

109TH CONGRESS  
1ST SESSION

# S. 1465

To strengthen programs relating to ocean, coastal, and Great Lakes science training by providing coordination of efforts, greater interagency cooperation, and the strengthening and expansion of related programs administered by the National Oceanic and Atmospheric Administration, and to diversify the ocean, coastal, and Great Lakes science community by attracting underrepresented groups.

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IN THE SENATE OF THE UNITED STATES

JULY 22, 2005

Mr. LAUTENBERG (for himself, Mr. INOUE, Mrs. BOXER, Mr. LEVIN, and Mr. SARBANES) introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

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## A BILL

To strengthen programs relating to ocean, coastal, and Great Lakes science training by providing coordination of efforts, greater interagency cooperation, and the strengthening and expansion of related programs administered by the National Oceanic and Atmospheric Administration, and to diversify the ocean, coastal, and Great Lakes science community by attracting underrepresented groups.

1 *Be it enacted by the Senate and House of Representa-*  
2 *tives of the United States of America in Congress assembled,*

1 **SECTION 1. SHORT TITLE; TABLE OF CONTENTS.**

2 (a) SHORT TITLE.—This Act may be cited as the  
 3 “Ocean and Coastal Literacy in Urban and other Environ-  
 4 ments”.

5 (b) TABLE OF CONTENTS.—The table of contents for  
 6 this Act is as follows:

Sec. 1. Short title; table of contents.

Sec. 2. Findings.

Sec. 3. Definitions.

TITLE I—OCEAN AND COASTAL SCIENCE EDUCATION COORDINATION

Sec. 101. National Science and Technology Council Technical Amendments.

Sec. 102. National Ocean and Coastal Science Education Task Force.

Sec. 103. Ocean and coastal science education advisory panel.

TITLE II—INTERAGENCY PROGRAMS TO ADVANCE OCEAN AND COASTAL  
 KNOWLEDGE

Sec. 201. National strategy for ocean and coastal science education.

Sec. 202. Ocean and coastal science education program.

TITLE III—NOAA OCEAN AND COASTAL SCIENCE EDUCATION PROGRAMS

Sec. 301. NOAA ocean and coastal science education programs.

Sec. 302. Amendment to the National Sea Grant College Program Act.

Sec. 303. Amendment to the Coastal Zone Management Act of 1972.

TITLE IV—AUTHORIZATIONS

Sec. 401. Authorization of appropriations.

7 **SEC. 2. FINDINGS.**

8 The Congress finds the following:

9 (1) The coastal regions and ocean waters of the  
 10 United States are vital to the Nation’s public safety,  
 11 homeland security, transportation, trade, energy pro-  
 12 duction, recreation and tourism, food production,  
 13 scientific research and education, environmental and  
 14 human health, and historical and cultural heritage.

1           (2) Development, resource extraction, and other  
2       human activities throughout watersheds, coupled  
3       with an expanding coastal population, are contrib-  
4       uting to processes of environmental change that may  
5       significantly threaten the long-term health and sus-  
6       tainability of ocean, coastal, and Great Lakes eco-  
7       systems.

8           (3) The United States Commission on Ocean  
9       Policy reports that United States high school grad-  
10      uates' scientific literacy is below the international  
11      average and finds that exciting ocean, coastal, and  
12      Great Lakes sciences and education has the poten-  
13      tial to stem the tide of science illiteracy in the Na-  
14      tion.

15          (4) Development and implementation of ocean,  
16      coastal, and Great Lakes literacy programs are es-  
17      sential to ensure a public that is fully knowledgeable  
18      about, fully informed about, and fully capable of de-  
19      cisions contributing to ocean, coastal, and Great  
20      Lakes issues.

21          (5) Development and implementation of edu-  
22      cation and training programs are essential to build  
23      a national scientific, technological, and engineering  
24      workforce fully representative of the Nation's citi-  
25      zens that meets the needs of growing ocean, coastal,

1 and Great Lakes economies and better prepares the  
2 Nation for competition in the global economy.

3 (6) Those involved in ocean, coastal, and Great  
4 Lakes policy and sciences are not fully representa-  
5 tive of the Nation's citizens, with only 10 percent of  
6 United States graduate students in marine sciences  
7 from underrepresented groups.

8 (7) A coordinated program of ocean and coastal  
9 science education would assist the Nation and the  
10 world in furthering knowledge of the ocean and the  
11 global climate system, ensuring homeland and na-  
12 tional security, developing innovative marine prod-  
13 ucts, improving weather and climate forecasts, im-  
14 proving human health, strengthening management  
15 and sustainable use of ocean and coastal resources,  
16 increasing the safety and efficiency of maritime op-  
17 erations, and protecting the environment and miti-  
18 gate man-made and natural hazards.

19 (8) Seven of the 10 most populated urban cen-  
20 ters in the United States are located along our ma-  
21 rine, estuarine, and Great Lakes coasts, and a co-  
22 ordinated program of education specifically focused  
23 on urban coastal issues, including urban stake-  
24 holders, would focus national attention on the

1 unique challenges faced by urban coastal commu-  
2 nities.

