

110TH CONGRESS  
1ST SESSION

# H. R. 260

To establish marine and freshwater research, development, and demonstration programs to support efforts to prevent, control, and eradicate invasive species, as well as to educate citizens and stakeholders and restore ecosystems.

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## IN THE HOUSE OF REPRESENTATIVES

JANUARY 5, 2007

Mr. EHLERS introduced the following bill; which was referred to the Committee on Science and Technology, and in addition to the Committees on Transportation and Infrastructure, Natural Resources, and House Administration, 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

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## A BILL

To establish marine and freshwater research, development, and demonstration programs to support efforts to prevent, control, and eradicate invasive species, as well as to educate citizens and stakeholders and restore ecosystems.

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

3       **SECTION 1. SHORT TITLE.**

4       This Act may be cited as the “Aquatic Invasive Spe-

5       cies Research Act”.

1 **SEC. 2. FINDINGS.**

2 The Congress makes the following findings:

3 (1) Aquatic invasive species damage infrastruc-  
4 ture, disrupt commerce, outcompete native species,  
5 reduce biodiversity, and threaten human health.

6 (2) The direct and indirect costs of aquatic  
7 invasive species to our Nation's economy number in  
8 the billions of dollars per year.

9 (3) Recent studies have shown that, in addition  
10 to economic damage, invasive species cause enor-  
11 mous environmental damage, and have cited invasive  
12 species as the second leading threat to endangered  
13 species.

14 (4) Over the past 200 years, the rate of de-  
15 tected marine and freshwater invasions in North  
16 America has increased exponentially.

17 (5) The rate of invasions continues to grow  
18 each year.

19 (6) Marine and freshwater research underlies  
20 every aspect of detecting, preventing, controlling,  
21 and eradicating invasive species, educating citizens  
22 and stakeholders, and restoring ecosystems.

23 (7) Current Federal efforts, including research  
24 efforts, have focused primarily on controlling estab-  
25 lished invasive species, which is both costly and often  
26 unsuccessful. An emphasis on research, development,

1 and demonstration to support efforts to prevent  
2 invasive species or eradicate them upon entry into  
3 United States waters would likely result in a more  
4 cost-effective and successful approach to combating  
5 invasive species through preventing initial introduc-  
6 tion.

7 (8) Research, development, and demonstration  
8 to support prevention and eradication includes moni-  
9 toring of both pathways and ecosystems to track the  
10 introduction and establishment of nonnative species,  
11 and development and testing of technologies to pre-  
12 vent introduction through known pathways.

13 (9) Therefore, Congress finds that it is in the  
14 United States interest to conduct a comprehensive  
15 and thorough research, development, and demonstra-  
16 tion program on aquatic invasive species in order to  
17 better understand how aquatic invasive species are  
18 introduced and become established and to support  
19 efforts to prevent the introduction and establishment  
20 of, and to eradicate, these species.

21 **SEC. 3. DEFINITIONS.**

22 In this Act:

23 (1) ADMINISTERING AGENCIES.—The term “ad-  
24 ministering agencies” means—

1 (A) the National Oceanic and Atmospheric  
2 Administration (including the Great Lakes En-  
3 vironmental Research Laboratory);

4 (B) the Smithsonian Institution (acting  
5 through the Smithsonian Environmental Re-  
6 search Center); and

7 (C) the United States Geological Survey.

8 (2) AQUATIC ECOSYSTEM.—The term “aquatic  
9 ecosystem” means a freshwater, marine, or estuarine  
10 environment (including inland waters, riparian  
11 areas, and wetlands) located in the United States.

12 (3) BALLAST WATER.—The term “ballast  
13 water” means any water (with its suspended matter)  
14 used to maintain the trim and stability of a vessel.

15 (4) INVASION.—The term “invasion” means the  
16 introduction and establishment of an invasive species  
17 into an ecosystem beyond its historic range.

18 (5) INVASIVE SPECIES.—The term “invasive  
19 species” means a species—

20 (A) that is nonnative to the ecosystem  
21 under consideration; and

22 (B) whose introduction causes or may  
23 cause harm to the economy, the environment, or  
24 human health.

