

Calendar No. 440

119TH CONGRESS
2^D SESSION

S. 1898

[Report No. 119–128]

To establish a demonstration program for the active remediation of orbital debris and to require the development of uniform orbital debris standard practices in order to support a safe and sustainable orbital environment, and for other purposes.

IN THE SENATE OF THE UNITED STATES

MAY 22, 2025

Mr. HICKENLOOPER (for himself, Ms. CANTWELL, Mr. WICKER, and Ms. LUMMIS) introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

JUNE 18, 2026

Reported by Mr. CRUZ, without amendment

A BILL

To establish a demonstration program for the active remediation of orbital debris and to require the development of uniform orbital debris standard practices in order to support a safe and sustainable orbital environment, 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,*

1 **SECTION 1. SHORT TITLE.**

2 This Act may be cited as the “Orbital Sustainability
3 Act of 2025” or the “ORBITS Act of 2025”.

4 **SEC. 2. FINDINGS; SENSE OF CONGRESS.**

5 (a) FINDINGS.—Congress makes the following find-
6 ings:

7 (1) The safety and sustainability of operations
8 in low-Earth orbit and nearby orbits in outer space
9 have become increasingly endangered by a growing
10 amount of orbital debris.

11 (2) Exploration and scientific research missions
12 and commercial space services of critical importance
13 to the United States rely on continued and secure
14 access to outer space.

15 (3) Efforts by nongovernmental space entities
16 to apply lessons learned through standards and best
17 practices will benefit from government support for
18 implementation both domestically and internation-
19 ally.

20 (b) SENSE OF CONGRESS.—It is the sense of Con-
21 gress that to preserve the sustainability of operations in
22 space, the United States Government should—

23 (1) to the extent practicable, develop and carry
24 out programs, establish or update regulations, and
25 commence initiatives to minimize orbital debris, in-
26 cluding initiatives to demonstrate active debris reme-

1 diation of orbital debris generated by the United
2 States Government or other entities under the juris-
3 diction of the United States;

4 (2) lead international efforts to encourage other
5 spacefaring countries to mitigate and remediate or-
6 bital debris under their jurisdiction and control; and

7 (3) encourage space system operators to con-
8 tinue implementing best practices for space safety
9 when deploying satellites and constellations of sat-
10 ellites, such as transparent data sharing and design-
11 ing for system reliability, so as to limit the genera-
12 tion of future orbital debris.

13 **SEC. 3. DEFINITIONS.**

14 In this Act:

15 (1) **ACTIVE DEBRIS REMEDIATION.**—The term
16 “active debris remediation”—

17 (A) means the deliberate process of facili-
18 tating the de-orbit, repurposing, or other dis-
19 posal of orbital debris, which may include mov-
20 ing orbital debris to a safe position, using an
21 object or technique that is external or internal
22 to the orbital debris; and

23 (B) does not include de-orbit, repurposing,
24 or other disposal of orbital debris by passive
25 means.

1 (2) ADMINISTRATOR.—The term “Adminis-
2 trator” means the Administrator of the National
3 Aeronautics and Space Administration.

4 (3) APPROPRIATE COMMITTEES OF CON-
5 GRESS.—The term “appropriate committees of Con-
6 gress” means—

7 (A) the Committee on Appropriations, the
8 Committee on Commerce, Science, and Trans-
9 portation, the Committee on Foreign Relations,
10 and the Committee on Armed Services of the
11 Senate; and

12 (B) the Committee on Appropriations, the
13 Committee on Science, Space, and Technology,
14 the Committee on Foreign Affairs, and the
15 Committee on Armed Services of the House of
16 Representatives.

17 (4) DEMONSTRATION PROJECT.—The term
18 “demonstration project” means the active orbital de-
19 bris remediation demonstration project carried out
20 under section 4(b).

21 (5) ELIGIBLE ENTITY.—The term “eligible enti-
22 ty” means—

23 (A) a United States-based—

24 (i) non-Federal, commercial entity;

1 (ii) institution of higher education (as
2 defined in section 101(a) of the Higher
3 Education Act of 1965 (20 U.S.C.
4 1001(a))); or

5 (iii) nonprofit organization;

6 (B) any other United States-based entity
7 the Administrator considers appropriate; and

8 (C) a partnership of entities described in
9 subparagraphs (A) and (B).

