TITLE 51—NATIONAL AND COMMERCIAL SPACE PROGRAMS

This title was enacted by Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3328

Subtitle I—General

Chap.		Sec.
101.	**Definitions**	**10101**

Subtitle II—General Program and Policy Provisions

201.	**National Aeronautics and Space Program**	**20101**
203.	**Responsibilities and Vision**	**20301**

Subtitle III—Administrative Provisions

301.	**Appropriations, Budgets, and Accounting**	**30101**
303.	**Contracting and Procurement**	**30301**
305.	**Management and Review**	**30501**
307.	**International Cooperation and Competition**	**30701**
309.	**Awards**	**30901**
311.	**Safety**	**31101**
313.	**Healthcare**	**31301**
315.	**Miscellaneous**	**31501**

Subtitle IV—Aeronautics and Space Research and Education

401.	**Aeronautics**	**40101**
403.	**National Space Grant College and Fellowship Program**	**40301**
405.	**Biomedical Research in Space**	**40501**
407.	**Environmentally Friendly Aircraft**	**40701**
409.	**Miscellaneous**	**40901**

Subtitle V—Programs Targeting Commercial Opportunities

501.	**Space Commerce**	**50101**
503.	**Commercial Reusable In-Space Transportation**	**50301**
505.	**Commercial Space Competitiveness**	**50501**
507.	**Office of Space Commerce**	**50701**
509.	**Commercial Space Launch Activities**	**50901**
511.	**Space Transportation Infrastructure Matching Grants**	**51101**
513.	**Space resource commercial exploration and utilization** [1]	**51301**
515.	**Office of Spaceports**	**51501**

Subtitle VI—Earth Observations

601.	**Land Remote Sensing Policy**	**60101**
603.	**Remote Sensing**	**60301**
605.	**Earth Science**	**60501**
606.	**Space Weather**	**60601**

Subtitle VII—Access to Space

701.	**Use of space launch system or alternatives** [2]	**70101**
[703.	**Repealed.]**	
705.	**Exploration Initiatives**	**70501**

707. Human Space Flight Independent Investigation Commission 70701
709. International Space Station 70901
711. Near-Earth Objects 71101
713. Cooperation for Safety Among Spacefaring Nations 71301

EDITORIAL NOTES

AMENDMENTS

2020—Pub. L. 116–181, §2(c)(1), Oct. 21, 2020, 134 Stat. 892, added item for chapter 606.

2018—Pub. L. 115–254, div. B, title V, §580(b)(2), Oct. 5, 2018, 132 Stat. 3396, added item for chapter 515.

2017—Pub. L. 115–10, title IV, §416(b), Mar. 21, 2017, 131 Stat. 35, struck out item for chapter 703 "Shuttle Pricing Policy for Commercial and Foreign Users".

2015—Pub. L. 114–90, title I, §117(b)(1), title III, §301(a)(2), title IV, §402(b), Nov. 25, 2015, 129 Stat. 718, 720, 722, added item for chapter 513 and substituted "Commerce" for "Commercialization" in item for chapter 507 and "Use of space launch system or alternatives" for "Use of Space Shuttle or Alternatives" in item for chapter 701.

2010—Pub. L. 111–314, §4(d)(7), Dec. 18, 2010, 124 Stat. 3443, added items for chapters 509 and 511.

TABLE I

(Showing disposition of former sections of Title 15)

Title 15 *Former Sections*	*Title 51* *New Sections*
1511e	50702
1535	50703
5601	60101 note
5602	60101
5611	60111
5612, 5613	Rep.
5614	60112
5615(a), (b)	60113
5615(c), (d)	Rep.
5621 to 5625	60121 to 60125
5631	60131
5632	60132
5633(a) to (e)	60133
5633(f), 5641(a)	Rep.
5641(b), (c)	60134
5651 to 5658	60141 to 60148
5671	60161
5672	60162
5801	50501 note
5802	50501
5803(a) to (c)	50502
5803(d)	Rep.
5805	Rep.
5806	50503
5807	50504
5808	50506

TABLE II

(Showing disposition of former sections of Title 42)

Title 42 *Former Sections*	*Title 51* *New Sections*
2451	20102
2452	20103
2453	Rep.
2454	20131
2455(a)	20132
2455(b)	20132 note
2456	20133
2456a	20134
2457	20135
2458 to 2458c	20136 to 20139
2459	20140
2459a	Elim.
2459b	20141
2459c	20142
2459d	30301
2459e	30302
2459f	20143
2459f–1	20144
2459g	30307
2459h	30308(b)
2459i	30102
2459j	20145
2459j–1	20145 note
2459k	20146
2459*l*	20147
2460	30101
2461	30901
2463	30303
2464	70101
2464a	Elim.
2465a(a)	70102(a)
2465a(b)	Rep.
2465a(c)	70102(b)
2465a(d)	70102(c)
2465c	70103(a)
2465f	70103(b)
2466 to 2466c	70301 to 70304
2467	40901
2467a	40902
2467b(a), (b)	40903(b), (c)
2467b(c)	40903(a)
2471, 2471a	20111 notes
2472	20111
2473(a), (b)	20112

2473(c)	20113
2473b (1st par.)	30304
2473b (last par.), 2473c(a)	Rep.
2473c(b)	31102 note
2473c(c) to (h)	31102
2473d	30309
2474(a)	Rep.
2474(b), (c)	20114(a), (b)
2474(d)	Rep.
2475	20115
2475a(a), (b)	30701(a), (b)(2)
2475b	30702
2476	20116
2476a	20117
2476b	Rep.
2477	31101
2481 to 2484	20161 to 20164
2486	40301 note
2486a to 2486i	40301 to 40309
2486k	40310
2486*l*	Rep.
2487	40501 note
2487a to 2487c	40501 to 40503
2487e	40504
2487f	40505
2487g	Rep.
14701	50101
14711(a)	50111(a)
14711(b)	Rep.
14712(a)	50112 note
14712(b)	50112
14713	50113
14714	50114
14715(a), (b)	50115(a), (b)
14715(c)	Rep.
14715(d), (e)	50115(c), (d)
14731	50131
14732	50132
14733(a)	50133
14733(b), (c)	Rep.
14734	50134
14735	Rep.
14751	50301 note
14752	50302
14753	50301
16601	10101 note
16611(a)	20301
16611(b)	20302

16611(c) to (g)	Elim.
16611(h)(1)	30103(a)
16611(h)(2)	Elim.
16611(i)	30103(b)
16611(j)	Elim.
16611a(a) to (c)	20303(a) to (c)
16611a(d)	Elim.
16611a(e)	20303(d)
16611a(f)	Elim.
16611b	30103(c)
16611b note (Pub. L. 111–8, div. B, title III, 123 Stat. 589)	30103(d)
16612	note prec. 40901
16613	30104
16614	30703
16615	30501
16616, 16617	Elim.
16618	30502
16631, 16632	Rep.
16633	70902
16634	50505
16635, 16636	Elim.
16651	30503
16652, 16653	Elim.
16654(a) (matter before par. (1))	30504(a)
16654(a)(1)	Elim.
16654(a)(2)	30504(b)
16654(b), 16655(1)	Elim.
16655(2), (3)	40904
16656	60505
16657	Elim.
16658	20304
16671 to 16676	60301 to 60306
16691	note prec. 71101
16701	40101
16711	40102
16712(a)	Elim.
16712(b)	40103
16721(a), (b)	40111
16721(c), (d)	Rep.
16722(a)	40701
16722(b) to (g)	40112(a) to (f)
16723 to 16725	40113 to 40115
16726	Rep.
16727	40116
16741	40131
16751	40141
16761(a), (b)	70501(a), (b)

16761(c)	Elim.
16762	70501 note
16763	70502
16764	70503
16765	70904
16766(1), (2)	70903
16766(3)	Elim.
16767(a), (b)	70905(b), (c)
16767(c)	Elim.
16767(d)	70905(a)
16781	31501
16782	70304 note
16791	40905
16792	30902
16793	Elim.
16794	40906
16795	40907
16796	note prec. 40901
16797	40908
16798(a)	Elim.
16798(b)	40909
16811	50116
16821	30306
16822	31301
16823	30704
16824	Elim.
16831	T. 42 §1886a
16832	Elim.
16841 to 16850	70701 to 70710
17701	20102 note
17702	10101 note
17711	60501
17712(a)	Elim.
17712(b) to (d)	60502(a) to (c)
17713(a)	60503
17713(b)	Elim.
17714	60504
17721	40702
17722	40703
17723(a)	40704 note
17723(b), (c)	40704(a), (b)
17724	40104
17731	70504
17732(a), (b)	70505(a), (b)
17732(c)	Elim.
17733(a)	70506 note
17733(b)	70506
17734	71301

17741	70507
17742	70508
17751(a)	70907
17751(b)	Elim.
17752	70906
17753	Elim.
17761	70501 note
17771	50903 note
17781(a)	Elim.
17781(b)	40903(d)
17781(c)	40311
17791(a)	71101
17791(b)	Elim.
17792	71101 note
17793 to 17795	71102 to 71104
17801	50111(b)
17811(a)	31502
17811(b), (c)	Elim.
17812(a)	31503
17812(b)	Elim.
17821(a)	71302 note
17821(b)	71302
17822	31302
17823	20305
17824	30305
17825(a), (b)	Elim.
17825(c)	60506
17826	Elim.
17827	30310
17828	31504
17829	31505

STATUTORY NOTES AND RELATED SUBSIDIARIES

ENACTMENT OF TITLE

Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3328, provided in part that: "Title 51, United States Code, 'National and Commercial Space Programs', is enacted as follows".

PURPOSE; CONFORMITY WITH ORIGINAL INTENT

Pub. L. 111–314, §2, Dec. 18, 2010, 124 Stat. 3328, provided that:

"(a) PURPOSE.—The purpose of this Act [see Tables for classification] is to codify certain existing laws related to national and commercial space programs as a positive law title of the United States Code.

"(b) CONFORMITY WITH ORIGINAL INTENT.—In the codification of laws by this Act, the intent is to conform to the understood policy, intent, and purpose of Congress in the original enactments, with such amendments and corrections as will remove ambiguities, contradictions, and other imperfections, in accordance with section 205(c)(1) of House Resolution No. 988, 93d Congress, as enacted into law by Public Law 93–554 (2 U.S.C. 285b(1))."

TRANSITIONAL AND SAVINGS PROVISIONS

Pub. L. 111–314, §5, Dec. 18, 2010, 124 Stat. 3443, provided that:

"(a) DEFINITIONS.—In this section:

"(1) SOURCE PROVISION.—The term 'source provision' means a provision of law that is replaced by a title 51 provision.

"(2) TITLE 51 PROVISION.—The term 'title 51 provision' means a provision of title 51, United States Code, that is enacted by section 3.

"(b) CUTOFF DATE.—The title 51 provisions replace certain provisions of law enacted on or before July 1, 2009. If a law enacted after that date amends or repeals a source provision, that law is deemed to amend or repeal, as the case may be, the corresponding title 51 provision. If a law enacted after that date is otherwise inconsistent with a title 51 provision or a provision of this Act [see Tables for classification], that law supersedes the title 51 provision or provision of this Act to the extent of the inconsistency.

"(c) ORIGINAL DATE OF ENACTMENT UNCHANGED.—For purposes of determining whether one provision of law supersedes another based on enactment later in time, a title 51 provision is deemed to have been enacted on the date of enactment of the corresponding source provision.

"(d) REFERENCES TO TITLE 51 PROVISIONS.—A reference to a title 51 provision is deemed to refer to the corresponding source provision.

"(e) REFERENCES TO SOURCE PROVISIONS.—A reference to a source provision, including a reference in a regulation, order, or other law, is deemed to refer to the corresponding title 51 provision.

"(f) REGULATIONS, ORDERS, AND OTHER ADMINISTRATIVE ACTIONS.—A regulation, order, or other administrative action in effect under a source provision continues in effect under the corresponding title 51 provision.

"(g) ACTIONS TAKEN AND OFFENSES COMMITTED.—An action taken or an offense committed under a source provision is deemed to have been taken or committed under the corresponding title 51 provision."

REPEALS

Pub. L. 111–314, §6, Dec. 18, 2010, 124 Stat. 3444, repealed specified laws relating to national and commercial space programs, except with respect to rights and duties that matured, penalties that were incurred, or proceedings that were begun before Dec. 18, 2010.

[1] So in original. Probably should be "Space Resource Commercial Exploration and Utilization".

[2] So in original. Probably should be "Use of Space Launch System or Alternatives".

Subtitle I—General

CHAPTER 101—DEFINITIONS

Sec.
10101. Definitions.

§10101. Definitions

In this title:

(1) ADMINISTRATION.—The term "Administration" means the National Aeronautics and Space Administration.

(2) ADMINISTRATOR.—The term "Administrator" means the Administrator of the National Aeronautics and Space Administration.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3329.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*

10101	(no source)	

Title-wide definitions for the terms "Administration" and "Administrator" are added for clarity and convenience.

STATUTORY NOTES AND RELATED SUBSIDIARIES

SHORT TITLE OF 2022 AMENDMENT

Pub. L. 117–167, div. B, title VII, §10801, Aug. 9, 2022, 136 Stat. 1730, provided that: "This title [amending sections 20145, 40112, 40903, 50111, and 70907 of this title and sections 18351, 18353, and 18354 of Title 42, The Public Health and Welfare, enacting provisions set out as notes under this section, sections 20102, 20113, 20301, 20302, 40102, 40112, 40113, 60501, 70901 of this title, and preceding section 71101 of this title, amending provisions set out as notes under sections 20301 and 20302 of this title and preceding section 71101 of this title] may be cited as the 'National Aeronautics and Space Administration Authorization Act of 2022'."

Pub. L. 117–103, div. HH, title II, §201, Mar. 15, 2022, 136 Stat. 1112, provided that: "This title [amending section 20145 of this title and enacting provisions set out as a note under section 20145 of this title] may be cited as the 'NASA Enhanced-Use Leasing Extension Act of 2022'."

SHORT TITLE OF 2020 AMENDMENT

Pub. L. 116–181, §1, Oct. 21, 2020, 134 Stat. 882, provided that: "This Act [enacting chapter 606 of this title, repealing section 18388 of Title 42, The Public Health and Welfare, and enacting provisions set out as a note under section 60601 of this title] may be cited as the 'Promoting Research and Observations of Space Weather to Improve the Forecasting of Tomorrow Act' or the 'PROSWIFT Act'."

SHORT TITLE OF 2019 AMENDMENT

Pub. L. 116–94, div. I, title VI, §601, Dec. 20, 2019, 133 Stat. 3027, provided that: "This title [amending section 20145 of this title] may be cited as the 'NASA Enhanced Use Leasing Extension Act of 2019'."

SHORT TITLE OF 2018 AMENDMENT

Pub. L. 115–403, §1, Dec. 31, 2018, 132 Stat. 5348, provided that: "This Act [amending section 20145 of this title] may be cited as the 'NASA Enhanced Use Leasing Extension Act of 2018'."

SHORT TITLE OF 2017 AMENDMENT

Pub. L. 115–10, §1(a), Mar. 21, 2017, 131 Stat. 18, provided that: "This Act [see Tables for classification] may be cited as the 'National Aeronautics and Space Administration Transition Authorization Act of 2017'."

Pub. L. 115–10, title IV, §441, Mar. 21, 2017, 131 Stat. 44, provided that: "This subtitle [subtitle D (§§441–443) of title IV of Pub. L. 115–10, enacting section 20149 of this title and provisions set out as notes under section 20149 of this title] may be cited as the 'To Research, Evaluate, Assess, and Treat Astronauts Act' or the 'TREAT Astronauts Act'."

SHORT TITLE OF 2015 AMENDMENT

Pub. L. 114–90, §1(a), Nov. 25, 2015, 129 Stat. 704, provided that: "This Act [enacting chapter 513 and sections 60126 and 70104 of this title, amending sections 20113, 50131, 50701, 50702, 50901, 50902, 50904 to 50908, 50914, 50915, 50919, 70101 to 70103, and 70907 of this title and sections 18351, 18353, and 18354 of Title 42, The Public Health and Welfare, and enacting provisions set out as notes under this section and sections 20113 and 50918 of this title] may be cited as the 'U.S. Commercial Space Launch Competitiveness Act'."

Pub. L. 114–90, title I, §101, Nov. 25, 2015, 129 Stat. 705, provided that: "This title [enacting section 70104 of this title, amending sections 20113, 50131, 50901, 50902, 50904 to 50908, 50914, 50915, 50919, 70101 to 70103, and 70907 of this title and sections 18351, 18353, and 18354 of Title 42, The Public Health and Welfare, and enacting provisions set out as notes under sections 20113 and 50918 of this title] may be cited as the 'Spurring Private Aerospace Competitiveness and Entrepreneurship Act of 2015' or 'SPACE Act of 2015'."

Pub. L. 114–90, title IV, §401, Nov. 25, 2015, 129 Stat. 720, provided that: "This title [enacting chapter 513 of this title] may be cited as the 'Space Resource Exploration and Utilization Act of 2015'."

SHORT TITLE OF 2013 AMENDMENT

Pub. L. 112–273, §1, Jan. 14, 2013, 126 Stat. 2454, provided that: "This Act [amending section 50915 of

this title, section 18313 of Title 42, The Public Health and Welfare, and provisions set out as a note under section 1701 of Title 50, War and National Defense] may be cited as the 'Space Exploration Sustainability Act'."

SHORT TITLE OF 2008 ACT

Pub. L. 110–422, §1(a), Oct. 15, 2008, 122 Stat. 4779, provided that: "This Act [see Tables for classification] may be cited as the 'National Aeronautics and Space Administration Authorization Act of 2008'."

SHORT TITLE OF 2005 ACT

Pub. L. 109–155, §1(a), Dec. 30, 2005, 119 Stat. 2895, provided that: "This Act [see Tables for classification] may be cited as the 'National Aeronautics and Space Administration Authorization Act of 2005'."

SHORT TITLE OF 2004 ACT

Pub. L. 108–492, §1, Dec. 23, 2004, 118 Stat. 3974, provided that: "This Act [see Tables for classification] may be cited as the 'Commercial Space Launch Amendments Act of 2004'."

SHORT TITLE OF 2002 ACT

Pub. L. 107–248, title IX, §901, Oct. 23, 2002, 116 Stat. 1573, provided that: "This title [see Tables for classification] may be cited as the 'Commercial Reusable In-Space Transportation Act of 2002'."

SHORT TITLE OF 2000 ACT

Pub. L. 106–405, §1, Nov. 1, 2000, 114 Stat. 1751, provided that: "This Act [see Tables for classification] may be cited as the 'Commercial Space Transportation Competitiveness Act of 2000'."

SHORT TITLE OF 1998 ACT

Pub. L. 105–303, §1(a), Oct. 28, 1998, 112 Stat. 2843, provided that: "This Act [see Tables for classification] may be cited as the 'Commercial Space Act of 1998'."

SHORT TITLE OF 1992 ACT

Pub. L. 102–555, §1, Oct. 28, 1992, 106 Stat. 4163, provided that: "This Act [see Tables for classification] may be cited as the 'Land Remote Sensing Policy Act of 1992'."

SHORT TITLE OF 1990 ACT

Pub. L. 101–611, title II, §201, Nov. 16, 1990, 104 Stat. 3205, provided that: "This title [see Tables for classification] may be cited as the 'Launch Services Purchase Act of 1990'."

SHORT TITLE OF 1987 ACT

Pub. L. 100–147, title II, §201, Oct. 30, 1987, 101 Stat. 869, provided that: "This title [see Tables for classification] may be cited as the 'National Space Grant College and Fellowship Act'."

SHORT TITLE OF 1958 ACT

Pub. L. 85–568, title I, §101, July 29, 1958, 72 Stat. 426, provided that: "This Act [see Tables for classification] may be cited as the 'National Aeronautics and Space Act of 1958'."

DEFINITIONS

Pub. L. 117–167, div. B, title VII, §10802, Aug. 9, 2022, 136 Stat. 1730, provided that: "In this title [see Short Title of 2022 Amendment note above]:

"(1) ADMINISTRATION.—The term 'Administration' means the National Aeronautics and Space Administration.

"(2) ADMINISTRATOR.—The term 'Administrator' means the Administrator of the National Aeronautics and Space Administration.

"(3) APPROPRIATE COMMITTEES OF CONGRESS.—Except as otherwise expressly provided, the term 'appropriate committees of Congress' means—

"(A) the Committee on Commerce, Science, and Transportation of the Senate; and

"(B) the Committee on Science, Space, and Technology of the House of Representatives.

"(4) CISLUNAR SPACE.—The term 'cislunar space' means the region of space beyond low-Earth orbit out to and including the region around the surface of the Moon.

"(5) DEEP SPACE.—The term 'deep space' means the region of space beyond low-Earth orbit,

including cislunar space.

"(6) DEVELOPMENT COST.—The term 'development cost' has the meaning given the term in section 30104 of title 51, United States Code.

"(7) GOVERNMENT ASTRONAUT.—The term 'government astronaut' has the meaning given the term in section 50902 of title 51, United States Code.

"(8) ISS.—The term 'ISS' means the International Space Station.

"(9) LOW-ENRICHED URANIUM.—The term 'low-enriched uranium' means uranium having an assay greater than the assay for natural uranium but less than 20 percent of the uranium–235 isotope.

"(10) NASA.—The term 'NASA' means the National Aeronautics and Space Administration.

"(11) ORION.—The term 'Orion' means the multipurpose crew vehicle described in section 303 of the National Aeronautics and Space Administration Authorization Act of 2010 (42 U.S.C. 18323).

"(12) OSTP.—The term 'OSTP' means the Office of Science and Technology Policy.

"(13) SPACE FLIGHT PARTICIPANT.—The term 'space flight participant' has the meaning given the term in section 50902 of title 51, United States Code.

"(14) SPACE LAUNCH SYSTEM.—The term 'Space Launch System' means the Space Launch System authorized under section 302 of the National Aeronautics and Space Administration [Authorization] Act of 2010 (42 U.S.C. 18322).

"(15) UNMANNED AIRCRAFT; UNMANNED AIRCRAFT SYSTEM.—The terms 'unmanned aircraft' and 'unmanned aircraft system' have the meanings given those terms in section 44801 of title 49, United States Code."

Pub. L. 115–10, §2, Mar. 21, 2017, 131 Stat. 19, provided that: "In this Act [see Tables for classification]:

"(1) ADMINISTRATION.—The term 'Administration' means the National Aeronautics and Space Administration.

"(2) ADMINISTRATOR.—The term 'Administrator' means the Administrator of the National Aeronautics and Space Administration.

"(3) APPROPRIATE COMMITTEES OF CONGRESS.—The term 'appropriate committees of Congress' means—

"(A) the Committee on Commerce, Science, and Transportation of the Senate; and

"(B) the Committee on Science, Space, and Technology of the House of Representatives.

"(4) CIS-LUNAR SPACE.—The term 'cis-lunar space' means the region of space from the Earth out to and including the region around the surface of the Moon.

"(5) DEEP SPACE.—The term 'deep space' means the region of space beyond low-Earth orbit, to include cis-lunar space.

"(6) GOVERNMENT ASTRONAUT.—The term 'government astronaut' has the meaning given the term in section 50902 of title 51, United States Code.

"(7) ISS.—The term 'ISS' means the International Space Station.

"(8) ISS MANAGEMENT ENTITY.—The term 'ISS management entity' means the organization with which the Administrator has a cooperative agreement under section 504(a) of the National Aeronautics and Space Administration Authorization Act of 2010 (42 U.S.C. 18354(a)).

"(9) NASA.—The term 'NASA' means the National Aeronautics and Space Administration.

"(10) ORION.—The term 'Orion' means the multipurpose crew vehicle described under section 303 of the National Aeronautics and Space Administration Authorization Act of 2010 (42 U.S.C. 18323).

"(11) SPACE LAUNCH SYSTEM.—The term 'Space Launch System' has the meaning given the term in section 3 of the National Aeronautics and Space Administration Authorization Act of 2010 (42 U.S.C. 18302).

"(12) UNITED STATES GOVERNMENT ASTRONAUT.—The term 'United States government astronaut' has the meaning given the term 'government astronaut' in section 50902 of title 51, United States Code, except it does not include an individual who is an international partner astronaut."

Pub. L. 111–358, title II, §206, Jan. 4, 2011, 124 Stat. 3996, provided that: "In this title [amending section 18421 of Title 42, The Public Health and Welfare, and enacting provisions set out as notes under section 20303 of this title, preceding sections 30501 and 40901 of this title, and under section 18421 of Title 42]:

"(1) ADMINISTRATOR.—The term 'Administrator' means the Administrator of NASA.

"(2) NASA.—The term 'NASA' means the National Aeronautics and Space Administration."

Pub. L. 110–422, §3, Oct. 15, 2008, 122 Stat. 4782, provided that: "In this Act [see Short Title of 2008 Act note above]:

"(1) ADMINISTRATOR.—The term 'Administrator' means the Administrator of NASA.

"(2) NASA.—The term 'NASA' means the National Aeronautics and Space Administration.

"(3) NOAA.—The term 'NOAA' means the National Oceanic and Atmospheric Administration.

"(4) OSTP.—The term 'OSTP' means the Office of Science and Technology Policy."

Pub. L. 109–155, §2, Dec. 30, 2005, 119 Stat. 2897, provided that: "In this Act [see Short Title of 2005 Act note above]:

"(1) ADMINISTRATOR.—The term 'Administrator' means the Administrator of the National Aeronautics and Space Administration.

"(2) ISS.—The term 'ISS' means the International Space Station.

"(3) NASA.—The term 'NASA' means the National Aeronautics and Space Administration."

Pub. L. 106–391, §3, Oct. 30, 2000, 114 Stat. 1579, provided that: "For purposes of this Act [see Tables for classification]—

"(1) the term 'Administrator' means the Administrator of the National Aeronautics and Space Administration;

"(2) the term 'commercial provider' means any person providing space transportation services or other space-related activities, the primary control of which is held by persons other than a Federal, State, local, or foreign government;

"(3) the term 'critical path' means the sequence of events of a schedule of events under which a delay in any event causes a delay in the overall schedule;

"(4) the term 'grant agreement' has the meaning given that term in section 6302(2) of title 31, United States Code;

"(5) the term 'institution of higher education' has the meaning given such term in section 101 of the Higher Education Act of 1965 (20 U.S.C. 1001);

"(6) the term 'State' means each of the several States of the United States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, and any other commonwealth, territory, or possession of the United States; and

"(7) the term 'United States commercial provider' means a commercial provider, organized under the laws of the United States or of a State, which is—

"(A) more than 50 percent owned by United States nationals; or

"(B) a subsidiary of a foreign company and the Secretary of Commerce finds that—

"(i) such subsidiary has in the past evidenced a substantial commitment to the United States market through—

"(I) investments in the United States in long-term research, development, and manufacturing (including the manufacture of major components and subassemblies); and

"(II) significant contributions to employment in the United States; and

"(ii) the country or countries in which such foreign company is incorporated or organized, and, if appropriate, in which it principally conducts its business, affords reciprocal treatment to companies described in subparagraph (A) comparable to that afforded to such foreign company's subsidiary in the United States, as evidenced by—

"(I) providing comparable opportunities for companies described in subparagraph (A) to participate in Government sponsored research and development similar to that authorized under this Act;

"(II) providing no barriers to companies described in subparagraph (A) with respect to local investment opportunities that are not provided to foreign companies in the United States; and

"(III) providing adequate and effective protection for the intellectual property rights of companies described in subparagraph (A)."

Subtitle II—General Program and Policy Provisions

CHAPTER 201—NATIONAL AERONAUTICS AND SPACE PROGRAM

SUBCHAPTER I—SHORT TITLE, DECLARATION OF POLICY, AND DEFINITIONS

Sec.

20101. Short title.
20102. Congressional declaration of policy and purpose.
20103. Definitions.

SUBCHAPTER II—COORDINATION OF AERONAUTICAL AND SPACE ACTIVITIES

20111. National Aeronautics and Space Administration.

20112. Functions of the Administration.
20113. Powers of the Administration in performance of functions.
20114. Administration and Department of Defense coordination.
20115. International cooperation.
20116. Reports to Congress.
20117. Disposal of excess land.

SUBCHAPTER III—GENERAL ADMINISTRATIVE PROVISIONS

20131. Public access to information.
20132. Security requirements.
20133. Permission to carry firearms.
20134. Arrest authority.
20135. Property rights in inventions.
20136. Contributions awards.
20137. Malpractice and negligence suits against United States.
20138. Insurance and indemnification.
20139. Insurance for experimental aerospace vehicles.
20140. Appropriations.
20141. Misuse of agency name and initials.
20142. Contracts regarding expendable launch vehicles.
20143. Full cost appropriations account structure.
20144. Prize authority.
20145. Lease of non-excess property.
20146. Retrocession of jurisdiction.
20147. Recovery and disposition authority.
20148. Indemnification; NASA launch services and reentry services.
20149. Medical monitoring and research relating to human space flight.

SUBCHAPTER IV—UPPER ATMOSPHERE RESEARCH

20161. Congressional declaration of purpose and policy.
20162. Definition of upper atmosphere.
20163. Program authorized.
20164. International cooperation.

EDITORIAL NOTES

AMENDMENTS

2017—Pub. L. 115–10, title III, §305(b), title IV, §443(b), Mar. 21, 2017, 131 Stat. 32, 47, added items 20148 and 20149.

SUBCHAPTER I—SHORT TITLE, DECLARATION OF POLICY, AND DEFINITIONS

§20101. Short title

This chapter may be cited as the "National Aeronautics and Space Act".

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3330.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
20101	(no source)	

Chapter 201 of title 51 restates the National Aeronautics and Space Act of 1958. Although short titles are generally eliminated as unnecessary in positive law titles of the United States Code, in this case it was suggested that the short title "National Aeronautics and Space Act" be provided for convenience.

§20102. Congressional declaration of policy and purpose

(a) DEVOTION OF SPACE ACTIVITIES TO PEACEFUL PURPOSES FOR BENEFIT OF ALL HUMANKIND.—Congress declares that it is the policy of the United States that activities in space should be devoted to peaceful purposes for the benefit of all humankind.

(b) AERONAUTICAL AND SPACE ACTIVITIES FOR WELFARE AND SECURITY OF UNITED STATES.—Congress declares that the general welfare and security of the United States require that adequate provision be made for aeronautical and space activities. Congress further declares that such activities shall be the responsibility of, and shall be directed by, a civilian agency exercising control over aeronautical and space activities sponsored by the United States, except that activities peculiar to or primarily associated with the development of weapons systems, military operations, or the defense of the United States (including the research and development necessary to make effective provision for the defense of the United States) shall be the responsibility of, and shall be directed by, the Department of Defense; and that determination as to which agency has responsibility for and direction of any such activity shall be made by the President.

(c) COMMERCIAL USE OF SPACE.—Congress declares that the general welfare of the United States requires that the Administration seek and encourage, to the maximum extent possible, the fullest commercial use of space.

(d) OBJECTIVES OF AERONAUTICAL AND SPACE ACTIVITIES.—The aeronautical and space activities of the United States shall be conducted so as to contribute materially to one or more of the following objectives:

(1) The expansion of human knowledge of the Earth and of phenomena in the atmosphere and space.

(2) The improvement of the usefulness, performance, speed, safety, and efficiency of aeronautical and space vehicles.

(3) The development and operation of vehicles capable of carrying instruments, equipment, supplies, and living organisms through space.

(4) The establishment of long-range studies of the potential benefits to be gained from, the opportunities for, and the problems involved in the utilization of aeronautical and space activities for peaceful and scientific purposes.

(5) The preservation of the role of the United States as a leader in aeronautical and space science and technology and in the application thereof to the conduct of peaceful activities within and outside the atmosphere.

(6) The making available to agencies directly concerned with national defense of discoveries that have military value or significance, and the furnishing by such agencies, to the civilian agency established to direct and control nonmilitary aeronautical and space activities, of information as to discoveries which have value or significance to that agency.

(7) Cooperation by the United States with other nations and groups of nations in work done pursuant to this chapter and in the peaceful application of the results thereof.

(8) The most effective utilization of the scientific and engineering resources of the United States, with close cooperation among all interested agencies of the United States in order to avoid unnecessary duplication of effort, facilities, and equipment.

(9) The preservation of the United States preeminent position in aeronautics and space through research and technology development related to associated manufacturing processes.

(10) The search for life's origin, evolution, distribution, and future in the universe.

(e) GROUND PROPULSION SYSTEMS RESEARCH AND DEVELOPMENT.—Congress declares that the general welfare of the United States requires that the unique competence in scientific and engineering systems of the Administration also be directed toward ground propulsion

systems research and development. Such development shall be conducted so as to contribute to the objectives of developing energy and petroleum-conserving ground propulsion systems, and of minimizing the environmental degradation caused by such systems.

(f) BIOENGINEERING RESEARCH, DEVELOPMENT, AND DEMONSTRATION PROGRAMS.—Congress declares that the general welfare of the United States requires that the unique competence of the Administration in science and engineering systems be directed to assisting in bioengineering research, development, and demonstration programs designed to alleviate and minimize the effects of disability.

(g) WARNING AND MITIGATION OF POTENTIAL HAZARDS OF NEAR-EARTH OBJECTS.—Congress declares that the general welfare and security of the United States require that the unique competence of the Administration be directed to detecting, tracking, cataloguing, and characterizing near-Earth asteroids and comets in order to provide warning and mitigation of the potential hazard of such near-Earth objects to the Earth.

(h) PURPOSE OF CHAPTER.—It is the purpose of this chapter to carry out and effectuate the policies declared in subsections (a) to (g).

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3330; Pub. L. 115–10, title V, §507, Mar. 21, 2017, 131 Stat. 50.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
20102	42 U.S.C. 2451.	Pub. L. 85–568, title I, §102, July 29, 1958, 72 Stat. 426; Pub. L. 94–413, §15(a), (b), Sept. 17, 1976, 90 Stat. 1270; Pub. L. 95–238, title III, §311, Feb. 25, 1978, 92 Stat. 83; Pub. L. 95–401, §7, Sept. 30, 1978, 92 Stat. 860; Pub. L. 98–361, title I, §110, July 16, 1984, 98 Stat. 426; Pub. L. 100–685, title II, §214, Nov. 17, 1988, 102 Stat. 4093; Pub. L. 106–391, title III, §302(a), Oct. 30, 2000, 114 Stat. 1591; Pub. L. 109–155, title III, §321(d)(2), Dec. 30, 2005, 119 Stat. 2923.

In subsection (b), the words "in conformity with section 201(e)", which appeared at the end of the subsection, are omitted as obsolete. Section 201 of Public Law 85–568, which was classified to former section 2471 of title 42 (last appearing in the 1970 edition of the United States Code), established the National Aeronautics and Space Council, with the functions of the Council specified in section 201(e). Those functions included advising the President "as he may request" with respect to promoting cooperation and resolving differences among agencies of the United States engaged in aeronautical and space activities. The words are obsolete because section 3(a)(4) of Reorganization Plan No. 1 of 1973 (5 App. U.S.C.), abolished the National Aeronautics and Space Council, including the office of Executive Secretary of the Council, together with its functions.

