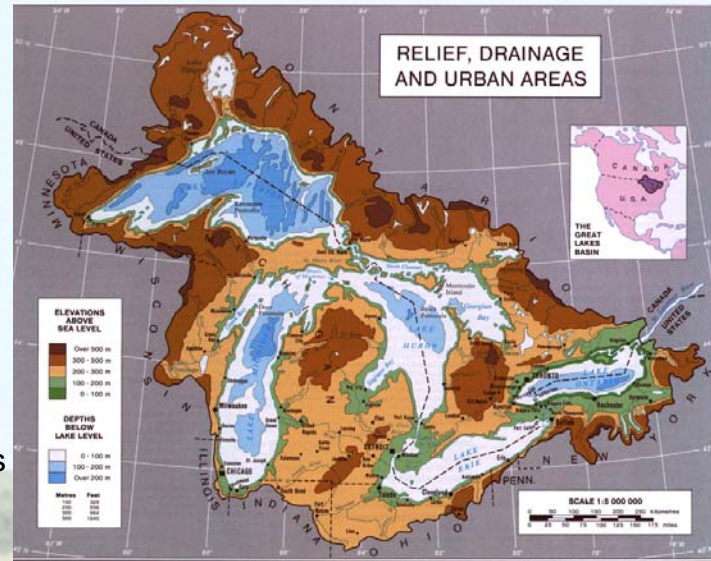


Great Lakes Program

Large Aquatic Ecosystem (LAE)



The **Great Lakes Program** is a nested structure of activities, managed and implemented by an alliance of Federal, State, Tribal, and nongovernmental agencies, working in a complementary and collaborative manner with their Canadian Federal, Provincial, and local counterparts, to protect and restore the Great Lakes. This nested structure is meant to parallel the natural boundaries found in the Great Lakes ecosystem: from local landscapes to sub-watersheds, to individual lake basins, to the entire Great Lakes Basin. The Program's guiding principles are contained in the Great Lakes Water Quality Agreement between the United States and Canada. The Great Lakes National Program Office (GLNPO) leads EPA's Great Lakes program activities.



The Great Lakes LAE's efforts are focused across the watershed rather than limited to political boundaries. This structure is intended to be both flexible and adaptable to respond to the needs of the ecosystem. The goal of these various programs and efforts is to achieve significant environmental improvements through the implementation of a multimedia, ecosystem-based approach in the Great Lakes. This management structure fosters cross-program and cross-agency integration of programs at a variety of scales; from Areas of Concern (using Remedial Action Plans), to issues of lakewide importance (using Lakewide Management Plans), to those of basin-wide concern (Canada-U.S. Binational Toxics Strategy).

Challenges

In spite of their large size, the Great Lakes are sensitive to the effects of a wide range of pollutants. Major stresses on the lakes include toxic and nutrient pollution, invasive species and habitat degradation. Sources of pollution include the runoff of soils and farm chemicals from agricultural lands, waste from cities, discharges from industrial areas and leachate from disposal sites. The large surface area of the lakes also makes them vulnerable to direct atmospheric pollutants that fall as rain, snow, or dust on the lake surface, or exchange as gases with the lake water. Outflows from the Great Lakes are relatively small (less than 1 percent per year) in comparison with the total volume of water. Pollutants that enter the lakes are retained in the system and become more concentrated with time.

Addressing these problems is complicated by the fact that the Great Lakes Basin encompasses large parts of two nations, the United States and Canada. A Great Lakes Interagency Task Force (IATF) was created through an Executive Order in 2004 to coordinate all facets of federal actions affecting the environmental health of the Great Lakes.

