

**Calendar No. 698**

107th Congress }  
2d Session }

SENATE

{ REPORT  
{ 107-310

**INLAND FLOOD FORECASTING AND  
WARNING SYSTEM ACT OF 2002**

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R E P O R T

OF THE

COMMITTEE ON COMMERCE, SCIENCE, AND  
TRANSPORTATION

on

H.R. 2486



OCTOBER 10, 2002.—Ordered to be printed

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U.S. GOVERNMENT PRINTING OFFICE

19-010

WASHINGTON : 2002

SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

ONE HUNDRED SEVENTH CONGRESS

SECOND SESSION

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(II)

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### INLAND FLOOD FORECASTING AND WARNING SYSTEM ACT OF 2002

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OCTOBER 10, 2002.—Ordered to be printed

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Mr. HOLLINGS, from the Committee on Commerce, Science, and  
Transportation, submitted the following

### R E P O R T

[To accompany H.R. 2486]

The Committee on Commerce, Science, and Transportation, to which was referred the Act (H.R. 2486) to authorize the National Weather Service to conduct research and development, training, and outreach activities relating to tropical cyclone inland forecasting improvement, and for other purposes, having considered the same, reports favorably thereon without amendment and recommends that the Act do pass.

#### PURPOSE OF THE BILL

The purpose of H.R. 2486 is to authorize the National Oceanic and Atmospheric Administration (NOAA), through the United States Weather Research Program (USWRP), to improve the capability to forecast inland flooding through research and modeling, and to develop, test, and deploy a new flood warning index.

#### BACKGROUND AND NEEDS

In 1999, Hurricane Floyd killed 48 people and caused nearly \$3 billion in property damage, primarily through the flooding of inland communities. In 2000, Tropical Storm Allison unexpectedly dumped more than 35 inches of rain in Texas and traveled from Texas eastward through much of the southeast United States, resulting in more than 50 deaths, again, primarily as a result of inland flooding.

While the National Weather Service has the ability to accurately predict most flood events, it has difficulty in forecasting coastal and estuary-inland flooding events that are caused by tropical cyclones.

In addition, the flood warning index (or scale) currently used by the National Weather Service does not include enough information about the potential risks and dangers posed by expected floods.

The USWRP is a \$9 million multi-agency collaborative effort of research communities, academia, and government. The focus of the program is to integrate weather-related research and new developments in technology with public and private sector applications.

The government participants include NOAA, which houses USWRP, the National Science Foundation, the National Aeronautic and Space Administration, and the Department of Defense.

#### LEGISLATIVE HISTORY

H.R. 2486 was introduced in the House of Representatives on July 12, 2001. It was reported as amended by the Committee on Science on June 5, 2002, House Report 107-495. The Act was passed in the House of Representatives by a vote of 413:3 (Roll no. 294). Upon passage by the House of Representatives, the Act was read twice and referred to the Senate Committee on Commerce, Science, and Transportation. On September 19, 2002, in an executive session, the Act was ordered to be reported without amendment favorably.

#### ESTIMATED COSTS

In accordance with paragraph 11(a) of rule XXVI of the Standing Rules of the Senate and section 403 of the Congressional Budget Act of 1974, the Committee provides the following cost estimate, prepared by the Congressional Budget Office:

U.S. CONGRESS,  
CONGRESSIONAL BUDGET OFFICE,  
*Washington, DC, October 2, 2002.*

Hon. ERNEST F. HOLLINGS,  
*Chairman, Committee on Commerce, Science, and Transportation,  
U.S. Senate, Washington, DC.*

DEAR MR. CHAIRMAN: The Congressional Budget Office has prepared the enclosed cost estimate for H.R. 2486, the Inland Flood Forecasting and Warning System Act of 2002.

If you wish further details on this estimate, we will be pleased to provide them. The CBO staff contact is Deborah Reis.

Sincerely,

BARRY B. ANDERSON  
(For Dan L. Crippen, Director).

Enclosure.

*H.R. 2486—Inland Flood Forecasting and Warning System Act of 2002*

Summary: H.R. 2486 would require the National Oceanic and Atmospheric Administration (NOAA) to improve its ability to forecast inland flooding through research and modeling. The act would direct the agency to create and implement a flood warning index, train government and other personnel to use new forecasting methodologies, assess trends in inland flooding, and conduct outreach and education. Finally, the act would authorize the appropriate of

\$1.25 million for each of fiscal years 2003 through 2005, and \$1.15 million for 2006 and 2007 for these activities.

Assuming appropriation of the authorized amounts, CBO estimates that implementing H.R. 2486 would cost about \$6 million over the 2003–2007 period. Enacting this legislation would not affect direct spending or revenues.

