

(2) Terms and conditions of Secretary**(A) In general**

An agreement entered into between the Secretary and any university, institution, or organization described in paragraph (1) shall be subject to such terms and conditions as the Secretary determines to be appropriate.

(B) Availability

The agreements under this subsection shall be available to all Reclamation projects and programs that may benefit from project-specific or programmatic cooperative research and development.

(c) Mutual benefit

Grants or other agreements made under this section may be for the mutual benefit of the United States and the entity that is provided the grant or enters into the cooperative agreement.

(d) Relationship to project-specific authority

This section shall not supersede any existing project-specific funding authority.

(e) Authorization of appropriations

There is authorized to be appropriated to carry out this section \$300,000,000, to remain available until expended.

(Pub. L. 111–11, title IX, §9504, Mar. 30, 2009, 123 Stat. 1334; Pub. L. 113–235, div. D, title II, §203, Dec. 16, 2014, 128 Stat. 2311.)

REFERENCES IN TEXT

The Endangered Species Act of 1973, referred to in subsec. (a)(1)(F), (G), is Pub. L. 93–205, Dec. 28, 1973, 87 Stat. 884, which is classified principally to chapter 35 (§1531 et seq.) of Title 16, Conservation. For complete classification of this Act to the Code, see Short Title note set out under section 1531 of Title 16 and Tables.

AMENDMENTS

2014—Subsec. (e). Pub. L. 113–235 substituted “\$300,000,000” for “\$200,000,000”.

§ 10365. Hydroelectric power assessment**(a) Duty of Secretary of Energy**

The Secretary of Energy, in consultation with the Administrator of each Federal Power Marketing Administration, shall assess each effect of, and risk resulting from, global climate change with respect to water supplies that are required for the generation of hydroelectric power at each Federal water project that is applicable to a Federal Power Marketing Administration.

(b) Access to appropriate data**(1) In general**

In carrying out each assessment under subsection (a), the Secretary of Energy shall consult with the United States Geological Survey, the National Oceanic and Atmospheric Administration, the program, and each appropriate State water resource agency, to ensure that the Secretary of Energy has access to the best available scientific information with respect to presently observed impacts and projected future impacts of global climate change on water supplies that are used to produce hydroelectric power.

(2) Access to data for certain assessments

In carrying out each assessment under subsection (a), with respect to the Bonneville Power Administration and the Western Area Power Administration, the Secretary of Energy shall consult with the Commissioner to access data and other information that—

(A) is collected by the Commissioner; and

(B) the Secretary of Energy determines to be necessary for the conduct of the assessment.

(c) Report

Not later than 2 years after March 30, 2009, and every 5 years thereafter, the Secretary of Energy shall submit to the appropriate committees of Congress a report that describes—

(1) each effect of, and risk resulting from, global climate change with respect to—

(A) water supplies used for hydroelectric power generation; and

(B) power supplies marketed by each Federal Power Marketing Administration, pursuant to—

(i) long-term power contracts;

(ii) contingent capacity contracts; and

(iii) short-term sales; and

(2) each recommendation of the Administrator of each Federal Power Marketing Administration relating to any change in any operation or contracting practice of each Federal Power Marketing Administration to address each effect and risk described in paragraph (1), including the use of purchased power to meet long-term commitments of each Federal Power Marketing Administration.

(d) Authority

The Secretary of Energy may enter into contracts, grants, or other agreements with appropriate entities to carry out this section.

(e) Costs**(1) Nonreimbursable**

Any costs incurred by the Secretary of Energy in carrying out this section shall be non-reimbursable.

(2) PMA costs

Each Federal Power Marketing Administration shall incur costs in carrying out this section only to the extent that appropriated funds are provided by the Secretary of Energy for that purpose.

(f) Authorization of appropriations

There are authorized to be appropriated such sums as are necessary to carry out this section for each of fiscal years 2009 through 2023, to remain available until expended.