3 (9) Increased Federal cooperation and invest-  
4 ment are essential to build on ocean, coastal, and  
5 Great Lakes research and education activities that  
6 are taking place within numerous federal, state, and  
7 local agencies, academic institutions and industries  
8 and to establish new partnerships for sharing ocean,  
9 coastal, and Great Lakes science resources, intellec-  
10 tual talent, and facilities.

11 **SEC. 3. DEFINITIONS.**

12 In this Act:

13 (1) ADMINISTRATOR; ADMINISTRATION.—The  
14 terms “Administrator” and “Administration” mean  
15 the Administrator of the National Oceanic and At-  
16 mospheric Administration and that Administration,  
17 respectively.

18 (2) ADVISORY PANEL.—The term “Advisory  
19 Panel” means the Ocean Research and Education  
20 Advisory Panel established under section 103.

21 (3) COUNCIL.—The term “Council” means the  
22 National Science and Technology Council.

23 (4) MINORITY-SERVING INSTITUTION.—The  
24 term “minority-serving institution” means an insti-  
25 tution that is—

1 (A) a historically Black college or univer-  
2 sity that is a part B institution, as defined in  
3 section 322(2) of the Higher Education Act of  
4 1965 (20 U.S.C. 1061(2));

5 (B) a Hispanic-serving institution, as de-  
6 fined in section 502(a)(5) of the Higher Edu-  
7 cation Act of 1965 (20 U.S.C. 1101a(a)(5));

8 (C) a tribally controlled college or univer-  
9 sity, as defined in section 316(b)(3) of the  
10 Higher Education Act of 1965 (20 U.S.C.  
11 1059c(b)(3));

12 (D) an Alaska Native-serving institution  
13 under section 317(b) of the Higher Education  
14 Act of 1965 (20 U.S.C. 1059d(b));

15 (E) a Native Hawaiian-serving institution  
16 under section 317(b) of the Higher Education  
17 Act of 1965 (20 U.S.C. 1059d(b)); or

18 (F) an institution determined by the Sec-  
19 retary of Education to have enrolled a substan-  
20 tial number of minority, low-income students  
21 during the previous academic year who received  
22 assistance under subpart I of part A of title IV  
23 of the Higher Education Act of 1965 (20  
24 U.S.C. 1070a et seq.) for that year.

1           (5) OCEAN AND COASTAL.—When used as an  
 2           adjective, the term “ocean and coastal” means  
 3           ocean, coastal (including estuarine), and Great  
 4           Lakes.

5           (6) OCEAN AND COASTAL SCIENCES.—The term  
 6           “ocean and coastal sciences” includes the explo-  
 7           ration of ocean, coastal (including estuarine), and  
 8           Great Lakes environments, the development of meth-  
 9           ods and instruments to study and monitor such envi-  
 10          ronments, and the conduct of basic and applied re-  
 11          search to advance understanding of—

12                   (A) the physics, chemistry, biology, and ge-  
 13                   ology of the ocean, coasts, and Great Lakes;

14                   (B) ocean, coastal, and Great Lakes proc-  
 15                   esses and interactions with other components of  
 16                   the total Earth system; and

17                   (C) the impacts of the ocean, coastal re-  
 18                   gions, and Great Lakes on society and manner  
 19                   in which such environments are influenced by  
 20                   human activity.

21           (7) OCEAN AND COASTAL SCIENCE EDU-  
 22           CATION.—The term “ocean and coastal science edu-  
 23           cation” includes literacy, outreach, formal education,  
 24           and informal education focused on the oceans,  
 25           coasts, and Great Lakes at all levels, including ele-

1       mentary, secondary, undergraduate, graduate, and  
2       the general public.

3           (8) STRATEGY.—The term “strategy” means  
4       the National Strategy for Ocean and Coastal  
5       Science, Education, and Literacy developed under  
6       section 201.

7           (9) TASK FORCE.—The term “task force”  
8       means the National Ocean and Coastal Science Edu-  
9       cation Task Force established under section 102.

10          (10) UNDERREPRESENTED GROUP.—The term  
11       “underrepresented group” means, with respect to  
12       ocean and coastal sciences, policy, and education  
13       programs and activities, members of a minority  
14       group, women, individuals with disabilities, and any  
15       other class of individuals who are underrepresented.

16       **TITLE I—OCEAN AND COASTAL**  
17       **SCIENCE EDUCATION CO-**  
18       **ORDINATION**

19       **SEC. 101. NATIONAL SCIENCE AND TECHNOLOGY COUNCIL**  
20               **TECHNICAL AMENDMENTS.**

21       (a) DIRECTOR OF OFFICE OF SCIENCE AND TECH-  
22       NOLOGY POLICY TO CHAIR COUNCIL.—Section 207(a) of  
23       the National Science and Technology Policy, Organization,  
24       and Priorities Act of 1976 (42 U.S.C. 6616(a)) is amend-  
25       ed—



1           (1) by striking “CHAIRMAN OF FEDERAL CO-  
2           ORDINATING COUNCIL FOR SCIENCE, ENGINEERING,  
3           AND TECHNOLOGY” in the subsection heading and  
4           inserting “CHAIR OF THE NATIONAL SCIENCE AND  
5           TECHNOLOGY COUNCIL”; and

6           (2) by striking paragraph (1) and inserting the  
7           following:

8           “(1) serve as Chair of the National Science and  
9           Technology Council; and”.