In subsection (c), the words "(as established by title II of this Act)", which appeared after "Administration", are omitted as unnecessary.

In subsection (d), the word "and", appearing at the end of paragraph (8), is omitted as unnecessary because of the introductory words "one or more of the following".

EDITORIAL NOTES

AMENDMENTS

2017—Subsec. (d)(10). Pub. L. 115–10 added par. (10).

STATUTORY NOTES AND RELATED SUBSIDIARIES

SCIENCE PRIORITIES

Pub. L. 117–167, div. B, title VII, §10821, Aug. 9, 2022, 136 Stat. 1740, provided that:

"(a) SENSE OF CONGRESS ON SCIENCE PORTFOLIO.—It is the sense of Congress that—

"(1) a balanced and adequately funded set of activities, consisting of research and analysis grant programs, technology development, suborbital research activities, and small, medium, and large space missions, contributes to a robust and productive science program and serves as a catalyst for innovation and discovery; and

"(2) the Research and Analysis programs funded by the Science Mission Directorate are critically important for—

"(A) preparing the next generation of space and Earth scientists;

"(B) pursuing peer-reviewed cutting-edge research;

"(C) maximizing scientific return from the [National Aeronautics and Space] Administration's space and Earth science missions; and

"(D) developing innovative techniques and future mission concepts.

"(b) GOAL.—The Administrator [of the National Aeronautics and Space Administration] shall pursue the goal of establishing annual funding for Research and Analysis in the Science Mission Directorate that reaches a level of not less than 10 percent of the total annual funding of relevant divisions of the Science Mission Directorate by fiscal year 2025."

CONGRESSIONAL FINDINGS AND POLICY

Pub. L. 110–422, §2, Oct. 15, 2008, 122 Stat. 4781, provided that: "The Congress finds, on this, the 50th anniversary of the establishment of the National Aeronautics and Space Administration, the following:

"(1) NASA [National Aeronautics and Space Administration] is and should remain a multimission agency with a balanced and robust set of core missions in science, aeronautics, and human space flight and exploration.

"(2) Investment in NASA's programs will promote innovation through research and development, and will improve the competitiveness of the United States.

"(3) Investment in NASA's programs, like investments in other Federal science and technology activities, is an investment in our future.

"(4) Properly structured, NASA's activities can contribute to an improved quality of life, economic vitality, United States leadership in peaceful cooperation with other nations on challenging undertakings in science and technology, national security, and the advancement of knowledge.

"(5) NASA should assume a leadership role in a cooperative international Earth observations and research effort to address key research issues associated with climate change and its impacts on the Earth system.

"(6) NASA should undertake a program of aeronautical research, development, and where appropriate demonstration activities with the overarching goals of—

"(A) ensuring that the Nation's future air transportation system can handle up to 3 times the current travel demand and incorporate new vehicle types with no degradation in safety or adverse environmental impact on local communities;

"(B) protecting the environment;

"(C) promoting the security of the Nation; and

"(D) retaining the leadership of the United States in global aviation.

"(7) Human and robotic exploration of the solar system will be a significant long-term undertaking of humanity in the 21st century and beyond, and it is in the national interest that the United States should assume a leadership role in a cooperative international exploration initiative.

"(8) Developing United States human space flight capabilities to allow independent American access to the International Space Station, and to explore beyond low Earth orbit, is a strategically important national imperative, and all prudent steps should thus be taken to bring the Orion Crew Exploration Vehicle and Ares I Crew Launch Vehicle to full operational capability as soon as possible and to ensure the effective development of a United States heavy lift launch capability for missions beyond low Earth orbit.

"(9) NASA's scientific research activities have contributed much to the advancement of knowledge, provided societal benefits, and helped train the next generation of scientists and engineers, and those activities should continue to be an important priority.

"(10) NASA should make a sustained commitment to a robust long-term technology development

activity. Such investments represent the critically important 'seed corn' on which NASA's ability to carry out challenging and productive missions in the future will depend.

"(11) NASA, through its pursuit of challenging and relevant activities, can provide an important stimulus to the next generation to pursue careers in science, technology, engineering, and mathematics.

"(12) Commercial activities have substantially contributed to the strength of both the United States space program and the national economy, and the development of a healthy and robust United States commercial space sector should continue to be encouraged.

"(13) It is in the national interest for the United States to have an export control policy that protects the national security while also enabling the United States aerospace industry to compete effectively in the global market place and the United States to undertake cooperative programs in science and human space flight in an effective and efficient manner."

Pub. L. 102–195, §§2, 3, Dec. 9, 1991, 105 Stat. 1605, 1606, provided that:

"SEC. 2. FINDINGS.

"Congress finds that—

"(1) the report of the Advisory Committee on the Future of the United States Space Program has provided a framework within which a consensus on the goals of the space program can be developed;

"(2) a balanced civil space science program should be funded at a level of at least 20 percent of the aggregate amount in the budget of the National Aeronautics and Space Administration for 'Research and development' and 'Space flight, control, and data communications';

"(3) development of an adequate data base for life sciences in space will be greatly enhanced through closer scientific cooperation with the Soviet Union, including active use of manned Soviet space stations;

"(4) the space program can make substantial contributions to health-related research and should be an integral part of the Nation's health research and development program;

"(5) Landsat data and the continuation of the Landsat system beyond Landsat 6 are essential to the Mission to Planet Earth and other long-term environmental research programs;

"(6) increased use of defense-related remote sensing data and data technology by civilian agencies and the scientific community can benefit national environmental study and monitoring programs;

"(7) the generation of trained scientists and engineers through educational initiatives and academic research programs outside of the National Aeronautics and Space Administration is essential to the future of the United States civil space program;

"(8) the strengthening and expansion of the Nation's space transportation infrastructure, including the enhancement of launch sites and launch site support facilities, are essential to support the full range of the Nation's space-related activities;

"(9) the aeronautical program contributes to the Nation's technological competitive advantage, and it has been a key factor in maintaining preeminence in aviation over many decades; and

"(10) the National Aero Space Plane program can have benefits to the military and civilian aviation programs from the new and innovative technologies developed in propulsion systems, aerodynamics, and control systems that could be enormous, especially for high-speed aeronautical and space flight.

"SEC. 3. POLICY.

"It is the policy of the United States that—

"(1) the Administrator of the National Aeronautics and Space Administration (hereinafter referred to as the 'Administrator'), in planning for national programs in environmental study and human space flight and exploration, should ensure the resiliency of the space infrastructure;

"(2) a stable and balanced program of civil space science should be planned to minimize future year funding requirements in order to accommodate a steady stream of new initiatives;

"(3) any new launch system undertaken or jointly undertaken by the National Aeronautics and Space Administration should be based on defined mission and program requirements or national policies established by Congress;

"(4) in fulfilling the mission of the National Aeronautics and Space Administration to improve the usefulness, performance, speed, safety, and efficiency of space vehicles, the Administrator should establish a program of research and development to enhance the competitiveness and cost effectiveness of commercial expendable launch vehicles; and

"(5) the National Aeronautics and Space Administration should promote and support efforts to advance scientific understanding by conducting or otherwise providing for research on environmental problems, including global change, ozone depletion, acid precipitation, deforestation, and smog."

Pub. L. 101–611, title I, §§101, 102, Nov. 16, 1990, 104 Stat. 3188, 3189, provided that:

"SEC. 101. FINDINGS.

"The Congress finds that—

"(1) over the next decade, the United States aeronautics and space program will be directed toward major national priorities of understanding, preserving, and enhancing our global environment, hypersonic transportation, human exploration, and emerging technology commercialization;

"(2) the United States aeronautics and space program is supported by an overwhelming majority of the American people;

"(3) the United States aeronautics and space program genuinely reflects our Nation's pioneer heritage and demonstrates our quest for leadership, economic growth, and human understanding;

"(4) the United States space program is based on a solid record of achievement and continues to promote the objective of international cooperation in the exploration of the planets and the universe;

"(5) the United States aeronautics and space program generates critical technology breakthroughs that benefit our economy through new products and processes that significantly improve our standard of living;

"(6) the United States aeronautics and space program excites the imagination of every generation and can stimulate the youth of our Nation toward the pursuit of excellence in the fields of science, engineering, and mathematics;

"(7) the United States aeronautics and space program contributes to the Nation's technological competitive advantage;

"(8) the United States aeronautics and space program requires a sustained commitment of financial and human resources as a share of the Nation's Gross National Product;

"(9) the United States space transportation system will depend upon a robust fleet of space shuttle orbiters and expendable and reusable launch vehicles and services;

"(10) the United States space program will be advanced with an assured funding stream for the development of a permanently manned space station with research, experimentation, observation, servicing, manufacturing, and staging capabilities for lunar and Mars missions;

"(11) the United States aeronautics program has been a key factor in maintaining preeminence in aviation over many decades;

"(12) the United States needs to maintain a strong program with respect to transatmospheric research and technology by developing and demonstrating National Aero-Space Plane technology by a mid-decade date certain;

"(13) the National Aeronautics and Space Administration is primarily responsible for formulating and implementing policy that supports and encourages civil aeronautics and space activities in the United States; and

"(14) commercial activities of the private sector will substantially and increasingly contribute to the strength of both the United States space program and the national economy.

"SEC. 102. POLICY.

"It is declared to be national policy that the United States should—

"(1) rededicate itself to the goal of leadership in critical areas of space science, space exploration, and space commercialization;

"(2) increase its commitment of budgetary resources for the space program to reverse the dramatic decline in real spending for such program since the achievements of the Apollo moon program;

"(3) ensure that the long-range environmental impact of all activities carried out under this title [see Tables for classification] are fully understood and considered;

"(4) promote and support efforts to advance scientific understanding by conducting or otherwise providing for research on environmental problems, including global change, ozone depletion, acid precipitation, deforestation, and smog;

"(5) forge a robust national space program that maintains a healthy balance between manned and unmanned space activities and recognizes the mutually reinforcing benefits of both;

"(6) maintain an active fleet of space shuttle orbiters, including an adequate provision of structural spare parts, and evolve the orbiter design to improve safety and performance, and reduce operational costs;

"(7) sustain a mixed fleet by utilizing commercial expendable launch vehicle services to the fullest extent practicable;

"(8) support an aggressive program of research and development designed to enhance the United States preeminence in launch vehicles;

"(9) continue and complete on schedule the development and deployment of a permanently manned, fully capable, space station;

"(10) develop an advanced, high pressure space suit to support extravehicular activity that will be required for Space Station Freedom when Assembly Complete is reached;

"(11) establish a dual capability for logistics and resupply of the space station utilizing the space

shuttle and expendable launch vehicles, including commercial services if available;

"(12) continue to seek opportunities for international cooperation in space and fully support international cooperative agreements;

"(13) maintain an aggressive program of aeronautical research and technology development designed to enhance the United States preeminence in civil and military aviation and improve the safety and efficiency of the United States air transportation system;

"(14) conduct a program of technology maturation, including flight demonstration in 1997, to prove the feasibility of an air-breathing, hypersonic aerospace plane capable of single-stage-to-orbit operation and hypersonic cruise in the atmosphere;

"(15) seek innovative technologies that will make possible advanced human exploration initiatives, such as the establishment of a lunar base and the succeeding mission to Mars, and provide high yield technology advancements for the national economy; and

"(16) enhance the human resources of the Nation and the quality of education."

NATIONAL AERONAUTICS AND SPACE CAPITAL DEVELOPMENT PROGRAM

Pub. L. 100–685, title I, §101, Nov. 17, 1988, 102 Stat 4083, provided that: "Congress finds that—

"(1) in accordance with section 106 of the National Aeronautics and Space Administration Authorization Act of 1988 (Public Law 100–147) [set out as a note under section 70901 of this title], a space station, hereafter referred to as the United States International Space Station, shall be constructed in order to establish a permanent presence for man in space for the following purposes—

"(A) the conduct of scientific experiments, applications experiments, and engineering experiments;

"(B) the servicing, rehabilitation, and construction of satellites and space vehicles;

"(C) the development and demonstration of commercial products and processes; and

"(D) the establishment of a space base for other civilian and commercial space activities including an outpost for further exploration of the solar system;

"(2) expendable launch vehicles should be used to launch those payloads that do not require the presence of man;

"(3) the space shuttle launches should be used to fulfill the Nation's needs for manned access to space;

"(4) preeminence in space and aeronautics is key to the national security and economic well being of the United States;

"(5) United States space policy needs long-range goals and direction in order to provide understanding for near-term space projects and programs;

"(6) over the next five years the National Aeronautics and Space Administration, hereafter referred to as the 'Administration', should pursue leadership in science through an aggressive set of major and moderate missions while maintaining a robust series of cost effective missions that can provide frequent flight opportunities to the scientific community[;]

"(7) over the next five years the Administration should prepare for the transition to the United States International Space Station of those science and technology programs that can be most efficiently and effectively conducted on that facility;

"(8) the Administration should encourage the United States private sector investment in space and, to the maximum extent practicable provide frequent flight opportunities for the development of technologies, processes and products that benefit from the space environment;

"(9) the Administration should enhance the existing space transportation capability through a robust mixed fleet of manned and unmanned vehicles in order to increase the reliability, productivity, and efficiency and reduce the cost of the Nation's access to space;

"(10) the United States faces an increasingly successful foreign challenge to its traditional preeminent position in aeronautics which is rapidly reducing its lead in both civil and military aircraft;

"(11) NASA's personnel are an integral component and resource for the Nation's space program, and an innovative personnel system should be developed;

"(12) the establishment of a permanent presence in space leading ultimately to space settlements is fully consistent with the goals of the National Aeronautics and Space Act of 1958 [see 51 U.S.C. 20101 et seq.];

"(13) the United States civil space activities should contribute significantly to enhancing the Nation's scientific and technological leadership, economy, pride, and sense of well-being, as well as United States world prestige and leadership;

"(14) civil sector activities should be comprised of a balanced strategy of research, development, operations, and technology for science, exploration, and appropriate applications;

"(15) assured access to space, sufficient to achieve all United States space goals, is an essential element of United States space policy, and the United States space transportation systems must provide a balanced, robust, and flexible capability with sufficient resiliency to allow continued operation despite failures in any single system;

"(16) the goals of the United States space transportation system are—

"(A) to achieve and maintain safe and reliable access to, transportation in, and return from, space;

"(B) to exploit the unique attributes of manned and unmanned launch and recovery systems;

"(C) to encourage, to the maximum extent feasible, the development and use of United States private sector space transportation capabilities; and

"(D) to reduce the costs of space transportation and related services;

"(17) recognizing that communications advancements are critical to all United States space activities, the Administration should continue research and development efforts for future advances in space communications technologies;

"(18) the goal of aeronautical research and technology development and validation activities should be to contribute to a national technology base that will enhance United States preeminence in civil and military aviation and improve the safety and efficiency of the United States air transportation system; and

"(19) aeronautical research and technology development and validation activities should—

"(A) emphasize emerging technologies with potential for breakthrough advances;

"(B) consist of—

"(i) fundamental research in all aeronautical disciplines, aimed at greater understanding of aeronautical phenomena and development of new aeronautical concepts; and

"(ii) technology development and validation activities aimed at laboratory-scale development and proof-of-concept demonstration of selected concepts with high payoff potential;

"(C) assure maintenance of robust aeronautical laboratories, including a first-rate technical staff and modern national facilities for the conduct of research and testing activities;

"(D) be conducted with the close, active participation of the United States aircraft industry so as to accelerate the transfer of research results to aviation products;

"(E) include providing technical assistance and facility support to other government agencies and United States industry;

"(F) include conducting joint projects with other government agencies where such projects contribute materially to the goals set forth in this section;

"(G) assure strong participation of United States universities both in carrying out aeronautical research and training future aeronautical research personnel; and

"(H) be conducted, where practical, so that United States industry receives research results before foreign competitors."

EXECUTIVE DOCUMENTS

SPACE POLICY DIRECTIVE–5. CYBERSECURITY PRINCIPLES FOR SPACE SYSTEMS

Space Policy Directive–5, Sept. 4, 2020, 85 F.R. 56155, provided:

Memorandum for the Vice President[,] the Secretary of State[,] the Secretary of Defense[,] the Attorney General[,] the Secretary of Commerce[,] the Secretary of Transportation[,] the Secretary of Homeland Security[,] the Director of the Office of Management and Budget[,] the Assistant to the President for National Security Affairs[,] the Director of National Intelligence[,] the Director of the Central Intelligence Agency[,] the Director of the National Security Agency[,] the Director of the National Reconnaissance Office[,] the Administrator of the National Aeronautics and Space Administration[,] the Director of the Office of Science and Technology Policy[,] the Chairman of the Joint Chiefs of Staff[, and] the Chairman of the Federal Communications Commission

SECTION 1. *Background.* The United States considers unfettered freedom to operate in space vital to advancing the security, economic prosperity, and scientific knowledge of the Nation. Space systems enable key functions such as global communications; positioning, navigation, and timing; scientific observation; exploration; weather monitoring; and multiple vital national security applications. Therefore, it is essential to protect space systems from cyber incidents in order to prevent disruptions to their ability to provide reliable and efficient contributions to the operations of the Nation's critical infrastructure.

Space systems are reliant on information systems and networks from design conceptualization through launch and flight operations. Further, the transmission of command and control and mission information

between space vehicles and ground networks relies on the use of radio-frequency-dependent wireless communication channels. These systems, networks, and channels can be vulnerable to malicious activities that can deny, degrade, or disrupt space operations, or even destroy satellites.

Examples of malicious cyber activities harmful to space operations include spoofing sensor data; corrupting sensor systems; jamming or sending unauthorized commands for guidance and control; injecting malicious code; and conducting denial-of-service attacks. Consequences of such activities could include loss of mission data; decreased lifespan or capability of space systems or constellations; or the loss of positive control of space vehicles, potentially resulting in collisions that can impair systems or generate harmful orbital debris.

The National Security Strategy of December 2017 states that "[t]he United States must maintain our leadership and freedom of action in space." As the space domain is contested, it is necessary for developers, manufacturers, owners, and operators of space systems to design, build, operate, and manage them so that they are resilient to cyber incidents and radio-frequency spectrum interference.

Space Policy Directive–3 (SPD–3) of June 18, 2018 (National Space Traffic Management Policy) [51 U.S.C. 71302 note], states that "[s]atellite and constellation owners should participate in a pre-launch certification process" that should consider a number of factors, including encryption of satellite command and control links and data protection measures for ground site operations.

The National Cyber Strategy of September 2018 states that my Administration will enhance efforts to protect our space assets and supporting infrastructure from evolving cyber threats, and will work with industry and international partners to strengthen the cyber resilience of existing and future space systems.

SEC. 2. *Definitions*. For the purposes of this memorandum, the following definitions shall apply:

(a) "Space System" means a combination of systems, to include ground systems, sensor networks, and one or more space vehicles, that provides a space-based service. A space system typically has three segments: a ground control network, a space vehicle, and a user or mission network. These systems include Government national security space systems, Government civil space systems, and private space systems.

(b) "Space Vehicle" means the portion of a space system that operates in space. Examples include satellites, space stations, launch vehicles, launch vehicle upper stage components, and spacecraft.

(c) "Positive Control" means the assurance that a space vehicle will only execute commands transmitted by an authorized source and that those commands are executed in the proper order and at the intended time.

(d) "Critical space vehicle functions (critical functions)" means the functions of the vehicle that the operator must maintain to ensure intended operations, positive control, and retention of custody. The failure or compromise of critical space vehicle functions could result in the space vehicle not responding to authorized commands, loss of critical capability, or responding to unauthorized commands.

SEC. 3. *Policy*. Cybersecurity principles and practices that apply to terrestrial systems also apply to space systems. Certain principles and practices, however, are particularly important to space systems. For example, it is critical that cybersecurity measures, including the ability to perform updates and respond to incidents remotely, are integrated into the design of the space vehicle before launch, as most space vehicles in orbit cannot currently be physically accessed. For this reason, integrating cybersecurity into all phases of development and ensuring full life-cycle cybersecurity are critical for space systems. Effective cybersecurity practices arise out of cultures of prevention, active defense, risk management, and sharing best practices.

The United States must manage risks to the growth and prosperity of our commercial space economy. To do so and to strengthen national resilience, it is the policy of the United States that executive departments and agencies (agencies) will foster practices within Government space operations and across the commercial space industry that protect space assets and their supporting infrastructure from cyber threats and ensure continuity of operations.

The cybersecurity principles for space systems set forth in section 4 of this memorandum are established to guide and serve as the foundation for the United States Government approach to the cyber protection of space systems. Agencies are directed to work with the commercial space industry and other non-government space operators, consistent with these principles and with applicable law, to further define best practices, establish cybersecurity-informed norms, and promote improved cybersecurity behaviors throughout the Nation's industrial base for space systems.

SEC. 4. *Principles*. (a) Space systems and their supporting infrastructure, including software, should be developed and operated using risk-based, cybersecurity-informed engineering. Space systems should be developed to continuously monitor, anticipate, and adapt to mitigate evolving malicious cyber activities that could manipulate, deny, degrade, disrupt, destroy, surveil, or eavesdrop on space system operations. Space system configurations should be resourced and actively managed to achieve and maintain an effective and resilient cyber survivability posture throughout the space system lifecycle.

(b) Space system owners and operators should develop and implement cybersecurity plans for their space systems that incorporate capabilities to ensure operators or automated control center systems can retain or

recover positive control of space vehicles. These plans should also ensure the ability to verify the integrity, confidentiality, and availability of critical functions and the missions, services, and data they enable and provide. At a minimum, space system owners and operators should consider, based on risk assessment and tolerance, incorporating in their plans:

(i) Protection against unauthorized access to critical space vehicle functions. This should include safeguarding command, control, and telemetry links using effective and validated authentication or encryption measures designed to remain secure against existing and anticipated threats during the entire mission lifetime;

(ii) Physical protection measures designed to reduce the vulnerabilities of a space vehicle's command, control, and telemetry receiver systems;

(iii) Protection against communications jamming and spoofing, such as signal strength monitoring programs, secured transmitters and receivers, authentication, or effective, validated, and tested encryption measures designed to provide security against existing and anticipated threats during the entire mission lifetime;

(iv) Protection of ground systems, operational technology, and information processing systems through the adoption of deliberate cybersecurity best practices. This adoption should include practices aligned with the National Institute of Standards and Technology's Cybersecurity Framework to reduce the risk of malware infection and malicious access to systems, including from insider threats. Such practices include logical or physical segregation; regular patching; physical security; restrictions on the utilization of portable media; the use of antivirus software; and promoting staff awareness and training inclusive of insider threat mitigation precautions;

(v) Adoption of appropriate cybersecurity hygiene practices, physical security for automated information systems, and intrusion detection methodologies for system elements such as information systems, antennas, terminals, receivers, routers, associated local and wide area networks, and power supplies; and

(vi) Management of supply chain risks that affect cybersecurity of space systems through tracking manufactured products; requiring sourcing from trusted suppliers; identifying counterfeit, fraudulent, and malicious equipment; and assessing other available risk mitigation measures.

(c) Implementation of these principles, through rules, regulations, and guidance, should enhance space system cybersecurity, including through the consideration and adoption, where appropriate, of cybersecurity best practices and norms of behavior.

(d) Space system owners and operators should collaborate to promote the development of best practices, to the extent permitted by applicable law. They should also share threat, warning, and incident information within the space industry, using venues such as Information Sharing and Analysis Centers to the greatest extent possible, consistent with applicable law.

(e) Security measures should be designed to be effective while permitting space system owners and operators to manage appropriate risk tolerances and minimize undue burden, consistent with specific mission requirements, United States national security and national critical functions, space vehicle size, mission duration, maneuverability, and any applicable orbital regimes.

SEC. 5. *General Provisions*. (a) Nothing in this memorandum shall be construed to impair or otherwise affect:

(i) the authority granted by law to an executive department or agency, or the head thereof; or

(ii) the functions of the Director of the Office of Management and Budget relating to budgetary, administrative, or legislative proposals.

(b) This memorandum shall be implemented consistent with applicable law and subject to the availability of appropriations.

(c) This memorandum is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

(d) The Secretary of Commerce is authorized and directed to publish this memorandum in the Federal Register.

DONALD J. TRUMP.

THE NATIONAL SPACE POLICY

Memorandum of President of the United States, Dec. 9, 2020, 85 F.R. 81755, provided:

Memorandum for the Vice President[,] the Secretary of State[,] the Secretary of Defense[,] the Attorney General[,] the Secretary of the Interior[,] the Secretary of Commerce[,] the Secretary of Transportation[,] the Secretary of Energy[,] the Secretary of Homeland Security[,] the Director of the Office of Management and

Budget[,] the Director of National Intelligence[,] the Assistant to the President for National Security Affairs[,] the Administrator of the National Aeronautics and Space Administration[,] the Director of the Office of Science and Technology Policy[, and] the Chairman of the Joint Chiefs of Staff

SECTION 1. *References*. This directive supersedes Presidential Policy Directive–4 (June 29, 2010) and references, promotes, and reemphasizes the following policy directives and memoranda:

a) Presidential Policy Directive 26—National Space Transportation Policy (November 21, 2013)

b) Executive Order 13803—Reviving the National Space Council (June 30, 2017) [51 U.S.C. 20111 note]

c) Space Policy Directive 1—Reinvigorating America's Human Space Exploration Program (December 11, 2017) [82 F.R. 59501]

d) The National Space Strategy (March 23, 2018)

e) Space Policy Directive 2—Streamlining Regulations on Commercial Use of Space (May 24, 2018) [51 U.S.C. 50101 note]

f) Space Policy Directive 3—National Space Traffic Management Policy (June 18, 2018) [51 U.S.C. 71302 note]

g) Space Policy Directive 4—Establishment of the United States Space Force (February 19, 2019) [10 U.S.C. 9081 note]

h) National Security Presidential Memorandum 20—Launch of Spacecraft Containing Space Nuclear Systems (August 20, 2019)

i) Executive Order 13906—Amending Executive Order 13803—Reviving the National Space Council (February 13, 2020)

j) Executive Order 13905—Strengthening National Resilience Through Responsible Use of Positioning, Navigation, and Timing Services (February 12, 2020) [6 U.S.C. 651 note]

k) Executive Order 13914—Encouraging International Support for the Recovery and Use of Space Resources (April 6, 2020) [51 U.S.C. 51302 note]

l) Space Policy Directive 5—Cybersecurity Principles for Space Systems (September 4, 2020) [set out above]

SEC. 2. *Principles*. It is the policy of the United States to ensure that space operations are consistent with the following principles.

1. It is the shared interest of all nations to act responsibly in space to ensure the safety, stability, security, and long-term sustainability of space activities. Responsible space actors operate with openness, transparency, and predictability to maintain the benefits of space for all humanity.

2. A robust, innovative, and competitive commercial space sector is the source of continued progress and sustained United States leadership in space. The United States remains committed to encouraging and facilitating the continued growth of a domestic commercial space sector that is globally competitive, supports national interests, and advances United States leadership in the generation of new markets and innovation-driven entrepreneurship.

3. In this resurgent era of space exploration, the United States will expand its leadership alongside nations that share its democratic values, respect for human rights, and economic freedom. Those values will extend with us to all space destinations as the United States once again steps beyond Earth, starting with the Moon and continuing to Mars.

4. As established in international law, outer space, including the Moon and other celestial bodies, is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means. The United States will pursue the extraction and utilization of space resources in compliance with applicable law, recognizing those resources as critical for sustainable exploration, scientific discovery, and commercial operations.

5. All nations have the right to explore and to use space for peaceful purposes and for the benefit of all humanity, in accordance with applicable law. Consistent with that principle, the United States will continue to use space for national security activities, including for the exercise of the inherent right of self-defense. Unfettered access and freedom to operate in space is a vital national interest.

6. The United States considers the space systems of all nations to have the right to pass through and conduct operations in space without interference. Purposeful interference with space systems, including supporting infrastructure, will be considered an infringement of a nation's rights. Consistent with the defense of those rights, the United States will seek to deter, counter, and defeat threats in the space domain that are hostile to the national interests of the United States and its allies. Any purposeful interference with or an attack upon the space systems of the United States or its allies that directly affects national rights will be met with a deliberate response at a time, place, manner, and domain of our choosing.

SEC. 3. *Goals*. The United States shall:

1. **Promote and incentivize private industry** to facilitate the creation of new global and domestic markets

for United States space goods and services, and strengthen and preserve the position of the United States as the global partner of choice for international space commerce.

2. **Encourage and uphold the rights of nations to use space responsibly and peacefully** by developing and implementing diplomatic, economic, and security capabilities and strategies to identify and respond to behaviors that threaten those rights.

3. **Lead, encourage, and expand international cooperation** on mutually beneficial space activities that broaden and extend the benefits of space for all humanity; further the exploration and use of space for peaceful purposes; protect the interests of the United States, its allies, and partners; advance United States interests and values; and enhance access to space-derived information and services.

4. **Create a safe, stable, secure, and sustainable environment for space activities**, in collaboration with industry and international partners, through the development and promotion of responsible behaviors; improved practices for the collection and sharing of information on space objects; protection of critical space systems and supporting infrastructures, with special attention to cybersecurity and supply chains; and measures to mitigate orbital debris.

5. **Increase the assurance of national critical functions** enabled by commercial, civil, scientific, and national security spacecraft and supporting infrastructure against disruption, degradation, and destruction through the development and fielding of materiel and non-materiel capabilities and rehearsal of continuity of operations practices.

6. **Extend human economic activity into deep space** by establishing a permanent human presence on the Moon, and, in cooperation with private industry and international partners, develop infrastructure and services that will enable science-driven exploration, space resource utilization, and human missions to Mars.

7. **Increase the quality of life for all humanity** through the cultivation, maturation, and development of space-enabled scientific and economic capabilities, including space and Earth resource discovery, management, and utilization; space and Earth weather and environmental monitoring and prediction; disaster monitoring, prediction, response, and recovery; and planetary defense.

8. **Preserve and expand United States leadership** in the development of innovative space technologies, services, and operations. Work with likeminded international and private partners, to prevent the transfer of sensitive space capabilities to those who threaten the interests of the United States, its allies, and its supporting industrial base.

SEC. 4. *Cross-sector Space Policy Guidelines*. The heads of all executive departments and agencies (agencies), consistent with their respective missions and authorities, shall execute the guidance provided in this section consistent with applicable law.

Heads of agencies with representation on the National Space Council shall designate a senior official with responsibility for overseeing their respective agency's implementation of the National Space Policy. This official shall periodically report to the National Space Council on the progress of implementation of this policy within respective agencies.

1. *Foundational Activities and Capabilities*. Foundational activities and capabilities enable the United States to fulfill the principles and goals directed in this policy.

(a) **Strengthen United States Leadership in Space-related Science and Technology**. Heads of agencies shall:

i. Reinforce United States technological leadership by promoting technology development; improved industrial capacity; a robust supplier base; and science, technology, engineering, and mathematics (STEM) education opportunities necessary to support United States leadership in space innovation;

ii. Conduct basic and applied research that increases space capabilities and decreases costs, if such research is best supported by the Government; and

iii. Encourage commercial space innovation and entrepreneurship through targeted investment in promising technologies that improve the Nation's leadership in space operations.

(b) **Strengthen and Secure the United States Space Industrial Base**. To further foster the security and resilience of the domestic space industrial base, heads of agencies, to the maximum extent practicable and consistent with applicable law, shall:

i. Promote the availability of space-related industrial capabilities in support of national critical functions;

ii. Identify suppliers and manufacturers key to the United States space-related science, technology, and industrial bases and incentivizing them to remain in, or return to, the United States;

iii. Support innovative entrepreneurial space companies through appropriate deregulatory actions;

iv. Strengthen the security, integrity, and reliability of the supply chains of United States space-related science, technology, and industrial bases by identifying and eliminating dependence on suppliers owned by, controlled by, or subject to the jurisdiction or direction of foreign adversaries, and engaging with United

States and international industrial partners to improve processes and effectively manage and secure supply chains; and

v. Incorporate cybersecurity principles across all phases of space systems design, development, acquisition, and deployment.

(c) **Enhance Capabilities for Assured Access to Space**. United States access to space depends in the first instance on assured launch capabilities. To the extent consistent with applicable law, United States Government payloads shall be launched on vehicles manufactured in the United States, unless approved for foreign launch in support of:

i. No-exchange-of-funds agreements involving international scientific programs, launches of scientific instruments on international spacecraft, or other cooperative government-to-government agreements;

ii. Launches of secondary-technology demonstrators or scientific payloads for which no United States launch service is available;

iii. Hosted payload arrangements on spacecraft not owned by the United States Government; or

iv. Other circumstances on a case-by-case exemption as coordinated by the Assistant to the President for National Security Affairs and the Director of the Office of Science and Technology Policy, consistent with established interagency standards and coordination guidelines.

v. To the maximum extent practicable and consistent with their responsibilities and applicable law, the heads of agencies shall:

1. Work collaboratively to acquire space launch services and hosted Government payload arrangements that are secure, reliable, cost-effective, and responsive to United States Government needs;

2. Enhance operational efficiency, increase capacity, and reduce launch costs by investing in the modernization of space launch infrastructure;

3. Permit the launch of United States Government spacecraft manufactured in the United States from territories of allied and likeminded nations when launched on vehicles manufactured in the United States; and

4. When sufficient United States commercial capabilities and services do not exist, support industry-led efforts to rapidly develop new and modernized launch systems and technologies necessary to assure and to sustain future reliable, resilient, and efficient access to space.

(d) **Safeguard Space Components of Critical Infrastructure**. The space domain is important to the function of critical infrastructure vital to the security, economy, resilience, public health, and safety of the United States. Multiple infrastructure sectors depend on reliable access to space-based systems to perform their functions.

i. The United States will develop strategies, capabilities, and options to respond to any purposeful interference with or attack on the space systems of the United States or its allies that directly affects national rights, especially those necessary for the operation of the Nation's critical infrastructure. Such strategies, capabilities, and options will allow for a deliberate response at a time, place, manner, and domain of its choosing.

ii. The Secretary of Defense, the Secretary of Homeland Security, and the Director of National Intelligence, in consultation with other heads of agencies, as appropriate, shall develop and maintain focused threat and risk assessments on the effect of deleterious actions in the space domain to the Nation's critical infrastructure.