(Pub. L. 111–11, title IX, §9505, Mar. 30, 2009, 123 Stat. 1336.)

§ 10366. Climate change and water intragovernmental panel**(a) Establishment**

The Secretary and the Administrator shall establish and lead a climate change and water intragovernmental panel—

(1) to review the current scientific understanding of each impact of global climate

change on the quantity and quality of freshwater resources of the United States; and

(2) to develop any strategy that the panel determines to be necessary to improve observational capabilities, expand data acquisition, or take other actions—

(A) to increase the reliability and accuracy of modeling and prediction systems to benefit water managers at the Federal, State, and local levels; and

(B) to increase the understanding of the impacts of climate change on aquatic ecosystems.

(b) Membership

The panel shall be comprised of—

(1) the Secretary;

(2) the Director;

(3) the Administrator;

(4) the Secretary of Agriculture (acting through the Under Secretary for Natural Resources and Environment);

(5) the Commissioner;

(6) the Secretary of the Army, acting through the Chief of Engineers;

(7) the Administrator of the Environmental Protection Agency; and

(8) the Secretary of Energy.

(c) Review elements

In conducting the review and developing the strategy under subsection (a), the panel shall consult with State water resource agencies, the Advisory Committee, drinking water utilities, water research organizations, and relevant water user, environmental, and other non-governmental organizations—

(1) to assess the extent to which the conduct of measures of streamflow, groundwater levels, soil moisture, evapotranspiration rates, evaporation rates, snowpack levels, precipitation amounts, flood risk, and glacier mass is necessary to improve the understanding of the Federal Government and the States with respect to each impact of global climate change on water resources;

(2) to identify data gaps in current water monitoring networks that must be addressed to improve the capability of the Federal Government and the States to measure, analyze, and predict changes to the quality and quantity of water resources, including flood risks, that are directly or indirectly affected by global climate change;

(3) to establish data management and communication protocols and standards to increase the quality and efficiency by which each Federal agency acquires and reports relevant data;

(4) to consider options for the establishment of a data portal to enhance access to water resource data—

(A) relating to each nationally significant freshwater watershed and aquifer located in the United States; and

(B) that is collected by each Federal agency and any other public or private entity for each nationally significant freshwater watershed and aquifer located in the United States;

(5) to facilitate the development of hydrologic and other models to integrate data that

reflects groundwater and surface water interactions; and

(6) to apply the hydrologic and other models developed under paragraph (5) to water resource management problems identified by the panel, including the need to maintain or improve ecological resiliency at watershed and aquifer system scales.

(d) Report

Not later than 2 years after March 30, 2009, the Secretary shall submit to the appropriate committees of Congress a report that describes the review conducted, and the strategy developed, by the panel under subsection (a).

(e) Demonstration, research, and methodology development projects

(1) Authority of Secretary

The Secretary, in consultation with the panel and the Advisory Committee, may provide grants to, or enter into any contract, cooperative agreement, interagency agreement, or other transaction with, an appropriate entity to carry out any demonstration, research, or methodology development project that the Secretary determines to be necessary to assist in the implementation of the strategy developed by the panel under subsection (a)(2).

(2) Requirements

(A) Maximum amount of Federal share

The Federal share of the cost of any demonstration, research, or methodology development project that is the subject of any grant, contract, cooperative agreement, interagency agreement, or other transaction entered into between the Secretary and an appropriate entity under paragraph (1) shall not exceed \$1,000,000.

(B) Report

An appropriate entity that receives funds from a grant, contract, cooperative agreement, interagency agreement, or other transaction entered into between the Secretary and the appropriate entity under paragraph (1) shall submit to the Secretary a report describing the results of the demonstration, research, or methodology development project conducted by the appropriate entity.

(f) Authorization of appropriations

(1) In general

There is authorized to be appropriated to carry out subsections (a) through (d) \$2,000,000 for each of fiscal years 2009 through 2011, to remain available until expended.

