

**AMENDMENT TO THE AMENDMENT IN THE
NATURE OF A SUBSTITUTE TO H.R. 3559
OFFERED BY MS. STEVENS OF MICHIGAN**

Add at the end of title II the following:

1 **SEC. 217. TURBULENCE RESEARCH AND DEVELOPMENT.**

2 (a) IN GENERAL.—Subject to the availability of ap-
3 propriations for such purpose, the Administrator, in col-
4 laboration with the Administrator of the National Oceanic
5 and Atmospheric Administration, and in consultation with
6 the Administrator of NASA, shall carry out applied re-
7 search and development to—

8 (1) enhance the monitoring and understanding
9 of severe turbulence, including clear-air turbulence;
10 and

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

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

18 (1) establish processes and procedures for com-
19 prehensive and systematic data collection through

1 both instrumentation and pilot reporting, of severe
2 turbulence, including clear-air turbulence;

3 (2) establish measures for storing and man-
4 aging such data collection;

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

7 (4) consider relevant existing research and de-
8 velopment from other entities, including Federal de-
9 partments and agencies, academia, and the private
10 sector; and

11 (5) carry out research and development—

12 (A) to understand the impacts of climate
13 change and other factors on the nature of tur-
14 bulence, including severe turbulence and clear-
15 air turbulence;

16 (B) to enhance turbulence forecasts for
17 flight planning and execution, seasonal pre-
18 dictions for schedule and route-planning, and
19 long-term projections of severe turbulence, in-
20 cluding clear-air turbulence; and

21 (C) on other subject matters areas related
22 to severe turbulence, as determined by the Ad-
23 ministrator; and

1 (6) support the effective transition of the re-
2 sults of research and development to operations,
3 where appropriate.

4 (c) NO DUPLICATION.—The Administrator shall en-
5 sure that research and development activities under this
6 section do not duplicate other Federal programs relating
7 to turbulence.

8 (d) TURBULENCE DATA.—

9 (1) COMMERCIAL PROVIDERS.—In conducting
10 research and development activities under subsection
11 (b), the Administrator may enter into agreements
12 with commercial providers for the following:

13 (A) The purchase of turbulence data.

14 (B) The placement on aircraft of instru-
15 ments relevant to understanding and moni-
16 toring turbulence.

17 (2) DATA ACCESS.—The Administrator shall
18 make the data collected pursuant to subsection (b)
19 widely available and accessible to the scientific re-
20 search, user, and stakeholder communities, including
21 the Administrator of the National Oceanic and At-
22 mospheric Administration, to the greatest extent
23 practicable and in accordance with Federal Aviation
24 Administration data management policies.

1 (e) REPORT ON TURBULENCE RESEARCH.—Not later
2 than 15 months after the date of the enactment of this
3 Act, the Administrator, in collaboration with the Adminis-
4 trator of the National Oceanic and Atmospheric Adminis-
5 tration, shall submit to the appropriate committees of
6 Congress a report that—

7 (1) details the activities conducted under this
8 section, including how the research and development
9 activities under subsection (b) have contributed to
10 the goals specified in subsection (a);

11 (2) assesses the current state of scientific un-
12 derstanding of the causes, occurrence rates, and past
13 and projected future trends in occurrence rates of
14 severe turbulence, including clear-air turbulence;

15 (3) describes the processes and procedures for
16 collecting, storing, and managing, data in pursuant
17 to subsection (b);

18 (4) assesses—

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

21 (B) the need for any future Federal Gov-
22 ernment collection or procurement of data and
23 instruments related to turbulence, including an
24 assessment of costs;

1 (5) describes how such data will be made avail-
2 able to the scientific research, user, and stakeholder
3 communities; and

4 (6) identifies future research and development
5 needed to inform the development of measures to
6 predict and mitigate the safety impacts that may re-
7 sult from severe turbulence, including clear-air tur-
8 bulence.