(e) MAINTAIN AND ENHANCE SPACE-BASED POSITIONING, NAVIGATION, AND TIMING (PNT) SYSTEMS. The United States must maintain its leadership in the service, provision, and responsible use of global navigation satellite systems (GNSS). To that end, the United States shall:

i. Provide continuous worldwide access, for peaceful civil uses, to the Global Positioning System (GPS) and its Government-provided augmentations, free of direct user fees;

ii. Engage with international GNSS providers to ensure compatibility, encourage interoperability with likeminded nations, promote transparency in civil service provision, and enable market access for United States industry;

iii. Operate and maintain the GPS constellation to satisfy civil and national security needs, consistent with published performance standards and interface specifications;

iv. Improve the cybersecurity of GPS, its augmentations, and federally owned GPS-enabled devices, and foster commercial space sector adoption of cyber-secure GPS enabled systems consistent with cybersecurity principles for space systems;

v. Allow for the continued use of allied and other trusted international PNT services in conjunction with GPS in a manner that ensures the resilience of PNT services and is consistent with applicable law;

vi. Invest in domestic capabilities and support international activities to detect, analyze, mitigate, and increase resilience to harmful interference to GNSS;

vii. Identify and promote, as appropriate, multiple and diverse complementary PNT systems or approaches for critical infrastructure and mission-essential functions; and

viii. Promote the responsible use of United States space-based PNT services and capabilities in civil and commercial sectors at the Federal, State, and local levels, including the utilization of multiple and diverse complementary PNT systems or approaches for national critical functions.

(f) **Develop and Retain Space Professionals**. The primary goals of space professional development are to achieve mission success in space operations and acquisition; stimulate innovation to improve commercial, civil, and national security space capabilities; and advance science, exploration, and discovery. Toward these ends, the heads of agencies, in cooperation with industry and academia, as appropriate, shall:

i. Establish standards for accession and career progression;

ii. Seek to create educational and professional development opportunities for the current space workforce, including internships and fellowships, and to implement measures to recruit, develop, maintain, and retain skilled space professionals, including engineering and scientific personnel and experienced space system developers and operators, across Government and commercial sectors;

iii. Promote and expand public-private partnerships within space and technology industries to foster transdisciplinary educational achievement in STEM programs, supported by targeted investments in such initiatives;

iv. Promote the exchange of scientists, engineers, and technologists among Federal laboratories, universities, and the commercial space sector to facilitate the exchange of diverse ideas and to build capacity in space technical knowledge and skills;

v. Develop the means to recruit and to employ qualified and skilled space professionals from likeminded nations to increase United States leadership in space commerce, science, exploration, and security; and

vi. Support training and education in key enabling scientific and engineering disciplines, including: artificial intelligence and machine learning, autonomy, orbital mechanics, collision avoidance methods, robotics, computer science and engineering, digital design and engineering, electromagnetics, materials science, hypersonics, geoscience, quantum-related technologies and applications, and cybersecurity.

(g) **Improve Space System Development and Procurement**. The heads of agencies shall:

i. Improve timely acquisition and deployment of space systems through enhancements in estimating costs, assessing technological risk and maturity, and leveraging and understanding emerging industrial base capabilities and capacity;

ii. Reduce programmatic risk through improved management of program requirements, reduce the use of cost-plus contracts, where appropriate, and take advantage of cost-effective opportunities to test high-risk components, payloads, and technologies in digital, space, or other relevant environments;

iii. Create opportunities to strengthen and to develop pertinent expertise in the Government workforce through internships and fellowships with the commercial space sector;

iv. Pursue and endorse cooperative research and development agreements;

v. Incorporate rapid prototyping, experimentation, and other efforts to accelerate development cycles to improve performance and to reduce costs;

vi. Embrace innovation to cultivate and to sustain an entrepreneurial United States research and development environment;

vii. Engage with the industrial base to improve processes and effectively manage and secure supply chains; and

viii. Promote, where consistent with applicable rules and regulations concerning Government contracting, procurement of critical materials and sub-tier components, such as solar cells and microelectronics, from domestic and other trusted sources of supply.

(h) **Strengthen Interagency and Commercial Partnerships**. As facilitated by the Executive Secretary of the National Space Council, the heads of agencies shall, consistent with applicable law:

i. Strengthen existing partnerships and pursue new partnerships among interagency members, the United States commercial space and related sectors, and United States academic institutions through cooperation, collaboration, information sharing, innovative procurements, and alignment of common pursuits to achieve United States goals;

ii. Encourage the sharing of capabilities and the exchange of expertise among agencies and, to the maximum extent practicable, with the United States commercial sectors to strengthen the Nation's ability to pursue its strategic goals;

iii. Develop implementation and response strategies and leverage United States capabilities to increase technology innovation and achieve desired outcomes involving space operations relating to science, public safety, national security, and economic growth.

2. *International Cooperation.*

(a) **Strengthen United States Leadership in Space**. The heads of agencies, in collaboration with the Secretary of State, shall:

i. Demonstrate United States leadership in space-related fora and activities to strengthen deterrence and assure allies and partners of its commitment to preserving the safety, stability, security, and long-term sustainability of space activities;

ii. Identify areas of mutual interest and benefit, such as collective self-defense and the promotion of secure and resilient space-related infrastructure;

iii. Lead the enhancement of safety, stability, security, and long-term sustainability in space by promoting a framework for responsible behavior in outer space, including the pursuit and effective implementation of best practices, standards, and norms of behavior;

iv. Encourage other nations to adopt United States space regulatory approaches and commercial space sector practices;

v. Encourage interoperability among United States, allied, and partner space systems, services, and data;

vi. Facilitate new market opportunities for United States commercial space capabilities and services, including commercial applications that rely on United States Government-provided space systems;

vii. Promote the adoption of policies and practices internationally that facilitate full, open, and timely access to Government space-derived environmental data on a reciprocal basis;

viii. Promote appropriate burden-, cost-, and risk-sharing among international partners; and

ix. Augment United States capabilities by leveraging existing and planned space capabilities of allies and partners.

(b) **Identify and Expand Areas for International Cooperation**. The heads of agencies shall identify potential areas for international cooperation across the spectrum of commercial, civil, and national security space activities that increase the understanding of Earth and space sciences, expand the detection of hazardous near-Earth objects, ensure the freedom of operation in and through space, increase the quality and safety of life on Earth, extend human presence and economic activity beyond low Earth orbit, and reduce the cost of achieving the Nation's goals.

i. The Secretary of State, in coordination with the heads of agencies, shall:

1. Carry out diplomatic and public diplomacy efforts to strengthen the understanding of, and support for, United States national space policies and programs and to promote the international use of United States space capabilities, systems, and services;

2. Encourage international support for the recovery and use of outer space resources;

3. Lead the consideration of proposals and concepts for arms control measures if they are equitable, effectively verifiable, and enhance the national security of the United States and its allies;

4. Pursue bilateral and multilateral transparency and confidence-building measures to encourage responsible actions in, and the peaceful use of, outer space to strengthen the safety, stability, security, and long-term sustainability of space activities, to increase predictability and reduce the risk of misunderstanding and inadvertent conflict escalation; and

5. Cooperate with likeminded international partners to establish standards of safe and responsible behavior, including openness, transparency, and predictability, to facilitate the detection, identification, and attribution of actions in space that are inconsistent with the safety, stability, security, and long-term sustainability of space activities.

ii. The Director of the Office of Science and Technology Policy, in coordination with the Administrator of the National Aeronautics and Space Administration (NASA), the Secretary of Commerce, and the heads of other agencies as appropriate, shall lead the development of national and international planetary protection guidelines, working with scientific, commercial, and international partners, for the appropriate protection of planetary bodies and Earth from harmful biological contamination.

3. *Preserving the Space Environment to Enhance the Long-term Sustainability of Space Activities.*

(a) **Preserve the Space Environment**. To preserve the space environment for responsible, peaceful, and safe use, and with a focus on minimizing space debris the United States shall:

i. Continue leading the development and adoption of international and industry standards and policies, such as the Guidelines for the Long-term Sustainability of Outer Space Activities and the Space Debris Mitigation Guidelines of the United Nations Committee on the Peaceful Uses of Outer Space;

ii. Continue to make available basic space situational awareness (SSA) data, and provide for basic space traffic coordination (including conjunction and reentry notifications), free of direct user fees while supporting new opportunities for United States commercial and non-profit products and services;

iii. Develop, maintain, and use SSA information from commercial, civil, and national security sources

in an open architecture data repository to detect, identify, and attribute actions in space that are inconsistent with the safety, stability, security, and the long-term sustainability of space activities;

iv. Develop and maintain space flight safety standards and best practices to coordinate space traffic;

v. Ensure that, consistent with international obligations, timely and accurate information concerning United States space objects launched into Earth orbit or beyond is entered into the United States domestic space object registry maintained by the Secretary of State and internationally registered with the United Nations as soon as practicable;

vi. Limit the creation of new debris, consistent with mission requirements and cost effectiveness, during the procurement and operation of spacecraft, launch services, and conduct of tests and experiments in space by following and periodically updating the United States Government Orbital Debris Mitigation Standard Practices;

vii. Regularly assess existing guidelines for non-government activities in or beyond Earth orbit, and maintain a timely and responsive regulatory environment for licensing those activities, consistent with United States law and international obligations;

viii. Pursue research and development of technologies and techniques to characterize and to mitigate risks from orbital debris, reduce hazards, and increase understanding of the current and future debris environment;

ix. Evaluate and pursue, in coordination with allies and partners, active debris removal as a potential long-term approach to ensure the safety of flight in key orbital regimes;

x. Require approval of exceptions to the United States Government Orbital Debris Mitigation Standard Practices from the head of the sponsoring agency and notification to the Secretary of State; and

xi. Continue to foster the development of best practices to prevent on-orbit collisions by collaborating with the commercial space sector and likeminded nations to: maintain and improve space object databases; pursue common international data standards and integrity measures; provide services and disseminate orbital tracking information, including predictions of space-object conjunctions, to commercial and international entities; and expand SSA to deep space.

(b) **Effective Export Policies.**

i. The United States will work to stem the flow of advanced space technology to unauthorized parties while ensuring the competitiveness of the United States space industrial base. The heads of agencies are responsible for protecting against adverse technology transfer in the conduct of their programs.

ii. The United States Government shall:

1. Consider letters of request and the issuance of licenses for space-related exports on a case-by-case basis, pursuant to, and in accordance with, the International Traffic in Arms Regulations (ITAR), the Conventional Arms Transfer Policy, the Export Administration Regulations, and other applicable laws and commitments;

2. Encourage the export of space-related items when doing so would not threaten the national interest;

3. Make eligible for streamlined authorization the export of space-related items that are generally available in the global marketplace, do not provide critical military functions, and are destined for certain allied or partner countries.

iii. Consistent with the foregoing, and consistent with existing law and regulation, license applications for exports of space-related items will be subject to a presumption of denial when destined for arms-embargoed destinations or other embargoed destinations.

iv. Sensitive or advanced spacecraft-related exports may require government-to-government transfers through the Foreign Military Sales process. The Secretary of State shall determine whether current arms transfer and nonproliferation policy directives provide sufficient guidance for the transfer of emerging technologies and space capabilities.

(c) **Space Nuclear Power and Propulsion.**

i. The United States will develop and use space nuclear power and propulsion (SNPP) systems where such systems enable achievement of United States scientific, national security, and commercial objectives. The United States will adhere to principles of safety, stability, security, and long-term sustainability in its development and utilization of space nuclear systems. In accordance with the National Security Policy Memorandum–20 Presidential Memorandum on Launch of Spacecraft Containing Space Nuclear Systems (August 20, 2019), authorization for launches of spacecraft containing space nuclear systems shall follow a tiered process based on the characteristics of the system, level of potential hazard, and national security considerations.

ii. The Administrator of NASA and the Secretary of Defense shall conduct and support design, development, and utilization of space nuclear systems, as appropriate, to enable and achieve their respective

mission objectives.

iii. The Secretary of Energy shall support the design, development, and utilization of SNPP systems to enable and achieve the scientific, exploration, and national security objectives of the United States, in coordination with sponsoring agencies and other entities, as appropriate. The Secretary of Energy shall maintain, on a full cost recovery basis, the capability and infrastructure to develop, furnish, and conduct safety analyses for space nuclear systems for use in United States Government space systems.

iv. The Secretary of Energy, in cooperation with the Secretary of Homeland Security and the heads of appropriate agencies, shall provide technical and operational support to the launch of SNPP systems to prepare for and respond to any potential radiological impacts of a launch to ensure the protection of public health and safety.

v. The Secretary of Commerce, in coordination with other appropriate agencies, shall promote responsible United States commercial space nuclear system investment, innovation, and operations.

vi. The Secretary of Transportation shall, in consultation with other applicable agencies, serve as the licensing authority for commercial launches of space nuclear systems.

(d) **Protection of Electromagnetic Spectrum**. In matters pertaining to the electromagnetic spectrum the United States shall:

i. Seek to protect access to, and operation in, the electromagnetic spectrum and related orbital assignments required to support the use of space by the United States Government, its allies, and partners, and United States commercial users;

ii. Preserve and protect the electromagnetic spectrum required to sustain existing and emergent space-based capabilities, including communications, navigation, and Earth observation;

iii. Explicitly address requirements for electromagnetic spectrum and orbital assignments prior to approving acquisition of space capabilities;

iv. Coordinate stable and predictable national and international regulatory frameworks to enable and support the competitiveness of space services and systems licensed by the United States;

v. Seek to remove or to streamline regulatory impediments that may discourage commercial space communications providers from obtaining licenses from the United States;

vi. Conduct and publish thorough operational, technical, and policy impact assessments, in coordination with Government space system operators, prior to reallocating spectrum for commercial, Government, or shared use;

vii. Enhance capabilities and techniques, in cooperation with commercial, civil, and international partners, to detect, identify, locate, and attribute sources of radio frequency interference, and to take necessary measures to sustain the electromagnetic environment in which critical United States space systems operate;

viii. Seek appropriate regulatory approval under United States domestic regulations for United States Government Earth stations operating with commercially owned satellites, consistent with the regulatory approvals granted to analogous commercial Earth stations; and

ix. Prioritize research and development of advanced technologies, innovative spectrum-utilization methods, and spectrum-sharing tools and techniques that increase spectrum access, efficiency, and effectiveness.

(e) **Cybersecurity for United States Space Systems**. In matters relating to cybersecurity for space systems the United States Government shall:

i. Seek to ensure space systems and their supporting infrastructure, including software, are designed, developed, and operated using risk-based, cybersecurity-informed engineering;

ii. Collaborate with industry and encourage development and integration of cybersecurity plans for space systems that mitigate unauthorized access to critical space system functions, reduce vulnerabilities, protect ground systems, promote cybersecurity hygiene practices, and manage supply chain risks;

iii. Collaborate with interagency, allied, partner, and commercial space system operators to promote the development and adoption of best practices and mitigations;

iv. Leverage widely adopted best practices and standards in the creation of rules and regulations, as appropriate; and

v. Determine appropriate cybersecurity measures for Government space systems through a mission risk assessment specific to a space system's design and operations.

(f) **Assurance of National Critical Functions**. The United States Government, in cooperation with private and public sectors, shall:

i. Assure space-enabled national critical functions by developing the techniques, measures, relationships, and capabilities necessary to maintain continuity of services;

ii. Pursue efforts to enhance the protection, cybersecurity, and resilience of selected spacecraft and

supporting infrastructure;

iii. Periodically conduct operationally-focused exercises to test the continuity of national critical functions and Federal mission assurance in a degraded or denied space environment due to natural or manmade disruptions;

iv. Incorporate the simulated disruption of space systems into interagency and national exercises; and

v. Address mission assurance and architectural resilience through the design, acquisition, command and control, exercise, and operation of materiel and non-materiel space and non-space capabilities.

SEC. 5. SECTOR GUIDELINES. The United States conducts space activities in three distinct but interdependent sectors: commercial, civil, and national security. Consistent with all applicable legal obligations agencies shall comply with the following guidance.

1. *Commercial Space Guidelines.*

The term "commercial," for the purposes of this policy, refers to goods, services, or activities provided by private sector enterprises that bear a reasonable portion of the investment risk and responsibility for the activity, operate in accordance with typical market-based incentives for controlling cost and optimizing return on investment, and have the legal capacity to offer those goods or services to existing or potential non-governmental customers.

A United States commercial space sector that leads in the global space marketplace is foundational to national strategic objectives that include increased and sustained prosperity, free market principles, enhanced international partnerships and collaboration, technological innovation, and scientific discovery, and is vital to United States and allied security.

(a) **Promoting a Robust Commercial Space Industry**. To promote a robust domestic commercial space industry and strengthen United States leadership as the country of choice for conducting commercial space activities, the heads of agencies shall:

i. Purchase and use United States commercial space capabilities and services, to the maximum practical extent under existing law, when such capabilities and services meet United States Government requirements;

ii. Prioritize partnerships with commercial industry to meet Government requirements through the modification of existing commercial space capabilities and services when potential system modifications represent a cost-effective and timely acquisition approach for the Government and are consistent with system and mission-security practices and principles;

iii. Consider inventive, nontraditional arrangements for acquiring commercial space goods and services to meet United States Government requirements, including measures such as hosting Government capabilities on commercial spacecraft, purchasing scientific or operational data from commercial satellite operators in support of Government missions, leveraging satellite servicing or on-orbit manufacturing, and public-private partnerships;

iv. Develop Government space systems only when in the national interest and no suitable or cost-effective United States commercial or, as appropriate, international commercial capability or service is available or could be available in time to meet Government requirements;

v. Refrain from conducting United States Government space activities that preclude, discourage, or compete with United States commercial space activities, unless required by national security or public safety;

vi. Pursue opportunities for transferring routine operational space functions to the commercial space sector where beneficial and cost-effective and consistent with legal, security, or safety needs;

vii. Cultivate increased technological innovation and entrepreneurship and provide alternatives to predatory foreign investment in the commercial space sector through the use of incentives such as prizes, competitions, and competitive grants;

viii. Ensure that United States Government space technology and infrastructure are made available for commercial use on a reimbursable, non-interference and equitable basis to the maximum practical extent, consistent with applicable laws and national security interests;

ix. Promote continued commercial United States leadership in space by making available, consistent with applicable laws and national security, commercially relevant technologies developed by Federal research and development programs to United States industry;

x. Create transparent regulatory processes that minimize, consistent with national security and public safety, the regulatory burden and uncertainty for commercial space activities and that are flexible so as to accommodate and to adapt to technical development, business innovation, and market demands;

xi. Encourage State and local governments to support the commercial space sector for the purposes of cultivating a technically skilled work force, diversifying innovation potential, and stimulating economic growth;

xii. Foster fair and open global trade and commerce through the promotion of standards and regulations that have been developed with input from United States industry;

xiii. Encourage the purchase and use of United States commercial space services and capabilities in international cooperative arrangements;

xiv. Encourage the growth of United States commercial human space exploration, including logistical provisioning, delivery, and the continued commercialization of operations in and beyond low Earth orbit, and the use of microgravity as a domain for research and development; and

xv. Promote the export of United States commercial space goods and services, including those developed by small and medium-sized enterprises, for use in international markets, consistent with United States export controls and national security objectives.

(b) **International Trade Agreements**. The United States Trade Representative (USTR) has the primary responsibility for international trade agreements to which the United States is a party. USTR, in consultation with other relevant heads of agencies, will lead any effort relating to the negotiation and implementation of trade disciplines governing trade in goods and services related to space.

(c) **Mission Authorization of Novel Activities**. The Secretary of Commerce, in coordination with the National Space Council, shall:

i. Identify whether any planned space activities fall beyond the scope of existing authorization and supervision processes necessary to meet international obligations; and

ii. Lead, if necessary, the development of minimally burdensome, responsive, transparent, and adaptive review, authorization, and supervision processes for such activities, consistent with national security and public safety interests, with a presumption of approval and prompt appeals process.

(d) **Foster the Development of Space Collision Warning Measures**. The Secretary of Commerce, in consultation with the Secretaries of State, Defense, and Transportation, the Administrator of NASA, and the heads of other agencies, shall collaborate, consistent with applicable law, with industry and foreign nations to:

i. Maintain and improve space object identification databases;

ii. Pursue common international data standards and data integrity measures;

iii. Disseminate orbital tracking information to commercial and international entities, including predictions of space object conjunctions;

iv. Enhance the common understanding of resident space objects;

v. Develop and implement standard practices for conjunction assessment operations to ensure the safety of flight of all space operations, across all orbital regimes; and

vi. Develop common commercial operating guidelines and propose licensing requirements, consistent with respective agency mission and authorities, for large constellations, rendezvous and proximity operations, satellite servicing, small satellites, end-of-mission planning, and other classes of space operations.

2. *Civil Space Guidelines.*

(a) **Space Science, Exploration, and Discovery**. The United States shall lead an innovative and sustainable program of scientific discovery, technology development, and space exploration with commercial and international partners to enable human expansion across the solar system and to bring back to Earth new knowledge and opportunities. Beginning with missions beyond low Earth orbit, the United States will lead the return of humans to the Moon for long-term exploration and utilization, followed by human missions to Mars and other destinations.

(b) The Administrator of NASA, in collaboration with other appropriate agencies, Federal laboratories, and commercial partners, shall, consistent with applicable law:

i. Lead a program to land the next American man and the first American woman on the Moon by 2024, followed by a sustained presence on the Moon by 2028, and the subsequent landing of the first human on Mars;

ii. Continue the operation of the International Space Station (ISS) in cooperation with international partners for scientific, technological, commercial, diplomatic, and educational purposes while developing separate commercial platforms to sustain continuous United States presence in and utilization of low Earth orbit and to transition beyond ISS operations;

iii. Develop partnerships to foster new economic activities in and beyond low Earth orbit that enable NASA and other customers to purchase services and capabilities at lower cost;

iv. In consultation with international and commercial partners as appropriate, support activities that include the presence of humans in space; maintain continuous human presence in Earth orbit by transitioning from ISS to commercial platforms and services; and continue to support future objectives in human space exploration;

v. Continue as the launch agent for the civil space sector while utilizing commercial space capabilities and services to the maximum practical extent;

vi. Continue to grow partnerships with the commercial space sector to enable safe, reliable, and cost-effective transport of crew and cargo to destinations in low Earth and cislunar orbits, and to the lunar surface;

vii. Lead space exploration technology development efforts in collaboration with industry, academia, and international partners to increase capabilities for future human and robotic space exploration missions while decreasing mission costs;

viii. Maintain a sustained robotic presence in the solar system with international and commercial partners to: prepare for future human missions; conduct scientific investigations; map and characterize water, mineral, and elemental resources; and demonstrate new technologies;

ix. Conduct space science for observations, research, and analysis of the Sun, space weather, the solar system, and the universe to enhance knowledge of the cosmos, advance scientific understanding, understand the conditions that may support the development of life, and search for planetary bodies and Earth-like planets in orbit around other stars;

x. Pursue capabilities, in cooperation with other agencies, commercial, and international partners, to detect, track, catalog, and characterize near Earth objects to warn of any predicted Earth impact and to identify potentially resource-rich planetary objects; and

xi. Develop options, in collaboration with other agencies, and international partners, for planetary defense actions both on Earth and in space to mitigate the potential effects of a predicted near Earth object impact or trajectory.

(c) **Observation of the Earth's Surface, Environment, and Weather**. To continue and to enhance a broad array of programs of space-based observation, research, and analysis of the Earth's surface, oceans, and atmosphere and their interactions, and to improve life on Earth:

i. The Administrator of NASA, in coordination with the heads of other appropriate agencies, shall conduct a program of research to understand Earth's interconnected systems, including the development of new Earth observing satellites for other agencies to use for operational purposes.

ii. The Secretary of Commerce, through the Administrator of the National Oceanic and Atmospheric Administration (NOAA), shall be responsible for the requirements, funding, and operation of civil environmental satellites and data-gathering in support of atmospheric and space weather forecasting. NOAA may utilize NASA as the acquisition agent for operational environmental satellites for those activities and programs.

iii. The Secretary of Commerce, through the Administrator of NOAA, and the Secretary of Defense, through the Secretary of the Air Force, in coordination with the Administrator of NASA and the heads of other appropriate agencies, shall:

1. Continue existing coverage responsibilities;

2. Develop a plan to provide Earth environmental satellite observation capabilities, including ground systems for operations, that meet current and future civil and national security requirements; and

3. Ensure the continued sharing of data from all systems.

iv. In support of operational requirements the Secretary of Commerce, in coordination with the Secretary of Defense, the Administrator of NASA, and the heads of other appropriate agencies, shall:

1. Collaborate with academia, the commercial sector, and international partners to ensure uninterrupted operational environmental satellite observations using cost-effective, resilient methods to acquire global meteorological satellite data;

2. Coordinate, as practicable, on future satellite and ground system architectures to reduce duplication of space acquisition processes and capabilities;

3. Utilize international partnerships to sustain and enhance a robust Earth observations program that meets civil and national security requirements, including weather, climate, ocean, and coastal observations; and

4. Purchase commercial environmental data for use in meteorological and space weather models when appropriate.

v. The Director of the Office of Science and Technology Policy, in consultation with the Assistant to the President for National Security Affairs, shall coordinate the implementation of the National Space Weather Strategy and Action Plan. The goals of this strategy are to: enhance the protection of Government and commercial systems against the effects of space weather; disseminate accurate and timely space weather characterization and forecasts; and establish plans and procedures for responding to and recovering from space weather events. Agencies contributing to the United States Government Earth

science enterprise shall pursue innovative partnerships with the commercial sector to make their agency's Earth observation data more easily discoverable, accessible, and usable to the public.

(d) **Land Remote Sensing.**

i. The Secretary of the Interior, through the Director of the United States Geological Survey (USGS), shall:

1. Conduct integrated predictive science, which includes research, monitoring, assessments, and modeling, on natural and human-induced changes to Earth's land, land cover, and inland surface waters, and manage a national global land surface data archive and its distribution;

2. Determine the operational requirements for collecting, processing, archiving, and distributing land surface data to the United States Government and other users;

3. Use international and commercial partnerships to help sustain and enhance land surface observations from space; and

4. Utilize, consistent with national security classification guidelines and sharing agreements and in coordination with the Secretary of Defense and the Director of National Intelligence, remote sensing information related to the environment and to disasters that is acquired from national security space systems.

ii. The Secretary of the Interior, through the Director of the USGS, and the Administrator of NASA shall work together to maintain a sustainable land-imaging program for operational land remote sensing observations that meets the needs of core United States users and leverages government, commercial, and international capabilities.

iii. The Administrators of NASA and NOAA, and the Director of the USGS shall:

1. Collaborate, as practicable, on future satellite and ground system architectures to ensure that civil space acquisition processes and capabilities are not unnecessarily duplicated; and

2. Continue to develop civil applications and information tools based on data collected by Earth observation satellites. They shall, to the maximum extent practicable, develop those applications and tools using known standards and open protocols and make data and applications from United States Government satellites openly available to the public.

i[v]. The Secretary of Commerce shall license and regulate private remote sensing systems consistent with the recognition that long-term United States national security and foreign policy interests are best served by ensuring that United States industry continues to lead the rapidly maturing and highly competitive commercial space-based remote sensing market. The Secretary of Commerce shall consult with the Secretary of State and Secretary of Defense in these matters in accordance with applicable law.

3. *National Security Space Guidelines.*

(a) The United States seeks a secure, stable, and accessible space domain, which has become a warfighting domain as a result of competitors seeking to challenge United States and allied interests in space.

(b) Strength and security in space contribute to United States and international security and stability. It is imperative that the United States adapt its national security organizations, policies, strategies, doctrine, security classification frameworks, and capabilities to deter hostilities, demonstrate responsible behaviors, and, if necessary, defeat aggression and protect United States interests in space through:

i. Robust space domain awareness of all activities in space with the ability to characterize and attribute potentially threatening behavior;

ii. Communicating to competitors which space activities the United States considers undesirable or irresponsible, while promoting, demonstrating, and communicating responsible norms of behavior;

iii. Assured, credible, and demonstrable responses to defend vital national interests in space;

iv. Resilient space-enabled missions that reduce the impact or deny the effectiveness of adversaries' actions; and

v. Synchronized diplomatic, information, military, and economic strategies that:

1. Deter adversaries and other actors from conducting activities that may threaten the peaceful use of space by the United States, its allies, and partners; and

2. Compel and impose costs on adversaries to cease behaviors that threaten the peaceful use of space by the United States, its allies, and partners.

(c) The United States Space Force will pursue these objectives as the primary branch of the United States Armed Forces responsible for organizing, training, and equipping forces capable of projecting power in, from, and to space to defend United States national interests; protecting the freedom of operation in, from, and to the space domain; and enhancing the lethality and effectiveness of the Joint Force. The United States Space Force, and other branches of the Armed Forces as appropriate, will also present forces to the United States Space Command, and to the other Combatant Commands as appropriate, to deliver combat

and combat support capabilities necessary to enable prompt and sustained offensive and defensive space operations, and to provide space support to joint operations in all domains.

(d) **Synchronized National Security Space.**

i. The space domain is a priority intelligence and military operational domain for the United States. The United States Intelligence Community and Department of Defense use space capabilities to provide strategic, operational, and tactical intelligence and decisive military advantages to the Nation.

ii. The Secretary of Defense and the Director of National Intelligence, in consultation with the heads of other appropriate agencies, Federal laboratories, and, as appropriate, in partnership with United States industry, shall:

1. Develop, acquire, and operate space systems and supporting information systems and networks to aid United States national security interests and to enable defense and intelligence operations;

2. Procure resilient space capabilities and services to provide defense and intelligence operations during times of competition and armed conflict;

3. Develop and apply advanced technologies, capabilities, and concepts that anticipate and rapidly respond to changes in the threat environment and improve the timeliness and quality of intelligence and data to support operations;

4. Identify and characterize current and future threats to United States space missions for the purposes of enabling effective deterrence and defense;

5. Develop resilient, cost-effective architectures and accelerate acquisition and fielding of space capabilities with sufficient capacity to increase the resilience of space-enabled missions and to expand the ability to field or to rapidly reconstitute space capabilities based on the strategic environment;

6. Develop, implement, and exercise plans, procedures, techniques, and capabilities necessary to assure critical national security space-enabled missions;

7. Protect and defend United States national security space assets through integration and synchronization of operational command and control capabilities and activities that foster seamless execution between the Intelligence Community and Department of Defense;

8. Promote, in collaboration with the Secretary of State, norms of behavior for responsible national security space activities that protect United States, allied, and partner interests in space;

9. Ensure cost-effective resilience of space capabilities and assurance of space-enabled missions, including supporting information systems and networks, commensurate with their planned use and taking into account the value these systems provide in countering or mitigating threats, the consequences of their loss or degradation, and the availability of other means to perform the mission;

10. Expand and increase emphasis on disruptive and emerging commercial space capabilities and provide assessments to United States and allied leadership on the effects of these capabilities on national security;

11. Integrate cybersecurity into space operations and capabilities to retain positive control of space systems and verify the integrity of critical functions, missions, and services they provide;

12. Improve, develop, integrate, demonstrate, and proliferate in cooperation with relevant interagency, international, intergovernmental, and commercial entities, space domain awareness capabilities to predict, detect, warn, characterize, and attribute human-caused and naturally occurring activities that pose threats to space systems of United States interest;

13. Provide to the Department of Commerce and other agencies, as necessary, SSA information that supports national security, civil, and human space flight activities, planetary defense from hazardous near-Earth objects, and commercial and allied space operations;

14. Collaborate with allies and partners actively engaging in space security and intelligence operations to incentivize and institute mechanisms for the exchange of relevant space, and space-related information; and

15. Collaborate with the Secretaries of Commerce and Energy, the Administrator of NASA, and the heads of other relevant agencies to periodically review the health and competitiveness of the United States space industrial base to determine whether the domestic space industry can meet the technical requirements, production, and service of national security space programs.

(e) **Department of Defense.**

i. The Secretary of Defense shall:

1. Defend the use of space for United States national security purposes, the United States economy, allies, and partners;

2. Protect freedom of navigation and preserve lines of communication that are open, safe,

and secure in the space domain;

3. Ensure that space capabilities are of sufficient capability and capacity to enable decisive offensive and defensive space operations vital to defending United States, allied, and partner interests in space while continuing to sustain support to joint operations;

4. Conduct operations in, from, and through space to deter conflict, and if deterrence fails, to defeat aggression while protecting and defending United States vital interests with allies and partners;

5. Provide, as launch agent for the Department of Defense and the Intelligence Community, affordable and timely space access for national security purposes while using commercial space capabilities and services to the maximum practical extent;

6. Develop, as launch agent for the Department of Defense and the Intelligence Community, rapid launch options to reinforce or to reconstitute priority national security space capabilities in times of crisis and conflict and that, when practicable and appropriate, leverage commercial capabilities;

7. Detect, characterize, warn, attribute, and respond to, in coordination with the Secretary of State and other relevant agencies, space-related behaviors and activities that threaten the space interests of the United States, its allies, or partners, international peace and security, or the long-term sustainability of the space environment;

8. Periodically conduct policy-driven, threat-informed, strategically-focused space posture reviews and assessments that encompass military, diplomatic, informational, and economic aspects of posture, including evaluation of the suitability of U.S. Government, commercial industry, and international space architectures to deliver effective and integrated deterrence and compellence solutions; and

9. Develop, acquire, and operate space intelligence capabilities to support joint operations.

(f) **Intelligence Community.**

i. The Director of National Intelligence shall:

1. Enhance foundational scientific and technical intelligence collection and single and all-source intelligence analysis;

2. Coordinate with the Secretary of Defense to ensure necessary and sufficient intelligence support for acquisition, operations, and defense of space capabilities;

3. Develop, obtain, and operate space intelligence capabilities to support strategic goals, intelligence priorities, and assigned tasks;

4. Provide robust, timely, and effective collection, processing, analysis, and dissemination of information on foreign space capabilities and threats and supporting information system activities;

5. Integrate all-source intelligence of foreign space capabilities and intentions to produce enhanced intelligence products that support space domain awareness;

6. Support monitoring, compliance, and verification for transparency and confidence-building measures and, if applicable, arms control agreements;

7. Ensure Intelligence Community equities are represented and reviewed in United States Government radio frequency deliberations; and

8. Promote counterintelligence and security partnerships and practices within the commercial, civil, and national security space communities.

SEC. 6. *General Provisions*. (a) Nothing in this memorandum shall be construed to impair or otherwise affect:

(i) the authority granted by law to an executive department or agency, or the head thereof; or

(ii) the functions of the Director of the Office of Management and Budget relating to budgetary, administrative, or legislative proposals.

(b) This memorandum shall be implemented consistent with applicable law and subject to the availability of appropriations.

(c) This memorandum is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

(d) The Secretary of Commerce is authorized and directed to publish this memorandum in the Federal Register.

DONALD J. TRUMP.

§20103. Definitions

In this chapter:

(1) AERONAUTICAL AND SPACE ACTIVITIES.—The term "aeronautical and space activities" means—

(A) research into, and the solution of, problems of flight within and outside the Earth's atmosphere;

(B) the development, construction, testing, and operation for research purposes of aeronautical and space vehicles;

(C) the operation of a space transportation system including the space shuttle, upper stages, space platforms, and related equipment; and

(D) such other activities as may be required for the exploration of space.

