



Healing Our Waters-Great Lakes Coalition

July 12, 2013

Federal Great Lakes Interagency Task Force
C/o: U.S. Environmental Protection Agency
Chicago, IL 60604

Re: Comments on the Great Lakes Restoration Initiative Action Plan Update

To whom it may concern:

On behalf of our over 120 member organizations, the Healing Our Waters[®]-Great Lakes (HOW) Coalition would like to thank the federal agencies responsible for the implementation of the Great Lakes Restoration Initiative for your exhaustive work to build a strong, healthy program that is steadily producing results across the Great Lakes region. You have listened to the needs of the region, investing in top priorities in targeted geographical areas to clean up Areas of Concern and reduce runoff causing toxic algae blooms.

Great Lakes restoration efforts are improving the lives of millions of people and work is continuing on projects throughout the region that will restore the Great Lakes and address the most urgent problems facing them. These projects are cleaning up drinking water flowing to millions of homes and thousands of industries and improving infrastructure important for future economic growth in the eight-state region of Minnesota, Wisconsin, Illinois, Indiana, Michigan, Ohio, Pennsylvania and New York. These projects are delivering results throughout, including fish and wildlife returning to places after decades-long absences; businesses emerging and thriving on restored waterfronts; and people fishing, kayaking, and swimming in restored waterways.

Our comments below are in response to the request from the Federal Great Lakes Interagency Task Force for stakeholder views on how the GLRI Action Plan should be updated for fiscal years 2015-2019.

First, we believe that characterizing the Great Lakes Restoration Initiative as just an “accelerator” inaccurately describes the program and may undercut perception of the total impact the GLRI has had in the region. EPA described the GLRI in this way in presentations made during stakeholder meetings in Buffalo, Milwaukee, and Cleveland and on the public Webinars¹ and at the Great Lakes Advisory Board meeting in May 2013. While there is no doubt that the GLRI has accelerated restoration and protection work in the region, it has also become the region’s fundamental restoration and protection tool. The GLRI’s size and scope means it plays a central role in successfully restoring and protecting the Great Lakes. Rather than just accelerating actions, it has actually catalyzed critical restoration action that likely would have never happened otherwise. The GLRI has organized an enormous region of the country to protect one-fifth of the world’s surface drinking water on which more than 30 million people depend. It is indeed the “largest investment in the Great Lakes in two decades.”²

Second, we believe that the investments of the GLRI must not be undermined by poor policy choices made as part of any regulatory process. Congress has graciously provided more than \$1 billion for over

¹ Accessed at <http://www.glri.us/public.html>

² Accessed at <http://www.glri.us/priorities.html>

1,500 projects to clean up toxic hot spots, restore wildlife habitat, and keep beaches open, among many other important activities. Poor policy choices on a range of activities – either new or ongoing – can undercut restoration activities, delay results, and lead to inefficient uses of the limited resources entrusted to the region. For example, continuing to dispose of dredge material in the open waters of Lake Erie can undermine attempts to end algal blooms there. Unchecked energy development can lead to water impairments that reverse water quality or habitat improvements. Inadequate ballast water regulations could lead to new aquatic invasive species, dealing a blow to the ongoing work of managing and controlling impacts from existing invasive species throughout the region. We encourage the Federal Interagency Task Force to not ignore these issues and to view them as part of the restoration agenda. We urge the Task Force to describe how it intends to prevent GLRI investments from being undermined by policy decisions as part of the new updated plan.

Third, accountability has been a major theme of the GLRI since its inception. The original action plan clearly stated:

The Initiative is an unprecedented opportunity to heal the ecosystem. With this unprecedented opportunity comes unprecedented responsibility, however, for *all of us* to demonstrate we are achieving the results intended in the Action Plan. We will use transparent means of demonstrating how public dollars are being invested as directed by the best available science.³ [Emphasis in original.]

