

ucts that have significant value added to the original data; and

(5) taken together demonstrate as diverse a set of public sector applications as possible.

(c) OPPORTUNITIES.—In carrying out this section, the Administrator shall seek opportunities to assist—

(1) in the development of commercial applications potentially available from the remote sensing industry; and

(2) State, local, regional, and tribal agencies in applying remote sensing and other geospatial information technologies for growth management.

(d) DURATION.—Assistance for a pilot project under subsection (a) shall be provided for a period not to exceed 3 years.

(e) REPORT.—Each recipient of a grant under subsection (a) shall transmit a report to the Administrator on the results of the pilot project within 180 days of the completion of that project.

(f) WORKSHOP.—Each recipient of a grant under subsection (a) shall, not later than 180 days after the completion of the pilot project, conduct at least one workshop for potential users to disseminate the lessons learned from the pilot project as widely as feasible.

(g) REGULATIONS.—The Administrator shall issue regulations establishing application, selection, and implementation procedures for pilot projects, and guidelines for reports and workshops required by this section.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3423.)

HISTORICAL AND REVISION NOTES

<i>Revised Section</i>	<i>Source (U.S. Code)</i>	<i>Source (Statutes at Large)</i>
60303	42 U.S.C. 16673.	Pub. L. 109–155, title III, § 313, Dec. 30, 2005, 119 Stat. 2921.

§ 60304. Program evaluation

(a) ADVISORY COMMITTEE.—The Administrator shall establish an advisory committee, consisting of individuals with appropriate expertise in State, local, regional, and tribal agencies, the university research community, and the remote sensing and other geospatial information industries, to monitor the program established under section 60303 of this title. The advisory committee shall consult with the Federal Geographic Data Committee and other appropriate industry representatives and organizations. Notwithstanding section 1013 of title 5, the advisory committee established under this subsection shall remain in effect until the termination of the program under section 60303 of this title.

(b) EFFECTIVENESS EVALUATION.—Not later than December 31, 2009, the Administrator shall transmit to Congress an evaluation of the effectiveness of the program established under section 60303 of this title in exploring and promoting the integrated use of sources of remote sensing and other geospatial information to address State, local, regional, and tribal agency needs. Such evaluation shall have been conducted by an independent entity.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3424; Pub. L. 117–286, § 4(a)(326), Dec. 27, 2022, 136 Stat. 4341.)

HISTORICAL AND REVISION NOTES

<i>Revised Section</i>	<i>Source (U.S. Code)</i>	<i>Source (Statutes at Large)</i>
60304	42 U.S.C. 16674.	Pub. L. 109–155, title III, § 314, Dec. 30, 2005, 119 Stat. 2921.

Editorial Notes

AMENDMENTS

2022—Subsec. (a). Pub. L. 117–286 substituted “section 1013 of title 5,” for “section 14 of the Federal Advisory Committee Act (5 App. U.S.C.),”.

§ 60305. Data availability

The Administrator shall ensure that the results of each of the pilot projects completed under section 60303 of this title shall be retrievable through an electronic, internet-accessible database.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3424.)

HISTORICAL AND REVISION NOTES

<i>Revised Section</i>	<i>Source (U.S. Code)</i>	<i>Source (Statutes at Large)</i>
60305	42 U.S.C. 16675.	Pub. L. 109–155, title III, § 315, Dec. 30, 2005, 119 Stat. 2922.

§ 60306. Education

The Administrator shall establish an educational outreach program to increase awareness at institutions of higher education and State, local, regional, and tribal agencies of the potential applications of remote sensing and other geospatial information and awareness of the need for geospatial workforce development.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3424.)

HISTORICAL AND REVISION NOTES

<i>Revised Section</i>	<i>Source (U.S. Code)</i>	<i>Source (Statutes at Large)</i>
60306	42 U.S.C. 16676.	Pub. L. 109–155, title III, § 316, Dec. 30, 2005, 119 Stat. 2922.

CHAPTER 605—EARTH SCIENCE

Sec.

