H. R. 4546

To provide for the National Oceanic and Atmospheric Administration, to authorize appropriations for the National Oceanic and Atmospheric Administration, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

JUNE 14, 2004

Mr. EHLERS introduced the following bill; which was referred to the Committee on Science, and in addition to the Committee on Resources, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned.

A BILL

To provide for the National Oceanic and Atmospheric Administration, to authorize appropriations for the National Oceanic and Atmospheric Administration, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. TABLE OF CONTENTS.

The table of contents for this Act is as follows:

1. Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

2. SECTION 1. TABLE OF CONTENTS.

3. The table of contents for this Act is as follows:

Sec. 1. Table of contents.

TITLE I—NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

Sec. 101. Short title.
Sec. 102. Definitions.
Sec. 103. National Oceanic and Atmospheric Administration.
Sec. 104. Administration leadership.
Sec. 106. Operations and services.
Sec. 107. Research and education.
Sec. 108. Science Advisory Board.
Sec. 109. Reports.
Sec. 110. Effect of Reorganization Plan.

TITLE II—AUTHORIZATION OF APPROPRIATIONS

Sec. 201. Short title.

TITLE III—COASTAL OCEAN SCIENCE PROGRAM

Sec. 301. Short title.
Sec. 302. Coastal Ocean Science Program.

TITLE IV—MARINE RESEARCH

Sec. 401. Short title.
Sec. 402. Purposes.
Sec. 403. Interagency marine research program.
Sec. 405. Authorization of appropriations.

TITLE V—OCEAN AND COASTAL OBSERVATION SYSTEMS

Sec. 501. Short title.
Sec. 502. Purposes.
Sec. 503. Integrated ocean and coastal observing system.
Sec. 504. Interagency financing.
Sec. 505. Great Lakes.
Sec. 506. Authorization of appropriations.

TITLE VI—ABRUPT CLIMATE CHANGE

Sec. 601. Short title.
Sec. 602. Abrupt climate change research program.
Sec. 603. Authorization of appropriations.

TITLE VII—UNITED STATES WEATHER RESEARCH PROGRAM

Sec. 701. Short title.
Sec. 702. Program focus.
Sec. 703. Program research priorities.
Sec. 704. Interagency planning and process.
Sec. 705. Reporting requirements.
Sec. 706. Authorization of appropriations.
TITLE I—NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

SEC. 101. SHORT TITLE.
This title may be cited as the “National Oceanic and Atmospheric Administration Act”.

SEC. 102. DEFINITIONS.
In this title:
(1) The term “Administration” means the National Oceanic and Atmospheric Administration.
(2) The term “Secretary” means the Secretary of Commerce.
(3) The term “Administrator” means the Administrator of the National Oceanic and Atmospheric Administration.

SEC. 103. NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION.
(a) IN GENERAL.—There shall be in the Department of Commerce an agency known as the National Oceanic and Atmospheric Administration.
(b) MISSION.—The mission of the Administration is to understand and predict changes in the Earth’s ocean and atmosphere and the effects of such changes on the land environment, to conserve and manage coastal, ocean, and Great Lakes ecosystems to meet national economic,
social, and environmental needs, and to educate the public about these topics.

(c) FUNCTIONS.—The functions of the Administration shall include—

(1) collecting, through observation and other means, communicating, analyzing, processing, providing, and disseminating comprehensive scientific data and information about weather and climate, solar and geophysical events on the Sun and in the space environment, and about the coasts, oceans, Great Lakes, and upper reaches of estuaries;

(2) operating and maintaining a system for the storage, retrieval, and dissemination of data relating to weather and climate, solar and geophysical events on the Sun and in the space environment, and about the coasts, oceans, Great Lakes, and upper reaches of estuaries;

(3) conducting and supporting basic and applied research and development of technology as may be necessary to carry out the functions described in this subsection;

(4) issuing weather, water, climate, and space weather forecasts and warnings;
(5) coordinating efforts of Federal agencies in support of national and international programs with respect to meteorological services;

(6) coordinating weather research activities of Federal agencies, as provided by law;

(7) understanding the science of Earth’s climate and related systems, and undertaking research, development, and demonstration to enhance society’s ability to plan and respond to climate variability and change;

(8) protecting, restoring, and managing the use of the coasts, oceans, and Great Lakes through ecosystem-based research, development, demonstration, and management;

(9) coordinating efforts of Federal agencies in support of national and international programs with respect to integrated Earth observing systems;

(10) administering public outreach and education programs and services to increase scientific and environmental literacy about weather and climate, solar and geophysical events on the Sun and in the space environment, and the coasts, oceans, Great Lakes, and upper reaches of estuaries;

(11) cooperating, in consultation with the Secretary of State, with international organizations and
scientists in bilateral and multilateral research, development, conservation, and service programs related to coastal, ocean, and Great Lakes issues; and

(12) any other function assigned to the Administration by law.

SEC. 104. ADMINISTRATION LEADERSHIP.

(a) Administrator.—

(1) In general.—There shall be, as the Administrator of the Administration, an Under Secretary of Commerce for Oceans and Atmosphere. The Administrator shall be appointed by the President, by and with the advice and consent of the Senate. The Administrator shall be paid at the rate of basic pay for level III of the Executive Schedule.

(2) Functions.—The Administrator shall perform such functions and exercise such powers with respect to the Administration as the Secretary may prescribe, including—

(A) general management;

(B) policy development and guidance;

(C) budget formulation, guidance, and execution; and

(D) serving as the Department of Commerce official for all ocean and atmosphere issues with other elements of the Department of
Commerce and with other Federal agencies, State, tribal, and local governments, and the public.