Congress also instructed EPA to “Establish a mechanism for monitoring and reporting on progress.”⁴ EPA responded to these directives by creating the Great Lakes Accountability System, which was designed to be the “primary mechanism for collecting information to monitor and report on GLRI progress” and present the “‘big picture’ of who is receiving GLRI funds and what they are doing with the money.”⁵ Until recently GLAS was not effectively tracking how the GLRI was being invested in the region. However, GLAS was recently updated to reflect the breadth of funded projects from all government sources. It also now includes a useful map detailing the location of where the project is taking or has taken place. The GLAS system also now allows for reporting on the Action Plan’s measures of progress, which include the number of acres restored, how much toxic sediment was remediated, or how many acres were controlled or managed for invasive species, among others. These are important outputs that demonstrate progress. However, the GLAS system must evolve to better track ecological outcomes if we are ever going to answer the fundamental question: Are the Lakes healthier?

To date, we can answer that question with a qualified yes. Consider the following:

- The Presque Isle, Pennsylvania, Area of Concern was delisted and the management actions necessary for delisting were completed in the Sheboygan, Wisconsin, AOC. As a result, Sheboygan and other cities have begun debating how to market and develop their cities after years of being pegged as toxic hot spots.
- 21 beneficial use impairments (BUIs) and 12 AOCs were removed, bringing the cumulative removal total to 33, exceeding the GLRI Action Plan target. More BUIs have been removed since the GLRI began in 2010 than between 1987 and 2009.
- The Fish and Wildlife Service, National Park Service, NRCS, and NOAA (among others) restored, protected, or enhanced over 90,000 acres of wetlands and other habitat in the Great Lakes.
- 800 river miles were cleared of barriers resulting in fish swimming into stretches of river where they have been absent for decades.

³ White House Council on Environmental Quality, et.al. “Great Lakes Restoration Initiative Action Plan: FY2010-FY2014.” P. 5

⁴ H.Rpt. 111-180. P. 102

⁵ U.S. EPA. “Great Lakes Restoration Initiative Accountability System User Guide.” V. 1.11. P. 2

- Farmers implemented conservation practices on nearly 280,000 acres of Great Lakes farms to reduce erosion and nutrient runoff into Great Lakes tributaries.⁶

These numbers are impressive. The stories behind them, however, illuminate the results and accomplishments that are making the Lakes healthier:

- At the Ashtabula River in Ohio, a sediment cleanup and habitat restoration project has revitalized the lower two miles of the river and advanced efforts to get it de-listed as a Great Lakes Area of Concern. The project has improved water quality and deepened the river channel, making the lower Ashtabula suitable again for maritime commerce, fishing, and recreational boating.
- The Grand Calumet River, which flows through a heavily industrialized area south of Chicago, was for years considered America's most polluted river. Thanks to a major cleanup, a large wetland was restored and more than 575,000 cubic yards of toxic mud was removed from the Lake Michigan tributary. The restoration project addressed pollution that led to fish consumption advisories, destroyed wildlife habitat, and an array of other environmental problems.
- At Clear Creek in Freedom, New York, excess stream erosion and sediment, in-stream barriers, elevated water temperatures, and competition from invasive fish restricted brook trout to a few tributaries in the watershed. A Great Lakes Restoration Initiative project restored 1,200 linear feet of in-stream habitat and re-established fish passage over a sheet-pile grade control structure, reconnecting six miles of prime trout habitat.⁷

To build on this record of success, we offer the following responses to the questions the Task Force posed:⁸

Integrating Climate Change Impacts into the GLRI (Question 1)

The Great Lakes Restoration Initiative is past due for comprehensive integration of climate adaptation practices across the five focus areas. Only through full integration of climate smart practices into the initiative will we ensure that the Lakes are fortified with sufficient resiliency to withstand and adapt to the changing climate. The need and intention to integrate climate smart practices across government programs was announced as a priority by President Obama in his address on climate change on June 25, 2013. In order to reach the President's goal, the GLRI must integrate practices throughout the program that robustly address current impacts from climate change and plan for future impacts where possible, ensuring that projects being done on the ground will stand up to a changing climate.