60501.	Goal.
60502.	Transitioning experimental research into operational services.
60503.	Reauthorization of Glory Mission.
60504.	Tornadoes and other severe storms.
60505.	Coordination with the National Oceanic and Atmospheric Administration.
60506.	Sharing of climate related data.

§ 60501. Goal

The goal for the Administration’s Earth Science program shall be to pursue a program of Earth observations, research, and applications activities to better understand the Earth, how it supports life, and how human activities affect its ability to do so in the future. In pursuit of this goal, the Administration’s Earth Science program shall ensure that securing practical

benefits for society will be an important measure of its success in addition to securing new knowledge about the Earth system and climate change. In further pursuit of this goal, the Administration shall, together with the National Oceanic and Atmospheric Administration and other relevant agencies, provide United States leadership in developing and carrying out a cooperative international Earth observations-based research program.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3425.)

HISTORICAL AND REVISION NOTES

Revised Section	Source (U.S. Code)	Source (Statutes at Large)
60501	42 U.S.C. 17711.	Pub. L. 110–422, title II, § 201, Oct. 15, 2008, 122 Stat. 4784.

Statutory Notes and Related Subsidiaries

EARTH SCIENCE MISSIONS AND PROGRAMS

Pub. L. 117–167, div. B, title VII, § 10824, Aug. 9, 2022, 136 Stat. 1742, provided that:

“(a) SENSE OF CONGRESS.—It is the sense of Congress that—

“(1) the Earth science and applications program of the [National Aeronautics and Space] Administration provides increasingly valuable data for natural resource management, agriculture, forestry, food security, air quality monitoring, and many other application areas; and

“(2) a robust and balanced Earth science and applications program contributes significantly to—

“(A) the scientific discovery and economic growth of the United States; and

“(B) supporting the health and safety of the people of the United States and the citizens of the world.

“(b) REAFFIRMATION.—Congress reaffirms the goal for the Administration’s Earth science and applications program set forth in section 60501 of title 51, United States Code, which states: ‘The goal for the Administration’s Earth Science program shall be to pursue a program of Earth observations, research, and applications activities to better understand the Earth, how it supports life, and how human activities affect its ability to do so in the future. In pursuit of this goal, the Administration’s Earth Science program shall ensure that securing practical benefits for society will be an important measure of its success in addition to securing new knowledge about the Earth system and climate change. In further pursuit of this goal, the Administration shall, together with the National Oceanic and Atmospheric Administration and other relevant agencies, provide United States leadership in developing and carrying out a cooperative international Earth observations-based research program.’[sic]

“(c) EARTH SCIENCE MISSIONS AND PROGRAMS.—With respect to the missions and programs of the Earth Science Division, the Administrator [of the National Aeronautics and Space Administration] shall, to the maximum extent practicable, follow the recommendations and guidance provided by the scientific community through the decadal survey for Earth science and applications from space of the National Academies of Sciences, Engineering, and Medicine, including—

“(1) the science priorities described in such survey;

“(2) the execution of the series of existing or previously planned observations (commonly known as the ‘program of record’); and

“(3) the development of a range of missions of all classes, including opportunities for principal investigator-led, competitively selected missions.

“(d) EARTH SYSTEM OBSERVATORY.—The Administrator shall pursue an Earth System Observatory, which shall consist of an array of new and complemen-

tary Earth-observing scientific satellites, instruments, and missions—

“(1) to address the recommendations of the 2018 Earth science and applications decadal survey of the National Academies of Sciences, Engineering, and Medicine entitled ‘Thriving on our Changing Planet’, including by conducting priority observations in—

“(A) aerosols;

“(B) cloud convection and precipitation;

“(C) mass change;

“(D) surface biology and geology;

“(E) surface deformation and change; and

“(F) other observation areas designated as high-priority by such decadal survey; and

“(2) to achieve the goal of the Earth Science Program set forth in section 60501 of title 51, United States Code.

