

# Great Lakes Restoration Initiative & Multi-year Restoration Action Plan Outline

## Summary of Comments



Prepared by the Great Lakes Commission



*Through Contract to the*

**U.S. Environmental Protection Agency  
For the Great Lakes Interagency Task Force**



**August 2009**

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### Table of Contents

<b>1</b>	<b>Introduction.....</b>	<b>1</b>
<b>2</b>	<b>The Great Lakes Restoration Initiative and Multi-Year Action Plan .....</b>	<b>4</b>
2.1	Existing Plans and Strategies .....	4
2.2	Project Selection.....	6
2.3	Funding and Grants Cycle.....	7
<b>3</b>	<b>Principle Focus Areas of the Action Plan .....</b>	<b>13</b>
3.1	Cross-Cutting Issues Relating to the Five Focus Areas .....	13
3.2	Toxic Substances and Areas of Concern.....	17
3.3	Invasive Species .....	23
3.4	Nearshore Health and Nonpoint Source Pollution .....	28
3.5	Habitat and Wildlife Protection and Restoration .....	35
<b>4</b>	<b>Accountability, Monitoring, Evaluation, Communication and Partnerships .....</b>	<b>41</b>

# 1 Introduction

The following is a summary of comments received through August 19, 2009 on the Great Lakes Restoration Initiative (GLRI) and the Multi-Year Action Plan Outline (the Action Plan). The Great Lakes Commission is pleased to provide this summary to the U.S. Environmental Protection Agency (EPA) and its partner federal agencies on the Great Lakes Interagency Task Force. These comments should assist the federal agencies as they move forward with GLRI implementation and are intended to help guide revisions to the Action Plan.

This document represents a collection of comments and recommendations made by more than 200 states, tribes, cities, individuals and organizations around the region. Comments were submitted directly to EPA or were recorded during a series of meetings held around the region between July 21 and August 5, 2009 (see Table 1).

EPA sponsored 18 meetings and calls: two meetings in each Great Lakes state (one for state agency officials and one for stakeholders and organizations) and held conference calls for Great Lakes cities and tribes. The purposes of the two-hour meetings were to review the Initiative's purpose, goals and implementation structure; review priorities for the FY 2010 funding plan and the process for awarding grants and contracts; and review and solicit input on a draft five-year strategic framework for implementing the Initiative (the Multi-Year Action Plan Outline), including how it should build on the Great Lakes Regional Collaboration (GLRC) and where changes or updates are needed.

In general, reactions to the GLRI and the Action Plan were very favorable, both at the meetings and in the comments received. The meetings were very well attended. Participation at state agency meetings ranged from 20-60 people. Each state meeting included representatives of multiple state agencies and was attended by at least one, and in some cases several, governors' cabinet members and staff. Participation at the stakeholder meetings ranged from 80 to over 200.

The vast majority of the comments were supportive and constructive. State agencies and other partners are enthusiastic about the GLRI and are ready to join with federal agencies to accelerate current restoration programs and implement the Initiative. The degree of readiness was reflected in the fact that states held several meetings to prepare for the session with EPA and often provided detailed and organized presentations. States and stakeholders urged EPA and federal agencies to provide feedback following the meetings and completion of this report. Across the basin, states and stakeholders are preparing plans and developing partnerships to begin the implementation process. Additional guidance from federal agencies is needed in many areas and could help save time and resources in the planning process.

Comments generally endorsed the five focus areas and priorities identified in the GLRI and Action Plan. Comments were generally supportive of the allocation of resources among the focus areas. Comments strongly urged EPA and federal partners to build the GLRI on the foundation of the Great Lakes Regional Collaboration (GLRC) Strategy. Comments noted that policy, regulations and enforcement (which are included in the GLRC but are not part of the GLRI) are critical elements of a successful restoration and protection effort. Comments strongly recommended that implementation of the GLRI be managed and implemented in a way that provides close collaboration with states and stakeholders.

EPA and federal partners were repeatedly urged to work together to “bundle” grants and contracts (award large sums that might be re-allocated by partners). EPA and federal partners were repeatedly urged to collaborate as a “federal family” to streamline the application, reporting and administration process. There were numerous recommendations that federal agencies collaborate and, where possible, combine funding sources and programs.

Comments stressed that protection and restoration of the Great Lakes is inextricably linked to economic revitalization throughout the region. The GLRI and the Action Plan stress on-the-ground restoration, transparency and accountability. These concepts were broadly endorsed by states and stakeholders who seek to meet these objectives while minimizing paperwork and transaction costs.

In short, states, cities, tribes and stakeholders are supportive and eager to work with federal agencies to ensure that implementation of the restoration initiative is successful, effective and results in a restored and healthier Great Lakes ecosystem and regional economy.

This document is divided into four chapters, with the bulk of the comments contained in Chapters 2-4. Chapter 2 describes comments related to procedural aspects of the GLRI and how funding under the Initiative will be administered. More specifically, this chapter summarizes comments related to existing plans and strategies, project selection criteria, and the management and administration of grants. Chapter 3 contains general comments pertaining to all five focus areas of the Action Plan, and specific comments concerning four of the five principle focus areas: toxic substances and Areas of Concern; invasive species; nearshore health and nonpoint source pollution; and habitat and wildlife protection and restoration. Chapter 4 covers general and specific comments related to the fifth focus area of the Action Plan: accountability, monitoring, evaluation, and partnerships. The fifth focus area was separated into its own chapter due to the extensive number of comments submitted on these topics.

The subsections in Chapters 2-4 are divided into *Recurring Comments*, *General Comments* and *Specific Comments*. **Recurring Comments** highlight the most often-repeated comments. **General Comments** represent comments that were repeated (but less frequently) or which were submitted on behalf of government agencies, organizations or groups. **Specific Comments** are included in the sections where they are applicable and relate to very detailed recommendations, specific locations, issues or concerns that were submitted by one entity. Comments are not listed in any particular order.

**Table 1: Great Lakes Restoration Initiative Meetings**

<b>Meeting with</b>	<b>Date</b>	<b>Location</b>	<b>Approximate Number of Attendees*</b>
Illinois Agency	July 22, 2009	Chicago, IL	21
Illinois Public	July 22, 2009	Chicago, IL	69
Indiana Agency	July 23, 2009	Merrillville, IN	14
Indiana Public	July 23, 2009	Merrillville, IN	57
Michigan Agency	August 3, 2009	Lansing, MI	20
Michigan Public	August 3, 2009	East Lansing, MI	200
Minnesota Agency	August 5, 2009	St. Paul, MN	21
Minnesota Public	August 4, 2009	Duluth, MN	118
New York Agency	July 30, 2009	Albany, NY	48
New York Public	July 29, 2009	Rochester, NY	86
Ohio Agency	July 27, 2009	Columbus, OH	26
Ohio Public	July 27, 2009	Independence, OH	133
Pennsylvania Agency	July 28, 2009	Erie, PA	20
Pennsylvania Public	July 28, 2009	Erie, PA	55
Wisconsin Agency	July 21, 2009	Madison, WI	32
Wisconsin Public	July 21, 2009	Milwaukee, WI	98
Great Lakes Cities	July 31, 2009	Chicago, IL (Conference Call)	15
Great Lakes Tribes	July 31, 2009	Chicago, IL (Conference Call)	30

\*Numbers represent only those participants who signed in and may underestimate the actual number of participants.

## **2 The Great Lakes Restoration Initiative and Multi-Year Action Plan**

Comments were generally supportive of the overall strategy. Some noted that policy and enforcement are critical to successful protection and restoration of the Great Lakes. As proposed, the GLRI is a project-driven initiative. The hundreds of projects proposed in the GLRI are needed to address the problem areas given priority in the GLRI. Those projects must contribute to a “whole” strategy that includes policy, regulation and enforcement.

This chapter describes comments related to procedural and process-related aspects of the GLRI and Action Plan and includes comments related to management of the GLRI, the relationship of the GLRI to existing plans and strategies, decisionmaking criteria and selection procedures, grant and contract management and administration. Certain comments, which pertain to the procedural aspects of the Multi-Year Action Plan and funding under the GLRI, can also be found in Chapters 3 and 4, as they relate to the five focus areas.

### **2.1 Existing Plans and Strategies**

This section addresses comments related to the GLRC Strategy to Restore and Protect the Great Lakes published in December 2005 and other regional and local plans, including some recommendations from these reports referenced in the Action Plan.

#### ***Recurring Comments***

2.1.1 **Use the GLRC as the blueprint for the GLRI.** Numerous agencies, individuals and organizations expressed support for using the GLRC Strategy as the blueprint for Great Lakes restoration. The Strategy remains the centerpiece for Great Lakes restoration and protection in the United States.

2.1.2 **Utilize existing plans and strategies.** There was strong support for utilizing existing plans and strategies, such as state wildlife action and fishery management plans, Areas of Concern (AOC) Remedial Action Plans (RAPs) and fishery management plans developed under the auspices of the Great Lakes Fishery Commission. Concern was expressed about EPA or partner federal agencies funding proposals to develop new plans or studies, or funding new activities that would compete with existing state plans and priorities.

Multiple states and organizations submitted copies of their respective existing plans and strategies during public meetings and comment period. It was recommended that federal agencies utilize the Great Lakes states’ plans as a basis for selecting projects to ensure efforts to build strong partnerships are rewarded. Using that process will allow states to identify high priority areas that were identified in the process of developing their state strategies.

#### ***General Comments***

2.1.3 **Update the GLRC.** Federal agencies were encouraged to articulate a process for updating the GLRC Strategy in order to reflect the most recent science and to incorporate

recommendations about actions needed to allow the Great Lakes to adapt to the effects of climate change.

- 2.1.4 **Implement recommendations from the paper *Prescription for Great Lakes Ecosystem Protection and Restoration*.** It was suggested that EPA and partner federal agencies should rely on the recommendations offered in the paper titled *Prescription for Great Lakes Ecosystem Protection and Restoration* (published in May 2006) when setting the Action Plan's goals, objectives, and principle actions. This paper was endorsed by hundreds of scientists from around the country and establishes the causes of, impacts of and remedies for the damage to Great Lakes health. It concludes that the Great Lakes are establishing a chain reaction of degradation; that their self-healing mechanisms have been impaired; and that the key to restoring those mechanisms and healing the lakes is to restore the health of the nearshore coastal communities and key tributaries.
- 2.1.5 **Leverage programs outside the scope of the GLRI.** It was recommended that the Action Plan include greater detail on the wide variety of programs and funding sources that may be outside the scope of the GLRI but may be leveraged to enhance GLRI-supported activities. Participants noted such programs as the Land and Water Conservation Fund and the Farm Bill.

### **Specific Comments**

- Wisconsin developed the *Wisconsin Great Lakes Strategy: Restoring and Protecting our Great Lakes* in order to translate the recommendations of the Great Lakes Regional Collaboration into its state-specific plan. The *Wisconsin Great Lakes Strategy* incorporates the goals and objectives reflected in other plans such as the Lakewide Management Plans, State Wildlife Action Plans, and the Joint Strategic Plan for Great Lakes Fisheries, thus ensuring broad support throughout the state. Building on partnerships and priorities identified by local governments and stakeholder groups in Wisconsin and providing funding for their key projects will keep this locally driven momentum going by producing results.
- Pennsylvania noted that one of the first tasks for them will be to integrate the numerous existing federal, state and local restoration plans into a specific set of priorities and actions that is the blueprint for future action by both government and nongovernment organizations in Pennsylvania. Work is underway on that effort with priority projects identified and ready for implementation.
- In order to establish priorities, meetings between the EPA, state and local governments should be held across the Great Lakes states from February to April 2010.
- One person did not support the GLRC and noted that the GLRC document is not a strategy but a compilation of agency project proposals and program needs. The commenter noted the GLRC is weighted toward spending and is less inclusive of policy, regulatory or executive actions that could protect and restore the health of the Great Lakes ecosystem.
- One comment expressed concern about the GLRC's limited scope, lack of a consistent ecological grounding for its objectives, and emphasis on outputs and activities instead of measurable ecological outcomes and goals. The benchmarks were established nearly five years ago, and an assessment of progress and updating of the GLRC is called for, especially in the context of the GLRI's proposed new investments and the pending renewal of the Great Lakes Water Quality Agreement.
- EPA Administrator Lisa Jackson has announced EPA's intention to create an initiative for urban rivers. Beyond the 2010 fiscal year, there should be a conversation about harmonizing this urban rivers initiative with the GLRI for the Great Lakes region, as there is tremendous overlap between the two visions and their goal of cleaning up fresh water.
- The EPA should consider developing a "mini GLRC" process, based on the highly successful GLRC, that effectively engaged local expert entities to work with state and federal agencies to

identify priority local issues, and projects that best address these issues. This will help to ensure that the money is spent wisely.

- The “goals, objectives, and targets of the Initiative” (page 5) should also align with the goals and objectives of the Great Lakes Water Quality Agreement.
- Clarify what statutory authority the Interagency Task Force has to be in a decisionmaking role in this process, if they have that role.
- There should be action to reduce and/or eliminate duplicate programs among multiple federal agencies or provide for program consolidation across agencies to eliminate waste and improve delivery efficiencies.
- EPA Region 5's Climate Change Action Plan should be referenced in this document.

## 2.2 Project Selection

This section addresses comments related to how federal agencies should select projects for funding under the GLRI and the sufficiency of selection criteria listed in the Action Plan. This section also includes comments related to states’ involvement in the project selection process.

### **Recurring Comments**

2.2.1 **Focus on on-the-ground restoration activities.** There was broad support for the Action Plan’s focus on efforts that accelerate restoration work and attempt to direct funds toward effective, on-the-ground restoration activities. Given the explicit goals for “shovel-ready” projects stated throughout the proposal, numerous groups are hopeful that the plan will accelerate restoration activities through a combination of direct restoration work (e.g., wetland restoration; establishment of buffer strips; shoreline softening and other hydrological restoration). At the same time, it is also understood that methodology development activities, including planning/design and assessment, are needed to ensure that more projects will be ready in the future for construction/implementation.

2.2.2 **Acknowledge the unique differences in funding priorities and geographic, governmental and administrative challenges between states.** States commented that there are unique geographic, governmental and administrative differences among the states that federal agencies should consider when selecting projects. Furthermore, each state has high priorities that may differ from other jurisdictions. Federal agencies are encouraged to select projects based on each state’s priorities. Please see the original comments submitted by state agencies for details.

Several states requested feedback on the comments and information they are providing to EPA and its partner federal agencies. Federal agencies are encouraged to provide feedback and direction on funding priorities, selection standards and information that is used in making resource allocation decisions.

2.2.3 **Avoid duplicating efforts and use states to coordinate projects.** Multiple states expressed concerns about projects within states that might compete with or conflict with state priorities. There is also a significant concern that local government and non-government organizations will become competitors rather than collaborators on projects within a watershed. EPA and federal agencies should develop a management mechanism to coordinate closely with states.

There was a great deal of discussion regarding the role of the states. It was suggested that EPA and federal agencies provide states the opportunity to coordinate the efforts of government, academic and non-profit organizations involved in Great Lakes restoration within their respective jurisdictions. This coordination could help alleviate federal paperwork and transaction costs that could consume time and resources.

### **General Comments**

- 2.2.4 **Reduce the number of projects/goals.** There was some concern that the money would be spread too thin and work would be too fragmented to affect significant environmental outcomes. A successful strategy depends on building momentum, and in this case, momentum requires showing meaningful results within the first few years. This can best be achieved by identifying and meeting three or four major interim restoration objectives, such as the cleanup of multiple Areas of Concern, acquisition and conservation of key habitats, halting introductions of non-native species invasions, or meaningful reduction in selected sources of nonpoint pollution.
- 2.2.5 **Funding allocations by state/lake.** There is recognition that grants will be competitive and there is no pre-established allocation by state or lake. However, some noted that federal agencies could provide more clear expectations to guide states and help others set priorities to minimize investments of staff time to develop proposals. There were a few suggestions that the GLRI should consider a near-equal distribution of project funding to each of the Great Lakes. Population density and politics should not overly influence distribution of restoration funding.