10 (6) ORBITAL DEBRIS.—The term “orbital de-
11bris” means any human-made space object orbiting
12Earth that—

13 (A) no longer serves an intended purpose;
14and

15 (B)(i) has reached the end of its mission;

16or

17 (ii) is incapable of safe maneuver or oper-
18ation.

19 (7) PROJECT.—The term “project” means a
20specific investment with defined requirements, a life-
21cycle cost, a period of duration with a beginning and
22an end, and a management structure that may inter-
23face with other projects, agencies, and international
24partners to yield new or revised technologies ad-
25dressing strategic goals.

1 (8) SECRETARY.—The term “Secretary” means
2 the Secretary of Commerce.

3 (9) SPACE TRAFFIC COORDINATION.—The term
4 “space traffic coordination” means the planning, co-
5 ordination, and on-orbit synchronization of activities
6 to enhance the safety and sustainability of oper-
7 ations in the space environment.

8 **SEC. 4. ACTIVE DEBRIS REMEDIATION.**

9 (a) PRIORITIZATION OF ORBITAL DEBRIS.—

10 (1) LIST.—Not later than 90 days after the
11 date of the enactment of this Act, the Secretary, in
12 consultation with the Administrator, the Secretary
13 of Defense, the Secretary of State, the National
14 Space Council, and representatives of the commer-
15 cial space industry, academia, and nonprofit organi-
16 zations, shall publish a list of select identified orbital
17 debris that may be remediated to improve the safety
18 and sustainability of orbiting satellites and on-orbit
19 activities.

20 (2) CONTENTS.—The list required under para-
21 graph (1)—

22 (A) shall be developed using appropriate
23 sources of data and information derived from
24 governmental and nongovernmental sources, in-
25 cluding space situational awareness data ob-

1 tained by the Office of Space Commerce, to the
2 extent practicable;

3 (B) shall include, to the extent prac-
4 ticable—

5 (i) a description of the approximate
6 age, location in orbit, size, mass, tumbling
7 state, post-mission passivation actions
8 taken, and national jurisdiction of each or-
9 bital debris identified; and

10 (ii) data required to inform decisions
11 regarding potential risk and feasibility of
12 safe remediation;

13 (C) may include orbital debris that poses a
14 significant risk to terrestrial people and assets,
15 including risk resulting from potential environ-
16 mental impacts from the uncontrolled reentry of
17 the orbital debris identified; and

18 (D) may include collections of small debris
19 that, as of the date of the enactment of this
20 Act, are untracked.

21 (3) PUBLIC AVAILABILITY; PERIODIC UP-
22 DATES.—

23 (A) IN GENERAL.—Subject to subpara-
24 graph (B), the list required under paragraph
25 (1) shall be published in unclassified form on a

publicly accessible internet website of the Department of Commerce.

(B) EXCLUSION.—The Secretary may not include on the list published under subparagraph (A) data acquired from nonpublic sources.

(C) PERIODIC UPDATES.—Such list shall be updated periodically.

(4) ACQUISITION, ACCESS, USE, AND HANDLING OF DATA OR INFORMATION.—In carrying out the activities under this subsection, the Secretary—

(A) shall acquire, access, use, and handle data or information in a manner consistent with applicable provisions of law and policy, including laws and policies providing for the protection of privacy and civil liberties, and subject to any restrictions required by the source of the information;

(B) shall have access, upon written request, to all information, data, or reports of any executive agency that the Secretary determines necessary to carry out the activities under this subsection, provided that such access is—

(i) conducted in a manner consistent with applicable provisions of law and policy

1 of the originating agency, including laws
2 and policies providing for the protection of
3 privacy and civil liberties; and

4 (ii) consistent with due regard for the
5 protection from unauthorized disclosure of
6 classified information relating to sensitive
7 intelligence sources and methods or other
8 exceptionally sensitive matters; and

9 (C) may obtain commercially available in-
10 formation that may not be publicly available.

