

National Oceanic and Atmospheric Administration  
Great Lakes Environmental Research Laboratory  
**Establishing Legislation and Authority**

**Federal Water Pollution Control Act (Clean Water Act)**

**33 U.S.C. § 1268: ESTABLISHMENT OF GREAT LAKES RESEARCH OFFICE**

There is established within the National Oceanic and Atmospheric Administration the Great Lakes Research Office. The Research Office shall conduct, through the *Great Lakes Environmental Research Laboratory*, the National Sea Grant College program, other Federal laboratories, and the private sector, appropriate research and monitoring activities which address priority issues and current needs relating to the Great Lakes. The Research Office shall identify issues relating to the Great Lakes resources on which research is needed. The Research Office shall submit a report to Congress on such issues before the end of each fiscal year which shall identify any changes in the Great Lakes system with respect to such issues.

**16 U.S.C. § 1447B—REGIONAL MARINE RESEARCH PROGRAMS**

“The purpose of this chapter is to establish regional research programs, under effective Federal oversight, to--

- (1) set priorities for regional marine and coastal research in support of efforts to safeguard the water quality and ecosystem health of each region; and
- (2) carry out such research through grants and improved coordination.”

(a) Establishment

A Regional Marine Research board shall be established for each of the following regions:

- (1) the Gulf of Maine region, comprised of the marine and coastal waters off the State of Maine, New Hampshire, and Massachusetts (north of Cape Cod);
- (2) the greater New York bight region, comprised of the marine and coastal waters off the States of Massachusetts (south of Cape Cod), Rhode Island, Connecticut, New York, and New Jersey, from Cape Cod to Cape May;
- (3) the mid-Atlantic region, comprised of the marine and coastal waters off the States of New Jersey, Delaware, Maryland, Virginia, and North Carolina, from Cape May to Cape Fear;
- (4) the South Atlantic region, comprised of the marine and coastal waters off the States of North Carolina, South Carolina, Georgia, and Florida, from Cape Fear to the Florida Keys, including the marine and coastal waters off Puerto Rico and the United States Virgin Islands;
- (5) the Gulf of Mexico region, comprised of the marine and coastal waters off the States of Florida, Alabama, Mississippi, Louisiana, and Texas, along the Gulf coast from the Florida Keys to the Mexican border;
- (6) the California region, comprised of the marine and coastal waters off the State of

- California, from Point Reyes to the Mexican border;
- (7) the North Pacific region, comprised of the marine and coastal waters off the States of California, Oregon, and Washington, from Point Reyes to the Canadian border;
- (8) the Alaska region, comprised of the marine and coastal waters off the State of Alaska; and
- (9) insular Pacific region, comprised of the marine and coastal waters off the State of Hawaii, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands.

**The Great Lakes Research Office** authorized under section 1268(d) of title 33 shall be responsible for research in the Great Lakes region and shall be considered the Great Lakes counterpart to the research program established pursuant to this chapter.

(b) Membership

(1) Composition

Each Board shall be comprised of 11 members of which—

- (A) 3 members shall be appointed by the Administrator of the National Oceanic and Atmospheric Administration, including 1 member who shall be a Sea Grant Program Director from a State within such region, who shall serve as chairman of the board;
- (B) 2 members shall be appointed by the Administrator of the Environmental Protection Agency; and
- (C) 6 members shall be appointed by Governors of States located within the region.

(2) Qualifications

Each individual appointed as a member of a Board shall possess expertise, pertinent to the region concerned, in scientific research, coastal zone management, fishery management, water quality management, State and local government, or any other area which is directly relevant to the functions of the Board. A majority of the members of each Board shall be trained in a field of marine or aquatic science and shall be currently engaged in research or research administration.

**15 U.S.C. § 1511 COMMERCE AND TRADE**

“Sec. 2901. Findings

***The following are hereby transferred to the Secretary of Commerce:***

(e) Those functions vested in the Secretary of Defense or in any officer, employee, or organizational entity of the Department of Defense by the provision of Public Law 91-144, 83 Stat. 326, under the heading

- “..... (2) the conception, planning, and conduct of basic research and development in the fields of water motion, water characteristics, water quantity, and ice and snow, and (3) the publication of data and the results of research projects in forms useful to the Corps of Engineers and the public, and the operation of a Regional Data Center for the

collection, coordination, analysis, and the furnishing to interested agencies of data relating to water resources of the *Great Lakes*.”

