

115TH CONGRESS  
1ST SESSION

# H. R. 3604

To establish a National Flood Research and Education Center to provide research, data, and recommendations on physical science, social science, economic analysis, policy analysis, risk analysis, monitoring, predicting, and planning as they relate to flooding and flood-related issues.

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## IN THE HOUSE OF REPRESENTATIVES

JULY 28, 2017

Mr. LOEBSACK introduced the following bill; which was referred to the Committee on Science, Space, and Technology, and in addition to the Committee on Transportation and Infrastructure, 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 a National Flood Research and Education Center to provide research, data, and recommendations on physical science, social science, economic analysis, policy analysis, risk analysis, monitoring, predicting, and planning as they relate to flooding and flood-related issues.

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 “National Flood Re-  
5       search and Education Center Act”.

1 **SEC. 2. NATIONAL FLOOD RESEARCH AND EDUCATION**  
2 **CENTER ESTABLISHMENT AND PURPOSE.**

3 (a) ESTABLISHMENT.—There is established within  
4 the National Oceanic and Atmospheric Administration a  
5 National Flood Research and Education Center (in this  
6 Act referred to as “NFREC”) which shall consist of—

7 (1) an office within the National Oceanic and  
8 Atmospheric Administration;

9 (2) one public university or college selected by  
10 the Administrator of the National Oceanic and At-  
11 mospheric Administration (in this Act referred to as  
12 the “Administrator”), which shall serve as the lead  
13 partner institution with the National Oceanic and  
14 Atmospheric Administration; and

15 (3) a consortium of other public universities or  
16 colleges selected by the Administrator and the lead  
17 partner institution based on their ability to fulfill  
18 specific purposes of NFREC.

19 (b) PURPOSES.—The purposes of NFREC are as fol-  
20 lows:

21 (1) To plan, conduct, and arrange for com-  
22 petent public research, data, education, and rec-  
23 ommendations within the following categories as  
24 they relate to flooding issues nationwide, regionally,  
25 and locally:

1 (A) Physical sciences, including engineer-  
2 ing, hydrology, environmental, and atmospheric  
3 sciences, of flooding and flood-related events.

4 (B) Social science of flooding and flood-re-  
5 lated events focused on increasing community  
6 resilience.

7 (C) Economic analysis of flooding and  
8 flood-related events in addition to analysis of a  
9 variety of existing and new strategies and tech-  
10 niques to reduce, manage, and prevent flooding  
11 and flood-related events.

12 (D) Policy analysis and recommendations  
13 on flooding-related policy on a Federal, State,  
14 and local governmental basis.

15 (E) Risk analysis and risk management of  
16 flooding and flood-related events.

17 (F) Improvement of existing, and testing  
18 of new, risk assessment tools, methods, and  
19 models for flooding and flood risks used by  
20 Federal, State, and local governments and other  
21 interested organizations.

22 (G) Improvement of existing, and testing  
23 of new, monitoring and predicting strategies  
24 and techniques of flooding and flood-related  
25 events.

1 (H) Improvement of existing, and testing  
2 of new, flood management and prevention strat-  
3 egies and techniques.

4 (2) To carry out this Act within a variety of re-  
5 gions in the United States which are identified and  
6 categorized by NFREC based on their specific flood-  
7 ing and flood-related issues, hydrology, weather, and  
8 related issues so that diverse flood situations are  
9 represented and examined through NFREC's work.

10 (3) To identify opportunities for increased effi-  
11 ciency in allocation of resources, coordination, co-  
12 operation, and consolidation of efforts as they relate  
13 to local, statewide, regional, and Federal flood-re-  
14 lated efforts with respect to NFREC's purposes.

15 (4) To develop or improve undergraduate and  
16 graduate degree programs and other programs at  
17 the consortium-member public universities and col-  
18 leges to advance the entry of new talent into flood-  
19 ing-related fields.

20 (5) To collaborate with other colleges and uni-  
21 versities in the region that have demonstrated capa-  
22 bility for research, information dissemination, and  
23 graduate training in order to develop regional net-  
24 works that are knowledgeable on regional flooding  
25 issues.

