

GLRI Project Evaluations  
March 23, 2016

Successful projects are essential to the credibility of the Great Lakes Restoration Initiative (GLRI) program, though failures may also be considered successful if the “lessons learned” is used to help improve future restoration work. While others, such as the U.S. Government Accountability Office have conducted more extensive audits of the GLRI, a subcommittee within the Great Lakes Advisory Board conducted a narrow review of three GLRI projects.

In an effort to help advance the work being done by federal agencies on adaptive management, a small subcommittee of the Great Lakes Advisory Board reviewed three of the hundreds of projects that have been completed using GLRI funding. Each of the GLRI projects, even within the same focus area, has a unique objective which makes comparing the projects challenging. However, regardless of the nature of the project, there are some key questions that could be used to define the success of a project as well as its impact. Clarity on what “success” means to GLRI and the ability to document progress are fundamental to demonstrating strategy, value and impact of the federal investment. A review of past projects will consider the restoration and preservation merit of a project. The review will also consider the broader impact of the findings or lessons of the project and how well that information was communicated. This information will serve to help EPA and other federal partners as they develop adaptive management principles to better utilize the information learned along the way.

Clarity on what “success” means to GLRI and the ability to document progress are fundamental to demonstrating strategy, value and impact of the federal investment. A review of past projects will serve to define “success” for GLRI projects, establish success measures for past projects, establish progress measures for current and future projects, and provide recommendations for oversight of project selection as it relates to the Action Plan goals. The review process and information gathered will also support the EPA’s effort to build a public database of GLRI projects and provide recommendations on an Adaptive Management Plan.

**Methodology:**

Hundreds of projects have been undertaken with GLRI funding. The review team agreed upon three projects to review based on various criteria. The review team only considered projects undertaken by non-federal entities. These projects had to be complete with a final grant report submitted to the federal government. The review team wanted a collection of projects that represented both the urban and non-urban work being carried out under the GLRI across the eight states. A diversity of habitats, ecological functions and geographic locations needed to be represented in the selected projects. While there were a great number of projects to choose from, the projects that the review team agreed to evaluate include:

- Cuyahoga River AOC Urban Riparian Restoration
- Eliminating Exposure to Toxic Chemicals at Day-care Centers in the Great Lakes Region of New York
- Coastal Restoration at the Refuge Gateway and Humbug Marsh

Evaluating GLRI projects presents challenges because of the diversity of projects and problems facing the Great Lakes. Each project will have different outcomes and measures of success. Regardless of the nature of the project, though, there are some key evaluation questions that could be used to evaluate projects to define success and impact. Starting with questions used by the National Science Foundation (NSF), the review team adopted modified evaluation questions to compare each of the three project reports. The following questions were applied to each project.

### **Restoration and Protection Merit**

- What is the problem/issue the project is designed to address?
- How does the project advance understanding and solving of the problem/issue?
- To what extent does the project explore an under-researched issue or problem?
- How does the project make progress toward the long term goals, objectives, and commitments under the five focus areas of the GLRI Action Plan I?

### **Broader Impacts**

- How does the project affect the immediate community?
- How does the project communicate its work/progress/findings to others?
- To what extent does the project involve other partners?
- What other lessons learned did the project generate? How can those lessons learned be communicated and applied to future projects?
- Who was included in the project team, including partnerships? Why and how were those people or organizations involved? Were any multi-disciplinary or multi-jurisdictional connections were strengthened, etc.

### **Implementation**

- How closely did the project follow its intended path of implementation?
- Did the project meet the short term, medium term, and long term outcomes that it anticipated? If not, why not?
- Was the project set up to course correct to meet those outcomes? If course corrections were made, why were they necessary and what corrections were made?
- Was the environmental monitoring done before, during, and upon completion of the project adequate to assess its effectiveness?
- Were there additional unanticipated outcomes that benefit one of the five focus areas?

