S. 517
[Report No. 109–202]

To establish the Weather Modification Operations and Research Board, and for other purposes.

IN THE SENATE OF THE UNITED STATES

MARCH 3, 2005

Mrs. HUTCHISON introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

DECEMBER 8, 2005

Reported under authority of the order of the Senate of November 18, 2005, by Mr. STEVENS, with an amendment and an amendment to the title

[Strike all after the enacting clause and insert the part printed in italic]

A BILL

To establish the Weather Modification Operations and Research Board, and for other purposes.

1 Be it enacted by the Senate and House of Representa-
2 tives of the United States of America in Congress assembled,
SECTION 1. SHORT TITLE.

This Act may be cited as the "Weather Modification Research and Technology Transfer Authorization Act of 2005".

SEC. 2. PURPOSE.

It is the purpose of this Act to develop and implement an comprehensive and coordinated national weather modification policy and a national cooperative Federal and State program of weather modification research and development.

SEC. 3. DEFINITIONS.

In this Act:

(1) BOARD.—The term "Board" means the Weather Modification Advisory and Research Board.

(2) EXECUTIVE DIRECTOR.—The term "Executive Director" means the Executive Director of the Weather Modification Advisory and Research Board.

(3) RESEARCH AND DEVELOPMENT.—The term "research and development" means theoretical analysis, exploration, experimentation, and the extension of investigative findings and theories of scientific or technical nature into practical application for experimental and demonstration purposes, including the experimental production and testing of models, devices, equipment, materials, and processes.
(4) Weather modification.—The term "weather modification" means changing or controlling, or attempting to change or control, by artificial methods the natural development of atmospheric cloud forms or precipitation forms which occur in the troposphere.

SEC. 4. WEATHER MODIFICATION ADVISORY AND RESEARCH BOARD ESTABLISHED.

(a) In general.—There is established in the Department of Commerce the Weather Modification Advisory and Research Board.

(b) Membership.—

(1) In general.—The Board shall consist of 11 members appointed by the Secretary of Commerce, of whom—

(A) at least 1 shall be a representative of the American Meteorological Society;

(B) at least 1 shall be a representative of the American Society of Civil Engineers;

(C) at least 1 shall be a representative of the National Academy of Sciences;

(D) at least 1 shall be a representative of the National Center for Atmospheric Research of the National Science Foundation;
(E) at least 2 shall be representatives of the National Oceanic and Atmospheric Administration of the Department of Commerce;

(F) at least 1 shall be a representative of institutions of higher education or research institutions; and

(G) at least 1 shall be a representative of a State that is currently supporting operational weather modification projects.

(2) TENURE.—A member of the Board serves at the pleasure of the Secretary of Commerce.

(3) VACANCIES.—Any vacancy on the Board shall be filled in the same manner as the original appointment.

(b) ADVISORY COMMITTEES.—The Board may establish advisory committees to advise the Board and to make recommendations to the Board concerning legislation, policies, administration, research, and other matters.

(c) INITIAL MEETING.—Not later than 30 days after the date on which all members of the Board have been appointed, the Board shall hold its first meeting.

(d) MEETINGS.—The Board shall meet at the call of the Chair.
(a) QUORUM.—A majority of the members of the Board shall constitute a quorum, but a lesser number of members may hold hearings.

(f) CHAIR AND VICE CHAIR.—The Board shall select a Chair and Vice Chair from among its members.

SEC. 5. DUTIES OF THE BOARD.

(a) PROMOTION OF RESEARCH AND DEVELOPMENT.—In order to assist in expanding the theoretical and practical knowledge of weather modification, the Board shall promote and fund research and development, studies, and investigations with respect to—

(1) improved forecast and decision-making technologies for weather modification operations, including tailored computer workstations and software and new observation systems with remote sensors; and

(2) assessments and evaluations of the efficacy of weather modification, both purposeful (including cloud-seeding operations) and inadvertent (including downwind effects and anthropogenic effects).

(b) FINANCIAL ASSISTANCE.—Unless the use of the money is restricted or subject to any limitations provided by law, the Board shall use amounts in the Weather Modification Research and Development Fund—

(1) to pay its expenses in the administration of this Act; and
(2) to provide for research and development
with respect to weather modifications by grants to,
or contracts or cooperative arrangements, with pub-
lie or private agencies.

(c) REPORT.—The Board shall submit to the Sec-
etary biennially a report on its findings and research re-
sults.

SEC. 6. POWERS OF THE BOARD.

(a) STUDIES, INVESTIGATIONS, AND HEARINGS.—
The Board may make any studies or investigations; obtain
any information, and hold any hearings necessary or prop-
er to administer or enforce this Act or any rules or orders
issued under this Act.