1 **SEC. 3. CONSORTIUM SELECTION AND COLLABORATION.**

2 (a) SELECTION OF THE LEAD PARTNER INSTITU-  
3 TION.—The Administrator, within 180 days after the date  
4 of enactment of this Act, shall select the lead partner insti-  
5 tution described in section 2(a)(2). The Administrator  
6 shall select a public university or college which—

7 (1) has demonstrated and proven expertise in  
8 physical and environmental science, flooding, hy-  
9 draulic research, hydroscience, engineering, and me-  
10 teorological issues;

11 (2) is located in a State which frequently expe-  
12 riences inland flooding;

13 (3) has previously partnered with, or received  
14 funds from, Federal and international agencies for  
15 flooding, hydrology, and watershed issues, including  
16 the Army Corps of Engineers, the United States Ge-  
17 ological Survey, the National Oceanic and Atmos-  
18 pheric Administration, the Department of Agri-  
19 culture, the Federal Emergency Management Agen-  
20 cy, the National Science Foundation, the Depart-  
21 ment of Housing and Urban Development, and the  
22 United Nations Educational, Scientific, and Cultural  
23 Organization;

24 (4) has the capacity to develop and submit a  
25 plan on how it will operate as the lead partner insti-  
26 tution, the type of research, activities, and collabora-

1       tion it would undertake, and how it would incor-  
2       porate its previous work on issues related to the pur-  
3       poses of NFREC into its new mission as the lead  
4       partner institution;

5               (5) can demonstrate an ability to take the lead-  
6       ing role of coordinating and fulfilling the purposes of  
7       NFREC;

8               (6) can demonstrate an ability to provide tech-  
9       nical assistance and demonstration project manage-  
10      ment and oversight both of grantees demonstration  
11      projects and of demonstration projects initiated  
12      through consortium members;

13              (7) can demonstrate an ability to incorporate  
14      NFREC work into undergraduate and graduate edu-  
15      cational programs within the public university or col-  
16      lege; and

17              (8) can demonstrate an ability to contribute the  
18      required non-Federal matching funding to maintain  
19      a lead partner institution center.

20      (b) SELECTION OF CONSORTIUM MEMBERS.—The  
21      Administrator, in partnership with the lead partner insti-  
22      tution, shall select, within 90 days after the selection of  
23      the lead partner institution, additional universities and  
24      colleges to participate in a consortium through criteria as  
25      determined by the Administrator and the lead partner in-

1 stitution which shall, among other criteria determined by  
2 the Administrator and lead partner institution, prioritize  
3 institutions that—

4 (1) have a focus or expertise in at least one of  
5 the categories described in section 2(b)(1);

6 (2) have the ability to plan, conduct, and ar-  
7 range for competent public research, data, edu-  
8 cation, and recommendations as they relate to flood-  
9 ing in diverse regions of the United States identified  
10 and in the categories described in section 2(b)(1)  
11 and meet the purposes of NFREC;

12 (3) can demonstrate an ability to provide tech-  
13 nical assistance and demonstration project manage-  
14 ment and oversight;

15 (4) can demonstrate an ability to incorporate  
16 NFREC work into undergraduate and graduate edu-  
17 cational programs within the university or college;  
18 and

19 (5) can demonstrate an ability to contribute the  
20 required non-Federal matching funding to maintain  
21 a consortium member center.

22 (c) CONSORTIUM PARTNERSHIPS.—The member in-  
23 stitutions of NFREC shall partner for the purposes of this  
24 Act in the following ways:

1           (1) NOAA PARTNERSHIP.—The National Oce-  
2           anic and Atmospheric Administration shall partner  
3           directly with the lead partner institution for the pur-  
4           poses of NFREC.

5           (2) LEAD PARTNER INSTITUTION PARTNER-  
6           SHIP.—The lead partner institution shall partner di-  
7           rectly with the National Oceanic and Atmospheric  
8           Administration and the consortium members for the  
9           purposes of NFREC.

10          (3) CONSORTIUM MEMBER PARTNERSHIP.—The  
11          consortium members shall partner with the lead  
12          partner institution for the purposes of NFREC.

