA to mitigate unavoidable impacts before they occur by purchasing credits from a wetlands bank, meeting permit requirements and environmental responsibilities, without jeopardizing aviation safety. (http://www.faa.gov/arp/environmental/5054a/WETPOL.html). In 2003, FAA signed a Memorandum of Agreement (MOA) with the United States Air Force, the U.S. Army Corps of Engineers, the U.S. Dept. of Agriculture's Wildlife Services, the U.S. Environmental Protection Agency, and the U.S. Fish and Wildlife Service. The MOA sets ground rules for enhanced Federal agency efforts to address wetland mitigation and restoration projects that occur near airports and to do so without jeopardizing aviation safety. (http://www.faa.gov/arp/environmental/5054a/wildhazmou.pdf)

Federal Highway Administration http://www.fhwa.dot.gov/

Program: Highway Environmental Research
Description: FHWA conducts research relating to enhancing environmental stewardship. FHWA coordinates wetland programs and research initiatives with other Federal agencies, including research and guidance on wetland and natural habitat mitigation and restoration.

Program: National Highway System – Wetlands Eligibility

Description: The National Highway System (NHS) program provides funding by formula to states' transportation agencies for preservation, management and construction of interstate and other principal arterial highways that are designated as part of the NHS. The State transportation agencies may use funds to finance wetland and natural habitat conservation planning and implementation, as well as compensatory mitigation and restoration projects that offset unavoidable losses from transportation projects. States have the authority to determine what portion of their total allocated funding under the NHS will finance wetland mitigation and enhancements. 23 CFR Part 777, Mitigation of Impacts to Privately Owned Wetlands, provides state transportation agencies the guidance on using Federal-aid highway funds to mitigate impacts to wetlands.

Program: Surface Transportation Program
Description: The Surface Transportation Program (STP) provides broad discretion for State and local governments to fund a variety of highway or transit activities with funds set aside specifically for STP. These activities include mitigation of damage to ecosystems, habitat, and wildlife; wetland banking; carpool projects, fringe and corridor parking facilities; bicycle transportation and pedestrian walkways; planning activities; and transportation control measures listed in the Clean Air Act.

- Environmental restoration and pollution abatement projects are specifically eligible for funding under STP, with statutory emphasis on identifying eligibility for measures to correct pollution or environmentally degraded conditions.
- State transportation agencies may use funds to finance wetland and natural habitat conservation planning and implementation, as well as compensatory mitigation and restoration projects that offset unavoidable losses from transportation projects. States have the authority to determine what portion of their total allocated funding under the broader STP will go to finance wetland mitigation and enhancements.

Program: Transportation Enhancements
Description: Transportation Enhancements (TE) is a Federal transportation grant program that helps communities improve quality of life by providing funding for transportation-related projects for mitigation of storm water runoff impacts, as well as historic preservation, pedestrian and bicycle access, and scenic beautification. Ten percent of the STP allocation for each state is set-aside for the Transportation Enhancement Program. http://www.enhancements.org

Maritime Administration http://www.marad.dot.gov/

Program: Ballast Water Research
Description: The Maritime Administration (MARAD) has work underway on technologies intended to minimize spread of invasive species, in cooperation with the National Oceanic and Atmospheric Administration and other agencies.

Pipeline Safety and Hazardous Materials Administration http://hazmat.dot.gov/

Program: Pipeline Integrity
Description: PHMSA's Office of Pipeline Safety (OPS) safety jurisdiction over pipelines covers more than 3,000 gathering, transmission, and distribution operators as well as some 52,000 master meter and liquefied natural gas (LNG) operators who own and/or operate approximately 1.6 million miles of gas pipelines, in addition to over 200 operators and an estimated 155,000 miles of hazardous liquid pipelines. OPS is updating its regulations to validate pipe integrity in high-density population areas, waters where a substantial likelihood of commercial navigation exists, and areas unusually sensitive to environmental

damage. Under the program, OPS works with pipeline operators as they develop compliant integrity activities.

St Lawrence Seaway Development Corporation http://www.seaway.dot.gov/

Program: Ballast Water Management
The St. Lawrence Seaway Development cooperates with the U.S. Coast Guard in implementing rules under the National Invasive Species Act require that vessels entering all U.S. waters must first exchange ballast water at sea. For the Great Lakes Seaway System, ballast water exchange is confirmed through USCG inspections before the vessel enters the System.

Level 3 Programs – Great Lakes Infrastructure Benefits

Level 3 of the Great Lakes Budget and Program Inventory provides qualitative descriptions of programs implemented by departments/agencies identified in the Executive Order, which lack a direct water quality or ecosystem connection, but benefit the Great Lakes region. Information is presented alphabetically by **department/agency** – bureau – *program*.

