

**Calendar No. 268**

114TH CONGRESS }  
*1st Session* }

SENATE

{ REPORT  
114-154

NATIONAL WEATHER SERVICE  
IMPROVEMENT ACT

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R E P O R T

OF THE

COMMITTEE ON COMMERCE, SCIENCE, AND  
TRANSPORTATION

ON

S. 1573



October 19, 2015.—Ordered to be printed

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SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

ONE HUNDRED FOURTEENTH CONGRESS

FIRST SESSION

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### NATIONAL WEATHER SERVICE IMPROVEMENT ACT

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OCTOBER 19, 2015.—Ordered to be printed  
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Mr. THUNE, from the Committee on Commerce, Science, and  
Transportation, submitted the following

### R E P O R T

[To accompany S. 1573]

The Committee on Commerce, Science, and Transportation, to which was referred the bill (S. 1573) to establish regional weather forecast offices, and for other purposes, having considered the same, reports favorably thereon with an amendment (in the nature of a substitute) and an amendment to the title and recommends that the bill (as amended) do pass.<sup>1</sup>

#### PURPOSE OF THE BILL

The purpose of S. 1573, the Weather Alerts for a Ready Nation Act of 2015,<sup>2</sup> is to improve communication from the National Weather Service (NWS) regarding severe weather risks, establish a warning coordination meteorologist in all 122 current weather forecast offices, and require the Administrator of the National Oceanic and Atmospheric Administration (NOAA) to submit a report to Congress that details the use of contract positions within the NWS.

#### BACKGROUND AND NEEDS

The NWS, housed within NOAA, is charged with providing weather, water, and climate data, forecasts, and warnings in order to protect life and property and to enhance the Nation's economy.<sup>3</sup> The NWS routinely provides public, marine, and aviation forecasts

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<sup>1</sup>The Committee ordered S.1573 to be reported with an amendment to the long title so as to read: "A bill to improve communications from the National Weather Service regarding severe weather risks, and for other purposes."

<sup>2</sup>The reported bill also would change the short title to the Weather Alerts for a Ready Nation Act of 2015.

<sup>3</sup>National Weather Service. About NOAA's National Weather Service. Available at: <http://www.weather.gov/about> (accessed April 10, 2013).

in addition to advisories and warnings when necessary.<sup>4</sup> The NWS data and products form a national information database and infrastructure that is used by other government agencies, private sector weather services organizations (e.g., The Weather Channel, Accurate), and the public. The emergency management communities depend upon the NWS for weather-related information, and the NWS depends on its core partners to disseminate the critical information to the general public.<sup>5</sup>

For a forecast to be most effective, it not only must be accurate, but it must be communicated in such a manner so that it is understood by the intended audience. As noted by the National Research Council, the NWS has made substantial progress in improving forecasts, but has struggled with how to better communicate its warnings and forecasts.<sup>6</sup> To better address the public's understanding of such warnings and forecasts, the NWS has begun to employ warning coordination meteorologists in some of its weather forecast offices. The responsibilities of a warning coordination meteorologist are to strengthen the interface between the NWS and its users. This type of position creates the opportunity for increased interaction with users such as the public, media outlets, the agricultural sector, and water managers, and to evaluate the adequacy and usefulness of NWS products and services. It is also necessary for the NWS to work closely with emergency managers to ensure effective preparedness. As weather forecasts are often difficult to understand, yet require public action, it is essential that end users and scientists work together toward providing improved impact forecasts.<sup>7</sup>

The 48-hour track forecast of Hurricane Katrina was nearly perfect; however, this devastating hurricane caused more than 1,000 direct weather fatalities and more than \$81 billion in property and crop damage.<sup>8</sup> This is not a unique scenario and examples of similar situations have been the subject of study and concern—including a May 2013 tornado outbreak in Oklahoma that raised concern in the field of meteorology. In this particular instance, 11 days after a devastating tornado touched down in the City of Moore, Oklahoma, another 2-mile wide tornado touched down 30 miles west of Oklahoma City and caused tens of thousands of people to spontaneously flee, causing a standstill traffic jam on an interstate highway. The two-mile wide tornado lifted as it came toward the city, but had it not it is estimated that the number of people killed could have climbed into the hundreds, if not reaching the level of loss in Hurricane Katrina.<sup>9</sup>

<sup>4</sup>National Research Council. 2012. The National Weather Service Modernization and Associated Restructuring: A Retrospective Assessment. Available at <http://www.nap.edu/catalog/13216/the-national-weather-service-modernization-and-associated-restructuring-a-retrospective>.