### **Specific Comments**

- One state noted potential problems with states reviewing specific proposals submitted to federal partners. States roles would be more appropriately limited to establishing criteria and guidelines for project selection.
- The Great Lakes Fishery and Ecosystem Restoration Program (administered by the Corps of Engineers) projects are reviewed by the Great Lakes Fishery Commission's Council of Lake Committees. This might be a useful model.
- The Project Selection Criteria and principles are generally sound. The national American Heritage Rivers (AHR) Alliance has been meeting with the Council on Environmental Quality to discuss some proposed guidance for how to evaluate highly diverse project proposals for stimulus and other federal funds. The AHR partners have developed a Project and Scoring Assessment Template that might be useful for evaluating projects under the GLRI.
- In the first bullet of the Project Selection Criteria, one comment asked who would determine what the "measurable environmental outcomes" are and what measures will be sufficient.
- One comment asked how public support would be determined, as noted in the seventh bullet under Project Selection.
- EPA might want to look at the work of the NW Power and Conservation Council, which has a very good scientific review process.

## **2.3 Funding and Grants Cycle**

This section includes comments related to the awarding of contracts and the request for proposals that EPA and federal agencies expect to issue. This section also includes comments related to the

two-year funding obligation requirement and timing of the funding in general. Issues associated with multiple agencies' Request for Proposals (RFPs) are also noted here.

### **Recurring Comments**

2.3.1 **Increase coordination among federal agencies to consolidate funding and to reduce the administrative burden on grantees.** All states and numerous other stakeholders strongly encouraged the federal agencies to coordinate and consolidate duplicative funding opportunities, which are currently distributed across multiple agencies. This will improve coordination and reduce duplication of multiple federal programs for restoration and protection. Such coordination will reduce transaction costs for applicants and recipients of funds, as well as improve reporting, transparency and accountability. As each agency has different requirements when applying for grants, a heavy administrative burden is placed on states, non-governmental organizations, municipal governments and others. Federal agencies are strongly encouraged to consolidate funding programs into large grant opportunities, reduce the number of agencies receiving funding in future years and streamline the paperwork requirements to reduce to the maximum extent possible transaction costs associated with applying and reporting to multiple federal programs. One state noted there are 18 different programs that fund habitat restoration, none of which would fund a project more expensive than about \$800,000; however, the habitat projects listed in its habitat restoration priorities would cost upwards of \$3 million and possibly as high as \$25 million.

Some suggestions for increasing coordination included using some of the funds to set up a coordinative body to administer the funds, allowing applicants to submit a single, consolidated application encompassing several grant opportunities, having one agency coordinate the distribution of funds through the different agencies, and creating a mechanism by which all project proposals are submitted to either the GLRI in general or to one federal agency for review so the proposals are considered by one decisionmaker before the various federal partners fund specific projects.

2.3.2 **Establish a large, “bundled” grant approach.** Many states and other groups expressed support for a large, bundled grant approach, which would enable the states to administer and manage sub-grants at a reasonable cost. Such an approach would allow states and others to manage the funds in an efficient manner, minimize administrative work, focus on its highest priorities, assure visible results rather than spread funds across too broad a geographic and programmatic range, improve transparency and accountability, and help ensure that spending is coordinated and consistent with the GLRI, state plans, state fishery and Wildlife Action Plans, Lakewide Management Plans (LaMPs) and other related efforts. Projects could also be packaged by critical geographic area to maximize environmental results and reduce grant paperwork.

Several states asked for clarification on potential state re-granting authority. States would like flexibility to focus on addressing their respective priorities creatively. There is some concern regarding the need to adhere to specific federal program guidelines.

2.3.3 **Recognize and address the unique challenges faced by tribal governments.** It is important that EPA and federal agencies remain cognizant of their responsibility to each of the tribes as sovereign governments. There was serious concern from tribal governments regarding a scoring system that rewards bundling. Tribes may share common goals and

interests with other tribes, state and federal agencies, and other environmental groups. However, differences in tribal capacity, needs, and priorities may hinder tribal willingness or ability to develop partnerships. The specific authorities of tribes under various treaties and federal statutes vary. Some tribes may have also made specific delegations of authority, such as those to an intertribal organization like GLIFWC. Federal agencies must honor trust responsibility so that each tribe's sovereignty is respected.

Tribes recognize and are willing to work with federal agencies for efficient management of GLRI funds. Tribal comments provided specific suggestions to address this challenge. (See Specific Comments.)

Tribes are encouraged that EPA has recognized the need to provide capacity funding for increased participation in the implementation of LaMPs and other intergovernmental planning and decisionmaking structures. Without this funding, many tribes would not be in a position to access project funding. Tribes recommended that other agencies receiving funding through the GLRI should be required to provide this type of funding.

- 2.3.4 **Reduce or eliminate match requirements.** All of the states, most cities and many tribes and other organizations noted the problems associated with meeting local match, especially during these times of fiscal crisis, budget deficits, staff reductions and hiring freezes. Multiple comments noted that rewarding project proposals that can produce a high match could have the effect of rewarding those areas of greater wealth, not the areas with the most significant environmental needs, benefits or potential returns. Federal agencies are strongly encouraged to exercise maximum flexibility in reducing or eliminating match requirements, counting in-kind or other contributions and helping organizations identify resources and approaches to meet match requirements.

### **General Comments**

- 2.3.5 **Provide funds for administrative support.** There was strong support from states and organizations for inclusion of administrative costs in funding proposals. State agencies, as well as regional and local groups, including many watershed groups that do on-the-ground restoration work, have staff limitations and have reduced capacity to apply for and manage grants for the additional work contemplated in the upcoming fiscal year. Groups need assistance in the development of grant proposals and for managing grants and meeting reporting requirements. Many comments noted concerns that staffing to implement GLRI projects would be challenging, especially since hiring staff will be for limited duration. One state noted that it might pursue establishing agreements with other organizations to support grant management and administration.
- 2.3.6 **Ensure funds are available for county and small local governments.** A few comments expressed concern that county and small local governments may get pushed aside by larger cities and well-established organizations. Rural areas may not have financial or political resources to participate. Equal consideration should be given to all towns and county governments and there should be some mechanism to assist these areas. Also, local government should be eligible for most, if not all, of the competitive grants and project agreements that are made available.

- 2.3.7 **Issue anticipatory Request for Proposals.** There was support for EPA issuing an anticipatory request for proposals before Congress enacts final funding levels each year. However, concern was expressed that after an RFP is issued, it will become more difficult for partners to consult with federal funders. EPA and its federal partners need to plan briefings or other means to assist prospective grantees while providing equal access to information. Also, in order to ensure potential project partners and applicants do not experience an undue burden, given the uncertainty associated with the appropriations process, it was recommend the anticipatory RFPs be simple to complete and the process be as streamlined as possible.
- 2.3.8 **Use GLRI funds to supplement and support existing work.** Numerous organizations continue to support the principle that federal programs funded by the GLRI are intended to “support new work, or enhance (but do not replace) existing Great Lakes basin activities.” However, a number of comments also recognized that even though base funds are supposed to exist in state or local entities, funds for some programs might disappear under the current economic crisis conditions. Reinvesting and supporting existing, base activities such as water quality assessments, nonpoint sources of pollution, and Total Daily Maximum Load development under the Clean Water Act, brownfields assessment and cleanup, and stormwater management with GLRI resources would allow states to put money toward other, innovative programs and would free up existing funds for work in other parts of the state.
- 2.3.9 **Maximize funding cycles and project completion timeframes.** Numerous comments sought clarification regarding the maximum time period over which grant funds could be used. It was noted that short-term grants might hinder collaboration. There was one suggestion that funds be set aside for out-years and multi-year programs, as some projects will require time to gear up. While the GLRI is anticipating funding each year for the next five years, opportunities must be found to allow the annual funds received by states and their partners to be spent over the maximum grant period (three years is typical and historically the maximum amount of time made available). Without flexibility for projects that require long duration for completion, uncertainty regarding continued funding may discourage states and partners from taking the important step of hiring new staff or reassigning current staff.

### **Specific Comments**

- Illinois agencies generally noted that they have grant programs in place that would fit in well with either a “bundled” or a re-grant option under the GLRI.
- Michigan agencies generally noted they could manage such a program, as it has the responsibility and expertise to fund grants. The state noted that “bundling” could be seen as a way to create and build partnerships, thereby reducing the possibility for fragmented projects.
- New York agencies noted that they have a vision for their Great Lakes restoration plans and they hope for flexibility in applying this vision to these federal grant programs.
- Ohio agencies generally noted that they are well prepared to launch collaborative projects.
- Pennsylvania agencies generally stated that there needs to be guidance on bundling, if that is an option.
- Wisconsin agencies generally supported “bundling” projects into large grants so that monies can be centrally managed.
- Tribal comments suggested alternatives to achieve the EPA’s expeditious and efficiently managing grants to fund programs and projects. EPA’s Water Division provides grants to individual tribes in the Great Lakes basin (and elsewhere) under its General Assistance Program and its Section 106

funding. In addition, the Bureau of Indian Affairs has a unique and efficient mechanism that provides funding to tribes – the Indian Self-Determination and Education Assistance Act, through what are commonly known as 638 contracts. This program provides advantages to meet match requirements. EPA and federal agencies should continue efforts to minimize matching requirements for tribes.

- Another comment proposed a model similar to EPA’s Indian General Assistance Program (GAP) to provide a sustainable capacity-building funding stream for monitoring, managing, restoring and enhancing biological communities that provide and maintain high quality and productive tribal subsistence opportunities.
- There was concern regarding the involvement of the Bureau of Indian Affairs. The individual would like to see the money go directly to the tribes, and bypass the Agency.
- It is difficult to identify which project may be best suited for which federal agency’s programs. This could be simplified by an online searchable platform where stakeholders could identify characteristics of their project and receive direction on which funding source may be most appropriate.
- Comments recommended EPA appoint an overall point person or program contact within GLNPO. One state noted that different answers are coming from the many points of contact listed in the funding guide. One group suggested that each of the five Great Lakes should have a single point person responsible for coordinating Great Lakes restoration activities under the GLRI. The person would be given performance measurements for the lake to which he/she is assigned. This point person would coordinate all efforts for his/her lake with the state or states within the individual Great Lake watershed.
- It was noted that a segmented grant structure might lead to a segmented ecosystem approach.
- One state suggested developing a revolving loan fund process for use by state agencies. These funds could be used for projects over the course of any given timeframe. The funds would provide some additional capital as well as flexibility for some projects.
- There was some confusion over how much of the \$475 million would go out in grants and how much would stay in the federal agencies. There were also questions regarding how much control EPA has over the different federal agencies’ allocation.
- Providing budget estimates that are linked to the Action Plan’s activities will help define what is needed to achieve its objectives, assist with long-term planning, and explicitly identify the overall cost and subsequent economic benefit of making these types of investments in Great Lakes restoration.
- The last paragraph of the Executive Summary states that funds will be distributed via existing avenues “through grants and cooperative agreements or through interagency agreement transfer of funds to other federal agencies...” Concern was expressed that this would rule out the funding of partnership efforts with NGOs.
- The Lake Ontario Coastal Initiative noted that they had a re-granting program through EPA Region 2 that provided seed money to ten remediation and four research projects in the Lake Ontario watershed. They noted that this model could be extended through the GLRI, as it is a cost-effective means of maintaining relationships with municipal partners.
- The New York Pollution Prevention Institute currently has a program in place that administers small grants to community organizations. This could be a model.
- One group recommended that either stakeholders be included in Interagency Task Force meetings and activities, or an Advisory Panel made up of stakeholders from all sectors be established to work with the IATF in developing Restoration Initiative priorities.
- One person believes that a significant portion of the funding should be allowed to be used through cooperative agreements, rather than through grants in order to provide flexibility.
- One way to streamline funding allocations while still encouraging grassroots participation is to develop a network of agencies and organizations to manage pass-through grants. Wisconsin’s Coastal Management Grants Program provides an excellent example of how a state agency can run an effective program to provide grants for project-based outreach, education and restoration in Wisconsin’s coastal communities. There are also many foundations in the region with long-standing track records in distributing funds to mission-based organizations requesting funds for results-

oriented projects in the Great Lakes Region. Please consider the role these organizations can play in helping EPA achieve the ambitious objectives of the Action Plan.

- One example of a bundled grant approach could be the National Oceanic and Atmospheric Administration (NOAA) 2001 Great Lakes Restoration Program where Congress appropriated \$30 million that was allocated to states, which in turn granted a portion of funds to local governments, not-for-profits, and Soil and Water Conservation Districts.

### 3 Principle Focus Areas of the Action Plan

This chapter contains general comments that cut across all five focus areas, and specific comments concerning four of the five principle focus areas: toxic substances and Areas of Concern; invasive species; nearshore health and nonpoint source pollution; and habitat and wildlife protection and restoration. Due to the extensive number of comments, the fifth focus area is separated into Chapter 4.

#### 3.1 Cross-Cutting Issues Relating to the Five Focus Areas

In general, there was broad support for the five focus areas. Comments generally endorsed the priorities as articulated in the Action Plan. Comments urged federal agencies to create specific objectives, measures of progress and principal actions that were realistic and measurable with existing resources. The lack of comments or critique of the provisional funding allocation levels in the FY 2010 plan suggests widespread support. It is worth noting that comments were raised when there were concerns or recommendations for change. Generally, fewer people comment when they support the proposal.

##### ***Recurring Comments***

3.1.1 **Improve the Long Term Goals, Interim Objectives, Measures of Progress, and Principle Actions.** Comments stressed the importance of establishing objectives and tracking progress with metrics that are measurable, realistic, and can be evaluated with existing data (or with funding to be provided through the GLRI). Sound objectives are essential to establishing priorities to guide project selection. Implementation partners should be involved in revising the Interim Objectives and Measures of Progress. Funding should be provided to support monitoring and reporting, especially if the measures require onerous tracking (See Chapter 4). Specific comments related to the Interim Objectives and Measures of Progress are contained in the Specific Comments sections below.

A number of the comments requested clarity on how the goals, objectives, measures and principle actions were set. Currently, the basis for deriving some of the quantitative interim objectives and measures is unclear. Many recommended a clarifying section or paragraph to address this. One comment noted that it is not clear how the interim goals will help accomplish long-term goals. One comment noted that the principal actions, across the report, are very general and it was difficult to determine how the principal actions will contribute to the accomplishment of the interim goals or longer-term goals.

These comments expressed overall concern regarding the lack of specificity in the goals and objectives outlined in the Action Plan. Numerous questions and comments were submitted in all of the focus areas regarding how the goals, objectives, measures, and actions will be completed where there are not. It is essential that measures of progress be realistic and not over-burdensome, based on common sense, be linked to the existence of good baseline data and that funding be provided, especially where additional data collection will be required.

3.1.2 **Include climate change.** Many organizations suggested that climate change be specifically addressed in all five focus areas, or in its own focus area. This issue, the anticipated impacts on people and resources and the need for assistance preparing and adapting both human and

natural environments, is not well addressed within the plan. Comments encouraged inclusion of funding to respond to predicted outcomes of climate change. Restoring ecosystem resiliency is a critical adaptation strategy. While this issue is a priority across the nation, the GLRI can make the Great Lakes region an incubator for adaptation programs that will be useful for ecosystems across the country.

- 3.1.3 **Incorporate economic impacts into project selection criteria and track economic development.** People resoundingly emphasized the linkage between the health of the Great Lakes ecosystem and the region's economic well-being and revitalization. Project selection criteria should evaluate potential economic impacts. Project implementation should track and report on economic impacts. Federal agencies should target technology development and building the region's global prominence in freshwater stewardship. For example, Wisconsin is trying to build an economy around freshwater resources and this effort can help get that information on the ground.

Several studies have documented that restoring ecosystem resiliency and remediating the legacy of toxic pollution will stimulate economic growth. For example, the Brookings Institute published *Healthy Waters, Strong Economy in 2007* ([http://www.healthylakes.org/site\\_upload/upload/GrtLakesCostBenefit.pdf](http://www.healthylakes.org/site_upload/upload/GrtLakesCostBenefit.pdf)), which found that investing in Great Lakes restoration (e.g., cleaning up Areas of Concern, restoring habitat and wetlands, reducing polluted runoff from farms and urban areas) would result in a two-to-one economic return.