10          (b) FUNCTIONS.—Section 401 of the National  
11          Science and Technology Policy, Organization, and Prior-  
12          ities Act of 1976 (42 U.S.C. 6651) is amended to read  
13          as follows:

14          **“SEC. 401. FUNCTIONS OF COUNCIL.**

15          “(a) IN GENERAL.—The National Science and Tech-  
16          nology Council shall consider problems and developments  
17          in the fields of science, technology, engineering, and math-  
18          ematics and related activities affecting more than one  
19          Federal agency, and shall recommend policies and other  
20          measures designed to—

21                 “(1) provide more effective planning and ad-  
22                 ministration of Federal scientific, engineering, and  
23                 technology programs;

24                 “(2) identify research and education needs, in-  
25                 cluding areas requiring additional emphasis;

1           “(3) achieve more effective use of the scientific,  
2           engineering, and technological resources and facili-  
3           ties of Federal agencies, including elimination of un-  
4           warranted duplication; and

5           “(4) further international cooperation in  
6           science, engineering and technology.

7           “(b) COORDINATION.—The Council may be assigned  
8           responsibility for developing long-range and coordinated  
9           plans for scientific and technical research and education  
10          activities which involve the participation of more than 2  
11          agencies. The plans shall—

12          “(1) identify research approaches and priorities  
13          which most effectively advance scientific under-  
14          standing and provide a basis for policy decisions;

15          “(2) provide for effective cooperation and co-  
16          ordination of research among Federal agencies; and

17          “(3) encourage domestic and, as appropriate,  
18          international cooperation among government, indus-  
19          try and university scientists.

20          “(c) OTHER DUTIES.—The Council shall perform  
21          such other related advisory duties as shall be assigned by  
22          the President or by the Chair of the Council.

23          “(d) ASSISTANCE OF OTHER AGENCIES.—For the  
24          purpose of carrying out the provisions of this section, each

1 Federal agency represented on the Council shall furnish  
2 necessary assistance to the Council, including—

3 “(1) detailing employees to the Council to per-  
4 form such functions, consistent with the purposes of  
5 this section, as the Chairman of the Council may as-  
6 sign to them; and

7 “(2) undertaking upon the request of the Chair,  
8 such special studies for the Council as come within  
9 the scope of authority of the Council.

10 “(e) **STANDING COMMITTEES; TASK FORCES; WORK-**  
11 **ING GROUPS.**—For the purpose of developing interagency  
12 plans, conducting studies, and making reports as directed  
13 by the Chairman, standing committees, task forces, and  
14 working groups of the Council may be established.”.

15 **SEC. 102. NATIONAL OCEAN AND COASTAL SCIENCE EDU-**  
16 **CATION COMMITTEE.**

17 (a) **TASK FORCE.**—The President shall establish a  
18 National Ocean and Coastal Science Education Task  
19 Force.

20 (b) **MEMBERSHIP.**—The task force shall be composed  
21 senior representatives with responsibility for, and exper-  
22 tise in, education from each of the following agencies and  
23 departments:

24 (1) The National Oceanic and Atmospheric Ad-  
25 ministration.

1           (2) The Navy.

2           (3) The National Science Foundation.

3           (4) The National Aeronautics and Space Ad-  
4       ministration.

5           (5) The Department of Energy.

6           (6) The Environmental Protection Agency.

7           (7) The Coast Guard.

8           (8) The United States Geological Survey.

9           (9) The United States Fish and Wildlife Serv-  
10       ice.

11          (10) The National Park Service.

12          (11) The Minerals Management Service.

13          (12) The Army Corps of Engineers.

14          (13) The National Institutes of Health.

15          (14) The Department of Agriculture.

16          (15) The Office of Science and Technology Pol-  
17       icy.

18          (16) The Department of Labor.

19          (17) The Department of Education.

20          (18) The Smithsonian Institution.

21          (19) Such other Federal agencies and depart-  
22       ments as the chair and vice chairs of the task force  
23       deem appropriate.

24       (c) CHAIR AND VICE CHAIRS.—The chair and vice  
25       chairs of the task force shall be appointed every 2 years

1 by a selection committee composed of leaders of the de-  
2 partments and agencies represented on the task force in-  
3 cluding, at a minimum, the Administrator and the Direc-  
4 tor of the National Science Foundation. The term of office  
5 of the chair and vice chairs shall be 2 years. A person  
6 who has previously served as chair or vice chair may be  
7 reappointed.