1           (6) INVASIVE SPECIES COUNCIL.—The term  
2           “Invasive Species Council” means the council estab-  
3           lished by section 3 of Executive Order No. 13112  
4           (42 U.S.C. 4321 note).

5           (7) PATHWAY.—The term “pathway” means 1  
6           or more routes by which an invasive species is trans-  
7           ferred from one ecosystem to another.

8           (8) SPECIES.—The term “species” means any  
9           fundamental category of taxonomic classification or  
10          any viable biological material ranking below a genus  
11          or subgenus.

12          (9) TASK FORCE.—The term “Task Force”  
13          means the Aquatic Nuisance Species Task Force es-  
14          tablished by section 1201(a) of the Nonindigenous  
15          Aquatic Nuisance Prevention and Control Act of  
16          1990 (16 U.S.C. 4721(a)).

17          (10) TYPE APPROVAL.—The term “type ap-  
18          proval” means an approval procedure under which a  
19          type of system is certified as meeting a standard es-  
20          tablished pursuant to Federal law for a particular  
21          application.

22 **SEC. 4. COORDINATION AND IMPLEMENTATION.**

23          (a) COORDINATION.—In carrying out this Act, the  
24          administering agencies shall coordinate with—

25                (1) appropriate State agencies;

1           (2) the Fish and Wildlife Service, the Environ-  
2       mental Protection Agency, and other appropriate  
3       Federal agencies; and

4           (3) the Task Force and Invasive Species Coun-  
5       cil.

6       (b) IMPLEMENTATION.—The administering agencies  
7       shall enter into a memorandum of understanding regard-  
8       ing the implementation of this Act, which shall include the  
9       coordination required by subsection (a).

10       (c) COOPERATION.—In carrying out this Act, the ad-  
11      ministering agencies shall contract, as appropriate, or oth-  
12      erwise cooperate with academic researchers.

13       (d) STRUCTURE.—To the extent practicable, the ad-  
14      ministering agencies shall carry out this Act working with-  
15      in the organizational structure of the Task Force and  
16      Invasive Species Council.

17   **SEC. 5. ECOLOGICAL AND PATHWAY RESEARCH.**

18       (a) IN GENERAL.—The administering agencies shall  
19      develop and conduct a marine and fresh-water research  
20      program which shall include ecological and pathway sur-  
21      veys and experimentation to detect nonnative aquatic spe-  
22      cies in aquatic ecosystems and to assess rates and patterns  
23      of introductions of nonnative aquatic species in aquatic  
24      ecosystems. The goal of this marine and freshwater re-  
25      search program shall be to support efforts to prevent the

1 introduction of, detect, and eradicate invasive species  
2 through informing early detection and rapid response ef-  
3 forts, informing relevant policy decisions, and assessing  
4 the effectiveness of implemented policies to prevent the in-  
5 troduction and spread of aquatic invasive species. Surveys  
6 and experiments under this subsection shall be commenced  
7 not later than 18 months after the date of the enactment  
8 of this Act.

9 (b) PROTOCOL DEVELOPMENT.—The administering  
10 agencies shall establish standardized protocols for con-  
11 ducting ecological and pathway surveys of nonnative  
12 aquatic species under subsection (a) that are integrated  
13 and produce comparable data. Protocols shall, as prac-  
14 ticable, be integrated with existing protocols and data col-  
15 lection methods. In developing the protocols under this  
16 subsection, the administering agencies shall draw on the  
17 recommendations gathered at the workshop under sub-  
18 section (g). The protocols shall be peer reviewed, and re-  
19 vised as necessary. Protocols shall be completed within 1  
20 year after the date of the enactment of this Act.