As the President re-iterated to the nation, we are past the point of having to prove that climate change is adversely affecting our environment, including the Great Lakes. Extreme flooding events from increased precipitation which lead to large combined sewer overflows are already plaguing the Great Lakes states. Water temperatures in the Lakes are rising at an alarming rate - Lake Superior reached an all-time high in the summer of 2012 - and lake levels are dropping.

Climate change poses serious questions for protecting and restoring the Great Lakes. Is the changing climate going to make it more difficult to restore fish and wildlife habitat? And if so, how do objectives need to be modified or added to in order to plan for climate impacts on fish and wildlife habitat while reaching the stated goals within the habitat focus area of the GLRI? Or, within the Area of Concern focus area, the climate impact of falling water levels within the Great Lakes system may warrant a slightly different approach or maintenance plan for removal of contaminated sediment than has been used in the past. As water levels fluctuate dramatically, how will previously un-exposed sediment be dealt with?

⁶ U.S.EPA. "Fiscal Year 2014 Justification of Appropriation Estimates for the Committee on Appropriations." P. 278

⁷ Found at www.healthylakes.org/successes/

⁸ Accessed on June 27, 2013 at <http://www.glri.us/pdfs/20130508-glab-charge-questions.pdf>

The only way to adequately address the nuances that arise when taking into account climate impacts is to look at all focus area goals and objectives through a climate lens.

Our intent is not to make the GLRI Action Plan a Great Lakes climate program. Rather, our intent is to ensure that the investments we are making in the GLRI now will remain viable into the future. Restoration and protection is inherently a tool for addressing impacts to climate change. Incorporating climate-smart practices into current restoration practices will help ensure funds are being used as efficiently and effectively as possible to increase the resiliency of the Great Lakes ecosystem, insuring that projects are not undermined or destroyed by heavier rains or lower lake levels.

Therefore, it is extremely important not to relegate the issue of climate change to a separate focus area within the GLRI. Doing so will make it too easy to underfund projects that address climate impacts and will not put the needed emphasis on addressing climate impacts as an important and easily integrated piece of restoration work.

To adequately address the impact climate change is having on the Great Lakes, climate adaptation practices and thinking must be woven throughout the GLRI Action Plan. Specifically within the Action Plan:

- The realities of how the changing climate will impact each focus area should be acknowledged within the focus area problem statement.
- Climate impacts should be used as a filter in the development of the long-term goals and objectives for each focus area. Each focus area should include a goal of limiting climate change vulnerability to the Lakes where possible and should use these impacts to shape the plan's objectives in order to adequately address stresses within the system resulting from climate change.
- Projects within the GLRI should either inherently help build resiliency for climate impacts or adequately incorporate climate smart practices into work being done.
- Assign points to climate smart practices in all federal agency Requests for Applications or Proposals coming out under the GLRI. Specifically, the RFP process must back up inclusion of climate into the GLRI Action Plan by assigning points for climate smart pieces of restoration projects for all applicable projects. NOAA has included climate smart language in their recent RFPs and can serve as a possible model.
- Where possible, encourage projects that are incorporating climate adaptation practices into their work to coordinate with established climate adaptation plans in the cities or communities where the work is being done. This integration may not always be possible, but where there are established plans, project managers should be acknowledging and coordinating with said plans.
- Require within the RFP process that the project incorporates a strong science based framework that is able to provide us with a better understanding of how restoration actions and climate stressors are impacting the system to effectively guide investment of GLRI dollars.
- Augment monitoring efforts to reduce lack of information on ecosystem response to impending changes. Monitoring is an important aspect of restoration projects and will contribute knowledge necessary to planning and adapting across different time horizons.