(3) Delegation of Authority.—The Administrator may, except as otherwise prohibited by law—

(A) delegate any functions, powers, or duties of the Administrator to such officers and employees of the Administration as the Administrator may designate; and

(B) authorize such successive redelegations of such functions, powers, or duties within the Administration as the Administrator considers necessary or appropriate.

(b) Assistant Secretary for Oceans and Atmosphere.—

(1) In General.—There shall be, as Deputy Administrator of the Administration, an Assistant Secretary of Commerce for Oceans and Atmosphere. The Assistant Secretary shall be appointed by the President, by and with the advice and consent of the Senate. The Assistant Secretary shall be the Administrator’s first assistant for purposes of subchapter III of chapter 33 of title 5, United States Code. The
Assistant Secretary shall be paid at the rate of basic pay for level IV of the Executive Schedule.

(2) FUNCTIONS.—The Assistant Secretary shall perform such functions and exercise such powers as the Secretary or Administrator may prescribe and shall act as Administrator during the absence or disability of the Administrator or in the event of a vacancy in the office of Administrator.

(e) DEPUTY UNDER SECRETARY FOR OCEANS AND ATMOSPHERE.—

(1) IN GENERAL.—There shall be in the Administration a Deputy Under Secretary for Oceans and Atmosphere. The Deputy Under Secretary shall be appointed by the Secretary. The position of Deputy Under Secretary shall be a Senior Executive Service position authorized under section 3133 of title 5, United States Code.

(2) FUNCTIONS.—The Deputy Under Secretary—

(A) shall serve as an advisor to the Administrator on all program and policy issues;

(B) shall ensure the timely and effective implementation of Administration policies and objectives;
(C) in the absence or disability of the Assistant Secretary, or in the event of a vacancy in such position, shall act in that position; and

(D) shall perform such other duties as the Secretary or Administrator shall prescribe.

(d) Deputy Assistant Secretary for Oceans and Atmosphere.—

(1) In general.—There shall be in the Administration a Deputy Assistant Secretary for Oceans and Atmosphere. The Deputy Assistant Secretary for Oceans and Atmosphere shall be appointed by the Secretary. The position of Deputy Assistant Secretary for Oceans and Atmosphere shall be a Senior Executive Service position authorized under section 3133 of title 5, United States Code.

(2) Functions.—The Deputy Assistant Secretary for Oceans and Atmosphere—

(A) shall serve as an advisor to the Administrator on program and policy issues related to environmental policy, strategic planning, and program analysis;

(B) shall ensure the timely and effective implementation of Administration policies and objectives related to environmental policy, strategic planning, and program analysis; and
(C) shall perform such other duties as the Secretary or Administrator shall prescribe.

(e) DEPUTY ASSISTANT SECRETARY FOR INTERNATIONAL AFFAIRS.—

(1) IN GENERAL.—There shall be in the Administration a Deputy Assistant Secretary for International Affairs. The Deputy Assistant Secretary for International Affairs shall be appointed by the Secretary. The position of Deputy Assistant Secretary for International Affairs shall be a Senior Executive Service position authorized under section 3133 of title 5, United States Code.

(2) FUNCTIONS.—The Deputy Assistant Secretary for International Affairs—

(A) shall serve as an advisor to the Administrator on program and policy issues related to coordination of United States policy with respect to international oceanic and atmospheric matters, and shall focus on international environmental issues critical to the United States;

(B) shall participate in international negotiations concerning oceanic and atmospheric matters; and

(C) shall perform such other duties as the Secretary or Administrator shall prescribe.
(f) Deputy Assistant Secretary for Science and Technology.—

(1) In general.—There shall be in the Administration a Deputy Assistant Secretary for Science and Technology, who shall coordinate and oversee the science and technology activities of the Administration and ensure that Administration decisions are informed by the results of appropriate and relevant research. The Deputy Assistant Secretary for Science and Technology shall be appointed by the Secretary. The position of Deputy Assistant Secretary for Science and Technology shall be a Senior Executive Service career reserved position as defined in section 3132(a)(8) of title 5, United States Code.

(2) Functions.—The Deputy Assistant Secretary for Science and Technology shall—

(A) coordinate research and development activities across the Administration, including coordination of research and development budgets;

(B) advise the Administrator on how programs can be transitioned from research to operational use;

(C) provide advice to the Administrator regarding science and technology issues and their
relationship to Administration policies, procedures, and decisions;

(D) participate in developing the Administration’s strategic plans and policies and review the science and technology aspects of those plans and policies;

(E) develop and oversee guidelines for the dissemination of research and development results conducted, sponsored, or cited by the Administration to the public;

(F) develop and oversee guidelines for peer review of science and technology research sponsored by the Administration;

(G) oversee implementation of the strategic plan for science and technology research, development, and demonstration required under section 109(b);

(H) oversee management of research laboratories in the Administration; and

(I) perform such other duties as the Secretary or Administrator shall prescribe.

(3) QUALIFICATIONS.—An individual appointed under paragraph (1) shall be a person who has an outstanding science and technology background, in-
including research accomplishments, scientific reputation, and public policy experience.

(4) CONSULTATION.—Before appointing an individual under paragraph (1), the Secretary shall consult with the National Academy of Sciences, the Science Advisory Board of the Administration, and other appropriate scientific organizations.