21 (c) ECOLOGICAL AND PATHWAY SURVEY REQUIRE-  
22 MENTS.—(1) Each ecological survey conducted under sub-  
23 section (a) shall, at a minimum—

24 (A) document baseline ecological information of  
25 the aquatic ecosystem including, to the extent prac-

1        ticable, a comprehensive inventory of native species,  
2        nonnative species, and species of unknown origin  
3        present in the ecosystem, as well as the chemical  
4        and physical characteristics of the water and under-  
5        lying substrate;

6            (B) for nonnative species, gather information to  
7        assist in identifying their life history, environmental  
8        requirements and tolerances, the historic range of  
9        their native ecosystems, and their history of spread-  
10       ing from their native ecosystems;

11           (C) track the establishment of nonnative species  
12       including information about the estimated abun-  
13       dance of nonnative organisms in order to allow an  
14       analysis of the probable date of introduction of the  
15       species; and

16           (D) identify the likely pathway of entry of non-  
17       native species.

18        (2) Each pathway survey conducted under this sec-  
19       tion shall, at a minimum—

20            (A) identify what nonnative aquatic species are  
21       being introduced or may be introduced through the  
22       pathways under consideration;

23            (B) determine the quantities of organisms being  
24       introduced through the pathways under consider-  
25       ation; and



1 (C) determine the practices that contributed to  
2 or could contribute to the introduction of nonnative  
3 aquatic species through the pathway under consider-  
4 ation.

5 (d) NUMBER AND LOCATION OF SURVEY SITES.—  
6 The administering agencies shall designate the number  
7 and location of survey sites necessary to carry out marine  
8 and freshwater research required under this section. In  
9 establishing sites under this subsection or subsection (e),  
10 emphasis shall be on the geographic diversity of sites, as  
11 well as the diversity of the human uses and biological char-  
12 acteristics of sites.

13 (e) COMPETITIVE GRANT PROGRAM.—The National  
14 Oceanic and Atmospheric Administration and the United  
15 States Geological Survey shall jointly administer a pro-  
16 gram to award competitive, peer-reviewed grants to aca-  
17 demic institutions, State agencies, and other appropriate  
18 groups, in order to assist in carrying out subsection (a),  
19 and shall include to the maximum extent practicable di-  
20 verse institutions, including Historically Black Colleges  
21 and Universities and those serving large proportions of  
22 Hispanics, Native Americans, Asian-Pacific Americans, or  
23 other underrepresented populations.

24 (f) SHIP PATHWAY SURVEYS.—Section  
25 1102(b)(2)(B)(ii) of the Nonindigenous Aquatic Nuisance

1 Prevention and Control Act of 1990 (16 U.S.C.  
2 4712(b)(2)(B)(ii)) is amended to read as follows:

3 “(ii) examine other potential modes  
4 for the introduction of nonnative aquatic  
5 species by ship, including hull fouling.”.

6 (g) WORKSHOP.—In order to support the develop-  
7 ment of the protocols and design for the surveys under  
8 subsections (b) and (c), and to determine how to obtain  
9 consistent, comparable data across a range of ecosystems,  
10 the administering agencies shall convene at least one  
11 workshop with appropriate researchers and representa-  
12 tives involved in the management of aquatic invasive spe-  
13 cies from Federal and State agencies and academic insti-  
14 tutions to gather recommendations. The administering  
15 agencies shall make the results of the workshop widely  
16 available to the public. The workshop shall be held within  
17 180 days after the date of the enactment of this Act.

18 (h) EXPERIMENTATION.—The administering agen-  
19 cies shall conduct research to identify the relationship be-  
20 tween the introduction and establishment of nonnative  
21 aquatic species, including those legally introduced, and the  
22 circumstances necessary for those species to become  
23 invasive.

24 (i) NATIONAL PATHWAY AND ECOLOGICAL SURVEYS  
25 DATABASE.—

1           (1) IN GENERAL.—The United States Geologi-  
2 cal Survey shall develop, maintain, and update, in  
3 consultation and cooperation with the Smithsonian  
4 Institution (acting through the Smithsonian Envi-  
5 ronmental Research Center), the National Oceanic  
6 and Atmospheric Administration, and the Task  
7 Force, a central, national database of information  
8 concerning information collected under this section.

9           (2) REQUIREMENTS.—The database shall—

10                   (A) be widely available to the public;

11                   (B) be updated not less than once a quar-  
12 ter;

13                   (C) be coordinated with existing databases,  
14 both domestic and foreign, collecting similar in-  
15 formation; and

16                   (D) be, to the maximum extent practicable,  
17 formatted such that the data is useful for both  
18 researchers and Federal and State employees  
19 managing relevant invasive species programs.

