



Great Lakes Restoration Initiative (GLRI)

Many stakeholders recognize the Great Lakes ecosystem as an international resource that has been altered by human activities and climate variability. These alterations have led to degraded water quality, diminished habitat, smaller native fish and wildlife populations, and a changed ecosystem. In response, the federal governments of the United States and Canada, eight U.S. states, and two Canadian provincial governments in the Great Lakes basin are implementing multiple restoration efforts. Activities under these efforts range from mitigating the harmful effects of toxic substances in lake waters to restoring fish habitat.

Most laws and past efforts addressed specific issues in the Great Lakes; few addressed issues at the ecosystem level. Consequently, stakeholders expressed the need for the federal government to initiate and implement a comprehensive approach for restoring the Great Lakes ecosystem. In 2010, the Obama Administration proposed and Congress began funding the Great Lakes Restoration Initiative (GLRI), which aims to restore the Great Lakes ecosystem under a single initiative. Specifically, GLRI aims to restore and maintain the chemical, physical, and biological integrity of the Great Lakes basin ecosystem by directing activities to address five focus areas: (1) toxic substances and areas of concern (areas in the Great Lakes that are environmentally degraded); (2) invasive species; (3) nearshore health and nonpoint source pollution; (4) habitat and wildlife protection and restoration; and (5) accountability, monitoring, evaluation, communication, and partnerships. Most GLRI projects take place within the Great Lakes Drainage Basin (see Figure 1).

Governance and Implementation

The Environmental Protection Agency (EPA) is the lead federal agency implementing and administering GLRI. In recent years, Congress has provided EPA authority, via language in annual Interior, Environment, and Related Agencies appropriations bills, to distribute appropriated funds to several federal agencies to undertake GLRI restoration activities and projects (see **Table 2** for agencies receiving funding to date). EPA also administers a grant program to fund nonfederal projects and activities related to Great Lakes restoration. An interagency Great Lakes Task Force oversees implementation of GLRI and created the strategy to guide restoration, referred to as the Action Plan. The first Action Plan provided a framework for restoring the Great Lakes ecosystem. The task force is required to release new Action Plans to provide guidance for restoration every five years. The GLRI Action Plan II, published in 2014, is the second Action Plan and summarizes actions to be implemented from FY2015 to FY2019. For each focus area under GLRI, the Action Plan provides a problem statement, a set of goals, interim objectives, progress measures, final targets, and principal activities for restoring the ecosystem. Restoration activities are conducted under existing federal authorities.

Funding

GLRI received approximately \$2.26 billion in appropriated funds from FY2010 to FY2016; as of February 2017, \$1.76 billion had been spent on 3,455 projects. (See **Table 1**.)

Table 1. Great Lakes Restoration Initiative, Annual Discretionary Federal Appropriations

Fiscal Year	Appropriations (\$ in millions)
FY2010	\$475.0
FY2011	\$300.0
FY2012	\$299.5
FY2013	\$298.8
FY2014	\$288.9
FY2015	\$300.0
FY2016	\$300.0
FY2017	\$250.0
FY2018 Request	\$0.0

Sources: FY2010-FY2017 appropriations bills and explanatory statements, and FY2018 President's budget request.

EPA received the majority of the funding to implement restoration projects. EPA's proposed budget for FY2018 eliminated agency funding for the GLRI program.

Figure 1. Great Lakes Drainage Basin



Source: U.S. Army Corps of Engineers, Detroit District.

Note: The Great Lakes Basin consists of the lakes and area in green.

Additionally, the budget recommended the rescission of \$50 million of the GLRI's current FY2017 funding. **Table 2** provides a breakdown of received funding by agency.

