

AMENDMENT NO. _____ Calendar No. _____

Purpose: In the nature of a substitute.

IN THE SENATE OF THE UNITED STATES—118th Cong., 1st Sess.

S. 1118

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

Referred to the Committee on _____ and
ordered to be printed

Ordered to lie on the table and to be printed

AMENDMENT IN THE NATURE OF A SUBSTITUTE intended
to be proposed by Ms. CORTEZ MASTO (for herself and
Mr. MANCHIN)

Viz:

1 Strike all after the enacting clause and insert the fol-
2 lowing:

3 **SECTION 1. SHORT TITLE.**

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

6 **SEC. 2. DEFINITIONS.**

7 In this Act:

8 (1) EVAPOTRANSPIRATION; ET.—The terms
9 “evapotranspiration” and “ET” mean the process by
10 which water is transferred from the land to the at-
11 mosphere by—

1 (A) evaporation from soil and other sur-
2 faces; and

3 (B) transpiration from plants.

4 (2) INDIAN TRIBE.—The term “Indian Tribe”
5 has the meaning given the term in section 4 of the
6 Indian Self-Determination and Education Assistance
7 Act (25 U.S.C. 5304).

8 (3) NON-FEDERAL ENTITY.—The term “non-
9 Federal entity” means—

10 (A) an institution of higher education;

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

12 (C) an Indian Tribe;

13 (D) a private sector entity;

14 (E) a nongovernmental organization; or

15 (F) an irrigation district, water district,
16 groundwater sustainability agency, or other or-
17 ganization with water or power delivery author-
18 ity.

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

22 **SEC. 3. EVAPOTRANSPIRATION DATA.**

23 (a) IN GENERAL.—The Secretary may—

24 (1) evaluate, analyze, test, refine, and improve
25 ET data and models, based on the best available

1 science and technology, including satellite-based ET
2 data with Landsat scale (30–100m) and ground-
3 based ET measurement technologies, across public
4 land (including State forests and units of the Na-
5 tional Forest System), rangeland, agricultural land,
6 and large urban and other vegetated landscapes;

7 (2) provide and maintain estimates of ET data
8 across large landscapes over certain periods of time;

9 (3) use ET data to advance the quantification
10 of evaporation and consumptive water use on public
11 land (including State forests and units of the Na-
12 tional Forest System), rangeland, agricultural land,
13 and large urban and other vegetated landscapes; and

14 (4) support the development and maintenance
15 of ET data, models, software systems, and associ-
16 ated research and development, in consultation with
17 other programs within the Department of the Inte-
18 rior that have developed and are maintaining ET
19 software systems and datasets.

20 (b) REQUIREMENTS AND COORDINATION.—In car-
21 rying out subsection (a), the Secretary—

22 (1) shall incorporate scientific peer review, as
23 appropriate and to the maximum extent practicable;

24 (2) shall collaborate and consult with scientists
25 and experts, including individuals working for com-

1 mercial enterprises, on using models or an ensemble
2 of models, based on the best available science and
3 technology, to provide ET data;

4 (3) may develop and carry out public education
5 programs aimed at helping non-Federal entities,
6 water managers, media outlets, agricultural pro-
7 ducers, and other relevant stakeholders understand
8 appropriate interpretations and uses of ET data;

9 (4) shall coordinate and consult with—

10 (A) the heads of other relevant Federal
11 agencies, including—

12 (i) the Commissioner of Reclamation;

13 (ii) the Administrator of the National
14 Aeronautics and Space Administration;

15 (iii) the Administrator of the National
16 Oceanic and Atmospheric Administration;

17 (iv) the Administrator of the Agricul-
18 tural Research Service; and

19 (v) the Chief of the Natural Resources
20 Conservation Service;

21 (B) non-Federal entities; and

22 (C) relevant stakeholders;

23 (5) may coordinate ET data analyses, use, and
24 collection efforts with other Federal agencies, States,
25 Indian Tribes, non-Federal entities, and other rel-

1 evant stakeholders through existing coordinating or-
2 ganizations, such as—

3 (A) the Western States Water Council; and

4 (B) the Western States Federal Agency
5 Support Team;

6 (6) shall provide a disclaimer relating to the
7 publication of ET data, in consultation with the ap-
8 plicable State from which the data is being pub-
9 lished; and

10 (7) shall adhere to scientific integrity policies
11 relating to the publication of ET data.

12 (c) COOPERATIVE AGREEMENTS.—In carrying out
13 subsection (a), the Secretary may enter into cooperative
14 agreements with non-Federal entities to provide for im-
15 proved technical approaches to carry out activities under
16 that subsection or additional in-kind resources.

17 (d) ADVISORY COMMITTEE.—

18 (1) IN GENERAL.—In carrying out subsection
19 (a), the Secretary shall establish an advisory com-
20 mittee, to be known as the “Advisory Committee on
21 ET Data” (referred to in this subsection as the
22 “Advisory Committee”).