(2) AERONAUTICAL AND SPACE VEHICLES.—The term "aeronautical and space vehicles" means aircraft, missiles, satellites, and other space vehicles, manned and unmanned, together with related equipment, devices, components, and parts.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3332.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
20103	42 U.S.C. 2452.	Pub. L. 85–568, title I, §103, July 29, 1958, 72 Stat. 427; Pub. L. 98–52, title I, §108, July 15, 1983, 97 Stat. 285.

In paragraph (1)(A), the word "Earth's" is capitalized for consistency in title 51.

SUBCHAPTER II—COORDINATION OF AERONAUTICAL AND SPACE ACTIVITIES

§20111. National Aeronautics and Space Administration

(a) ESTABLISHMENT AND APPOINTMENT OF ADMINISTRATOR.—There is established the National Aeronautics and Space Administration. The Administration shall be headed by an Administrator, who shall be appointed from civilian life by the President by and with the advice and consent of the Senate. Under the supervision and direction of the President, the Administrator shall be responsible for the exercise of all powers and the discharge of all duties of the Administration and shall have authority and control over all personnel and activities thereof.

(b) DEPUTY ADMINISTRATOR.—There shall be in the Administration a Deputy Administrator, who shall be appointed from civilian life by the President by and with the advice and consent of the Senate. The Deputy Administrator shall perform such duties and exercise such powers as the Administrator may prescribe. The Deputy Administrator shall act for, and exercise the powers of, the Administrator during the Administrator's absence or disability.

(c) RESTRICTION ON OTHER BUSINESS OR EMPLOYMENT.—The Administrator and the Deputy Administrator shall not engage in any other business, vocation, or employment while serving as such.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3332.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*

20111	42 U.S.C. 2472.	Pub. L. 85–568, title II, §202, July 29, 1958, 72 Stat. 429; Pub. L. 88–426, title III, §305(12), Aug. 14, 1964, 78 Stat. 423.

STATUTORY NOTES AND RELATED SUBSIDIARIES

AGENCY INFORMATION TECHNOLOGY AND CYBERSECURITY

Pub. L. 115–10, title VIII, §§811–813, Mar. 21, 2017, 131 Stat. 58–60, provided that:

"SEC. 811. INFORMATION TECHNOLOGY GOVERNANCE.

"(a) IN GENERAL.—The Administrator [of the National Aeronautics and Space Administration] shall, in a manner that reflects the unique nature of NASA [National Aeronautics and Space Administration]'s mission and expertise—

"(1) ensure the NASA Chief Information Officer, Mission Directorates, and Centers have appropriate roles in the management, governance, and oversight processes related to information technology operations and investments and information security programs for the protection of NASA systems;

"(2) ensure the NASA Chief Information Officer has the appropriate resources and insight to oversee NASA information technology and information security operations and investments;

"(3) provide an information technology program management framework to increase the efficiency and effectiveness of information technology investments, including relying on metrics for identifying and reducing potential duplication, waste, and cost;

"(4) improve the operational linkage between the NASA Chief Information Officer and each NASA mission directorate, center, and mission support office to ensure both agency and mission needs are considered in agency-wide information technology and information security management and oversight;

"(5) review the portfolio of information technology investments and spending, including information technology-related investments included as part of activities within NASA mission directorates that may not be considered information technology, to ensure investments are recognized and reported appropriately based on guidance from the Office of Management and Budget;

"(6) consider appropriate revisions to the charters of information technology boards and councils that inform information technology investment and operation decisions; and

"(7) consider whether the NASA Chief Information Officer should have a seat on any boards or councils described in paragraph (6).

"(b) GAO STUDY.—

"(1) STUDY.—The Comptroller General of the United States shall conduct a study of the effectiveness of the Administration's Information Technology Governance in ensuring information technology resources are aligned with agency missions and are cost effective and secure.

"(2) CONTENTS.—The study shall include an assessment of—

"(A) the resources available for overseeing Administration-wide information technology operations, investments, and security measures and the NASA Chief Information Officer's visibility and involvement into information technology oversight and access to those resources;

"(B) the effectiveness and challenges of the Administration's information technology structure, decision making processes and authorities, including impacts on its ability to implement information security; and

"(C) the impact of NASA Chief Information Officer approval authority over information technology investments that exceed a defined monetary threshold, including any potential impacts of such authority on the Administration's missions, flights programs and projects, research activities, and Center operations.

"(3) REPORT.—Not later than 1 year after the date of enactment of this Act [Mar. 21, 2017], the Comptroller General shall submit to the appropriate committees of Congress [Committee on Science, Space, and Technology of the House of Representatives and Committee on Commerce, Science, and Transportation of the Senate] a report detailing the results of the study under paragraph (1), including any recommendations.

"SEC. 812. INFORMATION TECHNOLOGY STRATEGIC PLAN.

"(a) IN GENERAL.—Subject to subsection (b), the Administrator [of the National Aeronautics and Space Administration] shall develop an information technology strategic plan to guide NASA [National Aeronautics

and Space Administration] information technology management and strategic objectives.

"(b) REQUIREMENTS.—In developing the strategic plan, the Administrator shall ensure that the strategic plan addresses—

"(1) the deadline under section 306(a) of title 5, United States Code; and

"(2) the requirements under section 3506 of title 44, United States Code.

"(c) CONTENTS.—The strategic plan shall address, in a manner that reflects the unique nature of NASA's mission and expertise—

"(1) near and long-term goals and objectives for leveraging information technology;

"(2) a plan for how NASA will submit to Congress of [sic] a list of information technology projects, including completion dates and risk level in accordance with guidance from the Office of Management and Budget;

"(3) an implementation overview for an agency-wide approach to information technology investments and operations, including reducing barriers to cross-center collaboration;

"(4) coordination by the NASA Chief Information Officer with centers and mission directorates to ensure that information technology policies are effectively and efficiently implemented across the agency;

"(5) a plan to increase the efficiency and effectiveness of information technology investments, including a description of how unnecessarily duplicative, wasteful, legacy, or outdated information technology across NASA will be identified and eliminated, and a schedule for the identification and elimination of such information technology;

"(6) a plan for improving the information security of agency information and agency information systems, including improving security control assessments and role-based security training of employees; and

"(7) submission by NASA to Congress of information regarding high risk projects and cybersecurity risks.

"(d) CONGRESSIONAL OVERSIGHT.—The Administrator shall submit to the appropriate committees of Congress [Committee on Science, Space, and Technology of the House of Representatives and Committee on Commerce, Science, and Transportation of the Senate] the strategic plan under subsection (a) and any updates thereto.

"SEC. 813. CYBERSECURITY.

"(a) FINDING.—Congress finds that the security of NASA [National Aeronautics and Space Administration] information and information systems is vital to the success of the mission of the agency.

"(b) INFORMATION SECURITY PLAN.—

"(1) IN GENERAL.—Not later than 1 year after the date of enactment of this Act [Mar. 21, 2017], the Administrator [of the National Aeronautics and Space Administration] shall implement the information security plan developed under paragraph (2) and take such further actions as the Administrator considers necessary to improve the information security system in accordance with this section.

"(2) INFORMATION SECURITY PLAN.—Subject to paragraphs (3) and (4), the Administrator shall develop an agency-wide information security plan to enhance information security for NASA information and information infrastructure.

"(3) REQUIREMENTS.—In developing the plan under paragraph (2), the Administrator shall ensure that the plan—

"(A) reflects the unique nature of NASA's mission and expertise;

"(B) is informed by policies, standards, guidelines, and directives on information security required for Federal agencies;

"(C) is consistent with the standards and guidelines under section 11331 of title 40, United States Code; and

"(D) meets applicable National Institute of Standards and Technology information security standards and guidelines.

"(4) CONTENTS.—The plan shall address—

"(A) an overview of the requirements of the information security system;

"(B) an agency-wide risk management framework for information security;

"(C) a description of the information security system management controls and common controls that are necessary to ensure compliance with information security-related requirements;

"(D) an identification and assignment of roles, responsibilities, and management commitment for information security at the agency;

"(E) coordination among organizational entities, including between each center, facility, mission directorate, and mission support office, and among agency entities responsible for different aspects of information security;

"(F) the need to protect the information security of mission-critical systems and activities and high-impact and moderate-impact information systems; and

"(G) a schedule of frequent reviews and updates, as necessary, of the plan."

COLLABORATION AMONG MISSION DIRECTORATES

Pub. L. 115–10, title VIII, §821, Mar. 21, 2017, 131 Stat. 61, provided that: "The Administrator [of the National Aeronautics and Space Administration] shall encourage an interdisciplinary approach among all NASA [National Aeronautics and Space Administration] mission directorates and divisions, whenever appropriate, for projects or missions—

"(1) to improve coordination, and encourage collaboration and early planning on scope;

"(2) to determine areas of overlap or alignment;

"(3) to find ways to leverage across divisional perspectives to maximize outcomes; and

"(4) to be more efficient with resources and funds."

USERS' ADVISORY GROUP

Pub. L. 101–611, title I, §121, Nov. 16, 1990, 104 Stat. 3204, as amended by Pub. L. 117–286, §4(a)(324), Dec. 27, 2022, 136 Stat. 4341, provided that:

"(a) ESTABLISHMENT.—(1) The National Space Council shall establish a Users' Advisory Group composed of non-Federal representatives of industries and other persons involved in aeronautical and space activities.

"(2) The Vice President shall name a chairman of the Users' Advisory Group.

"(3) The National Space Council shall from time to time, but not less than once a year, meet with the Users' Advisory Group.

"(4) The function of the Users' Advisory Group shall be to ensure that the interests of industries and other non-Federal entities involved in space activities, including in particular commercial entities, are adequately represented in the National Space Council.

"(5) The Users' Advisory Group may be assisted by personnel detailed to the National Space Council.

"(b) EXEMPTION.—The Users' Advisory Group shall not be subject to section 1013(a) of title 5, United States Code."

NATIONAL SPACE COUNCIL

Pub. L. 101–328, §3(a), July 8, 1990, 104 Stat. 308, provided that: "Not more than six individuals may be employed by the National Space Council without regard to any provision of law regulating the employment or compensation of persons in the Government service, at rates not to exceed the rate of pay for level VI of the Senior Executive Schedule as provided pursuant to section 5382 of title 5, United States Code."

Pub. L. 101–328, §4, July 8, 1990, 104 Stat. 308, provided that: "The National Space Council may, for purposes of carrying out its functions, employ experts and consultants in accordance with section 3109 of title 5, United States Code, and may compensate individuals so employed for each day they are involved in a business of the National Space Council (including traveltime) at rates not in excess of the daily equivalent of the maximum rate of pay for grade GS–18 as provided pursuant to section 5332 of title 5, United States Code."

[References in laws to the rates of pay for GS–16, 17, or 18, or to maximum rates of pay under the General Schedule, to be considered references to rates payable under specified sections of Title 5, Government Organization and Employees, see section 529 [title I, §101(c)(1)] of Pub. L. 101–509, set out in a note under section 5376 of Title 5.]

Pub. L. 100–685, title V, §501, Nov. 17, 1988, 102 Stat. 4102, provided that:

"(a) Effective February 1, 1989, there is established in the Executive Office of the President the National Space Council, which shall be chaired by the Vice President.

"(b) By March 1, 1989, the President shall submit to the Congress a report that outlines the composition and functions of the National Space Council.

"(c) The Council may employ a staff of not more than seven persons, which is to be headed by a civilian executive secretary, who shall be appointed by the President."

EXECUTIVE DOCUMENTS

EX. ORD. NO. 10849. ESTABLISHMENT OF SEAL FOR NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Ex. Ord. No. 10849, Nov. 27, 1959, 24 F.R. 9559, as amended by Ex. Ord. No. 10942, May 19, 1961, 26

F.R. 4419, provided:

WHEREAS the Administrator of the National Aeronautics and Space Administration has caused to be made, and has recommended that I approve, a seal for the National Aeronautics and Space Administration, the design of which accompanies and is hereby made a part of this order, and which is described as follows:

On a disc of the blue sky strewn with white stars, to dexter a larger yellow sphere bearing a red flight symbol apex in upper sinister and wings enveloping and casting a brown shadow upon the sphere, all partially encircled with a horizontal white orbit, in sinister a small light-blue sphere; circumscribing the disc a white band edged gold inscribed "National Aeronautics and Space Administration U.S.A." in red letters.

AND WHEREAS it appears that such seal is of suitable design and appropriate for establishment as the official seal of the National Aeronautics and Space Administration:

NOW, THEREFORE, by virtue of the authority vested in me as President of the United States, I hereby approve such seal as the official seal of the National Aeronautics and Space Administration.

EX. ORD. NO. 12675

Ex. Ord. No. 12675, Apr. 20, 1989, 54 F.R. 17691, as amended by Ex. Ord. No. 12712, Apr. 26, 1990, 55 F.R. 18095; Ex. Ord. No. 12869, §4(f), Sept. 30, 1993, 58 F.R. 51752, which established the National Space Council, was superseded by Ex. Ord. No. 13803, §9(a), June 30, 2017, 82 F.R. 31431, formerly set out below.

EXECUTIVE ORDER NO. 13803

Ex. Ord. No. 13803, June 30, 2017, 82 F.R. 31429, as amended by Ex. Ord. No. 13906, Feb. 13, 2020, 85 F.R. 10031, which reestablished the National Space Council and ordered the Council to convene the Users' Advisory Group, was revoked by Ex. Ord. No. 14056, §7(d), Dec. 1, 2021, 86 F.R. 68873, set out below.

EX. ORD. NO. 14056. THE NATIONAL SPACE COUNCIL

Ex. Ord. No. 14056, Dec. 1, 2021, 86 F.R. 68871, provided:

By the authority vested in me as President by the Constitution and the laws of the United States of America, it is hereby ordered as follows:

SECTION 1. *Purpose*. The National Space Council (Council), as authorized under Title V of Public Law 100–685 [§501, set out above], advises and assists the President regarding national space policy and strategy. This order sets forth the Council's membership, duties, and responsibilities.

SEC. 2. *Membership of the National Space Council*. The Council shall be composed of:

(a) the Vice President, who shall be Chair of the Council;
(b) the Secretary of State;
(c) the Secretary of Defense;
(d) the Secretary of the Interior;
(e) the Secretary of Agriculture;
(f) the Secretary of Commerce;
(g) the Secretary of Labor;
(h) the Secretary of Transportation;
(i) the Secretary of Energy;
(j) the Secretary of Education;
(k) the Secretary of Homeland Security;
(l) the Director of the Office of Management and Budget;
(m) the Director of National Intelligence;
(n) the Director of the Office of Science and Technology Policy;
(o) the Assistant to the President for National Security Affairs;
(p) the Assistant to the President for Economic Policy;
(q) the Assistant to the President for Domestic Policy;
(r) the Assistant to the President and National Climate Advisor;
(s) the Chairman of the Joint Chiefs of Staff;
(t) the Administrator of the National Aeronautics and Space Administration; and
(u) the heads of other executive departments and agencies (agencies) and other senior officials within the Executive Office of the President, as determined by the Chair.

SEC. 3. *Functions and Operations of the Council*. (a) The Council shall advise and assist the President on space policy and strategy. In particular, it shall:

(i) review, develop, and provide recommendations to the President on space policy and strategy;
(ii) coordinate implementation of space policy and strategy;
(iii) synchronize the Nation's civil, commercial, and national security space activities in furtherance of the

objectives of the President's national space policy and strategy;

(iv) facilitate resolution of differences among agencies on space-related policy and strategy matters;

(v) enable interagency cooperation, coordination, and information exchange on space activities; and

(vi) perform such other duties as the President may, from time to time, prescribe.

(b) The operation of the Council shall not interfere with the existing lines of authority in or responsibilities of any agency.

(c) The Council shall have a staff, headed by a civilian Executive Secretary appointed by the President.

(d) The Council shall meet at least annually.

(e) The Council shall consider and provide recommendations to the President on any space-related issue as determined by the Chair.

SEC. 4. *Responsibilities of the Chair*. (a) The Chair shall serve as the President's principal advisor on national space policy and strategy.

(b) The Chair shall establish procedures and set the agenda for Council sessions to address Presidential priorities.

(c) The Chair may recommend to the President candidates for the position of Executive Secretary.

(d) The Chair may invite the heads of other agencies, other senior officials in the Executive Office of the President, and other Federal employees to participate in Council meetings.

(e) The Chair or, upon the Chair's direction, the Executive Secretary, may develop budget recommendations for submission to the Director of the Office of Management and Budget that reflect the President's space policy and strategy, as well as provide advice concerning budget submissions by agencies related to the President's space policies and strategies.

SEC. 5. *National Space Policy Planning Process*. (a) The Council shall establish a process for developing and coordinating the implementation of national space policy and strategy.

(b) The head of each agency that conducts space-related activities shall, to the extent permitted by law, conform such activities to the President's national space policy and strategy.

(c) On space matters relating primarily to national security, the Council shall coordinate with the National Security Council (NSC) to develop space policy and strategy consistent with NSC priorities and practices.

SEC. 6. *Users' Advisory Group*. (a) The Council shall convene a Users' Advisory Group (Group) pursuant to section 121 of Public Law 101–611 [set out above], composed of non-Federal representatives of industries and other persons involved in aeronautical and space activities.

(b) Members of the Group shall serve without compensation for their work for the Group. Members of the Group, while engaged in the work of the Group, may be allowed travel expenses, including per diem in lieu of subsistence, to the extent permitted by law for persons serving intermittently in Government service (5 U.S.C. 5701–5707), consistent with the availability of funds.

(c) The Group shall report directly to the Council and shall provide advice or work product solely to the Council.

(d) The Group shall provide advice and recommendations to the Council on matters related to space policy and strategy, including Government policies, laws, regulations, treaties, international instruments, programs, and practices across the civil, commercial, and national security space sectors.

SEC. 7. *Administrative Provisions*. (a) To aid in the performance of the functions of the Council:

(i) the Office of Administration in the Executive Office of the President shall provide administrative support to the Council, to the extent permitted by law and within existing appropriations; and

(ii) legal advice to the Council with respect to its work and functions shall be provided exclusively by the Office of the Counsel to the President and the Counsel to the Vice President.

(b) To the extent practicable and permitted by law, including the Economy Act (31 U.S.C. 1535), and within existing appropriations, agencies serving on the Council, components of the Executive Office of the President, and interagency councils and committees that affect space policy or strategy shall make resources, including personnel, office support, and printing, available to the Council as reasonably requested by the Chair or, upon the Chair's direction, the Executive Secretary.

(c) Agencies shall cooperate with the Council through the Chair, or upon the Chair's request, the Executive Secretary, and provide such information and advice to the Council as it may reasonably request, to the extent permitted by law, including information regarding agencies' current and planned space activities.

(d) This order supersedes Executive Order 13803 of June 30, 2017 (Reviving the National Space Council) [formerly set out above], and Executive Order 13906 of February 13, 2020 (Amending Executive Order 13803—Reviving the National Space Council), and those orders are revoked. To the extent this order is inconsistent with any provision of any previous Executive Order or Presidential Memorandum, this order shall control.

(e) If any provision of this order or the application of such provision is held to be invalid, the remainder of

this order and other dissimilar applications of such provision shall not be affected.

SEC. 8. *General Provisions*. (a) Nothing in this order shall be construed to impair or otherwise affect:

(i) the authority granted by law to an executive department or agency, or the head thereof; or

(ii) the functions of the Director of the Office of Management and Budget relating to budgetary, administrative, or legislative proposals.

(b) This order shall be implemented consistent with applicable law and subject to the availability of appropriations.

(c) This order is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

J.R. BIDEN, JR.

§20112. Functions of the Administration

(a) PLANNING, DIRECTING, AND CONDUCTING AERONAUTICAL AND SPACE ACTIVITIES.—The Administration, in order to carry out the purpose of this chapter, shall—

(1) plan, direct, and conduct aeronautical and space activities;

(2) arrange for participation by the scientific community in planning scientific measurements and observations to be made through use of aeronautical and space vehicles, and conduct or arrange for the conduct of such measurements and observations;

(3) provide for the widest practicable and appropriate dissemination of information concerning its activities and the results thereof;

(4) seek and encourage, to the maximum extent possible, the fullest commercial use of space; and

(5) encourage and provide for Federal Government use of commercially provided space services and hardware, consistent with the requirements of the Federal Government.

(b) RESEARCH AND DEVELOPMENT IN CERTAIN TECHNOLOGIES.—

(1) GROUND PROPULSION TECHNOLOGIES.—The Administration shall, to the extent of appropriated funds, initiate, support, and carry out such research, development, demonstration, and other related activities in ground propulsion technologies as are provided for in sections 4 to 10 of the Electric and Hybrid Vehicle Research, Development, and Demonstration Act of 1976 (15 U.S.C. 2503 to 2509).

(2) SOLAR HEATING AND COOLING TECHNOLOGIES.—The Administration shall initiate, support, and carry out such research, development, demonstrations, and other related activities in solar heating and cooling technologies (to the extent that funds are appropriated therefor) as are provided for in sections 5, 6, and 9 of the Solar Heating and Cooling Demonstration Act of 1974 (42 U.S.C. 5503, 5504, 5507).

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3333.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
20112	42 U.S.C. 2473(a), (b).	Pub. L. 85–568, title II, §203(a), (b), July 29, 1958, 72 Stat. 429; Pub. L. 93–409, §4, Sept. 3, 1974, 88 Stat. 1070; Pub. L. 94–413, §15(c), Sept. 17, 1976, 90 Stat. 1270; Pub. L. 95–401, §6, Sept. 30, 1978, 92 Stat. 860; Pub. L. 101–611, title I, §107, Nov. 16, 1990, 104 Stat. 3197.

§20113. Powers of the Administration in performance of functions

(a) RULES AND REGULATIONS.—In the performance of its functions, the Administration is authorized to make, promulgate, issue, rescind, and amend rules and regulations governing the manner of its operations and the exercise of the powers vested in it by law.

(b) OFFICERS AND EMPLOYEES.—In the performance of its functions, the Administration is authorized to appoint and fix the compensation of officers and employees as may be necessary to carry out such functions. The officers and employees shall be appointed in accordance with the civil service laws and their compensation fixed in accordance with chapter 51 and subchapter III of chapter 53 of title 5, except that—

(1) to the extent the Administrator deems such action necessary to the discharge of the Administrator's responsibilities, the Administrator may appoint not more than 425 of the scientific, engineering, and administrative personnel of the Administration without regard to such laws, and may fix the compensation of such personnel not in excess of the rate of basic pay payable for level III of the Executive Schedule; and

(2) to the extent the Administrator deems such action necessary to recruit specially qualified scientific and engineering talent, the Administrator may establish the entrance grade for scientific and engineering personnel without previous service in the Federal Government at a level up to 2 grades higher than the grade provided for such personnel under the General Schedule, and fix their compensation accordingly.

(c) PROPERTY.—In the performance of its functions, the Administration is authorized—

(1) to acquire (by purchase, lease, condemnation, or otherwise), construct, improve, repair, operate, and maintain laboratories, research and testing sites and facilities, aeronautical and space vehicles, quarters and related accommodations for employees and dependents of employees of the Administration, and such other real and personal property (including patents), or any interest therein, as the Administration deems necessary within and outside the continental United States;

(2) to acquire by lease or otherwise, through the Administrator of General Services, buildings or parts of buildings in the District of Columbia for the use of the Administration for a period not to exceed 10 years without regard to section 8141 of title 40;

(3) to lease to others such real and personal property;

(4) to sell and otherwise dispose of real and personal property (including patents and rights thereunder) in accordance with the provisions of chapters 1 to 11 of title 40 and in accordance with title III of the Federal Property and Administrative Services Act of 1949 (41 U.S.C. 251 et seq.); [1] and

(5) to provide by contract or otherwise for cafeterias and other necessary facilities for the welfare of employees of the Administration at its installations and purchase and maintain equipment therefor.

(d) GIFTS.—In the performance of its functions, the Administration is authorized to accept unconditional gifts or donations of services, money, or property, real, personal, or mixed, tangible or intangible.

(e) CONTRACTS, LEASES, AND AGREEMENTS.—In the performance of its functions, the Administration is authorized, without regard to subsections (a) and (b) of section 3324 of title 31, to enter into and perform such contracts, leases, cooperative agreements, or other transactions as may be necessary in the conduct of its work and on such terms as it may deem appropriate, with any agency or instrumentality of the United States, or with any State, territory, or possession, or with any political subdivision thereof, or with any person, firm, association, corporation, or educational institution. To the maximum extent practicable and consistent with the accomplishment of the purpose of this chapter, such contracts, leases, agreements, and other transactions shall be allocated by the Administrator in a manner which will enable small-business concerns to participate equitably and proportionately in the conduct of the work of the Administration.

(f) COOPERATION WITH FEDERAL AGENCIES AND OTHERS.—In the performance of its

functions, the Administration is authorized to use, with their consent, the services, equipment, personnel, and facilities of Federal and other agencies with or without reimbursement, and on a similar basis to cooperate with other public and private agencies and instrumentalities in the use of services, equipment, and facilities. Each department and agency of the Federal Government shall cooperate fully with the Administration in making its services, equipment, personnel, and facilities available to the Administration, and any such department or agency is authorized, notwithstanding any other provision of law, to transfer to or to receive from the Administration, without reimbursement, aeronautical and space vehicles, and supplies and equipment other than administrative supplies or equipment.

(g) ADVISORY COMMITTEES.—In the performance of its functions, the Administration is authorized to appoint such advisory committees as may be appropriate for purposes of consultation and advice to the Administration.

(h) OFFICES AND PROCEDURES.—In the performance of its functions, the Administration is authorized to establish within the Administration such offices and procedures as may be appropriate to provide for the greatest possible coordination of its activities under this chapter with related scientific and other activities being carried on by other public and private agencies and organizations.

(i) TEMPORARY OR INTERMITTENT SERVICES OF EXPERTS OR CONSULTANTS.—In the performance of its functions, the Administration is authorized to obtain services as provided by section 3109 of title 5, but at rates for individuals not to exceed the per diem rate equivalent to the maximum rate payable under section 5376 of title 5.

(j) ALIENS.—In the performance of its functions, the Administration is authorized, when determined by the Administrator to be necessary, and subject to such security investigations as the Administrator may determine to be appropriate, to employ aliens without regard to statutory provisions prohibiting payment of compensation to aliens.

(k) CONCESSIONS FOR VISITORS' FACILITIES.—

(1) IN GENERAL.—In the performance of its functions, the Administration is authorized to provide by concession, without regard to section 1302 of title 40, on such terms as the Administrator may deem to be appropriate and necessary to protect the concessioner against loss of the concessioner's investment in property (but not anticipated profits) resulting from the Administration's discretionary acts and decisions, for the construction, maintenance, and operation of all manner of facilities and equipment for visitors to the several installations of the Administration and, in connection therewith, to provide services incident to the dissemination of information concerning its activities to such visitors, without charge or with a reasonable charge therefor (with this authority being in addition to any other authority that the Administration may have to provide facilities, equipment, and services for visitors to its installations).

(2) PUBLIC NOTICE AND DUE CONSIDERATION OF PROPOSALS.—A concession agreement under this subsection may be negotiated with any qualified proposer following due consideration of all proposals received after reasonable public notice of the intention to contract.

(3) REASONABLE OPPORTUNITY FOR PROFIT.—The concessioner shall be afforded a reasonable opportunity to make a profit commensurate with the capital invested and the obligations assumed. The consideration paid by the concessioner for the concession shall be based on the probable value of the opportunity and not on maximizing revenue to the United States.

(4) RECORDS AND ACCESS TO RECORDS.—Each concession agreement shall specify the manner in which the concessioner's records are to be maintained, and shall provide for access to the records by the Administration and the Comptroller General of the United States for a period of 5 years after the close of the business year to which the records relate.

(5) POSSESSORY INTERESTS.—A concessioner may be accorded a possessory interest, consisting of all incidents of ownership except legal title (which shall vest in the United States), in any structure, fixture, or improvement the concessioner constructs or locates upon land owned by the United States. With the approval of the Administration, such possessory interest may be assigned, transferred, encumbered, or relinquished by the concessioner, and, unless otherwise provided by contract, shall not be extinguished by the expiration or other termination of the concession and may not be taken for public use without just compensation.

(l) DETAILING MEMBERS OF ARMED FORCES.—In the performance of its functions, the Administration is authorized, with the approval of the President, to enter into cooperative agreements under which members of the Army, Navy, Air Force, Marine Corps, and Space Force may be detailed by the appropriate Secretary for services in the performance of functions under this chapter to the same extent as that to which they might be lawfully assigned in the Department of Defense.

(m) CLAIMS AGAINST THE UNITED STATES.—In the performance of its functions, the Administration is authorized—

(1) to consider, ascertain, adjust, determine, settle, and pay, on behalf of the United States, in full satisfaction thereof, any claim for $25,000 or less against the United States for bodily injury, death, or damage to or loss of real or personal property resulting from the conduct of the Administration's functions as specified in section 20112(a) of this title, where such claim is presented to the Administration in writing within 2 years after the accident or incident out of which the claim arises; and

(2) if the Administration considers that a claim in excess of $25,000 is meritorious and would otherwise be covered by this subsection, to report the facts and circumstances to Congress for its consideration.

(n) IDENTIFICATION OF GOVERNMENT ASTRONAUTS.—For purposes of a license issued or transferred by the Secretary of Transportation under chapter 509 to launch a launch vehicle or to reenter a reentry vehicle carrying a government astronaut (as defined in section 50902), the Administration shall designate a government astronaut in accordance with requirements prescribed by the Administration.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3333; Pub. L. 114–90, title I, §112(d), Nov. 25, 2015, 129 Stat. 712; Pub. L. 115–10, title VIII, §835(d), Mar. 21, 2017, 131 Stat. 69; Pub. L. 116–283, div. A, title IX, §927(f), Jan. 1, 2021, 134 Stat. 3832.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
20113	42 U.S.C. 2473(c).	Pub. L. 85–568, title II, §203(c), formerly §203(b), July 29, 1958, 72 Stat. 429; Pub. L. 86–20, May 13, 1959, 73 Stat. 21; Pub. L. 86–481, §5, June 1, 1960, 74 Stat. 153; Pub. L. 87–367, title II, §206(a), Oct. 4, 1961, 75 Stat. 791; Pub. L. 87–584, §6, Aug. 14, 1962, 76 Stat. 384; Pub. L. 87–793, §1001(f), Oct. 11, 1962, 76 Stat. 864; Pub. L. 88–426, title III, §306(d), Aug. 14, 1964, 78 Stat. 429; Pub. L. 88–448, title IV, §402(a)(34), Aug. 10, 1964, 78 Stat. 495; Pub. L. 91–646, title II, §220(a)(2), Jan. 2, 1971, 84 Stat. 1903; Pub. L. 93–74, §6, July 23, 1973, 87 Stat. 174; Pub. L. 93–316, §6, June 22, 1974, 88 Stat. 243; renumbered §203(c), Pub. L. 93–409, §4, Sept. 3, 1974, 88 Stat.

		1070; Pub. L. 96–48, §6(a), Aug. 8, 1979, 93 Stat. 348; Pub. L. 108–201, §2(a), Feb. 24, 2004, 118 Stat. 461.

In subsection (b), in the matter before paragraph (1), the words "chapter 51 and subchapter III of chapter 53 of title 5" are substituted for "the Classification Act of 1949, as amended" on authority of section 7(b) of Public Law 89–554 (80 Stat. 631), the first section of which enacted Title 5, Government Organization and Employees.

In subsection (c)(2), the words "section 8141 of title 40" are substituted for "the Act of March 3, 1877 (40 U.S.C. 34)" on authority of section 5(c) of Public Law 107–217 (116 Stat. 1303), the first section of which enacted Title 40, Public Buildings, Property, and Works.

In subsection (c)(4), the words "in accordance with the provisions of chapters 1 to 11 of title 40 and in accordance with title III of the Federal Property and Administrative Services Act of 1949 (41 U.S.C. 251 et seq.)" are substituted for "in accordance with the provisions of the Federal Property and Administrative Services Act of 1949, as amended (40 U.S.C. 471 et seq.)" on authority of section 5(c) of Public Law 107–217 (116 Stat. 1303), the first section of which enacted Title 40, Public Buildings, Property, and Works.

In subsection (e), the words "subsections (a) and (b) of section 3324 of title 31" are substituted for "section 3648 of the Revised Statutes, as amended (31 U.S.C. 529)" on authority of section 4(b) of Public Law 97–258 (96 Stat. 1067), the first section of which enacted Title 31, Money and Finance.

In subsection (i), the words "maximum rate payable under section 5376 of title 5" are substituted for "rate for GS–18" because of section 101(c) of the Federal Employees Pay Comparability Act of 1990 (enacted by §529 of Public Law 101–509, 5 U.S.C. 5376 note).

In subsection (k)(1), the words "section 1302 of title 40" are substituted for "section 321 of the Act of June 30, 1932 (47 Stat. 412; 40 U.S.C. 303b)" on authority of section 5(c) of Public Law 107–217 (116 Stat. 1303), the first section of which enacted Title 40, Public Buildings, Property, and Works.

EDITORIAL NOTES

REFERENCES IN TEXT

Level III of the Executive Schedule, referred to in subsec. (b)(1), is set out in section 5314 of Title 5, Government Organization and Employees.

The Federal Property and Administrative Services Act of 1949, referred to in subsec. (c)(4), is act June 30, 1949, ch. 288, 63 Stat. 377. Title III of the Act was classified generally to subchapter IV (§251 et seq.) of chapter 4 of former Title 41, Public Contracts, and was substantially repealed and restated in division C (§3101 et seq.) of subtitle I of Title 41, Public Contracts, by Pub. L. 111–350, §§3, 7(b), Jan. 4, 2011, 124 Stat. 3677, 3855. For complete classification of this Act to the Code, see Short Title of 1949 Act note set out under section 101 of Title 41 and Tables. For disposition of sections of former Title 41, see Disposition Table preceding section 101 of Title 41.

AMENDMENTS

2021—Subsec. (l). Pub. L. 116–283 substituted "Forces" for "Services" in heading and "Marine Corps, and Space Force" for "and Marine Corps" in text.

2017—Subsec. (g). Pub. L. 115–10, §835(d)(2), struck out "and Congress" after "advice to the Administration".

Pub. L. 115–10, §835(d)(1), inserted "and Congress" after "advice to the Administration".

2015—Subsec. (n). Pub. L. 114–90 added subsec. (n).

STATUTORY NOTES AND RELATED SUBSIDIARIES

EFFECTIVE DATE OF 2017 AMENDMENT

Pub. L. 115–10, title VIII, §835(d)(2), Mar. 21, 2017, 131 Stat. 69, provided that the amendment by section 835(d)(2) is effective Sept. 30, 2017.

OFFICE OF STEM ENGAGEMENT

Pub. L. 117–167, div. B, title VII, §10851(a)–(d), Aug. 9, 2022, 136 Stat. 1753, 1754, provided that:

"(a) SENSE OF CONGRESS.—It is the sense of Congress that NASA [National Aeronautics and Space Administration]'s inspiring mission, specialized facilities, skilled engineering and scientific workforce, and

research activities present unique opportunities for inspiring public engagement in STEM and increasing the number of students pursuing STEM degrees and careers.