### **Project Evaluations Findings**

Using these evaluation questions, the following is a reporting of the subcommittee's findings and conclusions.

### **Cuyahoga River AOC Urban Riparian Restoration**

#### **Restoration and Protection Merit**

- What is the problem/issue the project is designed to address?  
This project was done to address a source of impairment to the Cuyahoga River. The current configuration of the Ship Channel on the river including the dredged depth, slow

flow, armored shoreline and absence of a functional riparian edge produce a difficult environment for fish migration. Fish Habitat and Public Access were two Beneficial Use Impairments on the Cuyahoga River, and this project would address both of those BUIs.. Specific to the goals of the GLRI, the project addresses the Habitat Restoration and the AOC delisting goals.

The subcommittee believes that this project is at the heart of why the Great Lakes Restoration Initiative is needed. Many communities in the Great Lakes have struggled for decades with urban blight and historic pollution—problems that fell through the gaps of other public funding efforts.

- How does the project advance understanding and solving of the problem/issue?

The project involved 3,000 feet of river bank and fish habitat restoration as well as 4.75 miles of upland restoration. The report does not explain whether any new restoration techniques were used to address the problems. The lasting impacts to the community, like increased property values and land use by community are important to acknowledge.

- To what extent does the project explore an under-researched issue or problem?

The report does not explain whether any new restoration techniques were used to address the problems. Based on general knowledge of the challenges faced throughout the Great Lakes, though, the subcommittee believes that these issues are well researched and commonly found. Many urban communities need to keep armored shoreline. When writing RFP, look for grants to address the dual need to keep shipping while returning natural state. By the time you start some projects, though, it may need to change from the original grant based on new info that has come to light. Make sure it's not a negative.

- How does the project make progress toward the long term goals, objectives, and commitments under the five focus areas of the GLRI Action Plan I?

The project report uses the documentation from the Ohio Bird Watching Group. A variety of birds have been found at the site, including five “rare” species. The assumption is that these birds would not be present if the fish community had not returned.

### **Broader Impacts**

- How does the project affect the immediate community?

In addition to the river restoration, the project included construction of a 0.8 mile portion of the Towpath Trail, an observation deck and visitor amenities. Sitting in the heart of Cleveland, this project is located in an urban core along the Cuyahoga River. It provides greenspace in an urban area where parkland is minimal and provides access to the River. There will likely be a positive impact on local business and property values.

- How does the project communicate its work/progress/findings to others?

The report included articles that were written about the project as well as websites from project partners that include stories about the project. Throughout the project, there were numerous videos filmed and put online. There is also signage at the site. The report references ongoing and future work, including monitoring, but does not communicate how the outcomes and results of that work will be shared. Unclear how the “lessons learned” are captured and shared.

- To what extent does the project involve other partners?

There were numerous governmental partners including additional funders. The report does not specify what each partner contributed to reach completion. Project had a lot of partnerships between government and others which helps achieve goals. To the extent that we can engage partners outside of environmental world, they could measure impacts to property values and ancillary benefits.

- What other lessons learned did the project generate? How can those lessons learned be communicated and applied to future projects?

The report does not address any challenges encountered during the project or other lessons learned.

- Who was included in the project team, including partnerships? Why and how were those people or organizations involved? Were any multi-disciplinary or multi-jurisdictional connections were strengthened, etc.

The report was completed by the Cuyahoga County Department of Public Works and Baker Behnke, a landscape and architecture firm. The report does not clearly identify who comprised the project team and how various partnerships played a role. The GLRI has focused on AOCs which is important, but GLWQA does. We need to make sure lessons can be used for other non-AOC communities.

## **Implementation**

- How closely did the project follow its intended path of implementation?

Powerpoint format did not provide the best format to address this question. Because the presentation stated that it met its goals, the assumption is that the project generally followed the path to implementation.

- Did the project meet the short term, medium term, and long term outcomes that it anticipated? If not, why not?