Index of Great Lakes Level 3 Programs

- *Great Lakes Navigational System*

Federal Transit Administration

- *Capital Investments Grants and Loans*
- *Formula Grants for Other than Urbanized Areas*
- *Transit Oriented Development*
- *Urbanized Area Formula Grants*

Department of the Army http://www.army.mil/

Army Corps of Engineers http://www.usace.army.mil/

Program: Great Lakes-St. Lawrence Seaway Navigational System Study
Description: The Corps, U.S. Department of Transportation (USDOT), and U.S. Fish & Wildlife Service are working in partnership with Transport Canada (TC) and Environment Canada, as well as both the U.S. and Canadian St. Lawrence Seaway Authorities, on a study to evaluate the engineering, economic and environmental conditions of the Great Lakes and St. Lawrence Seaway System. The study reflects the goals of a May 2003 Memorandum of Cooperation entered into between USDOT and TC which underscores both countries' intent to cooperate and collaborate to ensure the viability of the system. This information will determine the requirements to maintain the integrity of the navigation system and environmental sustainability of the waterway for the next fifty years. It's anticipated the study will also look at how other factors such as modal integration, trade facilitation, congestion mitigation and overall sustainable transportation might affect future commercial navigation on the system. For more details, go the project web site at www.lre.usace.army.mil/greatlakes/greatlakes&st-lawrenceseawaystudy/

Program: Navigation Operation and Maintenance
Description: Waterborne commerce throughout the Great Lakes, connecting channels, and St. Lawrence Seaway is critical to the regional and national economy. Commercial navigation on the Great Lakes is dominated by the transport of raw materials for steel making, coal-fired power production, and construction (limestone, cement, stone, and gravel). Total annual commerce on the Great Lakes averages 175 million tons The Corps is authorized to maintain navigation projects around the Great Lakes and connecting channels that serve commercial and recreational users. This system includes: 68 deep draft harbors; 71 shallow, recreational harbors; 745 miles of navigation channel; 138 miles of breakwater; 25 locks, and; 2 visitor centers. For more information, go to www.lrd.usace.army.mil/navigation/glnavigation/

Program: Sault Saint Marie, Michigan (Soo Replacement Lock)
Description: The locks of Sault Saint Marie, Michigan form a passage for deep-draft ships around the rapids in the St. Marys River, which is the only water connection between Lake Superior and the other Great Lakes. Ships carry over 86 million tons of cargo through the Soo Locks annually. There are four locks at the Soo, two in Canada and two in the U.S. However, the vessels that carry two-thirds of the ore to Great Lakes ports can only fit through the largest of these, the Poe Lock. The proposed project would construct a new "Poe-sized" lock at the site of two smaller locks. This project is currently under pre-construction design. For more information, go to the Soo Locks web site at: www.lre.usace.army.mil/newsandevents/publications/publications/soolocks-saultste-marie/

Department of Commerce http://www.commerce.gov/

National Oceanic and Atmospheric Administration http://www.noaa.gov/

Program: Geodesy Program
Description: This program, managed by the National Geodetic Survey, monitors crustal motion in the Great Lakes by co-locating Continuously Operating Reference Stations (CORS) at 16 NOAA Great Lakes National Water Level Observation Network sites. CORS precisely measure latitudes, longitudes, and elevations and the co-location with water level stations provides better knowledge about flooding and drainage scenarios in the region.

Program: Great Lakes Navigation Products and Services - Office of Coast Survey
Description: The Office of Coast Survey provides complete nautical chart coverage for the Great Lakes, helping to ensure safe navigation throughout the Great Lakes waterways system. This indirectly contributes to the safekeeping of the Great Lakes environment and clean water by reducing the number of maritime accidents, which can create extensive environmental damage when they do occur. Nautical charting product technology is advancing rapidly, and now includes Electronic Navigational Charts (ENC) for the Great Lakes, in addition to the conventional paper and Raster Nautical Chart. The ENC incorporates technology that further reduces the chance for a maritime disaster. A Great Lakes Navigation Response Team has also been created to insure the accuracy of all the chart products. The team is also equipped to respond to maritime incidents for the purpose of assisting in determining cause and the location of underwater hazards.