11 (b) ACTIVE ORBITAL DEBRIS REMEDIATION DEM-
12 ONSTRATION PROJECT.—

13 (1) ESTABLISHMENT.—Not later than 180 days
14 after the date of the enactment of this Act, subject
15 to the availability of appropriations, the Adminis-
16 trator, in consultation with the head of each relevant
17 Federal department or agency, shall establish a dem-
18 onstration project to make competitive awards for
19 the research, development, and demonstration of
20 technologies leading to the remediation of selected
21 orbital debris identified under subsection (a)(1).

22 (2) PURPOSE.—The purpose of the demonstra-
23 tion project shall be to enable eligible entities to pur-
24 sue the phased development and demonstration of

1 technologies and processes required for active debris
2 remediation.

3 (3) PROCEDURES AND CRITERIA.—In estab-
4 lishing the demonstration project, the Administrator
5 shall—

6 (A) establish—

7 (i) eligibility criteria for participation;

8 (ii) a process for soliciting proposals
9 from eligible entities;

10 (iii) criteria for the contents of such
11 proposals;

12 (iv) project compliance and evaluation
13 metrics; and

14 (v) project phases and milestones;

15 (B) identify government-furnished data or
16 equipment;

17 (C) develop a plan for National Aero-
18 nautics and Space Administration participation,
19 as appropriate, in technology development and
20 intellectual property rights that—

21 (i) leverages National Aeronautics and
22 Space Administration Centers that have
23 demonstrated expertise and historical
24 knowledge in measuring, modeling, charac-

1 terizing, and describing the current and fu-
2 ture orbital debris environment; and

3 (ii) develops the technical consensus
4 for adopting mitigation measures for such
5 participation; and

6 (D)(i) assign a project manager to oversee
7 the demonstration project and carry out project
8 activities under this subsection; and

9 (ii) in assigning such project manager, le-
10 verage National Aeronautics and Space Admin-
11 istration Centers and the personnel of National
12 Aeronautics and Space Administration Centers,
13 as practicable.

14 (4) RESEARCH AND DEVELOPMENT PHASE.—

15 With respect to orbital debris identified under para-
16 graph (1) of subsection (a), the Administrator shall,
17 to the extent practicable and subject to the avail-
18 ability of appropriations, carry out the additional re-
19 search and development activities necessary to ma-
20 ture technologies, in partnership with eligible enti-
21 ties, with the intent to close commercial capability
22 gaps and enable potential future remediation mis-
23 sions for such orbital debris, with a preference for
24 technologies that are capable of remediating orbital

1 debris that have a broad range of characteristics de-
2 scribed in paragraph (2)(B)(i) of that subsection.

3 (5) DEMONSTRATION MISSION PHASE.—

4 (A) IN GENERAL.—The Administrator
5 shall evaluate proposals for a demonstration
6 mission, and select and enter into a partnership
7 with an eligible entity, subject to the availability
8 of appropriations, with the intent to dem-
9 onstrate technologies determined by the Admin-
10 istrator to meet a level of technology readiness
11 sufficient to carry out on-orbit remediation of
12 select orbital debris.

13 (B) EVALUATION.—In evaluating pro-
14 posals for the demonstration project, the Ad-
15 ministrator shall—

16 (i) consider the safety, feasibility,
17 cost, benefit, and maturity of the proposed
18 technology;

19 (ii) consider the potential for the pro-
20 posed demonstration to successfully reme-
21 diate orbital debris and to advance the
22 commercial state of the art with respect to
23 active debris remediation;

24 (iii) carry out a risk analysis of the
25 proposed technology that takes into consid-

1 eration the potential casualty risk to hu-
2 mans in space or on the Earth's surface;

3 (iv) in an appropriate setting, conduct
4 thorough testing and evaluation of the pro-
5 posed technology and each component of
6 such technology or system of technologies;
7 and

8 (v) consider the technical and finan-
9 cial feasibility of using the proposed tech-
10 nology to conduct multiple remediation
11 missions.

