

118TH CONGRESS
1ST SESSION

H. R. 4082

To provide for Federal Aviation Administration research and development on severe turbulence, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

JUNE 13, 2023

Ms. STEVENS introduced the following bill; which was referred to the Committee on Science, Space, and Technology

A BILL

To provide for Federal Aviation Administration research and development on severe turbulence, and for other purposes.

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 “FAA Severe Turbu-
5 lence Research and Development Act of 2023”.

6 **SEC. 2. TURBULENCE RESEARCH AND DEVELOPMENT.**

7 (a) IN GENERAL.—Subject to the availability of ap-
8 propriations for such purpose, the Administrator of the
9 Federal Aviation Administration (in this section referred
10 to as the “Administrator”), in collaboration with the Ad-

1 administrator of the National Oceanic and Atmospheric Ad-
2 ministration, and in consultation with the Administrator
3 of the National Aeronautics and Space Administration,
4 shall carry out applied research and development to—

5 (1) enhance the monitoring and understanding
6 of severe turbulence, including clear-air turbulence;
7 and

8 (2) inform the development of measures to miti-
9 gate safety impacts on crew and the flying public
10 that may result from severe turbulence.

11 (b) RESEARCH AND DEVELOPMENT ACTIVITIES.—In
12 conducting the research and development on severe turbu-
13 lence in accordance with subsection (a), the Administrator
14 shall—

15 (1) establish processes and procedures for com-
16 prehensive and systematic data collection through
17 both instrumentation and pilot reporting, of severe
18 turbulence, including clear-air turbulence;

19 (2) establish measures for storing and man-
20 aging such data collection;

21 (3) support measures for monitoring and char-
22 acterizing incidents of severe turbulence;

23 (4) consider relevant existing research and de-
24 velopment from other entities, including Federal de-

1 partments and agencies, academia, and the private
2 sector; and

3 (5) carry out research and development—

4 (A) to understand the impacts of climate
5 change and other factors on the nature of tur-
6 bulence, including severe turbulence and clear-
7 air turbulence;

8 (B) to enhance turbulence forecasts for
9 flight planning and execution, seasonal pre-
10 dictions for schedule and route-planning, and
11 long-term projections of severe turbulence, in-
12 cluding clear-air turbulence; and

13 (C) on other subject matters areas related
14 to severe turbulence, as determined by the Ad-
15 ministrator; and

16 (6) support the effective transition of the re-
17 sults of research and development to operations,
18 where appropriate.

19 (c) NO DUPLICATION.—The Administrator shall en-
20 sure that research and development activities under this
21 section do not duplicate other Federal programs relating
22 to turbulence.

23 (d) TURBULENCE DATA.—

24 (1) COMMERCIAL PROVIDERS.—In conducting
25 research and development activities under subsection

1 (b), the Administrator may enter into agreements
2 with commercial providers for the following:

3 (A) The purchase of turbulence data.

4 (B) The placement on aircraft of instru-
5 ments relevant to understanding and moni-
6 toring turbulence.

7 (2) DATA ACCESS.—The Administrator shall
8 make the data collected pursuant to subsection (b)
9 widely available and accessible to the scientific re-
10 search, user, and stakeholder communities, including
11 the Administrator of the National Oceanic and At-
12 mospheric Administration, to the greatest extent
13 practicable and in accordance with Federal Aviation
14 Administration data management policies.

15 (e) REPORT ON TURBULENCE RESEARCH.—Not later
16 than 15 months after the date of the enactment of this
17 Act, the Administrator, in collaboration with the Adminis-
18 trator of the National Oceanic and Atmospheric Adminis-
19 tration, shall submit to the Committee on Science, Space,
20 and Technology of the House of Representatives and the
21 Committee on Commerce, Science, and Transportation of
22 the Senate a report that—

23 (1) details the activities conducted under this
24 section, including how the research and development

1 activities under subsection (b) have contributed to
2 the goals specified in subsection (a);

3 (2) assesses the current state of scientific un-
4 derstanding of the causes, occurrence rates, and past
5 and projected future trends in occurrence rates of
6 severe turbulence, including clear-air turbulence;

7 (3) describes the processes and procedures for
8 collecting, storing, and managing, data in pursuant
9 to subsection (b);

10 (4) assesses—

11 (A) the use of commercial providers pursu-
12 ant to subsection (d)(1); and

13 (B) the need for any future Federal Gov-
14 ernment collection or procurement of data and
15 instruments related to turbulence, including an
16 assessment of costs;

17 (5) describes how such data will be made avail-
18 able to the scientific research, user, and stakeholder
19 communities; and

20 (6) identifies future research and development
21 needed to inform the development of measures to
22 predict and mitigate the safety impacts that may re-
23 sult from severe turbulence, including clear-air tur-
24 bulence.

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