



NOAA Great Lakes Habitat Restoration Program

How does Habitat Loss and Degradation Affect Great Lakes Constituents?

Beach closings, large-scale contaminated sites, invasive species, and fish consumption advisories are just some of the impacts of habitat loss and degradation. For example, the United States and Canada have identified 43 Areas of Concern (AOC) with severe environmental degradation including sediment and water contamination and impaired fish and benthic communities.

What is Needed to Restore and Protect Great Lakes Coastal Habitat?

Habitat loss and degradation are region-wide issues that span the entire Great Lakes basin. Thus, strong partnerships and sharing expertise, knowledge, and resources are the keys to effective restoration and protection. On May 18, 2004 President Bush signed an Executive Order that described the Great Lakes as a “national treasure” and established a cabinet-level Great Lakes Interagency Task Force to help establish regional collaboration and better integration of effort.

Secondly, any restoration efforts need to be accompanied by sufficient data collection to help set funding priorities and measure success. A **science-based approach** will insure that efforts are directed at the most important sources of the problems, that the socio-economic



consequences of the restoration efforts are evaluated and to monitor the success of the restoration effort in achieving its goal(s).

What Has NOAA Proposed to do?

In 2004, Executive Order 13340 was signed creating the Great Lakes Interagency Task Force establishing a regional collaboration of federal partners, including DOC, to restore the Great Lakes. This increase will enable NOAA to establish a Great Lakes Habitat Restoration Program, thereby mobilizing NOAA’s restoration assets to restore the Great Lakes’ aquatic resources. NOAA will identify an optimal restoration plan and its intended benefits, evaluate the socio-economic consequences, and monitor the success of the restoration effort in achieving its goals. To monitor the effectiveness of NOAA’s Great Lakes Habitat Restoration Program, the program targeted an increase to the GPRA performance measure target (i.e., acres restored per year). Additionally, the Great Lakes Restoration Program will provide the necessary outreach, facilitation and technical assistance to stakeholders and communities participating in the restoration activities. Overall, this program will develop a strong NOAA presence and leadership in habitat restoration within the Great Lakes region.

What Will Be Accomplished?

The two primary components of the Great Lakes Restoration Program will be (1) establishment of a cross-NOAA Habitat Restoration Program Office at NOAA’s Great Lakes Environmental Research Laboratory (GLERL) to identify partner agencies at bi-national, federal, state/provincial, and local levels and develop a strategy to foster renewed collaboration and integration, and (2) funding for ecosystem-based, science-driven restoration projects that can be used to support the Great Lakes Interagency Task Force and the GLERL and to develop scientific, ecosystem-based guidelines for other regions.

Restoration through Collaboration

NOAA recognizes that the Great Lakes are at a point where ecosystem-level changes are occurring rapidly in response to multiple stresses. Adding NOAA's scientific capabilities to an AOC where other partners are addressing stresses within their purview will mitigate the rapidity of these changes. Since NOAA's restoration efforts are ultimately focused on healthy coastal and lake habitats, restoration efforts must result in achieving water and habitat quality in these areas that will support and maintain living freshwater resources. Restoration that can influence water and habitat quality may include, but are not limited to: (1) reducing pollution loads such as nutrients, microbes, pesticides, and other contaminants to the coastal areas; (2) mitigating lake-ecosystem food-web disruption associated with aquatic invasive species; (3) increasing freshwater habitats by eliminating dead zones; or (4) improving coastal and nearshore habitats by re-grading, replanting or other shoreline improvements or stabilization actions.

What Will NOAA Contribute?

In addition to actual Great Lakes Restoration, this program will demonstrate the process and value of using a **science-based, ecosystem approach** in restoration efforts. NOAA is a science-based agency and can thus provide an ecosystem approach to the restoration process.

The demonstration projects will be supported by a scientific effort at the beginning of the projects, monitoring during the restoration phase, and analyses and assessment after the restoration has been completed. Results will be used to develop guidelines for other science-based restoration efforts throughout the Great Lakes basin.

How Will Great Lakes Science be Integrated into Habitat Restoration?

The Habitat Restoration Program Office will take advantage of GLERL's strong scientific expertise to develop collaborative, integrated science-based restoration

strategies. In addition the co-location at GLERL will promote cooperation and communication with the GLERL-based:

- ◆ **NOAA Center of Excellence for Great Lakes and Human Health**
- ◆ **NOAA National Center for Research on Invasive Species (NCRAIS)**
- ◆ **Great Lakes Sea Grant Network Extension Agents (and liaison with the seven Great Lakes Sea Grant Programs).**

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