## **16 U.S.C. § 4741--CONSERVATION**

Sec. 4701. Findings and purposes

“(a) Findings

The Congress finds that--

- (1) the discharge of untreated water in the ballast tanks of vessels and through other means results in unintentional introductions of nonindigenous species to fresh, brackish, and saltwater environments;
- (2) when environmental conditions are favorable, nonindigenous species become established, may compete with or prey upon native species of plants, fish, and wildlife, may carry diseases or parasites that affect native species, and may disrupt the aquatic environment and economy of affected nearshore areas;
- (3) the zebra mussel was unintentionally introduced into the Great Lakes and has infested—
  - (A) waters south of the Great Lakes, into a good portion of the Mississippi River drainage;
  - (B) waters west of the Great Lakes, into the Arkansas River in Oklahoma; and
  - (C) waters east of the Great Lakes, into the Hudson River and Lake Champlain;
- (4) the potential economic disruption to communities affected by the zebra mussel due to its colonization of water pipes, boat hulls and other hard surfaces has been estimated at \$5,000,000,000 by the year 2000, and the potential disruption to the diversity and abundance of native fish and other species by the zebra mussel and ruffe, round goby, and other nonindigenous species could be severe;
- (5) the zebra mussel was discovered on Lake Champlain during 1993 and the opportunity exists to act quickly to establish zebra mussel controls before Lake Champlain is further infested and management costs escalate;
- (6) in 1992, the zebra mussel was discovered at the northernmost reaches of the Chesapeake Bay watershed;
- (7) the zebra mussel poses an imminent risk of invasion in the main waters of the Chesapeake Bay;
- (8) since the Chesapeake Bay is the largest recipient of foreign ballast water on the East Coast, there is a risk of further invasions of other nonindigenous species;
- (9) the zebra mussel is only one example of thousands of nonindigenous species that have become established in waters of the United States and may be causing economic and ecological degradation with respect to the natural resources of waters of the United States;
- (10) since their introduction in the early 1980's in ballast water discharges, ruffe--
  - (A) have caused severe declines in populations of other species of fish in Duluth Harbor (in Minnesota and Wisconsin);
  - (B) have spread to Lake Huron; and

(C) are likely to spread quickly to most other waters in North America if action is not taken promptly to control their spread;”

“(b) Purposes

The purposes of this chapter are—

- (1) to prevent unintentional introduction and dispersal of nonindigenous species into waters of the United States through ballast water management and other requirements;
- (2) to coordinate federally conducted, funded or authorized research, prevention, control, information dissemination and other activities regarding the zebra mussel and other aquatic nuisance species;
- (3) to develop and carry out environmentally sound control methods to prevent, monitor and control unintentional introductions of nonindigenous species from pathways other than ballast water exchange;
- (4) to understand and minimize economic and ecological impacts of nonindigenous aquatic nuisance species that become established, including the zebra mussel; and
- (5) to establish a program of research and technology development and assistance to States in the management and removal of zebra mussels.”

“ (1) \$1,625,000, which shall be made available from funds otherwise authorized to be appropriated if such funds are so authorized, to fund aquatic nuisance species prevention and control research under section 4722(i) of this title at the ***Great Lakes Environmental Research Laboratory*** of the National Oceanic and Atmospheric Administration, of which \$500,000 shall be made available for grants, to be competitively awarded and subject to peer review, for research relating to Lake Champlain”

“(3) \$1,125,000 to fund aquatic nuisance species prevention and control research under section 4722(i) of this title at ***the Great Lakes Environmental Research Laboratory*** of the National Oceanic and Atmospheric Administration;”

### **16 U.S.C. § 4722. AQUATIC NUISANCE SPECIES PROGRAM**

The Assistant Secretary, in consultation with the Task Force, shall investigate and identify environmentally sound methods for preventing and reducing the dispersal of aquatic nuisance species between the Great Lakes-Saint Lawrence drainage and the Mississippi River drainage through the Chicago River Ship and Sanitary Canal, including any of those methods that could be incorporated into the operation or construction of the lock system of the Chicago River Ship and Sanitary Canal.

The ***Great Lakes Environmental Research Laboratory*** of the National Oceanic and Atmospheric Administration shall provide technical assistance to appropriate entities to assist in the research conducted pursuant to this subsection.