20 **SEC. 6. ANALYSIS.**

21           (a) INVASION ANALYSIS.—

22           (1) IN GENERAL.—Not later than 3 years after  
23 the date of the enactment of this Act, and every year  
24 thereafter, the administering agencies shall analyze  
25 data collected under section 5 and other relevant re-

1 search on the rates and patterns of invasions by  
2 aquatic invasive species in waters of the United  
3 States. The purpose of this analysis shall be to use  
4 the data collected under section 5 and other relevant  
5 research to support efforts to prevent the introduc-  
6 tion of, detect, and eradicate invasive species  
7 through informing early detection and rapid re-  
8 sponse efforts, informing relevant policy decisions,  
9 and assessing the effectiveness of implemented poli-  
10 cies to prevent the introduction and spread of  
11 invasive species.

12 (2) CONTENTS.—The analysis required under  
13 paragraph (1) shall include with respect to aquatic  
14 invasive species—

15 (A) an analysis of pathways, including—

16 (i) identifying, and characterizing as  
17 high, medium, or low risk, pathways re-  
18 gionally and nationally;

19 (ii) identifying new and expanding  
20 pathways;

21 (iii) identifying handling practices  
22 that contribute to the introduction of spe-  
23 cies in pathways; and

24 (iv) assessing the risk that species le-  
25 gally introduced into the United States

1           pose for introduction into aquatic eco-  
2           systems;

3           (B) patterns and rates of invasion and sus-  
4           ceptibility to invasion of various bodies of  
5           water;

6           (C) how the risk of establishment through  
7           a pathway is related to the identity and number  
8           of organisms transported;

9           (D) rates of spread and numbers and types  
10          of pathways of spread of new populations of the  
11          aquatic invasive species and an estimation of  
12          the potential spread and distribution of newly  
13          introduced invasive species based on their envi-  
14          ronmental requirements and historical distribu-  
15          tion;

16          (E) documentation of factors that influ-  
17          ence an ecosystem's vulnerability to a nonnative  
18          aquatic species becoming invasive;

19          (F) a description of the potential for, and  
20          impacts of, pathway management programs on  
21          invasion rates;

22          (G) recommendations for improvements in  
23          the effectiveness of pathway management;

24          (H) to the extent practical, a determina-  
25          tion of the level of reduction in live organisms

1 of various taxonomic groups required to reduce  
2 the risk of establishment to receiving aquatic  
3 ecosystems to an acceptable level; and

4 (I) an evaluation of the effectiveness of  
5 management actions (including any standard)  
6 at preventing nonnative species introductions  
7 and establishment.

8 (b) RESEARCH TO ASSESS THE POTENTIAL OF THE  
9 ESTABLISHMENT OF INTRODUCED SPECIES.—Within 2  
10 years after the date of the enactment of this Act, the ad-  
11 ministering agencies shall develop a profile, based on the  
12 general characteristics of invasive species and vulnerable  
13 ecosystems, in order to predict, to the extent practical,  
14 whether a species planned for importation is likely to in-  
15 vade a particular aquatic ecosystem if introduced. In de-  
16 veloping the profile, the above agencies shall analyze the  
17 research conducted under section 5, and other research  
18 as necessary, to determine general species and ecosystem  
19 characteristics (taking into account the opportunity for in-  
20 troduction into any ecosystem) and circumstances that can  
21 lead to establishment. Based on the profile, the Task  
22 Force shall make recommendations to the Invasive Species  
23 Council as to what planned importations of nonnative  
24 aquatic organisms should be restricted. This profile shall  
25 be peer-reviewed.