(2) Demonstration, research, and methodology development projects

There is authorized to be appropriated to carry out subsection (e) \$10,000,000 for the period of fiscal years 2009 through 2013, to remain available until expended.

(Pub. L. 111-11, title IX, §9506, Mar. 30, 2009, 123 Stat. 1338.)

§ 10367. Water data enhancement by United States Geological Survey

(a) National streamflow information program

(1) In general

The Secretary, in consultation with the Advisory Committee and the Panel and consistent with this section, shall proceed with implementation of the national streamflow information program, as reviewed by the National Research Council in 2004.

(2) Requirements

In conducting the national streamflow information program, the Secretary shall—

(A) measure streamflow and related environmental variables in nationally significant watersheds—

(i) in a reliable and continuous manner; and

(ii) to develop a comprehensive source of information on which public and private decisions relating to the management of water resources may be based;

(B) provide for a better understanding of hydrologic extremes (including floods and droughts) through the conduct of intensive data collection activities during and following hydrologic extremes;

(C) establish a base network that provides resources that are necessary for—

(i) the monitoring of long-term changes in streamflow; and

(ii) the conduct of assessments to determine the extent to which each long-term change monitored under clause (i) is related to global climate change;

(D) integrate the national streamflow information program with data collection activities of Federal agencies and appropriate State water resource agencies (including the National Integrated Drought Information System)—

(i) to enhance the comprehensive understanding of water availability;

(ii) to improve flood-hazard assessments;

(iii) to identify any data gap with respect to water resources; and

(iv) to improve hydrologic forecasting; and

(E) incorporate principles of adaptive management in the conduct of periodic reviews of information collected under the national streamflow information program to assess whether the objectives of the national streamflow information program are being adequately addressed.

(3) Improved methodologies

The Secretary shall—

(A) improve methodologies relating to the analysis and delivery of data; and

(B) investigate, develop, and implement new methodologies and technologies to estimate or measure streamflow in a more cost-efficient manner.

(4) Network enhancement

(A) In general

Not later than 10 years after March 30, 2009, in accordance with subparagraph (B), the Secretary shall—

(i) increase the number of streamgages funded by the national streamflow information program to a quantity of not less than 4,700 sites; and

(ii) ensure all streamgages are flood-hardened and equipped with water-quality sensors and modernized telemetry.

(B) Requirements of sites

Each site described in subparagraph (A) shall conform with the National Streamflow Information Program plan as reviewed by the National Research Council.

(5) Federal share

The Federal share of the national streamgaging network established pursuant to this subsection shall be 100 percent of the cost of carrying out the national streamgaging network.

(6) Authorization of appropriations

(A) In general

Except as provided in subparagraph (B), there are authorized to be appropriated such sums as are necessary to operate the national streamflow information program for the period of fiscal years 2009 through 2023, to remain available until expended.

(B) Network enhancement funding

There is authorized to be appropriated to carry out the network enhancements described in paragraph (4) \$10,000,000 for each of fiscal years 2009 through 2019, to remain available until expended.

(b) National groundwater resources monitoring

(1) In general

The Secretary shall develop a systematic groundwater monitoring program for each major aquifer system located in the United States.

(2) Program elements

In developing the monitoring program described in paragraph (1), the Secretary shall—

(A) establish appropriate criteria for monitoring wells to ensure the acquisition of long-term, high-quality data sets, including, to the maximum extent possible, the inclusion of real-time instrumentation and reporting;

(B) in coordination with the Advisory Committee and State and local water resource agencies—

(i) assess the current scope of groundwater monitoring based on the access availability and capability of each monitoring well in existence as of March 30, 2009; and

(ii) develop and carry out a monitoring plan that maximizes coverage for each major aquifer system that is located in the United States; and

(C) prior to initiating any specific monitoring activities within a State after March 30, 2009, consult and coordinate with the applicable State water resource agency with jurisdiction over the aquifer that is the subject of the monitoring activities, and comply with all applicable laws (including regulations) of the State.