(b) PERSONNEL.—The Board may employ, as pro-
vided for in appropriations Acts, an Executive Director
and other support staff necessary to perform duties and
functions under this Act.

(c) COOPERATION WITH OTHER AGENCIES.—The
Board may cooperate with public or private agencies to
promote the purposes of this Act.

(d) COOPERATIVE AGREEMENTS.—The Board may
enter into cooperative agreements with the head of any
department or agency of the United States, an appropriate
official of any State or political subdivision of a State, or
an appropriate official of any private or public agency of
organization for conducting weather modification activities
of cloud-seeding operations.

(c) Conduct and Contracts for Research and Development.—The Executive Director, with the ap-
proval of the Board, may conduct and may contract for
research and development activities relating to the pur-
poses of this section.

SEC. 7. COOPERATION WITH THE WEATHER MODIFICATION
OPERATIONS AND RESEARCH BOARD.

The heads of the departments and agencies of the
United States and the heads of any other public or private
agencies and institutions that receive research funds from
the United States shall, to the extent possible, give full
support and cooperation to the Board and to initiate inde-
pendent research and development programs that address
weather modifications.

SEC. 8. FUNDING.

(a) In General.—There is established within the
Treasury of the United States the Weather Modification
Research and Development Fund, which shall consist of
amounts appropriated pursuant to subsection (b) or re-
ceived by the Board under subsection (c).

(b) Authorization of Appropriations.—There is
authorized to be appropriated to the Board for the pur-
poses of carrying out the provisions of this Act
$10,000,000 for each of fiscal years 2005 through 2014. Any sums appropriated under this subsection shall remain available, without fiscal year limitation, until expended.

(e) Gifts.—The Board may accept, use, and dispose of gifts or donations of services or property.

SEC. 9. EFFECTIVE DATE.

This Act shall take effect on October 1, 2005.

SECTION 1. SHORT TITLE.

This Act may be cited as the “Weather Modification Research and Development Policy Authorization Act of 2005”.

SEC. 2. PURPOSE.

It is the purpose of this Act 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.

SEC. 3. DEFINITIONS.

In this Act:

(1) BOARD.—The term “Board” means the Weather Modification Research Advisory Board.

(2) RESEARCH AND DEVELOPMENT.—The term “research and development” means theoretical analysis, exploration, experimentation, and the extension of investigative findings and theories of a scientific or
technical nature into practical application for experimental and demonstration purposes, including the experimental production and testing of models, devices, equipment, materials, and processes.

(3) WEATHER MODIFICATION.—The term “weather modification” means the purposeful or inadvertent changing or controlling, or attempting to change or control, by artificial methods, the natural development of atmospheric cloud forms or precipitation forms which occur in the troposphere.

SEC. 4. WEATHER MODIFICATION SUBCOMMITTEE.

(a) ESTABLISHMENT.—The Director of the Office of Science and Technology Policy shall establish a Weather Modification Subcommittee to coordinate a national research program on weather modification.

(b) MEMBERSHIP.—The Weather Modification Subcommittee shall include representatives from appropriate Federal agencies, including the National Oceanic and Atmospheric Administration, the National Science Foundation, and the National Aeronautics and Space Administration.

(c) CHAIRS OF THE WEATHER MODIFICATION SUBCOMMITTEE.—A representative from the National Oceanic and Atmospheric Administration and a representative from
the National Science Foundation shall serve together as co-chairs of the Weather Modification Subcommittee.

(d) IMPLEMENTATION PLAN.—Not later than 180 days after the date of enactment of this Act, the Director of the Office of Science and Technology Policy shall develop and submit to Congress a plan for coordinated Federal activities under the national research program under subsection (a) and the plan shall—

(1) for a 10-year period beginning in the year it is submitted, establish the goals and priorities for Federal research that most effectively advances scientific understanding of weather modification;

(2) describe specific activities required to achieve such goals and priorities, including funding of competitive research grants, training and support for scientists, and participation in international research efforts;

(3) identify and address, as appropriate, relevant programs and activities of the Federal agencies and departments that would contribute to the program;

(4) consider and use, as appropriate, reports and studies conducted by Federal agencies and departments, and other expert scientific bodies, including
the National Research Council report on Critical
Issues in Weather Modification Research;

(5) make recommendations for the coordination
of program activities with weather modification ac-
tivities of other national and international organiza-
tions;

(6) incorporate recommendations from the
Weather Modification Research Advisory Board; and

(7) estimate Federal funding for research activi-
ties to be conducted under the program described in
subsection (a).