Powerpoint format did not provide the best format to address this question. Because the presentation stated that it met its goals, the assumption is that the project generally met the short-medium-long term outcomes. Report identified future and ongoing work but did not provide assurances it would be done or by whom. Does the lack of this future work undermine and/or lessen the need for the existing work?

- Was the project set up to course correct to meet those outcomes? If course corrections were made, why were they necessary and what corrections were made?

Based on the information provided, the subcommittee is uncertain whether the project was set up to course correct or whether any corrections were made during the project.

- Was the environmental monitoring done before, during, and upon completion of the project adequate to assess its effectiveness?

According to the report, environmental monitoring of fish species will be done by NEORS, ODN and the Cuyahoga River Community Planning, though that work will be done outside of the grant.

- Were there additional unanticipated outcomes that benefit one of the five focus areas?

Based on the information provided, the subcommittee is unable to determine whether there were any unanticipated outcomes that benefit one of the five focus areas.

Outside of the subcommittee's review questions, the subcommittee feels strongly that the Powerpoint format for the report is inadequate to fully communicate information about the project and how it met the objectives of the grant. Further, the format does not lend itself to the sharing of information so that other communities may follow and/or build on the success of this project. The subcommittee recommends that GLRI implementing agencies utilize a better report format.

### **Eliminating Exposure to Toxic Chemicals at Day-care Centers in the Great Lakes Region of New York**

- What is the problem/issue the project is designed to address?

This project is designed to address the elimination of exposure to toxins at daycares in the Great Lakes region of New York. While reducing and even eliminating the exposure of children to toxins is a laudable goal, the subcommittee was uncertain about the connection of this project to the Great Lakes—no specific resonance to the Great Lakes. Reducing children's exposure to toxins is a national goal, and the toxins identified did not have a specific tie to the Great Lakes. The subcommittee recommends that moving forward, grant administrators should ensure that there is a clear link to the Lakes.

- How does the project advance understanding and solving of the problem/issue?

The project reduced the exposure to toxins by educating and training the day care trainers as well as site evaluations to identify toxins in facilities.

- To what extent does the project explore an under-researched issue or problem?

This project explored an under-researched issue area. The issue of regular exposure to toxins through items found in daycares is not well understood or researched though there is substantial research concluding the harm to children from exposure to toxins. Based on grantee information, toxic chemicals are still prevalent in daycares which are supposed to be safe-havens and protect children.

- How does the project make progress toward the long term goals, objectives, and commitments under the five focus areas of the GLRI Action Plan I and broader GLWQA objectives?

The project addresses the Toxic Substances and Areas of Concern Focus Area of the GLRI Action Plan. As previously state, the goals of the project are not specific to the Great Lakes though. There is a very indirect link to contamination of fish and wildlife and the prevention of human contamination through different routes such as toys. Annex II of the GLWQA covers chemicals of mutual concern, and this project furthers the goals of Annex II by hopefully limiting exposure and the potential to introduce those chemicals into the Great Lakes cycle.

### **Broader Impacts**

- How does the project affect the immediate community?

Based on the conclusions in the grantee's report, there was a positive and direct impact on the daycare community of New York. There were continued trainings. Beyond New York, there was contact with daycares in other states.

- How does the project communicate its work/progress/findings to others?

Because this project targeted local caregivers, the immediate community is likely more informed about routes of exposure to toxins. The grantee documented toxin use reduction in 50-100 care providers and provided technical assistance.

Of the three projects reviewed, the subcommittee felt that this project's report provided the best explanation about the partnerships utilized to implement the grant and how information was communicated. The grantee provided a report to CEHN for other materials and presentations. The grantees dealt with larger organizations like YMCA and Head Start so that it would be easy to transition a Great Lakes Basin effort into a national effort.

- To what extent does the project involve other partners?

The project report identified many partners that were involved. Information about partnerships was found throughout the report, and in the interest of ensuring that similar efforts may be duplicated elsewhere, grant administrators should consider requesting that specific partnership information be provided more concisely.