“(e) SURVEY OF USE OF EARTH OBSERVATION DATA BY STATES, TRIBES, AND TERRITORIES.—

“(1) SURVEY.—The Administrator shall arrange for the conduct of a survey of the use of NASA [National Aeronautics and Space Administration] Earth observation data by States, Tribal organizations, and territories.

“(2) SUBMISSION.—Not later than 18 months after the date of the enactment of this Act [Aug. 9, 2022], the Administrator shall submit to the appropriate committees of Congress [Committee on Commerce, Science, and Transportation of the Senate and Committee on Science, Space, and Technology of the House of Representatives] the results of the survey conducted under paragraph (1).

“(f) CLIMATE ARCHITECTURE PLAN.—The Administrator shall—

“(1) maintain a comprehensive, strategic Climate Architecture Plan for Earth Observations and Applications from Space that describes an integrated and balanced program of Earth science and applications observations to advance science, policy, and applications and societal benefits; and

“(2) update such plan every 5 years so as to align with the release of the decadal surveys in Earth science and applications from space and the mid-decade assessments of the National Academies of Sciences, Engineering, and Medicine [probably should be “National Academies of Sciences, Engineering, and Medicine”].”

CARBON CYCLE REMOTE SENSING APPLICATIONS RESEARCH

Pub. L. 106–391, title III, § 315, Oct. 30, 2000, 114 Stat. 1595, provided that:

“(a) CARBON CYCLE REMOTE SENSING APPLICATIONS RESEARCH PROGRAM.—

“(1) IN GENERAL.—The Administrator [of the National Aeronautics and Space Administration] shall develop a carbon cycle remote sensing applications research program—

“(A) to provide a comprehensive view of vegetation conditions;

“(B) to assess and model agricultural carbon sequestration; and

“(C) to encourage the development of commercial products, as appropriate.

“(2) USE OF CENTERS.—The Administrator of the National Aeronautics and Space Administration shall use regional earth science application centers to conduct applications research under this section.

“(3) RESEARCHED AREAS.—The areas that shall be the subjects of research conducted under this section include—

“(A) the mapping of carbon-sequestering land use and land cover;

“(B) the monitoring of changes in land cover and management;

“(C) new approaches for the remote sensing of soil carbon; and

“(D) region-scale carbon sequestration estimation.

“(b) AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated to carry out this section

\$5,000,000 of funds authorized by section 102 [114 Stat. 1581] for fiscal years 2001 through 2002.”

EARTH OBSERVING SYSTEM

Pub. L. 102-588, title I, §102(g), Nov. 4, 1992, 106 Stat. 5111, directed the Administrator of the National Aeronautics and Space Administration to carry out an Earth Observing System program addressing highest priority international climate change research goals; within 180 days after Nov. 4, 1992, submit to Congress a plan to ensure that the highest priority measurements were maintained on schedule to the greatest extent practicable while lower priority measurements were deferred or deleted; and within 90 days after Nov. 4, 1992, submit to Congress a Development Plan.

§ 60502. Transitioning experimental research into operational services

(a) INTERAGENCY PROCESS.—The Director of the Office of Science and Technology Policy, in consultation with the Administrator, the Administrator of the National Oceanic and Atmospheric Administration, and other relevant stakeholders, shall develop a process to transition, when appropriate, Administration Earth science and space weather missions or sensors into operational status. The process shall include coordination of annual agency budget requests as required to execute the transitions.

(b) RESPONSIBLE AGENCY OFFICIAL.—The Administrator and the Administrator of the National Oceanic and Atmospheric Administration shall each designate an agency official who shall have the responsibility for and authority to lead the Administration's and the National Oceanic and Atmospheric Administration's transition activities and interagency coordination.

(c) PLAN.—For each mission or sensor that is determined to be appropriate for transition under subsection (a), the Administration and the National Oceanic and Atmospheric Administration shall transmit to Congress a joint plan for conducting the transition. The plan shall include the strategy, milestones, and budget required to execute the transition. The transition plan shall be transmitted to Congress no later than 60 days after the successful completion of the mission or sensor critical design review.