Investing in priority subjects (Question 2)

We have supported the GLRI Action Plan's consolidation of the Great Lakes Regional Collaboration Strategy to Restore and Protect the Great Lakes' eight priorities into the current Action Plan's five focus areas: cleaning up toxics and Areas of Concern, combating invasive species, promoting nearshore health, restoring wetlands and other habitat, and tracking progress.

We also supported the Task Force's further refinement of the focus areas into three key priorities under them: accelerating the cleanup of Areas of Concern, reducing harmful algae in three priority watersheds, and preventing the introduction of new invasive species.

We support the new Action Plan continuing its focus on these three priority areas. These areas continue to be the biggest sources of stress for the Lakes contributing to what scientists have described as "ecosystem breakdown...where intensifying levels of stress from a combination of sources have overwhelmed the natural processes that normally stabilize and buffer the [Great Lakes] system from permanent change."⁹ The three priority areas reflect the causes of this ecosystem breakdown because they either represent the severe historic damage caused to the lakes nearshore (AOCs) or the new stresses from human-induced sources (invasive species or nutrient pollution). We believe that it is appropriate for the GLRI to continue prioritizing them in the next plan, especially since the problems they represent took decades to develop and will take decades more of focused attention to solve.

However, we provide this caveat: while focusing on the three priorities is important, they are not the only problems or stresses facing the Lakes. We expect the GLRI Action Plan to also continue to spell out goals, objectives, actions, and measures of progress for all five focus areas and to fund activities in all these areas as a prescription for recovery.¹⁰

AOCs. We believe that the implementation of the current Action Plan has generally struck the right balance between focusing on completing all management actions in some AOCs to delist them while at the same time investing in others that may not be taken off the cleanup list for several years. We need to take advantage of getting work done in targeted AOCs where it is possible to move quickly in taking all the actions necessary to delist. However, we must get ready in future years to take similar action in other AOCs. Supporting some projects in all AOCs helps ensure we are lining up future progress. We encourage the IATF to continue implementing this approach.

Nutrients. We support targeting priority watersheds for nutrient reduction work. Following a robust expert process, our Coalition's Technical Advisory Committee identified five areas that are particularly important because they represent areas that suffer from multiple assaults.¹¹ Our own work demonstrates our willingness to invest in targeting priority areas for restoration and protection and we continue to believe in that approach. Now that work has begun to reduce nutrient runoff in the three targeted watersheds, we believe that given how long it will take to have an impact on the problem we need to continue prioritizing those areas to make meaningful progress. Importantly, how we measure progress in these areas will be critical. We would like to see a tighter link to water quality indicators as measures of progress in this focus area. We also want to see the best practices used in these priority areas identified and shared with the wider region so everyone can take advantage of the best methods to reduce nutrient runoff. Recent research suggests that the current suite of best management practices may not be sufficient for tackling the current drivers of dissolved phosphorus loads, so an investment in on-the-ground testing and modeling of new approaches will be key.

We would also like to see clear agreement between U.S. EPA and the U.S. Department of Agriculture toward the achievement of a common set of water quality objectives in priority watersheds. This must include a clear understanding of anticipated timeframes for achieving these objectives.

⁹ Bails, et.al. 2005. "Prescription for Great Lakes Ecosystem Protection and Restoration." P. 1

¹⁰ Ibid. P. 11-15

¹¹ The five focus areas the Coalition identified are St. Louis Bay and St. Louis River; Chicagoland (which includes Northwest Indiana; Saginaw Bay; Western Lake Erie; Eastern Lake Ontario. Accessed on June 27, 2013: <http://healthylakes.org/press-releases/coalition-targets-5-great-lakes-restoration-priority-areas-2/>

Invasive Species. We believe that this priority should focus on the control and management of invasive species within the region more than on prevention. Prevention should be addressed through robust regulatory action, which is outside the purview of the Action Plan, but, as is highlighted above, must be coordinated with the goals and actions being identified over the next five years so as to not undermine the GLRI's investments. We also acknowledge that funding for prevention activities is available through other agency programs and does not have to be funded out of the GLRI. This is particularly true for Asian carp activities where prevention funds have been provided in the Army Corps and Fish and Wildlife Service's budgets. We believe that future carp prevention activities should increasingly be funded through the base budgets of the federal agencies leaving the GLRI to focus on other priorities.