<sup>5</sup>National Academy of Public Administration. 2013. Forecast for the Future: Assuring the Capacity of the National Weather Service. Available at <http://www.napawash.org/2013/1455-forecast-for-the-future-national-weather-service.html>.

<sup>6</sup>National Research Council. 2010. When Weather Matters: Science and Service to Meet Critical Societal Needs. Available at <http://www.nap.edu/catalog/12888/when-weather-matters-science-and-service-to-meet-critical-societal>.

<sup>7</sup>National Research Council. 2010. When Weather Matters: Science and Service to Meet Critical Societal Needs. Available at <http://www.nap.edu/catalog/12888/when-weather-matters-science-and-service-to-meet-critical-societal>.

<sup>8</sup>Ibid.

<sup>9</sup>Testimony of Dr. Kim Klochow, Postdoctoral Researcher University Corporation for Atmospheric Research, in U.S. Congress, Senate Committee on Commerce, Science, and Transportation, Weathering the Storm: How Can We Better Communicate Weather to Enhance Commerce and Safety?, hearings, 114th Cong., 1st sess., April 22, 2015 (Washington, DC).

Examples like this are evidence of the fundamental need for the research and partnership that must be developed between the weather community and social scientists. Understanding how people interpret forecasts and how that interpretation can influence behavior and motivation are valuable in advancing the impact the weather enterprise can have on saving lives. Weather forecasting is inherently uncertain; therefore, it is particularly important to address the communication of uncertainty to users and the need to discuss not only predictions of weather variables, but predictions of weather impacts.<sup>10</sup> As a result of these gaps, many experts believe that social science should be considered a primary element of the solution and not just considered in hindsight.

With respect to NOAA oversight, the Committee was made aware that in January 2012, the Department of Commerce’s Office of Inspector General (OIG) received multiple anonymous complaints identifying a senior official who was personally involved in the procurement of his own lucrative post-retirement consulting position within the NWS.<sup>11</sup> The individual was included in developing the applicable statement of work, salary, creation of the position, and arrangements for approximately \$50,000 worth of housing expense reimbursement to which he was not entitled. As a result of the investigation, NOAA took action to terminate the contract. The OIG is also taking steps to ensure this is not a more systematic “revolving door” issue within the agency.

#### SUMMARY OF PROVISIONS

S. 1573, the Weather Alerts for a Ready Nation Act of 2015, would direct NOAA to designate a warning coordination meteorologist in each of the 122 current weather forecast offices. The warning coordination meteorologist would be responsible for interfacing with the users of NWS products and services. In addition, S. 1573 would further require NOAA to evaluate and improve the current communication of hazardous weather and water events to prevent loss of life and property. Any implementation that would change the current warning system would require NOAA to consider social and behavioral sciences, the needs of various demographics, and needs of stakeholders.

Lastly, S. 1573 would require the Administrator of NOAA to submit to Congress a report that details the use of contract positions within the NWS, addressing a recent OIG report that discovered the inappropriate creation of a lucrative post-retirement position for a previous NWS employee—which point to potential concerns within NOAA and the NWS regarding such arrangements. After the initial report, which would be due 180 days following enactment, there would be an annual reporting requirement with the information to be publicly available.

#### LEGISLATIVE HISTORY

S. 1573 was introduced by Senator Thune on June 15, 2015. Senators Thune and Schatz submitted a substitute amendment to be

<sup>10</sup> *Ibid.*

<sup>11</sup> Department of Commerce Office of Inspector General. 2015. National Oceanic and Atmospheric Administration. Investigation into Alleged Contracting Misconduct and Exertion of Improper Influence Involving a Senior National Weather Service Official. Final Report No. OIG-12-0447. Available at <http://www.oig.doc.gov/OIGPublications/OIG-12-0447-I.pdf>.

considered for the Executive Session. On June 25, 2015, the Committee met in open Executive Session and, by a voice vote, ordered S. 1573 to be reported favorably with an amendment in the nature of a substitute.

#### 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:

##### *S. 1573—Weather Alerts for a Ready Nation Act of 2015*

S. 1573 would require the National Weather Service (NWS) to employ a warning coordinator at each of its weather forecast offices and to conduct certain studies. Assuming appropriation of the necessary amounts, CBO estimates that implementing the legislation would cost \$1 million over the 2016–2017 period. Because enacting the bill would not affect direct spending or revenues, pay-as-you-go procedures do not apply.