- 3.1.4 **Encourage policy and legislation changes to complement restoration activities.** Multiple comments stressed that long-term restoration could be undermined by inadequate regulation and policy. For example, the success of the Action Plan's priorities for AIS depends on eliminating invasive species introductions via ballast water. EPA should use its authority under the Clean Water Act to establish new rules.

The region has labored valiantly with limited success to address the local manifestations of pollution and related problems with global sources. There must be increased attention to a global ban PCBs and toxaphene, for example. Global sources of pollutants will limit success cleaning up AOCs.

- 3.1.5 **Clarify whether projects may address and/or cut across multiple issue and geographic areas.** There were numerous questions about whether projects would have to fall in one "silo" or whether they should cut across the five focus areas. Comments requested flexibility in preparing projects to address multiple problems in a large watershed.

- 3.1.6 **Fund education and public participation.** There was strong and repeated support at the public stakeholder meetings for funding education to enhance the success of the GLRI in all five focus areas. The Action Plan should more explicitly acknowledge the importance of public participation, education and outreach. Citizen education and involvement is vital to build broad public support for the GLRI now, and to help create the next generation of stewards. It was recommended that consideration should also be made for states that are involved in the Environmental Information Exchange Network (EIEN). EIEN facilitates electronic reporting and the sharing, integration, analysis, and use of environmental and other types of information from many different sources.

There were several specific recommendations that the GLRI include an investment in youth and school-aged science education programs that meet applicable state standards. Achieving and sustaining Great Lakes restoration will be a continual process, and a modest investment in science-based Great Lakes educational programs will prepare this and future generations to deal with and manage existing and future Great Lakes stewardship challenges.

### **General Comments**

- 3.1.7 **Explore new and innovative technologies.** A number of comments recommended the EPA invest in new, innovative technologies to address Great Lakes issues, especially in the areas of ballast water treatment and sediment remediation.
- 3.1.8 **Implement a whole-basin/watershed approach.** Numerous comments supported a holistic, basinwide approach to restoration for all five focus areas. It was noted that funding for projects related to major rivers feeding into the Great Lakes should take a whole-river system approach that extends to the upper reaches of rivers rather than being limited to the areas near river mouths.
- 3.1.9 **Consult states and local entities when delineating priority watersheds.** The issue of “priority” watersheds and beaches is generally endorsed but needs to be clarified.
- 3.1.10 **Promote sustainable development.** Comments stressed that the GLRC identified sustainable development as a critical issue for Great Lakes restoration but its absence is conspicuous in this Action Plan. Key principles associated with sustainable development should be restored in Action Plan revisions.
- 3.1.11 **Incorporate urban areas into funding priorities.** Several comments, especially in the areas of nonpoint source pollution and habitat restoration, recommended that the Funding Plan incorporate and emphasize urban areas in the funding priorities. Comments were especially concerned with urban runoff and protecting important habitat areas in cities. One comment suggested that there should be less focus on areas easily removable from the 303d list and more emphasis on supporting projects in heavily populated urban areas.
- 3.1.12 **Protect source water.** The GLRI needs to recognize the importance of protecting and improving source water for surface water intakes. Drinking water protection should be recognized in the Toxic Substances and Areas of Concern (AOC), Nearshore Health and Nonpoint Source (NPS) Pollution, and Accountability, Monitoring, Evaluation, Communication, and Partnerships focus areas at a minimum. In addition, some consideration should be given to whether specific goals and objectives are needed for drinking water protection, similar to those provided for beach protection.
- 3.1.13 **Accountability should not be a separate focus area.** A number of comments noted that, while accountability and transparency are extremely important for overall tracking of the GLRI, accountability should also be imbedded into each of the four resource focus areas rather than viewed as an external parallel category. The integration of this category within the other four areas will provide a unifying presence that should be used to connect the funding efforts together to maximize on the benefits from the investment. Other comments expressed similar sentiments for evaluation, monitoring, communication and partnerships.

## **Specific Comments**

- Comments recommended the regulatory review process of all appropriate agencies be examined and modified to improve restoration management. Modifications should consider consolidation of restoration activities within agencies for increased efficiency.
- It was noted that if there is not sufficient coordination, overlapping projects could result in one project exacerbating problems elsewhere. For example, habitat restoration in one area could increase the spread of invasive species.
- One participant recommended the development of a series of conceptual ecological models for each of the focus areas. One approach would be to have generic models for each focus area, which serve as overarching templates. Then each generic focus area model could be modified for specific geographic areas to reflect local attributes.
- A few comments dealt with the high degree of uncertainty (and therefore risk) associated with the outcome of many of the restoration actions that are likely to be proposed as well as the capacity to document positive outcomes when they occur. One commenter noted that this uncertainty would be rapidly revealed by an objective discussion of the scientific knowledge associated with key relationships addressed in the Action Plan, such as sediment contaminant dynamics or the ecological impacts of invasive species. Assuming this is the case, federal agencies are encouraged to develop a conceptual framework, or model, as a context for the entire restoration initiative as well as each proposed restoration action, and give serious and careful consideration to building an effective monitoring/assessment component into each restoration activity so the opportunity for learning is not compromised.
- The listed focus areas in paragraph two of the Executive Summary place Toxic Substances and Areas of Concern at the top of the list. This placement appears to put toxics at a different priority level than in the GLRC focus areas. Also, given the distribution of funds in the 2010 budget proposal, these items appear to be regarded as high priority. The commenter asked for clarification regarding how the priorities were established.
- The Executive Summary states that annual reports will detail progress in meeting ecosystem goals. A majority of goals described in the outline are stressor-related, with no indication that they are related to a particular ecosystem response or attribute. One comment asked for clarification on the overall objective of the GLRI, whether it be to improve ecosystem attributes or reduce individual stressor presence. A clear tie between stressor presence and ecosystem impacts needs to be expressed in order to justify the efforts.
- For the Saginaw Chippewa Indian Tribe, the biggest issue is addressing the need for a watershed management plan.
- The goals of the GLRI should become more aggressive in future phases.
- Baseline status and trend information is particularly important in the Lake Superior basin. In addition, the Binational Program's Ecosystem Goals document contains priorities for monitoring that will lead to the achievement of the Ecosystem Goals for Lake Superior. The EPA should consider using (with revisions as necessary) Long Term Goals 3 and 4 under Habitat and Wildlife Protection and Restoration in each Focus Area. High priority actions identified by the LaMPs will lead to the achievement of not only habitat and wildlife goals, but also goals related to invasive species, toxics and accountability.
- The report makes multiple references to meeting "ecosystem goals" but these are not clearly articulated. A short list of broad but clear ecosystem goals (for which progress can be measured through benchmarks and interim objectives) should be spelled out up front in the Action Plan. The commenter listed some examples of these goals.
- One comment suggested incorporating nonpoint source pollution into the section on toxics. Placing nonpoint sources with the other chemicals and Areas of Concern makes more sense from a funding and strategic planning perspective.
- One comment suggested that there is too much emphasis (money) on monitoring, evaluation, partnerships and accountability as opposed to reducing stressors to the Great Lakes. Although there

is significant benefit to monitoring and evaluation, there appears to be less emphasis on specific actions leading to the accomplishment of already established goals to reduce stressors.

## **3.2 Toxic Substances and Areas of Concern**

### ***Recurring Comments***

- 3.2.1 **Account for air pollution and deposition.** There were a number of comments relating to the importance of considering toxaphene, mercury deposition from power plants, burning of plastics and other air pollution sources from outside the basin. One state suggested adding a goal for mercury emissions and a principle action for ensuring the implementation of mercury reduction commitments into the Plan. The comments referenced the GLRC interim milestone for mercury reduction from coal-fired power plants and asked that a similar (more stringent) action be included in this Action Plan Outline.
- 3.2.2 **Fish consumption should be a higher priority.** Numerous comments noted that fish consumption deserves higher priority and greater funding to protect human health. The leading source of human exposure to toxic substances in the region is consumption of Great Lakes sport fish. While the paramount goal of eradicating persistent toxic substances in the ecosystem is pursued over the long term, there is an immediate need to reduce this exposure and protect the health of vulnerable populations, including tribal members and women of child-bearing age and children. It is recommended that EPA and cooperating health agencies update, clarify and broadcast through innovative means to these target populations. The \$6 million proposed may not be sufficient. A uniform methodology for developing fish consumption guidance should be developed.
- 3.2.3 **Emerging contaminants should be addressed.** There was broad general support expressed for allocating funds to address pharmaceuticals, e-waste, and personal care products as potential pathways for emerging contaminants of concern. Some of the emerging contaminants specifically mentioned as missing from the plan were brominated and chlorinated flame retardants, Polybrominated diphenyl ethers, decabromo-diphenyl ether (BDE-209) and Dechlorane Plus (DP). Some suggested using funds for a public education program to address disposal of prescription drugs. Sulfates from mines are a concern and are causing damage to wild rice resources. It was also noted that Interim Objectives and Measure of Progress should be established for these “emerging” pollutants.

### ***General Comments***

- 3.2.4 **Focus on Remedial Action Plans and Lakewide Management Plans.** Comments recommended that EPA rely on locally developed RAP Stage II implementation plans and priorities and recognized that this was a key recommendation in the GLRC. Significant and sustained local stakeholder involvement has been developed to build community support for Remedial Action Plans. Support for RAP coordinators is important and cannot happen with volunteers alone.

However, another comment noted that RAPs should not necessarily be the only basis for focus on toxic substances, including contaminated sediments.

A number of comments recommended that the draft Action Plan more directly recognize the appropriate role of the LaMPs. The Binational Executive Committee recently recognized LaMPs as the best mechanism to identify a comprehensive set of priorities unique to each lake, with the appropriate capacity to set and direct the implementation of the highest priority projects, and with governmental and stakeholder partnerships already in place. This was noted as particularly important for Lake Superior.

- 3.2.5 **Improve plans for the disposal of contaminated materials and eliminate open water disposal.** Many groups discussed the issue of dredging harbors, especially in relation to the disposal of dredged material. The Army Corps of Engineers estimates more than 16 million cubic yards of sediment need to be removed from Great Lakes harbors and waterways, a significant portion of which is toxic. It was suggested that GLRI funds could be used to help offset the increased costs of removing toxic sediments from Great Lakes ports and waterways. It was recommended that increased investment be made to explore innovative treatment technologies or re-use options. Multiple comments urged federal agencies to eliminate open-lake dumping of dredged materials.
- 3.2.6 **Increase the emphasis on projects addressing groundwater.** There should be more focus on groundwater due to its great importance for life. Particularly cities, of all sizes, rely on this essential resource.
- 3.2.7 **Clarify priority system for classifying AOC projects.** A number of comments addressed priority-setting for AOCs.
- 3.2.8 **Include preventive measures in order to avoid future recontamination.** Several comments noted the futility of remediation efforts if toxic pollutants continue to be released. Several comments expressed concern over a proposed tire burning co-energy facility in Erie, Pennsylvania.
- 3.2.9 **Utilize existing Soil and Water Conservation Districts.** Districts have been active working in all of the five focus areas. Every state has conservation districts; there are 208 in the basin alone. Comments noted that the Natural Resource Conservation Service (NRCS) has the technology, staff and experience to help implement these programs, and recommended that there be a funnel so that money comes to the states but in the pathway of the districts. Districts have to be involved.

Other comments noted some concern with improving project implementation as both NRCS and the federal government are lacking in technical service providers and engineers.

- 3.2.10 **Address the global use of PCBs and Toxaphene.** Multiple comments noted the issue of global PCB use hinders the eradication of PCBs from the Great Lakes, as the water is influenced by PCB use across the Northern Hemisphere not just by the hot spots of buried sediment. The comments also suggested ultimate progress should be measured by the actual disappearance of PCBs from the system rather than the amount of contaminated sediment removed or the dollars spent on remediation.
- 3.2.11 **Include funds for contaminated areas that are not “Areas of Concern.”** A few comments recommended that federal agencies broaden their focus beyond AOCs.

- 3.2.12 **Concerns regarding monitoring periods and delisting AOCs as measurable goals.** There was some concern and questions about the goal to delist a number of AOCs and Beneficial Use Impairments (BUIs). Recognizing potentially long recovery times and variable rates of recovery, it was recommended that federal agencies focus on whether the job is being done effectively, not whether AOCs are being delisted.
- 3.2.13 **Develop additional Interim Objectives for other chemicals.** It was noted that the Action Plan should include Interim Objectives for other chemicals, in particular mercury (including a target for eliminating variances for point-source discharges) and dioxins (including reductions in releases from open burning, and development of improved inventories)

### **Specific Comments**

- EPA should consider improvements to BUIs on a river segment basis for tracking progress in AOCs, such as 75 percent of the AOC that meets targets for fish habitat.
- It was recommended that the Multi-Year Action Plan's goals and Interim Objectives for AOCs include a period of recovery after a remediation or restoration project.
- Progress in voluntary reduction commitments made by facilities in Great Lakes states should be tracked.
- The entire shoreline of Lake Michigan in Illinois was noted as contaminated with asbestos.
- One comment suggested no money is needed for toxics in light of the Binational Toxic Strategy.
- There is no mention of cost recovery in toxic substances and AOCs (e.g., polluter pays).
- There was a question regarding how these funds would work with settlements from contamination lawsuits, such as the Dow Chemical Company lawsuit in Saginaw County. There was a question about whether Superfund sites or lands currently under litigation should apply for funding.
- Hospitals are especially concerned with pollution from pharmaceuticals issues and have resources and opportunities for collaboration.
- Pharmaceuticals should be returned to pharmacies for simplicity and safe drop off. Special drop off sites are not effective. One comment asked to where discarded pills would be disposed.
- Specific objectives should be included to address the loadings of other important toxic pollutants such as pharmaceuticals and personal care products to the Great Lakes and connecting channels.
- Another objective could be added to address the use and release of sulfonated perfluor-chemicals that have been known to be associated with the production of Teflon.
- Another objective could be added to address the use and release of sulfonated perfluor-chemicals that have also been known to be associated with the use and release from chromium electroplaters and are known persistent bioaccumulative toxics (PBTs).
- The Kalamazoo AOC has had historical problems during the negotiation process, and the necessary remediation work has not been done. There was concern about this AOC and others ending up in the same situation and the individual encouraged improvement to this process.
- The Red Cliffs Band has received money from the Defense Department to look for barrels of waste that were disposed of in the lakes. It was suggested that the GLRI fund similar efforts in the rest of the lakes.
- Mercury emissions from taconite needs more research to get solutions on the ground.
- Teridium is entering the lakes from landfills and treatment plants. This chemical needs to be monitored very closely and it is not.
- There was a concern with sulfuric acid leakage from mining operations in northern Minnesota.
- A few participants urged remediation and restoration of the River Raisin, which has been damaged by the Corps of Engineers and a public utility. Existing dams on the River Raisin inhibit fish passage.