**16 U.S.C. § 760e – STUDY OF MIGRATORY GAME FISH; WATERS; RESEARCH PURPOSE**

“The Secretary of Commerce is directed to undertake a comprehensive continuing study of migratory marine fish of interest to recreational fishermen of the United States....including fish which migrate through or spend part of their lives in the inshore waters of the United States. The study shall include, but not be limited to, research on migrations, identity of stocks, growth rates, mortality rates, variation in survival, environmental influences, both natural and artificial, including pollution and effects of fishing on the species for the purpose of developing wise conservation policies and constructive management activities.”

**42 U.S.C. § 7412—PUBLIC HEALTH & WELFARE—POLLUTION PREVENTION AND CONTROL**

“The Administrator, in cooperation with the Under Secretary of Commerce for Oceans and Atmosphere, shall conduct a program to identify and assess the extent of atmospheric deposition of hazardous air pollutants (and in the discretion of the Administrator, other air pollutants) to the **Great Lakes**, the Chesapeake Bay, Lake Champlain and coastal waters. As part of such program, the Administrator shall—

- (A) monitor the **Great Lakes**, the Chesapeake Bay, Lake Champlain and coastal waters, including monitoring of the **Great Lakes** through the monitoring network established pursuant to paragraph (2) of this subsection and designing and deploying an atmospheric monitoring network for coastal waters pursuant to paragraph (4);
- (B) investigate the sources and deposition rates of atmospheric deposition of air pollutants (and their atmospheric transformation precursors);
- (C) conduct research to develop and improve monitoring methods and to determine the relative contribution of atmospheric pollutants to total pollution loadings to the **Great Lakes**, the Chesapeake Bay, Lake Champlain, and coastal waters;”

**15 U.S.C. §§ 1525, 1540—COOPERATIVE AGREEMENTS/REIMBURSEMENT TO FURTHER NOAA’S MISSION**

**Memorandum of Understanding between the Environmental Research Laboratories of the National Oceanic and Atmospheric Administration and the University of Michigan -- Revision of 7/11/89.**

“The environmental Research Laboratories (ERL) of the National Oceanic and Atmospheric Administration (NOAA) have collaborated for a number of years with the University of Michigan and Michigan State University in limnological and environmental research. This Memorandum of understanding (MOU) between NOAA and the University of Michigan reaffirms their common interest in these research areas and provides a basis for future cooperative research efforts. .... 2. Improve the effectiveness of graduate-level education and expand the scientific experiences available to graduate students by providing a central vehicle for their participation in joint research programs with the **Great Lakes Environmental Research Laboratory**. .....2) Assist in the coordination of research accomplished in GLERL... 1) **Facilitate the establishment of joint research projects between scientists”**

## **15 U.S.C. § 2901—NATIONAL CLIMATE PROGRAM ACT**

Sec. 2901. Findings

“The Congress finds and declares the following:

- (1) Weather and climate change affect food production, energy use, land use, water resources and other factors vital to national security and human welfare.
- (2) An ability to anticipate natural and man-induced changes in climate would contribute to the soundness of policy decisions in the public and private sectors.
- (3) Significant improvements in the ability to forecast climate on an intermediate and long-term basis are possible.
- (4) Information regarding climate is not being fully disseminated or used, and Federal efforts have given insufficient attention to assessing and applying this information.
- (5) Climate fluctuation and change occur on a global basis, and deficiencies exist in the system for monitoring global climate changes. International cooperation for the purpose of sharing the benefits and costs of a global effort to understand climate is essential.
- (6) The United States lacks a well-defined and coordinated program in climate-related research, monitoring, assessment of effects, and information utilization.” ...

“(b) Formulation of United States Policy.--The President, through the Environmental Protection Agency, shall be responsible for developing and proposing to Congress a coordinated national policy on global climate change. Such policy formulation shall consider research findings of the Committee on Earth Sciences of the Federal Coordinating Council on Science and Engineering Technology, the National Academy of Sciences, the National Oceanic and Atmospheric Administration,....”