(Pub. L. 111-314, §3, Dec. 18, 2010, 124 Stat. 3425.)

HISTORICAL AND REVISION NOTES

<i>Revised Section</i>	<i>Source (U.S. Code)</i>	<i>Source (Statutes at Large)</i>
60502(a)	42 U.S.C. 17712(b).	Pub. L. 110-422, title II, §204(b), (c), (d), Oct. 15, 2008, 122 Stat. 4785.
60502(b)	42 U.S.C. 17712(c).	
60502(c)	42 U.S.C. 17712(d).	

§ 60503. Reauthorization of Glory Mission

Congress reauthorizes the Administration to continue with development of the Glory Mission, which will examine how aerosols and solar energy affect the Earth's climate.

(Pub. L. 111-314, §3, Dec. 18, 2010, 124 Stat. 3425.)

HISTORICAL AND REVISION NOTES

<i>Revised Section</i>	<i>Source (U.S. Code)</i>	<i>Source (Statutes at Large)</i>
60503	42 U.S.C. 17713(a).	Pub. L. 110-422, title II, §206(a), Oct. 15, 2008, 122 Stat. 4785.

§ 60504. Tornadoes and other severe storms

The Administrator shall ensure that the Administration gives high priority to those parts of its existing cooperative activities with the National Oceanic and Atmospheric Administration that are related to the study of tornadoes and other severe storms, tornado-force winds, and other factors determined to influence the development of tornadoes and other severe storms, with the goal of improving the Nation's ability to predict tornados and other severe storms. Further, the Administrator shall examine whether there are additional cooperative activities with the National Oceanic and Atmospheric Administration that should be undertaken in the area of tornado and severe storm research.

(Pub. L. 111-314, §3, Dec. 18, 2010, 124 Stat. 3425.)

HISTORICAL AND REVISION NOTES

<i>Revised Section</i>	<i>Source (U.S. Code)</i>	<i>Source (Statutes at Large)</i>
60504	42 U.S.C. 17714.	Pub. L. 110-422, title II, §208, Oct. 15, 2008, 122 Stat. 4786.

§ 60505. Coordination with the National Oceanic and Atmospheric Administration

(a) JOINT WORKING GROUP.—The Administrator and the Administrator of the National Oceanic and Atmospheric Administration shall appoint a Joint Working Group, which shall review and monitor missions of the two agencies to ensure maximum coordination in the design, operation, and transition of missions where appropriate. The Joint Working Group shall also prepare the plans required by subsection (c).

(b) COORDINATION REPORT.—Not later than February 15 of each year, the Administrator and the Administrator of the National Oceanic and Atmospheric Administration shall jointly transmit a report to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate on how the Earth science programs of the Administration and the National Oceanic and Atmospheric Administration will be coordinated during the fiscal year following the fiscal year in which the report is transmitted.

(c) COORDINATION OF TRANSITION PLANNING AND REPORTING.—The Administrator, in conjunction with the Administrator of the National Oceanic and Atmospheric Administration and in consultation with other relevant agencies, shall evaluate relevant Administration science missions for their potential operational capabilities and shall prepare transition plans for the existing and future Earth observing systems found to have potential operational capabilities.

(d) LIMITATION.—The Administrator shall not transfer any Administration Earth science mission or Earth observing system to the National Oceanic and Atmospheric Administration until the plan required under subsection (c) has been approved by the Administrator and the Administrator of the National Oceanic and Atmospheric Administration and until financial resources have been identified to support the transition or transfer in the President's budget request for

the National Oceanic and Atmospheric Administration.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3426.)

HISTORICAL AND REVISION NOTES

<i>Revised Section</i>	<i>Source (U.S. Code)</i>	<i>Source (Statutes at Large)</i>
60505	42 U.S.C. 16656.	Pub. L. 109–155, title III, § 306, Dec. 30, 2005, 119 Stat. 2919.