- The Waukegan AOC is notable in terms of fish advisories. Significant work has been done to remedy the PCB inputs from the Outboard Marine Plant and coke plant in the harbor, but much more can and should be done. The area should have received Legacy Act funding for complete remediation.
- A basinwide clean sweep program that allows local governments to collect agricultural, residential and business hazardous wastes would be ideal as local funding is generally inconsistent and does not provide residents with sufficient opportunity to dispose of waste.
- It is implied that pharmaceuticals and personal care products are the most significant chemicals of emerging concern. PBDEs and perfluorinated compounds (PFCs) are equally important and should be considered.
- If the first goal of the toxics focus area is to be achieved, the Interagency Task Force should focus upon the largest contributor of pollution. Lake Superior, northern Lake Michigan and northern Lake Huron trout fillets will contain more than the “hazardous waste” designation level of toxaphene for many years to come.
- Detailed contaminant data for Sandusky and Erie County should be publicly accessible.
- One comment noted there should be funding to test well samples for pesticides throughout the Lake Erie Watershed
- It was recommended that the Action Plan’s 2014 target of remediating 7 millions lbs. of contaminated sediment be cumulatively measured for actions taken after the 2007 baseline, rather than from the original program’s inception.
- EPA should immediately take steps to ban or limit certain "emerging pollutants" for which the evidence that they present an unacceptable risk is already clear. Nonylphenol Ethoxylate chemicals should be banned under TSCA for many of their current uses. Atrazine use should also be restricted.
- One comment suggested that only one area of concern in or near each of the five Great Lakes should be cleaned up to the extent that four out of every five BUIs are eliminated before moving on to the next most appropriate AOC in or near that lake.
- While agricultural polluted runoff is addressed within the other areas of focus, what was left out of the goals and objectives of the draft Action Plan was the contribution of brownfields and former industrial urban riverfronts to polluted runoff and toxins. Consequently, the current Action Plan does not address riverfront brownfields and urban river issues at all (except beaches and AOCs). Given the large number of formerly industrial riverfront and lakefront communities in the Great Lakes region, this is a gap in the priorities outlined in the Action Plan. Specifically, the Action Plan should incorporate goals for remediation of toxic brownfields on waterfronts and redevelopment of these brownfields that incorporates innovative stormwater management and emphasizes public access and recreation, which were laid out in the Sustainable Development area of focus of the GLRC Strategy.
- EPA proposes to pay for implementation for BUIs in AOCs. As previously stated, for the Maumee, the data is old and the conditions have changed with nutrients being a primary concern. It would appear that some BUIs are derived from TMDLs. It will be difficult to measure improvements if there is no current data (within last five years).
- One comment recommended the expansion of the Diesel Emissions Reduction Program so more Great Lakes operators can receive grants to re-engine their vessels and further reduce their already low level of emissions. The GLRI presents an opportunity to take a regional approach to the Great Lakes Navigation System rather than focusing on non-attainment zones.
- One comment noted that it has been a long time since the last long-term study on humans and Great Lakes fish consumption was conducted, making goal-setting difficult.
- Wetland restoration may also offer a cost-effective means for bioremediation of some toxic substances in Great Lakes AOCs. The group recommended consultation with scientific experts on the efficacy of constructed wetlands for bioremediation and support the use of GLRI funds for research to evaluate and report on wetland bioremediation techniques that show promise.
- One group asked for continued financial support of the Lake Superior Binational Program's LaMP so LaMP goals will continue to be achieved and ways to accomplish Restoration Action Plan goals will be found.
- The GLRI should address Great Lakes ecological impacts from low and high level waste storage and potential for leaching and leaking into the Great Lakes.

- One state noted that efforts to remove toxic sediments within the basin may be the single most important activity in this category. At the same time, strong efforts need to be implemented in non-AOC areas to avoid future AOCs.
- One comment asked what “remediation” options are anticipated as options for sediment clean-up. To be most effective, the full array of available remediation options, including monitored natural recovery must be applied.
- Establishing a goal, in the third and fourth bullets on page 10, that seeks to Reduce PCB levels five percent annually in fish and seven percent annually in air ignores the basic fact that these declines are not linear. Continued declines in PCB levels in both fish and the atmosphere are influenced more by factors other than point source – or even nonpoint source – inputs. Current water column PCB levels, air-water exchange rates, etc. are better determinants of reduction rates. Goals for further reductions will have to reflect these realities.
- The Interim Objective to delist “x” number of AOCs and/or “x” number of beneficial use impairments by any date cannot be established without identifying and understanding the barriers to delisting. Delisting of entire AOCs is a difficult matter given that the focus of the Action Plan is on several individual “hot spots” within a large number of AOCs.
- The first bullet under the Principle Actions to Achieve Progress heading on page 11 states that existing programs will be utilized to accomplish AOC clean-up goals – including Natural Resource Damage Assessment (NRDA) processes. This substantially suggests a business-as-usual approach to sediment remediation. Costs, litigation, and economic impacts on Basin private and public institutions must be assessed before moving forward on these plans. An objective behind implementation of the Great Lakes Legacy Act has been to expedite or encourage remediation activities by removing, to the extent possible, the barriers that have frustrated the “standard” processes. Focusing on NRDA and other traditional legal processes will not assure goal attainment.
- The second bullet under Principle Actions states that “a variety of strategic actions” will be used to implement enhanced pollution prevention and reduction efforts within the Basin. These actions can also represent substantial liabilities for Great Lakes industries and municipal entities. These liabilities need to be assessed before the ability to meet specific reduction targets can be accomplished in a cost effective manner.
- The fourth Interim Objective needs clarification regarding correspondence with current rates and reference to lake-specific populations or overall basinwide populations. The objective should consider the lakewide nature of these populations as well as the atmospheric deposition from other sources and changes in the food web. Careful consideration for monitoring should be considered given the interplay of several factors in addition to the removal of the sediments. This goal also must consider that this is a long-term process and the length of time required to show results is significant.
- “Remediated” needs to be defined. The commenter asked what percent of the total load of toxics 7 million cubic yards represents. The commenter asked how much will still be left in the sediments in 2015.
- In the opening sentence on page nine “persistent toxic substances (PTS)” are said to be “present at levels above those considered safe for humans and wildlife...” This generalization overstates the situation, as it does not explain where, when, and in what context levels are not “considered safe.” More detail both from the standpoint of issues and progress made should be provided in this section.
- The last sentence in the opening paragraph of the Problem Statement generalizes the AOC clean-up situation and should be revised. What is needed is an in-depth description of the AOCs, what “hot spots” are in each of them, what has been cleaned-up, what not, etc. as well as a justification for tying Fish Consumption Advisories to them and identifying which might be positively impacted compared to those that may not be. This issue is much more complicated than the Restoration Initiative Outline discussion states. In order to describe successes that come from the GLRI, a means for dealing with – and communicating – these complicating factors must be provided. This group recommended establishing a workgroup, including stakeholders, charged with establishing a process for reporting outcomes from the AOC remediation effort.
- While the Problem Statement discusses pollutants including polychlorinated biphenyls (PCBs), mercury, banned pesticides and chemicals of emerging concerns, and recognizes atmospheric

deposition as an important loading mechanism, only PCBs (with the exception of general waste collection) are discussed in the Interim Objectives and the Measures of Progress and this should be expanded. The phrase “persistent toxics” in the measures should also be included.

- The Proposed Long Term Goals listed on page five, like the focus areas, appear to be loosely based on the GLRC Strategy goals. However, they have been substantially modified. In addition to wording changes, the order of the goals has been changed. This suggests an ordering of priorities. Given that the GLRC report was the result of extended stakeholder input and involvement, the justification for this prioritization needs to be provided. If the apparent prioritization has not occurred, it is recommended that the list of goals be reworded and reordered to be more consistent with the GLRC Strategy report.
- In Goal 1, the word “discharge” should be replaced with “release.”
- “Source reduction” in goal 2 is dicey as many of these sources are global and need an international framework. Another goal should be that upstream and global sources are targeted to prevent the need for perpetual cleanup.
- One person suggested that the AOCs that are going to be delisted should be named in the Interim Objectives, Bullet 1. Otherwise, all should be delisted.
- One state recommended that the third and fourth bullet on page 10 regarding PCB be revised to read, “Through 2014, track the rate of decline of PCBs in whole lake trout and walleye and in air in the Great Lakes basin as an indicator of global input trends. Rates of decline in the fish should meet or exceed an annual average of 5 percent. The annual average rate of decline should be 7 percent in the air or atmosphere.”
- For Measure 6, the “Annual percentage decline” will depend on the global strategy.
- Measures of progress for mercury could include: a measure of mercury reduced from coal-fired electric generating facilities (passage and progress on implementing state rules); implementation of area source regulations that cover electric arc furnaces and foundries; implementation of the Great Lakes Mercury Products Phase-Down Strategy and the Great Lakes Mercury Emissions Reduction Initiative; development and implementation of mercury TMDLs; data collected in the basin on mercury-containing switches from the National Vehicle Mercury Switch Recovery Program (NVMSRP) (with continued funding); continued efforts to reduce long-range transport and deposition through such efforts as the Quicksilver Caucus and data collected through the clean sweep/household hazardous waste collection efforts; data collected from sediment cores and/or atmospheric monitoring data.
- To complete the Measures of Progress table on page 10 for the new bullet on mercury, the following bullets can be used in the table columns: “Measure: Reduce mercury emissions from Great Lakes states by at least 1 ton. Baseline: See state emission inventories. 2010 Target: 1,400 pounds. 2014 Target: 600 pounds.”
- Measurements can also continue to track other PBTs including dioxin, chlordane, and DDT to continue to show a decline in the environment.
- Not all pollution prevention activities can be measured by pounds of waste reduced. There needs to be a measurement of the pollution prevention activities implemented or the number of behavioral changes resulting from these programs. The dollars saved due to pollution prevention activities would also be an appropriate measurement.
- Another measure could be to increase the education/outreach activities to inform individuals on healthy fish consumption including a clear message regarding PBT-contaminated fish.
- In regard to the third bullet in Principle Actions to Achieve Progress, the aggressive fish consumption advisory (FCA) programs can run counter to the goal of reducing FCAs within the Basin. Aggressive programs can result in the use of more conservative assumptions for establishing FCA, thus increasing the number of advisories.
- In regard to the fourth bullet in Principle Actions to Achieve Progress, the action should include annual tracking studies of predator fish species, birds of prey and high fish consuming species such as cormorants, terns and gulls.
- Support for local (watershed) groups is important to achieving many of these goals, particularly in AOCs and should be included as a Principle Action.

- One comment asked whether experiments utilizing plant for removing heavy metals and other tough compounds from sediments in watersheds could be funded.
- One comment suggested abandoned buildings should be demolished so contaminants on site could be removed.
- There needs to be a clarification of the terms toxics, pollutants, and Areas of Concern. These terms are all being used interchangeably and this could lead to misunderstandings between pollutant types, authorities and methods of corrective action. Chemicals should likely be broken into at least three categories: legacy chemicals (or toxics or pollutants), chemicals of emerging concern, and nonpoint sources of pollution (see Specific Comment in 3.1 regarding the restructuring of this section to include nonpoint source pollution).
- Since pharmaceuticals are ubiquitous and will always be with us, it may be helpful to cite chemicals over which EPA has greater control (e.g., pesticides and toxic chemicals, hazardous waste, HHW) or locations where EPA has control over the manufacturer (e.g., the plant, the plant's outfall).
- The Action Plan should include a more holistic Pollution Prevention and Toxics Reduction program that addresses classes of chemicals from manufacturers and water treatment facilities.
- It will be very important for the federal agencies and the states to be proactive in anticipating the kinds of permit applications that might be received pertaining to PCB disposal and consistently apply regulations, policies, management standards, etc. in order to ensure safe waste management.
- One comment noted that a new Pesticide Registration Notice on spray drift is to shortly take effect and there is a need to develop educational initiatives to inform users about the need to pay attention to the labels. If enforced adequately, the new labels should reduce unanticipated human and ecological exposures to pesticides.
- Integrated Pest Management can be an effective tool in reducing any unnecessary application and toxicity of pesticides. It was suggested that a similar sum of funds be set aside for a grant program that would promote agricultural Integrated Pest Management.
- There needs to be intensive intra-EPA (especially within the regions) coordination in addition to all the external coordination mentioned in the paragraph. The Land and Chemicals Division is concerned that the increased attention to PCB remediation will require additional Land and Chemicals Division resources to review permits and remediation plans. There needs to be more detail as to what is expected of the other EPA programs and what, if any, GLRI resources those programs might expect. This is a good action plan but it will not be realized without the contributions and support of other Agency programs.

### 3.3 Invasive Species

#### ***Recurring Comments***

- 3.3.1 **Invest in ballast water treatment technology and encourage the adoption of ballast water policy.** Multiple comments stressed that it is critical that ballast water discharges are addressed, and that this is one of the easiest mechanisms for halting the spread and introduction on invasive species in the Great Lakes. It was noted that the elimination of invasive species in ballast water may require regulatory or policy action.

Many individuals and groups recommended a partnership with industry. They suggested that agencies and industry work together to develop a ballast water treatment system that can accommodate the volumes and pumping rates of Great Lakes vessels. Multiple comments also supported funding the development of new and innovative technologies. While there are some ballast water treatment systems in existence, none has been proven effective in a cold, freshwater environment. The Great Lakes shipping industry is prepared to be a full partner

with the EPA in this groundbreaking research. There was concern that the shipping industry will be harmed without this research.

- 3.3.2 **Increase funding for invasive species.** States strongly supported provisional funding proposals to implement state management plans. There was some discussion as to whether there is enough money allocated to invasive species under the GLRI.

### **General Comments**

- 3.3.3 **Utilize the resources, expertise and priorities of the Great Lakes Panel on Aquatic Nuisance Species (GLP).** The Panel could be useful in working with the eight states to coordinate and assist in implementation of state management plans, as well as providing a means for states and federal agencies to collaborate on management activities that would benefit from a multi-state, lake-basin or regional approach. Funding for the GLP has been progressively reduced over time and would need to be increased. The GLP submitted priorities developed by the Panel's Information/Education and Research Coordination committees that should be considered by EPA and federal agencies when developing funding priorities.
- 3.3.4 **Address organisms in trade.** It was recommended that the Action Plan include an Interim Objective to create a regional mechanism to address the introduction of invasive species from organisms in trade (e.g. development of a screening system and coordinated state moratoria).
- 3.3.5 **Fund studies on the Mississippi River/Great Lakes connection.** Comments recommended that the Action Plan incorporate the GLRC's recommendation for a comprehensive study on hydrological/biological separation of the Great Lakes and Mississippi River Basin to prevent the introduction of Asian Carp into the Great Lakes.
- 3.3.6 **Include terrestrial invasive species.** It was recommended that funds be available to address terrestrial invasive species. One state expressed specific concerns about purple loosestrife, garlic mustard, phragmites, gypsy moths, emerald ash borers and other plant, bird and insect species as well as the aquatic invaders. Strategies should include the development of biological controls for existing invasive plants (phragmites). It was recommended that there be increased attention on other invasive plants that are making their way to the Great Lakes, e.g. water chestnut, Japanese knotweed, etc.
- 3.3.7 **Fund the development of rapid response programs.** Rapid response needs more attention. A recent mock exercise indicated that much additional work is needed to prepare the region. Through the Great Lakes Regional Collaboration's AIS Rapid Response effort, the region has begun developing rapid response protocols. GLRI funding could support further development and refinement of these necessary protocols. A rapid response and assessment capability is needed to let the public know if there are health risks and to determine if the new invasive can be controlled. Rapid response in the whole basin needs to be addressed; not just in the lakes themselves.
- 3.3.8 **Fund AIS outreach and education.** Outreach campaigns are often the most effective mechanism for combating AIS issues.

3.3.9 **Collaborate with other regions outside of the basin.** One state supported AIS funds being used outside the Great Lakes basin, because species are entering from other areas.

3.3.10 **Develop a centralized and coordinated data management system to allow for reporting and tracking of invasive species.**

### **Specific Comments**

- One comment noted that the GLRC concluded that there should be a distinction between ocean-going vessels and lakers; thus, federal agencies should adopt requirements for installation of ballast water treatment systems on ocean-going vessels and separate requirements for the use of best management practices for lakers.
- One person noted that there is a wastewater treatment plant near the Cuyahoga River mouth that could be used as a pilot program for testing and handling ballast water on land. Many of the ports around the Great Lakes have abandoned wastewater treatment plants that could be used for similar pilot projects.
- One comment noted that Michigan Technological University has an innovative method to treat ballast water, which is effective, inexpensive and ready to deploy. While it is designed to stop the VHS virus, it may also work to stop most existing aquatic invasive species. Funds can be used to finish testing, conduct operational trials and help ship owners pay for retrofitting.
- One commentator has designed and built an inexpensive small boat disinfection station that is operational at the Eagle Harbor, MI marina. To implement disinfection stations at 60 boat launches would cost approximately \$639,000.
- One individual suggested that, in general, nature should be left alone and areas allowed to adapt to the new species with money spent and action taken only where success can be fully achieved.
- There are parts of the initiative that specifically address sea lamprey, but other invasive species should be emphasized as well.
- Obtaining an inventory of invasive plants such as autumn olive and developing an eradication plan that encompasses both public and private land is crucial to the health of the Great Lakes ecosystem.
- While there was support generally for control of invasive species, there was caution that too-stringent controls might hurt the ability of Great Lakes ports to stay cost-competitive.
- The Action Plan needs to reference pathogens such as viral hemorrhagic septicemia.
- One person noted that the Michigan DNR is handling infected bait and fisheries inspections with a well-run program that needs support. They are in need of a trained individual to fully oversee the baitfish certification program to ensure that all entities are complying with existing regulations, do focused work on how this industry operates to include how fish move throughout the state, and to check records for compliance. The cost of this measure would be \$75,000 annually and would greatly reduce the risk from this vector.
- There is \$1.8 million proposed to address the emerald ash borer, however, one person noted that existing efforts have failed. The comment expressed concern that another program would also fail to address this issue.
- The first Interim Objective should contain a caveat that barriers to aquatic invasive species will be retained or constructed as necessary.
- GLRI could be used to fund the installation of invasive species rapid response equipment aboard lakers. The equipment could be generically designed to deliver a biocide or range of biocides to respond to a specific introduction of a new invasive species from a variety of other vectors. This program provides a risk-based approach and fills the gap between Best Management Practices and full ballast water treatment.
- The GLRI must also recognize the important role of private landowners in invasive species prevention and control efforts.
- EPA has not adequately explained how it intends to coordinate with the U.S. Coast Guard, the U.S. Maritime Administration, the U.S. Fish and Wildlife Service, and the National Marine Fisheries

Service, all of which have important roles to play in the federal government's response to the invasive species problem.