(g) GENERAL COUNSEL.—

(1) IN GENERAL.—There shall be in the Administration a General Counsel. The General Counsel shall be appointed by the Secretary. The General Counsel shall be paid at the rate of basic pay for level V of the Executive Schedule.

(2) FUNCTIONS.—The General Counsel—

(A) shall serve as the chief legal officer of the Administration for all legal matters that arise in connection with the conduct of the functions of the Administration; and

(B) shall perform such other functions and exercise such powers as the Secretary or Administrator may prescribe.

(h) CONTINUATION OF SERVICE.—Any individual serving on the date of enactment of this Act in a position provided for in this Act may continue to serve in that position until a successor is appointed under this Act. Nothing
in this title shall be construed to require the appointment
of a successor under this Act sooner than would have been
required under law as in effect before the date of enact-
ment of this Act.

SEC. 105. NATIONAL WEATHER SERVICE.

(a) In General.—The Secretary shall maintain
within the Administration a National Weather Service.

(b) Mission.—The mission of the National Weather
Service is to provide weather, water, and climate forecasts
and warnings for the United States, its territories, adja-
cent waters, and ocean areas for the protection of life and
property and the enhancement of the national economy.

(c) Goals.—The goals of the National Weather Serv-
ice shall include—

(1) to provide timely and accurate weather,
water, climate, and space weather forecasts; and

(2) to provide timely and accurate warnings of
weather, water, and climate natural hazards, and of
space weather hazards.

(d) Functions.—The functions of the National
Weather Service shall include—

(1) maintaining a network of regional and local
weather forecast offices;

(2) maintaining a network of observation sys-
tems to collect weather and climate data;
(3) operating national centers to deliver guidance, forecasts, warnings, and analysis about weather, water, climate, and space weather phenomena for the Administration and the public;

(4) conducting and supporting applied research to facilitate the rapid incorporation of weather and climate science advances into operational tools; and

(5) such other functions to serve the mission of the National Weather Service as the Administrator may prescribe.

(e) PUBLIC-PRIVATE PARTNERSHIPS.—Not less than once every 5 years, the Secretary shall develop and submit to Congress a policy that defines processes for making decisions about the roles of the National Weather Service and the private sector in providing weather and climate related products, technologies, and services. The first such policy shall be completed not less than 12 months after the date of enactment of this Act. At least 90 days before submitting the policy to Congress, the Secretary shall publish the policy in the Federal Register for a public comment period of not less than 60 days.

SEC. 106. OPERATIONS AND SERVICES.

(a) IN GENERAL.—The Secretary shall maintain within the Administration operational and service programs to support routine data collection and direct serv-
ices and products regarding satellite, observations, and coastal, ocean, and Great Lakes information.

(b) FUNCTIONS.—To support the mission described in section 102(b), and in addition to the functions described in section 102(c), the operations and service functions of the Administration shall include—

(1) acquiring, managing, and operating coastal, ocean, and Great Lakes observing systems;

(2) ensuring the availability of a global Earth-observing system, integrating remote sensing and in situ assets that provide critical data needed to support the mission of the Administration, and providing that data to decisionmakers and the public;

(3) developing, acquiring, and managing operational environmental satellite constellations and associated ground control and data acquisition facilities to support the mission of the Administration;

(4) managing and distributing atmospheric, geophysical, and marine data and data products for the Administration through national environmental data centers;

(5) providing for long-term stewardship of environmental data, products, and information via data processing, storage, and archive facilities;
(6) promoting widespread availability of environmental data and information through full and open access and exchange to the greatest extent possible;

(7) issuing licenses for private remote sensing space systems under the Land Remote Sensing Policy Act of 1992;

(8) administering a national water level observation network, which shall include monitoring of the Great Lakes;

(9) providing charts and other information for safe navigation of the oceans and inland waters, as provided by law; and

(10) such other functions to serve the operations and services mission of the Administration as the Administrator may prescribe.

SEC. 107. RESEARCH AND EDUCATION.

(a) IN GENERAL.—The Secretary shall maintain within the Administration programs to conduct and support research and education and the development of technologies relating to weather, climate, and the coasts, oceans, and Great Lakes.

(b) FUNCTIONS.—To support the mission described in section 102(b), and in addition to the functions de-
scribed in section 102(c), the research and education func-
tions of the Administration shall include—

(1) conducting and supporting research and de-
velopment of technology to improve the Administra-
tion’s capabilities in collecting, through observation
and otherwise, communicating, analyzing, proc-
essing, providing, and disseminating comprehensive
scientific data and information about weather, cli-
mate, and the coasts, oceans, and Great Lakes;

(2) improving environmental prediction and
management capabilities through ecosystem-based
research and development;

(3) improving knowledge of Earth’s climate and
related systems through research and observation for
decision support;

(4) reducing uncertainty in projections of how
the Earth’s climate and related systems may change
in the future;

(5) fostering the public’s ability to understand
and integrate scientific information into consider-
ations of national environmental issues through edu-
cation and public outreach activities;

(6) administering the National Sea Grant Col-
leage Program Act;
(7) conducting and supporting research and development of technology for exploration of the oceans;

(8) maintaining a system of laboratories to perform the functions described in this subsection;

(9) supporting extramural peer-reviewed competitive grant programs to assist the Administration in performing the functions described in this subsection; and

(10) such other functions to serve the research and education mission of the Administration as the Administrator may prescribe.

SEC. 108. SCIENCE ADVISORY BOARD.