13 **SEC. 4. PARTNERSHIPS AND COLLABORATION WITH FED-**  
14 **ERAL, REGIONAL, STATE, AND LOCAL GOV-**  
15 **ERNMENTS AND ORGANIZATIONS.**

16          (a) PARTNERSHIPS.—NFREC shall partner with the  
17          United States Geological Survey and the Army Corps of  
18          Engineers for the purposes of this Act.

19          (b) COLLABORATION.—NFREC shall—

20               (1) collaborate on Federal flood-related issues  
21               with Federal agencies such as the Federal Emer-  
22               gency Management Agency, the Environmental Pro-  
23               tection Agency, the National Aeronautics and Space  
24               Administration, the National Science Foundation,  
25               and the Department of Agriculture;



1           (2) collaborate and share best practices on re-  
2           gional, State, and locally specific flooding and flood-  
3           related issues with—

4                   (A) State, county, and local governments;

5                   (B) local councils of governments or re-  
6           gional planning organizations;

7                   (C) State agriculture, natural resource, en-  
8           vironment, economic development, and water  
9           agencies;

10                  (D) floodplain managers;

11                  (E) State Homeland Security personnel,  
12           county disaster recovery coordinators, emer-  
13           gency management personnel, and first re-  
14           sponders;

15                  (F) resource conservation and development  
16           councils;

17                  (G) watershed organizations and boards;

18                  (H) agriculture and commodity organiza-  
19           tions and farmers;

20                  (I) environmental organizations; and

21                  (J) business and development organiza-  
22           tions; and

23           (3) explore opportunities to collaborate, when  
24           appropriate, on Federal flood-related issues with  
25           other Federal agencies such as the Bureau of Rec-

1 lamation, the Tennessee Valley Authority, the Bu-  
2 reau of Land Management, the National Park Serv-  
3 ice, the Bureau of Indian Affairs, the Public Health  
4 Administration, the National Science Foundation,  
5 the Department of Defense, the Department of the  
6 Interior, the Department of Housing and Urban De-  
7 velopment, and various national laboratories.

8 **SEC. 5. INFORMATION COLLECTION AND DISSEMINATION.**

9 (a) NOAA.—

10 (1) ANNUAL REPORT.—The Administrator shall  
11 publish annually a report containing the activities,  
12 partnerships and collaborations, Federal policy rec-  
13 ommendations, previous and continuing budgets,  
14 findings, and any other applicable information from  
15 the consortium members, and shall provide each re-  
16 port to Congress and the President and make it  
17 available to the public in an easily accessible elec-  
18 tronic format on the National Oceanic and Atmos-  
19 pheric Administration’s website.

20 (2) REVIEW OF REPORTS FROM CONSORTIUM  
21 MEMBERS.—The Administrator shall review the re-  
22 ports from the consortium members to ensure that  
23 funds are being spent properly according to the pur-  
24 poses of this Act and that the consortium members  
25 are producing competent public research, data, edu-

1 cation, and recommendations in regard to flooding  
2 and flood-related issues.

3 (3) REVIEW OF CONSORTIUM OPERATIONS.—

4 The Administrator shall periodically review the oper-  
5 ation of consortium members to ensure that funds  
6 are being spent properly according to the purposes  
7 of this Act and that the consortium members are  
8 producing competent public research, data, edu-  
9 cation, and recommendations in regard to flooding  
10 and flood-related issues.

11 (b) LEAD PARTNER INSTITUTION.—

12 (1) COMPILATION OF ANNUAL CONSORTIUM  
13 MEMBER REPORTS.—The lead partner institution  
14 shall compile annually reports from consortium  
15 members, along with its own report, containing the  
16 activities, partnerships and collaborations, Federal  
17 policy recommendations, previous and continuing  
18 budgets, findings, and any other applicable informa-  
19 tion from consortium members, and shall provide  
20 this information to the Administrator annually by a  
21 date determined by the Administrator.