"(b) ESTABLISHMENT.—The Administrator [of the National Aeronautics and Space Administration] shall establish an Office of STEM Engagement (referred to in this section as the 'Office') for the purpose of advancing progress toward the STEM education goals of the United States by enhancing STEM literacy, increasing diversity, equity, and inclusion in STEM, and preparing the STEM workforce for the future.

"(c) RESPONSIBILITIES.—The Office established shall be responsible for coordinating efforts and activities among organizations across the [National Aeronautics and Space] Administration, including NASA headquarters, mission directorates, and NASA centers, designed—

"(1) to create unique opportunities for students and the public to learn from and contribute to the work of NASA in exploration and discovery;

"(2) to contribute to the growth of a diverse STEM workforce; and

"(3) to strengthen public understanding of science by enabling connections to the mission and work of NASA.

"(d) PORTFOLIO.—The Office shall coordinate and administer—

"(1) the National Space Grant College and Fellowship Program under chapter 403 of title 51 United States Code;

"(2) the Established Program to Stimulate Competitive Research under section 40903 of title 51 United States Code;

"(3) the Minority University Research and Education Project;

"(4) the NextGen STEM Project; and

"(5) any other program or activity the Administrator considers appropriate."

[For definition of "STEM" as used in section 10851(a)–(d) of Pub. L. 117–167, set out above, see section 18901 of Title 42, The Public Health and Welfare.]

PROGRAM, WORKFORCE, AND INDUSTRIAL BASE REVIEWS

Pub. L. 117–167, div. B, title VII, §10861, Aug. 9, 2022, 136 Stat. 1754, provided that:

"(a) REPORT ON INDUSTRIAL BASE FOR CIVIL SPACE MISSIONS AND OPERATIONS.—

"(1) IN GENERAL.—Not later than 1 year after the date of the enactment of this Act [Aug. 9, 2022], and from time to time thereafter, the Administrator [of the National Aeronautics and Space Administration] shall submit to the appropriate committees of Congress [Committee on Commerce, Science, and Transportation of the Senate and Committee on Science, Space, and Technology of the House of Representatives] a report on the United States industrial base for NASA [National Aeronautics and Space Administration] civil space missions and operations.

"(2) ELEMENTS.—The report required by paragraph (1) shall include the following:

"(A) A comprehensive description of the current status of the United States industrial base for NASA civil space missions and operations.

"(B) A description and assessment of the weaknesses in the supply chain, skills, manufacturing capacity, raw materials, key components, and other areas of the United States industrial base for NASA civil space missions and operations that could adversely impact such missions and operations if unavailable.

"(C) A description and assessment of various mechanisms to address and mitigate the weaknesses described pursuant to subparagraph (B).

"(D) A comprehensive list of the collaborative efforts, including future and proposed collaborative efforts, between NASA and the Manufacturing USA institutes of the Department of Commerce.

"(E) An assessment of—

"(i) the defense and aerospace manufacturing supply chains relevant to NASA in each region of the United States; and

"(ii) the feasibility and benefits of establishing a supply chain center of excellence in a State in which NASA does not, as of the date of the enactment of this Act, have a research center or test facility.

"(F) Such other matters relating to the United States industrial base for NASA civil space missions and operations as the Administrator considers appropriate.

"(b) WORKFORCE AND MODELING AND TEST FACILITIES.—

"(1) REVIEW.—

"(A) IN GENERAL.—The Administrator shall enter into an arrangement with the National Academies of Sciences, Engineering, and Medicine to carry out a comprehensive review of the

workforce, skills-base, and modeling and test facilities of the [National Aeronautics and Space] Administration.

"(B) ELEMENTS.—The review conducted under subparagraph (A) shall include the following:

"(i) A consideration of the use of emerging technologies in relevant engineering and science disciplines and the skills needed to apply such capabilities to Administration missions across all mission directorates.

"(ii) Prioritized recommendations on actions needed to align the Administration's workforce with research objectives and strategic goals and on the improvements and additions to modeling capabilities and test facilities needed to meet the Administration's strategic goals and objectives.

"(C) REPORT.—Not later than 18 months after the date of the enactment of this Act, the Administrator shall submit to the appropriate committees of Congress report on the results of the review conducted under subparagraph (A).

"(2) IMPLEMENTATION PLAN.—Not later than 120 days after the date on which the review under paragraph (1) is completed, the Administrator shall submit to the appropriate committees of Congress a plan for implementing the recommendations contained the review.

"(3) REPORT ON NASA INFRASTRUCTURE, WORKFORCE SKILLS AND CAPABILITIES.—

"(A) POLICY AND PROCEDURE.—

"(i) IN GENERAL.—The Administrator shall develop an Administration policy and procedure for assessment, not less frequently than every 5 years, of the strategic capabilities of the Administration, including infrastructure and facilities, and workforce skills and capabilities.

"(ii) ELEMENTS.—The policy and procedure developed under clause (i) shall include acquiring data and support for Administration decisions and recommendations on strategic capabilities, including on infrastructure and facilities, and workforce skills and capabilities needed to support the goals and objectives of the Administration through 2040.

"(B) REPORT.—Not later than 1 year after the date of the enactment of this Act, the Administrator shall submit the policy and procedure developed under subparagraph (A) to the appropriate committees of Congress.

"(4) INDEPENDENT PROGRAM ANALYSIS AND EVALUATION OFFICE.—

"(A) ESTABLISHMENT.—The Administrator shall establish within NASA an Independent Program Analysis and Evaluation Office (referred to in this paragraph as the 'Office') for purposes of independently assessing program performance, making programmatic, technical risk mitigation and institutional recommendations, performing cost estimates and analyses, and conducting strategic planning activities, among other functions.

"(B) INDEPENDENCE.—The Office shall remain independent of any program, and shall have no programmatic responsibilities, so as to maintain its independent assessment integrity.

"(C) ACTIVITIES AUTHORIZED.—In conducting the functions of the Office, the Administrator may carry out—

"(i) research on program assessment;

"(ii) cost, schedule, and technical estimation; and

"(iii) other relevant activities for the purposes of obtaining the highest level of expertise and the most effective decision-making tools with which to inform the Administrator.

"(D) MOON TO MARS ACTIVITIES.—The Office shall maintain an ongoing, focused effort to assess the goals, objectives, requirements, architectural approach, cost and schedule, and progress of the Administration's Moon to Mars activities.

"(5) INTERNATIONAL SPACE STATION.—Not later than 1 year after the date of the enactment of this Act, the Administrator shall submit to the appropriate committees of Congress the results of an independent estimate by the Office of the cost of continuing International Space Station operations through September 30, 2030, including—

"(A) crew and cargo transportation, research to be undertaken reflecting the priorities described in section 10816 [51 U.S.C. 70901 note], and maintenance costs; and

"(B) opportunities for operational efficiencies that could result in cost savings and increased research productivity and the amount of those potential savings and productivity increases."

[For definition of "Manufacturing USA institute" as used in section 10861 of Pub. L. 117–167, set out above, see section 18901 of Title 42, The Public Health and Welfare.]

COLLABORATION

Pub. L. 115–10, title V, §517, Mar. 21, 2017, 131 Stat. 54, provided that: "The Administration [National Aeronautics and Space Administration] shall continue to develop first-of-a-kind instruments that, once proved,

can be transitioned to other agencies for operations. Whenever responsibilities for the development of sensors or for measurements are transferred to the Administration from another agency, the Administration shall seek, to the extent possible, to be reimbursed for the assumption of such responsibilities."

SPACE ACT AGREEMENTS

Pub. L. 115–10, title VIII, §841, Mar. 21, 2017, 131 Stat. 72, provided that:

"(a) SENSE OF CONGRESS.—It is the sense of Congress that, when used appropriately, Space Act Agreements can provide significant value in furtherance of NASA [National Aeronautics and Space Administration]'s mission.

"(b) FUNDED SPACE ACT AGREEMENTS.—To the extent appropriate, the Administrator [of the National Aeronautics and Space Administration] shall seek to maximize the value of contributions provided by other parties under a funded Space Act Agreement in order to advance NASA's mission.

"(c) NON-EXCLUSIVITY.—

"(1) IN GENERAL.—The Administrator shall, to the greatest extent practicable, issue each Space Act Agreement—

"(A) except as provided in paragraph (2), on a nonexclusive basis;

"(B) in a manner that ensures all non-government parties have equal access to NASA resources; and

"(C) exercising reasonable care not to reveal unique or proprietary information.

"(2) EXCLUSIVITY.—If the Administrator determines an exclusive arrangement is necessary, the Administrator shall, to the greatest extent practicable, issue the Space Act Agreement—

"(A) utilizing a competitive selection process when exclusive arrangements are necessary; and

"(B) pursuant to public announcements when exclusive arrangements are necessary.

"(d) TRANSPARENCY.—The Administrator shall publicly disclose on the Administration's website and make available in a searchable format each Space Act Agreement, including an estimate of committed NASA resources and the expected benefits to agency objectives for each agreement, with appropriate redactions for proprietary, sensitive, or classified information, not later than 60 days after such agreement is signed by the parties.

"(e) ANNUAL REPORTS.—

"(1) REQUIREMENT.—Not later than 90 days after the end of each fiscal year, the Administrator shall submit to the appropriate committees of Congress [Committee on Science, Space, and Technology of the House of Representatives and Committee on Commerce, Science, and Transportation of the Senate] a report on the use of Space Act Agreement authority by the Administration during the previous fiscal year.

"(2) CONTENTS.—The report shall include for each Space Act Agreement in effect at the time of the report—

"(A) an indication of whether the agreement is a reimbursable, non-reimbursable, or funded Space Act Agreement;

"(B) a description of—

"(i) the subject and terms;

"(ii) the parties;

"(iii) the responsible—

"(I) Mission Directorate;

"(II) Center; or

"(III) headquarters element;

"(iv) the value;

"(v) the extent of the cost sharing among Federal Government and non-Federal sources;

"(vi) the time period or schedule; and

"(vii) all milestones; and

"(C) an indication of whether the agreement was renewed during the previous fiscal year.

"(3) ANTICIPATED AGREEMENTS.—The report shall include a list of all anticipated reimbursable, non-reimbursable, and funded Space Act Agreements for the upcoming fiscal year.

"(4) CUMULATIVE PROGRAM BENEFITS.—The report shall include, with respect to each Space Act Agreement covered by the report, a summary of—

"(A) the technology areas in which research projects were conducted under that agreement;

"(B) the extent to which the use of that agreement—

"(i) has contributed to a broadening of the technology and industrial base available for meeting Administration needs; and

"(ii) has fostered within the technology and industrial base new relationships and practices

that support the United States; and

"(C) the total amount of value received by the Federal Government during the fiscal year under that agreement."

SENSE OF CONGRESS

Pub. L. 114–90, title I, §112(b), Nov. 25, 2015, 129 Stat. 711, provided that: "The National Aeronautics and Space Administration has a need to fly government astronauts (as defined in section 50902 of title 51, United States Code, as amended) within commercial launch vehicles and reentry vehicles under chapter 509 of that title. This need was identified by the Secretary of Transportation and the Administrator of the National Aeronautics and Space Administration due to the intended use of commercial launch vehicles and reentry vehicles developed under the Commercial Crew Development Program, authorized in section 402 of the National Aeronautics and Space Administration Authorization Act of 2010 (124 Stat. 2820; Public Law 111–267). It is the sense of Congress that the authority delegated to the Administration by the amendment made by subsection (d) of this section [amending this section] should be used for that purpose."

PURCHASE OF AMERICAN-MADE EQUIPMENT AND PRODUCTS

Pub. L. 106–391, title III, §319, Oct. 30, 2000, 114 Stat. 1597, provided that:

"(a) PURCHASE OF AMERICAN-MADE EQUIPMENT AND PRODUCTS.—In the case of any equipment or products that may be authorized to be purchased with financial assistance provided under this Act [see Tables for classification], it is the sense of the Congress that entities receiving such assistance should, in expending the assistance, purchase only American-made equipment and products.

"(b) NOTICE TO RECIPIENTS OF ASSISTANCE.—In providing financial assistance under this Act, the Administrator [of the National Aeronautics and Space Administration] shall provide to each recipient of the assistance a notice describing the statement made in subsection (a) by the Congress."

ENHANCEMENT OF SCIENCE AND MATHEMATICS PROGRAMS

Pub. L. 106–391, title III, §321, Oct. 30, 2000, 114 Stat. 1597, provided that:

"(a) DEFINITIONS.—In this section:

"(1) EDUCATIONALLY USEFUL FEDERAL EQUIPMENT.—The term 'educationally useful Federal equipment' means computers and related peripheral tools and research equipment that is appropriate for use in schools.

"(2) SCHOOL.—The term 'school' means a public or private educational institution that serves any of the grades of kindergarten through grade 12.

"(b) SENSE OF THE CONGRESS.—

"(1) IN GENERAL.—It is the sense of the Congress that the Administrator [of the National Aeronautics and Space Administration] should, to the greatest extent practicable and in a manner consistent with applicable Federal law (including Executive Order No. 12999 [40 U.S.C. 549 note]), donate educationally useful Federal equipment to schools in order to enhance the science and mathematics programs of those schools.

"(2) REPORTS.—Not later than 1 year after the date of the enactment of this Act [Oct. 30, 2000], and annually thereafter, the Administrator shall prepare and submit to Congress a report describing any donations of educationally useful Federal equipment to schools made during the period covered by the report."

[1] *See References in Text note below.*

§20114. Administration and Department of Defense coordination

(a) ADVISE AND CONSULT.—The Administration and the Department of Defense, through the President, shall advise and consult with each other on all matters within their respective jurisdictions related to aeronautical and space activities and shall keep each other fully and currently informed with respect to such activities.

(b) REFERRAL TO THE PRESIDENT.—If the Secretary of Defense concludes that any request, action, proposed action, or failure to act on the part of the Administrator is adverse to the responsibilities of the Department of Defense, or the Administrator concludes that any request, action, proposed action, or failure to act on the part of the Department of Defense is adverse to the

responsibilities of the Administration, and the Administrator and the Secretary of Defense are unable to reach an agreement with respect to the matter, either the Administrator or the Secretary of Defense may refer the matter to the President for a decision (which shall be final).

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3336.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
20114(a)	42 U.S.C. 2474(b).	Pub. L. 85–568, title II, §204(b), (c), July 29, 1958, 72 Stat. 431.
20114(b)	42 U.S.C. 2474(c).	

In subsection (a), the words "through the President" are substituted for "through the Liaison Committee" because the Civilian-Military Liaison Committee, which was established by section 204(a) of the National Aeronautics and Space Act of 1958 (42 U.S.C. 2474(a)), was abolished and its functions, together with the functions of its chairman and other officers, were transferred to the President by sections 1(e) and 3(a) of Reorganization Plan No. 4 of 1965 (5 App. U.S.C.).

In subsection (b), the words "as provided in section 201 (e)", which appeared at the end of the subsection, are omitted as obsolete. Section 201 of Public Law 85–568, which was classified to former section 2471 of title 42 (last appearing in the 1970 edition of the United States Code), established the National Aeronautics and Space Council, with the functions of the Council specified in section 201(e). Those functions included advising the President "as he may request" with respect to promoting cooperation and resolving differences among agencies of the United States engaged in aeronautical and space activities. The words are obsolete because section 3(a)(4) of Reorganization Plan No. 1 of 1973 (5 App. U.S.C.), abolished the National Aeronautics and Space Council, including the office of Executive Secretary of the Council, together with its functions.

§20115. International cooperation

The Administration, under the foreign policy guidance of the President, may engage in a program of international cooperation in work done pursuant to this chapter, and in the peaceful application of the results thereof, pursuant to agreements made by the President with the advice and consent of the Senate.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3337.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
20115	42 U.S.C. 2475.	Pub. L. 85–568, title II, §205, July 29, 1958, 72 Stat. 432.

EXECUTIVE DOCUMENTS

DELEGATION OF AUTHORITY

Memorandum of President of the United States, Oct. 10, 1995, 60 F.R. 53251, provided:

Memorandum for the Administrator of the National and Aeronautics and Space Administration

By the authority vested in me as President by the Constitution and the laws of the United States of America, and in order to facilitate the efficient operations of the aeronautical and space programs of the National Aeronautics and Space Administration (NASA), it is hereby ordered as follows:

The authority conferred upon the President by the Constitution and the laws of the United States of America to executive mutual waivers of claims of liability on behalf of the United States for damages arising out of cooperative activities is hereby delegated to the Administrator of NASA for agreements with foreign

governments and their agents regarding aeronautical, science, and space activities that are executed pursuant to the authority granted NASA by the National Aeronautics and Space Act of 1958, Public Law 85–568, as amended [see 51 U.S.C. 20101 et seq.]. All such agreements shall be subject to coordination with and the concurrence of the Department of State to the extent provided by applicable law, regulations, and procedures. All such waivers of liability entered into prior to the date of this memorandum are hereby ratified.

You are authorized and directed to publish this memorandum in the Federal Register.

WILLIAM J. CLINTON.

§20116. Reports to Congress

(a) PRESIDENTIAL REPORT.—The President shall transmit to Congress in May of each year a report, which shall include—

(1) a comprehensive description of the programmed activities and the accomplishments of all agencies of the United States in the field of aeronautics and space activities during the preceding fiscal year; and

(2) an evaluation of such activities and accomplishments in terms of the attainment of, or the failure to attain, the objectives described in section 20102(d) of this title.

(b) RECOMMENDATIONS FOR ADDITIONAL LEGISLATION.—Any report made under this section shall contain such recommendations for additional legislation as the Administrator or the President may consider necessary or desirable for the attainment of the objectives described in section 20102(d) of this title.

(c) CLASSIFIED INFORMATION.—No information that has been classified for reasons of national security shall be included in any report made under this section, unless the information has been declassified by, or pursuant to authorization given by, the President.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3337.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
20116	42 U.S.C. 2476.	Pub. L. 85–568, title II, §206, July 29, 1958, 72 Stat. 432; Pub. L. 92–68, §7, Aug. 6, 1971, 85 Stat. 177; Pub. L. 106–391, title III, §302(b), Oct. 30, 2000, 114 Stat. 1591.

In subsections (a)(2) and (b), the words "section 102(c) of this Act", which appear in section 206 of Public Law 85–568 (72 Stat. 432), are treated as referring to section 102(d), rather than section 102(c), of Public Law 85–568 because of the redesignation done by section 110(a)(2) of the National Aeronautics and Space Administration Authorization Act, 1985 (Public Law 98–361, 98 Stat. 426). Section 102(d) of Public Law 85–568 is restated as section 20102(d) of title 51.

EXECUTIVE DOCUMENTS

DELEGATION OF CERTAIN REPORTING AUTHORITY

Memorandum of President of the United States, Mar. 5, 2004, 69 F.R. 11489, provided:

Memorandum for the Administrator of the National Aeronautics and Space Administration

By the authority vested in me as President by the Constitution and the laws of the United States, including section 301 of title 3, United States Code, I hereby delegate to you the functions conferred upon the President by section 206 of the National Aeronautics and Space Act of 1958, as amended ([former] 42 U.S.C. 2476) [now 51 U.S.C. 20116], to provide the specified report to the Congress. Nothing in this delegation shall be construed to impair or otherwise affect the authority of the Director of the Office of Management and Budget with respect to budget, administrative, and legislative proposals.

You are authorized and directed to publish this memorandum in the Federal Register.

GEORGE W. BUSH.

§20117. Disposal of excess land

Notwithstanding the provisions of this or any other law, the Administration may not report to a disposal agency as excess to the needs of the Administration any land having an estimated value in excess of $50,000 that is owned by the United States and under the jurisdiction and control of the Administration, unless—

(1) a period of 30 days has passed after the receipt by the Speaker and the Committee on Science and Technology of the House of Representatives and the President and the Committee on Commerce, Science, and Transportation of the Senate of a report by the Administrator or the Administrator's designee containing a full and complete statement of the action proposed to be taken and the facts and circumstances relied upon in support of such action; or

(2) each such committee before the expiration of that period has transmitted to the Administrator written notice to the effect that the committee has no objection to the proposed action.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3337.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
20117	42 U.S.C. 2476a.	Pub. L. 85–568, title II, §207, as added Pub. L. 93–74, §7, July 23, 1973, 87 Stat. 175; amended Pub. L. 103–437, §15(j), Nov. 2, 1994, 108 Stat. 4593.

In paragraph (1), the words "Committee on Science and Technology" are substituted for "Committee on Science, Space, and Technology" on authority of section 1(a)(10) of Public Law 104–14 (2 U.S.C. note prec. 21), Rule X(1)(n) of the Rules of the House of Representatives, adopted by House Resolution No. 5 (106th Congress, January 6, 1999), and Rule X(1)(o) of the Rules of the House of Representatives, adopted by House Resolution No. 6 (110th Congress, January 5, 2007).

STATUTORY NOTES AND RELATED SUBSIDIARIES

CHANGE OF NAME

Committee on Science and Technology of House of Representatives changed to Committee on Science, Space, and Technology of House of Representatives by House Resolution No. 5, One Hundred Twelfth Congress, Jan. 5, 2011.

SUBCHAPTER III—GENERAL ADMINISTRATIVE PROVISIONS

§20131. Public access to information

(a) PUBLIC INSPECTION.—Information obtained or developed by the Administrator in the performance of the Administrator's functions under this chapter shall be made available for public inspection, except information—

(1) authorized or required by Federal statute to be withheld;

(2) classified to protect the national security; or

(3) described in subsection (b).

(b) SPECIAL HANDLING OF TRADE SECRET OR CONFIDENTIAL INFORMATION.—

(1) IN GENERAL.—The Administrator, for a period of up to 5 years after the development of information described in paragraph (2), may provide appropriate protections against the dissemination of such information, including exemption from subchapter II of chapter 5 of title 5.

(2) INFORMATION DESCRIBED.—Information referred to in paragraph (1) is information that results from activities conducted under an agreement entered into under subsections (e) and (f) of section 20113 of this title, and that would be a trade secret or commercial or financial information that is privileged or confidential under the meaning of section 552(b)(4) of title 5 if the information had been obtained from a non-Federal party participating in such an agreement.

(c) COMMITTEES OF CONGRESS.—Nothing in this chapter authorizes the withholding of information by the Administrator from the duly authorized committees of Congress.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3338.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
20131(a)	42 U.S.C. 2454(a) (words before proviso).	Pub. L. 85–568, title III, §303, July 29, 1958, 72 Stat. 433; Pub. L. 102–588, title V, §509, Nov. 4, 1992, 106 Stat. 5129.
20131(b)	42 U.S.C. 2454(b).	
20131(c)	42 U.S.C. 2454(a) (proviso).	

§20132. Security requirements

The Administrator shall establish such security requirements, restrictions, and safeguards as the Administrator deems necessary in the interest of the national security. The Administrator may arrange with the Director of the Office of Personnel Management for the conduct of such security or other personnel investigations of the Administration's officers, employees, and consultants, and its contractors and subcontractors and their officers and employees, actual or prospective, as the Administrator deems appropriate. If any such investigation develops any data reflecting that the individual who is the subject of the investigation is of questionable loyalty, the matter shall be referred to the Federal Bureau of Investigation for the conduct of a full field investigation, the results of which shall be furnished to the Administrator.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3338.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
20132	42 U.S.C. 2455(a).	Pub. L. 85–568, title III, §304(a), July 29, 1958, 72 Stat. 433; 1978 Reorg. Plan No. 2, §102, eff. Jan. 1, 1979, 43 F.R. 36037, 92 Stat. 3783.

The words "Director of the Office of Personnel Management" are substituted for "Civil Service Commission" because of section 102 of Reorganization Plan No. 2 of 1978 (5 App U.S.C.).

STATUTORY NOTES AND RELATED SUBSIDIARIES

ACCESS TO RESTRICTED DATA

Pub. L. 85–568, title III, §304(b), July 29, 1958, 72 Stat. 434, provided that: "The Atomic Energy Commission may authorize any of its employees, or employees of any contractor, prospective contractor, licensee, or prospective licensee of the Atomic Energy Commission or any other person authorized to have access to Restricted Data by the Atomic Energy Commission under subsection 145 b. of the Atomic Energy Act of 1954 (42 U.S.C. 2165(b)), to permit any member, officer, or employee of the Council [National Aeronautics and Space Council], or the Administrator [of the National Aeronautics and Space Administration], or any officer, employee, member of an advisory committee, contractor, subcontractor, or officer or employee of a contractor or subcontractor of the Administration [National Aeronautics and Space Administration], to have access to Restricted Data relating to aeronautical and space activities which is required in the performance of his duties and so certified by the Council or the Administrator, as the case may be, but only if (1) the Council or Administrator or designee thereof has determined, in accordance with the established personnel security procedures and standards of the Council or Administration, that permitting such individual to have access to such Restricted Data will not endanger the common defense and security, and (2) the Council or Administrator or designee thereof finds that the established personnel and other security procedures and standards of the Council or Administration are adequate and in reasonable conformity to the standards established by the Atomic Energy Commission under section 145 of the Atomic Energy Act of 1954 (42 U.S.C. 2165). Any individual granted access to such Restricted Data pursuant to this subsection may exchange such Data with any individual who (A) is an officer or employee of the Department of Defense, or any department or agency thereof, or a member of the armed forces, or a contractor or subcontractor of any such department, agency, or armed force, or an officer or employee of any such contractor or subcontractor, and (B) has been authorized to have access to Restricted Data under the provisions of section 143 of the Atomic Energy Act of 1954 (42 U.S.C. 2163)."

[Atomic Energy Commission abolished and functions transferred by sections 5814 and 5841 of Title 42, The Public Health and Welfare. See also Transfer of Functions notes set out under those sections.]

[National Aeronautics and Space Council, together with functions of Council, abolished by section 3(a)(4) of Reorg. Plan No. 1 of 1973, effective July 1, 1973, set out in the Appendix to Title 5, Government Organization and Employees.]

§20133. Permission to carry firearms

As the Administrator deems necessary in the public interest, the Administrator may—

(1) direct officers and employees of the Administration to carry firearms while in the conduct of their official duties; and

(2) authorize employees of contractors and subcontractors of the Administration who are engaged in the protection of property owned by the United States, and located at facilities owned by or contracted to the United States, to carry firearms while in the conduct of their official duties.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3338.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
20133	42 U.S.C. 2456.	Pub. L. 85–568, title III, §304(e), July 29, 1958, 72 Stat. 435.

§20134. Arrest authority

Under regulations prescribed by the Administrator and approved by the Attorney General, employees of the Administration and of its contractors and subcontractors authorized to carry firearms under section 20133 of this title may arrest without warrant for any offense against the United States committed in their presence, or for any felony cognizable under the laws of the United States if they have reasonable grounds to believe that the person to be arrested has committed or is committing such felony. Persons granted authority to make arrests by this section may exercise that

authority only while guarding and protecting property owned or leased by, or under the control of, the United States under the administration and control of the Administration or one of its contractors or subcontractors, at facilities owned by or contracted to the Administration.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3339.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
20134	42 U.S.C. 2456a.	Pub. L. 85–568, title III, §304(f), as added Pub. L. 100–685, title II, §206, Nov. 17, 1988, 102 Stat. 4090.

§20135. Property rights in inventions

(a) DEFINITIONS.—In this section:

(1) CONTRACT.—The term "contract" means any actual or proposed contract, agreement, understanding, or other arrangement, and includes any assignment, substitution of parties, or subcontract executed or entered into thereunder.

(2) MADE.—The term "made", when used in relation to any invention, means the conception or first actual reduction to practice of such invention.

(3) PERSON.—The term "person" means any individual, partnership, corporation, association, institution, or other entity.

(b) EXCLUSIVE PROPERTY OF UNITED STATES.—

(1) IN GENERAL.—An invention shall be the exclusive property of the United States if it is made in the performance of any work under any contract of the Administration, and the Administrator determines that—

(A) the person who made the invention was employed or assigned to perform research, development, or exploration work and the invention is related to the work the person was employed or assigned to perform, or was within the scope of the person's employment duties, whether or not it was made during working hours, or with a contribution by the Government of the use of Government facilities, equipment, materials, allocated funds, information proprietary to the Government, or services of Government employees during working hours; or

(B) the person who made the invention was not employed or assigned to perform research, development, or exploration work, but the invention is nevertheless related to the contract, or to the work or duties the person was employed or assigned to perform, and was made during working hours, or with a contribution from the Government of the sort referred to in subparagraph (A).

(2) PATENT TO UNITED STATES.—If an invention is the exclusive property of the United States under paragraph (1), and if such invention is patentable, a patent therefor shall be issued to the United States upon application made by the Administrator, unless the Administrator waives all or any part of the rights of the United States to such invention in conformity with the provisions of subsection (g).

(c) CONTRACT PROVISIONS FOR FURNISHING REPORTS OF INVENTIONS, DISCOVERIES, IMPROVEMENTS, OR INNOVATIONS.—Each contract entered into by the Administrator with any party for the performance of any work shall contain effective provisions under which the party shall furnish promptly to the Administrator a written report containing full and complete technical information concerning any invention, discovery, improvement, or innovation which may be made in the performance of any such work.

(d) PATENT APPLICATION.—No patent may be issued to any applicant other than the

Administrator for any invention which appears to the Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office (hereafter in this section referred to as the "Director") to have significant utility in the conduct of aeronautical and space activities unless the applicant files with the Director, with the application or within 30 days after request therefor by the Director, a written statement executed under oath setting forth the full facts concerning the circumstances under which the invention was made and stating the relationship (if any) of the invention to the performance of any work under any contract of the Administration. Copies of each such statement and the application to which it relates shall be transmitted forthwith by the Director to the Administrator.

(e) ISSUANCE OF PATENT TO APPLICANT.—Upon any application as to which any such statement has been transmitted to the Administrator, the Director may, if the invention is patentable, issue a patent to the applicant unless the Administrator, within 90 days after receipt of the application and statement, requests that the patent be issued to the Administrator on behalf of the United States. If, within such time, the Administrator files such a request with the Director, the Director shall transmit notice thereof to the applicant, and shall issue such patent to the Administrator unless the applicant within 30 days after receipt of the notice requests a hearing before the Patent Trial and Appeal Board on the question whether the Administrator is entitled under this section to receive the patent. The Board may hear and determine, in accordance with rules and procedures established for interference and derivation cases, the question so presented, and its determination shall be subject to appeal by the applicant or by the Administrator to the United States Court of Appeals for the Federal Circuit in accordance with procedures governing appeals from decisions of the Patent Trial and Appeal Board in other proceedings.

(f) SUBSEQUENT TRANSFER OF PATENT IN CASE OF FALSE REPRESENTATIONS .—Whenever a patent has been issued to an applicant in conformity with subsection (e), and the Administrator thereafter has reason to believe that the statement filed by the applicant in connection with the patent contained a false representation of a material fact, the Administrator, within 5 years after the date of issuance of the patent, may file with the Director a request for the transfer to the Administrator of title to the patent on the records of the Director. Notice of any such request shall be transmitted by the Director to the owner of record of the patent, and title to the patent shall be so transferred to the Administrator unless, within 30 days after receipt of notice, the owner of record requests a hearing before the Patent Trial and Appeal Board on the question whether any such false representation was contained in the statement filed in connection with the patent. The question shall be heard and determined, and the determination shall be subject to review, in the manner prescribed by subsection (e) for questions arising thereunder. A request made by the Administrator under this subsection for the transfer of title to a patent, and prosecution for the violation of any criminal statute, shall not be barred by the failure of the Administrator to make a request under subsection (e) for the issuance of the patent to the Administrator, or by any notice previously given by the Administrator stating that the Administrator had no objection to the issuance of the patent to the applicant.

(g) WAIVER OF RIGHTS TO INVENTIONS.—Under such regulations in conformity with this subsection as the Administrator shall prescribe, the Administrator may waive all or any part of the rights of the United States under this section with respect to any invention or class of inventions made or which may be made by any person or class of persons in the performance of any work required by any contract of the Administration if the Administrator determines that the interests of the United States will be served thereby. Any such waiver may be made upon such terms and under such conditions as the Administrator shall determine to be required for the protection of the interests of the United States. Each such waiver made with respect to any invention shall be subject to the reservation by the Administrator of an irrevocable, nonexclusive, nontransferable, royalty-free license for the practice of such invention throughout the world by or on behalf of the United States or any foreign government pursuant to any treaty or agreement with the United States. Each proposal for any waiver under this subsection shall be referred to an Inventions and Contributions Board which shall be established by the Administrator within the Administration. Such Board shall accord to each interested party an opportunity for hearing, and shall transmit to the Administrator its

findings of fact with respect to such proposal and its recommendations for action to be taken with respect thereto.

(h) PROTECTION OF TITLE.—The Administrator is authorized to take all suitable and necessary steps to protect any invention or discovery to which the Administrator has title, and to require contractors or persons who retain title to inventions or discoveries under this section to protect the inventions or discoveries to which the Administration has or may acquire a license of use.

(i) ADMINISTRATION AS DEFENSE AGENCY.—The Administration shall be considered a defense agency of the United States for the purpose of chapter 17 of title 35.

(j) OBJECTS INTENDED FOR LAUNCH, LAUNCHED, OR ASSEMBLED IN OUTER SPACE.—Any object intended for launch, launched, or assembled in outer space shall be considered a vehicle for the purpose of section 272 of title 35.

(k) USE OR MANUFACTURE OF PATENTED INVENTIONS INCORPORATED IN SPACE VEHICLES LAUNCHED FOR PERSONS OTHER THAN UNITED STATES.—The use or manufacture of any patented invention incorporated in a space vehicle launched by the United States Government for a person other than the United States shall not be considered to be a use or manufacture by or for the United States within the meaning of section 1498(a) of title 28, unless the Administration gives an express authorization or consent for such use or manufacture.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3339; Pub. L. 112–29, §7(d)(2), Sept. 16, 2011, 125 Stat. 315.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
20135	42 U.S.C. 2457.	Pub. L. 85–568, title III, §305, July 29, 1958, 72 Stat. 435; Pub. L. 96–517, §7(b), Dec. 12, 1980, 94 Stat. 3027; Pub. L. 97–96, §7, Dec. 21, 1981, 95 Stat. 1210; Pub. L. 97–164, title I, §162(3), Apr. 2, 1982, 96 Stat. 49; Pub. L. 98–622, title II, §205(c), Nov. 8, 1984, 98 Stat. 3388; Pub. L. 106–113, div. B, §1000(a)(9) [title IV, §4732(b)(20)], Nov. 29, 1999, 113 Stat. 1536, 1501A–585.

EDITORIAL NOTES

AMENDMENTS

2011—Subsec. (e). Pub. L. 112–29 substituted "Patent Trial and Appeal Board" for "Board of Patent Appeals and Interferences" in two places and inserted "and derivation" after "established for interference".