Selecting and Prioritizing Projects (Question 3)

The selection and prioritization process within the GLRI for projects outside of AOCs is well rounded and has functioned well for the first four years of the program. In particular, HOW supports the project selection criteria that emphasize projects that are able to advance applicable ecological priorities of existing plans. Such comprehensive planning has been done throughout the Great Lakes ecosystem that linking the goals of the new GLRI Action Plan to those of existing plans is a smart and efficient use of federal dollars and will ensure sufficient coordination between efforts.

However, as the Action Plan matures, it is important to re-examine how projects are selected and prioritized to ensure that GLRI funds are having the most significant impact on the health of the Lakes as possible. HOW recommends four metrics that should be added to the selection process for restoration projects outside of AOCs in the next iteration of the Action Plan. Specifically:

- Project selection criteria should include a project's ability to adequately incorporate climate smart practices.
- Projects that accomplish goals from multiple focus or priority areas should be prioritized.
- Selection criteria should favor projects that include approaches to monitor and assess outputs and outcomes.
- When working in under-served communities, project selection criteria should include a project's ability to adequately address environmental justice and human health issues as well as a description of how the local community will be meaningfully engaged.

Prioritization of projects outside of AOCs must also be re-evaluated as the GLRI moves into its second phase. HOW is very supportive of establishing and following through on the prioritized work to delist AOCs, address nutrients problems in key watersheds, and stop invasive species. Setting priorities allows complex problems to receive the attention needed to find solutions.

In addition, the GLRI should prioritize a portion of funding for new and innovative projects that have the ability to translate to other locations throughout the basin if successful. There are many restoration problems we know how to solve, but there are many we do not. We must be willing to invest in innovative approaches that have the potential to greatly benefit the system in the future. We must also be willing to assess the success of these new approaches through coupled research and monitoring and be equally willing for them to fail and learn lessons from that failure.

Although we understand that having consistent priorities to invest in over time is critical to realizing tangible progress, buy-in from the Great Lakes community is also critical to the overall success of the GLRI program. Therefore, the federal agencies should consistently engage the public on an annual basis to understand the restoration priorities of the Great Lakes community.

Finally, HOW urges the agencies to invest as much funding as possible into the merit-based, competitive grants process of the GLRI. Groups are ready and able to do the restoration work required to restore the Lakes. Although we realize that some work like AOC cleanup cannot be included in an open request for proposals, the majority of restoration work called for under the GLRI can be completed by nonfederal stakeholders in the region. In addition, agency budgets should not be using GLRI dollars to supplant cuts in funding; rather GLRI funding should supplement the work being done on the ground by the agencies in the region.

Leveraging Non-GLRI Funding for Projects and Prioritizing Large Scale Restoration Projects (Question 4)

Utilizing other pots of funding to bolster work under the GLRI is an important tactic to make the program as effective as possible. However, the GLRI should not prioritize projects or activities based solely on their ability to leverage non-GLRI funds. HOW believes the current mix of matching requirements under the GLRI strikes the right balance to allow small community-based groups to participate in restoration work while also allowing for leveraging of non-GLRI funds where applicable. The portion of GLRI funding that does not require matching funds to secure a grant is a critical resource for small watershed and community groups – allowing them to do important work that was previously difficult to find funding for through other programs. In addition, the GLRI's allowance of in-kind contributions to fuel matching requirements allows for needed flexibility for small groups without access to large pots of money. Finally, requiring match for a portion of GLRI projects through a small set of existing programs helps improve and strengthen partnerships across the region, encouraging buy-in and helping groups work together better. Where the GLRI does encourage leveraging of non-GLRI funding, partnerships must also be required. It is imperative for all groups within an area be able to participate in the planning and restoration process regardless of their ability to procure matching funds or leverage non-GLRI funding. While leveraging funds is an admirable goal, it should not be used as a prioritization criterion that is applied throughout the entire program.