(e) PROGRAM SCOPE.—The national research program
under subsection (a) may include the following activities
related to weather modification:

(1) Interdisciplinary research and coordination
of research and activities to improve understanding of
processes relating to weather modification, includ-
ing—

(A) cloud modeling;

(B) cloud seeding;

(C) improving forecast and decision-making
technologies;

(D) related severe weather research; and

(E) potential adverse affects of weather
modification.
(2) Coordination with relevant organizations that engage in weather modification research.

(3) Development through partnerships among Federal agencies, States, and academic institutions of new technologies and approaches for weather modification.

(4) Scholarships and educational opportunities that encourage an interdisciplinary approach to weather modification.

(f) ANNUAL REPORT ON ACTIVITIES.—Beginning with the first year occurring more than 24 months after the date of enactment of this Act, the Director of the Office of Science and Technology Policy shall prepare and submit to the President and Congress not later than January 31st of each year an annual report on the activities conducted pursuant to this section during the preceding fiscal year, including—

(1) a summary of the achievements of Federal weather modification research, including Federally supported external research, during the preceding fiscal year;

(2) an analysis of the progress made toward achieving the goals and objectives of the plan developed under subsection (d), including the identification of trends;
(3) a copy or summary of the plan and any changes made to the plan;

(4) a summary of agency budgets for weather modification activities for the preceding fiscal year;

(5) any recommendations regarding additional action or legislation that may be required to assist in achieving the purposes of this Act;

(6) a description of the relationship between research conducted on weather modification and research conducted pursuant to the Global Change Research Act of 1990 (15 U.S.C. 2921 et seq.), as well as research on weather forecasting and prediction; and

(7) a description of any potential adverse consequences on life, property, or water resource availability from weather modification efforts, and any suggested means of mitigating or reducing such consequences if such efforts are undertaken.

SEC. 5. WEATHER MODIFICATION RESEARCH ADVISORY BOARD ESTABLISHED.

(a) Establishment.—There is established in the Office of Science and Technology Policy the Weather Modification Research Advisory Board to make recommendations to the Weather Modification Subcommittee on matters related to weather modification.
(b) Membership.—

(1) Composition.—The Board shall consist of 9 members, each with a field of expertise in atmospheric science or civil engineering relevant to weather modification, and appointed by the Director of the Office of Science and Technology Policy as follows:

(A) At least 1 member shall be a representative of the American Meteorological Society.

(B) At least 1 member shall be a representative of the American Society of Civil Engineers.

(C) At least 1 member shall be a representative of the National Academy of Sciences.

(D) At least 1 member shall be a representative of institutions of higher education or research institutes with experience in the field.

(E) At least 1 member shall be a representative of a State organization that is currently supporting operational weather modification projects.

(2) Tenure.—A member of the Board shall serve at the pleasure of the Director of the Office of Science and Technology Policy.

(3) Vacancies.—Any vacancy on the Board shall be filled in the same manner as the original appointment.
(c) Initial Meeting.—Not later than 30 days after the date on which all members of the Board have been appointed, the Board shall hold its first meeting.

(d) Meetings.—The Board shall meet at the call of the Chair.

(e) Quorum.—A majority of the members of the Board shall constitute a quorum, but a lesser number of members may hold hearings.

(f) Chair and Vice Chair.—The Board shall select a Chair and Vice Chair from among its members.

(g) Duties of the Board.—The duties of the Board shall include the following:

(1) Advising the Weather Modification Subcommittee on recommendations concerning legislation, policies, administration, research, and other matters related to weather modification.

(2) In order to assist in expanding the theoretical and practical knowledge of weather modification, the Board shall advise the Weather Modification Subcommittee on the research and development, studies, and investigations with respect to—

(A) potential uses of technologies and observation systems for weather modification research; and
(B) assessments and evaluations of the efficacy of weather modification, both purposeful, including cloud-seeding operations, and inadvertent, including downwind effects and anthropogenic effects.

(h) POWERS OF THE BOARD.—The Board may conduct public meetings, gather information, and issue reports.

SEC. 6. COOPERATION WITH THE WEATHER MODIFICATION SUBCOMMITTEE.

The heads of the departments and agencies of the United States and the heads of any other public or private agencies and institutions that receive research funds from the United States related to weather modification shall, to the extent possible, give full support and cooperation to the Weather Modification Subcommittee.

Amend the title so as to read: “To establish a coordinated national weather modification research and development program, and for other purposes”.
A BILL

To establish the Weather Modification Operations and Research Board, and for other purposes.

DECEMBER 8, 2005

Reported with an amendment and an amendment to the title.