

118TH CONGRESS
1ST SESSION

S. 1118

To establish the Open Access Evapotranspiration (OpenET) Data Program.

IN THE SENATE OF THE UNITED STATES

MARCH 30, 2023

Ms. CORTEZ MASTO (for herself and Mr. HICKENLOOPER) introduced the following bill; which was read twice and referred to the Committee on Energy and Natural Resources

A BILL

To establish the Open Access Evapotranspiration (OpenET)
Data Program.

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

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Open Access
5 Evapotranspiration Data Act”.

6 **SEC. 2. DEFINITIONS.**

7 In this Act:

8 (1) **EVAPOTRANSPIRATION.**—The term
9 “evapotranspiration” or “ET” means the process by

1 which water is transferred from the land to the at-
2 mosphere by—

3 (A) evaporation from soil and other sur-
4 faces; and

5 (B) transpiration from plants.

6 (2) PROGRAM.—The term “Program” means
7 the Open Access Evapotranspiration (OpenET) Data
8 Program established under section 4(a).

9 (3) PROGRAM PARTNER.—The term “Program
10 partner” means—

11 (A) an institution of higher education;

12 (B) a State (including a State agency);

13 (C) an Indian Tribe as defined in section
14 4 of the Indian Self-Determination and Edu-
15 cation Assistance Act (25 U.S.C. 5304);

16 (D) a private sector entity;

17 (E) a nongovernmental organization; or

18 (F) any other entity determined to be ap-
19 propriate by the Secretary.

20 (4) SECRETARY.—The term “Secretary” means
21 the Secretary of the Interior, acting through the Di-
22 rector of the United States Geological Survey.

23 **SEC. 3. FINDINGS.**

24 Congress finds that—

1 (1) evapotranspiration is the second largest
2 component of the water budget, which is an account-
3 ing of the allocation of water resources to various
4 water uses;

5 (2) evapotranspiration is a measure of the
6 water that is consumed and lost from a water sys-
7 tem, removed from available supplies, and unavail-
8 able for other uses within a watershed;

9 (3) accurate information on evapotranspiration
10 is required to balance water supply and water de-
11 mand in a watershed and ensure that adequate
12 water supplies for beneficial uses are available over
13 time;

14 (4) water users and managers are impeded in
15 more efficient decision making by—

16 (A) the lack of consistent and comprehen-
17 sive water use data; and

18 (B) the fact that access to existing data is
19 often limited and cost-prohibitive; and

20 (5) evapotranspiration data may be applied for
21 the purposes of—

22 (A) assisting users and decisionmakers to
23 better manage resources and protect financial
24 viability of farm operations during drought;

1 (B) developing more accurate water budg-
2 ets and innovative management programs to
3 better promote conservation and sustainability
4 efforts; and

5 (C) employing greater groundwater man-
6 agement practices and understanding impacts
7 of consumptive water use.

8 **SEC. 4. OPEN ACCESS EVAPOTRANSPIRATION (OPENET)**
9 **DATA PROGRAM.**

10 (a) ESTABLISHMENT.—The Secretary shall establish
11 a program to be known as the “Open Access
12 Evapotranspiration (OpenET) Data Program” under
13 which the Secretary shall provide for the delivery of sat-
14 ellite-based evapotranspiration data, as available, sup-
15 ported by other ET methods—

16 (1) to advance the quantification of evaporation
17 and consumptive water use; and

18 (2) to provide data users with estimates of
19 evapotranspiration data across large landscapes over
20 certain periods of time, with a priority for Landsat
21 scale (30–100m) when available.

22 (b) PURPOSE.—The purpose of the Program is to
23 support the operational distribution of satellite-based
24 evapotranspiration data generated under the Program to
25 sustain and enhance water resources in the United States.

1 (c) DUTIES.—In carrying out the Program, the Sec-
2 retary shall—

3 (1) evaluate, use, and modify sources of sat-
4 ellite-based evapotranspiration data, supported by
5 other ET methods, based on best available science
6 and technologies; and

7 (2) coordinate and consult with—

8 (A) the heads of other relevant Federal
9 agencies, including—

10 (i) the Commissioner of Reclamation;

11 (ii) the Administrator of the National
12 Aeronautics and Space Administration;

13 (iii) the Administrator of the National
14 Oceanic and Atmospheric Administration;

15 (iv) the Administrator of the Agricul-
16 tural Research Service; and

17 (v) the Chief of the Natural Resources
18 Conservation Service; and

19 (B) Program partners.