Priorities

Priorities include: monitoring lake ecosystem indicators; managing and providing public access to Great Lakes data; helping communities address contaminated sediments in Areas of Concern; supporting local protection and restoration of important habitats; promoting reductions of point, nonpoint, and atmospheric sources of pollutants through the Canada-U.S. Binational Toxics Strategy which fosters pollution prevention; preventing and responding to the introduction of aquatic invasive species; monitoring and improving beach health; encouraging sustainable policies and practices; coordinating habitat priorities of the Lakewide Management Plans; and implementation of priority habitat restoration and protection projects that lead to Beneficial Use Impairment delistings at Areas of Concern.



Accomplishments

The United States Great Lakes Program has made significant progress in reducing persistent toxic substances in the Great Lakes. Based upon 2000 data, the Great Lakes Binational Toxics Strategy reports that:

- Dioxin/furan emissions have been reduced by nearly 90% from the 1987 baseline.
- Mercury emissions and use have both been reduced by over 50% from their baselines of 1990 and 1995, respectively.
- Benzo(a)pyrene emissions have been reduced by almost 80% between 1996 and 2001.

EPA is cleaning up sediments contaminated by past unregulated discharges through its Superfund program and through a new authority under the Great Lakes Legacy Act of 2002 to accelerate cleanups in Areas of Concern through cost-sharing partnerships with non-federal entities.

- EPA's Great Lakes National Program Office has helped facilitate contaminated sediment cleanups totaling over 4.5 million cubic yards of contaminated sediments since 1997.

Future Direction

The *Great Lakes Regional Collaboration Strategy to Restore and Protect the Great Lakes* addresses eight of the most significant broad-scale issues facing the Great Lakes, as identified by the Great Lakes Governors at the request of the Great Lakes Congressional Delegation. These include:

- Invasive Species
- Coastal Health
- Areas of Concern/Sediments
- Toxic Pollutants
- Habitat and Species
- Nonpoint Source
- Indicators and Information
- Sustainability

The Strategy has an unprecedented level of bipartisan support from the Great Lakes Congressional Delegation and Great Lakes stakeholders, who remain firmly committed to continuing the Great Lakes Regional Collaboration (GLRC) and implementing its Strategy recommendations. GLRC efforts to further Strategy goals have resulted in a series of initiatives on toxics, invasive species, beaches, and wetlands (www.glrc.us).

Federal implementation of key Strategy recommendations by the IATF has led to some very significant on-the-ground actions to restore and protect the Great Lakes. The IATF supported the GLRC Strategy by committing to 48 near-term actions to restore the Great Lakes. Thirty-nine of these actions have been completed.

The Great Lakes Facts

Watershed Size: 201,460 square miles

Waterbody Size: 94,250 square miles

Population: more than 30 million people live in the Great Lakes Basin

EPA Regions: 2, 3, and 5 (Ontario, Canada)

Director: Gary Gulezian

The **Great Lakes Program** was designated a member of the US Environmental Protection Agency's



Large Aquatic Ecosystem Council (LAE) in 2008. The Great Lakes Program joins nine other geographic-based efforts that focus on protecting and restoring the health of critical aquatic ecosystems. The LAE Council seeks to merge geographically-based efforts with national water programs to advance the health of the Nation's large aquatic ecosystems and strengthen national water programs.

LAE Program Websites

Chesapeake Bay Program
www.chesapeakebay.net

Columbia River Basin
www.epa.gov/region10/columbia

Great Lakes
www.epa.gov/glnpo

Gulf of Mexico Program
www.epa.gov/gmpo

Lake Champlain Basin Program
www.lcbp.org

Long Island Sound Study
www.longislandsoundstudy.net

Pacific Islands Office
www.epa.gov/region09/islands

Puget Sound - Georgia Basin
(Under Construction)

San Francisco Bay Delta Estuary
(Under Construction)

South Florida Geographic Initiative
www.epa.gov/Region4/water/southflorida

Office of Wetlands, Oceans,
and Watersheds

[www.epa.gov/owow/oceans/
partnerships/large_aquatic.html](http://www.epa.gov/owow/oceans/partnerships/large_aquatic.html)

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