8 (d) RESPONSIBILITIES.—The task force shall—

9 (1) serve as the primary source of advice and  
10 support on ocean and coastal science education for  
11 the Council and assist in carrying out the functions  
12 of the Council as they relate to such matters, includ-  
13 ing budgetary analyses;

14 (2) serve as the committee on ocean and coastal  
15 science education for the Council and carry out  
16 Council functions under section 401 of the National  
17 Science and Technology Policy, Organization, and  
18 Priorities Act of 1976 (42 U.S.C. 6651) that relate  
19 to ocean and coastal sciences;

20 (3) improve cooperation among Federal depart-  
21 ments and agencies with respect to ocean and coast-  
22 al sciences and education budgets, programs, oper-  
23 ations, facilities and personnel;

1           (4) stimulate collaborations among Federal de-  
2           partments and agencies to allow more efficient and  
3           effective use of existing Federal assets;

4           (5) provide a forum for development of the na-  
5           tional strategy for ocean and coastal science edu-  
6           cation and oversee its implementation;

7           (6) establish standards for United States ocean  
8           and coastal literacy, which may include development  
9           of ocean and coastal science assessments or curricula  
10          to meet national or State science standards in ele-  
11          mentary and secondary education science programs;

12          (7) establish standards for an ocean and coastal  
13          literacy outreach program to link science and edu-  
14          cation programs to broader communities, especially  
15          with respect to underrepresented groups and urban  
16          coastal areas;

17          (8) foster the development of ocean and coastal  
18          education and outreach programs that are integrated  
19          with and based upon Federal ocean and coastal  
20          science programs and that link educators and sci-  
21          entists, especially with respect to underrepresented  
22          groups and specifically urban coastal issues;

23          (9) coordinate Federal programs to improve  
24          representation of underrepresented groups and  
25          groups from urban areas in ocean-related careers;

1           (10) coordinate Federal ocean and coastal edu-  
2 cation activities for students at all levels, including  
3 funding for educational opportunities at the elemen-  
4 tary, secondary, undergraduate, graduate, and post-  
5 doctoral levels;

6           (11) identify and work to establish linkages  
7 among Federal programs and those of States, aca-  
8 demic institutions, museums and aquariums, indus-  
9 try, foundations, and other non-governmental orga-  
10 nizations;

11          (12) coordinate United States government  
12 ocean and coastal science education activities with  
13 those of other nations;

14          (13) carry out such other activities as the  
15 Council may require; and

16          (14) establish such interagency subcommittees  
17 and working groups as necessary to support the  
18 functions of the task force and develop comprehen-  
19 sive and balanced Federal programs and approaches  
20 to ocean and coastal sciences and education needs.

21 **SEC. 103. OCEAN AND COASTAL SCIENCE EDUCATION ADVI-**  
22 **SORY PANEL.**

23       (a) MEMBERSHIP.—

24           (1) APPOINTMENT.—The task force shall main-  
25 tain an Ocean and Coastal Science Education Advi-

1 sory Panel consisting of not less than 10 and not  
2 more than 18 members appointed by the chair.

3 (2) QUALIFICATIONS.—Members of the advisory  
4 panel shall be selected from among individuals rep-  
5 resenting ocean and coastal industries and founda-  
6 tions, State governments, museums and aquariums,  
7 non-governmental organizations, formal and infor-  
8 mal educators, ocean and coastal science educators,  
9 and such other participants in ocean and coastal ac-  
10 tivities as the chair considers appropriate, who have  
11 the requisite expertise under paragraph (3).

12 (3) EXPERTISE.—Members shall have expertise  
13 in fields of endeavor including ocean and coastal  
14 sciences, ocean and coastal science education, out-  
15 reach, ocean and coastal management and policy,  
16 and ocean engineering.

17 (4) REPRESENTATIVES OF UNDERREP-  
18 RESENTED GROUPS.—Representatives of underrep-  
19 resented groups shall have balanced representation  
20 on the advisory panel without regard to the require-  
21 ments of paragraphs (2) and (3).

22 (b) RESPONSIBILITIES.—The advisory panel will ad-  
23 vise the task force on—



1           (1) development and implementation of the na-  
 2           tional strategy for ocean and coastal science edu-  
 3           cation;

4           (2) matters relating to links between ocean and  
 5           coastal science education and ocean and coastal ob-  
 6           serving systems, oceanographic facilities and labora-  
 7           tories, and national oceanographic data require-  
 8           ments;

9           (3) issues pertaining to involvement of under-  
 10          represented groups in ocean-related careers; and

11          (4) Any additional matters that the task force  
 12          considers appropriate.

13          (c) FUNDING.—The chair and vice chairs of the task  
 14          force annually shall make funds available to support the  
 15          activities of the Advisory Panel.

## 16   **TITLE II—INTERAGENCY PRO-** 17       **GRAMS TO ADVANCE OCEAN** 18       **AND COASTAL KNOWLEDGE**

### 19   **SEC. 201. NATIONAL STRATEGY FOR OCEAN AND COASTAL** 20       **SCIENCE EDUCATION AND LITERACY.**

21          (a) IN GENERAL.—The task force shall develop a na-  
 22          tional strategy for ocean and coastal science education and  
 23          literacy. The chair shall submit the strategy to the Con-  
 24          gress within 1 year after the date of enactment of this  
 25          Act, and submit a revised strategy at least once every 3

1 years thereafter. The initial strategy shall be based on the  
2 recommendations of the United States Commission on  
3 Ocean Policy and shall establish, for the 10-year period  
4 beginning in the year the strategy is submitted, the goals  
5 and priorities for education that most effectively support  
6 national workforce and professional development needs  
7 and improve public understanding and ability to partici-  
8 pate in ocean policy decisions.