Although HOW is supportive of projects that are able to address multiple stressors affecting the Lakes, we do not believe that projects should be given priority within the GLRI solely based on their size or price tag. Rather, when large-scale restoration projects are being considered for GLRI funding, they must be evaluated on a project-by-project basis to determine their merit. We recognize that evaluations of complex projects like large-scale restoration projects may be more tedious, but projects of this nature must be given the same rigorous evaluation as smaller restoration projects to determine whether funding them makes sense. Through our Priority Area Grant Program, HOW has funded many small projects (at \$15,000 or less) which have resulted in significant benefits to the ecosystem and additional funding to continue the work.¹² We have seen firsthand that the size of a project does not dictate the merits to the ecosystem, its innovative methods, or importance to restoring the health of the Great Lakes.

We believe that large-scale restoration projects under the GLRI must show a clear connection to an overarching comprehensive plan, but also demonstrate an obvious connection to a suite of projects that contribute to the same environmental outcome.

Additionally, processes must be in place to not only effectively evaluate large-scale restoration projects for their complexities and cross focus area nature to understand if they merit GLRI funding but also to ensure that if they are funded, they will not be bogged down in bureaucracy during implementation. Additionally, a portion of funding for large scale restoration projects must be available to non-governmental implementers to do the work needed. When the GLRI does fund large-scale restoration projects, the last critical component must be a sound monitoring and assessment program able to help us understand if these projects are helping to improve the health of the Lakes.

¹² See project examples at <http://healthylakes.org/healing-our-waters-grants/>

Tracking the Economic Benefits of Restoration through the GLRI (Question 5)

We know that for every dollar we invest in restoration in the Great Lakes, we receive at least two dollars in economic benefit. This metric, released in 2007 as part of the Brookings Institution Report on Great Lakes restoration, titled *America's North Coast: A Benefit-Cost Analysis of a Program to Protect and Restore the Great Lakes*, has been immeasurable in helping people understand the economic benefits of restoring the Great Lakes. More recent studies suggest that the return on investment for restoration efforts is even greater: Restoration efforts in Muskegon Lake in Michigan, according to Grand Valley State University, are producing a 6-to-1 return on investment.

HOW is a firm believer in continuing to gather and distribute evidence of the economic benefits of restoration to the Great Lakes region – this type of data is one of our best tools to advocate effectively for the GLRI program. Tracking job creation through the GLRI would provide the Great Lakes community with another economic indicator of the positive economic benefits from restoring the Great Lakes. Therefore, HOW fully supports tracking job creation through the GLRI with the caveat that generating economic data like job creation from restoration must not compromise ongoing restoration practices which are the backbone of the program. In other words, the GLRI's main focus must be on the ecological improvement of the Great Lakes. There must not be a requirement for an economic justification for restoration practices to receive GLRI funding. HOW recommends the following to track job creation within the GLRI program:

- The federal agencies should make a discrete investment to hire staff with the needed expertise to track job creation through the GLRI program. This could include putting together a simple database and education of grantees to track jobs created.

A small investment of this kind stands to provide very significant dividends in the ability of the program to prove economic benefits to decision makers and the public.