12 (C) CONSULTATION.—The Administrator
13 shall consult with the head of each relevant
14 Federal department or agency before carrying
15 out any demonstration mission under this para-
16 graph.

17 (D) ACTIVE DEBRIS REMEDIATION DEM-
18 ONSTRATION MISSION.—It is the sense of Con-
19 gress that the Administrator should consider
20 maximizing competition for, and use best prac-
21 tices to engage commercial entities in, an active
22 debris remediation demonstration mission.

23 (6) BRIEFING AND REPORTS.—

24 (A) INITIAL BRIEFING.—Not later than 30
25 days after the establishment of the demonstra-

tion project under paragraph (1), the Administrator shall provide to the appropriate committees of Congress a briefing on the details of the demonstration project.

(B) ANNUAL REPORT.—Not later than 1 year after the initial briefing under subparagraph (A), and annually thereafter until the conclusion of the 1 or more demonstration missions, the Administrator shall submit to the appropriate committees of Congress a status report on—

(i) the technology developed under the demonstration project;

(ii) progress toward the accomplishment of the 1 or more demonstration missions; and

(iii) any duplicative efforts carried out or supported by the National Aeronautics and Space Administration or the Department of Defense.

(C) RECOMMENDATIONS.—Not later than 1 year after the date on which the first demonstration mission is carried out under this subsection, the Administrator, in consultation with the head of each relevant Federal depart-

1 ment or agency, shall submit to Congress a re-
2 port that provides legislative, regulatory, and
3 policy recommendations to improve active debris
4 remediation missions, as applicable.

5 (D) TECHNICAL ANALYSIS.—

6 (i) IN GENERAL.—To inform decisions
7 regarding the acquisition of active debris
8 remediation services by the Federal Gov-
9 ernment, not later than 1 year after the
10 date on which an award is made under
11 paragraph (1), the Administrator shall
12 submit to Congress a report that—

13 (I) summarizes the cost-effective-
14 ness, and provides a technical analysis
15 of, technologies developed under the
16 demonstration project;

17 (II) identifies any technology
18 gaps addressed by the demonstration
19 project and any remaining technology
20 gaps; and

21 (III) provides, as applicable, any
22 further legislative, regulatory, and
23 policy recommendations to enable ac-
24 tive debris remediation missions.

1 (ii) AVAILABILITY.—The Administra-
2 tion shall make the report submitted under
3 clause (i) available to the Secretary, the
4 Secretary of Defense, and other relevant
5 Federal departments and agencies, as de-
6 termined by the Administrator.

7 (7) SENSE OF CONGRESS ON INTERNATIONAL
8 COOPERATION.—It is the sense of Congress that, in
9 carrying out the demonstration project, it is critical
10 that the Administrator, in coordination with the Sec-
11 retary of State and in consultation with the National
12 Space Council, cooperate with one or more partner
13 countries to enable the remediation of orbital debris
14 that is under their respective jurisdictions.

15 (c) AUTHORIZATION OF APPROPRIATIONS.—There is
16 authorized to be appropriated to the Administrator to
17 carry out this section \$150,000,000 for the period of fiscal
18 years 2026 through 2030.

19 (d) RESCISSION OF UNOBLIGATED FUNDS.—Unobli-
20 gated balances of amounts appropriated or otherwise
21 made available by subsection (c) as of September 30,
22 2030, shall be rescinded not later than December 31,
23 2030.

24 (e) RULE OF CONSTRUCTION.—Nothing in this sec-
25 tion may be construed to grant the Administrator the au-

1 thority to issue any regulation relating to activities under
2 subsection (b) or related space activities under title 51,
3 United States Code.

4 **SEC. 5. ACTIVE DEBRIS REMEDIATION SERVICES.**

5 (a) IN GENERAL.—To foster the competitive develop-
6 ment, operation, improvement, and commercial availability
7 of active debris remediation services, and in consideration
8 of the economic analysis required by subsection (b) and
9 the briefing and reports under section 4(b)(6), the Admin-
10 istrator and the head of each relevant Federal department
11 or agency may acquire services for the remediation of or-
12 bital debris, whenever practicable, through fair and open
13 competition for contracts that are well-defined, milestone-
14 based, and in accordance with the Federal Acquisition
15 Regulation.