The bill would require NWS to ensure that each of the agency's 122 weather forecast offices has a warning coordinator. Because the agency already meets that requirement, CBO estimates that implementing this provision would not affect federal spending. The bill also would require the agency to study the effectiveness of the hazardous weather alert system and to report on the use of contractors at NWS. Based on information from NOAA, CBO estimates that conducting those studies would cost \$1 million over the 2016–2017 period, assuming availability of appropriate funds.

S. 1573 contains no intergovernmental or private-sector mandates as defined in the Unfunded Mandates Reform Act and would impose no costs on state, local, or tribal governments. Public entities, such as state or local government agencies responsible for responding to weather emergencies, would benefit from information and technical assistance provided by the National Weather Service.

The CBO staff contacts for this estimate are Ben Christopher and Jeff LaFave. The estimate was approved by Theresa Gullo, Assistant Director for Budget Analysis.

#### REGULATORY IMPACT

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:

##### NUMBER OF PERSONS COVERED

S. 1573 as reported would not create any new programs or impose any new regulatory requirements, and therefore would not subject any individuals or businesses to new regulations.

##### ECONOMIC IMPACT

Enactment of this legislation is not expected to have any inflationary or adverse impact on the Nation's economy.

##### PRIVACY

The bill would not impact the personal privacy of individuals.

## PAPERWORK

S. 1573 would require reports from the Federal Government. The Administrator of NOAA would provide to Congress a report on the current watch and warning system and recommendations to improve this system. The Administrator should also provide yearly updates to Congress until the watch and warning system has been updated. The Administrator also would provide a report to Congress regarding certain details on employees contracted by NOAA, and would be required to provide this same information on a website to be updated annually.

## CONGRESSIONALLY DIRECTED SPENDING

In compliance with paragraph 4(b) of rule XLIV of the Standing Rules of the Senate, the Committee provides that no provisions contained in the bill, as reported, meet the definition of congressionally directed spending items under the rule.

## SECTION-BY-SECTION ANALYSIS

*Section 1. Short title.*

This section would designate the short title of the bill as the “Weather Alerts for a Ready Nation Act of 2015.”

*Section 2. Warning coordination meteorologists at weather forecast offices of National Weather Service.*

This section would require the NWS to employ at least one warning coordination meteorologist to be located at each of the established 122 weather forecast offices. The role of the warning coordination meteorologist would be to provide service to the geographic area covered by the weather forecast office; liaise with users of NWS products such as the public and media; collaborate locally to tailor products and services to improve their usefulness; and work closely with State, local, and tribal government agencies. Each warning coordination meteorologist may also identify community preparedness objectives and develop plans for promoting more effective use of NWS products and services; and conduct citizen education about severe weather preparedness. It is the Committee’s intention to clarify and codify the role of the existing employees, not to create a duplicative or conflicting position.

*Section 3. Improving National Oceanic and Atmospheric Administration communication of hazardous weather and water events.*

This section would direct NOAA to evaluate the current system used for issuing severe weather watches and warnings. The evaluation should focus on methods to clearly communicate risks, ways to broadly disseminate information, and how the system could help prevent the loss of life and property. A report of this evaluation, done in consultation with other NOAA line offices, the academic sector, the media, non-Federal forecasters, and emergency planners and responders would be required to be submitted to Congress not later than two years after the date of enactment. Beginning not later than four years after enactment, NOAA would be required to annually update Congress on its progress implementing a new watch and warning system, until it has satisfied the requirements

in this section, at which point it would be required to issue a final report.

*Section 4. Report on contract positions at the National Weather Service.*

This section would require NOAA to submit a report to Congress 180 days after the date of enactment that summarizes, with respect to the most recent completed fiscal year, full-time employees and contractors employed within the NWS disaggregate by each equivalent level of the General Schedule. The report would include comparisons between NWS employees and contract employees with regard to salary, positions, and quantity. NOAA would be required to also include information on actions taken to respond to an OIG report (OIG-12-0447) that raised concerns over NOAA hiring former employees into lucrative post-retirement contract positions. For each fiscal year after the year covered by the initial report, NOAA and the NWS would be required to provide the above information through a publicly accessible website.

CHANGES IN EXISTING LAW

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