9 (b) SPECIFIC ACTIONS.—The strategy shall—

10 (1) provide for increased Federal investment in  
11 ocean and coastal science education over 5 years and  
12 for additional investments in education and out-  
13 reach, technology development, and ocean explo-  
14 ration;

15 (2) make recommendations for the coordination  
16 of Federal ocean and coastal science education ac-  
17 tivities with those of States, regional entities, other  
18 nations, and international organizations;

19 (3) consider and use, as appropriate, reports  
20 and studies conducted by Federal agencies and de-  
21 partments, the National Research Council, or other  
22 entities;

23 (4) establish a plan to improve representation  
24 of traditionally underrepresented groups in ocean-re-  
25 lated careers, both policy and science;

1           (5) establish a plan to address specifically  
2       urban marine and coastal issues, emphasizing the  
3       link between urban communities and coastal issues  
4       including health, recreation, open space, develop-  
5       ment, and resource use;

6           (6) build on and complement existing programs;  
7       and

8           (7) develop an evaluation and assessment strat-  
9       egy for determining the most effective practices for  
10      existing and new ocean and coastal science education  
11      programs.

12      (c) ELEMENTS.—The strategy shall include the fol-  
13      lowing elements:

14           (1) Ocean and coastal science education coordi-  
15      nation and establishment of mechanisms to improve  
16      ocean literacy and contribute to public awareness of  
17      the condition and importance of the ocean.

18           (2) Partnerships among Federal agencies,  
19      States, academia, industries, members of the ocean  
20      and coastal science community, and underrep-  
21      resented groups.

22           (3) Workforce and professional development in-  
23      cluding traineeships, scholarships, fellowships, and  
24      internships.

1           (4) Information management systems that pro-  
 2       vide information from varied sources to produce in-  
 3       formation readily usable by ocean and coastal  
 4       science educators, students, and the public.

5           (5) The development, adapted for ocean and  
 6       coastal science education, of technology and sensor  
 7       development, including adaptation of their products  
 8       for ocean and coastal science education.

9           (6) The development of information manage-  
 10      ment systems and new learning technologies for effi-  
 11      cient delivery of Federal marine science assets to  
 12      students, teachers, and citizen decision-makers.

13       (d) PUBLIC PARTICIPATION.—In developing the  
 14   strategy, the task force shall consult with the Advisory  
 15   Panel, academic, State, industry, museums and aquar-  
 16   iums, education, and conservation groups and representa-  
 17   tives. Not later than 90 days before the chair submits the  
 18   strategy, or any revision thereof, to the Congress, a sum-  
 19   mary of the proposed strategy or revision and a response  
 20   to comments shall be published in the Federal Register  
 21   for a public comment period of not less than 60 days.

22   **SEC. 202. OCEAN AND COASTAL SCIENCE EDUCATION PRO-**  
 23       **GRAM.**

24       (a) ESTABLISHMENT.—Consistent with the strategy,  
 25   the President shall establish an interagency ocean and

1 coastal education program to improve public awareness,  
 2 understanding, and appreciation of the role of the ocean  
 3 in meeting our Nation's economic, social, and environ-  
 4 mental needs. The program shall complement and build  
 5 upon existing efforts rather than duplicate such efforts.  
 6 The ocean and coastal education program shall include  
 7 formal education activities for elementary, secondary, un-  
 8 dergraduate, graduate, and postdoctoral students, con-  
 9 tinuing education activities for adults, and informal edu-  
 10 cation activities for learners of all ages. Under the pro-  
 11 gram, particular attention shall be paid with respect to—

12           (1) students from underrepresented groups, es-  
 13           pecially at the elementary and secondary levels; and

14           (2) elementary and secondary students in urban  
 15           areas, with the goal of improving public awareness  
 16           and literacy of urban coastal problems.

17       (b) ELEMENTS.—

18           (1) IN GENERAL.—The program shall use ap-  
 19           propriate interagency coordination mechanisms,  
 20           build upon existing programs, and shall, at a min-  
 21           imum, provide sustained funding for—

22                   (A) development of model instructional  
 23                   programs for students at all levels, with special  
 24                   focus on developing an urban unit;

1 (B) a regional education network to sup-  
2 port academic competition and experiential  
3 learning opportunities for middle and high  
4 school students;

5 (C) a regional education network specifi-  
6 cally to enhance ocean literacy opportunities for  
7 minority students and students in urban areas;

8 (D) teacher enrichment programs that pro-  
9 vide for participation in ocean and coastal  
10 sciences, research expeditions, voyages of explo-  
11 ration, and the conduct of scientific research;

12 (E) educator professional development and  
13 student training and support to provide diverse  
14 ocean-related education opportunities at the un-  
15 dergraduate, graduate, and postdoctoral levels;

16 (F) mentoring programs and partnerships  
17 with minority-serving institutions, building on  
18 elementary and secondary minority programs,  
19 to ensure diversity in the ocean and coastal  
20 workforce;

21 (G) a national network of Centers for  
22 Ocean and Coastal Sciences Education Excel-  
23 lence to improve the acquisition of knowledge  
24 by students at all levels through enhanced col-

1           laborations between the scientific and education  
2           communities;

3           (H) the National Ocean and Coastal  
4           Sciences Bowl, a competition among high  
5           schools to promote knowledge of the ocean and  
6           coasts, with evaluation of the potential merits  
7           of a similar program for middle schools;

8           (I) the EstuaryLive program, a experien-  
9           tial learning program focused on coastal re-  
10          sources and issues; and

11          (J) an internet-based ocean and coastal  
12          science portal to provide a centralized source of  
13          Federal, State, academic, non-governmental,  
14          and other ocean and coastal science education  
15          materials, programs, and products.