Subsec. (f). Pub. L. 112–29, §7(d)(2)(A), substituted "Patent Trial and Appeal Board" for "Board of Patent Appeals and Interferences".

STATUTORY NOTES AND RELATED SUBSIDIARIES

EFFECTIVE DATE OF 2011 AMENDMENT

Amendment by Pub. L. 112–29 effective upon the expiration of the 1-year period beginning on Sept. 16, 2011, and applicable to proceedings commenced on or after that effective date, with certain exceptions, see section 7(e) of Pub. L. 112–29, set out as a note under section 6 of Title 35, Patents.

§20136. Contributions awards

(a) APPLICATIONS.—Subject to the provisions of this section, the Administrator is authorized, on the Administrator's own initiative or on application of any person, to make a monetary award, in an amount and on terms the Administrator determines to be warranted, to any person (as defined by section 20135(a) of this title) for any scientific or technical contribution to the Administration which is determined by the Administrator to have significant value in the conduct of aeronautical and space activities. Each application made for such an award shall be referred to the Inventions and Contributions Board established under section 20135 of this title. Such Board shall accord to each applicant an opportunity for hearing on the application, and shall transmit to the Administrator its recommendation as to the terms of the award, if any, to be made to the applicant for the contribution. In determining the terms and conditions of an award the Administrator shall take into account—

(1) the value of the contribution to the United States;

(2) the aggregate amount of any sums which have been expended by the applicant for the development of the contribution;

(3) the amount of any compensation (other than salary received for services rendered as an officer or employee of the Government) previously received by the applicant for or on account of the use of the contribution by the United States; and

(4) any other factors the Administrator determines to be material.

(b) APPORTIONMENT OF AWARDS.—If more than one applicant under subsection (a) claims an interest in the same contribution, the Administrator shall ascertain and determine the respective interests of the applicants, and shall apportion any award to be made among the applicants in amounts the Administrator determines to be equitable.

(c) SURRENDER OF OTHER CLAIMS.—No award may be made under subsection (a) unless the applicant surrenders, by means the Administrator determines to be effective, all claims that the applicant may have to receive any compensation (other than the award made under this section) for the use of the contribution or any element thereof at any time by or on behalf of the United States, or by or on behalf of any foreign government pursuant to a treaty or agreement with the United States, within the United States or at any other place.

(d) REPORT AND WAITING PERIOD.—No award may be made under subsection (a) in an amount exceeding $100,000 unless the Administrator transmits to the appropriate committees of Congress a full and complete report concerning the amount and terms of, and the basis for, the proposed award, and a period of 30 calendar days of regular session of Congress expires after receipt of the report by the committees.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3342.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
20136(a)	42 U.S.C. 2458(a).	Pub. L. 85–568, title III, §306, July 29, 1958, 72 Stat. 437.
20136(b)	42 U.S.C. 2458(b) (1st sentence).	
20136(c)	42 U.S.C. 2458(b) (par. (1) of last sentence).	
20136(d)	42 U.S.C. 2458(b) (par. (2) of last sentence).	

In subsections (c) and (d), the words "No award may be made under subsection (a)" are substituted for "No award may be made under subsection (a) with respect to any contribution" for clarity and to eliminate unnecessary words.

§20137. Malpractice and negligence suits against United States

(a) EXCLUSIVE REMEDY.—The remedy against the United States provided by sections 1346(b) and 2672 of title 28, for damages for personal injury, including death, caused by the negligent or wrongful act or omission of any physician, dentist, nurse, pharmacist, or paramedical or other supporting personnel (including medical and dental technicians, nursing assistants, and therapists) of the Administration in the performance of medical, dental, or related health care functions (including clinical studies and investigations) while acting within the scope of such person's duties or employment therein or therefor shall be exclusive of any other civil action or proceeding by reason of the same subject matter against such person (or the estate of such person) whose act or omission gave rise to the action or proceeding.

(b) ATTORNEY GENERAL TO DEFEND ANY CIVIL ACTION OR PROCEEDING FOR MALPRACTICE OR NEGLIGENCE.—The Attorney General shall defend any civil action or proceeding brought in any court against any person referred to in subsection (a) (or the estate of such person) for any such injury. Any such person against whom such civil action or proceeding is brought shall deliver within such time after date of service or knowledge of service as determined by the Attorney General, all process served upon such person or an attested true copy thereof to such person's immediate superior or to whomever was designated by the Administrator to receive such papers. Such person shall promptly furnish copies of the pleading and process therein to the United States Attorney for the district embracing the place wherein the proceeding is brought, to the Attorney General, and to the Administrator.

(c) REMOVAL OF ACTIONS.—Upon a certification by the Attorney General that any person described in subsection (a) was acting in the scope of such person's duties or employment at the time of the incident out of which the suit arose, any such civil action or proceeding commenced in a State court shall be removed without bond at any time before trial by the Attorney General to the district court of the United States of the district and division embracing the place wherein it is pending and the proceeding deemed a tort action brought against the United States under the provisions of title 28, and all references thereto. Should a district court of the United States determine, on a hearing on a motion to remand held before a trial on the merits, that the case so removed is one in which a remedy by suit within the meaning of subsection (a) is not available against the United States, the case shall be remanded to the State court.

(d) COMPROMISE OR SETTLEMENT OF CLAIMS.—The Attorney General may compromise or settle any claim asserted in such civil action or proceeding in the manner provided in section 2677 of title 28, and with the same effect.

(e) APPLICABILITY OF OTHER PROVISIONS OF LAW.—For purposes of this section, the provisions of section 2680(h) of title 28 shall not apply to any cause of action arising out of a negligent or wrongful act or omission in the performance of medical, dental, or related health care functions (including clinical studies and investigations).

(f) LIABILITY INSURANCE FOR PERSONS ASSIGNED TO FOREIGN COUNTRIES OR NON-FEDERAL AGENCIES.—The Administrator or the Administrator's designee may, to the extent that the Administrator or the designee deems appropriate, hold harmless or provide liability insurance for any person described in subsection (a) for damages for personal injury, including death, caused by such person's negligent or wrongful act or omission in the performance of medical, dental, or related health care functions (including clinical studies and investigations) while acting within the scope of such person's duties if such person is assigned to a foreign country or detailed for service with other than a Federal department, agency, or instrumentality or if the circumstances are such as are likely to preclude the remedies of third persons against the United States described in section 2679(b) of title 28, for such damage or injury.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3343.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*

20137	42 U.S.C. 2458a.	Pub. L. 85–568, title III, §307, as added Pub. L. 94–464, §3, Oct. 8, 1976, 90 Stat. 1988.

In subsection (a), the word "hereafter" is omitted as unnecessary.

In subsection (b), in the last sentence, commas are added after "brought" and "Attorney General" for clarity.

In subsection (e), the words "wrongful act or omission" are substituted for "wrongful act of omission" to correct an error in the law.

§20138. Insurance and indemnification

(a) DEFINITIONS.—In this section:

(1) SPACE VEHICLE.—The term "space vehicle" means an object intended for launch, launched, or assembled in outer space, including the space shuttle and other components of a space transportation system, together with related equipment, devices, components, and parts.

(2) THIRD PARTY.—The term "third party" means any person who may institute a claim against a user for death, bodily injury, or loss of or damage to property.

(3) USER.—The term "user" includes anyone who enters into an agreement with the Administration for use of all or a portion of a space vehicle, who owns or provides property to be flown on a space vehicle, or who employs a person to be flown on a space vehicle.

(b) AUTHORIZATION.—The Administration is authorized on such terms and to the extent it may deem appropriate to provide liability insurance for any user of a space vehicle to compensate all or a portion of claims by third parties for death, bodily injury, or loss of or damage to property resulting from activities carried on in connection with the launch, operations, or recovery of the space vehicle. Appropriations available to the Administration may be used to acquire such insurance, but such appropriations shall be reimbursed to the maximum extent practicable by the users under reimbursement policies established pursuant to section 20113 of this title.

(c) INDEMNIFICATION.—Under such regulations in conformity with this section as the Administrator shall prescribe taking into account the availability, cost, and terms of liability insurance, any agreement between the Administration and a user of a space vehicle may provide that the United States will indemnify the user against claims (including reasonable expenses of litigation or settlement) by third parties for death, bodily injury, or loss of or damage to property resulting from activities carried on in connection with the launch, operations, or recovery of the space vehicle, but only to the extent that such claims are not compensated by liability insurance of the user. Such indemnification may be limited to claims resulting from other than the actual negligence or willful misconduct of the user.

(d) TERMS OF INDEMNIFICATION AGREEMENT.—An agreement made under subsection (c) that provides indemnification must also provide for—

(1) notice to the United States of any claim or suit against the user for the death, bodily injury, or loss of or damage to the property; and

(2) control of or assistance in the defense by the United States, at its election, of that suit or claim.

(e) CERTIFICATION OF JUST AND REASONABLE AMOUNT.—No payment may be made under subsection (c) unless the Administrator or the Administrator's designee certifies that the amount is just and reasonable.

(f) PAYMENTS.—Upon the approval by the Administrator, payments under subsection (c) may be made, at the Administrator's election, either from funds available for research and development not otherwise obligated or from funds appropriated for such payments.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3344.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
20138	42 U.S.C. 2458b.	Pub. L. 85–568, title III, §308, as added Pub. L. 96–48, §6(b)(2), Aug. 8, 1979, 93 Stat. 348.

§20139. Insurance for experimental aerospace vehicles

(a) DEFINITIONS.—In this section:

(1) COOPERATING PARTY.—The term "cooperating party" means any person who enters into an agreement with the Administration for the performance of cooperative scientific, aeronautical, or space activities to carry out the purposes of this chapter.

(2) DEVELOPER.—The term "developer" means a United States person (other than a natural person) who—

(A) is a party to an agreement with the Administration for the purpose of developing new technology for an experimental aerospace vehicle;

(B) owns or provides property to be flown or situated on that vehicle; or

(C) employs a natural person to be flown on that vehicle.

(3) EXPERIMENTAL AEROSPACE VEHICLE.—The term "experimental aerospace vehicle" means an object intended to be flown in, or launched into, orbital or suborbital flight for the purpose of demonstrating technologies necessary for a reusable launch vehicle, developed under an agreement between the Administration and a developer.

(4) RELATED ENTITY.—The term "related entity" includes a contractor or subcontractor at any tier, a supplier, a grantee, and an investigator or detailee.

(b) IN GENERAL.—The Administrator may provide liability insurance for, or indemnification to, the developer of an experimental aerospace vehicle developed or used in execution of an agreement between the Administration and the developer.

(c) TERMS AND CONDITIONS.—

(1) IN GENERAL.—Except as otherwise provided in this section, the insurance and indemnification provided by the Administration under subsection (b) to a developer shall be provided on the same terms and conditions as insurance and indemnification is provided by the Administration under section 20138 of this title to the user of a space vehicle.

(2) INSURANCE.—

(A) IN GENERAL.—A developer shall obtain liability insurance or demonstrate financial responsibility in amounts to compensate for the maximum probable loss from claims by—

(i) a third party for death, bodily injury, or property damage, or loss resulting from an activity carried out in connection with the development or use of an experimental aerospace vehicle; and

(ii) the United States Government for damage or loss to Government property resulting from such an activity.

(B) MAXIMUM REQUIRED.—The Administrator shall determine the amount of insurance required, but, except as provided in subparagraph (C), that amount shall not be greater than the amount required under section 50914(a)(3) of this title for a launch. The Administrator shall publish notice of the Administrator's determination and the applicable amount or amounts in the Federal Register within 10 days after making the determination.

(C) INCREASE IN DOLLAR AMOUNTS.—The Administrator may increase the dollar amounts set forth in section 50914(a)(3)(A) of this title for the purpose of applying that section under this section to a developer after consultation with the Comptroller General and such experts and consultants as may be appropriate, and after publishing notice of the increase in the

Federal Register not less than 180 days before the increase goes into effect. The Administrator shall make available for public inspection, not later than the date of publication of such notice, a complete record of any correspondence received by the Administration, and a transcript of any meetings in which the Administration participated, regarding the proposed increase.

(D) SAFETY REVIEW REQUIRED BEFORE ADMINISTRATOR PROVIDES INSURANCE.—The Administrator may not provide liability insurance or indemnification under subsection (b) unless the developer establishes to the satisfaction of the Administrator that appropriate safety procedures and practices are being followed in the development of the experimental aerospace vehicle.

(3) NO INDEMNIFICATION WITHOUT CROSS-WAIVER.—Notwithstanding subsection (b), the Administrator may not indemnify a developer of an experimental aerospace vehicle under this section unless there is an agreement between the Administration and the developer described in subsection (d).

(4) APPLICATION OF CERTAIN PROCEDURES.—If the Administrator requests additional appropriations to make payments under this section, like the payments that may be made under section 20138(c) of this title, then the request for those appropriations shall be made in accordance with the procedures established by subsections (d) and (e) of section 50915 of this title.

(d) CROSS-WAIVERS.—

(1) ADMINISTRATOR AUTHORIZED TO WAIVE.—The Administrator, on behalf of the United States, and its departments, agencies, and instrumentalities, may reciprocally waive claims with a developer or cooperating party and with the related entities of that developer or cooperating party under which each party to the waiver agrees to be responsible, and agrees to ensure that its own related entities are responsible, for damage or loss to its property for which it is responsible, or for losses resulting from any injury or death sustained by its own employees or agents, as a result of activities connected to the agreement or use of the experimental aerospace vehicle.

(2) LIMITATIONS.—

(A) CLAIMS.—A reciprocal waiver under paragraph (1) may not preclude a claim by any natural person (including, but not limited to, a natural person who is an employee of the United States, the developer, the cooperating party, or their respective subcontractors) or that natural person's estate, survivors, or subrogees for injury or death, except with respect to a subrogee that is a party to the waiver or has otherwise agreed to be bound by the terms of the waiver.

(B) LIABILITY FOR NEGLIGENCE.—A reciprocal waiver under paragraph (1) may not absolve any party of liability to any natural person (including, but not limited to, a natural person who is an employee of the United States, the developer, the cooperating party, or their respective subcontractors) or such a natural person's estate, survivors, or subrogees for negligence, except with respect to a subrogee that is a party to the waiver or has otherwise agreed to be bound by the terms of the waiver.

(C) INDEMNIFICATION FOR DAMAGES.—A reciprocal waiver under paragraph (1) may not be used as the basis of a claim by the Administration, or the developer or cooperating party, for indemnification against the other for damages paid to a natural person, or that natural person's estate, survivors, or subrogees, for injury or death sustained by that natural person as a result of activities connected to the agreement or use of the experimental aerospace vehicle.

(D) WILLFUL MISCONDUCT.—A reciprocal waiver under paragraph (1) may not relieve the United States, the developer, the cooperating party, or the related entities of the developer or cooperating party, of liability for damage or loss resulting from willful misconduct.

(3) EFFECT ON PREVIOUS WAIVERS.—This subsection applies to any waiver of claims entered into by the Administration without regard to the date on which the Administration entered into the waiver.

(e) RELATIONSHIP TO OTHER LAWS.—

(1) SECTION 20138.—This section does not apply to any object, transaction, or operation to which section 20138 of this title applies.

(2) SECTION 50919(g)(1).—The Administrator may not provide indemnification to a developer under this section for launches subject to license under section 50919(g)(1) of this title.

(f) TERMINATION.—

(1) IN GENERAL.—The provisions of this section shall terminate on December 31, 2010.

(2) EFFECT OF TERMINATION ON AGREEMENT.—The termination of this section shall not terminate or otherwise affect any cross-waiver agreement, insurance agreement, indemnification agreement, or other agreement entered into under this section, except as may be provided in that agreement.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3345.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
20139	42 U.S.C. 2458c.	Pub. L. 85–568, title III, §309, formerly title III, as added Pub. L. 106–74, title IV, §435(a), Oct. 20, 1999, 113 Stat. 1097; designated §309 and amended Pub. L. 106–391, title III, §324(a)(2), (b), Oct. 30, 2000, 114 Stat. 1599, 1600; Pub. L. 109–155, title VII, §702, Dec. 30, 2005, 119 Stat. 2936.

In subsection (d)(3), the words "without regard to the date on which the Administration entered into the waiver" are substituted for "without regard to whether it was entered into before, on, or after the date of enactment of this Act" to avoid an ambiguity in the law. Literally, the words "the date of enactment of this Act" mean July 29, 1958, the date of enactment of Public Law 85–568. However, the intended meaning of the words "the date of enactment of this Act" is probably October 20, 1999, the date of enactment of Public Law 106–74. The question as to which date is actually intended is rendered inconsequential by the words "before, on, or after".

§20140. Appropriations

(a) AUTHORIZATION.—

(1) IN GENERAL.—There are authorized to be appropriated such sums as may be necessary to carry out this chapter, except that nothing in this chapter shall authorize the appropriation of any amount for—

(A) the acquisition or condemnation of any real property; or

(B) any other item of a capital nature (such as plant or facility acquisition, construction, or expansion) which exceeds $250,000.

(2) AVAILABILITY.—Sums appropriated pursuant to this subsection for the construction of facilities, or for research and development activities, shall remain available until expended.

(b) USE OF FUNDS FOR EMERGENCY REPAIRS OF EXISTING FACILITIES.—Any funds appropriated for the construction of facilities may be used for emergency repairs of existing facilities when such existing facilities are made inoperative by major breakdown, accident, or other circumstances and such repairs are deemed by the Administrator to be of greater urgency than the construction of new facilities.

(c) TERMINATION.—Notwithstanding any other provision of law, the authorization of any

appropriation to the Administration shall expire (unless an earlier expiration is specifically provided) at the close of the third fiscal year following the fiscal year in which the authorization was enacted, to the extent that such appropriation has not theretofore actually been made.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3347.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
20140	42 U.S.C. 2459.	Pub. L. 85–568, title III, §310, formerly §307, July 29, 1958, 72 Stat. 438; Pub. L. 88–113, §6, Sept. 6, 1963, 77 Stat. 144; renumbered §308, Pub. L. 94–464, §3, Oct. 8, 1976, 90 Stat. 1988; renumbered §309, Pub. L. 96–48, §6(b)(1), Aug. 8, 1979, 93 Stat. 348; renumbered §310, Pub. L. 106–391, title III, §324(a)(1), Oct. 30, 2000, 114 Stat. 1599.

§20141. Misuse of agency name and initials

(a) IN GENERAL.—No person (as defined by section 20135(a) of this title) may knowingly use the words "National Aeronautics and Space Administration" or the letters "NASA", or any combination, variation, or colorable imitation of those words or letters either alone or in combination with other words or letters—

(1) as a firm or business name in a manner reasonably calculated to convey the impression that the firm or business has some connection with, endorsement of, or authorization from, the Administration which does not, in fact, exist; or

(2) in connection with any product or service being offered or made available to the public in a manner reasonably calculated to convey the impression that the product or service has the authorization, support, sponsorship, or endorsement of, or the development, use, or manufacture by or on behalf of the Administration which does not, in fact, exist.

(b) CIVIL PROCEEDING TO ENJOIN.—Whenever it appears to the Attorney General that any person is engaged in an act or practice which constitutes or will constitute conduct prohibited by subsection (a), the Attorney General may initiate a civil proceeding in a district court of the United States to enjoin such act or practice.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3348.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
20141	42 U.S.C. 2459b.	Pub. L. 85–568, title III, §311, formerly §310, as added Pub. L. 98–52, title I, §107, July 15, 1983, 97 Stat. 284; renumbered §311, Pub. L. 106–391, title III, §324(a)(1), Oct. 30, 2000, 114 Stat. 1599.

§20142. Contracts regarding expendable launch vehicles

(a) COMMITMENTS BEYOND AVAILABLE APPROPRIATIONS.—The Administrator may enter into contracts for expendable launch vehicle services that are for periods in excess of the period for which funds are otherwise available for obligation, provide for the payment for contingent liability which may accrue in excess of available appropriations in the event the Federal Government for its convenience terminates such contracts, and provide for advance payments reasonably related to launch vehicle and related equipment, fabrication, and acquisition costs, if any such contract limits the amount of the payments that the Government is allowed to make under such contract to amounts provided in advance in appropriation Acts. Such contracts may be limited to sources within the United States when the Administrator determines that such limitation is in the public interest.

(b) TERMINATION IF FUNDS NOT AVAILABLE.—If funds are not available to continue any such contract, the contract shall be terminated for the convenience of the Government, and the costs of such contract shall be paid from appropriations originally available for performance of the contract, from other unobligated appropriations currently available for the procurement of launch services, or from funds appropriated for such payments.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3348.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
20142	42 U.S.C. 2459c.	Pub. L. 85–568, title III, §312, formerly §311, as added Pub. L. 100–147, title I, §117, Oct. 30, 1987, 101 Stat. 867; renumbered §312, Pub. L. 106–391, title III, §324(a)(1), Oct. 30, 2000, 114 Stat. 1599.

In subsection (a), the word "expendable" is substituted for "expendabe" to correct an error in the law.

§20143. Full cost appropriations account structure

(a) ACCOUNTS FOR APPROPRIATIONS.—

(1) DESIGNATION OF 3 ACCOUNTS.—Appropriations for the Administration shall be made in 3 accounts, "Science, Aeronautics, and Education", "Exploration Systems and Space Operations", and an account for amounts appropriated for the necessary expenses of the Office of the Inspector General.

(2) REPROGRAMMING.—Within the Exploration Systems and Space Operations account, no more than 10 percent of the funds for a fiscal year for Exploration Systems may be reprogrammed for Space Operations, and no more than 10 percent of the funds for a fiscal year for Space Operations may be reprogrammed for Exploration Systems. This paragraph shall not apply to reprogramming for the purposes described in subsection (b)(2).

(3) AVAILABILITY.—Appropriations shall remain available for 2 fiscal years, unless otherwise specified in law. Each account shall include the planned full costs of Administration activities.

(b) TRANSFERS AMONG ACCOUNTS.—

(1) IN GENERAL.—To ensure the safe, timely, and successful accomplishment of Administration missions, the Administration may transfer among accounts as necessary, amounts for—

(A) Federal salaries and benefits;

(B) training, travel, and awards;

(C) facility and related costs;

(D) information technology services;

(E) publishing services;
(F) science, engineering, fabricating, and testing services; and
(G) other administrative services.

(2) DISASTER, ACT OF TERRORISM, EMERGENCY RESCUE.—The Administration may also transfer amounts among accounts for the immediate costs of recovering from damage caused by a major disaster (as defined in section 102 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C. 5122)) or by an act of terrorism, or for the immediate costs associated with an emergency rescue of astronauts.

(c) TRANSFER OF UNEXPIRED BALANCES.—The unexpired balances of prior appropriations to the Administration for activities authorized under this chapter may be transferred to the new account established for such activity in subsection (a). Balances so transferred may be merged with funds in the newly established account and thereafter may be accounted for as one fund under the same terms and conditions.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3349.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
20143	42 U.S.C. 2459f.	Pub. L. 85–568, title III, §313, formerly §312, as added Pub. L. 106–377, §1(a)(1) [title IV, §431], Oct. 27, 2000, 114 Stat. 1441, 1441A–56; renumbered §313 and amended, Pub. L. 108–199, div. G, title IV, §417, Jan. 23, 2004, 118 Stat. 415; Pub. L. 108–447, div. I, title IV, §417, Dec. 8, 2004, 118 Stat. 3339; Pub. L. 109–155, title II, §201, Dec. 30, 2005, 119 Stat. 2915.

In subsection (a)(1), the words "for fiscal year 2007 and thereafter" are omitted as unnecessary.

STATUTORY NOTES AND RELATED SUBSIDIARIES

NOTICE OF REPROGRAMMING OR REORGANIZATION

Pub. L. 106–391, title III, §311, Oct. 30, 2000, 114 Stat. 1594, provided that:

"(a) NOTICE OF REPROGRAMMING.—If any funds authorized by this Act [see Tables for classification] are subject to a reprogramming action that requires notice to be provided to the Appropriations Committees of the House of Representatives and the Senate, notice of such action shall concurrently be provided to the Committee on Science [now Committee on Science, Space, and Technology] of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate.

"(b) NOTICE OF REORGANIZATION.—The Administrator [of the National Aeronautics and Space Administration] shall provide notice to the Committees on Science [now Science, Space, and Technology] and Appropriations of the House of Representatives, and the Committees on Commerce, Science, and Transportation and Appropriations of the Senate, not later than 30 days before any major reorganization of any program, project, or activity of the National Aeronautics and Space Administration."

§20144. Prize authority

(a) IN GENERAL.—The Administration may carry out a program to competitively award cash prizes to stimulate innovation in basic and applied research, technology development, and prototype

demonstration that have the potential for application to the performance of the space and aeronautical activities of the Administration. The Administration may carry out a program to award prizes only in conformity with this section.

(b) TOPICS.—In selecting topics for prize competitions, the Administrator shall consult widely both within and outside the Federal Government, and may empanel advisory committees. The Administrator shall give consideration to prize goals such as the demonstration of the ability to provide energy to the lunar surface from space-based solar power systems, demonstration of innovative near-Earth object survey and deflection strategies, and innovative approaches to improving the safety and efficiency of aviation systems.

(c) ADVERTISING.—The Administrator shall widely advertise prize competitions to encourage participation.

(d) REQUIREMENTS AND REGISTRATION.—For each prize competition, the Administrator shall publish a notice in the Federal Register announcing the subject of the competition, the rules for being eligible to participate in the competition, the amount of the prize, and the basis on which a winner will be selected.

(e) ELIGIBILITY.—To be eligible to win a prize under this section, an individual or entity—

(1) shall have registered to participate in the competition pursuant to any rules promulgated by the Administrator under subsection (d);

(2) shall have complied with all the requirements under this section;

(3) in the case of a private entity, shall be incorporated in and maintain a primary place of business in the United States, and in the case of an individual, whether participating singly or in a group, shall be a citizen or permanent resident of the United States; and

(4) shall not be a Federal entity or Federal employee acting within the scope of their employment.

(f) LIABILITY.—

(1) ASSUMPTION OF RISK.—Registered participants must agree to assume any and all risks and waive claims against the Federal Government and its related entities, except in the case of willful misconduct, for any injury, death, damage, or loss of property, revenue, or profits, whether direct, indirect, or consequential, arising from their participation in a competition, whether such injury, death, damage, or loss arises through negligence or otherwise. For the purposes of this paragraph, the term "related entity" means a contractor or subcontractor at any tier, and a supplier, user, customer, cooperating party, grantee, investigator, or detailee.

(2) LIABILITY INSURANCE.—Participants must obtain liability insurance or demonstrate financial responsibility, in amounts determined by the Administrator, for claims by—

(A) a third party for death, bodily injury, or property damage, or loss resulting from an activity carried out in connection with participation in a competition, with the Federal Government named as an additional insured under the registered participant's insurance policy and registered participants agreeing to indemnify the Federal Government against third party claims for damages arising from or related to competition activities; and

(B) the Federal Government for damage or loss to Government property resulting from such an activity.

(g) JUDGES.—For each competition, the Administration, either directly or through an agreement under subsection (h), shall assemble a panel of qualified judges to select the winner or winners of the prize competition on the basis described pursuant to subsection (d). Judges for each competition shall include individuals from outside the Administration, including from the private sector. A judge may not—

(1) have personal or financial interests in, or be an employee, officer, director, or agent of any entity that is a registered participant in a competition; or

(2) have a familial or financial relationship with an individual who is a registered participant.

(h) ADMINISTERING THE COMPETITION.—The Administrator may enter into an agreement

with a private, nonprofit entity to administer the prize competition, subject to the provisions of this section.

(i) FUNDING.—

(1) SOURCES.—Prizes under this section may consist of Federal appropriated funds and funds provided by the private sector for such cash prizes. The Administrator may accept funds from other Federal agencies for such cash prizes. The Administrator may not give any special consideration to any private sector entity in return for a donation.

(2) AVAILABILITY.—

(A) DEFINITION OF PROVISIONS KNOWN AS THE ANTI-DEFICIENCY ACT.—In this paragraph, the term "provisions known as the Anti-Deficiency Act" means sections 1341, 1342, 1349(a), 1350, 1351, 1511, 1512, 1513, 1514, 1515, 1516, 1517, 1518, and 1519 of title 31.

(B) IN GENERAL.—Notwithstanding any other provision of law, funds appropriated for prize awards under this section shall remain available until expended, and may be transferred, reprogrammed, or expended for other purposes only after the expiration of 10 fiscal years after the fiscal year for which the funds were originally appropriated. No provision in this section permits obligation or payment of funds in violation of the provisions known as the Anti-Deficiency Act.

(3) APPROPRIATION OR COMMITMENT OF FUNDS REQUIRED BEFORE ANNOUNCEMENT OF PRIZE OR INCREASE.—

(A) IN GENERAL.—No prize may be announced under subsection (d) until all the funds needed to pay out the announced amount of the prize have been appropriated or committed in writing by a private source.

(B) INCREASE.—The Administrator may increase the amount of a prize after an initial announcement is made under subsection (d) if—

(i) notice of the increase is provided in the same manner as the initial notice of the prize; and

(ii) the funds needed to pay out the announced amount of the increase have been appropriated or committed in writing by a private source.

(4) NOTICE TO COMMITTEES FOR PRIZE GREATER THAN $50,000,000.—No prize competition under this section may offer a prize in an amount greater than $50,000,000 unless 30 days have elapsed after written notice has been transmitted to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate.

(5) APPROVAL OF ADMINISTRATOR FOR PRIZE GREATER THAN $1,000,000.—No prize competition under this section may result in the award of more than $1,000,000 in cash prizes without the approval of the Administrator.

(j) USE OF ADMINISTRATION NAME OR INSIGNIA.—A registered participant in a competition under this section may use the Administration's name, initials, or insignia only after prior review and written approval by the Administration.

(k) COMPLIANCE WITH EXISTING LAW.—The Federal Government shall not, by virtue of offering or providing a prize under this section, be responsible for compliance by registered participants in a prize competition with Federal law, including licensing, export control, and non-proliferation laws, and related regulations.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3350; Pub. L. 111–358, title I, §105(b), Jan. 4, 2011, 124 Stat. 3993.)

AMENDMENT NOT SHOWN IN TEXT

This section was derived from section 2459f–1 of Title 42, The Public Health and Welfare, which was amended by Pub. L. 111–358, title I, §105(b), Jan. 4, 2011, 124 Stat. 3993. For applicability of

this amendment to this section, see section 5(b) of Pub. L. 111–314, set out as a Transitional and Savings Provisions note preceding section 10101 of this title. Former section 2459f–1 of Title 42 was amended by striking out "The Administration may carry out a program to award prizes only in conformity with this section."

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
20144	42 U.S.C. 2459f–1.	Pub. L. 85–568, title III, §314, as added Pub. L. 109–155, title I, §104, Dec. 30, 2005, 119 Stat. 2910; Pub. L. 110–422, title XI, §1105(b), Oct. 15, 2008, 122 Stat. 4809.

In subsection (i)(2), subparagraph (A) is added, and the words "provisions known as the Anti-Deficiency Act" are substituted for "the Anti-Deficiency Act (31 U.S.C. 1341)", for clarity.

In subsection (i)(4), the words "Committee on Science and Technology" are substituted for "Committee on Science" on authority of Rule X(1)(o) of the Rules of the House of Representatives, adopted by House Resolution No. 6 (110th Congress, January 5, 2007).

STATUTORY NOTES AND RELATED SUBSIDIARIES

CHANGE OF NAME

Committee on Science and Technology of House of Representatives changed to Committee on Science, Space, and Technology of House of Representatives by House Resolution No. 5, One Hundred Twelfth Congress, Jan. 5, 2011.

AVAILABILITY OF FUNDS

Pub. L. 119–74, div. A, title III, Jan. 23, 2026, 140 Stat. 43, provided that: "Funds for any announced prize otherwise authorized shall remain available, without fiscal year limitation, until a prize is claimed or the offer is withdrawn."

Similar provisions were contained in the following prior appropriation acts:

Pub. L. 118–42, div. C, title III, Mar. 9, 2024, 138 Stat. 160.

Pub. L. 117–328, div. B, title III, Dec. 29, 2022, 136 Stat. 4548.

Pub. L. 117–103, div. B, title III, Mar. 15, 2022, 136 Stat. 138.

Pub. L. 116–260, div. B, title III, Dec. 27, 2020, 134 Stat. 1270.

Pub. L. 116–93, div. B, title III, Dec. 20, 2019, 133 Stat. 2419.

Pub. L. 116–6, div. C, title III, Feb. 15, 2019, 133 Stat. 123.

Pub. L. 115–141, div. B, title III, Mar. 23, 2018, 132 Stat. 431.

PURPOSE

Pub. L. 110–422, title XI, §1105(a), Oct. 15, 2008, 122 Stat. 4809, provided that: "Prizes can play a useful role in encouraging innovation in the development of technologies and products that can assist NASA [National Aeronautics and Space Administration] in its aeronautics and space activities, and the use of such prizes by NASA should be encouraged."

§20145. Lease of non-excess property

(a) IN GENERAL.—The Administrator may enter into a lease under this section with any person or entity (including another department or agency of the Federal Government or an entity of a State or local government) with regard to any non-excess real property and related personal property under the jurisdiction of the Administrator.

(b) CASH CONSIDERATION.—

(1) FAIR MARKET VALUE.—(A) A person or entity entering into a lease under this section shall provide cash consideration for the lease at fair market value as determined by the

Administrator.

(B) Notwithstanding subparagraph (A), the Administrator may accept in-kind consideration for leases entered into for the purpose of developing renewable energy production facilities.

(2) UTILIZATION.—

(A) IN GENERAL.—The Administrator may utilize amounts of cash consideration received under this subsection for a lease entered into under this section to cover the full costs to the Administration in connection with the lease. These funds shall remain available until expended.

(B) CAPITAL REVITALIZATION AND IMPROVEMENTS.—Of any amounts of cash consideration received under this subsection that are not utilized in accordance with subparagraph (A)—

(i) 35 percent shall be deposited in a capital asset account to be established by the Administrator, shall be available for maintenance, capital revitalization, and improvements of the real property assets and related personal property under the jurisdiction of the Administrator, and shall remain available until expended; and

(ii) the remaining 65 percent shall be available to the respective center or facility of the Administration engaged in the lease of nonexcess real property, and shall remain available until expended for maintenance, capital revitalization, and improvements of the real property assets and related personal property at the respective center or facility subject to the concurrence of the Administrator.

(C) NO UTILIZATION FOR DAILY OPERATING COSTS.—Amounts utilized under subparagraph (B) may not be utilized for daily operating costs.

(c) ADDITIONAL TERMS AND CONDITIONS.—The Administrator may require such terms and conditions in connection with a lease under this section as the Administrator considers appropriate to protect the interests of the United States.

(d) RELATIONSHIP TO OTHER LEASE AUTHORITY.—The authority under this section to lease property of the Administration is in addition to any other authority to lease property of the Administration under law.