(a) In General.—There shall be within the Administration a Science Advisory Board, which shall provide such scientific advice as may be requested by the Administrator, the Committee on Commerce, Science and Transportation of the Senate, or the Committee on Science or Resources of the House of Representatives.

(b) Purpose.—The purpose of the Science Advisory Board is to advise the Administrator and Congress on long-range and short-range strategies for research, education, and the application of science to resource management and environmental assessment and prediction.

(c) Members.—
(1) IN GENERAL.—The Science Advisory Board shall consist of not more than 15 members appointed by the Administrator to ensure a balanced representation among preeminent scientists, engineers, educators, industry, and science policy experts reflecting the full breadth of the Administration’s areas of responsibility.

(2) TERMS OF SERVICE.—Members shall be appointed for 3-year terms, renewable once, and shall serve at the discretion of the Administrator. An individual serving a term as a member of the Science Advisory Board on the date of enactment of this Act may complete that term, and may be reappointed once for another term of 3 years unless the term being served on such date of enactment is the second term served by that individual. Vacancy appointments shall be for the remainder of the unexpired term of the vacancy, and an individual so appointed may subsequently be appointed for 2 full 3-year terms if the remainder of the unexpired term is less than one year.

(3) CHAIRPERSON.—The Administrator shall designate a chairperson from among the members of the Board.
(4) **APPOINTMENT.**—Members of the Science Advisory Board shall be appointed as special Government employees, within the meaning given such term in section 202(a) of title 18, United States Code.

(5) **CRITERIA FOR SELECTION.**—The Administrator shall develop and apply standard criteria, in accordance with applicable Department of Commerce guidance, for the selection of members of the Science Advisory Board.

(d) **ADMINISTRATIVE PROVISIONS.**—

(1) **REPORTING.**—The Science Advisory Board shall report to the Administrator and the appropriate requesting party.

(2) **ADMINISTRATIVE SUPPORT.**—The Administrator shall provide administrative support to the Science Advisory Board.

(3) **MEETINGS.**—The Science Advisory Board shall meet at least twice each year, and at other times at the call of the Administrator or the Chairperson.

(4) **COMPENSATION AND EXPENSES.**—A member of the Science Advisory Board shall not be compensated for service on such board, but upon request by the member may be allowed travel expenses, in-
cluding per diem in lieu of subsistence, in accordance with subchapter I of chapter 57 of title 5, United States Code.

(5) SUBCOMMITTEES.—The Science Advisory Board may establish such subcommittees of its members as may be necessary. The Science Advisory Board may establish task forces and working groups consisting of Board members and outside experts as may be necessary.

(e) EXPIRATION.—Section 14 of the Federal Advisory Committee Act (5 U.S.C. App.) shall not apply to the Science Advisory Board.

SEC. 109. REPORTS.

(a) REPORT ON DATA MANAGEMENT, ARCHIVAL, AND DISTRIBUTION.—Not later than 1 year after the date of enactment of this Act the Secretary shall develop and transmit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science of the House of Representatives a report on the environmental data and information systems of the Administration. The report shall include—

(1) an assessment of the adequacy of the environmental data and information systems of the Administration to—
(A) provide adequate capacity to manage, archive and disseminate environmental information collected and processed, or expected to be collected and processed, by the Administration and other appropriate departments and agencies;

(B) establish, develop, and maintain information bases, including necessary management systems, which will provide for consistent, efficient, and compatible transfer and use of data;

(C) develop effective interfaces among the environmental data and information systems of the Administration and other appropriate departments and agencies;

(D) develop and use nationally accepted formats and standards for data collected by various national and international sources; and

(E) integrate and interpret data from different sources to produce information that can be used by decisionmakers in developing policies that effectively respond to national and global environmental concerns; and

(2) a strategic plan to—

(A) set forth modernization and improvement objectives for an integrated national envi-
ronmental data access and archive system for
the 10 year period beginning with the year in
which the plan is transmitted, including facility
requirements and critical new technology com-
ponents that would be necessary to meet the ob-
jectives set forth;

(B) propose specific Administration pro-
grams and activities for implementing the plan;

(C) identify the data and information man-
agement, archival, and distribution responsibil-
ities of the Administration with respect to other
Federal departments and agencies and inter-
national organizations; and

(D) provide an implementation schedule
and estimate funding levels necessary to achieve
modernization and improvement objectives.

(b) Strategic Plan for Scientific Research.—
Not later than 1 year after the date of enactment of this
Act the Secretary shall develop and transmit to the Com-
mittee on Commerce, Science, and Transportation of the
Senate and the Committee on Science of the House of
Representatives a strategic plan for science and tech-
nology research, development, and demonstration at the
Administration. The plan shall include an assessment of
the science and technology needs of the Administration
and a strategic plan for coordinating research, development, and demonstration activities across the Administration to effectively meet those needs.

**SEC. 110. EFFECT OF REORGANIZATION PLAN.**

Reorganization Plan No. 4 of 1970 shall have no further force and effect.

**TITLE II—AUTHORIZATION OF APPROPRIATIONS**

**SEC. 201. SHORT TITLE.**

This title may be cited as the “National Oceanic and Atmospheric Administration Authorization Act of 2004”.