Promoting Environmental Justice within the GLRI (Question 5)

Great Lakes cities are integral to the restoration of the Great Lakes. In many cities, restoration practices are needed most within disadvantaged communities that have been adversely affected by pollution, fish that are unsafe to eat, and a lack of safe access to the shores of rivers and lakes. In these communities there is an opportunity to engage local groups and citizens to show them why restoration is important and how it can benefit their community. However, it is critical that this work be done in a way which promotes partnerships with local groups and citizens and allows them to become an invested participant in the restoration process. For too long, disadvantaged groups have been forced to tolerate others coming into their communities and telling them what is best. In order for restoration practices to be successful, there must be buy-in from the local community. Additionally, by encouraging restoration project managers to hire locally to fulfill contracts for the implementation of projects, GLRI dollars would be able to both complete the needed restoration work while bolstering the local economy by putting local people to work improving their environment. HOW recommends the following to address environmental justice within the GLRI:

- Projects being funded by GLRI dollars within disadvantaged communities must include meaningful engagement and partnership-building opportunities with local community groups and citizens.
- Restoration projects located in disadvantaged communities should be encouraged to hire locally when awarding contracts for work.

Indicators and Science (Question 6)

We understand that the International Joint Commission is in the process of developing a small set of ecosystem indicators that will tell us the most about the health of the lakes. Monitoring the response of the Great Lakes ecosystem through an agreed-upon set of integrative indicators is an extremely important element of the Great Lakes restoration effort. We hope the Interagency Task Force will be in a position to adopt the IJC's indicators or something equally comprehensive as soon as the IJC has completed its work. Just as importantly, the IJC's indicators or any alternative must be incorporated into the measures of progress of the new GLRI Action Plan. This will both link local restoration and protection actions to monitoring for improvements at larger ecological scales (i.e., lakewide), and also ensure that the actions undertaken by the GLRI serve a dual purpose by implementing activities necessary to meet our obligations under the new Great Lakes Water Quality Agreement.

In addition to the indicators that the IJC may develop, to the extent practicable, the new GLRI Action Plan should also attempt to integrate measures of progress from other plans to coordinate action across efforts. As the current Action Plan acknowledges, many plans have been developed. We encourage the new Action Plan to take another step towards integrating and aligning all these plans to further reduce duplication of effort.

However, it is not sufficient to integrate IJC indicators or measures of progress from other plans into the new GLRI Action Plan. All the focus areas must also describe how planned actions will be monitored, scientifically assessed, and evaluated to ensure that what is undertaken is actually working. We are talking about the incorporation of a robust science-based adaptive management framework into the GLRI Action Plan itself. Our Coalition has been calling for this since 2010 when we said:

Although we believe that the majority of GLRI funds should be targeted towards restoration work, we acknowledge that some GLRI funds must be used for basic research and monitoring to ensure the Initiative is successful. However, GLRI-funded research should be part of a detailed research agenda that illustrates a direct connection to improving the health of the Great Lakes ecosystem. This knowledge must also be applied to future projects and programs.¹³

In 2011, we wrote the following:

Although the bulk of Federal GLRI investments should continue to be focused on the highest priority on-the-ground, in-the-water activities that produce the greatest measurable restoration results, some funding should be set aside for basic science, research, and monitoring. Investments in these areas are important because they tell us how to adapt plans. They make sure we are continuing to prioritize the most needed projects and are using the most effective implementation methods. Because research and on-the-ground work go hand in hand, it is important that both receive resources. It is also important that funding for grants goes to colleges, universities, and other groups that are also doing important research and does not just stay at Federal agencies.¹⁴

This monitoring can be accomplished through a strategy that addresses two efforts: first, integrate science support for adaptive management through comprehensive project assessment and evaluation; and second, provide scientific support that guides and improves restoration efforts. Any adaptive management framework must:

¹³ Healing Our Waters-Great Lakes Coalition. August 30, 2010. Written communication to Cameron Davis and Gary Gulezian.

¹⁴ Healing Our Waters-Great Lakes Coalition. August 12, 2011. Written communication to Cameron Davis and Susan Hedman.