16 (b) ECONOMIC ANALYSIS.—Based on the results of
17 the demonstration project, the Secretary, acting through
18 the Office of Space Commerce, shall publish an assess-
19 ment of the estimated Federal Government and private
20 sector demand for orbital debris remediation services for
21 the 10-year period beginning in 2026.

22 **SEC. 6. UNIFORM ORBITAL DEBRIS STANDARD PRACTICES**
23 **FOR UNITED STATES SPACE ACTIVITIES.**

24 (a) IN GENERAL.—Not later than 90 days after the
25 date of the enactment of this Act, the National Space

1 Council, in coordination with the Secretary, the Adminis-
2 trator of the Federal Aviation Administration, the Sec-
3 retary of Defense, the Secretary of State, the Federal
4 Communications Commission, and the Administrator,
5 shall initiate an update to the Orbital Debris Mitigation
6 Standard Practices that—

7 (1) considers planned space systems, including
8 satellite constellations; and

9 (2) addresses—

10 (A) collision risk;

11 (B) explosion risk;

12 (C) casualty probability;

13 (D) post-mission disposal of space systems;

14 (E) time to disposal or de-orbit;

15 (F) spacecraft collision avoidance and
16 automated identification capability; and

17 (G) the ability to track orbital debris of de-
18 creasing size.

19 (b) CONSULTATION.—In developing the update under
20 subsection (a), the National Space Council, or a designee
21 of the National Space Council, shall seek advice and input
22 on commercial standards and best practices from rep-
23 resentatives of the commercial space industry, academia,
24 and nonprofit organizations, including through workshops

1 and, as appropriate, advance public notice and comment
2 processes under chapter 5 of title 5, United States Code.

3 (c) PUBLICATION.—Not later than 1 year after the
4 date of the enactment of this Act, such update shall be
5 published in the Federal Register and posted to the rel-
6 evant Federal Government internet websites.

7 (d) REGULATIONS.—To promote uniformity and
8 avoid duplication in the regulation of space activity, in-
9 cluding licensing by the Federal Aviation Administration,
10 the National Oceanic and Atmospheric Administration,
11 and the Federal Communications Commission, such up-
12 date, after publication, shall be used to inform the further
13 development and promulgation of Federal regulations re-
14 lating to orbital debris.

15 (e) INTERNATIONAL PROMOTION.—To encourage ef-
16 fective and nondiscriminatory standards, best practices,
17 rules, and regulations implemented by other countries,
18 such update shall inform bilateral and multilateral discus-
19 sions focused on the authorization and continuing super-
20 vision of nongovernmental space activities.

21 (f) PERIODIC REVIEW.—Not less frequently than
22 every 5 years, the Orbital Debris Mitigation Standard
23 Practices referred to in subsection (a) shall be assessed
24 and, if necessary, updated, used, and promulgated in a
25 manner consistent with this section.

1 **SEC. 7. STANDARD PRACTICES FOR SPACE TRAFFIC CO-**
2 **ORDINATION.**

3 (a) IN GENERAL.—The Secretary, in coordination
4 with the Secretary of Defense and members of the Na-
5 tional Space Council and the Federal Communications
6 Commission, shall facilitate the development of standard
7 practices for on-orbit space traffic coordination based on
8 existing guidelines and best practices used by Government
9 and commercial space industry operators.

10 (b) CONSULTATION.—In facilitating the development
11 of standard practices under subsection (a), the Secretary,
12 through the Office of Space Commerce, in consultation
13 with the National Institute of Standards and Technology,
14 shall engage in frequent and routine consultation with rep-
15 resentatives of the commercial space industry, academia,
16 and nonprofit organizations.

17 (c) PROMOTION OF STANDARD PRACTICES.—On
18 completion of such standard practices, the Secretary, the
19 Secretary of State, the Secretary of Transportation, the
20 Administrator, and the Secretary of Defense shall promote
21 the adoption and use of the standard practices for domes-
22 tic and international space missions.

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