1 (c) AUTHORIZATION OF APPROPRIATIONS.—There  
2 are authorized to be appropriated for carrying out this sec-  
3 tion and section 5 of this Act, and section 1102(b)(2) of  
4 the Nonindigenous Aquatic Nuisance Prevention and Con-  
5 trol Act of 1990 (16 U.S.C. 4712(b)(2)) for each of the  
6 fiscal years 2008 through 2012—

7 (1) \$4,000,000 for the Smithsonian Environ-  
8 mental Research Center;

9 (2) \$11,000,000 for the United States Geologi-  
10 cal Survey (including activities through the Coopera-  
11 tive Fish and Wildlife Research Program), of which  
12 \$6,500,000 shall be for the grant program under  
13 section 5(e), and of which \$500,000 shall be for de-  
14 veloping, maintaining, and updating the database  
15 under section 5(i); and

16 (3) \$10,500,000 for the National Oceanic and  
17 Atmospheric Administration, of which \$6,500,000  
18 shall be for the grant program under section 5(e).

19 **SEC. 7. DISSEMINATION.**

20 (a) IN GENERAL.—The Invasive Species Council, in  
21 coordination with the Task Force and the administering  
22 agencies, shall be responsible for disseminating the infor-  
23 mation collected under this Act to the public, including  
24 Federal, State, and local entities, relevant policymakers,

1 and private researchers with responsibility over or interest  
2 in aquatic invasive species.

3 (b) REPORT TO CONGRESS.—Not later than 3 years  
4 after the date of the enactment of this Act, the Invasive  
5 Species Council shall report actions and findings under  
6 section 6 to the Congress, and shall update this report  
7 once every 3 years thereafter, or more often as necessary.

8 (c) RESPONSE STRATEGY.—The Invasive Species  
9 Council, in coordination with the Task Force, the admin-  
10 istering agencies, and other appropriate Federal and State  
11 agencies, shall develop and implement a national strategy  
12 for how information collected under this Act will be shared  
13 with Federal, State, and local entities with responsibility  
14 for determining response to the introduction of potentially  
15 invasive aquatic species, to enable those entities to better  
16 and more rapidly respond to such introductions.

17 (d) PATHWAY PRACTICES.—The Invasive Species  
18 Council, in coordination with the Task Force and the ad-  
19 ministering agencies, shall disseminate information to,  
20 and develop an ongoing educational program for, pathway  
21 users (including vendors and customers) on how their  
22 practices could be modified to prevent the intentional or  
23 unintentional introduction of nonnative aquatic species  
24 into aquatic ecosystems.



1 (e) AUTHORIZATION OF APPROPRIATIONS.—There  
2 are authorized to be appropriated to the Secretary of the  
3 Interior for each of the fiscal years 2008 through 2012  
4 \$500,000 for the Invasive Species Council for carrying out  
5 this section.

6 **SEC. 8. TECHNOLOGY DEVELOPMENT, DEMONSTRATION,**  
7 **AND VERIFICATION.**

8 (a) ENVIRONMENTALLY SOUND TECHNOLOGY DE-  
9 velopment, demonstration, and verification.—

10 (1) GRANT PROGRAM.—Not later than 1 year  
11 after the date of the enactment of this Act, the En-  
12 vironmental Protection Agency, acting through the  
13 Office of Research and Development, in consultation  
14 with the Army Corps of Engineers, the admin-  
15 istering agencies, and the Task Force, shall develop  
16 and begin administering a grant program to fund re-  
17 search, development, demonstration, and verification  
18 of environmentally sound cost-effective technologies  
19 and methods to control and eradicate aquatic  
20 invasive species.

21 (2) PURPOSES.—Proposals funded under this  
22 subsection shall—

23 (A) seek to support Federal, State, or local  
24 officials' ongoing efforts to control and eradi-

1           cate aquatic invasive species in an environ-  
2           mentally sound manner;

3           (B) increase the number of environ-  
4           mentally sound technologies or methods Fed-  
5           eral, State, or local officials may use to control  
6           or eradicate aquatic invasive species;

7           (C) provide for demonstration or dissemi-  
8           nation of the technology or method to potential  
9           end-users; and

10          (D) verify that any technology or method  
11          meets any appropriate criteria developed for ef-  
12          fectiveness and environmental soundness by the  
13          Environmental Protection Agency.

14          (3) PREFERENCE.—The Administrator of the  
15          Environmental Protection Agency shall give pref-  
16          erence to proposals that will likely meet any appro-  
17          priate criteria developed for environmental sound-  
18          ness by the Environmental Protection Agency.