(e) LEASE RESTRICTIONS.—

(1) NO LEASE BACK OR OTHER CONTRACT.—The Administration is not authorized to lease back property under this section during the term of the out-lease or enter into other contracts with the lessee respecting the property.

(2) CERTIFICATION THAT OUT-LEASE WILL NOT HAVE NEGATIVE IMPACT ON MISSION.—The Administration is not authorized to enter into an out-lease under this section unless the Administrator certifies that the out-lease will not have a negative impact on the mission of the Administration.

(f) REPORTING REQUIREMENTS.—The Administrator shall submit an annual report by January 31st of each year. The report shall include the following:

(1) VALUE OF ARRANGEMENTS AND EXPENDITURES OF REVENUES.—Information that identifies and quantifies the value of the arrangements and expenditures of revenues received under this section.

(2) AVAILABILITY AND USE OF FUNDS FOR OPERATING PLAN.—The availability and use of funds received under this section for the Administration's operating plan.

(3) ANNUAL AND CUMULATIVE NUMBER OF LEASES.—The annual and cumulative number of leases entered into under this section, by National Aeronautics and Space Administration center and facility.

(4) ESTIMATED COST SAVINGS.—For each active lease agreement under this section, the estimated cost savings to the Administration resulting from reduced maintenance, operating, and associated costs in the previous fiscal year.

(5) OTHER QUANTIFIABLE BENEFITS.—Other quantifiable benefits, including additional cost savings not included under paragraph (4), to the Administration resulting from the use of

leases under this section.

(g) REPORT ON ENHANCED-USE LEASING REQUIREMENTS.—Not later than 270 days after the date of the enactment of the National Aeronautics and Space Administration Authorization Act of 2022, the Administrator shall prepare and submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives a report on existing requirements for applicants seeking a lease under this section, including—

(1) any requirement related to the involvement of foreign entities, foreign entity ownership, and foreign entity investment; and

(2) at the discretion of the Administrator, any other requirement related to the protection and security of Administration missions and facilities.

(h) SUNSET.—The authority to enter into leases under this section shall expire December 31, 2032. The expiration under this subsection of authority to enter into leases under this section shall not affect the validity or term of leases or the Administration's retention of proceeds from leases entered into under this section before the expiration of the authority.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3352; Pub. L. 112–55, div. B, title III, Nov. 18, 2011, 125 Stat. 626; Pub. L. 115–10, title VIII, §832, Mar. 21, 2017, 131 Stat. 67; Pub. L. 115–403, §2, Dec. 31, 2018, 132 Stat. 5348; Pub. L. 116–94, div. I, title VI, §602, Dec. 20, 2019, 133 Stat. 3028; Pub. L. 117–103, div. HH, title II, §203, Mar. 15, 2022, 136 Stat. 1113; Pub. L. 117–167, div. B, title VII, §10862, Aug. 9, 2022, 136 Stat. 1756.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
20145	42 U.S.C. 2459j.	Pub. L. 85–568, title III, §315, as added Pub. L. 108–7, div. K, title IV, §418, Feb. 20, 2003, 117 Stat. 525; Pub. L. 110–161, div. B, title V, §533(a)–(e), Dec. 26, 2007, 121 Stat. 1931; Pub. L. 110–422, title XI, §1117(c), (d), Oct. 15, 2008, 122 Stat. 4814.

In subsection (f)(2), the word "Administration's" is substituted for "Agency's" for clarity.

In subsection (g), the words "10 years after December 26, 2007" are substituted for "on the date that is ten years after the date of the enactment of the Commerce, Justice, Science, and Related Agencies Appropriations Act of 2008" for consistency and to reflect the date of enactment of the Commerce, Justice, Science, and Related Agencies Appropriations Act, 2008 (Public Law 110–161, div. B, 121 Stat. 1884).

EDITORIAL NOTES

REFERENCES IN TEXT

The date of the enactment of the National Aeronautics and Space Administration Authorization Act of 2022, referred to in subsec. (g), is the date of enactment of title VII of div. B of Pub. L. 117–167, which was approved Aug. 9, 2022.

AMENDMENTS

2022—Subsec. (f)(3) to (5). Pub. L. 117–167, §10862(b), added pars. (3) to (5).
Subsec. (g). Pub. L. 117–167, §10862(c)(2), added subsec. (g). Former subsec. (g) redesignated (h).
Pub. L. 117–167, §10862(a), substituted "December 31, 2032" for "December 31, 2022".
Pub. L. 117–103 substituted "December 31, 2022" for "December 31, 2021".
Subsec. (h). Pub. L. 117–167, §10862(c)(1), redesignated subsec. (g) as (h).
2019—Subsec. (g). Pub. L. 116–94 substituted "December 31, 2021" for "December 31, 2019".

2018—Subsec. (g). Pub. L. 115–403 substituted "December 31, 2019" for "December 31, 2018".

2017—Subsec. (g). Pub. L. 115–10 substituted "December 31, 2018" for "10 years after December 26, 2007".

2011—Subsec. (b)(1). Pub. L. 112–55 designated existing provisions as subpar. (A) and added subpar. (B).

STATUTORY NOTES AND RELATED SUBSIDIARIES

FINDINGS

Pub. L. 117–103, div. HH, title II, §202, Mar. 15, 2022, 136 Stat. 1113, provided that: "Congress finds the following:

"(1) NASA uses enhanced-use leasing to enter into agreements with private sector entities, State and local governments, academic institutions, and other Federal agencies for lease of non-excess, underutilized NASA properties and facilities.

"(2) NASA uses enhanced-use leasing authority to support responsible management of its real property, including to improve the use of underutilized property for activities that are compatible with NASA's mission and to reduce facility operating and maintenance costs.

"(3) In fiscal year 2019, under its enhanced-use lease authority, NASA leased 65 real properties.

"(4) In fiscal year 2019, NASA's use of enhanced-use leasing resulted in the collection of $10,843,025.77 in net revenue.

"(5) In fiscal year 2019, NASA used a portion of its enhanced-use leasing revenues for repairs of facility control systems such as lighting and heating, ventilation, and air conditioning.

"(6) NASA's use of enhanced-use leasing authority can contribute to reducing the rate of increase of the Agency's overall deferred maintenance cost."

DEPOSIT OF PROCEEDS

Pub. L. 113–6, div. B, title III, Mar. 26, 2013, 127 Stat. 263, provided in part: "That hereafter, notwithstanding section 315 of the National Aeronautics and Space Act of 1958 (see 51 U.S.C. 20145), all proceeds from leases entered into under that section shall be deposited into this account [funds appropriated under the headings 'NATIONAL AERONAUTICS AND SPACE ADMINISTRATION' and ' CONSTRUCTION AND ENVIRONMENTAL COMPLIANCE AND RESTORATION' of title III of div. B of Pub. L. 113–6]: *Provided further*, That such proceeds shall be available for a period of 5 years to the extent and in amounts as provided in annual appropriations Acts".

Similar provisions were contained in the following appropriation acts:

Pub. L. 119–74, div. A, title III, Jan. 23, 2026, 140 Stat. 43.
Pub. L. 118–42, div. C, title III, Mar. 9, 2024, 138 Stat. 160.
Pub. L. 117–328, div. B, title III, Dec. 29, 2022, 136 Stat. 4548.
Pub. L. 117–103, div. B, title III, Mar. 15, 2022, 136 Stat. 137.
Pub. L. 116–260, div. B, title III, Dec. 27, 2020, 134 Stat. 1270.
Pub. L. 116–93, div. B, title III, Dec. 20, 2019, 133 Stat. 2418.
Pub. L. 116–6, div. C, title III, Feb. 15, 2019, 133 Stat. 123.
Pub. L. 115–141, div. B, title III, Mar. 23, 2018, 132 Stat. 431.
Pub. L. 115–31, div. B, title III, May 5, 2017, 131 Stat. 214.
Pub. L. 114–113, div. B, title III, Dec. 18, 2015, 129 Stat. 2317.
Pub. L. 113–235, div. B, title III, Dec. 16, 2014, 128 Stat. 2203.
Pub. L. 113–76, div. B, title III, Jan. 17, 2014, 128 Stat. 72.
Pub. L. 112–55, div. B, title III, Nov. 18, 2011, 125 Stat. 625.
Pub. L. 111–117, div. B, title III, Dec. 16, 2009, 123 Stat. 3144.

§20146. Retrocession of jurisdiction

(a) DEFINITION OF STATE.—In this section, the term "State" means any of the several States, the District of Columbia, the Commonwealth of Puerto Rico, the United States Virgin Islands, Guam, American Samoa, the Northern Mariana Islands, and any other commonwealth, territory, or possession of the United States.

(b) RELINQUISHING LEGISLATIVE JURISDICTION.—Notwithstanding any other provision of law, the Administrator may relinquish to a State all or part of the legislative jurisdiction of the

United States over lands or interests under the control of the Administrator in that State.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3353.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
20146	42 U.S.C. 2459k.	Pub. L. 85–568, title III, §316, as added Pub. L. 109–155, title VII, §701, Dec. 30, 2005, 119 Stat. 2935.

§20147. Recovery and disposition authority

(a) DEFINITIONS.—In this section:

(1) ADMINISTRATION HUMAN SPACE FLIGHT VEHICLE.—The term "Administration human space flight vehicle" means a space vehicle, as defined in section 20138(a) of this title, that—

(A) is intended to transport one or more persons;

(B) is designed to operate in outer space; and

(C) is either—

(i) owned by the Administration; or

(ii) owned by an Administration contractor or cooperating party and operated as part of an Administration mission or a joint mission with the Administration.

(2) CREWMEMBER.—The term "crewmember" means an astronaut or other person assigned to an Administration human space flight vehicle.

(b) CONTROL OF REMAINS.—

(1) IN GENERAL.—Subject to paragraphs (2) and (3), when there is an accident or mishap resulting in the death of a crewmember of an Administration human space flight vehicle, the Administrator may take control over the remains of the crewmember and order autopsies and other scientific or medical tests.

(2) TREATMENT.—Each crewmember shall provide the Administrator with the crewmember's preferences regarding the treatment accorded to the crewmember's remains and the Administrator shall, to the extent possible, respect those stated preferences.

(3) CONSTRUCTION.—This section shall not be construed to permit the Administrator to interfere with any Federal investigation of a mishap or accident.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3353.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
20147	42 U.S.C. 2459*l*.	Pub. L. 85–568, title III, §317, as added Pub. L. 109–155, title VII, §705, Dec. 30, 2005, 119 Stat. 2936.

§20148. Indemnification; NASA launch services and reentry services

(a) IN GENERAL.—Under such regulations in conformity with this section as the Administrator shall prescribe taking into account the availability, cost, and terms of liability insurance, any contract between the Administration and a provider may provide that the United States will indemnify the

provider against successful claims (including reasonable expenses of litigation or settlement) by third parties for death, bodily injury, or loss of or damage to property resulting from launch services and reentry services carried out under the contract that the contract defines as unusually hazardous or nuclear in nature, but only to the extent the total amount of successful claims related to the activities under the contract—

(1) is more than the amount of insurance or demonstration of financial responsibility described in subsection (c)(3); and

(2) is not more than the amount specified in section 50915(a)(1)(B).

(b) TERMS OF INDEMNIFICATION.—A contract made under subsection (a) that provides indemnification shall provide for—

(1) notice to the United States of any claim or suit against the provider for death, bodily injury, or loss of or damage to property; and

(2) control of or assistance in the defense by the United States, at its election, of that claim or suit and approval of any settlement.

(c) LIABILITY INSURANCE OF THE PROVIDER.—

(1) IN GENERAL.—The provider under subsection (a) shall obtain liability insurance or demonstrate financial responsibility in amounts to compensate for the maximum probable loss from claims by—

(A) a third party for death, bodily injury, or property damage or loss resulting from a launch service or reentry service carried out under the contract; and

(B) the United States Government for damage or loss to Government property resulting from a launch service or reentry service carried out under the contract.

(2) MAXIMUM PROBABLE LOSSES.—

(A) IN GENERAL.—The Administrator shall determine the maximum probable losses under subparagraphs (A) and (B) of paragraph (1) not later than 90 days after the date that the provider requests such a determination and submits all information the Administrator requires.

(B) REVISIONS.—The Administrator may revise a determination under subparagraph (A) of this paragraph if the Administrator determines the revision is warranted based on new information.

(3) AMOUNT OF INSURANCE.—For the total claims related to one launch or reentry, a provider shall not be required to obtain insurance or demonstrate financial responsibility of more than—

(A)(i) $500,000,000 under paragraph (1)(A); or

(ii) $100,000,000 under paragraph (1)(B); or

(B) the maximum liability insurance available on the world market at reasonable cost.

(4) COVERAGE.—An insurance policy or demonstration of financial responsibility under this subsection shall protect the following, to the extent of their potential liability for involvement in launch services or reentry services:

(A) The Government.

(B) Personnel of the Government.

(C) Related entities of the Government.

(D) Related entities of the provider.

(E) Government astronauts.

(d) NO INDEMNIFICATION WITHOUT CROSS-WAIVER.—Notwithstanding subsection (a), the Administrator may not indemnify a provider under this section unless there is a cross-waiver between the Administration and the provider as described in subsection (e).

(e) CROSS-WAIVERS.—

(1) IN GENERAL.—The Administrator, on behalf of the United States and its departments, agencies, and instrumentalities, shall reciprocally waive claims with a provider under which each party to the waiver agrees to be responsible, and agrees to ensure that its related entities are responsible, for damage or loss to its property, or for losses resulting from any injury or death sustained by its employees or agents, as a result of activities arising out of the performance of the contract.

(2) LIMITATION.—The waiver made by the Government under paragraph (1) shall apply only to the extent that the claims are more than the amount of insurance or demonstration of financial responsibility required under subsection (c)(1)(B).

(f) WILLFUL MISCONDUCT.—Indemnification under subsection (a) may exclude claims resulting from the willful misconduct of the provider or its related entities.

(g) CERTIFICATION OF JUST AND REASONABLE AMOUNT.—No payment may be made under subsection (a) unless the Administrator or the Administrator's designee certifies that the amount is just and reasonable.

(h) PAYMENTS.—

(1) IN GENERAL.—Upon the approval by the Administrator, payments under subsection (a) may be made from funds appropriated for such payments.

(2) LIMITATION.—The Administrator shall not approve payments under paragraph (1), except to the extent provided in an appropriation law or to the extent additional legislative authority is enacted providing for such payments.

(3) ADDITIONAL APPROPRIATIONS.—If the Administrator requests additional appropriations to make payments under this subsection, then the request for those appropriations shall be made in accordance with the procedures established under section 50915.

(i) RULES OF CONSTRUCTION.—

(1) IN GENERAL.—The authority to indemnify under this section shall not create any rights in third persons that would not otherwise exist by law.

(2) OTHER AUTHORITY.—Nothing in this section may be construed as prohibiting the Administrator from indemnifying a provider or any other NASA contractor under other law, including under Public Law 85–804 (50 U.S.C. 1431 et seq.).

(3) ANTI-DEFICIENCY ACT.—Notwithstanding any other provision of this section—

(A) all obligations under this section are subject to the availability of funds; and

(B) nothing in this section may be construed to require obligation or payment of funds in violation of sections 1341, 1342, 1349 through 1351, and 1511 through 1519 of title 31, United States Code (commonly referred to as the "Anti-Deficiency Act").

(j) RELATIONSHIP TO OTHER LAWS.—The Administrator may not provide indemnification under this section for an activity that requires a license or permit under chapter 509.

(k) DEFINITIONS.—In this section:

(1) GOVERNMENT ASTRONAUT.—The term "government astronaut" has the meaning given the term in section 50902.

(2) LAUNCH SERVICES.—The term "launch services" has the meaning given the term in section 50902.

(3) PROVIDER.—The term "provider" means a person that provides domestic launch services or domestic reentry services to the Government.

(4) REENTRY SERVICES.—The term "reentry services" has the meaning given the term in section 50902.

(5) RELATED ENTITY.—The term "related entity" means a contractor or subcontractor.

(6) THIRD PARTY.—The term "third party" means a person except—

(A) the United States Government;

(B) related entities of the Government involved in launch services or reentry services;

(C) a provider;

(D) related entities of the provider involved in launch services or reentry services; or
(E) a government astronaut.

(Added Pub. L. 115–10, title III, §305(a), Mar. 21, 2017, 131 Stat. 30.)

EDITORIAL NOTES

REFERENCES IN TEXT

Public Law 85–804, referred to in subsec. (i)(2), is Pub. L. 85–804, Aug. 28, 1958, 72 Stat. 972, which is classified generally to chapter 29 (§1431 et seq.) of Title 50, War and National Defense. For complete classification of this Act to the Code, see Tables.

§20149. Medical monitoring and research relating to human space flight

(a) IN GENERAL.—Notwithstanding any other provision of law, the Administrator may provide for—

(1) the medical monitoring and diagnosis of a former United States government astronaut or a former payload specialist for conditions that the Administrator considers potentially associated with human space flight; and

(2) the treatment of a former United States government astronaut or a former payload specialist for conditions that the Administrator considers associated with human space flight, including scientific and medical tests for psychological and medical conditions.

(b) REQUIREMENTS.—

(1) NO COST SHARING.—The medical monitoring, diagnosis, or treatment described in subsection (a) shall be provided without any deductible, copayment, or other cost sharing obligation.

(2) ACCESS TO LOCAL SERVICES.—The medical monitoring, diagnosis, and treatment described in subsection (a) may be provided by a local health care provider if it is unadvisable due to the health of the applicable former United States government astronaut or former payload specialist for that former United States government astronaut or former payload specialist to travel to the Lyndon B. Johnson Space Center, as determined by the Administrator.

(3) SECONDARY PAYMENT.—Payment or reimbursement for the medical monitoring, diagnosis, or treatment described in subsection (a) shall be secondary to any obligation of the United States Government or any third party under any other provision of law or contractual agreement to pay for or provide such medical monitoring, diagnosis, or treatment. Any costs for items and services that may be provided by the Administrator for medical monitoring, diagnosis, or treatment under subsection (a) that are not paid for or provided under such other provision of law or contractual agreement, due to the application of deductibles, copayments, coinsurance, other cost sharing, or otherwise, are reimbursable by the Administrator on behalf of the former United States government astronaut or former payload specialist involved to the extent such items or services are authorized to be provided by the Administrator for such medical monitoring, diagnosis, or treatment under subsection (a).

(4) CONDITIONAL PAYMENT.—The Administrator may provide for conditional payments for or provide medical monitoring, diagnosis, or treatment described in subsection (a) that is obligated to be paid for or provided by the United States or any third party under any other provision of law or contractual agreement to pay for or provide such medical monitoring, diagnosis, or treatment if—

(A) payment for (or the provision of) such medical monitoring, diagnosis, or treatment services has not been made (or provided) or cannot reasonably be expected to be made (or provided) promptly by the United States or such third party, respectively; and

(B) such payment (or such provision of services) by the Administrator is conditioned on reimbursement by the United States or such third party, respectively, for such medical monitoring, diagnosis, or treatment.

(c) EXCLUSIONS.—The Administrator may not—

(1) provide for medical monitoring or diagnosis of a former United States government astronaut or former payload specialist under subsection (a) for any psychological or medical condition that is not potentially associated with human space flight;

(2) provide for treatment of a former United States government astronaut or former payload specialist under subsection (a) for any psychological or medical condition that is not associated with human space flight; or

(3) require a former United States government astronaut or former payload specialist to participate in the medical monitoring, diagnosis, or treatment authorized under subsection (a).

(d) PRIVACY.—Consistent with applicable provisions of Federal law relating to privacy, the Administrator shall protect the privacy of all medical records generated under subsection (a) and accessible to the Administration.

(e) REGULATIONS.—The Administrator shall promulgate such regulations as are necessary to carry out this section.

(f) DEFINITION OF UNITED STATES GOVERNMENT ASTRONAUT.—In this section, the term "United States government astronaut" has the meaning given the term "government astronaut" in section 50902, except it does not include an individual who is an international partner astronaut.

(g) DATA USE AND DISCLOSURE.—The Administrator may use or disclose data acquired in the course of medical monitoring, diagnosis, or treatment of a former United States government astronaut or a former payload specialist under subsection (a), in accordance with subsection (d). Former United States government astronaut or former payload specialist participation in medical monitoring, diagnosis, or treatment under subsection (a) shall constitute consent for the Administrator to use or disclose such data.

(Added Pub. L. 115–10, title IV, §443(a), Mar. 21, 2017, 131 Stat. 45.)

STATUTORY NOTES AND RELATED SUBSIDIARIES

ANNUAL REPORTS

Pub. L. 115–10, title IV, §443(c), Mar. 21, 2017, 131 Stat. 47, provided that:

"(1) IN GENERAL.—Each fiscal year, not later than the date of submission of the President's annual budget request for that fiscal year under section 1105 of title 31, United States Code, the Administrator [of the National Aeronautics and Space Administration] shall publish a report, in accordance with applicable Federal privacy laws, on the activities of the Administration [National Aeronautics and Space Administration] under section 20149 of title 51, United States Code.

"(2) CONTENTS.—Each report under paragraph (1) shall include a detailed cost accounting of the Administration's activities under section 20149 of title 51, United States Code, and a 5-year budget estimate.

"(3) SUBMISSION TO CONGRESS.—The Administrator shall submit to the appropriate committees of Congress [Committee on Science, Space, and Technology of the House of Representatives and Committee on Commerce, Science, and Transportation of the Senate] each report under paragraph (1) not later than the date of submission of the President's annual budget request for that fiscal year under section 1105 of title 31, United States Code."

INSPECTOR GENERAL AUDIT

Pub. L. 115–10, title IV, §443(f), Mar. 21, 2017, 131 Stat. 47, provided that: "The Inspector General of NASA [National Aeronautics and Space Administration] shall periodically audit or review, as the Inspector General considers necessary to prevent waste, fraud, and abuse, the activities of the Administration [National Aeronautics and Space Administration] under section 20149 of title 51, United States Code."

SUBCHAPTER IV—UPPER ATMOSPHERE RESEARCH

§20161. Congressional declaration of purpose and policy

(a) PURPOSE.—The purpose of this subchapter is to authorize and direct the Administration to develop and carry out a comprehensive program of research, technology, and monitoring of the phenomena of the upper atmosphere so as to provide for an understanding of and to maintain the chemical and physical integrity of the Earth's upper atmosphere.

(b) POLICY.—Congress declares that it is the policy of the United States to undertake an immediate and appropriate research, technology, and monitoring program that will provide for understanding the physics and chemistry of the Earth's upper atmosphere.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3354.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
20161	42 U.S.C. 2481.	Pub. L. 85–568, title IV, §401, as added Pub. L. 94–39, §8, June 19, 1975, 89 Stat. 222.

§20162. Definition of upper atmosphere

In this subchapter, the term "upper atmosphere" means that portion of the Earth's sensible atmosphere above the troposphere.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3354.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
20162	42 U.S.C. 2482.	Pub. L. 85–568, title IV, §402, as added Pub. L. 94–39, §8, June 19, 1975, 89 Stat. 222.

§20163. Program authorized

(a) IN GENERAL.—In order to carry out the purposes of this subchapter, the Administration, in cooperation with other Federal agencies, shall initiate and carry out a program of research, technology, monitoring, and other appropriate activities directed to understand the physics and chemistry of the upper atmosphere.

(b) ACTIVITIES.—In carrying out the provisions of this subchapter, the Administration shall—

(1) arrange for participation by the scientific and engineering community, of both the Nation's industrial organizations and institutions of higher education, in planning and carrying out appropriate research, in developing necessary technology, and in making necessary observations and measurements;

(2) provide, by way of grant, contract, scholarships, or other arrangements, to the maximum extent practicable and consistent with other laws, for the widest practicable and appropriate participation of the scientific and engineering community in the program authorized by this subchapter; and

(3) make all results of the program authorized by this subchapter available to the appropriate regulatory agencies and provide for the widest practicable dissemination of such results.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3354.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
20163	42 U.S.C. 2483.	Pub. L. 85–568, title IV, §403, as added Pub. L. 94–39, §8, June 19, 1975, 89 Stat. 222.

§20164. International cooperation

In carrying out the provisions of this subchapter, the Administration, subject to the direction of the President and after consultation with the Secretary of State, shall make every effort to enlist the support and cooperation of appropriate scientists and engineers of other countries and international organizations.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3355.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
20164	42 U.S.C. 2484.	Pub. L. 85–568, title IV, §404, as added Pub. L. 94–39, §8, June 19, 1975, 89 Stat. 223.

CHAPTER 203—RESPONSIBILITIES AND VISION

Sec.

20301. General responsibilities.
20302. Vision for space exploration.
20303. Contribution to innovation.
20304. Basic research enhancement.
20305. National Academies decadal surveys.
20306. Special appropriations for Mars missions, Artemis missions, and Moon to Mars program.

EDITORIAL NOTES

AMENDMENTS

2025—Pub. L. 119–21, title IV, §40005(b), July 4, 2025, 139 Stat. 136, added item 20306.

§20301. General responsibilities

(a) PROGRAMS.—The Administrator shall ensure that the Administration carries out a balanced set of programs that shall include, at a minimum, programs in—

(1) human space flight, in accordance with section 20302 of this title;

(2) aeronautics research and development; and

(3) scientific research, which shall include, at a minimum—

(A) robotic missions to study the Moon and other planets and their moons, and to deepen understanding of astronomy, astrophysics, and other areas of science that can be productively studied from space;

(B) Earth science research and research on the Sun-Earth connection through the development and operation of research satellites and other means;

(C) support of university research in space science, Earth science, and microgravity science; and

(D) research on microgravity, including research that is not directly related to human exploration.

(b) CONSULTATION AND COORDINATION.—In carrying out the programs of the Administration, the Administrator shall—

(1) consult and coordinate to the extent appropriate with other relevant Federal agencies, including through the National Science and Technology Council;

(2) work closely with the private sector, including by—

(A) encouraging the work of entrepreneurs who are seeking to develop new means to launch satellites, crew, or cargo;

(B) contracting with the private sector for crew and cargo services, including to the International Space Station, to the extent practicable;

(C) using commercially available products (including software) and services to the extent practicable to support all Administration activities; and

(D) encouraging commercial use and development of space to the greatest extent practicable; and

(3) involve other nations to the extent appropriate.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3355.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
20301	42 U.S.C. 16611(a).	Pub. L. 109–155, title I, §101(a), Dec. 30, 2005, 119 Stat. 2897.

STATUTORY NOTES AND RELATED SUBSIDIARIES

IMPROVED PROCESS FOR YIELD DETERMINATION; REPORT; DEFINITIONS

Pub. L. 118–31, div. A, title XVI, §1601(b)–(d), Dec. 22, 2023, 137 Stat. 583, provided that:

"(b) IMPROVED PROCESS FOR YIELD DETERMINATION.—Not later than one year after the date of the enactment of this Act [Dec. 22, 2023], the Secretary of Defense, the Secretary of Transportation, and the Administrator of the National Aeronautics and Space Administration shall jointly establish a process through which scientifically-valid yield determinations can be assessed for space launch vehicles while in flight.

"(c) REPORT.—Not later than 90 days after the completion of the LOX-Methane Assessment working group process, the Secretary of Defense, the Secretary of Transportation, and the Administrator of the National Aeronautics and Space Administration shall submit to the appropriate congressional committees a report that includes a description of the effects of the LOX-Methane Assessment on existing and future maximum credible event analyses and any resulting effects on commercial space launch, civil space activities, and national security.

"(d) DEFINITIONS.—In this section:

"(1) The term 'appropriate congressional committees' means the following:

"(A) The congressional defense committees [Committees on Armed Services and Appropriations of the Senate and the House of Representatives].

"(B) The Committee on Commerce, Science, and Transportation of the Senate.

"(C) The Committee on Science, Space, and Technology of the House of Representatives.

"(D) The Committee on Transportation and Infrastructure of the House of Representatives.

"(2) The term 'LOX-Methane Assessment working group' means the ongoing interagency working group studying the explosive characteristics of liquid oxygen and methane and comprised of representatives from the Department of Defense, the Department of Transportation, and the National Aeronautics and Space Administration.

"(3) The term 'launch vehicle' has the meaning given such term in section 50902(11) of title 51, United States Code."

SPACE LAUNCH SYSTEM CONFIGURATIONS

Pub. L. 117–167, div. B, title VII, §10812, Aug. 9, 2022, 136 Stat. 1735, provided that:

"(a) EXPLORATION GROUND SYSTEMS INFRASTRUCTURE.—The Administrator shall ensure that—

"(1) the necessary elements of a ground system infrastructure are in place to enable the preparation and use of the Space Launch System, specifically the Block 1 (at least 70 mt), Block 1B (at least 105 mt), and Block 2 (at least 130 mt) variants of the Space Launch System; and

"(2) not fewer than 2 bays of the vehicle assembly building of such ground system infrastructure are outfitted and dedicated to support Space Launch System stacking and preparations.

"(b) FLIGHT RATE AND SAFETY.—After the first crewed lunar landing of the Administration's Moon to Mars activities, the Administrator shall, to the extent practicable, seek to carry out a flight rate of 2 integrated Space Launch System and Orion crew vehicle missions annually until the lunar activities needed to enable a human mission to Mars are completed so as to maintain the critical human spaceflight production and operations skills necessary for the safety of human spaceflight activities in deep space.

"(c) MOBILE LAUNCH PLATFORM.—

"(1) IN GENERAL.—The Administrator is authorized to maintain 2 operational mobile launch platforms to enable the launch of multiple configurations of the Space Launch System.

"(2) SECOND MOBILE LAUNCH PLATFORM.—

"(A) IN GENERAL.—In implementing paragraph (1), the Administrator shall take all necessary steps to develop and complete a second mobile launch platform, to be in place by 2026, to support the first launch of the Block 1B variant of the Space Launch System.

"(B) REQUIREMENT.—Such second mobile launch platform shall be sized and constructed to accommodate the Block 2 variant of the Space Launch System.

"(d) REPORTS.—The Administrator shall submit to Congress—

"(1) not later than 45 days after the date of the enactment of this Act [Aug. 9, 2022], a report on the steps the Administrator and industry partners are taking—

"(A) to address the cost, schedule, and performance challenges in the development of the Mobile Launch–2 platform; and

"(B) to ensure that such platform is ready for operational use on a schedule that aligns with the current plans for an Artemis IV launch, which is currently anticipated in 2027; and

"(2) not later than 90 days after such date of enactment, a report that contains a list of the key milestones required for completing each of the Space Launch System variants, and an estimated date on which such milestones will be completed.

"(e) EXPLORATION UPPER STAGE.—

"(1) IN GENERAL.—To meet the capability requirements under section 302(c)(2) of the National Aeronautics and Space Administration Authorization Act of 2010 (42 U.S.C. 18322(c)(2)), the Administrator shall continue development of the Exploration Upper Stage for the Space Launch System on a schedule consistent with the Artemis IV lunar mission.

"(2) BRIEFING.—Not later than 90 days after the date of the enactment of this Act, the Administrator shall brief the appropriate committees of Congress on the development and scheduled availability of the Exploration Upper Stage for the Artemis IV lunar mission.

"(f) MAIN PROPULSION TEST ARTICLE.—To meet the requirements under section 302(c)(3) of the National Aeronautics and Space Administration Authorization Act of 2010 (42 U.S.C. 18322(c)(3)), the Administrator may initiate development of a main propulsion test article for the integrated Exploration Upper Stage element of the Space Launch System, consistent with cost and schedule constraints, particularly for long-lead propulsion hardware needed for flight."

[For definitions of terms used in section 10812 of Pub. L. 116–167, set out above, see section 10802 of Pub. L. 117–167, set out as a Definitions note under section 10101 of this title.]

ROCKET ENGINE TEST INFRASTRUCTURE

Pub. L. 117–167, div. B, title VII, §10813, Aug. 9, 2022, 136 Stat. 1736, provided that:

"(a) IN GENERAL.—The Administrator shall, to the extent practicable, continue to carry out a program to modernize rocket propulsion test infrastructure at NASA facilities—

"(1) to increase capabilities;

"(2) to enhance safety;

"(3) to support propulsion development and testing; and

"(4) to foster the improvement of Government and commercial space transportation and exploration.

"(b) PROJECTS.—Projects funded under the program described in subsection (a) may include—

"(1) infrastructure and other facilities and systems relating to rocket propulsion test stands and rocket propulsion testing;

"(2) enhancements to test facility capacity and flexibility; and

"(3) such other projects as the Administrator considers appropriate to meet the goals described in that subsection.

"(c) REQUIREMENTS.—In carrying out the program under subsection (a), the Administrator shall—

"(1) to the extent practicable and appropriate, prioritize investments in projects that enhance test and flight certification capabilities, including for large thrust-level atmospheric and altitude engines and engine systems, and multi-engine integrated test capabilities;

"(2) continue to make underutilized test facilities available for commercial use on a reimbursable basis; and

"(3) ensure that no project carried out under this program adversely impacts, delays, or defers testing or other activities associated with facilities used for Government programs, including—

"(A) the Space Launch System and the Exploration Upper Stage of the Space Launch System;

"(B) in-space propulsion to support exploration missions; or

"(C) nuclear propulsion testing.

"(d) RULE OF CONSTRUCTION.—Nothing in this section shall preclude a NASA program, including the Space Launch System and the Exploration Upper Stage of the Space Launch System, from using the modernized test infrastructure developed under this section.

"(e) WORKING CAPITAL FUND STUDY.—

"(1) IN GENERAL.—Not later than 1 year after the date of the enactment of this division [Aug. 9, 2022], the Administrator shall submit to the appropriate committees of Congress a report on the use of the authority under section 30102 of title 51, United States Code, to promote increased use of NASA rocket propulsion test infrastructure for research, development, testing, and evaluation activities by other Federal agencies, firms, associations, corporations, and educational institutions.

"(2) MATTERS TO BE INCLUDED.—The report required by paragraph (1) shall include the following:

"(A) An assessment of prior use, if any, of the authority under section 30102 of title 51, United States Code, to improve testing infrastructure.

"(B) An analysis of any barrier to implementation of such authority for the purpose of promoting increased use of NASA rocket propulsion test infrastructure."

[For definitions of terms used in section 10813 of Pub. L. 116–167, set out above, see section 10802 of Pub. L. 117–167, set out as a Definitions note under section 10101 of this title.]

SEARCH FOR LIFE

Pub. L. 117–167, div. B, title VII, §10822, Aug. 9, 2022, 136 Stat. 1740, provided that:

"(a) SENSE OF CONGRESS.—It is the sense of Congress that—

"(1) the report entitled 'An Astrobiology Strategy for the Search for Life in the Universe' published by the National Academies of Sciences, Engineering, and Medicine outlines key scientific questions and methods on the search for the origin, evolution, distribution, and future of life in the universe; and

"(2) the interaction of lifeforms with their environment, a central focus of astrobiology research, is a topic of broad significance to life sciences research in space and on Earth.