- Help the region understand and assess the cumulative impacts of the hundreds of restoration projects funded by the GLRI at sub-basin, individual lake, and basin-wide scales.
- Increase the efficiency and cost-effectiveness of restoration activities.
- Lead to understanding the actions necessary to facilitate implementation of effective adaptive management approaches in future years.
- Maximize the success of restoration projects by implementing science-guided corrective actions.
- Advance restoration science by improving techniques and methods.
- Identify key knowledge gaps associated with each focus area.
- Provide a single clearinghouse that integrates project results and enables resource managers to better analyze and prioritize subsequent restoration actions.
- Include every stakeholder with an interest in the entire program to maximize buy in and to help shape monitoring and modeling choices around the framework.

There are several examples of this science integration that can serve as models. Some are external and focused at the program scale, such as those associated with restoration efforts in the Chesapeake Bay, Everglades, and Puget Sound. Others can be found within the region at the project scale, such as the multi-sector effort to restore native fish spawning habitat in the Lake Huron to Lake Erie Corridor connecting channels. The key features of these efforts that should be incorporated into the GLRI Action Plan are:

- Science and action that are coupled, iterative, and incorporated directly into restoration
- Successive projects that build on knowledge developed from previous projects
- Projects consider multiple stressors (i.e., wetland loss and climate change)
- Projects are based on existing restoration plans and considers impacts beyond the individual project site
- Successive projects are both more cost-efficient and effective
- Project teams are comprised of federal, state, tribal, academic, private sector and non-governmental partners, all as appropriate, with each contributing their expertise

We must not start this process with identifying the problems first as is currently proposed in IATF's "Adaptive Science-Based Framework for Great Lakes Restoration".¹⁵ Successful adaptive management begins with the identification of the desired goal or outcome. Limiting factors and problems that impede us achieving our goal are then identified with strategies and actions planned to address the problems and help us achieve our goals. We then monitor and assess the management actions undertaken to determine whether we achieved our goal or what changes are necessary for the next steps to be taken. We are providing more detailed comments on the proposed framework separately.

Monitoring. Monitoring projects is a key element of tracking success. In order to target federal dollars effectively, we must know how existing projects are impacting the system. However, we are underwhelmed by the integration of monitoring to date. We do not believe that every project must be monitored, but monitoring and scientifically evaluating a careful subset of them will help ensure we understand whether we are achieving the ecological outputs (e.g., number of acres restored or toxic sediment remediated) and outcomes (e.g., water quality improvements), and allow us to "learn as we restore". This must be built into the new Action Plan's measures of progress. Even with appropriate monitoring and evaluation at the project (short term) scale, there would remain a critical gap between these efforts and the IJC (long term) lake-scale indicators. The Action Plan should support scientific monitoring and assessment at sub-basin (medium term) scales (i.e. smaller than entire lakes). These assessments should be able to tell us if the collection of projects in that region are improving ecological

¹⁵ See page 14.

conditions on time scales appropriate for adaptive management. This will require GLRI resources and we continue to urge the IATF to invest adequate funding to nonfederal partners to ensure we are monitoring and assessing enough projects to know what kind of impact the GLRI is having on the Great Lakes ecosystem based on the indicators discussed above.

Additionally, monitoring data that is recorded must be made available to the public so people can develop restoration projects that we know will work because they employ an effective technique in the right location.

Conclusion

The GLRI has breathed new life into cleaning up the Great Lakes and is providing one of the highest returns on investment in the federal budget. It is a widely held belief in the Great Lakes community and among HOW members that we could not have achieved the scale of restoration work being done in the region without the vision and focus of the GLRI. The federal agencies involved in administering the program deserve praise for their unending work to create and refine the GLRI. In only three years, it has become one of the most successful restoration vehicles in Great Lakes history.

Thank you for the opportunity to provide these comments. The HOW Coalition remains dedicated to working with our partners at the federal, state, and local level to effectively implement the comprehensive restoration plan for the Great Lakes.

Sincerely,


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Co-Chair


John Jackson
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Cc: Federal Great Lakes Interagency Task Force