



Schatz_3 (as modified 7_31 - SLC)

AMENDMENT NO. _____ Calendar No. _____

Purpose: To require the Under Secretary of Commerce for Oceans and Atmosphere to maintain the National Mesonet Program.

IN THE SENATE OF THE UNITED STATES—118th Cong., 2d Sess.

S. 4343

To establish and maintain a coordinated program within the National Oceanic and Atmospheric Administration that improves wildfire, fire weather, fire risk, and smoke related forecasting, detection, modeling, observations, and service delivery, and to address growing needs in the wildland-urban interface, and for other purposes.

Referred to the Committee on _____ and ordered to be printed

Ordered to lie on the table and to be printed

AMENDMENT intended to be proposed by Mr. SCHATZ

Viz:

1 At the appropriate place, insert the following:

2 **SEC. ____ . NATIONAL MESONET PROGRAM.**

3 (a) PROGRAM.—The Under Secretary of Commerce
4 for Oceans and Atmosphere shall maintain the National
5 Mesonet Program (referred to in this section as the “Pro-
6 gram”), which shall—

7 (1) obtain observations to improve under-
8 standing of and forecast capabilities for atmospheric,
9 drought, fire, and water events, with a prioritization

1 on leveraging available commercial, academic, and
2 other non-Federal Government environmental data
3 to enhance coordination across the private, public,
4 and academic sectors of the weather enterprise in
5 the United States;

6 (2) establish means to integrate greater density
7 and more types of environmental observations into
8 the Program on an annual basis, including by en-
9 couraging local and regional networks of environ-
10 mental monitoring stations, in situ sensor networks,
11 including soil moisture and ground-based profilers,
12 and satellite constellations, to participate in the Pro-
13 gram; and

14 (3) establish memoranda of understanding with
15 networks outside of the scope of the Program in fur-
16 therance of this section.

17 (b) PROGRAM ELEMENTS.—In carrying out the Pro-
18 gram, the Under Secretary shall—

19 (1) increase data density by—

20 (A) improving and increasing the quantity
21 and density of environmental observations used
22 by the Administration and the National Weath-
23 er Service to support baseline forecasts, includ-
24 ing nowcasts, warnings, and forecasts with in-
25 creased resolution that protect individuals, busi-

1 nesses, agricultural production, food security,
2 military, and government agencies in the
3 United States, and enabling such individuals
4 and entities to operate in a safe, efficient, and
5 orderly manner;

6 (B) yielding increased quantities of bound-
7 ary-layer data to improve numerical weather
8 prediction performance, including in subsea-
9 sonal to seasonal timescales;

10 (C) identifying available terrestrial or ma-
11 rine environmental data, or quantifiable gaps in
12 such data, to improve the understanding of air-
13 sea interactions; and

14 (D) supporting the National Weather Serv-
15 ice in reaching its target of a 30-minute warn-
16 ing time for severe weather through better pre-
17 dictive model algorithms driven by increasingly
18 effective observations;

19 (2) monitor local meteorological conditions by—

20 (A) acquiring soil and moisture data to
21 monitor soil moisture, vegetation water content,
22 and moisture loss from evaporation, in support
23 of operational forecasting, the National Inte-
24 grated Drought Information System, and local

1 commercial, agricultural, and emergency man-
2 agement needs;

3 (B) supporting the National Coordinated
4 Soil Moisture Monitoring Network in acquiring
5 soil moisture and related data to support the
6 development of decision-support products and
7 other information services; and

8 (C) expanding and enhancing environ-
9 mental observational networks in the roadway
10 environment to provide real-time road weather
11 and surface conditions for surface transpor-
12 tation and related economic sectors; and

13 (3) administer the Program by—

14 (A) obtaining data in furtherance of this
15 section only when demonstrably cost effective
16 and meeting or exceeding data quality stand-
17 ards available to the National Oceanic and At-
18 mospheric Administration (referred to in this
19 section as the “Administration”);

20 (B) subject to the requirement in subpara-
21 graph (A), leveraging existing networks of envi-
22 ronmental monitoring stations, including sup-
23 plemental radar systems, to increase the quan-
24 tity and density of environmental observations
25 and data available to the Administration;

1 (C) providing the critical technical and ad-
2 ministrative infrastructure needed to facilitate
3 rapid integration and sustained use of new and
4 emerging networks of environmental monitoring
5 stations anticipated in coming years from non-
6 Federal Government sources;

7 (D) coordinating with existing data devel-
8 oped by the Administration and used for fore-
9 casts, including data from the National Envi-
10 ronmental Satellite, Data, and Information
11 Service, the Integrated Ocean Observing Sys-
12 tem, the Global Ocean Monitoring and Observ-
13 ing Program, the National Data Buoy Center,
14 and the National Ocean Service; and

15 (E) identifying and communicating to the
16 Office of Oceanic and Atmospheric Research
17 and other partners priorities of research and
18 development needed to advance observations in
19 the Program.