**SEC. 202. AUTHORIZATION OF APPROPRIATIONS.**

There are authorized to be appropriated to the Administrator—

(1) for Program Support—

(A) $300,000,000 for fiscal year 2005;

(B) $306,000,000 for fiscal year 2006; and

(C) $312,000,000 for fiscal year 2007;

(2) for the National Ocean Service—

(A) $490,000,000 for fiscal year 2005;

(B) $500,000,000 for fiscal year 2006; and

(C) $510,000,000 for fiscal year 2007;

(3) for the Office of Oceanic and Atmospheric Research—

(A) $414,000,000 for fiscal year 2005;
(B) $422,000,000 for fiscal year 2006; and
(C) $430,000,000 for fiscal year 2007;

(4) for the National Weather Service—
(A) $836,000,000 for fiscal year 2005;
(B) $853,000,000 for fiscal year 2006; and
(C) $870,000,000 for fiscal year 2007;

(5) for the National Environmental Satellite Data and Information Service—
(A) $897,000,000 for fiscal year 2005;
(B) $915,000,000 for fiscal year 2006; and
(C) $933,000,000 for fiscal year 2007; and

(6) for the Office of Program Planning and Integration—
(A) $2,000,000 for fiscal year 2005;
(B) $2,000,000 for fiscal year 2006; and
(C) $2,000,000 for fiscal year 2007.

TITLE III—COASTAL OCEAN SCIENCE PROGRAM

SEC. 301. SHORT TITLE.
This title may be cited as the “Coastal Ocean Science Program Act of 2004”.

SEC. 302. COASTAL OCEAN SCIENCE PROGRAM.
Section 201(c) of the National Oceanic and Atmospheric Administration Authorization Act of 1992 is amended to read as follows:
“(c) COASTAL OCEAN SCIENCE PROGRAM.—

“(1) IN GENERAL.—There shall be in the National Oceanic and Atmospheric Administration a Coastal Ocean Science Program that supports Great Lakes, estuarine, and coastal ocean research and assessment through competitive, peer-reviewed research programs.

“(2) PROGRAM ELEMENTS.—The Coastal Ocean Science Program shall augment and integrate existing research capabilities of the National Oceanic and Atmospheric Administration, other Federal agencies, and the academic community. Research shall be conducted to improve predictions of ecosystem trends in coastal, ocean, and Great Lakes ecosystems, and upper reaches of estuaries; to better conserve and manage coastal, ocean, and Great Lakes ecosystems; to improve predictions of effects of coastal and Great Lakes pollution to help correct and prevent environmental degradation; to improve understanding and characterization of the role oceans play in global climate and environmental analysis; and to improve predictions of coastal hazards to protect human life, personal property, and ecosystem function.
“(3) Authorization of Appropriations.—

There are authorized to be appropriated to the Secretary of Commerce for implementing the Coastal Ocean Science Program such sums as may be necessary for each of fiscal years 2005 through 2008.”.

TITLE IV—MARINE RESEARCH

SEC. 401. SHORT TITLE.

This title may be cited as the “Marine Research Act”.

SEC. 402. PURPOSES.

The purposes of this title are to provide for—

(1) Presidential support and coordination of interagency marine research programs; and

(2) development and coordination of a comprehensive and integrated United States ocean, coastal, and Great Lakes research and monitoring program that will assist this Nation and the world to understand, use, and respond to the interactions of humans and the marine environment.

SEC. 403. INTERAGENCY MARINE RESEARCH PROGRAM.

(a) Coordination.—The President, through the National Science and Technology Council, shall coordinate and support a national research program to improve understanding of the interactions of humans and the marine environment.
(b) IMPLEMENTATION PLAN.—Within 1 year after the date of enactment of this Act, the National Science and Technology Council, through the Director of the Office of Science and Technology Policy, shall develop and submit to the Congress a plan for coordinated Federal activities under the program. Nothing in this subsection is intended to duplicate or supersede the activities of the Inter-Agency Task Force on Harmful Algal Blooms and Hypoxia established under section 603 of the Harmful Algal Bloom and Hypoxia Research and Control Act of 1998 (16 U.S.C. 1451 note). In developing the plan, the National Science and Technology Council shall consult with the Inter-Agency Task Force on Harmful Algal Blooms and Hypoxia. Such plan shall build on and complement the ongoing activities of the National Oceanic and Atmospheric Administration, the National Science Foundation, and other departments and agencies, and shall—

(1) establish, for the 10-year period beginning in the year it is submitted, the goals and priorities for Federal research which most effectively advance scientific understanding of the connections between humans and the marine environment, provide usable information for the protection of human life, and use the biological potential of the oceans for development of new products;
(2) describe specific activities required to achieve such goals and priorities, including the funding of competitive research grants, ocean and coastal observations, training and support for scientists, and participation in international research efforts;

(3) identify and address, as appropriate, relevant programs and activities of the Federal agencies and departments that would contribute to the program;

(4) consider and use, as appropriate, reports and studies conducted by Federal agencies and departments, the National Research Council, the Ocean Research Advisory Panel, the Commission on Ocean Policy, and other expert scientific bodies; and

(5) estimate Federal funding for research activities to be conducted under the program.

(c) PROGRAM SCOPE.—The program may include the following activities related to the interaction of humans and the marine environment:

(1) Interdisciplinary research among the ocean and biological sciences, and coordinated research and activities to improve understanding of processes within the ocean that may affect human life and to explore the potential contribution of marine organisms to medicine and research.
(2) Coordination with the National Ocean Research Leadership Council (10 U.S.C. 7902(a)) to ensure that any integrated ocean and coastal observing system provides information necessary to support the program described in this section, including detection of contaminants in marine waters and seafood.

(3) Development through partnerships among Federal agencies, States, or academic institutions of new technologies and approaches for detecting and reducing hazards to human life from ocean sources and to strengthen understanding of the value of marine biodiversity.