16          (2) EVALUATION.—The task force shall assess  
17          and evaluate the elements of the program for suc-  
18          cess on a continuing basis.

19          (c) INTERAGENCY FUNDING.—The Administration,  
20          the National Science Foundation, and other Federal agen-  
21          cies involved in the program are authorized to participate  
22          in interagency financing and share, transfer, receive, and  
23          spend funds appropriated to any Federal participant in  
24          the program for the purposes of carrying out any adminis-  
25          trative or programmatic project or activity under this sec-

1 tion. Funds may be transferred among such departments  
 2 and agencies through an appropriate instrument that  
 3 specifies the goods, services, or space being acquired from  
 4 another Federal participant and the costs of the same.

5 **TITLE III—NOAA OCEAN**  
 6 **SCIENCE AND COASTAL EDU-**  
 7 **CATION PROGRAMS**

8 **SEC. 301. NOAA OCEAN AND COASTAL SCIENCE EDUCATION**  
 9 **PROGRAMS.**

10 (a) IN GENERAL.—

11 (1) AUTHORITY TO ESTABLISH PROGRAMS.—

12 The Administrator shall conduct, develop, support,  
 13 promote, and coordinate formal and informal edu-  
 14 cational activities authorized by this section to en-  
 15 hance public awareness and understanding of the  
 16 science, service, and stewardship missions of the Ad-  
 17 ministration, such as the EstuaryLive program, the  
 18 Bay Watershed Education and Training Program,  
 19 and the Teacher-at-Sea and Teacher-in-the Air Pro-  
 20 grams. In conducting those activities, the Adminis-  
 21 trator shall consult with the task force and build  
 22 upon the educational programs and activities of the  
 23 National Sea Grant College Program, the National  
 24 Marine Sanctuaries Program, the National Estua-  
 25 rine Research Reserve System, regional offices of the



1 Administration, and programs relating to ocean ex-  
2 ploration, undersea research, marine resources, ma-  
3 rine observations, and oceans and human health.

4 (2) EDUCATIONAL ACTIVITIES INCLUDED.—In  
5 carrying out this section, the Administrator shall in-  
6 clude among the educational activities education of  
7 the general public, teachers, students at all levels  
8 (including primary and secondary levels), and ocean  
9 and coastal managers and stakeholders, with par-  
10 ticular attention to addressing the lack of participa-  
11 tion by underrepresented groups in ocean and coast-  
12 al sciences and policy careers.

13 (3) GRANT AND CONTRACT AUTHORITY.—In  
14 carrying out educational activities under this section,  
15 the Administrator may enter into grants, contracts,  
16 cooperative agreements, resource sharing agreements  
17 or interagency financing with Federal, State and re-  
18 gional agencies, tribes, commercial organizations,  
19 educational institutions, non-profit organizations or  
20 other persons.

21 (4) GOALS; STANDARDS; PERIODIC ASSESS-  
22 MENTS.—The Administrator shall establish goals  
23 and standards for assessing the success of each of  
24 the Administration's educational activities under this

1 section and shall evaluate the success of each such  
2 activity every 3-to-5 years.

3 (5) STRATEGIES.—The Administrator, in con-  
4 sultation with the appropriate program directors,  
5 shall ensure that educational activities under this  
6 section will—

7 (A) integrate agency-conducted and agen-  
8 cy-funded science into high-quality educational  
9 materials;

10 (B) improve access to Administration edu-  
11 cational resources;

12 (C) support educator professional develop-  
13 ment programs to improve understanding and  
14 use of agency sciences;

15 (D) promote participation in agency-re-  
16 lated sciences and careers, particularly by mem-  
17 bers of underrepresented groups; and

18 (E) leverage partnerships to enhance for-  
19 mal and informal environmental science edu-  
20 cation.

21 (b) REGIONAL EDUCATION PROGRAM.—

22 (1) IN GENERAL.—The Administrator shall es-  
23 tablish a regional elementary and secondary edu-  
24 cation program that—

1 (A) focuses on providing experiential learn-  
2 ing opportunities for students in the area of  
3 ocean and coastal resources, based on the model  
4 of the Bay Watershed Education and Training  
5 Program;

6 (B) is administered, wherever possible, at  
7 the local and regional offices of the Administra-  
8 tion or Sea Grant College Program offices or  
9 offices of other appropriate existing programs;  
10 and

11 (C) shall provide funding, on a competitive  
12 basis, to organizations emphasizing experiential  
13 learning for elementary and secondary students.

14 (2) PRIORITIES.—The regional program shall  
15 give a priority to—

16 (A) providing experiential ocean and coast-  
17 al education programs for elementary, middle,  
18 and secondary school students that are aligned  
19 with National or State standards of learning;  
20 and

21 (B) providing teacher training in ocean  
22 and coastal education, including adequate train-  
23 ing for teachers to bring experiential learning  
24 into their classrooms.

