

Calendar No. 319

109TH CONGRESS }
1st Session }

SENATE

{ REPORT
109-202

WEATHER MODIFICATION RESEARCH AND
TECHNOLOGY TRANSFER AUTHORIZATION
ACT OF 2005

R E P O R T

OF THE

COMMITTEE ON COMMERCE, SCIENCE, AND
TRANSPORTATION

ON

S. 517



DECEMBER 8, 2005.—Ordered to be printed

Filed under authority of the order of the Senate of November 18, 2005

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SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

ONE HUNDRED NINTH CONGRESS

SECOND SESSION

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

R E P O R T

[To accompany S. 517]

The Committee on Commerce, Science, and Transportation, to which was referred the bill (S. 517) to establish the Weather Modification Operations and Research Board, 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. 517, as set forth in section 2 of the bill is, “to develop and implement a comprehensive and coordinated national weather modification research policy and a national cooperative Federal and State program of weather modification research and development.”

BACKGROUND AND NEEDS

Weather modification refers to the intentional modification of atmospheric processes by human activities. For a number of years the Federal government supported research for weather modification. Federal support for weather modification research and development peaked in the mid-1970s and has since declined due in part to both a lack of a statistical confirmation of hail suppression and rain enhancement seeding experiments and a shift from federally funded in-house weather modification research and development to

cooperative Federal/State weather modification research. Currently, there is no Federal funding for weather modification activities.

SUMMARY OF PROVISIONS

The bill would create a subcommittee in the Office of Science and Technology Policy (OSTP) to coordinate a national weather modification research program. The subcommittee would be co-chaired by representatives from the National Oceanic and Atmospheric Administration (NOAA) and the National Science Foundation (NSF), and would have representation from the National Aeronautics and Space Administration (NASA) and other appropriate Federal agencies.

The subcommittee would be required to submit a plan for weather modification research that describes goals and activities, evaluates existing programs, makes suggestions on coordination with existing programs, and provides an estimation of Federal funding for weather modification research. The program would include activities to improve the understanding of processes related to weather modification and the potential negative impacts of weather modification.

The bill also would establish an advisory board in OSTP to make recommendations to the subcommittee. This advisory board would be composed of outside experts including scientists, engineers and State officials involved in weather modification operations. The advisory board would examine potential uses for weather modification research and evaluate the efficacy of weather modification research.

LEGISLATIVE HISTORY

The Weather Modification Research and Technology Transfer Authorization Act of 2005 (S. 517) was introduced by Senator Hutchison on March 3, 2005 and referred to the Senate Committee on Commerce, Science, and Transportation. The Subcommittee on Disaster Prevention and Prediction and the Subcommittee on Science and Space held a joint hearing on S. 517 on November 10, 2005. On November 17, 2005, the Committee considered the bill in an open Executive Session. Senator Hutchison offered an amendment in the nature of a substitute. The Committee, without objection, adopted the substitute and ordered S. 517 be reported with the amendment.

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:

DECEMBER 1, 2005.

Hon. TED STEVENS,
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 S. 517, the Weather Modification Research and Development Policy Act of 2005.

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

Sincerely,

DOUGLAS HOLTZ-EAKIN.

Enclosure.

S. 517—Weather Modification Research and Development Policy Act of 2005

S. 517 would establish within the Office of Science and Technology Policy (OSTP) a new Weather Modification Subcommittee and a Weather Modification Research Advisory Board. Weather modification is the general term that refers to any human attempt to alter the weather. The subcommittee would consist of representatives from the National Oceanic and Atmospheric Administration, the National Science Foundation, and the National Aeronautics and Space Administration and would be responsible for coordinating a national research program on weather modification. The advisory board would consist of nine members with weather expertise from outside the federal government, appointed by the Director of OSTP to advise the work of the subcommittee.

Within 180 days of enactment, the legislation would require the Weather Modification Subcommittee to report to the Congress goals and priorities for federal weather modification research over the next 10 years. In addition, the subcommittee would annually report on weather modification research achievements, progress, budgets, and recommendations. (This legislation would not specifically authorize any such research.) The advisory board would work with the subcommittee to make recommendations on weather modification issues.

Based on information from OSTP, CBO expects that the new subcommittee and advisory board would require a small increase in staff and overall administrative expenses to coordinate a national research program on weather modification. We estimate that implementing S. 517 would cost about \$1 million annually, assuming appropriation of the necessary amounts. Enacting the legislation would not affect direct spending or revenues.

S. 517 contains no intergovernmental or private-sector mandates as defined in the Unfunded Mandates Reform Act; any costs to state, local, or tribal governments would result from complying with conditions of federal assistance.

The CBO staff contact for this estimate is Matthew Pickford. This estimate was 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:

NUMBER OF PERSONS COVERED

The bill would require OSTP to develop a national weather modification policy. The bill would not authorize any new regulations and, therefore, would not subject any individuals or businesses to new regulations.

ECONOMIC IMPACT

S. 517 would not have an adverse economic impact on the nation's economy. The Act would not authorize any new spending.

PRIVACY

The reported bill would have little, if any, impact on the personal privacy of U.S. citizens.

PAPERWORK

The reported bill would not increase paperwork requirements significantly for individuals and businesses. Section 4 of the Act would require OSTP to submit a 10-year plan to Congress and an annual report to the President and Congress.

SECTION-BY-SECTION ANALYSIS

Section 1. Short title

Section 1 would establish the short title of the bill as the "Weather Modification Research and Development Policy Authorization Act of 2005."

Section 2. Purpose

Section 2 would establish the purpose of the bill to develop a comprehensive national weather modification research policy.

Section 3. Definitions

Section 3 would define various terms in the act, including "Board", "Research and Development", and "Weather Modification."

Section 4. Weather Modification Subcommittee

Section 4 would create a subcommittee in OSTP to coordinate a national weather modification research program. The subcommittee would be co-chaired by NOAA and NSF, and would have representation from NASA and other appropriate Federal agencies.

The section would require the Subcommittee to submit a plan for weather modification research that would describe goals and activities, evaluate existing programs, make suggestions on coordination with existing programs, and provide an estimation of Federal funding for weather modification research.

The section states that the program may include activities to improve the understanding of processes related to weather modification including cloud seeding, cloud modeling, improved forecast

technologies, as well as the potential negative impacts of weather modification.

Finally the section would require the Board to submit an annual report on the activities conducted pursuant to this section.

Section 5. Weather modification research advisory board established

Section 5 would establish an advisory board in OSTP to make recommendations to the Weather Modification Subcommittee. The board would be composed of outside experts including scientists, engineers and State officials involved in weather modification operations. The board would examine potential uses for weather modification research and would evaluate the efficacy of weather modification research.

Section 6. Cooperation with Weather Modification Subcommittee

Section 6 would instruct Federal agencies to cooperate with the Weather Modification Subcommittee.

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.