(4) Support for scholars, trainees, and education opportunities that encourage an interdisciplinary and international approach to exploring the diversity of life in the oceans.

SEC. 404. NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION MARINE RESEARCH INITIATIVE.

(a) Establishment.—As part of the interagency program planned and coordinated under section 403, the Secretary of Commerce is authorized to establish a Marine Research Initiative to coordinate and implement research and activities of the National Oceanic and Atmospheric
Administration related to the program. The Marine Research Initiative is authorized to provide support for—

(1) centralized program and research coordination;

(2) one or more National Oceanic and Atmospheric Administration national centers of excellence;

(3) research grants; and

(4) distinguished scholars and traineeships.

(b) NATIONAL CENTERS.—(1) The Secretary is authorized to identify and provide financial support for, through a competitive process to develop within the National Oceanic and Atmospheric Administration, one or more centers of excellence that strengthen the capabilities of the National Oceanic and Atmospheric Administration to carry out its programs and activities related to the Marine Research Initiative.

(2) The center or centers shall focus on areas related to agency missions, including use of marine organisms as indicators for marine environmental health, ocean pollutants, marine toxins and pathogens, harmful algal blooms, hypoxia, seafood testing, and biology and pathobiology of marine mammals, and on disciplines including marine genomics, marine environmental microbiology, and ecological chemistry.
(3) In selecting centers for funding, the Secretary shall give priority to proposals with strong interdisciplinary scientific merit that encourage educational opportunities and provide for effective partnerships among the National Oceanic and Atmospheric Administration, other Federal entities, and State, academic, and industry participants.

(c) Extramural Research Grants.—(1) The Secretary is authorized to provide grants of financial assistance to the scientific community for critical research and projects that explore the interaction of humans and the marine environment and that complement or strengthen programs and activities of the National Oceanic and Atmospheric Administration. Officers and employees of Federal agencies may collaborate with, and participate in, such research and projects to the extent requested by the grant recipient.

(2) Grants under this subsection shall be awarded through a competitive peer-reviewed process that may be conducted jointly with other agencies participating in the interagency program established in section 403.

(d) Distinguished Scholars and Traineeships.—(1) The Secretary of Commerce is authorized to designate and provide financial assistance to support distinguished scholars from academic institutions,
industry, State governments, or other Federal agencies for collaborative work with National Oceanic and Atmospheric Administration scientists and facilities.

(2) The Secretary of Commerce is authorized to establish a program to provide traineeships, training, and experience to predoctoral and postdoctoral students and to scientists at the beginning of their careers who are interested in research on the interaction of humans and the marine environment conducted under the National Oceanic and Atmospheric Administration initiative.

SEC. 405. AUTHORIZATION OF APPROPRIATIONS.

There are authorized to be appropriated to the Secretary of Commerce to carry out the National Oceanic and Atmospheric Administration Marine Research Initiative established under section 404, $8,000,000 for each of fiscal years 2005 through 2008. Not less than 50 percent of the amounts appropriated to carry out the Initiative for each fiscal year shall be utilized to support the programs described in subsections (c) and (d) of section 404.

TITLE V—OCEAN AND COASTAL OBSERVATION SYSTEMS

SEC. 501. SHORT TITLE.

This title may be cited as the “Ocean and Coastal Observation Systems Act”.

•HR 4546 IH
SEC. 502. PURPOSES.

The purposes of this title are to provide for—

(1) development and maintenance of an inte-

grated system that provides for sustained ocean and

coastal observations from in situ, remote, and vessel

platforms, and that promotes improved comprehen-

sive scientific data and information about the ocean

and coastal environment; and

(2) implementation of a data and information

system required by all components of an integrated

ocean and coastal observing system and related re-

search.

SEC. 503. INTEGRATED OCEAN AND COASTAL OBSERVING

SYSTEM.

(a) ESTABLISHMENT.—The President, through the

National Oceanic and Atmospheric Administration, shall

establish and maintain an integrated system of marine

monitoring, data communication and management, data

analysis, and research designed to provide data and infor-

mation for the rapid and timely detection and prediction

of changes occurring in the ocean and coastal environment

that impact the Nation’s social, economic, and ecological

systems. Such an integrated ocean and coastal observing

system shall provide for long-term and continuous obser-

vations of the oceans and coasts for the following pur-

poses:
(1) Improving weather forecasts and public warnings of natural disasters and coastal hazards and mitigating such disasters and hazards.

(2) Understanding, assessing, and responding to human-induced and natural processes of global change.

(3) Conducting focused research to enhance the national understanding of coastal and global ocean systems.

(4) Providing information that contributes to public awareness of the condition and importance of the oceans.

(b) FUNCTIONS.—In carrying out responsibilities under this section, the National Oceanic and Atmospheric Administration shall—

(1) serve as the lead entity providing oversight of Federal ocean and coastal observing requirements and activities;

(2) adopt and maintain plans for the design, operation, and improvement of such system;

(3) coordinate and administer a program of re-search and development to support the operation of an integrated ocean and coastal observing system and advance the understanding of the oceans;
(4) establish a joint operations center to be maintained in conjunction with other Federal agencies;

(5) provide, as appropriate, support for and representation on United States delegations to international meetings on ocean and coastal observing programs and in consultation with the Secretary of State to coordinate relevant Federal activities with those of other nations;

(6) promote collaboration among regional coastal observing systems established pursuant to subsection (d);

(7) prepare annual and long-term plans for the design and implementation of an integrated ocean and coastal observing system, including the regional coastal observing systems and taking into account the science and technology advances considered ready for operational status;

(8) identify requirements for a common set of measurements to be collected and distributed;

(9) establish standards and protocols for quality control and data management and communications, in consultation with the Joint Operations Center established pursuant to subsection (c); and
(10) work with regional coastal observing entities, the National Sea Grant College Program, and other bodies as needed to assess user needs, develop data products, make effective use of existing capabilities, and incorporate new technologies, as appropriate.