22 (2) ANNUAL LEAD PARTNER INSTITUTION RE-  
23 PORT.—In addition, the lead partner institution  
24 shall publish annually a report specific to its activi-  
25 ties, partnerships and collaborations, State and local

1 policy recommendations, previous and continuing  
2 budgets, findings, and other applicable information  
3 by a date determined by the Administrator which  
4 shall also be made available to the public in an easily  
5 accessible electronic format on the lead partner insti-  
6 tution's website.

7 (c) CONSORTIUM MEMBERS.—The consortium mem-  
8 bers shall each publish annually a report containing the  
9 activities, partnerships and collaborations, State and local  
10 policy recommendations, previous and continuing budgets,  
11 findings, and other applicable information by a date deter-  
12 mined by the lead partner institution which shall also be  
13 made available to the public in an easily accessible elec-  
14 tronic format on the consortium members' websites.

15 (d) NATIONAL FLOOD RESEARCH AND EDUCATION  
16 CENTER WEBSITE.—NFREC shall establish a website  
17 which shall contain at least the following information:

18 (1) Key findings and best practices.

19 (2) Collaborations and partnerships.

20 (3) Annual reports and other pertinent informa-  
21 tion on its purposes.

22 (4) The location and contact information for  
23 the consortium members.

24 (5) Federal, State, local, and regionally specific  
25 public research, data, education, and policy rec-

1       ommendations which shall be updated in a timely  
2       manner with new information.

3               (6) The variety of regions in the United States  
4       which are identified and categorized by NFREC,  
5       based on their specific flooding and flood-related  
6       issues, hydrology, weather, and related issues.

7               (7) Approved demonstration projects and their  
8       progress in addition to information on applying for  
9       demonstration project assistance.

10              (8) Tools for monitoring, predicting, and mod-  
11       eling flooding as they become available.

12 **SEC. 6. TECHNICAL ASSISTANCE AND DEMONSTRATION**  
13 **PROJECTS.**

14       (a) TECHNICAL ASSISTANCE AND DEMONSTRATION  
15 PROJECTS.—NFREC may provide technical assistance  
16 and demonstration project grant assistance to eligible enti-  
17 ties on a competitive basis to assist with implementing rec-  
18 ommendations of NFREC or testing new or improved  
19 strategies or technologies for the categories described in  
20 section 2(b)(1).

21       (b) ELIGIBLE ENTITIES.—The following are eligible  
22 entities for purposes of this section:

23               (1) State governments.

24               (2) County governments.

25               (3) Local governments.

1           (c) TECHNICAL ASSISTANCE.—Consortium members  
2 may provide technical assistance at their discretion to eli-  
3 gible entities that have limited capacity for developing an  
4 application for demonstration project grants. Consortium  
5 members may also provide technical assistance at their  
6 discretion in implementing demonstration projects ap-  
7 proved by the Administrator.

8           (d) COMPETITIVE CRITERIA.—The Administrator, in  
9 partnership with the lead partner institution, shall develop  
10 criteria required for submitting a competitive demonstra-  
11 tion project grant application and for the approval of such  
12 an application.

13           (e) ELIGIBLE ACTIVITIES.—Grantees may use funds  
14 only for flooding-related projects which implement rec-  
15 ommendations of NFREC or for testing of—

16           (1) improved existing and or new risk analysis  
17 and risk management of flooding and flood-related  
18 events;

19           (2) improved existing and or new risk assess-  
20 ment tools, methods, and models for flooding and  
21 flood risks used by Federal, State, and local govern-  
22 ments and other interested organizations;

23           (3) improved existing and or new monitoring  
24 and predicting strategies and techniques of flooding  
25 and flood-related events; or

1           (4) improved existing and or new flood manage-  
2           ment and prevention strategies and techniques.

3           (f) SUBCONTRACTING.—Eligible entities may sub-  
4           contract a portion of grant funds received for necessary  
5           construction-related costs to pursue an eligible activity.

6           (g) APPLICATIONS.—

7           (1) CONSORTIUM REVIEW AND APPROVAL.—  
8           Within 60 days of receiving a completed application,  
9           the consortium member in whose region the project  
10          will take place and the lead partner institution shall  
11          review and approve or disapprove the application.