- Although the draft Action Plan Outline proposes a number of ambitious actions with regard to invasive species, and the President's budget envisions the expenditure of large sums of money on different programs at different agencies, the draft Action Plan outline does not explain how these various programs fit into a coherent whole. Nor does the draft fully account for the important roles of state and regional entities.
- The draft Action Plan outline does not explain what EPA believes to be the ultimate goal for ballast water regulation in the Great Lakes. It also does not lay out specific interim steps to meet that goal.
- The Action Plan needs to consider the Asian carp barrier working at a reduced voltage and identify measures that will be taken to prevent the Asian carp, and other invasive species, from entering the Great Lakes at the Chicago Waterway System.
- The GLRI should address impacts to infrastructure from aquatic non-native species like quagga and zebra mussels.
- Proposed long term Goal 1 under this focus area calls for application of the "virtual elimination" concept to this area. No authority has been cited for the use of this very specific term. The attempts over the years to define this term have applied only to "toxics" – not other areas. It comes from the Great Lakes Water Quality Agreement, where it applies only to toxics, and is used nowhere else in U.S. regulatory policy. Expansion of the use of this term without specific legal authority to do so is a bad precedent.
- Another measure should be to reduce the range of invasions.
- Developing integrated pest management programs for invasive species management as described in Goal 5 may be an effective tool. However, to be successful, the effort must include establishing partnerships with pest control professionals from industry and other sectors. The Initiative will have to include a partnership-building framework in order to be successful.
- The Principle Actions to Achieve Progress section indicates that the general approach for addressing aquatic invasive species is known, but that there is a lack of clear, comprehensive, and actionable plans to reach goals. These need to be developed very quickly. The comment recommended that specific dates for the plan development be included as Interim Objectives and Measures of Progress.
- One person asked for clarity regarding "enhanced prevention programs."
- Specific goals and Measures of Progress for this focus area are largely not yet described in the Problem Statement. The process for setting these needs to include stakeholder participation to ensure achievable outcomes.
- In the Problem Statement, add a fourth goal to the list: "Seriously consider closing the Seaway and instituting a trans-shipping port."
- Goal 3 states that the spread of invasives via recreational activities and canals is to be "prevented." This is a very absolute desired outcome. The commenter expressed concern regarding the feasibility of this goal. A proper basis for setting this goal needs to be provided.
- Goal 5 should say, "management and control," not just "control."
- No dates have been specified for the Interim Objectives. One state recommended no dates be past 2014, the timeframe for the Action Plan; however, the prevention actions should be implemented sooner than 2014.
- As currently written, the first bullet in the Interim Objectives may conflict with the objective on increased detection efforts. If detection efforts are increased, the rate of detection of new species may increase, even if the rate of new introductions is falling. The commenter suggested this bullet be removed unless a weighted measure can be developed.
- Bullet 2 in the Interim Objectives is unachievable without identifying specific species; it is not possible to control all existing populations. Some invasives are worse problems than others are. The Action Plan should target the worst of the bad actors.
- Bullet 5 in the Interim Objectives should be revised to target ballast water and say, "By 2011, ballast water treatment technology that prevents the introduction of invasive species will be tested, refined, evaluated and implemented."

- Another Interim Objective that should be included is “Reissue federal Vessel General Permit or pass federal law by 2014 that requires specific technology for preventing the introduction of AIS to the Great Lakes.”
- The measures for progress need to be linked with restoration of ecosystem function rather than cumulative areas managed. This would give an appropriate strategic emphasis rather than pursuit of large areas on the basis of demonstrating effectiveness. Smaller areas managed to protect or retain high quality habitats should be prioritized over areas that are severely degraded and have other issues to be addressed (e.g. hydrology) prior to initiating invasive species control.
- Add a Measure of Progress on the number of ships operating in the Great Lakes with ballast water treatment on board. All ships should have treatment onboard by 2014.
- Add a Measure of Progress that addresses recommended Interim Objective “Reissue federal Vessel General Permit or pass federal law by 2014 that requires specific technology for preventing the introduction of AIS to the Great Lakes.”
- One comment suggested adding a Measure of Progress that addresses the rebound of native species in historic habitat.
- The principle actions for this focus area regarding ballast water treatment option implementation and integrated pest management program development must include stakeholder processes to ensure success.
- The first Principle Action on ballast water treatment should be edited to emphasize installation of systems, not study of systems.
- The fifth Principle Action needs to finish with “...and tribes.” Tribes also have a significant role in the prevention and control of invasive species and should be eligible for funding under this action.
- There is no action to achieve progress targeting organisms in trade. A separate action should be added on developing and implementing a screening tool, “Develop and implement a screening tool for new species – Screening of all species not on a clean list and proposed for introductions should be implemented for the Great Lakes basin as a regulatory tool.”
- While the notion of an early detection and immediate response is possible, it should be based on a strategic investment approach as well as a risk benefit analysis for the rapid response plan. It is likely that a one size fits all approach for different invasive taxa could require resources far beyond the agencies abilities to respond. Currently, many resource agencies are reacting to invasive species that are already long-established with little chance of elimination by the time of detection. In addition, earlier warning would also provide for improved management options to slow the spread of invasive species.
- The proposed focus on preventing the spread of invasive species through recreational uses (e.g., hunting, fishing, boating) is too narrow. Seventy five percent of Wisconsin’s remaining wetlands are privately owned making private landowners a critical audience to engage in invasive species prevention and management efforts. Funding and technical support are needed to teach private landowners about how to manage their lands to prevent or reduce the spread of invasive species. Financial incentives and technical assistance are also needed to support and underwrite invasive species management efforts on private lands.
- In addition to supporting research for the development and testing of innovative control technologies, the GLRI must facilitate the dissemination and discussion of the results of those efforts. For example, funding should be provided to support species-specific listservs or working groups to facilitate information sharing on the best available science and technology. In some cases, these working groups may already exist.
- One comment asked whether there would be port inspections of Great Lakes vessels for invasive species.

## 3.4 Nearshore Health and Nonpoint Source Pollution

This section contains comments related to beach quality, point and nonpoint source pollution as well as nearshore health in general.

### **Recurring Comments**

3.4.1 **Include support for traditional infrastructure.** The principle in the GLRI and Action Plan of not investing in traditional infrastructure to address combined and sanitary sewer overflow (CSO and SSO) issues was discussed repeatedly, especially by cities. It was recognized that the federal budget proposes to increase funding for CSOs and SSOs. Some agreed that GLRI funds should not be used for CSO and SSO remediation because of excessive costs. Many others noted that cleanup of these sources is essential to achieve the goal of Great Lakes restoration and urged EPA to reconsider. Many individuals reiterated that restoration could not take place while septic systems, CSOs and SSOs continue to degrade water quality. One group noted that the GLRI should not be competing with or interfering with State Revolving Fund (SRF) appropriations and a number suggested that the GLRI should work in concert with the SRFs.

Some cities are particularly concerned that high transaction costs and densely layered processing requirements for the SRF in some states have caused municipalities to turn to the private bond market for funding.

3.4.2 **Include green infrastructure projects in the GLRI.** Green infrastructure was generally supported, although there needs to be a more clear definition as to what will qualify. It was noted that there is no reference to green infrastructure or low impact development in the Action Plan, and the comment suggested that these concepts be added.

3.4.3 **Increase beach access.** Several comments suggested using the funds to increase or improve shoreline access. It was recommended that the Action Plan reinforce public access to the Great Lakes as an economic enhancement activity and to demonstrate visible success of the GLRI. While it is critical to protect existing resources, it is also important to expand efforts to preserve, protect, and allow public access where appropriate.

### **General Comments**

3.4.4 **Support beach monitoring and sanitary surveys.** There was general support for the use of sanitary surveys to identify sources of contamination on beaches. There were numerous references to the importance of restoring beach health in general and support for funding for beach monitor. Comments expressed support for addressing sources of pollution in addition to monitoring. It was recommended that the Action Plan reference research in support of high-priority beach monitoring needs (including rapid testing, standardization, and microbial source tracking). It was noted that the Action Plan needs earlier deadlines to begin implementing and assessing effectiveness of measures to control pollution affecting beaches.

3.4.5 **Include improvements to recreation and boating activities as potential funded projects.** One comment noted that little attention is paid to recreation and additional recreational opportunities beyond beaches. Marinas and private boaters have an impact on lake quality,

and a motivation for minimizing their impact. Programs such as capital improvement grants and loans would be beneficial for these entities.

- 3.4.6 **Address animal feeding operations.** Concern was expressed regarding runoff from animal feeding operations. It was suggested that this waste should be treated as human waste as it is just as harmful to the environment. EPA and its federal partners should aggressively monitor pollution from concentrated animal feeding operations and prosecute unpermitted discharges. CAFO lagoons need to be monitored for breeches where the manure washes into streams that flow into the lakes. Another problem is over- application of liquid manure on farm fields. The practice of applying liquid manure must have phosphorus limits.
- 3.4.7 **Improve land use planning.** One theme that was noted as missing from the report was the connection between land use and water quality. It was suggested that more focus be put on land use change and efforts to tie community planning, development, and infrastructure to environmental protection goals. Prevention of future problems should be a priority and land use planning efforts can bring together local governments to identify and deal with such issues.
- 3.4.8 **Authorize NRCS to distribute Environmental Quality Incentives Program (EQIP) funds geographically.** It was noted there are limitations on the ability of NRCS to distribute EQIP funds geographically. It was recommended that GLRI funding for EQIP should include the authority for NRCS to target EQIP funds to those watersheds demonstrated to be contributing high nutrient loads into the Great Lakes.
- 3.4.9 **Endorse a tribal set aside.** Multiple groups recommended that funding be set aside for tribes. Without a tribal allocation, it will be difficult for tribes to be competitive in a grant opportunity. The Wisconsin Tribal Conservation Advisory Council has been able to work with USDA-NRCS, which now provides tribal funds for EQIP and WHIP programs. Generally, NRCS focused on traditional agriculture, which left tribes out. Tribes view forestry and subsistence gathering as a form of agriculture.
- 3.4.10 **Add buffer strips into the Interim Objectives.** It was recommended that the Action Plan add an Interim Objective on the acreage of buffer strips protected or restored. The GLRC recommends to restore, recover, and protect a net increase of 550,000 acres of wetlands and to create 335,000 new acres of buffer strips within the Great Lakes by 2010 as an action to mitigate nonpoint pollution. It was recommended that this or a similar wetland/buffer strip target be added to the Action Plan as an Interim Objective.

### **Specific Comments**

- Using federal stimulus funding, New York State has developed a new grant program for green infrastructure projects as defined by EPA for the American Recovery and Reinvestment Act. This program is extremely popular with more than 300 applications vying for \$40 million funding. Additional funding for these types of projects in the Great Lakes basin will support the use of these new technologies and approaches to reduce climate change and CSO/SSO impacts on the lakes.
- One state recommended the GLRI encourage implementation of retrofitting best practices or management measures into nonpoint source projects as older, urbanized areas continue to be a major source of nutrients, sediments and pollutants to the Lakes. The states have all completed Coastal Nonpoint Source Management Plans that describe pro-active approaches to retrofitting urban areas.

The GLRI could reduce overall pollutant loads to the Lakes by emphasizing these management measures and by providing resources to the task of retrofitting.

- One participant recommended a project for Sodus Bay beach in NY. The beach is plagued by seaweed problems.
- Funding should go to restoring the two-mile sand beach at East Harbor State Park near Port Clinton, Ohio. This 37-year erosion problem is central to the goals of GLRI.
- Under the second Principle Action, it is recommended that plants which meet EPA's nine elements for planning when referring to implementation be included.
- The report should clarify that PCB content is measured by an ecosystem standard rather than a human health standard.
- There was concern about Wisconsin's nonpoint rules. In 2001, the state revised this program and developed a comprehensive rule to reduce nonpoint. There are cost share requirements that can be up to 70 percent of the total project cost. In addition, another shortcoming of the Wisconsin nonpoint program is that landowners have to volunteer. There is some concern with using federal money for these kinds of programs since federal dollars cannot be used for mandatory compliance with statewide standards and prohibitions. Compliance is essential to assure effectiveness.
- The Alliance for the Great Lakes manages the very successful Adopt-a-Beach Program. These kinds of programs should be supported.
- Pennsylvania has an initiative to promote coverage of 35 percent of the urban areas with trees. This could be considered a soft solution to the nonpoint source pollution problem.
- There was a question about how this money will interact with the CWA's Section 319 Nonpoint Source Management Program. There needs to be more 319-like funds for watershed work and BMP implementation.
- Monitoring should be increased in order to help set TMDLs.
- EPA proposes \$1 million for TMDLs. This seems too low. It was noted that there is another \$1.1 million for TMDLs for phosphorus, but it should be for all nutrients. TMDLs should be conducted along the near shore areas of each of the lakes and in major rivers where there has often been insufficient funding for TMDLs. TMDL's could help establish a baseline for accountability and improvements.
- The GLRC Strategy makes the untested assumption that spending more on and expanding the scope of existing programs administered by USDA and NRCS as lead agencies will result in a 40 percent reduction in sediment loss from these lands.
- A wetland restoration project that addresses industry and agricultural pollution in Green Bay was offered as a model.
- Shoreline protection projects for private property protection should not be eligible for funding.
- SWAT is a river basin scale model developed to quantify the impact of land management practices in large, complex watersheds. This might be a useful tool.
- The most comprehensive work on algal indicator development was done by the Great Lakes Environmental Indicator (GLEI) project, which developed potentially valuable indicators of water quality for the Great Lakes. One participant suggests a GLEI II project.
- It was noted that the protection of working agricultural lands (row crops, flower crops, vegetables, orchards, vineyards, etc) is not well addressed in the plan.
- Concern was expressed about permitting for smaller water quality improvement projects. Small projects do not have the resources to comply with the same regulatory requirements as large projects.
- Some recent monitoring results indicate that managing sediment load can no longer be used as surrogate for measuring phosphorus load. There is also data that should be considered, such as dissolved phosphorus as well as total phosphorus.
- It was recommended that the U.S. Forest Service be added to the list of collaborating agencies under the first bullet of Principle Actions.
- It was recommended that the Action Plan encourage funding for the installation of methane digesters and gasification as a way to transform animal waste into clean energy.