(c) JOINT OPERATIONS CENTER.—The Administrator of the National Oceanic and Atmospheric Administration, in conjunction with the Administrator of the National Aeronautics and Space Administration, the Director of the National Science Foundation, the Under Secretary for Science and Technology of the Department of Homeland Security, and any other Federal agent the President considers appropriate, shall operate and maintain a joint operations center—

(1) to acquire, integrate, and deploy required technologies and provide support for an ocean and coastal observing system based on annual long-term plans, developed by the National Oceanic and Atmospheric Administration;

(2) to implement standards and protocols for quality control and data management and communications;

(3) to migrate science and technology advancements from research and development to operational
deployment based on the annual and long-term plans;

(4) to integrate and extend existing programs into an operating ocean and coastal observing system based on the annual and long-term plans;

(5) to coordinate the data communication and management system; and

(6) to certify that regional coastal observing systems meet the standards established in subsection (d) and to ensure a periodic process for review and recertification of the regional coastal observing systems.

(d) REGIONAL COASTAL OBSERVING SYSTEMS.—

(1) IN GENERAL.—The Administrator of the National Oceanic and Atmospheric Administration, through the Joint Operations Center, shall work with representatives of entities in each region that provide ocean data and information to users to form regional associations. The regional associations shall be responsible for the development and operation of observing systems in the coastal regions extending to the seaward boundary of the United States Exclusive Economic Zone, including the Great Lakes. Participation in a regional association may consist of legal entities, including research institutions, institu-
tions of higher learning, for-profit corporations, non-profit corporations, State, local, and regional agencies, and consortia of 2 or more such institutions or organizations, that—

(A) have demonstrated an organizational structure capable of supporting and integrating all aspects of a coastal ocean observing system within a region or subregion; and

(B) have prepared an acceptable business plan, including research components, and gained documented acceptance of their intended regional or subregional jurisdiction by users and other parties of interest within the region or subregion with the objectives of—

(i) delivering an integrated and sustained system that meets national goals;

(ii) incorporating into the system existing and appropriate regional observations collected by Federal, State, regional, or local agencies;

(iii) responding to the needs of the users, including the public, within the region;

(iv) maintaining sustained, 24-hour-a-day operations and disseminating observa-
tions in a manner that is routine, predictable and, if necessary, in real-time or near real-time;

(v) providing services that include the collection and dissemination of data and data management for timely access to data and information;

(vi) creating appropriate products that are delivered in a timely fashion to the public and others who use, or are affected by, the oceans;

(vii) providing free and open access to the data collected with financial assistance under this title; and

(viii) adhering to national standards and protocols to ensure that data and related products can be fully exchanged among all of the regional coastal systems and will be accessible to any user in any part of the Nation.

(2) CIVIL LIABILITY.—For purposes of determining the civil liability under section 2671 of title 28, United States Code, any regional observing system and any employee thereof that is designated part of a regional association under this subsection
shall be deemed to be an instrumentality of the United States with respect to any act or omission committed by any such system or any employee thereof in fulfilling the purposes of this title.

(c) PILOT PROJECTS.—

(1) IN GENERAL.—The Administrator, in consultation with the Joint Operations Center, may initiate pilot projects. A pilot project is an organized, planned set of activities designed to provide an evaluation of technology, methods, or concepts within a defined schedule and having the goal of advancing the development of the sustained, integrated ocean observing system. The pilot projects shall—

(A) develop protocols for coordinated implementation of the full system;

(B) design and implement regional coastal ocean observing systems;

(C) establish mechanisms for the exchange of data between and among regions and Federal agencies;

(D) specify products and services and related requirements for observations, data management, and analysis in collaboration with user groups; and
(E) develop and test new technologies and techniques to more effectively meet the needs of users of the system.

(2) Infrastructure Capital Projects.—The pilot projects shall include one or more projects to capitalize the infrastructure for the collection, management, analysis, and distribution of data and one or more projects where the basic infrastructure and institutional mechanisms already exist for ongoing coastal observations, to fund the operations necessary for the collection of the common set of observations.

SEC. 504. INTERAGENCY FINANCING.

The departments and agencies represented on the joint operations center are authorized to participate in interagency financing and share, transfer, receive, and spend funds appropriated to any member of the joint operations center for the purposes of carrying out any administrative or programmatic project or activity under this title.

SEC. 505. GREAT LAKES.

Provisions of this title relating to ocean and coastal areas shall also apply to the Great Lakes.

SEC. 506. AUTHORIZATION OF APPROPRIATIONS.

(a) Observing System Authorization.—For development and implementation of an integrated ocean and
coastal observing system under section 503, including financial assistance to regional coastal ocean observing systems and in addition to any amounts previously authorized, there are authorized to be appropriated to—

(1) the National Oceanic and Atmospheric Administration, such sums as may be necessary;

(2) the National Science Foundation, such sums as may be necessary;

(3) the National Aeronautics and Space Administration, such sums as may be necessary; and

(4) other Federal agencies with operational coastal or ocean monitoring systems or which provide funds to States for such systems, such sums as may be necessary.