20 (c) FINANCIAL AND TECHNICAL ASSISTANCE.—

21 (1) IN GENERAL.—In furtherance of the Pro-
22 gram, in a fiscal year, the Under Secretary may
23 award not less than 15 percent of the amount appro-
24 priated for the Program for that fiscal year for fi-
25 nancial assistance to State, Tribal, private, and aca-

1 demic entities seeking to build, expand, or upgrade
2 equipment and capacity of mesonet systems.

3 (2) OTHER FEDERAL AWARDS.—Financial as-
4 sistance under this subsection may be made in co-
5 ordination with and in addition to awards from
6 other Federal agencies.

7 (3) AGREEMENTS.—Before receiving financial
8 assistance under paragraph (1), the State, Tribal,
9 private, or academic entity seeking financial assist-
10 ance under this subsection shall enter into an agree-
11 ment with the Under Secretary to provide data to
12 the Program, subject to verification by the Program
13 of the relative operational value and evaluation of
14 the cost of such data, for use in weather prediction,
15 severe weather warnings, and emergency response.

16 (4) ASSISTANCE AND OTHER SUPPORT.—The
17 Under Secretary may provide—

18 (A) technical assistance, project implemen-
19 tation support, and guidance to State, Tribal,
20 private, and academic entities seeking financial
21 assistance under this subsection; and

22 (B) technical and financial assistance for
23 maintenance of monitoring stations in under-
24 represented or remote areas of the country

1 where it is financially unfeasible for 1 entity to
2 operate such stations without such assistance.

3 (5) TERMS.—In providing financial assistance
4 under this subsection, the Under Secretary shall es-
5 tablish terms to ensure that each State, Tribal, pri-
6 vate, or academic entity that receives financial as-
7 sistance under this subsection receives a level of sup-
8 port commensurate with the quality and other char-
9 acteristics of the data to be provided.

10 (6) DETERMINATION.—A State, Tribal, private,
11 or academic entity may only receive financial assist-
12 ance under this subsection if the Under Secretary
13 determines such entity will provide sufficient finan-
14 cial support from non-Federal Government sources
15 and fully maintain the quality of the mesonet system
16 and associated data standards required by the Pro-
17 gram for a period of not less than 5 years.

18 (7) PRIORITY.—The Under Secretary shall
19 prioritize providing assistance under paragraph (1)
20 to not fewer than 1 entity in a remote area or an
21 area that has a lack of environmental monitoring
22 stations described in subsection (a)(2).

23 (d) ADVISORY COMMITTEE.—

24 (1) IN GENERAL.—The Under Secretary shall
25 ensure the Program has an active advisory com-

1 mittee of subject matter experts to make rec-
2 ommendations to the Administration on the identi-
3 fication, implementation, procurement, and tracking
4 of data needed to supplement the Program, and rec-
5 ommend improvements, expansions, and acquisitions
6 of available data.

7 (2) DESIGNATION OF EXISTING COMMITTEE.—
8 The Under Secretary may designate an existing ad-
9 visory committee, subcommittee, or working group of
10 the Federal Government, including the Science Advi-
11 sory Board of the Administration, to carry out the
12 requirement under paragraph (1).

13 (3) ACADEMIC EXPERTISE.—The advisory com-
14 mittee under paragraph (1), in consultation with the
15 Program, shall include expertise from 1 or more in-
16 stitutions of higher education (as defined in section
17 101 of the Higher Education Act of 1965 (20
18 U.S.C. 1001)) to assist the advisory committee to
19 identify, evaluate, and recommend potential partner-
20 ships, regional or subregional consortia, and collabo-
21 rative methods that would expand the number of
22 participants and volume of data in the Program.

23 (e) REGULAR BRIEFINGS.—

24 (1) IN GENERAL.—Not less frequently than an-
25 nually through 2035, the Under Secretary shall pro-

1 vide regular briefings to the Committee on Com-
2 merce, Science, and Transportation of the Senate
3 and the Committee on Science, Space, and Tech-
4 nology of the House of Representatives on all activi-
5 ties under the Program.

6 (2) BRIEFING CONTENT.—Each briefing re-
7 quired under paragraph (1) shall include informa-
8 tion relating to the following:

9 (A) Efforts to implement the activities de-
10 scribed in subsection (b).

11 (B) Any financial or technical assistance
12 provided pursuant to subsection (c).

13 (C) Efforts to address recommendations
14 received from the advisory committee under
15 subsection (d), if any.

16 (D) The potential need and associated ben-
17 efits of a coastal and ocean mesonet, or other
18 emerging areas of weather data needs.

19 (E) Progress toward eliminating gaps in
20 weather observation data in States and regions
21 of the United States.

22 (F) Any other topic the Under Secretary
23 determines relevant.

24 (f) DEFINITIONS.—In this section, the terms “sea-
25 sonal”, “State”, “subseasonal”, “Under Secretary”, and

1 “weather enterprise” have the meanings given those terms
2 in section 2 of the Weather Research and Forecasting In-
3 novation Act of 2017 (15 U.S.C. 8501).

4 (g) AUTHORIZATION OF APPROPRIATIONS.—There
5 are authorized to be appropriated to the Under Secretary
6 such sums as may be necessary to carry out this section.