20 (d) COMPONENTS.—In carrying out the Program, the
21 Secretary shall, in coordination with other relevant agen-
22 cies, carry out activities to develop, maintain, establish,
23 expand, or advance delivery of satellite-based
24 evapotranspiration data, supported by other ET methods,
25 to advance the quantification of evaporation and consump-

1 tive water use, with an emphasis on carrying out activities
2 that—

3 (1) support the development and maintenance
4 of evapotranspiration data and software systems and
5 associated research and development in a manner
6 that ensures that Program data are reflective of the
7 best available science, including by providing support
8 to Program partners, or coordinating activities with
9 other programs within the Department of the Inte-
10 rior, that have developed and are maintaining
11 evapotranspiration software systems and datasets;

12 (2) demonstrate or test new and existing
13 evapotranspiration measurement technology;

14 (3) improve evapotranspiration measurement
15 science and technology; and

16 (4) develop or refine the application of satellite-
17 based evapotranspiration data available to Federal
18 agencies, States, and Indian Tribes, including pro-
19 grams within both the Water Resources and Core
20 Science Systems divisions of the United States Geo-
21 logical Survey. These may include—

22 (A) the Water Availability and Use Science
23 Program, the National Water Census, and Inte-
24 grated Water Availability Assessments; and

1 (B) the National Land Imaging Program,
2 the Land Change Science Program, and the
3 Science Analytics and Synthesis Program.

4 (e) WATER USE AND AVAILABILITY OF PROGRAM
5 DATA.—The Secretary—

6 (1) shall incorporate, to the maximum extent
7 practicable, program information and data for pur-
8 poses of determining consumptive water use on irri-
9 gated or other vegetated landscapes for use by water
10 resource management agencies;

11 (2) may continue to coordinate data analyses,
12 use, and collection efforts with other Federal agen-
13 cies, States, and Tribal governments through exist-
14 ing coordinating organizations, such as—

15 (A) the Western States Water Council; and

16 (B) the Western States Federal Agency
17 Support Team; and

18 (3) may provide information collected and ana-
19 lyzed under the Program to Program partners
20 through appropriate mechanisms, including through
21 agreements with Federal agencies, States (including
22 State agencies), or Indian Tribes, leases, contracts,
23 cooperative agreements, grants, loans, and memo-
24 randa of understanding.

1 (f) COOPERATIVE AGREEMENTS.—The Secretary
2 shall—

3 (1) enter into cooperative agreements with Pro-
4 gram partners to provide for the efficient and cost-
5 effective administration of the Program, including
6 through cost sharing or by providing additional in-
7 kind resources necessary to carry out the Program;
8 and

9 (2) provide nonreimbursable matching funding,
10 as permissible, for programmatic and operational ac-
11 tivities under this section, in consultation with Pro-
12 gram partners.

13 (g) ENVIRONMENTAL LAWS.—Nothing in this Act
14 modifies any obligation of the Secretary to comply with
15 applicable Federal and State environmental laws in car-
16 rying out this Act.

17 **SEC. 5. REPORT.**

18 Not later than 5 years after the date of the enact-
19 ment of this Act, the Secretary shall submit to the Com-
20 mittees on Energy and Natural Resources, Agriculture,
21 Nutrition, and Forestry, and Appropriations of the Senate
22 and the Committees on Natural Resources, Agriculture,
23 and Appropriations of the House of Representatives a re-
24 port that includes—

1 (1) a status update on the operational incorpo-
2 ration of Program data into modeling, water plan-
3 ning, and reporting efforts of relevant Federal agen-
4 cies; and

5 (2) a list of Federal agencies and Program
6 partners that are applying Program data to bene-
7 ficial use, including a description of examples of ben-
8 eficial uses.

9 **SEC. 6. AUTHORIZATION OF APPROPRIATIONS.**

10 There is authorized to be appropriated to the Sec-
11 retary to carry out this Act \$23,000,000 for each of fiscal
12 years 2024 through 2028, to remain available until ex-
13 pended.

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