In subsection (b), the words “beginning with the first fiscal year after the date of enactment of this Act [December 30, 2005]” are omitted as obsolete.

In subsection (b), the words “Committee on Science and Technology” are substituted for “Committee on Science” on authority of Rule X(1)(o) of the Rules of the House of Representatives, adopted by House Resolution No. 6 (110th Congress, January 5, 2007).

Statutory Notes and Related Subsidiaries

CHANGE OF NAME

Committee on Science and Technology of House of Representatives changed to Committee on Science, Space, and Technology of House of Representatives by House Resolution No. 5, One Hundred Twelfth Congress, Jan. 5, 2011.

§ 60506. Sharing of climate related data

The Administrator shall work to ensure that the Administration’s policies on the sharing of climate related data respond to the recommendations of the Government Accountability Office’s report on climate change research and data-sharing policies and to the recommendations on the processing, distribution, and archiving of data by the National Academies Earth Science Decadal Survey, “Earth Science and Applications from Space”, and other relevant National Academies reports, to enhance and facilitate their availability and widest possible use to ensure public access to accurate and current data on global warming.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3426.)

HISTORICAL AND REVISION NOTES

<i>Revised Section</i>	<i>Source (U.S. Code)</i>	<i>Source (Statutes at Large)</i>
60506	42 U.S.C. 17825(c).	Pub. L. 110–422, title XI, § 1109(c), Oct. 15, 2008, 122 Stat. 4811.

CHAPTER 606—SPACE WEATHER

Sec.	
60601.	Space weather.
60602.	Integrated strategy.
60603.	Sustaining and advancing critical space weather observations.
60604.	Research activities.
60605.	Space weather data.
60606.	Space weather knowledge transfer and information exchange.
60607.	Pilot program for obtaining commercial sector space weather data.
60608.	Space weather benchmarks.

§ 60601. Space weather

(a) FINDINGS.—

(1) SPACE WEATHER.—Congress makes the following findings with respect to space weather:

(A) Space weather phenomena pose a significant threat to ground-based and space-

based critical infrastructure, modern technological systems, and humans working in space.

(B) The effects of severe space weather on the electric power grid, satellites and satellite communications and information, aviation operations, astronauts living and working in space, and space-based position, navigation, and timing systems could have significant societal, economic, national security, and health impacts.

(C) Space-based and ground-based observations provide crucial data necessary to understand, forecast, and prepare for space weather phenomena.

(D) Clear roles and accountability of Federal departments and agencies are critical for efficient and effective response to threats posed by space weather.

(E) Space weather observation and forecasting are essential for the success of human and robotic space exploration.

(F) In October 2015, the National Science and Technology Council published a National Space Weather Strategy and a National Space Weather Action Plan seeking to integrate national space weather efforts and add new capabilities to meet increasing demand for space weather information.

(G) In March 2019, the National Science and Technology Council published an updated National Space Weather Strategy and Action Plan to enhance the preparedness and resilience of the United States to space weather.

(2) ROLE OF FEDERAL AGENCIES.—Congress makes the following findings with respect to the role of Federal agencies on space weather:

(A) The National Oceanic and Atmospheric Administration provides operational space weather monitoring, forecasting, and long-term data archiving and access for civil applications, maintains ground-based and space-based assets to provide observations needed for space weather forecasting, prediction, and warnings, provides research to support operational responsibilities, and develops requirements for space weather forecasting technologies and science.

(B) The Department of Defense provides operational space weather research, monitoring, and forecasting for the Department’s unique missions and applications.

(C) The National Aeronautics and Space Administration provides increased understanding of the fundamental physics of the Sun-Earth system through basic research, space-based observations and modeling, developing new space-based technologies and missions, and monitoring of space weather for the National Aeronautics and Space Administration’s space missions.

(D) The National Science Foundation provides increased understanding of the Sun-Earth system through ground-based measurements, technologies, and modeling.

(E) The Department of the Interior collects, distributes, and archives operational ground-based magnetometer data in the United States and its territories, works with the international community to improve