Table 2. GLRI Projects and Funding by Agency
(\$ in millions, as of February 2017)

Agency	Projects	Funding
Agency for Toxic Substances and Disease Registry	10	\$11.6
Animal and Plant Health Inspection Service	34	\$8.1
Bureau of Indian Affairs	255	\$30.5
Centers for Disease Control and Prevention	4	\$2.8
Environmental Protection Agency	921	\$720.7
Federal Highway Administration	12	\$6.7
Maritime Administration	8	\$16.6
National Oceanic and Atmospheric Administration	224	\$171.4
National Park Service	78	\$31.9
Natural Resources Conservation Service	248	\$139.6
U.S. Army Corps of Engineers	550	\$191.2
U.S. Coast Guard	53	\$15.5
U.S. Fish and Wildlife Service	814	\$356.3
U.S. Geological Survey	152	\$100.7
U.S. Forest Service	92	\$60.0

Source: Great Lakes Restoration Initiative, 2017.

Authorization of GLRI

Although GLRI dates to 2010, it was not authorized outside of annual appropriations legislation until 2016, under Title IV of the Water Infrastructure Improvements for the Nation Act (P.L. 114-322). The bill authorized the scope and function of GLRI, as well as a process and criteria for approving projects. Notable provisions were a prohibition for GLRI funds to be used for any water infrastructure activity other than green infrastructure that improves the habitat and ecosystem of the Great Lakes and a requirement that federal agencies maintain their base level of funding for Great Lakes activities without regard to the GLRI funding. The law authorized appropriations of \$300 million annually from FY2017 to FY2021.

Potential Issues for Congress

Since the implementation of GLRI in 2010, questions about GLRI have emerged, including how much funding it will receive, how long it will take, and how much it will cost. Some stakeholders are concerned that GLRI might receive significantly less or no funding for FY2018. The Trump Administration proposed to eliminate funding for GLRI for FY2018, stating that “this change returns the responsibility for funding local environmental efforts and programs to state and local entities.” In a June 2017 House

Appropriations Committee hearing, some Members expressed concern about the effect eliminating funding on restoration.

Although P.L. 114-322 provided direction on the scope and scale of GLRI, some stakeholders continue to question the initiative's direction and duration. Unlike some other restoration initiatives, GLRI does not follow a detailed or prescriptive plan or feasibility study. Action Plan II broadly discusses an overall vision for restoration and specifies goals and targets for restoration. However, Action Plan II does not estimate how long it will take to restore the Great Lakes ecosystem or how much the restoration will cost. Some scientists have noted that it is challenging to contemplate the cost and duration for restoring the Great Lakes ecosystem because of its size and complexity. Some contend that the Great Lakes Water Quality Agreement is guiding restoration of the Great Lakes.

Restoration Progress to Date

GLRI began without stated long-term goals; it is unclear how much progress has been made toward the overall restoration of the Great Lakes. GLRI aims to track restoration progress through annual reports to Congress and indicators. GLRI has established an accountability system that lists and describes projects and their funding. The Action Plan includes a set of milestones for the five-year period it covers; it also attempts to situate progress to date on a number of measures. Among the GLRI's more notable accomplishments to date have been cleanup actions for delisting of five Great Lakes Areas of Concern (areas with a significant impairment of beneficial uses designated by the United States and Canada), doubling of the acreage enrolled in agricultural conservation programs, and funding of over 3,000 restoration projects. Although the milestones track implementation of projects, some observers might question how the completion or progress of these projects relates to the overall restoration of the ecosystem or ecosystem processes.

Coordination of Efforts

Some stakeholders question the coordination and duplication among federal and state restoration efforts. In a 2015 report, the Government Accountability Office asserted that restoration efforts in the Great Lakes suffered from inadequate coordination. The effort required to improve coordination may be significant due to the number of entities involved in restoration. Further, some stakeholders argue that greater coordination among federal and nonfederal stakeholders might create opportunities to leverage resources to accomplish common restoration projects. The GLRI aims to build on existing federal, state, and local activities. Nonfederal representatives lack a formal role to coordinate with federal actions in a governance entity. A Great Lakes Advisory Board contains nonfederal members and convenes to discuss restoration efforts; however, the board has limited authorities for participating in project selection and coordination.

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