Program: National Ice Center (Great Lakes Products and Services)
Description: The National Ice Center (NIC) is a multi-agency operational center operated by the United States Navy, the National Oceanic and Atmospheric Administration (NOAA), and the United States Coast Guard (USCG). NIC's mission is to provide the highest quality strategic and tactical ice services tailored to meet the operational requirements of U.S. national interests and to provide specialized meteorological and oceanographic services to United States government agencies. All NIC regional sea ice, Great Lakes, and Chesapeake Bay analyses are derived from near real-time integration of remotely sensed and *in-situ* oceanographic/meteorological observations. NIC Great Lakes analysis and forecast guidance products are produced on regional and tactical scales. These products are disseminated in both digital and analog formats. During Great Lakes ice season (beginning around December 1, ending around May 1), the NIC produces a five lake composite chart twice a week in conjunction with the Canadian Ice Service. The NIC also produces a Daily Ice Edge for all of the Great Lakes, as well as a daily text description of the ice conditions on Lake Michigan. NIC ice products are also provided to the NOAA Great Lakes Environmental Research Laboratory (GLERL), which incorporates them into climate and other public service products.

Program: Thunder Bay National Marine Sanctuary and Underwater Preserve
Description: Designated in 2000, the Thunder Bay National Marine Sanctuary and Underwater Preserve maintains stewardship over one of the nation's most historically significant collection of shipwrecks. Located in the northeast corner of Michigan's lower-peninsula, the 448 square mile Sanctuary contains 40 known historic shipwrecks. Archival research indicates that over 200 sites await discovery in and around the Sanctuary. From wooden schooners to sidewheel steamers to modern freighters, the shipwrecks of Thunder Bay represent a cross-section of Great Lakes maritime history. The Sanctuary seeks to ensure that divers and non-divers of all ages share equally in the discovery, exploration and appreciation of Thunder Bay's historic shipwrecks and the Great Lakes ecosystem. The Sanctuary is jointly managed by NOAA and the State of Michigan.

Environmental Protection Agency http://www.epa.gov

Office of Solid Waste and Emergency Response http://www.epa.gov/oswer

Program: Brownfields
Description: EPA's Brownfields Program is designed to empower States, communities, and other stakeholders in economic development to work together in a timely manner to prevent, assess, safely clean up, and sustainably reuse brownfields. A brownfield is a property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. EPA's Brownfields Program provides financial and technical assistance for brownfields revitalization, including grants for environmental assessment, cleanup, and job training. In addition, EPA's Brownfields Program provides funding to the Great Lakes Commission to increase awareness, strengthen collaboration, and identify specific strategies and tools with a focus on brownfields redevelopment, urban revitalization, and land protection. More information can be found at www.epa.gov/brownfields.

Program: Superfund
Description: The Superfund Program cleans up contaminated sites under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), which is also known as Superfund. The Superfund program is responsible for addressing threats to human health and the environment caused by uncontrolled hazardous substances. Sites adjacent to water bodies, sites with contaminated water bodies, and sites near water bodies can release contamination that impacts the Great Lakes. There are a number of sites, which have been identified within Areas of Concern that are being addressed under Superfund authority. Other sites are also being addressed that have contamination on land or in the ground water that may also impact the Great Lakes.

Department of Housing and Urban Development http://www.hud.gov

Office of Community Planning and Development http://www.hud.gov/offices/cpd/

Program: Brownfields Economic Development Imitative (BEDI)
Description: The BEDI program provides competitive economic development grants to Community Development Block Grant recipients, in connection with notes or other obligations guaranteed under Section 108 of the Housing and Community Development Act of 1974, for purposes of either enhancing either the security of the guaranteed loans or the viability of the projects financed with these Section 108 loans. Grants are used to develop industrial or commercial sites known as brownfields due to the presence of potential presence or environmental contamination.

Program: Community Development Block Grant (Non-Entitlement) for States and Small Cities
Description: The Community Development Block Grant (CDBG) program provides Federal funding to help States and units of local government in non-entitled areas meet their housing and community development needs. The CDBG program provides grants to carry out a wide range of community development activities directed toward neighborhood revitalization, economic development, and improved community facilities and services. CDBG funds may be used to meet community development needs that present a serious and immediate threat to the health or welfare of a community.

Program: Economic Development Initiative - Special Purpose and Neighborhood Initiative Grants

Description: HUD administers congressionally mandated grants to local governments, nonprofit organizations and other entities, as identified in HUD's annual appropriations legislation and

accompanying appropriations committee reports. These grants generally fall under two categories: Economic Development Imitative Special Purpose and a smaller group of Neighborhood Initiative grants.