12          (2) ADMINISTRATOR APPROVAL.—Within 30  
13          days of receiving an application that has been ap-  
14          proved by the applicable consortium members, the  
15          Administrator shall determine whether to provide  
16          the project final approval.

17          (h) GRANT SIZE.—

18          (1) IN GENERAL.—Demonstration project grant  
19          awards under this section shall not exceed \$250,000  
20          per project.

21          (2) WAIVER OF GRANT SIZE LIMITATION.—The  
22          Administrator may waive such grant size limitation  
23          if—

24                  (A) all consortium members approve of  
25                  such a waiver;

1 (B) the eligible entity has the expertise, or  
2 will work with partners that have the expertise,  
3 to manage the proposed project; and

4 (C) the eligible entity can show that a  
5 project involves multiple watersheds or jurisdic-  
6 tions, benefits multiple communities, has broad  
7 community support, and incorporates multiple  
8 aspects of NFREC's work in the project.

9 (i) MATCHING FUNDS.—Entities receiving a dem-  
10 onstration project grant under this section shall be re-  
11 quired to provide a 30-percent non-Federal cost share.

12 (j) TOTAL DEMONSTRATION PROJECT GRANT  
13 AMOUNT AVAILABLE.—There shall be not more than  
14 \$2,000,000 available annually for demonstration project  
15 grants under this section nationwide.

16 (k) MONITORING AND REPORTING.—For a dem-  
17 onstration project that receives a grant under this section,  
18 the applicable regional consortium member shall monitor  
19 the effectiveness, efficiency, and progress of the project  
20 and report on these factors and their involvement periodi-  
21 cally to the lead partner institution. The applicable re-  
22 gional consortium member shall make this information  
23 available through its website and additionally provide this  
24 information in its annual reports.



1 **SEC. 7. AUTHORIZATION OF APPROPRIATIONS.**

2 (a) IN GENERAL.—For each of the fiscal years 2018  
3 through 2023, there are authorized for NFREC,  
4 \$10,000,000, of which—

5 (1) not more than \$2,000,000 each fiscal year  
6 shall be for the operation of the National Oceanic  
7 and Atmospheric Administration’s center; and

8 (2) not more than \$3,000,000 each fiscal year  
9 shall be for the operation of the lead partner institu-  
10 tion’s center, matched by a 20-percent non-Federal  
11 cost share.

12 (b) ADDITIONAL AUTHORIZATION.—

13 (1) LEAD PARTNER INSTITUTION.—There are  
14 authorized such sums as may be necessary for the  
15 lead partner institution to improve its facilities to a  
16 level that meets the requirements of the role of lead  
17 partner institution.

18 (2) PLAN.—Before the lead partner institution  
19 receives any funding under this subsection, a plan  
20 detailing what type of facility construction or im-  
21 provements will take place must first be approved by  
22 the Administrator. Such plan shall include any land  
23 acquisition, engineering, design, and staffing and  
24 equipment needs, in addition to other information as  
25 required by the Administrator.

1           (3) NON-FEDERAL COST SHARE.—There shall  
2           be a non-Federal cost share of 20 percent for facility  
3           improvement or construction projects pursued by the  
4           lead partner institution.

5           (4) WAGE RATE REQUIREMENTS.—Any author-  
6           ized and funded construction activity shall meet  
7           Federal prevailing wage requirements as determined  
8           by the Secretary of Labor in accordance with sub-  
9           chapter IV of chapter 31 of part A of subtitle II of  
10          title 40, United States Code (commonly referred to  
11          as the “Davis-Bacon Act”).

12          (c) CONSORTIUM MEMBER CENTERS.—

13           (1) IN GENERAL.—Not more than \$3,000,000  
14           each fiscal year shall be for the operation of all con-  
15           sortium members’ centers, matched by a 20-percent  
16           non-Federal cost share.

17           (2) LIMITATION.—Any one consortium member  
18           shall not receive more than \$500,000 in Federal  
19           funds in one fiscal year.

20          (d) GRANTS.—Not more than \$2,000,000 each fiscal  
21          year shall be made available for demonstration project  
22          grants nationwide.

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