1       (c) OCEAN AND COASTAL LITERACY IN URBAN ENVI-  
2       RONMENTS PROGRAM.—

3           (1) IN GENERAL.—The Administrator shall es-  
4       tablish an Ocean and Coastal Literacy in Urban En-  
5       vironments Program (to be known as the Ocean  
6       CLUE Program) that is designed to broaden knowl-  
7       edge about the oceans and coastal areas among  
8       underrepresented groups and in urban areas.

9           (2) ELIGIBILITY CRITERIA.—In order to be eli-  
10      gible to participate in the program—

11           (A) at least 50 percent of the student body  
12      of an applicant school, or a school with which  
13      an applicant group proposes to work, shall con-  
14      sist of members of underrepresented groups; or

15           (B) the applicant school, or a school with  
16      which an applicant proposes to work, shall be  
17      located in an urban area.

18          (3) GRANTS.—

19           (A) IN GENERAL.—Under the program,  
20      the Administrator shall award grants to eligible  
21      elementary and secondary schools, or groups  
22      proposing to work with elementary and sec-  
23      ondary schools selected through a competitive  
24      process, on the basis of the merits of their pro-  
25      posals.

1 (B) TERM.—A grant under the program  
2 shall be awarded initially for a period of 1 year,  
3 but may be renewed annually for up to 3 addi-  
4 tional years.

5 (C) REQUIREMENTS.—As a condition of  
6 receiving a grant under the program, a recipi-  
7 ent shall demonstrate to the satisfaction of the  
8 Administrator that—

9 (i) it will use a curriculum of ocean  
10 and coastal science that complements or  
11 satisfies National, State, or regional  
12 science requirements;

13 (ii) activities funded in whole or in  
14 part by the grant will focus on marine  
15 science, marine policy, and other maritime  
16 social sciences, with experiential teaching  
17 methods explored;

18 (iii) it will contribute to a coordinated  
19 Ocean CLUE website established by the  
20 Administrator that is accessible by the  
21 public; and

22 (iv) it will undertake to meet with  
23 other grant recipients at least once during  
24 each year for which it is receiving a grant

1 to share curricula and to discuss successful  
2 techniques and challenges.

3 (d) BAY WATERSHED EDUCATION AND TRAINING  
4 PROGRAM.—The Administrator shall expand the Bay Wa-  
5 tershed Education and Training Program by not more  
6 than 1 region per year.

7 (e) EDUCATIONAL PARTNERSHIP PROGRAM.—The  
8 Administrator shall establish a program of educational  
9 partnerships with minority-serving institutions, providing  
10 financial assistance to these institutions to support col-  
11 laborative research and training of students in ocean, at-  
12 mospheric, and Earth sciences through competitive proc-  
13 esses. The program shall have include at least the fol-  
14 lowing 4 components:

15 (1) Cooperative Science Centers will be estab-  
16 lished at minority-serving institutions in partnership  
17 with other institutions that have established pro-  
18 grams and graduate degrees in ocean, Earth, and  
19 atmospheric disciplines.

20 (2) An Environmental Entrepreneurship Pro-  
21 gram will provide funding to eligible minority-serving  
22 institutions to attract students who are members of  
23 an underrepresented group to pursue academic  
24 study, careers, and entrepreneurship opportunities in  
25 ocean, Earth, and atmospheric sciences.

1           (3) A Graduate Sciences Program will recruit  
 2           and provide graduate level training in ocean, Earth,  
 3           and atmospheric sciences to outstanding candidates  
 4           who are members of an underrepresented group.

5           (4) An Undergraduate Scholarship Program  
 6           will be established whose goal is to increase the  
 7           number of students who undertake coursework and  
 8           graduate with degrees in fields integral to the Ad-  
 9           ministration's mission.

10          (f) ADDITIONAL ELEMENTARY AND SECONDARY  
 11 PROGRAMS.—The Administrator shall establish elemen-  
 12 tary and secondary ocean education programs, exploring  
 13 partnerships with non-governmental organizations and ex-  
 14 ploring experiential or non-traditional education tech-  
 15 niques, such as the EstuaryLive and the Bay Watershed  
 16 Education and Training programs.

17          (g) TEACHER-AT-SEA; TEACHER-IN-THE-AIR.—The  
 18 Administrator shall—

19           (1) establish a program, to be known as the  
 20           Teacher-at-Sea Program, to bring teachers from ele-  
 21           mentary, middle, and secondary schools, and from  
 22           institutions of higher education to sea aboard Ad-  
 23           ministration research and survey ships to work  
 24           under the tutelage of scientists and crew;

1           (2) establish a related program, to be known as  
 2           the Teacher-in-the Air Program, using Administra-  
 3           tion aircraft for the purposes of marine observations  
 4           and studies of links between the atmosphere and the  
 5           ocean; and

6           (3) consider establishing a counterpart program  
 7           to the Teacher-at-Sea Program in coastal areas  
 8           using smaller Administration ships.