- The short-term stimulus to local economies provided by the GLRI could provide longer economic benefits if some of the funds could be used for projects that stimulate tourism, provide recreational boating, fishing, swimming access, enhance parks and generally improve conditions in coastal communities to make them attractive places to visit and live.
- Any study of the sediment patterns in the Sandusky Bay should include monitoring the sediment depths as well as sediment content in the areas of the Sandusky Bay causeway's to accurately determine fill rates. Intelligent decisions can only be made once accurate fill rate information has been obtained.
- One person expressed concern with the area around three causeways in Sandusky Bay. This area seems to be a sediment trap and is getting shallower every year.
- It must be recognized that many of the sources of harmful phosphorus to the Great Lakes are point sources and subject to regulation under current law. Publicly owned treatment works have phosphorus limits that should be tightened. Stormwater and CSO pollution should be better addressed and enforcement actions brought against operations that fail to comply with their permits.
- States should be encouraged to enact restrictions on phosphorus based fertilizer, at least for non-agricultural uses.
- It is also critical, that states enact numeric phosphorus standards as soon as possible for all tributaries to the Great Lakes (as well as other waters).
- The term "nearshore health" implies interest in the areas near the shores of Lake Michigan. If the goal of the GLRI is to address nonpoint pollution to the Great Lakes, then the Action Plan must explicitly address watershed health, not simply nearshore health (as also noted in 3.1.7). "Near-shore health" in the title of this focus area should be renamed "Watershed Health."
- Targeted wetland restoration offers a cost-effective and viable practice to reduce sediment, phosphorus and nitrogen loads and should figure prominently in efforts to reach target reductions.
- While phosphorus is perhaps the primary issue with lake health, nitrogen should not be altogether ignored in the prioritization.
- One group expressed various concerns about the Maumee and Detroit rivers and their effect on Lake Erie water quality. Reducing the nutrient inputs to Lake Erie via the Maumee River should be a high priority project and be one of the targeted tributaries.
- The Action Plan talks about significantly reducing harmful algal blooms, avian botulism and/or excessive Cladophora growth from 2008 levels, but does not identify what "significantly reduced" means. It would be good to include a percentage as a measure for reduction.
- There are fly ash pits on or near the shores of Western Lake Erie. The runoff from these pits needs to be tested to determine if water quality standards are being met.
- This section focuses on actions in watersheds with existing problems. Although this section does contain one Principle Action related to collecting data about nearshore conditions and stressors, Lake Superior's good condition should not be a detriment to receiving funding for protection of nearshore health. The water quality problems caused by loadings from Lake Superior tributaries may not be as severe and those in other Great Lakes, but still require management and targeted action.
- There seems to be no estimates of the amount of phosphorus that will be reduced from these agricultural programs. There needs to be accountability for these programs.
- There were a few comments related to phosphorus coming from lawn fertilizers. One group recommended an assessment be conducted on the amount of runoff of phosphorus from application of lawn fertilizers. The group also suggested that there should be regulation of lawn treatment.
- One group noted that there is not sufficient funding dedicated to stormwater management issues such as low impact development and green infrastructure.
- With over 20 cities and 14 million acres of working forest and agricultural landscapes, investment in the green infrastructure of New York State's Great Lakes basin could be a major investment into the upstate economy. The investment in forests and farms have benefits to the entire region as the return is realized in a variety of ways including: stronger industries that make up a key component of New York's economy, cleaner water and air, climate change benefits, increased tourism and smart growth for both the rural and urban areas of the State. The GLRI should ensure that these industries and the state and municipal structures that support them, receive the federal attention that they deserve.

- The Alliance for the Great Lakes noted their ability to deploy a 7,000+ corps of volunteers via the Adopt-a-Beach program to assist in achieving GLRI outcomes under this focus area.
- The Friends of Seminary Woods and Friends of St. Francis Greenspace have been trying for years to save an old growth forest, Lake Michigan shoreline and open space in the Milwaukee suburb of St. Francis. The group plans to re-apply for Coastal and Estuarine Land and Conservation Program funds and other funds that would be offered through the GLRI. The \$5 million proposed for the GLRI is helpful. However, more money would be appreciated simply because it may cost more than that just to protect Seminary Woods, the adjacent Cousins Center and the adjacent re-mediated brownfield owned by We Energies.
- Modeling for National Pollution Discharge Elimination System (NPDES) program permits in the Great Lakes should be reevaluated. The current permitting process encourages industries to discharge into the lake rather than nearby rivers and streams because the allowable pollutant discharge limits are usually higher in the lake. Often limits for bays are included with the Great Lake even though the bay is an estuary that is normally shallower and more vulnerable. Resources for assessing the models used for NPDES permits should be funded by GLRI.
- Achievement of Goal 1 will require a significant investment of shoreline landowner understanding and acceptance of ecological principles and processes associated with this dynamic natural area. The comment recommended that efforts be focused on an outreach and education campaign to help local municipalities (and hence zoning boards) and landowners understand their role in Great Lakes nearshore health.
- Goal 1 indicates that nearshore aquatic communities should be self-sustaining and comprise native species. In some instances, the native species has been extirpated and an ecological equivalent that is naturalized is self-sustaining. This goal should emphasize self-sustainable and desirable communities of native and naturalized species.
- Goal 4 will require a significant amount of funds and relies on too many other efforts to be successful.
- To achieve significant long-term reduction in soil erosion, one state strongly supports long-term funding mechanisms for local technical assistance efforts, which are critical to the success of implementation of soil conservation practices.
- The blanket percent reduction in phosphorus loadings described in bullet four under Interim Objectives may or may not be justified. A process needs to be established to determine what measures are appropriate and how such a reduction target, if appropriate, could be achieved. If this target has been established via a phosphorus loading reduction task force, than information needs to be acknowledged and referenced.
- The development of a “standardized sanitary survey tool” for the identification of beach contamination sources, as described in the seventh bullet on page 16, should take place via a stakeholder process. Many entities are currently involved in beach management programs. To keep the momentum going for the good work these groups are doing, they must be consulted and allowed to apply their expertise.
- The first, second, third, and fourth Interim Objectives require the identification of priority and/or targeted watersheds for control measures or load reductions. These objectives need to acknowledge that a consensus set of criteria should be developed and consideration should be given to existing state plans (approved NPS watershed management plans and TMDLs) and priorities as well as targeting degraded and contributing watersheds.
- One state noted that there seems to be a disconnect in the timeline of the second and third Interim Objective. In the third Interim Objective, the state suggested creating a baseline and specific target(s) (including target tributaries if needed) before or in the early stages of implementation of soil erosion controls.
- In the fourth Interim Objective, clarification is needed regarding role of soluble phosphorus in nearshore problems to establish an Interim Objective for percent reduction. This comment also asked for clarification on how this objective relates to the long-term goals and the type of change expected in the nearshore.

- In regard to the seventh and eighth Interim Objectives, the standardized beach sanitary surveys do not definitively identify sources of contamination. They may point in the right direction and gather information that is useful in development of predictive models; however, there is a disconnect between the two objectives. Alternative objectives could address number of beaches removed from the nonattainment list; number of beaches where source control measures have been implemented and beaches are now open, etc.
- Under Interim Objectives, and generally under the nonpoint source focus area, it is important to focus on nutrients, but also other nonpoint pollutants, particularly in urban watersheds. Obviously, the Action Plan is targeting pathogens and phosphorus, but if urban watersheds are being included, other pollutants such as chlorides and metals should be included as well.
- The plan should also address hydrological changes resulting from urban development that contribute nonpoint source pollutants and cause erosion and sedimentation of tributary streams and wetlands.
- The same stakeholder participation concept must be applied to the establishment of conservation tillage goals or targets contemplated in the last bullet at the top of page 17. Much experience is available regarding the utilization of these techniques. A blanket application of these practices may or may not provide a beneficial outcome. Agricultural professionals must participate in establishing these goals.
- A public process needs to be established for the prioritization of watersheds to be selected for implementation of control measures as described in the first bullet under Interim Objectives.
- Many of the Measures of Progress are piecemeal and do not measure correlation with causal factors.
- One state recommended a greater emphasis on funding for programs that have wetland-eligible practices (e.g., the Wetland Reserve Program, the Wetland Reserve Enhancement Program, or the Conservation Reserve Enhancement Program) and require permanent easements. This state would also like to see more specificity in the types of agricultural conservation practices to be encouraged through the GLRI.
- One state supports the development and implementation of TMDLs to reduce nutrient and sediment loads and would like to see a greater emphasis on wetland restoration in phosphorus and sediment cleanup efforts for impaired waters. The TMDL for the Rock River Basin in Wisconsin provides a good example of an effort to rank wetland restoration projects for water quality improvement benefits.
- The Problem Statement needs to include the need to reduce sediment loading in the Problem Statement and elsewhere when referring to nonpoint source pollution.
- The opening paragraph in the Problem Statement on page 15 describes uses and interactions between users of nearshore waters but fails to acknowledge that treated effluent discharges also do and must occur in these areas. This is an important concept that must be included.
- The blanket statement in the second paragraph of the Problem Statement that control strategies have “failed” to protect and maintain the Great Lakes is an oversimplification. Much progress has been made and needs to be acknowledged.
- The focus area goals appear to be a restatement of items taken from the Nonpoint, Habitat/Species and perhaps other Collaboration topic areas. They also vary from those stated in the Collaboration Restoration Strategy. The process for developing this different approach needs to be explained.
- Another factor not included in the Problem Statement is the role that invasives (especially mussels) have in the transformation or availability of phosphorus. It can be more significant than just the quantities of phosphorus present.
- There are several instances in the Problem Statement where it appears that the cause of nearshore problems is focused on excessive nutrient loading to the lakes. The implication is that these problems can be fixed by addressing sources of nutrients and sediment that may carry nutrients to the lakes. The importance of AIS and other non-nutrient factors in the ‘new’ nearshore problems needs to be introduced here as well as the concept that reducing nutrient loads alone may not be enough to address the complex changes that are occurring/have occurred. This plays well with the continued work planned by the National Oceanic Atmospheric Administration and other partners to evaluate these problems.

- The second paragraph of the Problem Statement should indicate the possibility of reduction of sediment loading into tributaries through treatment of historical logging erosion sites, road crossing sites, and access sites.
- Goal 2 is a bit vague and broad. It is not clear whether this is referring to land use, recreation, and economic activities in the entire Great Lakes watershed or just in the nearshore, wetland, and upland habitats.
- Goal 2 should be revised to include “in-stream” habitats.
- Goal 3 should be changed to, “enjoyment of the nearshore areas or the health and vitality of habitat.”
- The second bullet at the top of page 16 (this goal does not have a number) should be revised to say: “achieve a significant reduction in soil erosion and the loading of sediments into tributaries through greater implementation of practices that conserve soils and slow overland flow in agriculture, forestry and urban areas.”
- The first bullet in Interim Objectives should say, “...pollution control measures and reduce nonpoint source pollution in watersheds that are not only in poor condition, but that are nearly healthy and require fewer actions to bring them to a healthy state.”
- The second bullet in Interim Objectives should be revised to say “By 2014, remediation, restoration and conservation actions in xxx priority watershed in each Great Lake basin will control erosion, reduce nutrient runoff from urban and agricultural sources, reduce overland flow across the landscape, improve riparian areas, and improve habitat to protect nearshore aquatic resources.”
- The fifth bullet in Interim Objectives seems to suggest that nearshore biological problems are nutrient driven and that the problem can be significantly improved by local actions to reduce nutrient loads. At the very least, it is expected that nutrient reductions will be needed in the upstream watersheds not just locally, but required actions may need to address hydrologic changes, internal nutrient loading, changes in food web, etc.
- While the Objective of understanding causes of nearshore impairment within five years is an important goal and may be achievable in some instances, it may not be a realistic Interim Objective given the scope and unique nature of many areas of impairment, both temporally as well as geographically.
- In addition to Cladophora, Spirogyra growth has implicated some locations in the Great Lakes. The fifth bullet in Interim Objectives should be changed to reflect this.
- One person suggested that specific areas should be targeted and used to measure progress and test actions.
- The timelines for improvements in recreational water quality at beaches indicate that no pollution remediation will be assessed until 2014. Given existing knowledge about many small, localized pollution sources, the Action Plan should provide for initial delivery of some remediation success by 2011 at the latest, with achievement of at least 75 percent remediation of high priority sites by 2014.
- The second bullet at the top of page 17 should be changed to read, “By 20xx, the percentage of agricultural lands in conservation and/or utilizing conservation tillage practices will increase by 15 percent.”
- For the third and fourth Measures of Progress, measuring the “extent and severity” and “negative effects” is often very subjective and difficult for what should be an objective assessment of progress. Standardized agreed upon metrics will be needed for these.
- The fourth Measure of Progress may be difficult to measure accurately. It is also difficult to measure "negative impact" quantitatively other than having someone go to a site and confirm nuisance algae. Much of the impact is related to how the shoreline in an area is used.
- One state supported the fifth measure related to the rate of sediment deposition in harbors. However, many of the areas that experience detrimental effects from sedimentation are in harbors with no commercial dredging as well as in upstream areas where sediment may disproportionately affect in stream habitat, particularly upstream of catchment basins (e.g. dams). This measure should be reconsidered, perhaps with a form of remote sensing technology.
- In regard to the sixth Measure of Progress, one state strongly supports priority be given to “permanent conservation efforts” through Farm Bill programs like the Wetland Reserve Program (WRP). “Acres subscribed in conservation programs managed by NRCS” should be revised to state

“Acres subscribed in conservation programs managed by NRCS that result in permanent protection of natural resources.” In addition, given some of the restrictions placed on releasing certain information from participants in Farm Bill programs, it will be important to develop an appropriate method to garner adequate, meaningful information to validate the effectiveness of practices in targeted areas.

- In regard to the sixth Measure of Progress, one group noted that other programs, such as wetland restoration, riparian buffers and stormwater mitigation will also help reduce nonpoint source pollution by slowing overland flow, thus reducing peak flood flows and erosion from streambed and banks. The group recommended adding “acres of these practices” to the measure.
- Additional measures that should be considered include measures similar to those in the EPA’s Strategic Plan dealing with watershed restoration. Suggestions include measures designed specifically to address contaminants of nearshore concern – e.g., number of *E. coli* (P, sediment) impaired waters restored.
- An additional measure that should be considered is to use changes in economic value over time of recreation and other ecosystem services and avoided costs like reductions in dredging. This would integrate a broad range of items into easily understandable currencies.
- One state recommends that the second Principle Action to Achieve Progress be deleted. It is unlikely that phosphorus load reductions could be easily scaled from TMDLs to larger watersheds to yield meaningful load reduction targets for the Great Lakes.
- The restoration of wetlands should be added as an additional Principle Action. One state views wetland restoration and wetland protection efforts as high priority Best Management Practices (BMPs) that should be used to improve the water quality of the Great Lakes as well as habitat.
- Annually estimating Phosphorus loads to the Great Lakes is a costly endeavor; it may be better to estimate these loads on a less frequent basis. In addition, a standardized and agreed upon method for estimating the loads will be needed.
- One state suggested the Interagency Task Force work directly with the Michigan Agriculture Environmental Assurance Program (MAEAP) to meet nonpoint source pollution reduction goals and objectives.
- Actions should support implementation of Phase II Stormwater requirements.
- Funds could be used to encourage parking lot landscaping or streetscape landscaping that facilitates stormwater filtration.
- Funds could go to implement small-scale retention sites in urban neighborhoods.
- Current proposals call for the allocation of only \$5 million of this \$475 million to be directed to the National Oceanic and Atmospheric Administration’s Coastal and Estuarine Land Conservation Program (CELCP) for land acquisition specifically for Great Lakes habitat protection. Considering the recommendations that were made in the GLRC, this appears completely inadequate and disproportionate to the needs.

## **3.5 Habitat and Wildlife Protection and Restoration**

### ***Recurring Comments***

- 3.5.1 **Allow funds to be used to purchase and protect lands.** It was noted that protection is just as important as restoration. It was recommended that funds be available for purchasing land. Purchase of easements and riparian buffers are additional options. EPA and federal agencies should strongly consider a fixed, sizable grant allocation to, or project agreements with, Great Lakes land conservancies with a record of accomplishment in protecting and managing critical habitats. One group urged that strategies and funding programs should strongly consider the critical role of land conservancies, as they are strategically (and geographically) positioned to have a positive impact on protecting water quality.

3.5.2 **Prioritize projects that restore upland areas and subwatersheds.** A number of groups noted the downstream benefits of restoring upland areas and subwatersheds that may be significant contributors to the health of larger rivers and lakes. Headwaters are valuable, ecologically unique, diverse and sensitive systems. More awareness and protection is needed, especially as many impoverished, rural areas are far from the lakes and do not think of themselves as contributing to problems affecting the lakes. Potential practices include reforestation, planting riparian buffers and wetland restoration; these practices can slow surface water flows to help reduce peak flow flows in streams, lower sedimentation rates, and ultimately improve fish habitat and water quality.