- What other lessons learned did the project generate? How were those lessons learned, especially from projects that were not specific to the Great Lakes, communicated and how may they be applied to future projects?

The report contained a section titled “challenges” which provided the subcommittee and others interested in duplicating this work with good information about potential obstacles. For instance, the report explained that the timing of gathering information is important for future work in this area. As chemicals are phased out due to regulations or international agreements, future work on routes of toxin exposure needs to consider those deadlines. The report also stated that finding information about the chemicals used in toys and fabric is complicated because of different international requirements.

- Who was included in the project team, including partnerships? Why and how were those people or organizations involved? Were any multi-disciplinary or multi-jurisdictional connections were strengthened, etc.

Many groups are cited throughout the report, but no section of the report specifies why those partners were chosen and the structure of the partnerships.

## **Implementation**

- How closely did the project follow its intended path of implementation?

The overall goals to quantifiable reductions in toxic chemicals used in child care settings and building a network occurred. The grantee added two additional toxins, lead and cadmium, a slight deviation in implementation. Grantees also modified their arrangements with daycares in region 2. The report mentioned some deviations, but without seeing the grant application, it is unclear how far the project deviated from the intended implementation path.

- Did the project meet the short term, medium term, and long term outcomes that it anticipated? If not, why not?

Yes, the goals of the grant were met. The report does not identify short or medium goals though.

- Was the project set up to course correct to meet those outcomes? If course corrections were made, why were they necessary and what corrections were made?

The subcommittee was not provided with an implementation plan/study design and cannot say whether the project was set up in order to course correct. It's unclear whether the project was set up for course correction as much as circumstances required course correction.

- Was the environmental monitoring done before, during, and upon completion of the project adequate to assess its effectiveness?

Yes, there were surveys that engaged the audience and quantifiable results are available. The report said that successful, ongoing monitoring was not practical with the limited staff. The subcommittee believes that qualitative results for projects that disseminate information or educate, as is the case with this project, are difficult to assess. The grantee reported quantitative results on number of meetings and the number of facilities evaluated. In order to effectuate change, the grantees need to change behavior which will be very hard to monitor.

- Were there additional unanticipated outcomes that benefit one of the five focus areas?

The report cited unanticipated outcomes such as the realization that behaviors needed to change in order to sustain meaningful change and that as knowledge increased, exposure decreased. These outcomes could benefit the Accountability, Education, Monitoring, Evaluation, Communication and Partnerships Focus Area.

### **Coastal Restoration at the Refuge Gateway and Humbug Marsh**

- What is the problem/issue the project is designed to address?

This project was a coastal habitat restoration project within an AOC.

- How does the project advance understanding and solving of the problem/issue?

The project restored both coastal wetland habitat and upland habitat as well as treated Phragmites. Specific activities included importing clean fill and topsoil, plantings, restoration of an eroded berm and invasive plant control. The report provides six bullet points of the lessons learned during this project which would be practical advice for others with similar projects..

- To what extent does the project explore an under-researched issue or problem?

Like the Cuyahoga River project, there is no description of the exact environmental conditions or explanation of whether the project techniques and activities were experimental. Based on outside knowledge of the conditions at AOCs, the subcommittee assumed that this project used conventional habitat restoration techniques to address well known problems.



- How does the project make progress toward the long term goals, objectives, and commitments under the five focus areas of the GLRI Action Plan I and the broader GLWQA objectives?

This project fits into the Habitat Restoration goal of the GLRI Action Plan and Annex 7 of the GLWQA to protect native species and their habitat. The project's work on controlling Phragmites, an invasive plant, works to fulfill Annex 6 of the GLWQA to limit the impact of existing aquatic invasive species.

## **Broader Impacts**

- How does the project affect the immediate community?

