

107TH CONGRESS
2^D SESSION

S. 2951

IN THE HOUSE OF REPRESENTATIVES

NOVEMBER 19, 2002

Referred to the Committee on Science

AN ACT

To authorize appropriations for the Federal Aviation
Administration, 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 “Federal Aviation Ad-
5 ministration Research, Engineering, and Development Act
6 of 2002”.

1 **SEC. 2. AUTHORIZATION OF APPROPRIATIONS.**

2 (a) AMOUNTS AUTHORIZED.—Section 48102(a) of
3 title 49, United States Code, is amended—

4 (1) by striking “and” at the end of paragraph
5 (7);

6 (2) by striking the period at the end of para-
7 graph (8) and inserting a semicolon; and

8 (3) by adding at the end the following:

9 “(9) for fiscal year 2003, \$261,000,000, includ-
10 ing—

11 “(A) \$211,000,000 to improve aviation
12 safety;

13 “(B) \$18,000,000 to improve the efficiency
14 of the air traffic control system;

15 “(C) \$16,000,000 to reduce the environ-
16 mental impact of aviation; and

17 “(D) \$16,000,000 to improve the efficiency
18 of mission support;

19 “(10) for fiscal year 2004, \$274,000,000, in-
20 cluding—

21 “(A) \$221,000,000 to improve aviation
22 safety;

23 “(B) \$19,000,000 to improve the efficiency
24 of the air traffic control system;

25 “(C) \$17,000,000 to reduce the environ-
26 mental impact of aviation; and

1 “(D) \$17,000,000 to improve the efficiency
2 of mission support; and

3 “(11) for fiscal year 2005, \$287,000,000, in-
4 cluding—

5 “(A) \$231,000,000 to improve aviation
6 safety;

7 “(B) \$20,000,000 to improve the efficiency
8 of the air traffic control system;

9 “(C) \$18,000,000 to reduce the environ-
10 mental impact of aviation; and

11 “(D) \$18,000,000 to improve the efficiency
12 of mission support.”.

13 **SEC. 3. COORDINATION OF NATIONAL AVIATION SAFETY**
14 **AND SECURITY RESEARCH PROGRAMS.**

15 (a) DEVELOPMENT OF PLAN.—Not later than June
16 30, 2003, the National Aeronautics and Space Adminis-
17 tration Administrator, the Federal Aviation Administra-
18 tion Administrator, and the Under Secretary of Transpor-
19 tation for Security shall prepare and transmit an updated
20 integrated civil aviation research and development plan to
21 the Senate Committee on Commerce, Science, and Trans-
22 portation, the House of Representatives Committee on
23 Transportation and Infrastructure, and the House of Rep-
24 resentatives Committee on Science.

1 (b) CONTENTS.—The updated integrated civil avia-
2 tion research and development plan shall include—

3 (1) identification of the respective aviation re-
4 search and development requirements, roles, and re-
5 sponsibilities of the National Aeronautics and Space
6 Administration, the Federal Aviation Administra-
7 tion, and the Transportation Security Administra-
8 tion; and

9 (2) review of steps they could take to facilitate
10 the transfer and adoption of new technologies in an
11 operational environment, including consideration of
12 increasing the exchange of research staff, providing
13 greater details on funding at the project level in
14 joint plans, and providing for greater use of tech-
15 nology readiness in program plans and budgets to
16 help frame the maturity of new technologies and de-
17 termine when they can be implemented.

18 **SEC. 4. RESEARCH PROGRAM TO IMPROVE AIRFIELD PAVE-**
19 **MENTS.**

20 The Federal Aviation Administration Administrator
21 shall continue the program to consider awards to nonprofit
22 concrete and asphalt pavement research foundations to
23 improve the design, construction, rehabilitation, and re-
24 pair of concrete and asphalt airfield pavements to aid in
25 the development of safer, more cost-effective, and more

1 durable airfield pavements. The Administrator may use
2 grants or cooperative agreements in carrying out this sec-
3 tion. Nothing in this section requires the Administrator
4 to prioritize an airfield pavement research program above
5 safety, security, Flight 21, environment, or energy re-
6 search programs.

7 **SEC. 5. ENSURING APPROPRIATE STANDARDS FOR AIR-**
8 **FIELD PAVEMENTS.**

9 (a) IN GENERAL.—The Federal Aviation Administra-
10 tion Administrator shall review and determine whether the
11 Federal Aviation Administration’s standards used to de-
12 termine the appropriate thickness for asphalt and concrete
13 airfield pavements are in accordance with the Federal
14 Aviation Administration’s standard 20-year-life require-
15 ment using the most up-to-date available information on
16 the life of airfield pavements. If the Administrator deter-
17 mines that such standards are not in accordance with that
18 requirement, the Administrator shall make appropriate
19 adjustments to the Federal Aviation Administration’s
20 standards for airfield pavements.