19          (4) MERIT REVIEW.—Grants shall be awarded  
20          under this subsection through a competitive, peer-re-  
21          viewed process.

22          (5) REPORT.—Not later than 3 years after the  
23          date of the enactment of this Act, the Administrator  
24          of the Environmental Protection Agency shall pre-  
25          pare and submit a report to Congress on the pro-

1       gram conducted under this subsection. The report  
2       shall include findings and recommendations of the  
3       Administrator with regard to technologies and meth-  
4       ods.

5       (b) SHIP PATHWAY TECHNOLOGY DEMONSTRA-  
6       TION.—

7               (1) REAUTHORIZATION OF PROGRAM.—Section  
8       1301(e) of the Nonindigenous Aquatic Nuisance  
9       Prevention and Control Act of 1990 (16 U.S.C.  
10      4741(e)) is amended by striking “\$2,500,000” and  
11      inserting “\$7,500,000 for each of the fiscal years  
12      2008 through 2012”.

13              (2) EXPANSION OF PROGRAM.—Section 1104(b)  
14      of the Nonindigenous Aquatic Nuisance Prevention  
15      and Control Act of 1990 (16 U.S.C. 4714(b)) is  
16      amended—

17                      (A) by redesignating paragraphs (4) and

18                      (5) as paragraphs (5) and (6), respectively; and

19                      (B) by inserting after paragraph (3) the  
20      following new paragraph:

21              “(4) ADDITIONAL PURPOSES.—The Secretary  
22      of the Interior and the Secretary of Commerce may  
23      also demonstrate and verify technologies under this  
24      subsection to monitor and control pathways of orga-

1 nism transport on ships other than through ballast  
2 water.”.

3 (3) CRITERIA AND WORKSHOP.—Section 1104  
4 of the Nonindigenous Aquatic Nuisance Prevention  
5 and Control Act of 1990 (16 U.S.C. 4714) is  
6 amended by adding at the end the following new  
7 subsections:

8 “(d) CRITERIA.—When issuing grants under this sec-  
9 tion, the National Oceanic and Atmospheric Administra-  
10 tion shall give preference to those technologies that will  
11 likely meet the criteria laid out in any testing protocol de-  
12 veloped by the Environmental Protection Agency Office of  
13 Research and Development’s Environmental Technology  
14 Verification Program.

15 “(e) WORKSHOP.—The National Oceanic and Atmos-  
16 pheric Administration shall hold an annual workshop of  
17 principal investigators funded under this section and re-  
18 searchers conducting research directly related to ship  
19 pathway technology development, for information ex-  
20 change, and shall make the proceedings widely available  
21 to the public.”.

22 (c) AUTHORIZATION OF APPROPRIATIONS.—There  
23 are authorized to be appropriated for each of the fiscal  
24 years 2008 through 2012 \$2,500,000 for the Environ-  
25 mental Protection Agency to carry out subsection (a).

1 **SEC. 9. RESEARCH TO SUPPORT THE SETTING AND IMPLE-**  
2 **MENTATION OF SHIP PATHWAY STANDARDS.**

3 (a) RESEARCH PROGRAM.—The Coast Guard and the  
4 Environmental Protection Agency, in coordination with  
5 the National Oceanic and Atmospheric Administration,  
6 the Task Force, and other appropriate Federal agencies  
7 and academic researchers, shall develop a coordinated re-  
8 search program to support the promulgation and imple-  
9 mentation of standards to prevent the introduction and  
10 spread of invasive species by ships that shall include—

11 (1) characterizing physical, chemical, and bio-  
12 logical harbor conditions relevant to ballast dis-  
13 charge into United States waters to inform the de-  
14 sign and implementation of ship vector control tech-  
15 nologies and practices;

16 (2) developing testing protocols for determining  
17 the effectiveness of vector monitoring and control  
18 technologies and practices;

19 (3) researching and demonstrating methods for  
20 mitigating the spread of invasive species by coastal  
21 voyages, including exploring the effectiveness of al-  
22 ternative exchange zones in the near coastal areas  
23 and other methods proposed to reduce transfers of  
24 organisms;

25 (4) verifying the practical effectiveness of any  
26 type approval process to ensure that the process pro-

1       duces repeatable and accurate assessments of treat-  
2       ment effectiveness; and

3           (5) evaluating the effectiveness and residual  
4       risk and environmental impacts associated with any  
5       standard set with respect to the ship pathway  
6       through experimental research.