9           (h) NOAA SCIENCE EDUCATION PLAN.—The Ad-  
 10          ministrator, in consultation with the Ocean Education  
 11          Council and representatives of the Marine Sanctuaries  
 12          Program, the Sea Grant Program, the National Estuarine  
 13          Research Reserve System, the Office of Exploration, the  
 14          National Undersea Research Program, and other appro-  
 15          priate Administration programs, shall develop a science  
 16          education plan setting forth education goals and strategies  
 17          for the Administration, as well as programmatic actions  
 18          to carry out such goals and priorities over the next 20  
 19          years. The plan shall—

20           (1) set forth the Administration's goals, prior-  
 21           ities, and programmatic activities for ocean and  
 22           coastal science education in 5-year phases;

23           (2) identify links between the Administration's  
 24           ocean and coastal science education activities and its  
 25           programs and missions;



1           (3) consider the recommendations of ocean and  
 2           coastal science and education experts, as well as  
 3           those of professional education associations or orga-  
 4           nizations;

5           (4) be developed in consultation with pro-  
 6           grammatic offices, ocean and coastal sciences and  
 7           education experts, and interested members of the  
 8           public; and

9           (5) be evaluated and updated every 3-to-5  
 10          years.

11 **SEC. 302. AMENDMENT TO THE NATIONAL SEA GRANT COL-**  
 12 **LEGE PROGRAM ACT.**

13          Section 212(a) of the National Sea Grant College  
 14          Program Act (33 U.S.C 1131(a)) is amended by adding  
 15          at the end the following:

16               “(3) MARINE AND AQUATIC SCIENCE EDU-  
 17          CATION.—In addition to the amounts authorized for  
 18          each fiscal year under paragraphs (1) and (2), there  
 19          are authorized to be appropriated for marine and  
 20          aquatic science education in each of fiscal years  
 21          2006 through 2011—

22               “(A) \$6,000,000 in funding for the edu-  
 23          cational activities of sea grant programs;

1           “(B) \$4,000,000 for competitive grants for  
2           projects and research that target national and  
3           regional ocean and coastal science literacy; and

4           “(C) \$3,000,000 for competitive grants to  
5           support educational partnerships under the na-  
6           tional Coastal and Ocean Education Program  
7           to be funded through an appropriate inter-  
8           agency mechanism.”.

9   **SEC. 303. AMENDMENT TO THE COASTAL ZONE MANAGE-**  
10                   **MENT ACT OF 1972.**

11       Section 318(a) of the Coastal Zone Management Act  
12   of 1972 (16 U.S.C. 1464(a)) is amended—

13           (1) by striking “and” after the semicolon in  
14       paragraph (1)(C);

15           (2) by striking “1999.” in paragraph (2)(C)  
16       and inserting “1999; and”; and

17           (3) by adding at the end the following:

18           “(3) for estuarine science education, there are  
19       authorized to be appropriated, in addition to the  
20       amounts authorized for each fiscal year under para-  
21       graphs (1) and (2), in each of fiscal years 2006  
22       through 2011—

23           “(A) \$3,000,000 in increased funding for  
24       the educational activities of National Estuarine  
25       Research Reserves; and

1 “(B) \$1,000,000 for competitive grants for  
 2 projects that use National Estuarine Research  
 3 Reserve System system-wide monitoring pro-  
 4 gram data to advance ocean and coastal science  
 5 literacy.”.

## 6 **TITLE IV—AUTHORIZATIONS**

### 7 **SEC. 401. AUTHORIZATION OF APPROPRIATIONS.**

8 (a) NATIONAL OCEAN AND COASTAL EDUCATION  
 9 PROGRAM.—Of the amounts authorized annually to the  
 10 Department of the Navy, the National Science Founda-  
 11 tion, the National Oceanic and Atmospheric Administra-  
 12 tion, the National Aeronautics and Space Administration,  
 13 and other agencies that are members of the National  
 14 Ocean and Coastal Science Education Task Force for fis-  
 15 cal year 2006 through fiscal year 2011, up to \$25,000,000  
 16 from each agency may be made available for the National  
 17 Ocean and Coastal Education Program under section 202.

18 (b) NATIONAL OCEANIC AND ATMOSPHERIC ADMIN-  
 19 ISTRATION.—In addition to the amounts authorized to be  
 20 made available by subsection (a) of this section and under  
 21 section 212(a)(3) of the National Sea Grant College Pro-  
 22 gram Act (33 U.S.C 1131(a)(3)) and section 318(a)(3)  
 23 of the Coastal Zone Management Act of 1972 (16 U.S.C.  
 24 1464(a)(3)), there are authorized to be appropriated to  
 25 the Administrator—

1           (1) \$20,000,000 for each of fiscal years 2006  
2 through 2011 for educational activities under section  
3 301(a);

4           (2) \$8,000,000 for each of fiscal years 2006  
5 through 2011 for educational activities under section  
6 301 (c);

7           (3) \$8,000,000 for each of fiscal years 2006  
8 through 2011 for educational activities under section  
9 301(d);

10          (4) \$10,000,000 for each of fiscal years 2006  
11 through 2011 for educational activities under section  
12 301(e);

13          (5) \$6,000,000 for each of fiscal years 2006  
14 through 2011 for educational activities under section  
15 301(f); and

16          (6) \$200,000 for each of fiscal years 2006  
17 through 2011 for educational activities under section  
18 301(g).

19          (c) AVAILABILITY.—Sums appropriated pursuant to  
20 subsection (b) shall remain available until expended.

○