### **General Comments**

3.5.3 **Support funding for a mass fish marking program.** A number of people associated with the Great Lakes Fishery Commission recommended that funds be allocated to a mass marking program for Great Lakes fish. Eight million dollars should be allocated to the U.S. Fish and Wildlife Service for this basinwide, cooperative project that is broadly supported by fishery management agencies. Data from mass marking will help track stocked and native species and better guide restoration of native species.

3.5.4 **Address lake level regulation.** There were several concerns expressed, especially in New York, regarding artificial regulation of lake levels. The Action Plan needs to include an objective to ensure protection and restoration of habitats damaged by unnatural regulation of lake levels. There should be Great Lakes-wide discussion of water levels in and between the lakes. Individual control boards may help one area at the expense of another. The Action Plan needs to include an objective ensuring protection of habitats from unnatural regulation of lake levels.

3.5.5 **Fund fish stocking.** Some groups and individuals recommended that funds be provided for stocking native fish, including ciscoes or yellow perch in Lake Michigan.

3.5.6 **Improve wetland protection.** Several comments noted the importance of maintaining and improving programs that protect and restore wetlands. It is critical that the GLRI address the full spectrum of protection activities to ensure a long-term return on our investments. Support for sustaining the progress already accomplished will be critical to avoid losing the ecological function of existing wetlands; maintaining existing wetlands will protect investments already made in the Great Lakes.

### **Specific Comments**

- A state recommended an Interim Objective of miles of streams restored or watersheds meeting use attainment, to coincide with Clean Water Act goals.
- The Green Steams program in Wisconsin is a potential model for building buffers and establishing wetlands.
- The Pennsylvania Fish and Boat Commission recommended projects to restore the Alleghany fish hatchery.
- Establishing parks in western Lake Erie was endorsed.
- It was recommended that flood control dams be maintained or else contaminated sediment must be properly remediated before removal in order to prevent transport.
- Another comment strongly urged unnecessary dams be removed.

- Chequamegon Bay is one of the most biologically productive ecosystems in Lake Superior. Restoration and protection efforts should be focused here, including priority watersheds such as the Bad River, Fish Creek and Whittlesey Creek. Habitat can be improved with practices that restore connectivity and replace lost habitat, such as culvert replacement, migratory fish barrier removal, enhancement of large woody structure, elimination of invasive species and restoration of stream bank flooding.
- Marsh water levels on Lake Ontario are too high on average. Continued high water levels cause the leads to fill in and the plant community to degrade. In order for marshes to drain and shorebird habitat to be restored, regulation at the Cornwall-Massena Dam needs to drop be lowed by the beginning of September.
- One person expressed concern about Michigan’s wetlands program. The person suggested that it be funded before it disappears.
- Some comments noted that setting the Interim Objective for wetlands at 15,000 acres restored is too low. The GLRC Strategy identified a short-term goal of restoring/protecting 550,000 acres. A lot more work could be done considering there is \$80 million allocated to this category.
- Wetlands must be better protected and EPA and the Corps might establish regulations that make clear the broad existing authority under the Clean Water Act to prevent wetland fills of a type that in the aggregate may degrade water quality in the Great Lakes. Violators of 404 should be aggressively prosecuted.
- Restoring wetlands in Northwest Ohio should be a high priority. The ODNR has georeferenced overlay maps that could help Ohio identify key places for wetland restoration.
- Achievement of restoration of native open-water fish communities near southern Great Lakes urban areas (e.g. Milwaukee-Chicago-Gary corridor, Detroit River, greater Cleveland), as in other locations, depends on elimination of key stressors. In these and other urbanized locations, loss of physical habitat and infrastructure hardening near tributary mouths and along the shoreline can severely limit the ability of native fish to reproduce and forage successfully. Where physical habitat is a limiting factor, removal of other stressors is unlikely to result in enhancement of successful propagation of native fish species. The GLRI should prioritize some habitat restoration funds to be spent on restoring physical habitat in Great Lakes urban areas in support of restoration of native fish communities in the southern Great Lakes.
- The Action Plan needs to include an objective ensuring protection of emergent habitat due to lake level declines resulting from climate change.
- Funding should go to assessing fish kills in intakes and ways to minimize the kills. USGS reports show that over 70 percent of the water used from Lake Erie is from power plants. There should be a comprehensive study of all the intakes in Lake Erie, the amount and type of fish that are killed, and determination if the kills are massive enough that a cooling tower needs to be installed to reduce fish kills and thermal outputs.
- The GLRI should address Great Lakes ecological impacts from: thermal pollution from cooling water discharge and impacts on native species; cumulative thermal pollution from average water temperature increases due to global climate change, combined with thermal discharges from electricity generating units, and that impact on ice coverage, evaporation, and ecosystem as a whole; fish and wildlife impacts from impingement and entrainment impacts due to water intake; average daily water withdrawals and consumptive use by the new plant, consistent federal and state laws and regulation on water withdrawals; and impacts from water withdrawals on lake levels and ecosystems.
- This section tends to treat “fish and wildlife” as a single concept, and few objectives address non-fish objectives, which is a big gap. Predators, indicator species, and plants are all critical elements of protecting habitat AND wildlife.
- Bays are estuaries and good indicators for the lakes. Yet bays generally have no HUC units are not recognized and identified in the system. It would benefit the lakes if bays were given HUC units and allowed to be managed as a watershed estuary. The river and lake waters that comprise bays make them ideal for monitoring and testing for lake and river trends. Bays are usually sediment collectors and so testing the sediments in the bays could provide valuable information.

- Objectives and measures should be added to reflect the appropriate restoration actions needed for these unique resources, including the following: Reduction of excessive sediment delivery (tons per year), restoration and enhancement of in-stream habitat in coldwater streams (miles), number of road crossing, historical logging, and recreation access sources of excess sediment eliminated or treated.
- The Action Plan needs to include to a mechanism to address the confusion and loss of protections as a result of recent Supreme Court cases (SWANCC and Rapanos). The Action Plan should recommend that the Congress adopt the Clean Water Restoration Act to clarify the definition of “waters of the United States” to provide the foundation for steady and predictable implementation of the Clean Water Act.
- The term “restoration” should be defined, as it is not a realistic goal for some activities; “rehabilitation” is the suggested alternative term.
- The first objective calls for 3,000 miles of rivers and tributaries to be “reopened.” The removal or bypass of “500 barriers to fish passage” can have enormous impacts on hydroelectric, industrial and municipal water flow management facilities currently operating within the Basin. No justification or reasoning behind this objective has been provided. This objective should be re-evaluated and fully vetted with Great Lakes basin dam owners and operators to determine viability and impacts.
- One state noted that fixing 500 or more barriers (as noted in the Interim Objectives) will likely absorb all of the funding in the GLRI and is not realistic. However, in spite of the cost, this objective will have immediate returns and is a high priority. Critical management activities to allow fish passage or remove barriers will provide for the sustainability and rehabilitation of fish populations.
- The third Interim Objective of propagating 8 million lake trout and lake sturgeon and other native species requires further explanation to gain a better understanding of intent. Lake trout have solid rehabilitation plans to back the need for propagation of this species, but discussion needs to occur with state agencies regarding lake sturgeon and the category of “other species” before fully committing to this objective.
- One person asked about the criteria for determining the health of 2,000 coastal wetlands and 500 critical spawning areas. She asked to whom this data will be given and what decisions will be made based on it.
- A few states noted that restoring habitat in AOCs with habitat-related beneficial use impairments is an important goal, but a potentially expensive undertaking. This objective will likely require significant funds beyond what may be available in the GLRI and may not be achievable. This could pull funds away from other much-needed habitat restoration and enhancement priorities. For this reason, the GLRI should look for opportunities to re-establish habitat in AOCs through funding sources dedicated to clean-up of areas with toxic sediments rather than through taking funds from traditional wildlife restoration programs to achieve AOC clean-up goals. Allocation of traditional wildlife restoration program funds should be protected for the types of activities those programs typically support.
- Some Interim Objectives described under this focus area are completely new and do not appear to have come from the GLRC Strategy.
- The means or assurance of success for accomplishing blanket percent “improvement” or existence at “sustaining levels” for threatened, endangered, and native non-threatened species as is called for in the Interim Objectives has not been provided. Some connection between restoration actions and outcomes must be made if these goals are to be achieved.
- Priority should be given to wetland restoration projects that achieve multiple benefits (e.g., endangered species, migratory bird habitat, water quality improvement).
- For the first Long Term Goal, the insertion of the term “native” before “fish and wildlife” is unnecessary and again does not reflect the social values that are important to ecosystem management principles. Furthermore, it may be the health of a key non-native population that keeps another non-native population in check, for the health of the native species. For example, Chinook salmon keep alewife populations in balance, which leads to successful reproduction and recruitment of perch, walleye and lake trout.
- For the first Long Term Goal, one state supported establishing separate goals for the restoration, protection and enhancement for each of the habitat types listed.

- There should be a separate goal identified for acres of wetlands restored, acres of wetlands protected and acres of wetlands enhanced. A number of comments noted that each of the other habitat types (e.g. wetland associated uplands, coastal uplands, and islands) should be separated and should specify acres restored, acres protected, and acres enhanced. Restoration and protection acreage goals should not be combined and the protection, restoration or enhancement must be permanent.
- The first Long Term Goal should be clarified to indicate priority for protection of intact habitats. It should also include the strategies in the National Fish Habitat Action Plan.
- For the second Long Term Goal, stocking is a tool currently used in the Great Lakes to provide for enhancement of a fishery, for the rehabilitation of a population, or for the reintroduction of a regionally extirpated species. For some species (e.g. chinook salmon, alewife, lake trout), it may be the stocking of non-native fish that provides for the rehabilitation of the native species.
- Disease issues are complex and should be removed from the second goal and stated within its own goal.
- The second goal should be more inclusive of wildlife. For example, rather than stocking native fish, speak to restoring native fish and wildlife populations.
- The fourth goal should include State Wildlife Action Plans in the list of strategic plans.
- One individual suggested adding a goal for protecting headwaters and pristine areas.
- The second Interim Objective should be modified to include tributary streams and riparian habitats.
- The second Interim Objective should emphasize permanent protection and restoration, with an emphasis on permanent protection of the best remaining habitat.
- One state and one individual noted that the fourth Interim Objective should specify which species will be included in this objective and how they will be determined.
- The fifth Interim Objective is dependent upon the species in question as well as the location in question particularly for late maturing species that do not begin to reproduce until the age of 6 or 25 years. A better measure would be improvement in measures of natural reproduction and recruitment.
- One state noted that the sixth Interim Objective for collecting data on the health of 2,000 coastal wetlands and 500 critical spawning areas is too broad. It is not clear which wetlands will be studied, or why, and what data will be collected as a measure of wetland health. Identifying the number of polygons may be less important than setting a target for the percent of coastal wetland acreage to be studied or identifying priority coastal wetlands to evaluate.
- The seventh Interim Objective of 30 percent of habitat-related beneficial use impairments will be delisted across 27 AOCs is inconsistent with the Interim Objective stated in the AOC section. These differences should be reconciled.
- In the seventh Interim Objective, “Delisted” should be changed to “Removed” or “fixed.” Delisting is an administrative act; the benchmark should be fixing the cause of the listing.
- The first two measures may not be good measures of progress as some dams and barriers throughout the Great Lakes region are tied to controlling invasive species.
- In regard to the third measure, the inclusion of “number of fish propagated” should be revised. The measure should reflect the success of those fish stocked as well as natural reproduction. One person asked whether “propagated” would include hatchery fish. She noted that hatchery reproduction should not be used as a benchmark for restoration.
- The fifth measure may be difficult to quantify, since the total number of populations of these species appears to be unknown. In addition, the 2010 Target appears to be "9 populations of Lake Trout and Lake Sturgeon," not "9 percent of Lake Trout and Lake Sturgeon populations."
- In regard to the ninth measure, one group recommended adding a protection measure and increasing or adding target acres for protection. Tributary stream and riparian habitat should also be added.
- A new measure should be, “Number of in-stream miles of habitat restored or enhanced.”
- For the first Principle Action, The text should clarify that the habitat for fish and wildlife populations from deep waters to inland headwaters will be protected and restored.
- The second Principle Action says, “...propagating lake trout and lake sturgeon fingerlings, assessing fish populations, and protecting and restoring culturally significant species.” The reference to lake trout should be removed or the heading should be changed. The heading is currently titled “Maintain

or Improve the Population Status of Threatened, Endangered, Rare, and Migratory Species.” Lake trout are neither rare nor migratory.

- The third Principle Action should be changed to include tributary streams and riparian habitats.
- The third Principle Action should read, “Protect, restore, or enhance habitats by restoring, emulating or managing natural hydrological regimes...” There are too many places in the Great Lakes watershed where restoring natural hydrological regimes will be impossible.
- To be most effective, the restoration plan should specifically recognize high-quality and coldwater streams, and large, intact forested habitats among the top priorities for restoration action.
- One comment asked how culverted and buried streams would be handled.

## 4 Accountability, Monitoring, Evaluation, Communication and Partnerships

This chapter covers the fifth focus area: Accountability, Monitoring, Evaluation, Communication and Partnerships. It was broadly noted that setting goals, objectives and measurable targets to track progress effectively will be critical to the success of the GLRI.

Numerous organizations noted that they have the capacity to engage stakeholders, act as re-granters for GLRI funds, and are ready and willing to work with the federal agencies to advance the Initiative. Throughout the region, numerous meetings are being held to discuss plans and forge partnerships to implement the GLRI. Federal agencies should see the written comments for more details on where new partnerships can be formed. Comments frequently recommend improvements to manage, streamline and coordinate these aspects of the GLRI. Earlier chapters of this report recommended streamlining the contracting and grant-making process and “bundling” grants that might be re-granted by states or regional organizations. (See Chapter 2.)

### **Recurring Comments**

4.1.1 **Create and provide funding to support a coordinated, efficient, streamlined reporting and accounting system.** States and stakeholders broadly endorsed the importance of transparency. It was strongly recommended that EPA and federal agencies devise an accountability system that is based on transparency, common sense and minimization of transaction costs. From experience with the ARRA, some were concerned with over-burdensome accountability structures that will detract from actual on-the-ground work. Providing funding to states and other grantees to assist with project tracking, coordination, public outreach/involvement, reporting, and public and media relations is essential for ensuring transparency, collecting feedback to manage the GLRI adaptively in out-years, and building support for additional funding.

A number of organizations recommended federal agencies simplify reporting requirements to collect necessary information and to track progress without detracting from efficient and effective project implementation. Streamlining reporting requirements of the various federal agencies for GLRI projects in coming years should also be explored. A single annual report to EPA providing the appropriate information/progress should be developed. To the extent possible, results should be reported in a manner that is highly transparent and that allows for sharing of data with the public. Federal agencies were encouraged to require annual reporting only, which is consistent with most federal grants. Federal agencies were also encouraged to design simple, straightforward reporting requirements that will focus on the critical actions taken and the project outcomes. Reporting requirements need to be up-front so that organizations can set in place tools that will be ready to capture the information that will be required for reporting.

4.1.2 **Create a management and decisionmaking structure that builds collaboration and encourages transparency.** There was repeated support and appreciation for the summer meetings that engaged Great Lakes stakeholders and demonstrated a commitment to openness and transparency. Multiple comments recommended the federal agencies ensure ongoing stakeholder involvement and public oversight as the collaboration process benefits from multi-stakeholder involvement. A collaborative structure to enable key partners to be

centrally involved in informing budgeting, coordinating program delivery, oversight and reporting is desired.

It was especially noted that governors, state agency officials, mayors, tribes and stakeholders were key partners that drove the successful development of the GLRC strategy and have been active supporters calling for congressional support for implementation. A management structure that builds on collaboration with these partners is essential.

Multiple comments also noted the importance of active involvement of all nonfederal agency parties, especially NGOs, in restoration efforts. In noting that the GLRI's goals, objectives and targets will be "aligned with those of the Great Lakes states and local and Tribal governments," the Action Plan leaves out relevant efforts of NGOs. NGOs are responsible for and/or involved in much of the on-the-ground restoration work and have tremendous levels of expertise on issues affecting local areas, and their experience (including in some cases previous work in priority setting) should be utilized to help set priorities. It was recommended that federal agencies ensure that the Action Plan recognize and the GLRI utilize all stakeholder input, including during the establishment of goals, objectives and targets.

