

Calendar No. 629

114TH CONGRESS }
2d Session }

SENATE

{ REPORT
{ 114-351

METROPOLITAN WEATHER HAZARDS
PROTECTION ACT OF 2015

R E P O R T

OF THE

COMMITTEE ON COMMERCE, SCIENCE, AND
TRANSPORTATION

ON

S. 2058



SEPTEMBER 15, 2016.—Ordered to be printed

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SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

ONE HUNDRED FOURTEENTH CONGRESS

SECOND SESSION

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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. 2058]

The Committee on Commerce, Science, and Transportation, to which was referred the bill (S. 2058) to require the Secretary of Commerce to maintain and operate at least one Doppler weather radar site within 55 miles of each city in the United States that has a population of more than 700,000 individuals, and for other purposes, having considered the same, reports favorably thereon with an amendment (in the nature of a substitute) and recommends that the bill (as amended) do pass.

PURPOSE OF THE BILL

The purpose of S. 2058, the Metropolitan Weather Hazards Protection Act of 2015, is to direct the Secretary of Commerce to identify areas with gaps in radar coverage and develop a plan for addressing these gaps.

BACKGROUND AND NEEDS

Doppler radars are used to determine the velocity of objects, such as precipitation and airplanes. The ubiquity of their images have made them one of the most widely recognized tools for weather predictions. The National Oceanic and Atmospheric Administration's (NOAA) National Weather Service's (NWS) radar network is made up of 158 NEXt-generation RADar (NEXRAD).¹ In 2013, the NWS finished the software and hardware upgrades necessary to install

¹NOAA National Severe Storms Laboratory, accessed December 3, 2015, at <http://www.nssl.noaa.gov/tools/radar/nexrad>.

dual polarization technology in all of its NEXRADs. “Dual-pol” radars can detect which type of precipitation is falling and capture the characteristic airborne debris created when a tornado touches ground.² NEXRADs are no longer manufactured; however, the NWS is currently performing service life extensions³ on all of its NEXRADs, with the goal of extending their use for another 20 years.⁴

Of particular concern to the bill’s sponsors, Charlotte, North Carolina, is currently covered by a NWS Doppler radar that is 94 miles away in Greer, South Carolina. No other city of Charlotte’s size has a radar situated more than 55 miles away. The current location results in a majority of the metropolitan area being without radar beam coverage below 10,000 feet. Due to the circumference of the Earth, the further a radar is from a given point the higher the radar beam scans the atmosphere, leading to lower resolutions and an inability to detect the low-level dynamics of severe weather. Rowan, Cabarrus, and Davidson Counties in North Carolina have an even more pronounced problem with limited radar coverage because of the location of the radar.

Local meteorologists believe that the lack of quality radar coverage has made it difficult for the local NWS forecast office in Spartanburg, Tennessee to detect severe weather, specifically tornadoes. In March 2012, the NWS office failed to warn of a tornado that affected Mecklenburg, Rowan, and Cabarrus Counties of North Carolina. It can be very difficult to detect rotation in thunderstorms that tend to affect North Carolina; however, the lack of a Doppler radar for the Piedmont may enhance the problem.

In addition, radar coverage over several other regions is sparse or limited. For example, Washington and New Mexico face significant gaps in radar coverage.

SUMMARY OF PROVISIONS

If enacted, S. 2058 would require the Secretary of Commerce to identify areas with gaps in radar coverage and develop a plan for addressing these gaps.

LEGISLATIVE HISTORY

S. 2058 was introduced by Senator Burr on September 17, 2015. It was cosponsored by Senator Tillis. On December 9, 2015, the Committee met in open Executive Session and, by a voice vote, ordered a substitute version of S. 2058 reported favorably. The substitute amendment was offered by Senator Cantwell.

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

²NOAA Weather Ready Nation, “Dual-polarization radar: Stepping stones to building a Weather-Ready Nation,” accessed December 3, 2015, at http://www.nws.noaa.gov/com/weatherreadynation/news/130425_dualpol.html#.VmAqc7S7GY.

³NOAA National Weather Service Radar Operations Center, accessed December 3, 2015, at <http://www.roc.noaa.gov/WSR88D/SLEP/SLEP.aspx>.

⁴R. D. Cook and T. L. Allmon, G. Secret, A. D. Free, D. L. Rose, and J. M. Williams, “A Service Life Extension Program for the WSR-88D Radars,” paper presented at the American Meteorological Society’s 30th Conference on Environmental Information Processing Technologies, Atlanta, Georgia, February 2-4, 2014, at <https://ams.confex.com/ams/94Annual/webprogram/Paper241171.html>.

Act of 1974, the Committee provides the following cost estimate, prepared by the Congressional Budget Office:

S. 2058—Metropolitan Weather Hazards Protection Act of 2015

S. 2058 would require the National Oceanic and Atmospheric Administration (NOAA) to complete a study that would identify areas without Next Generation Weather Radar (NEXRAD). The study also would determine how NEXRAD could improve weather forecasts in those areas and would assess the feasibility of expanding radar capabilities in those areas. Finally, the bill would require NOAA to develop a peer-reviewed plan to improve radar coverage in underserved areas.

Based on information provided by NOAA, CBO estimates that implementing S. 2058 would cost less than \$500,000; such spending would be subject to the availability of appropriated funds. Enacting the bill would not affect direct spending or revenues; therefore, pay-as-you-go procedures do not apply. CBO estimates that enacting the legislation would not increase net direct spending or on-budget deficits in any of the four consecutive 10-year periods beginning in 2027.

S. 2058 contains no intergovernmental or private-sector mandates as defined in the Unfunded Mandates Reform Act and would not affect the budgets of state, local, or tribal governments.

The CBO staff contact for this estimate is Jeff LaFave. The estimate was approved by H. Samuel Papenfuss, Deputy 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. 2058 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. 2058, as amended, would require a report and a plan from NOAA. The NOAA Administrator would provide to Congress a report on gaps in the coverage of the NEXRAD system and a plan on how to improve radar coverage. It would not increase paperwork for the private sector.

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 provide the short title of the bill, the Metropolitan Weather Hazards Protection Act of 2015.

Section 2. Study on gaps in NEXRAD coverage and requirement for plan to address such gaps.

As introduced this section would have required the Secretary of Commerce to maintain and operate at least one Doppler weather radar site within 55 miles of each city in the United States that has a population of more than 700,000 individuals. There are two locations that fit the criteria for additional radars. The model of radars NOAA currently uses is no longer manufactured and the agency was concerned that it would be very costly, and potentially impossible to complete the mandate. This section, as modified in Committee, would require the Secretary of Commerce to identify areas with gaps in radar coverage and develop a plan for addressing these gaps.

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.