While the reported project accomplishments focus on number of acres of restored habitat and area where Phragmites were controlled, the subcommittee believes that there were broader benefits to the immediate community based on outside information about the community benefits for delisting an AOC. This project site is located in an urban core and will provide health benefits by removing air pollutants with the new trees and providing greenspace for additional recreation. EPA provided funds through a separate but related grant to hire a 4-person restoration crew providing a handful of jobs to community members.

- How does the project communicate its work/progress/findings to others?

The report does not address how the work, progress, or findings were communicated to others. The subcommittee feels that because there are many other potential projects that are similar to this project, communicating the results of this project would be very advantageous.

- To what extent does the project involve other partners?

A number of partners such as students, businesses, volunteers, and the Detroit River International Wildlife Refuge were named in the report so partners were involved. The report does not provide details about the partnership arrangements and responsibilities.

- What “lessons learned” did the project generate? How were those lessons learned, especially from projects that were not specific to the Great Lakes, communicated and applied to future projects?

The report provides six bulleted items in the “Lessons Learned” section. However, the report does not provide any details as to how those lessons were learned, communicated, or applied to future projects.

- Who was included in the project team, including partnerships? Why and how were those people or organizations involved? Were any multi-disciplinary or multi-jurisdictional connections were strengthened, etc.

A number of partners such as students, businesses, volunteers, and the Detroit River International Wildlife Refuge were named in the report so partners were involved. The report does not provide details about the partnership arrangements and responsibilities.

The report does explain that additional funding was received from EPA which allowed for the hiring of a restoration crew from a non-profit, Greening of Detroit. This partner allowed for the plants to be maintained throughout the summer which ensured greater survival of the plants/trees and a higher chance for long-term project success.

## **Implementation**

- How closely did the project follow its intended path of implementation?

The report does not address whether the project followed its intended path of implementation. The subcommittee did not receive the initial grant application which might have allowed the subcommittee to better answer this question.

- Did the project meet the short term, medium term, and long term outcomes that it anticipated? If not, why not?

The report simply states that the grant objectives were achieved but does not address whether it met the short, medium and long term goals or even whether they existed for this project.

- Was the project set up to course correct to meet those outcomes? If course corrections were made, why were they necessary and what corrections were made?

The report does not address whether the project was set up to course correct.

- Was the environmental monitoring done before, during, and upon completion of the project adequate to assess its effectiveness?
- Were there additional unanticipated outcomes that benefit one of the five focus areas?

## **Conclusions**

Since the first GLRI grant was awarded, significant progress has been made to improve the overall health of the Great Lakes as well as the wildlife and people living in the region. The subcommittee reviewed a very small percentage of the number of GLRI grants and believes that all of the awards were made in an effort to advance lake health. The subcommittee appreciates the fact that it reviewed project reports using review questions that the grantees were not specifically asked to address in their project completion reports. However, in order to ensure that

future projects continue to advance the goals of the GLRI, that information is shared throughout the Great Lakes community, and that regulators are informed about results and new information so that they can adapt, the subcommittee reviewed the project reports to help determine whether they moved the needle toward a healthier, stronger and more resilient Great Lakes system. The subcommittee provides the following conclusions and recommendations to the full Great Lakes Advisory Board.

**Communication.** Though the reports did not always clearly explain how project results and lessons were communicated to others, the subcommittee believes that communicating results is vitally important for adaptive management. Otherwise, success will not be replicated, and misguided restoration efforts will be allowed to continue. The subcommittee concluded that communicating the results of the project was not always a priority and that grantees should be expected to do more to ensure that the information from the award is shared among multiple stakeholder groups. The subcommittee recommends that agencies administering GLRI grants determine how information from grants may be effectively shared to the community at large.

**More consistent reporting requirements.** There are multiple federal agencies awarding and administering GLRI grants, and each agency has its own reporting requirements. Because of the differences in the information contained in the report, it is challenging to evaluate the projects consistently. Further, without a more consistent format for the reports, it will be difficult for others to quickly collect results and learn from the project in order to replicate it. The subcommittee recommends that agencies adopt a more consistent reporting format.