7       (b) WORKING GROUP.—Not later than 2 years after  
8       the issuance by the Coast Guard of any standard relating  
9       to the introduction by ships of invasive species, the Coast  
10      Guard shall convene a working group including the Envi-  
11      ronmental Protection Agency, the administering agencies,  
12      and other appropriate Federal and State agencies and aca-  
13      demic researchers, to evaluate the effectiveness of that  
14      standard and accompanying implementation protocols.  
15      The duties of the working group shall, at a minimum, in-  
16      clude—

17           (1) reviewing the effectiveness of the standard  
18      in reducing the establishment of invasive species in  
19      aquatic ecosystems, taking into consideration the  
20      data collected under section 5; and

21           (2) developing recommendations to the Coast  
22      Guard for the revision of such standard and type ap-  
23      proval process to ensure effectiveness in reducing in-  
24      troductions and accurate shipboard monitoring of  
25      treatment performance that is simple and stream-

1 lined, which shall be made widely available to the  
2 public.

3 (c) AUTHORIZATION OF APPROPRIATIONS.—There  
4 are authorized to be appropriated for each of the fiscal  
5 years 2008 through 2012 \$1,500,000 for the Coast Guard  
6 and \$1,500,000 for the Environmental Protection Agency  
7 to carry out subsection (a).

8 **SEC. 10. RESEARCH IN SYSTEMATICS AND TAXONOMY.**

9 (a) IN GENERAL.—The National Science Foundation  
10 shall establish a program to award grants to researchers  
11 at institutions of higher education and museums to carry  
12 out research programs in systematics and taxonomy.

13 (b) GOALS.—The goals of the program under this  
14 section are to—

15 (1) encourage scientists to pursue careers in  
16 systematics and taxonomy to ensure a continuing  
17 knowledge base in these disciplines;

18 (2) ensure that there will be adequate expertise  
19 in systematics and taxonomy to support Federal,  
20 State, and local needs to identify species;

21 (3) develop this expertise throughout the United  
22 States with an emphasis on regional diversity; and

23 (4) draw on existing expertise in systematics  
24 and taxonomy at institutions of higher education

1 and museums to train the next generation of system-  
2 atists and taxonomists.

3 (c) CRITERIA.—Grants shall be awarded under this  
4 section on a merit-reviewed competitive basis. Emphasis  
5 shall be placed on funding proposals in a diverse set of  
6 ecosystems and geographic locations, and, when applica-  
7 ble, integrated with the United States Long Term Ecologi-  
8 cal Research Network. Preference shall be given to pro-  
9 posals that will include student participation, and to insti-  
10 tutions and museums that actively train students to be-  
11 come experts in taxonomy and systematics.

12 (d) AUTHORIZATION OF APPROPRIATIONS.—There  
13 are authorized to be appropriated to the National Science  
14 Foundation for carrying out this section \$2,500,000 for  
15 each of the fiscal years 2008 through 2012.

16 **SEC. 11. STATE PROGRAMS.**

17 (a) PLAN.—The administering agencies, in coopera-  
18 tion with the appropriate State agencies, shall develop a  
19 plan to—

20 (1) conduct a survey of methods States and  
21 Federal agencies are using to control or eradicate  
22 aquatic invasive species;

23 (2) facilitate the exchange of information  
24 among States and Federal agencies on methods  
25 States or Federal agencies have found to be effective



1 at controlling or eradicating aquatic invasive species  
2 and the costs of those methods; and

3 (3) evaluate the cost-effectiveness of the various  
4 methods States and Federal agencies are using to  
5 control or eradicate aquatic invasive species.

6 (b) REPORT.—Not later than one year after the date  
7 of enactment of this Act, the administering agencies shall  
8 jointly transmit to the Congress the plan described in sub-  
9 section (a) and the expected costs of carrying out the plan.

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