21 (b) REPORT.—Within 1 year after the date of enact-
22 ment of this Act, the Administrator shall report the results
23 of the review conducted under subsection (a) and the ad-
24 justments, if any, made on the basis of that review to the
25 Senate Committee on Commerce, Science, and Transpor-

1 tation, the House of Representatives Committee on Trans-
2 portation and Infrastructure, and the House of Represent-
3 atives Committee on Science.

4 **SEC. 6. AIR TRAFFIC MANAGEMENT RESEARCH AND DE-**
5 **VELOPMENT INITIATIVE.**

6 (a) OBJECTIVE.—The Federal Aviation Administra-
7 tion Administrator, in coordination with the National Aer-
8 onautics and Space Administration Administrator, shall
9 participate in a national initiative with the objective of de-
10 fining and developing an air traffic management system
11 designed to meet national long-term aviation security,
12 safety, and capacity needs. The initiative should result in
13 a multiagency blueprint for acquisition and implementa-
14 tion of an air traffic management system that would—

15 (1) build upon current air traffic management
16 and infrastructure initiatives;

17 (2) improve the security, safety, quality, and af-
18 fordability of aviation services;

19 (3) utilize a system of systems approach;

20 (4) develop a highly integrated, secure common
21 information network to enable common situational
22 awareness for all appropriate system users; and

23 (5) ensure seamless global operations for sys-
24 tem users.

1 (b) IMPLEMENTATION.—In implementing subsection
2 (a), the Federal Aviation Administration Administrator, in
3 coordination with the National Aeronautics and Space Ad-
4 ministration Administrator, shall work with other appro-
5 priate Government agencies and industry to—

6 (1) develop system performance requirements;

7 (2) determine an optimal operational concept
8 and system architecture to meet such requirements;

9 (3) utilize new modeling, simulation, and anal-
10 ysis tools to quantify and validate system perform-
11 ance and benefits;

12 (4) ensure the readiness of enabling tech-
13 nologies; and

14 (5) develop a transition plan for successful im-
15 plementation into the National Airspace System.

16 **SEC. 7. ASSESSMENT OF WAKE TURBULENCE RESEARCH**
17 **AND DEVELOPMENT PROGRAM.**

18 (a) ASSESSMENT.—The Federal Aviation Adminis-
19 tration Administrator shall enter into an arrangement
20 with the National Research Council for an assessment of
21 the Federal Aviation Administration’s proposed wake tur-
22 bulence research and development program. The assess-
23 ment shall address—

24 (1) research and development goals and objec-
25 tives;

1 (2) research and development objectives that
2 should be part of Federal Aviation Administration's
3 proposed program;

4 (3) proposed research and development pro-
5 gram's ability to achieve the goals and objectives of
6 the Federal Aviation Administration, and of the Na-
7 tional Research Council, the schedule, and the level
8 of resources needed; and

9 (4) the roles other Federal agencies, such as
10 National Aeronautics and Space Administration and
11 the National Oceanic and Atmospheric Administra-
12 tion, should play in wake turbulence research and
13 development, and coordination of these efforts.

14 (b) REPORT.—A report containing the results of the
15 assessment shall be provided to the Senate Committee on
16 Commerce, Science, and Transportation, the House of
17 Representatives Committee on Transportation and Infra-
18 structure, and the House of Representatives Committee
19 on Science not later than 1 year after the date of enact-
20 ment of this Act.

21 (c) AUTHORIZATION OF APPROPRIATIONS.—There
22 are authorized to be appropriated to the Federal Aviation
23 Administration Administrator for fiscal year 2003,
24 \$500,000 to carry out this section.

1 **SEC. 8. DEVELOPMENT OF ANALYTICAL TOOLS AND CER-**
2 **TIFICATION METHODS.**

3 The Federal Aviation Administration may conduct re-
4 search to promote the development of analytical tools to
5 improve existing certification methods and to reduce the
6 overall costs to manufacturers for the certification of new
7 products.

8 **SEC. 9. CABIN AIR QUALITY RESEARCH PROGRAM.**

9 In accordance with the recommendation of the Na-
10 tional Academy of Sciences in its report entitled “The Air-
11 liner Cabin Environment and the Health of Passengers
12 and Crew”, the Federal Aviation Administration may es-
13 tablish a research program to answer questions about
14 cabin air quality of aircraft.

15 **SEC. 10. RESEARCH TO IMPROVE CAPACITY AND REDUCE**
16 **DELAYS.**

17 The Administrator may include, as part of the Fed-
18 eral Aviation Administration research program, a system-
19 atic review and assessment of the specific causes of airport
20 delay at the 31 airports identified in the Airport
21 Benchmarking Study, on an airport-by-airport basis.

Passed the Senate November 18, 2002.

Attest:

JERI THOMSON,

Secretary.