23 (2) MEMBERSHIP.—The Advisory Committee
24 shall be composed of not fewer than 11 members, to

1 be appointed by the Secretary, who shall be rep-
2 resentatives of—

3 (A) States, including State agencies;

4 (B) Indian Tribes;

5 (C) irrigation districts, water districts,
6 groundwater sustainability agencies, or other
7 organizations with water or power delivery au-
8 thority;

9 (D) farmers or ranchers;

10 (E) nongovernmental organizations;

11 (F) research institutions and institutions
12 of higher education that are qualified to provide
13 advice regarding ET measurement and science;
14 and

15 (G) private sector entities that are quali-
16 fied to provide advice regarding ET measure-
17 ment and science.

18 (3) RESPONSIBILITIES.—

19 (A) IN GENERAL.—The Advisory Com-
20 mittee shall provide recommendations to the
21 Secretary for the implementation of the activi-
22 ties authorized under subsection (a), including
23 recommendations regarding—

24 (i) ET research;

1 (ii) scientific progress of ET measure-
2 ment and science;

3 (iii) ET data use and application, in-
4 cluding restrictions and qualifications on
5 use of data;

6 (iv) public education programs aimed
7 at helping relevant stakeholders under-
8 stand the appropriate interpretations and
9 uses of ET data;

10 (v) scientific overviews of ET data
11 used or published by Federal agencies for
12 regulation or water resources planning and
13 management;

14 (vi) data privacy measures and proce-
15 dures beyond the minimum required by
16 this Act;

17 (vii) reducing the competitiveness of
18 commercial services offering ET data,
19 analyses, or other products or impacts to
20 the viability of the commercial services;
21 and

22 (viii) such other topics as the Advisory
23 Committee determines appropriate.

24 (B) CONSIDERATION.—The Secretary shall
25 take into consideration any recommendation of

1 the Advisory Committee provided under sub-
2 paragraph (A).

3 (e) ENVIRONMENTAL LAWS.—Nothing in this Act
4 modifies any obligation of the Secretary to comply with
5 applicable Federal and State environmental laws in car-
6 rying out this Act.

7 (f) APPLICATION; EFFECT OF ACT; PRIVACY.—

8 (1) APPLICATION.—ET data may be applied for
9 the purposes of—

10 (A) assisting users and decisionmakers to
11 better manage resources and protect financial
12 viability of farm operations during drought; and

13 (B) developing more accurate water budg-
14 ets and innovative management programs to
15 better promote conservation and sustainability
16 efforts.

17 (2) FEDERAL OR STATE WATER RIGHTS.—
18 Nothing in this Act creates, impairs, alters, or su-
19 persedes a Federal or State water right.

20 (3) PRIVACY.—In carrying out subsection
21 (a), the Secretary shall, to the maximum extent prac-
22 ticable, aggregate or de-identify ET data under this
23 Act in a manner sufficient to ensure that informa-
24 tion on entities or personally identifiable information
25 is not disclosed.

1 (4) AUTHORITY.—Nothing in this Act provides
2 new, or expands any existing, authority to provide
3 ET data, in accordance with the matter under the
4 heading “GEOLOGICAL SURVEY” of the first
5 section of the Act of March 3, 1879 (20 Stat. 394,
6 chapter 182; 43 U.S.C. 31(a)).

7 **SEC. 4. REPORT.**

8 Not later than 2 years after the date of enactment
9 of this Act, the Secretary shall submit to the Committees
10 on Energy and Natural Resources, Agriculture, Nutrition,
11 and Forestry, and Appropriations of the Senate and the
12 Committees on Natural Resources, Agriculture, and Ap-
13 propriations of the House of Representatives a report that
14 includes—

15 (1) an evaluation and analysis of the accuracy,
16 limitations, and trade-offs of new and existing ET
17 measurement science and technology and ET data;

18 (2) a summary of the uses or anticipated uses
19 of ET data by relevant Federal agencies and non-
20 Federal entities;

21 (3) a status update on the operational incorpo-
22 ration of ET data into modeling, water planning,
23 and reporting efforts of relevant Federal agencies;

1 (4) an evaluation of potential governance struc-
2 tures and privacy protections that could be used to
3 ensure the intended and proper use of ET data;

4 (5) recommendations for using ET data for an
5 improved, larger-scale approach and application; and

6 (6) a description of—

7 (A) any non-Federal entities that provide
8 ET data or analysis; and

9 (B) any potential adverse impacts to the
10 entities described under subparagraph (A) re-
11 lating to the publication of ET data.

12 **SEC. 5. AUTHORIZATION OF APPROPRIATIONS.**

13 There are authorized to be appropriated to the Sec-
14 retary to carry out this Act, to remain available until ex-
15 pended—

16 (1) \$5,000,000 for fiscal year 2024;

17 (2) \$8,000,000 for fiscal year 2025;

18 (3) \$11,000,000 for fiscal year 2026;

19 (4) \$14,500,000 for fiscal year 2027; and

20 (5) \$17,000,000 for fiscal year 2028.