Department of the Interior http://www.doi.gov/

U.S. Geological Survey http://www.usgs.gov/

Program: Earth Surface Dynamics Program
Description: The USGS Earth Surface Dynamics Program supports the Central Great Lakes Geologic Mapping Coalition, a partnership among the State Geological Surveys of Illinois, Indiana, Michigan, Ohio, and the USGS, to produce three-dimensional geologic maps of the glacial deposits that cover much of the Midwestern United States. These maps provide a foundation for making economic and environmental decisions related to the use of natural resources and help guide wise land-use decisions.

Program: Energy Resources Program
Description: The USGS Energy Resources Program provides objective resource assessments of the oil and gas potential for reserve growth in the Great Lakes area. USGS scientists are working with the U.S. Army Corps of Engineers to help evaluate the environmental effects of oil and gas drilling near the Great Lakes.

Program: Mineral Resources Program
Description: The USGS Mineral Resources Program provides objective resource assessments and research on mineral potential, production, consumption, and environmental effects. In the Great Lakes area, USGS scientists use geochemical sampling to determine the mineral economic potential and general geochemical signature of the region to address possible environmental concerns.

Program: National Cooperative Geologic Mapping Program
Description: The USGS National Cooperative Geologic Mapping Program produces geologic maps that depict the distribution of the geologic materials that cover the Great Lakes region and are needed to provide information for exploring, developing, and preserving mineral, energy, and water resources of the area. In the Great Lakes Region, this work is done in cooperation with the Great Lakes Geologic Mapping Coalition.

National Park Service http://www.nps.gov/

Program: Great Lakes Park Operations
Description: The ten units of the National Park System that ring the Great Lakes provide a wide variety of benefits to the Great Lakes region, reflecting the NPS mission derived from its Organic Act, to conserve the natural and historic objects and wildlife in the park areas, as well as the scenery, and to provide for public use and enjoyment of those resources in a way that will leave them unimpaired for the enjoyment of future generations. In addition to these conservation, preservation, and recreation benefits, these parks provide public education in the science and history that makes these places nationally significant and the techniques that help us to care for them.

Department of Transportation http://www.dot.gov/

Federal Highway Administration http://www.fhwa.dot.gov/

Program: Congestion Mitigation and Air Quality Improvement Program

Description: The Congestion Mitigation and Air Quality Improvement Program (CMAQ) is a Federal transportation grant program that has since 1992 provided funds to State Departments of Transportation, Metropolitan Planning Organizations, and transit agencies to invest in projects that reduce criteria air pollutants from transportation-related sources. The program addresses both air quality and congestions problems, improving both the efficiency of the transportation network and the quality of life for people in affected regions. http://www.fhwa.dot.gov/environment/cmaq/index.htm

Program: Federal Lands Highways
Description: The Federal Lands Highways Program (FLHP) provides funding for a coordinated program of public roads and transit facilities serving Indian lands and Federal lands, including National Parks and National Forests.

Program: Recreational Trails
Description: The Recreational Trails program provides funding for the improvement of maintenance of recreational trails that are part of the broader Statewide Comprehensive Outdoor Recreation Plans. http://www.fhwa.dot.gov/environment/rectrails/index.htm

Program: Scenic Byways
Description: The Scenic Byways program assists States in planning and developing scenic byways. Byways may be nominated for designation as National Scenic Byways or All-American Roads. http://www.fhwa.dot.gov/environment/scenguid.htm

St Lawrence Seaway Development Corporation http://www.seaway.dot.gov/

Program: Great Lakes–St. Lawrence Seaway Navigational System Study
Description: See entry under U.S. Army Corps of Engineers for information about the U.S. partnership with Canadian counterparts on a study to evaluate the engineering, economic and environmental conditions of the Great Lakes and St. Lawrence Seaway System.

Federal Transit Administration http://www.fta.dot.gov

Program: Capital Investments Grants and Loans Program
Description: The Capital Investment Grants and Loans Program provides transit capital assistance for new fixed guideway systems and extensions to existing fixed guideway systems (New Starts), fixed guideway modernization, and bus and bus related facilities.

Program: Formula Grants for other than Urbanized Areas.
Description: Formula Grants for Other than Urbanized Areas provides transit capital and operating assistance, through the States, to non-urbanized areas (less than 50,000 in population).

Program: Transit-Oriented Development
Description: Transit Oriented Development (TOD) is an initiative to increase mobility, create livable communities, and protect and enhance the natural environment. In TOD efforts, DOT works with States and local communities to encourage land use that creates places that encourage transit use, cycling and walking; improve access to community services at reduced cost; and increase housing affordability.

Program: Urbanized Area Formula Grants

Description: The Urbanized Area Formula Grants Program provides transit capital and operating assistance to urbanized areas with populations of more than 50,000.