(b) REGIONAL COASTAL OBSERVING SYSTEMS.—The Administrator of the National Oceanic and Atmospheric Administration shall make at least 51 percent of the funds appropriated pursuant to subsection (a)(1) available as grants for the development and implementation of the regional coastal observing systems based on the plans adopted by the Council, which may be used to leverage non-Federal funds.
TITLE VI—ABRUPT CLIMATE CHANGE

SEC. 601. SHORT TITLE.
This title may be cited as the “Abrupt Climate Change Research Act of 2004”.

SEC. 602. ABRUPT CLIMATE CHANGE RESEARCH PROGRAM.
(a) ESTABLISHMENT OF PROGRAM.—The Secretary of Commerce shall establish within the National Oceanic and Atmospheric Administration, and shall carry out, a program of scientific research on abrupt climate change.

(b) PURPOSES OF PROGRAM.—The purposes of the program are as follows:

(1) To develop a global array of terrestrial and oceanographic indicators of paleoclimate in order to sufficiently identify and describe past instances of abrupt climate change.

(2) To improve understanding of thresholds and nonlinearities in geophysical systems related to the mechanisms of abrupt climate change.

(3) To incorporate such mechanisms into advanced geophysical models of climate change.

(4) To test the output of such models against an improved global array of records of past abrupt climate changes.
(c) ABRUPT CLIMATE CHANGE DEFINED.—In this section, the term “abrupt climate change” means a change in the climate that occurs so rapidly or unexpectedly that human or natural systems have difficulty adapting to the climate as changed.

SEC. 603. AUTHORIZATION OF APPROPRIATIONS.

There are authorized to be appropriated to the Secretary of Commerce for such sums as may be necessary to carry out the research program required under section 602.

TITLE VII—UNITED STATES WEATHER RESEARCH PROGRAM

SEC. 701. SHORT TITLE.

This title may be cited as the “United States Weather Research Program Act of 2004”.

SEC. 702. PROGRAM FOCUS.


(1) hurricanes, floods, and heavy precipitation, including both snow and rain;

(2) building on existing investments, including those of the National Weather Service modernization
effort, to dramatically accelerate improvement in
weather forecasts;

(3) providing attention and resources in areas
where progress can be made quickly and where the
impact will be greatest;

(4) establishing goals that can be attained by
leveraging the resources of several agencies and
through the collaborative scientific efforts of the
operational and research communities in academia
and government; and

(5) making research grants to universities and
other research institutions.

SEC. 703. PROGRAM RESEARCH PRIORITIES.

The research priorities of the United States Weather
Research Program shall be in the areas of—

(1) hurricanes, to improve—

(A) landfall location forecasts; and

(B) forecasts of hurricane strength;

(2) heavy precipitation, to improve forecasts of
both winter storms and rain storms through better
prediction of timing, location, and intensity;

(3) floods, to improve—

(A) flood forecasting by coupling precipita-
tion forecasts with hydrologic prediction; and
(B) forecasting and warning systems for inland flooding related to tropical cyclones;

(4) two-to-fourteen day forecasting, to—

(A) improve short and medium range numerical weather predictions and warnings of high-impact weather events;

(B) conduct the Hemispheric Observing System Research and Predictability Experiment (THORpex) to fill observational gaps in the Northern Hemisphere; and

(C) test and evaluate advanced data assimilation techniques in global models;

(5) societal and economic impacts, to—

(A) identify methods of delivering weather information effectively and recommend ways to improve weather communications;

(B) assess social and economic impacts of adverse weather ranging from disastrous to routine;

(C) evaluate what weather information is most useful to public and private decision makers; and

(D) providing for research on societal and economic impact to ensure a connection be-
between weather research and improvement of the human condition; and

(6) testing research concepts in an environment identical to those used by operational meteorologists, to enable technology transfer to those operational meteorologists.

SEC. 704. INTERAGENCY PLANNING AND PROCESS.

The National Oceanic and Atmospheric Administration, as the lead agency of the United States Weather Research Program, shall coordinate and consult with the National Science Foundation, the National Aeronautics and Space Administration, other appropriate Federal agencies, and other appropriate entities to develop a five-year plan—

(1) describing how Federal agencies can best team with universities and other research institutions;

(2) identifying social, economic, and military needs and requirements for weather information, as well as defining the research required to meet these needs;

(3) outlining methods for dissemination of weather information to user communities; and
(4) describing best practices for transferring United States Weather Research Program research results to forecasting operations.

SEC. 705. REPORTING REQUIREMENTS.

Not later than one year after the date of the enactment of this Act, and every 5 years thereafter, the Administrator of the National Oceanic and Atmospheric Administration shall transmit to the Committee on Science of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a report which shall include—

(1) the most recent five-year plan developed or updated under section 704, including the roles and funding to be provided by various Federal agencies in achieving the objectives of the plan;

(2) a justification of any changes to the plan since the last transmittal under this section; and

(3) a detailed assessment of the extent to which the objectives of the plan have been achieved.

SEC. 706. AUTHORIZATION OF APPROPRIATIONS.

There are authorized to be appropriated to the Office of Atmospheric Research of the National Oceanic and Atmospheric Administration for carrying out this title such sums as may be necessary, of which at least 50 percent shall be for competitive, peer-reviewed grants to, or con-
tracts or cooperative agreements with, institutions of higher education (as defined in section 101 of the Higher Education Act of 1965 (20 U.S.C. 1001)).