## **33 U.S.C. § 145—HARMFUL ALGAL BLOOM AND HYPOXIA RESEARCH AND CONTROL ACT OF 1998**

“(10) the National Oceanic and Atmospheric Administration, through its ongoing **research**, education, grant, and coastal resource management programs, possesses a full range of capabilities necessary to support a near and long-term comprehensive effort to prevent, reduce, and **control** harmful algal blooms and **hypoxia**;

“(11) funding for the **research** and related programs of the National Oceanic and Atmospheric Administration will aid in improving the Nation's understanding and capabilities for addressing the human and environmental costs associated with harmful algal blooms and **hypoxia**; and...”

## **33 U.S.C. § 1268--NAVIGATION AND NAVIGABLE WATERS--WATER POLLUTION PREVENTION AND CONTROL--RESEARCH AND RELATED PROGRAMS**

“The Congress finds that--

(A) the Great Lakes are a valuable national resource, continuously serving the people of the United States and other nations as an important source of food, fresh **water**, recreation, beauty, and enjoyment;

(B) the United States should seek to attain the goals embodied in the Great Lakes **Water**

**Quality Agreement** of 1978, as amended by the **Water Quality Agreement** of 1987 and any other agreements and amendments, with particular emphasis on goals related to toxic pollutants; and..."

**33 U.S.C. §2326b-NAVIGATION AND NAVIGABLE WATERS--WATER  
RESOURCES DEVELOPMENT**

"The Secretary (*of Commerce*) may enter into cooperation agreements with non-Federal interests with respect to navigation projects, or other appropriate non-Federal entities, for the development of long-term management strategies for controlling sediments at such projects."

**GREAT LAKES WATER QUALITY AGREEMENT OF 1978—AMENDED 1987**

*International Agreement between Canada and the United States which involves restoring and enhancing water quality in the Great Lakes System*

"Implementation: The Parties, in cooperation with State and Provincial Governments, shall conduct research in order to:

- a) Determine the mass transfer of pollutants between the Great Lakes basin Ecosystem components of water, sediment, air, land and biota, and the processes controlling the transfer of pollutants across the interfaces between these components in accordance with Annexes 13,14, 15, and 16;
- b) Develop load reduction models for pollutants in the Great Lakes System in accordance with the research requirements of Annexes 2, 11, 12, and 13;
- c) Determine the physical and transformational processes affecting the delivery of pollutants by tributaries to the Great Lakes in accordance with Annexes 2, 11, 12, 13;
- d) Determine cause-effect inter-relationships of productivity and ecotoxicity, and identify future research needs in accordance with Annexes 11, 12, 13 and 15;
- e) Determine the relationship of contaminated sediments on ecosystem health, in accordance with the research needs of Annexes 2, 12 and 14;
- f) Determine the pollutant exchanges between the Areas of Concern and the open lakes including cause-effect inter-relationships among nutrients, productivity, sediments, pollutants, biota and ecosystem health, and to develop in-situ chemical, physical and biological remedial options in accordance with Annexes 2, 12, 14, and sub-paragraph 1(f) of Annex 3;
- g) Determine the aquatic effects of varying lake levels in relation to pollution sources, particularly respecting the conservation of wetlands and the fate and effects of pollutants in the Great Lakes Basin Ecosystem in accordance with Annexes 2, 11, 12, 13, 15, and 16;
- h) Determine the ecotoxicity and toxicity effects of pollutants in the development of water quality objectives in accordance with Annex 1;
- i) Determine the impact of water quality and the introduction of non-native species on fish and wildlife population and habitats in order to develop feasible options for their recovery, restoration or enhancement in accordance with sub-paragraph 1(a) of Article IV and Annexes 1,2,11 and 12;

- j) Encourage the development of control technologies for treatment of municipal and industrial effluents, atmospheric emissions and the disposal of wastes, including wastes deposited in landfills;
- k) Develop action levels for contamination that incorporate multi-media exposures and the interactive effects of chemicals; and
- l) Develop approaches to population-based studies to determine the long-term, lowlevel effects of toxic substances on human health.”

**15 U.S.C. § 1525--COMMERCE AND TRADE--DEPARTMENT OF COMMERCE**

“The Secretary of Commerce is authorized, upon the request of any person, firm, organization, or others, public or private, to make special studies on matters within the authority of the Department of Commerce; to prepare from its records special compilations, lists, bulletins, or reports; to perform the functions authorized by section 1152 of this title; and to furnish transcripts or copies of its studies, compilations, and other records; upon the payment of the actual or estimated cost of such special work.”