H.R. 2486 contains no intergovernmental or private-sector mandates as defined in the Unfunded Mandates Reform Act (UMRA) and would impose no costs on state, local, or tribal governments.

Estimated cost to the Federal Government: The estimated budgetary impact on H.R. 2486 is shown in the following table. The costs of this legislation fall within budget function 300 (natural resources and environment).

For this estimate, CBO assumes that the amounts authorized by H.R. 2486 will be appropriated near the beginning of each fiscal year and that outlays will follow historical spending patterns for similar grant programs.

|   | By fiscal year, in millions of dollars— |      |      |      |      |
|---|---|------|------|------|------|
|   | 2003                                    | 2004 | 2005 | 2006 | 2007 |
| CHANGES IN SPENDING SUBJECT TO APPROPRIATION        |   |      |      |      |      |
| Inland Flood Forecasting and Warning <sup>1</sup> : |   |      |      |      |      |
| Authorized Level .....                              | 1                                       | 1    | 1    | 1    | 1    |
| Estimated Outlays .....                             | 1                                       | 1    | 1    | 1    | 1    |

<sup>1</sup> NOAA's National Weather Service \$642 million in operating funds from fiscal year 2002 appropriations, about \$1.5 million of which was for advanced hydrological forecasting activities similar to those that would be authorized by H.R. 2486. A full-year appropriation for NOAA for 2003 has not yet been provided.

Intergovernmental and private-sector impact: H.R. 2486 contains no intergovernmental or private-sector mandates as defined in UMRA. The act would benefit public universities by authorizing a total of \$1.55 million in grant funding over the 2003–2007 period to institutions of higher education, including public universities, for developing models for improved flood forecasts and for analyzing long-term trends in the frequency and severity of inland flooding. Any costs incurred by states would be voluntary.

Previous CBO cost estimate: On May 31, 2002, CBO transmitted a cost estimate for H.R. 2486 as ordered reported by the House Committee on Science on May 22, 2002. The authorization levels contained in the Senate version of the legislation are \$100,000 higher than those of the version approved by the House Science Committee for fiscal years 2003 through 2005. The cost estimates reflect this difference.

Estimate prepared by: Federal Cost: Deborah Reis; Impact on State, Local, and Tribal Governments: Susan Sieg Tompkins; and Impact on the Private Sector: Cecil McPherson.

Estimate approved by: Peter H. Fontaine, Deputy Assistant Director for Budget Analysis.

#### REGULATORY IMPACT STATEMENT

In accordance with paragraph 11(b) of rule XXVI of the Standing Rules of the Senate, the Committee provides the following evaluation of the regulatory impact of the legislation, as reported:

Because H.R. 2486 does not create any new programs, the legislation would have no additional regulatory impact, and should result in no additional reporting requirements. The legislation would

have no further effect on the number or types of individuals and businesses regulated, the economic impact of such regulation, the personal privacy of affected individuals, or the paperwork required from such individuals and businesses.

#### SECTION-BY-SECTION ANALYSIS

##### *Section 1. Short title*

Section 1 would cite the title of the Act as the “Inland Flood Forecasting and Warning System Act of 2002.”

##### *Section 2. Authorized activities*

Section 2 would authorize NOAA, through the United States Weather Research Program, to develop, test, and deploy an inland flood warning index for use by public and emergency management officials. After developing the index, NOAA would be required to train emergency management officials, National Weather Service personnel, meteorologists, and others, as appropriate, in the use of the new inland flood warning index, and conduct outreach and education activities for the public.

##### *Section 3. Authorization of appropriations*

Section 3 would authorize appropriations of \$1,150,000 for each fiscal year (FY) from 2003 through 2007, for a total of \$5,750,000 to NOAA. Of this amount, up to \$250,000 for each fiscal year would be available for competitive merit reviewed grants to institutions of higher education to improve the ability to forecast coastal and estuary-inland flooding associated with tropical cyclones.

##### *Section 4. Report*

Section 4 would require NOAA, not later than 90 days after the Act is enacted, and annually through FY 2007, to report to the Senate Committee on Commerce, Science, and Transportation and House of Representatives Committee on Science on the success and acceptance of the inland flood warning index. NOAA would also be required to report to the House of Representatives Committee on Science and the Senate Committee on Commerce, Science, and Transportation, not later than January 1, 2006, on the likely long-term trends in inland flooding, and the activities conducted under the direction of this legislation, especially activities to alert the public and builders to flood hazards.

#### CHANGES IN EXISTING LAW

In compliance with paragraph 12 of rule XXVI of the Standing Rules of the Senate, the Committee states that the Act as reported would make no change to existing law.