- 4.1.3 **Support the use of best available science and good baseline data.** Comments repeated the importance of utilizing the best available science for monitoring and evaluation of progress. Building from existing plans and ongoing state and local programs will provide the GLRI with a solid, science-based foundation. Good baseline data and support for long-term monitoring is essential to adequately identify and address priorities, track progress and adapt and adjust priorities.
- 4.1.4 **Ensure partnership with Canada.** Many expressed hope that there would be greater collaboration with Canada as the issues and challenges facing the Great Lakes cross boundaries. Renegotiation of the Great Lakes Water Quality Agreement could be a forum to ensure binational coordination.

### **General Comments**

- 4.1.5 **Utilize adaptive management mechanisms or feedback loops.** It was widely recommended that the federal agencies develop a meaningful feedback loop or adopt an adaptive management framework. First, doing so helps establish the GLRI's long-term need by outlining activities that can be undertaken in the future. Focus on funding entire projects (from planning, design, implementation and monitoring) so that each stage can be integrated in the future. Second, linking activities to review and feedback will help the Great Lakes community learn, adapt and measure the effectiveness of the initiative. Third, monitoring is critical to evaluating progress and assessments are vital to planning the proper scope of a project. This approach will provide a clearer role for the scientific community.
- 4.1.6 **Additional research.** It was recommended that the Action Plan explicitly recognize and include efforts to support research that can ensure more effective restoration actions over time. While restoration efforts should be initiated immediately, additional research will lead to more cost-effective restoration and sustained productivity. A few groups stressed that, while action is important, continued science and research is needed. Funding for research also creates jobs.

Not all comments agreed that additional funds should support more research. It was noted that almost 15% of the proposed initiative is devoted to research. For example, \$2.04 million is proposed for “assessing indicators” for the Great Lakes ecosystem. This prolongs and extends an effort that has been underway for 15 years. It is time for agencies participating in this effort to produce something intelligible to the public, enabling independent and verifiable assessment of whether the ecosystem is deteriorating, rebounding, or mixed.

- 4.1.7 **Identify science-based indicators of ecosystem health.** Notwithstanding the concerns above, comments recommended that the Action Plan ensure that efforts to refine science-based indicators build on the numerous indicators that have already been developed or proposed, and ensure that the chosen indicators best provide information on ecosystem health. EPA should use the indicators identified by the State of the Lakes Ecosystem Conference (SOLEC). Although the GLRC did not establish priorities, the science community, through SOLEC, has provided information that clearly establishes what those priorities should be. This information, coupled with the Great Lakes Observing System (GLOS) data management and communications capability, can serve a large share of the GLRI’s accountability needs.
- 4.1.8 **Provide support for coordinated monitoring.** It was noted that long-term monitoring is important. The Action Plan should ensure that existing data are collated and assessed before investing in new monitoring efforts. Coordination among all relevant existing entities involved in monitoring is essential. The Action Plan should ensure adequate coordination among all relevant existing entities involved in monitoring, including the Great Lakes Observing System.
- 4.1.9 **Explicitly link monitoring and assessment to restoration activities.** Although Congress has strongly emphasized that the GLRI focus on “on-the-ground restoration activities that achieve measurable results,” the Action Plan does not clearly outline how the proposed research, monitoring and assessment activities will be integrated with restoration activities.
- 4.1.10 **Outputs vs. outcomes.** The GLRI will need to strike a balance between measurements and monitoring of outputs and outcomes. For the first years, a bias on outputs is recommended so there is a strong bias toward measuring outputs, not outcomes. For example, to address the issue of nonpoint source pollution, it is widely understood that buffer strips in priority watersheds will yield a positive impact on water quality. Targets measuring outputs – miles of buffer strips in critical watersheds – should be tracked. Far-reaching goals to achieve a specific percentage reduction in total suspended solids in the lakes by 2014 may be unreasonable, hard to measure without baseline data and will likely fail. The ability to measure is limited, expensive and there wide-variations in results.
- 4.1.11 **Utilize existing tracking and reporting mechanisms.** Multiple comments noted that various tracking and reporting measures are already in place within states and organizations. Examples of existing programs include Ohio’s State of the Lake, Lake Erie Quality Index.

### **Specific Comments**

- It was suggested that the Executive Order creating the Great Lakes Interagency Task Force be replaced with a new Executive Order that outlines mechanisms for federal coordination,

- collaboration, consultation and oversight. The GLRI must create order and accountability across the 16 federal agencies that are using over 140 federal programs to protect and restore the Great Lakes.
- It is recommended that the Federal agencies work with stakeholders to identify an existing independent institution that can provide regular evaluations on the success or failure of the Federal government on achieving its goals under the GLRI.
  - The bottom of page five and top of page six states that the GLRI will use “independent science panels.” A number of comments asked how these panels are going to be established and what will the make-up of them will be. These panels must be stakeholder-based and balanced with respect to potential points of view. Similar comments were submitted regarding what the Action Plan calls “oversight groups,” page 8.
  - It was recommended that the EPA and cooperating agencies empower a citizen panel consisting of two people from each of the eight states to monitor and report to the public on spending and results from the initiative over time. The panel should have at least one person from each state who is not affiliated with the support groups and constituencies who participated in the development of the GLRC or this Action Plan. It is simply not practical to expect agencies receiving money from the initiative to comment candidly on whether the money is well spent.
  - It was suggested that a new Great Lakes Leadership Council replace existing forums and be vested with establishing annual priorities and recommending actions for departments and agencies on the federal Interagency Task Force. The Council could provide oversight of execution of the Action Plan and ensure coordination with the local entities. Like the GLRC, the Council should be composed of a diverse array of stakeholders, including representatives from the federal, state, local and tribal governments, as well as non-governmental organizations and businesses. Similar advisory groups should be encouraged within each Great Lakes state, to help set clearly defined priorities and coordinate activities at both the regional and local level.
  - One comment suggested that Department of Energy be added to the Interagency Task Force.
  - Representatives of the GLRI should contact the Corporation for National and Community Service.
  - The Southeast Michigan Council of Governments (SEMCOG) is the regional Section 208 Water Quality Management Agency as designated by the federal Clean Water Act. In this capacity, SEMCOG is uniquely qualified to play an official coordinating role that can assist the EPA in effectively carrying out the GLRI process in their region.
  - The Great Lakes Fishery Commission should be specifically mentioned as a key cooperating and organizing entity in the document.
  - Under the second Interim Objective, the accountability system must be easily useable and accessible to state and local governments.
  - One state supports implementing the accountability system for grantees through the grant reporting requirements to avoid duplication of effort and multiple reporting requirements.
  - The Problem Statement appears to consider only the 83 U.S. counties along the Great Lakes shorelines. It must consider all of the counties in the basin as they all contribute to the habitat impairments in the Great Lakes.
  - In the background discussion under Measures of Progress, the text notes that the federal agencies will work together but there is no mention of state or tribal agencies. State and tribal agencies should be included in a collaborative effort with the federal agencies to establish baselines for the various performance goals and to identify needed additional research and monitoring, outreach, and implementation.
  - For the third bullet in Principle Actions to Achieve Progress, the enhancing partnerships action is unclear as written.
  - A new Principle Action could be, “Enhance citizen involvement in protecting and restoring the Great Lakes.”
  - In regard to Goal 6, the Great Lakes Water Quality Agreement needs to be treated as a primary tool to coordinate not just activities, but goals, objectives and strategies.
  - A new Goal could be, “Available resources are focused on programs and projects most likely to bring about lasting protection and improvement of Great Lakes resources.”

- Water infrastructure professionals at the local community level (e.g., water and wastewater professionals) need to become strongly engaged in their local watershed restoration efforts to create long-term sustainability.
- One person noted that the goal should be to achieve something like the Millennium Ecosystem Assessment for the Great Lakes.
- GLRI should support existing monitoring, reporting, and educational networks that have experienced severe budget cuts over the last few years. For example, Wisconsin's Basin Educators have been a strong and experienced partner in the realm of delivering environmental education through the UW-Extension Office. Yet funding has been repeatedly cut over the past few years.
- The Wisconsin Great Lakes Strategy mirrors the goals and objectives reflect in other plans such as the Lakewide Management Plans, State Wildlife Action Plans and the Joint Strategic Plan for Great Lakes Fisheries. These are science-based plans that represent years of collective Great Lakes knowledge and ongoing studies.
- Wisconsin has developed a Phosphorus Index that provides a science-based indicator. If used, it will help assess and evaluate the delivery and improvements of phosphorus delivery to nearshore areas.
- Youth and school-aged education programs should include teacher training that comply with initial and continual certification standards. Furthermore, monitoring and sampling as well as real data could be used as educational tools. It was also suggested that the GLRI website have an area specifically for teachers.
- Organizations that can help contribute to public education and reach millions include the region's zoos and aquaria.
- The Action Plan should develop a Service Corps model for Great Lakes restoration.
- The Northwest Indiana Consortium for the Environment (NICE), led by Indiana University Northwest, is in early stages of developing a monitoring network for restoration projects. NICE is a coalition of the faculties of the six academic facilities in Indiana's three shoreline counties. The need for monitoring was identified in an earlier inventory of restoration projects in this region.
- Wisconsin's Recovery Act website has a map where a user can click on a county to see where the money went and what it did. This might be a useful feature in the accountability and tracking department.
- EPA should look into Environmental Assurance Programs.
- These plans should be coordinated with farms and farmers. EPA should take great pains to work closely with agriculture to address farming in the floodplain and the consequences of ditching.
- The Finger Lakes-Lake Ontario Watershed Protection Alliance (FL-LOWPA) fosters coordinated watershed management programs across the Lake Ontario Basin based on local needs. This might be a good model for EPA.
- EPA should partner with and fund the Coastal Councils. They are very good at accountability, outreach and education.
- Under "Tracking Progress," NRCS asked that "individual projects" be defined. It will be difficult to report out on every conservation practice they will fund under GLRI. NRCS requested reporting out cumulative progress for a particular program/focus area.
- The Lake Superior Binational Forum will be deeply involved in the 2011 year of monitoring on Lake Superior, especially with citizen science monitoring efforts.
- Volunteer hours should be recorded in a regional time banking system.
- There should be monitoring of public water intakes as there is in the St. Clair River/Lake St. Clair/Detroit Rivers. This monitoring would serve as a warning for toxics that may be dumped in the water and headed for a drinking water supply and supply water quality data for the Great Lakes with continuous monitoring with across the board testing of the same parameters. In addition, 316 a and b assessments for aquatic life killed in the intakes and, when used, thermal impacts, should be assessed lake-wide rather than each intake independent of the others.
- The EPA is encouraged to consider data from Chicago and similar beach systems that do not have a readily attributable point source of pollution. The group noted that incorporating this beach data into a new protocol would greatly contribute to that protocol's effectiveness.

- Provide funding for strategic conservation planning and design. The sophistication of geographic information systems and other technologies continues to increase at a significant rate, and much can be gained by using this technology to identify areas with the greatest need for protection and management.
- The Binational Program's Ecosystem Goals document contains priorities for monitoring that will lead to the achievement of the Ecosystem Goals for Lake Superior (as discussed in Goal 4 of the Habitat and Wildlife Protection and Restoration).
- On page 8, the Action Plan discusses tracking progress. The comment asked to whom progress would be reported.
- The 2011 GLRI program focus areas and priorities should be based on a mid-term evaluation of 2010 projects. Evaluation of projects, their status and expected success, should be used to develop next year's (2011) priorities and topic areas.
- The plan should attempt to coordinate new monitoring efforts so that they occur in the same locations that projects are implemented. This would allow the EPA and potentially other stakeholders to gather data on how effective the implementation projects are and what effect they have on the larger ecosystem. It might be efficient and effective to target specific watersheds where a number of issues could be addressed. If a particular watershed has substantial restoration opportunities, those types of areas should be targeted.
- When allocating funding, it will be important to be sure that the projects selected address the focus areas outlined by the plan.
- As the program progresses into the future, it will be important to use the monitoring data generated to evaluate where to focus resources.
- Scientific information changes constantly. Updates on current scientific data are needed on a regular basis to incorporate into restoration decisionmaking.
- In Wisconsin, the Gathering Waters Conservancy and the Lake Michigan Shorelands Alliance will be working closely with the Trust for Public Land over the next year to develop what is known as a Greenprint for Wisconsin's Lake Michigan basin. Using this innovative modeling tool, Wisconsin will combine the science behind water quality, habitat, and other resource protection goals with the art of working with stakeholders to identify community values around land conservation and habitat restoration to develop a regional conservation plan. This project will result in targeted and efficient conservation, and success will be measured in acres protected and natural treasures preserved for future generations.
- One state noted that it will be difficult to get consensus on a refined set of science-based assessment indicators.
- One state recommends supporting the efforts of the National Fish Habitat Board in developing the National Fish Habitat Assessment.
- Under the third Interim Objective, one state suggests expanding the remote sensing program, if possible, to include assessment of phragmites locations.
- There needs to be careful thought given to appropriate measures of progress. While some physical metrics can be readily observed soon after completion of the remediation measures, many of the biological parameters may take a decade or more to fully recover or utilize the area. Some biological metrics in the short-term may not yield satisfactory results, which could lead to conclusions of failed projects, when in fact the response is to be expected to occur on a lengthier timeline.
- It is very important to ensure continued support for monitoring and evaluation after 2014. Many of the projects that will be funded under the GLRI will not demonstrate full benefits for several years.
- One state noted that all federal agencies (but primarily the National Resource Conservation Service, Farm Services Agency, and the U.S. Fish and Wildlife Service) must be required to share their habitat related restoration data with partners. Farm Bill "privacy provisions" and "lack of staff resources to compile the information" have been the primary reasons given for their inability to provide this important information. Unless this issue is addressed, it will be very difficult to track progress on many of the habitat-related goals accurately. This state also noted that sharing of data among agencies and organizations will also encourage greater use of information obtained with GLRI funding.

- Federal agencies should be required to report project information in a Geographic Information System format to the extent possible.
- One state noted that the Army Corps of Engineers was funded to develop a database under the Great Lakes Habitat Initiative for tracking project development for improvement of habitat. While initially onerous, it has been much improved. It should be easy to “retrofit” the database to track project thresholds and progress with relatively little added cost. If done properly, making the use of this database integral to project reporting can facilitate project tracking and allow partners, the public and the Legislature to follow progress.
- Monitoring on a smaller scale than proposed needs to be supported by the GLRI. Most of the indicators and monitoring supported by the GLRI are for nearshore or open waters of the Great Lakes. These are not sensitive enough to identify upstream problems that contribute to problems in the Great Lakes/nearshore or to document progress that may result from water quality improvement projects in one watershed. Funding support for tributary watershed monitoring is essential to document progress until changes are seen in the nearshore and/or open water indicators. Support for tributary watershed monitoring is also needed to ensure that problems can be identified and track progress toward their resolution given the expected increased effort in areas such as TMDL and watershed management plan implementation, sediment clean ups, and actions to remove beneficial use impairments in AOCs will require enhanced monitoring under existing the state monitoring program.
- Goal 2 should include the need for common databases and data structures to support all of the other needs in the GLRI.
- Goal 4 needs additional clarification.
- For the first Measure of Progress, use of the Great Lakes 40-point scale may not be a good representation initially. Additional measures should be considered.
- One comment felt that although the fifth Focus Area in the plan refers to accountability and monitoring, the explicit linkage of these activities to restoration actions is inadequately articulated. In addition, an overarching integrated assessment of outcomes of the entire restoration initiative is not explicitly proposed.
- One state noted that the monitoring location is important. For example, tributary data may be more useful than lakewide data.
- It was suggested that monitoring could be enhanced by citizen’s group or volunteers.
- One group asked for more detail regarding what is intended with the Coordinated Science Monitoring Initiative, which may potentially address a longstanding need for better basin-wide coordination on monitoring.
- One comment asked if and how a hydrologic model of the Great Lakes basin would be assembled.
- The Office of Pesticides Program, in conjunction with the Office of Wetlands and Water, with EPA Region 5 playing a strong leadership role, has recently developed a national pesticides water quality database. The gathering of data is an important first step in evaluating the impact of pesticide applications on water quality. The Land and Chemicals Division suggested there be a small sum of funds to encourage states to monitor their waters and participate in this project.