

§10367. Water data enhancement by United States Geological Survey

(a) Federal priority streamgauge 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 Federal priority streamgauge program.

(2) Requirements

In conducting the Federal priority streamgauge 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 Federal priority streamgauge 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 Federal priority streamgauge program to assess whether the objectives of the Federal priority streamgauge 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, 2023, in accordance with subparagraph (B), the Secretary shall-

- (i) increase the number of streamgauges funded by the national streamflow information program to a quantity of not less than 4,700 sites; and
- (ii) ensure all streamgauges are flood-hardened and equipped with precipitation water-quality sensors and modernized telemetry.

(B) Requirements of sites

Each site described in subparagraph (A) shall conform with the Federal needs established through regular solicitation of feedback, such as that documented in the report titled "Re-prioritization of the U.S. Geological Survey Federal Priority streamgauge program, 2022"¹ (Open-file Report 2023-1032).

(5) Federal share

The Federal share of the Federal priority streamgauge network established pursuant to this subsection shall be 100 percent of the cost of carrying out the Federal priority streamgauge 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 Federal priority streamgauge program for the period of fiscal years 2009 through 2028, 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 2028, 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 and Tribes-

- (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 or Tribal lands after March 30, 2009, consult and coordinate with the applicable State water resource agency or Tribe with jurisdiction over the aquifer that is the subject of the monitoring activities, and comply with all applicable laws (including regulations) of the State.

(3) Program objectives

In carrying out the monitoring program described in paragraph (1), the Secretary shall-

(A) provide data that is necessary for the improvement of understanding with respect to surface water and groundwater interactions;

(B) by expanding the network of monitoring wells to reach each climate division, support the groundwater climate response network to improve the understanding of the effects of global climate change on groundwater recharge and availability; and

(C) support the objectives of the assessment program.

(4) 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 groundwater recharge, discharge, and storage in a more cost-efficient manner.

(5) Federal share

The Federal share of the monitoring program described in paragraph (1) may be 100 percent of the cost of carrying out the monitoring program.

(6) Priority

In selecting monitoring activities consistent with the monitoring program described in paragraph (1), the Secretary shall give priority to those activities for which a State, a Tribe or local governmental entity agrees to provide for a substantial share of the cost of establishing or operating a monitoring well or other measuring device to carry out a monitoring activity.

(7) Authorization of appropriations

There are authorized to be appropriated \$4,000,000 per fiscal year to carry out this subsection for the period of fiscal years 2023 through 2028, to remain available until expended.

(c) Improved water estimation, measurement, and monitoring technologies

(1) Authority of Secretary

The Secretary may provide grants on a nonreimbursable basis to appropriate entities with expertise in water resource data acquisition and reporting, including Federal agencies, the Water Resources Research Institutes and other academic institutions, and private entities, to-

- (A) investigate, develop, and implement new methodologies and technologies to estimate or measure water resources data in a cost-efficient manner; and
- (B) improve methodologies relating to the analysis and delivery of data.

(2) Priority

In providing grants to appropriate entities under paragraph (1), the Secretary shall give priority to appropriate entities that propose the development of new methods and technologies for-

- (A) predicting and measuring streamflows;
- (B) estimating changes in the storage of groundwater;
- (C) improving data standards and methods of analysis (including the validation of data entered into geographic information system databases);
- (D) measuring precipitation and potential evapotranspiration; and
- (E) water withdrawals, return flows, and consumptive use.

(3) Partnerships

In recognition of the value of collaboration to foster innovation and enhance research and development efforts, the Secretary shall encourage partnerships, including public-private partnerships, between and among Federal agencies, academic institutions, and private entities to promote the objectives described in paragraph (1).

(4) Authorization of appropriations

There is authorized to be appropriated to carry out this subsection \$5,000,000 for each of fiscal years 2009 through 2028.

(Pub. L. 111-11, title IX, §9507, Mar. 30, 2009, 123 Stat. 1339 ; Pub. L. 118-174, §2, Dec. 23, 2024, 138 Stat. 2602.)

EDITORIAL NOTES

AMENDMENTS

2024-Subsec. (a). Pub. L. 118-174, §2(1)(A), substituted "Federal priority streamgauge program" for "National streamflow information program" in heading.

Subsec. (a)(1). Pub. L. 118-174, §2(1)(B), substituted "Federal priority streamgauge program" for "national streamflow information program, as reviewed by the National Research Council in 2004".

Subsec. (a)(2). Pub. L. 118-174, §2(1)(C), substituted "Federal priority streamgauge program" for "national streamflow information program" wherever appearing.

Subsec. (a)(4)(A). Pub. L. 118-174, §2(1)(D)(i), substituted "2023" for "2009" in introductory provisions.

Subsec. (a)(4)(A)(i). Pub. L. 118-174, §2(1)(D)(i)(i), inserted "precipitation" before water-quality sensors.

Subsec. (a)(4)(B). Pub. L. 118-174, §2(1)(D)(ii), which directed the substitution of "Federal needs established through regular solicitation of feedback, such as that documented in the report titled 'Re-prioritization of the U.S. Geological Survey Federal Priority streamgauge program, 2022' (Open-file Report 2023-1032)," for "National Streamflow Information Program as reviewed by the National Research Council," was executed by making the substitution for "National Streamflow Information Program plan as reviewed by the National Research Council.", to reflect the probable intent of Congress.

Subsec. (a)(5). Pub. L. 118-174, §2(1)(E), substituted "Federal priority streamgauge network" for "national streamgaging network" in two places.

Subsec. (a)(6)(A). Pub. L. 118-174, §2(1)(F)(i), substituted "Federal priority streamgauge program" for "national streamflow information program" and "2028" for "2023".

Subsec. (a)(6)(B). Pub. L. 118-174, §2(1)(F)(ii), substituted "2028" for "2019".

Subsec. (b)(2)(B). Pub. L. 118-174, §2(2)(A)(i), inserted "and Tribes" after "agencies" in introductory provisions.

Subsec. (b)(2)(C). Pub. L. 118-174, §2(2)(A)(ii), inserted "or Tribal lands" after "within a State" and "or Tribe" after "water resource agency".

Subsec. (b)(6). Pub. L. 118-174, §2(2)(B), inserted ", a Tribe" after "a State".

Subsec. (b)(7). Pub. L. 118-174, §2(2)(C), substituted "\$4,000,000 per fiscal year" for "such sums as are necessary" and "2023 through 2028" for "2009 through 2023".

Subsec. (c). Pub. L. 118-174, §2(3), (4), redesignated subsec. (d) as (c) and struck out former subsec. (c) which related to brackish groundwater assessment study and report.

Subsec. (c)(4). Pub. L. 118-174, §2(5), substituted "2028" for "2019".

Subsec. (d). Pub. L. 118-174, §2(4), redesignated subsec. (d) as (c).

¹ So in original. Probably should be "Re-Prioritization of the U.S. Geological Survey Federal Priority Streamgauge Network, 2022".