"(b) PROGRAM CONTINUATION.—

"(1) IN GENERAL.—The Administrator [of the National Aeronautics and Space Administration] shall continue to implement a collaborative, multidisciplinary science and technology development program to search for evidence of the existence or historical existence of life beyond Earth in support of—

"(A) the scientific priorities of the most recent decadal surveys on planetary science and astrobiology and astronomy and astrophysics of the National Academies of Sciences, Engineering, and Medicine; and

"(B) the objective described in section 20102(d)(10) of title 51, United States Code.

"(2) ELEMENT.—The program under paragraph (1) shall include activities relating to astronomy, biology, geology, and planetary science.

"(3) COORDINATION WITH LIFE SCIENCES PROGRAM.—In carrying out the program under paragraph (1), the Administrator shall coordinate efforts with the life sciences program of the [National Aeronautics and Space] Administration.

"(4) INSTRUMENTATION AND SENSOR TECHNOLOGY.—In carrying out the program under paragraph (1), the Administrator may invest in the development of new instrumentation and sensor technology.

"(5) TECHNOSIGNATURES.—In carrying out the program under paragraph (1), the Administrator may support, as appropriate, merit-reviewed, competitively selected research on technosignatures."

SPACE NUCLEAR CAPABILITIES

Pub. L. 117–167, div. B, title VII, §10841, Aug. 9, 2022, 136 Stat. 1751, provided that:

"(a) NUCLEAR PROPULSION.—

"(1) USE IN ROBOTIC AND HUMAN EXPLORATION ACTIVITIES.—The Administrator, in collaboration with other relevant Federal agencies and with industry, shall take all necessary steps to carry out research and development, ground-based testing and in-space testing, and other associated activities to enable the use of space nuclear propulsion in Administration robotic and human exploration activities, including in cargo missions to Mars in the late 2020's and crewed missions to Mars in the 2030's.

"(2) SPACE NUCLEAR PROPULSION PROGRAM.—

"(A) IN GENERAL.—The Administrator shall establish a space nuclear propulsion program to carry out the activities described in paragraph (1).

"(B) ELEMENTS.—The program established under subparagraph (A) shall include the following:

"(i) Research and development in both nuclear electric and nuclear thermal propulsion technology maturation efforts, to the extent practicable, and the development of consistent figures of merit across both nuclear electric and nuclear thermal systems, as recommended by the National Academies of Sciences, Engineering, and Medicine in the report entitled 'Space Nuclear Propulsion for Human Mars Exploration', so as to inform a down-selection of a nuclear electric or nuclear thermal propulsion system by 2026, or as early as practicable.

"(ii) Ground-based testing, to the extent practicable, including not less than 1 ground-based test of a full-scale, integrated nuclear propulsion system before any in-space test or demonstration of such system.

"(iii) In-space demonstration of a nuclear propulsion system in the late 2020's, which may be carried out as a cargo mission to Mars.

"(3) PLAN.—

"(A) IN GENERAL.—Not later than 180 days after the date of the enactment of this Act [Aug. 9, 2022], the Administrator shall submit to the appropriate committees of Congress a plan to achieve an in-space flight test of a nuclear propulsion system that could support the first crewed mission to Mars in the 2030's.

"(B) ELEMENTS.—The plan required by subparagraph (A) shall include the following:

"(i) A timeline to mature enabling technologies and an outline of major milestones for integration of such technologies into the larger nuclear propulsion system.

"(ii) A cost estimate for maturing such technologies.

"(iii) A description of facility requirements for the program under paragraph (2) associated with such technologies.

"(iv) A description of the manner in which the Administrator will use the efforts described in paragraph (2)(B) to determine whether the in-space flight test should demonstrate a nuclear electric propulsion system or a nuclear thermal propulsion system.

"(C) An identification of any policy or regulatory challenges or barriers to conducting such in-space test or any precursor ground-based testing, and a description of options for addressing such challenges or barriers.

"(b) NUCLEAR SURFACE POWER PROGRAM.—

"(1) ESTABLISHMENT.—The Administrator shall establish a program for research, testing, and development of a space nuclear surface power reactor design.

"(2) PLAN.—

"(A) IN GENERAL.—The Administrator shall—

"(i) develop a plan and timeline for the program established under paragraph (1), taking into consideration mission needs; and

"(ii) include in such plan opportunities for participation by United States commercial entities.

"(B) SUBMISSION.—Not later than 1 year after the date of the enactment of this Act, the Administrator shall submit to the appropriate committees of Congress the plan developed under subparagraph (A).

"(c) ASSESSMENT OF IN-SPACE PROPULSION TESTING FACILITIES.—

"(1) IN GENERAL.—The Administrator shall carry out a needs assessment for facilities and technical

capabilities required to support ground-based testing of a full-scale, full-power integrated nuclear propulsion system.

"(2) ELEMENT.—The assessment required by paragraph (1) shall consider the potential development of facilities that will support long-term research and development of space nuclear propulsion systems.

"(3) REPORT.—Not later than 270 days after the date of the enactment of this Act, the Administrator shall submit to the appropriate committees of Congress a report on the results of the assessment carried out under paragraph (1)."

[For definitions of terms used in section 10841 of Pub. L. 116–167, set out above, see section 10802 of Pub. L. 117–167, set out as a Definitions note under section 10101 of this title.]

PRIORITIZATION OF LOW-ENRICHED URANIUM TECHNOLOGY

Pub. L. 117–167, div. B, title VII, §10842, Aug. 9, 2022, 136 Stat. 1753, provided that:

"(a) IN GENERAL.—The Administrator shall prioritize the use of low-enriched uranium, including high-assay low-enriched uranium, for space nuclear research and development, including ground and in-space testing and other related demonstration activities carried out under this title [see Short Title of 2022 Amendment note set out under section 10101 of this title].

"(b) INTERAGENCY COLLABORATION.—The Administrator shall, to the extent practicable, collaborate and coordinate with the Secretary of Defense, the Secretary of Energy, and the heads of other relevant Federal agencies on technology development, knowledge exchange, lessons learned regarding nuclear power and propulsion technologies, common fuels, flight demonstrations, and operational systems production for space applications.

"(c) REPORT ON NUCLEAR TECHNOLOGY PRIORITIZATION.—Not later than 120 days after the date of the enactment of this Act [Aug. 9, 2022], the Administrator shall submit to the appropriate committees of Congress a report that details the actions taken and planned, including a timeline for such actions, to implement subsection (a)."

[For definitions of terms used in section 10842 of Pub. L. 116–167, set out above, see section 10802 of Pub. L. 117–167, set out as a Definitions note under section 10101 of this title.]

FUNDING FOR CERTAIN LUNAR TRANSPORTATION AND HABITATION CAPABILITIES, LUNAR TERRAIN MOBILITY CAPABILITIES, EXPLORATION MISSION RATED SUITS, LUNAR COMMUNICATIONS AND NAVIGATION CAPABILITIES

Pub. L. 117–103, div. B, title III, Mar. 15, 2022, 136 Stat. 136, provided in part: "That acquisition of human-rated deep space exploration lunar and cislunar transportation and habitation capabilities, human-rated lunar terrain mobility capabilities, exploration mission rated suits, lunar communications and navigation capabilities, and their associated components, may be funded incrementally in fiscal year 2022 and thereafter."

FUNDING FOR ORION, SPACE LAUNCH SYSTEM, EXPLORATION GROUND SYSTEMS, AND MOBILE LAUNCH PLATFORMS

Pub. L. 115–141, div. B, title III, Mar. 23, 2018, 132 Stat. 430, provided in part: "That acquisition of Orion crew vehicles, SLS launch vehicles, Exploration Ground Systems, mobile launch platforms, and their associated components may be funded incrementally in fiscal year 2018 and thereafter".

SPACE LAUNCH SYSTEM, ORION, AND EXPLORATION GROUND SYSTEMS

Pub. L. 115–10, title IV, §421, Mar. 21, 2017, 131 Stat. 35, as amended by Pub. L. 117–167, div. B, title VII, §10817(a), Aug. 9, 2022, 136 Stat. 1740, provided that:

"(a) FINDINGS.—Congress makes the following findings:

"(1) NASA has made steady progress in developing and testing the Space Launch System and Orion exploration systems with the successful Exploration Flight Test of Orion in December of 2014, the final qualification test firing of the 5-segment Space Launch System boosters in June 2016, and a full thrust, full duration test firing of the RS–25 Space Launch System core stage engine in August 2016.

"(2) Through the 21st Century Launch Complex program and Exploration Ground Systems programs, NASA has made significant progress in transforming exploration ground systems infrastructure to meet NASA's mission requirements for the Space Launch System and Orion and to modernize NASA's launch complexes to the benefit of the civil, defense, and commercial space sectors.

"(b) SPACE LAUNCH SYSTEM.—

"(1) SENSE OF CONGRESS.—It is the sense of Congress that use of the Space Launch System and Orion, with contributions from partnerships with the private sector, academia, and the international community, is the most practical approach to reaching the Moon, Mars, and beyond.

"(2) REAFFIRMATION.—Congress reaffirms the policy and minimum capability requirements for

the Space Launch System under section 302 of the National Aeronautics and Space Administration Authorization Act of 2010 (42 U.S.C. 18322).

"(c) SENSE OF CONGRESS ON SPACE LAUNCH SYSTEM, ORION, AND EXPLORATION GROUND SYSTEMS.—It is the sense of Congress that—

"(1) as the United States works to send humans on a series of missions to Mars in the 2030s, the United States national space program should continue to make progress on its commitment by fully developing the Space Launch System, Orion, and related Exploration Ground Systems;

"(2) using the Space Launch System and Orion for a wide range of contemplated missions will facilitate the national defense, science, and exploration objectives of the United States;

"(3) the United States should have continuity of purpose for the Space Launch System and Orion in deep space exploration missions, using them beginning with the uncrewed mission, Artemis I, planned for 2018, followed by the crewed mission, Artemis II, in cis-lunar space planned for 2021, and for subsequent missions beginning with Artemis III extending into cis-lunar space and eventually to Mars;

"(4) the President's annual budget requests for the Space Launch System and Orion development, test, and operational phases should strive to accurately reflect the resource requirements of each of those phases;

"(5) the fully integrated Space Launch System, including an upper stage needed to go beyond low-Earth orbit, will safely enable human space exploration of the Moon, Mars, and beyond; and

"(6) the Administrator should budget for and undertake a robust ground test and uncrewed and crewed flight test and demonstration program for the Space Launch System and Orion in order to promote safety and reduce programmatic risk.

"(d) IN GENERAL.—The Administrator shall continue the development of the fully integrated Space Launch System, including an upper stage needed to go beyond low-Earth orbit, in order to safely enable human space exploration of the Moon, Mars, and beyond over the course of the next century as required in section 302(c) of the National Aeronautics and Space Administration Authorization Act of 2010 (42 U.S.C. 18322(c)).

"(e) REPORT.—

"(1) IN GENERAL.—Not later than 60 days after the date of enactment of this Act [Mar. 21, 2017], the Administrator shall submit to the appropriate committees of Congress a report addressing the ability of Orion to meet the needs and the minimum capability requirements described in section 303(b)(3) of the National Aeronautics and Space Administration Authorization Act of 2010 (42 U.S.C. 18323(b)(3)).

"(2) CONTENTS.—The report shall detail—

"(A) those components and systems of Orion that ensure it is in compliance with section 303(b)(3) of that Act (42 U.S.C. 18323(b)(3));

"(B) the expected date that Orion, integrated with a vehicle other than the Space Launch System, could be available to transport crew and cargo to the ISS;

"(C) any impacts to the deep space exploration missions under subsection (f) of this section due to enabling Orion to meet the minimum capability requirements described in section 303(b)(3) of that Act (42 U.S.C. 18323(b)(3)) and conducting the mission described in subparagraph (B) of this paragraph; and

"(D) the overall cost and schedule impacts associated with enabling Orion to meet the minimum capability requirements described in section 303(b)(3) of that Act (42 U.S.C. 18323(b)(3)) and conducting the mission described in subparagraph (B) of this paragraph.

"(f) EXPLORATION MISSIONS.—The Administrator shall continue development of—

"(1) an uncrewed exploration mission to demonstrate the capability of both the Space Launch System and Orion as an integrated system by 2018;

"(2) subject to applicable human rating processes and requirements, a crewed exploration mission to demonstrate the Space Launch System, including the Core Stage and Exploration Upper Stages, by 2021;

"(3) subsequent missions beginning with Artemis III at operational flight rate sufficient to maintain safety and operational readiness using the Space Launch System and Orion to extend into cis-lunar space and eventually to Mars; and

"(4) a deep space habitat as a key element in a deep space exploration architecture along with the Space Launch System and Orion.

"(g) OTHER USES.—The Administrator shall assess the utility of the Space Launch System for use by the science community and for other Federal Government launch needs, including consideration of overall cost and schedule savings from reduced transit times and increased science returns enabled by the unique capabilities of the Space Launch System.

"(h) UTILIZATION REPORT.—

"(1) IN GENERAL.—The Administrator, in consultation with the Secretary of Defense and the Director of National Intelligence, shall prepare a report that addresses the effort and budget required to

enable and utilize a cargo variant of the 130-ton Space Launch System configuration described in section 302(c) of the National Aeronautics and Space Administration Authorization Act of 2010 (42 U.S.C. 18322(c)).

"(2) CONTENTS.—In preparing the report, the Administrator shall—

"(A) consider the technical requirements of the scientific and national security communities related to a cargo variant of the Space Launch System; and

"(B) directly assess the utility and estimated cost savings obtained by using a cargo variant of the Space Launch System for national security and space science missions.

"(3) SUBMISSION TO CONGRESS.—Not later than 180 days after the date of enactment of this Act [Mar. 21, 2017], the Administrator shall submit the report to the appropriate committees of Congress."

[Pub. L. 117–167, div. B, title VII, §10817(a), Aug. 9, 2022, 136 Stat. 1740, which directed amendment of section 421 of the National Aeronautics and Space Administration Authorization Act of 2017, was executed by amending section 421 of Pub. L. 115–10, set out above, which is section 421 of the National Aeronautics and Space Administration Transition Authorization Act of 2017, to reflect the probable intent of Congress.]

[For definitions of terms used in section 421 of Pub. L. 115–10, set out above, see section 2 of Pub. L. 115–10, set out as a note under section 10101 of this title.]

MAINTAINING A BALANCED SPACE SCIENCE PORTFOLIO

Pub. L. 115–10, title V, §501, Mar. 21, 2017, 131 Stat. 48, provided that:

"(a) SENSE OF CONGRESS ON SCIENCE PORTFOLIO.—Congress reaffirms the sense of Congress that—

"(1) a balanced and adequately funded set of activities, consisting of research and analysis grant programs, technology development, suborbital research activities, and small, medium, and large space missions, contributes to a robust and productive science program and serves as a catalyst for innovation and discovery; and

"(2) the Administrator [of the National Aeronautics and Space Administration] should set science priorities by following the guidance provided by the scientific community through the National Academies of Sciences, Engineering, and Medicine's decadal surveys.

"(b) POLICY.—It is the policy of the United States to ensure, to the extent practicable, a steady cadence of large, medium, and small science missions."

PLANETARY SCIENCE

Pub. L. 115–10, title V, §502, Mar. 21, 2017, 131 Stat. 48, provided that:

"(a) FINDINGS.—Congress finds that—

"(1) Administration [National Aeronautics and Space Administration] support for planetary science is critical to enabling greater understanding of the solar system and the origin of the Earth;

"(2) the United States leads the world in planetary science and can augment its success in that area with appropriate international, academic, and industry partnerships;

"(3) a mix of small, medium, and large planetary science missions is required to sustain a steady cadence of planetary exploration; and

"(4) robotic planetary exploration is a key component of preparing for future human exploration.

"(b) MISSION PRIORITIES.—

"(1) IN GENERAL.—In accordance with the priorities established in the most recent Planetary Science Decadal Survey, the Administrator [of the National Aeronautics and Space Administration] shall ensure, to the greatest extent practicable, the completion of a balanced set of Discovery, New Frontiers, and Flagship missions at the cadence recommended by the most recent Planetary Science Decadal Survey.

"(2) MISSION PRIORITY ADJUSTMENTS.—Consistent with the set of missions described in paragraph (1), and while maintaining the continuity of scientific data and steady development of capabilities and technologies, the Administrator may seek, if necessary, adjustments to mission priorities, schedule, and scope in light of changing budget projections."

EXTRASOLAR PLANET EXPLORATION STRATEGY

Pub. L. 115–10, title V, §508, Mar. 21, 2017, 131 Stat. 50, provided that:

"(a) STRATEGY.—

"(1) IN GENERAL.—The Administrator [of the National Aeronautics and Space Administration] shall enter into an arrangement with the National Academies to develop a science strategy for the study and exploration of extrasolar planets, including the use of the Transiting Exoplanet Survey Satellite, the James Webb Space Telescope, a potential Wide-Field Infrared Survey Telescope mission, or any other telescope, spacecraft, or instrument, as appropriate.

"(2) REQUIREMENTS.—The strategy shall—

"(A) outline key scientific questions;

"(B) identify the most promising research in the field;

"(C) indicate the extent to which the mission priorities in existing decadal surveys address the key extrasolar planet research and exploration goals;

"(D) identify opportunities for coordination with international partners, commercial partners, and not-for-profit partners; and

"(E) make recommendations regarding the activities under subparagraphs (A) through (D), as appropriate.

"(b) USE OF STRATEGY.—The Administrator shall use the strategy—

"(1) to inform roadmaps, strategic plans, and other activities of the Administration [National Aeronautics and Space Administration] as they relate to extrasolar planet research and exploration; and

"(2) to provide a foundation for future activities and initiatives related to extrasolar planet research and exploration.

"(c) REPORT TO CONGRESS.—Not later than 18 months after the date of enactment of this Act [Mar. 21, 2017], the National Academies shall submit to the Administrator and to the appropriate committees of Congress [Committee on Science, Space, and Technology of the House of Representatives and Committee on Commerce, Science, and Transportation of the Senate] a report containing the strategy developed under subsection (a)."

ASTROBIOLOGY STRATEGY

Pub. L. 115–10, title V, §509, Mar. 21, 2017, 131 Stat. 50, provided that:

"(a) STRATEGY.—

"(1) IN GENERAL.—The Administrator [of the National Aeronautics and Space Administration] shall enter into an arrangement with the National Academies to develop a science strategy for astrobiology that would outline key scientific questions, identify the most promising research in the field, and indicate the extent to which the mission priorities in existing decadal surveys address the search for life's origin, evolution, distribution, and future in the Universe.

"(2) RECOMMENDATIONS.—The strategy shall include recommendations for coordination with international partners.

"(b) USE OF STRATEGY.—The Administrator shall use the strategy developed under subsection (a) in planning and funding research and other activities and initiatives in the field of astrobiology.

"(c) REPORT TO CONGRESS.—Not later than 18 months after the date of enactment of this Act [Mar. 21, 2017], the National Academies shall submit to the Administrator and to the appropriate committees of Congress [Committee on Science, Space, and Technology of the House of Representatives and Committee on Commerce, Science, and Transportation of the Senate] a report containing the strategy developed under subsection (a)."

SPACE TECHNOLOGY RESEARCH AND DEVELOPMENT

Pub. L. 115–10, title VII, §§701, 702, Mar. 21, 2017, 131 Stat. 56, 57 provided that:

"SEC. 701. SPACE TECHNOLOGY INFUSION.

"(a) SENSE OF CONGRESS ON SPACE TECHNOLOGY.—It is the sense of Congress that space technology is critical—

"(1) to developing technologies and capabilities that will make the Administration [National Aeronautics and Space Administration]'s core missions more affordable and more reliable;

"(2) to enabling a new class of Administration missions beyond low-Earth orbit; and

"(3) to improving technological capabilities and promote innovation for the Administration and the Nation.

"(b) SENSE OF CONGRESS ON PROPULSION TECHNOLOGY.—It is the sense of Congress that advancing propulsion technology would improve the efficiency of trips to Mars and could shorten travel time to Mars, reduce astronaut health risks, and reduce radiation exposure, consumables, and mass of materials required for the journey.

"(c) POLICY.—It is the policy of the United States that the Administrator [of the National Aeronautics and Space Administration] shall develop technologies to support the Administration's core missions, as described in section 2(3) of the National Aeronautics and Space Administration Authorization Act of 2010 (42 U.S.C. 18301(3)), and support sustained investments in early stage innovation, fundamental research, and technologies to expand the boundaries of the national aerospace enterprise.

"(d) PROPULSION TECHNOLOGIES.—A goal of propulsion technologies developed under subsection

(c) shall be to significantly reduce human travel time to Mars.

"SEC. 702. SPACE TECHNOLOGY PROGRAM.

"(a) SPACE TECHNOLOGY PROGRAM AUTHORIZED.—The Administrator [of the National Aeronautics and Space Administration] shall conduct a space technology program (referred to in this section as the 'Program') to research and develop advanced space technologies that could deliver innovative solutions across the Administration [National Aeronautics and Space Administration]'s space exploration and science missions.

"(b) CONSIDERATIONS.—In conducting the Program, the Administrator shall consider—

"(1) the recommendations of the National Academies' review of the Administration's Space Technology roadmaps and priorities; and

"(2) the applicable enabling aspects of the stepping stone approach to exploration under section 70504 of title 51, United States Code.

"(c) REQUIREMENTS.—In conducting the Program, the Administrator shall—

"(1) to the extent practicable, use a competitive process to select research and development projects;

"(2) to the extent practicable and appropriate, use small satellites and the Administration's suborbital and ground-based platforms to demonstrate space technology concepts and developments; and

"(3) as appropriate, partner with other Federal agencies, universities, private industry, and foreign countries.

"(d) SMALL BUSINESS PROGRAMS.—The Administrator shall organize and manage the Administration's Small Business Innovation Research Program and Small Business Technology Transfer Program within the Program.

"(e) NONDUPLICATION CERTIFICATION.—The Administrator shall submit a budget for each fiscal year, as transmitted to Congress under section 1105(a) of title 31, United States Code, that avoids duplication of projects, programs, or missions conducted by [the] Program with other projects, programs, or missions conducted by another office or directorate of the Administration.

"(f) COLLABORATION, COORDINATION, AND ALIGNMENT.—

"(1) IN GENERAL.—The Administrator shall—

"(A) ensure that the Administration's projects, programs, and activities in support of technology research and development of advanced space technologies are fully coordinated and aligned;

"(B) ensure that the results [of] the projects, programs, and activities under subparagraph (A) are shared and leveraged within the Administration; and

"(C) ensure that the organizational responsibility for research and development activities in support of human space exploration not initiated as of the date of enactment of this Act [Mar. 21, 2017] is established on the basis of a sound rationale.

"(2) SENSE OF CONGRESS.—It is the sense of Congress that projects, programs, and missions being conducted by the Human Exploration and Operations Mission Directorate in support of research and development of advanced space technologies and systems focusing on human space exploration should continue in that Directorate.

"(g) REPORT.—Not later than 180 days after the date of enactment of this Act, the Administrator shall provide to the appropriate committees of Congress a report—

"(1) comparing the Administration's space technology investments with the high-priority technology areas identified by the National Academies in the National Research Council's report on the Administration's Space Technology Roadmaps; and

"(2) including—

"(A) identification of how the Administration will address any gaps between the agency's investments and the recommended technology areas, including a projection of funding requirements; and

"(B) identification of the rationale described in subsection (f)(1)(C).

"(h) ANNUAL REPORT.—The Administrator shall include in the Administration's annual budget request for each fiscal year the rationale for assigning organizational responsibility for, in the year prior to the budget fiscal year, each initiated project, program, and mission focused on research and development of advanced technologies for human space exploration."

EXECUTIVE DOCUMENTS

SPACE POLICY DIRECTIVE–6. NATIONAL STRATEGY FOR SPACE NUCLEAR POWER AND PROPULSION

Space Policy Directive–6, Dec. 16, 2020, 85 F.R. 82873, provided:

Memorandum for the Vice President[,] the Secretary of State[,] the Secretary of Defense[,] the Secretary of Commerce[,] the Secretary of Transportation[,] the Secretary of Energy[,] the Director of the Office of Management and Budget[,] the Assistant to the President for National Security Affairs[,] the Administrator of the National Aeronautics and Space Administration[,] the Chairman of the Nuclear Regulatory Commission[, and] the Director of the Office of Science and Technology Policy

SECTION 1. *Policy*. The ability to use space nuclear power and propulsion (SNPP) systems safely, securely, and sustainably is vital to maintaining and advancing United States dominance and strategic leadership in space. SNPP systems include radioisotope power systems (RPSs) and fission reactors used for power or propulsion in spacecraft, rovers, and other surface elements. SNPP systems can allow operation of such elements in environments in which solar and chemical power are inadequate. They can produce more power at lower mass and volume compared to other energy sources, thereby enabling persistent presence and operations. SNPP systems also can shorten transit times for crewed and robotic spacecraft, thereby reducing radiation exposure in harsh space environments.

National Security Presidential Memorandum–20 (NSPM–20) of August 20, 2019 (Launch of Spacecraft Containing Space Nuclear Systems), updated the process for launches of spacecraft containing space nuclear systems. It established it as the policy of the United States to "develop and use space nuclear systems when such systems safely enable or enhance space exploration or operational capabilities."

Cooperation with commercial and international partners is critical to achieving America's objectives for space exploration. Presidential Policy Directive 4 of June 28, 2010 (National Space Policy), as amended by the Presidential Memorandum of December 11, 2017 (Reinvigorating America's Human Space Exploration Program) [82 F.R. 58501], established it as the policy of the United States to "[l]ead an innovative and sustainable program of exploration with commercial and international partners to enable human expansion across the solar system and to bring back to Earth new knowledge and opportunities."

This memorandum establishes a national strategy to ensure the development and use of SNPP systems when appropriate to enable and achieve the scientific, exploration, national security, and commercial objectives of the United States. In the context of this strategy only, the term "development" includes the full development process from design through testing and production, and the term "use" includes launch, operation, and disposition. This memorandum outlines high-level policy goals and a supporting roadmap that will advance the ability of the United States to use SNPP systems safely, securely, and sustainably. The execution of this strategy will be subject to relevant budgetary and regulatory processes and to the availability of appropriations.

SEC. 2. *Goals*. The United States will pursue goals for SNPP development and use that are both mission-enabling and ambitious in their substance and their timeline. These goals will enable a range of existing and future space missions, with the aim of accelerating achievement of key milestones, including in-space demonstration and use of new SNPP capabilities. This memorandum establishes the following such goals for the Nation:

(a) Develop uranium fuel processing capabilities that enable production of fuel that is suitable to lunar and planetary surface and in-space power, nuclear electric propulsion (NEP), and nuclear thermal propulsion (NTP) applications, as needed. These capabilities should support the ability to produce different uranium fuel forms to meet the nearest-term mission needs and, to the extent feasible, should maximize commonality—meaning use of the same or similar materials, processes, designs, or infrastructure—across these fuel forms. To maximize private-sector engagement and cost savings, these capabilities should be developed to enable a range of terrestrial as well as space applications, including future commercial applications;

(b) Demonstrate a fission power system on the surface of the Moon that is scalable to a power range of 40 kilowatt-electric (kWe) and higher to support a sustained lunar presence and exploration of Mars. To the extent feasible, this power system should align with mission needs for, and potential future government and commercial applications of, in-space power, NEP, and terrestrial nuclear power;

(c) Establish the technical foundations and capabilities—including through identification and resolution of the key technical challenges—that will enable options for NTP to meet future Department of Defense (DoD) and National Aeronautics and Space Administration (NASA) mission requirements; and

(d) Develop advanced RPS capabilities that provide higher fuel efficiency, higher specific energy, and longer operational lifetime than existing RPS capabilities, thus enabling survivable surface elements to support robotic and human exploration of the Moon and Mars and extending robotic exploration of the solar system.

SEC. 3. *Principles*. The United States will adhere to principles of safety, security, and sustainability in its development and use of SNPP systems, in accordance with all applicable Federal laws and consistent with international obligations and commitments.

(a) *Safety*. All executive departments and agencies (agencies) involved in the development and use of SNPP systems shall take appropriate measures to ensure, within their respective roles and responsibilities, the safe development, testing, launch, operation, and disposition of SNPP systems. For United States Government SNPP programs, the sponsoring agency holds primary responsibility for safety. For programs involving multiple agencies, the terms of cooperation shall designate a lead agency with primary responsibility for safety in each stage of development and use.

(i) Ground development. Activities associated with ground development, including ground testing, of SNPP systems shall be conducted in accordance with applicable Federal, State, and local laws and existing authorities of regulatory agencies.

(ii) Launch. NSPM–20 established safety guidelines and safety analysis and review processes for Federal Government launches of spacecraft containing space nuclear systems, including SNPP systems, and for launches for which the Department of Transportation has statutory authority to license as commercial space launch activities (commercial launches). These guidelines and processes address launch and any subsequent stages during which accidents may result in radiological effects on the public or the environment—for instance, in an unplanned reentry from Earth orbit or during an Earth flyby. Launch activities shall be conducted in accordance with these guidelines and processes.

(iii) Operation and disposition. The operation and disposition of SNPP systems shall be planned and conducted in a manner that protect human and environmental safety and national security assets. Fission reactor SNPP systems may be operated on interplanetary missions, in sufficiently high orbits, and in low-Earth orbits if they are stored in sufficiently high orbits after the operational part of their mission. In this context, a sufficiently high orbit is one in which the orbital lifetime of the spacecraft is long enough for the fission products to decay to a level of radioactivity comparable to that of uranium–235 by the time it reenters the Earth's atmosphere, and the risks to existing and future space missions and of collision with objects in space are minimized. Spacecraft operating fission reactors in low-Earth orbits shall incorporate a highly reliable operational system to ensure effective and controlled disposition of the reactor.

(b) *Security*. All agencies involved in the development and use of SNPP systems shall take appropriate measures to protect nuclear and radiological materials and sensitive information, consistent with sound nuclear nonproliferation principles. For United States Government SNPP programs, the sponsoring agency holds primary responsibility for security. For programs involving multiple agencies, the terms of cooperation shall designate a lead agency with primary responsibility for security in each stage of development and use. The use of highly enriched uranium (HEU) in SNPP systems should be limited to applications for which the mission would not be viable with other nuclear fuels or non-nuclear power sources. Before selecting HEU or, for fission reactor systems, any nuclear fuel other than low-enriched uranium (LEU), for any given SNPP design or mission, the sponsoring agency shall conduct a thorough technical review to assess the viability of alternative nuclear fuels. The sponsoring agency shall provide to the respective staffs of the National Security Council, the National Space Council, the Office of Science and Technology Policy, and the Office of Management and Budget a briefing that provides justification for why the use of HEU or other non-LEU fuel is required, and any steps the agency has taken to address nuclear safety, security, and proliferation-related risks. The Director of the Office of Science and Technology Policy shall ensure, through the National Science and Technology Council, that other relevant agencies are invited to participate in these briefings.

(c) *Sustainability*. All agencies involved in the development and use of SNPP systems shall take appropriate measures to conduct these activities in a manner that is suitable for the long-term sustainment of United States space capabilities and leadership in SNPP.

(i) Coordination and Collaboration. To maximize efficiency and return on taxpayer investment, the heads of relevant agencies shall seek and pursue opportunities to coordinate among existing and future SNPP development and use programs. Connecting current efforts with likely future applications will help ensure that such programs can contribute to long-term United States SNPP capabilities and leadership. Agencies also shall seek opportunities to partner with the private sector, including academic institutions, in order to facilitate contributions to United States SNPP capabilities and leadership. To help identify opportunities for collaboration, the heads of relevant agencies should conduct regular technical exchanges among SNPP programs, to the extent that such exchanges are consistent with the principle of security and comply with applicable Federal, State, and local laws. Agencies shall coordinate with the Department of State when seeking opportunities for international partnerships.

(ii) Commonality. The heads of relevant agencies shall seek to identify and use opportunities for commonality among SNPP systems, and between SNPP and terrestrial nuclear systems, whenever doing so could advance program and policy objectives without unduly inhibiting innovation or market development, or hampering system suitability to specific mission applications. For example, opportunities for commonality may exist in goals (e.g., demonstration timeline), reactor design, nuclear fuels (e.g., fuel type and form, and

enrichment level), supplementary systems (e.g., power conversion, moderator, reflector, shielding, and system vessel), methods (e.g., additive manufacturing of fuel or reactor elements), and infrastructure (e.g., fuel supply, testing facilities, launch facilities, and workforce).

(iii) Cost-effectiveness. The heads of relevant agencies should pursue SNPP development and use solutions that are cost-effective while also consistent with the principles of safety and security. For any program or system, the heads of such agencies should seek to identify the combination of in-space and ground-based testing and certification that will best qualify the system for a given mission while ensuring public safety.

SEC. 4. *Roles and Responsibilities*. (a) The Vice President, on behalf of the President and acting through the National Space Council, shall coordinate United States policy related to use of SNPP systems.

(b) The Secretary of State shall, under the direction of the President, coordinate United States activities related to international obligations and commitments and international cooperation involving SNPP.

(c) The Secretary of Defense shall conduct and support activities associated with development and use of SNPP systems to enable and achieve United States national security objectives. When appropriate, the Secretary of Defense shall facilitate private-sector engagement in DoD SNPP activities.

(d) The Secretary of Commerce shall promote responsible United States commercial SNPP investment, innovation, and use, and shall, when consistent with the authorities of the Secretary, ensure the publication of clear, flexible, performance-based rules that are applicable to use of SNPP and are easily navigated. Under the direction of the Secretary of Commerce, the Department of Commerce (DOC) shall ascertain and communicate the views of private-sector partners and potential private-sector partners to relevant agency partners in order to facilitate public-private collaboration in SNPP development and use.

(e) The Secretary of Transportation's statutory authority includes licensing commercial launches and reentries, including vehicles containing SNPP systems. Within this capacity, the Secretary of Transportation shall, when appropriate, facilitate private-sector engagement in the launch or reentry aspect of SNPP development and use activities, in support of United States science, exploration, national security, and commercial objectives. To help ensure the launch safety of an SNPP payload, and consistent with 51 U.S.C. 50904, a payload review may be conducted as part of a license application review or may be requested by a payload owner or operator in advance of or apart from a license application.

(f) The Secretary of Energy shall, in coordination with sponsoring agencies and other agencies, as appropriate, support development and use of SNPP systems to enable and achieve United States scientific, exploration, and national security objectives. When appropriate, the Secretary of Energy shall work with sponsoring agencies and DOC to facilitate United States private-sector engagement in Department of Energy (DOE) SNPP activities. Under the direction of the Secretary of Energy and consistent with the authorities granted to DOE, including authorities under the Atomic Energy Act of 1954 (AEA), as amended, 42 U.S.C. 2011, *et seq*., DOE may authorize ground-based SNPP development activities, including DOE activities conducted in coordination with sponsoring agencies and private-sector entities. As directed in NSPM–20, the Secretary of Energy shall maintain, on a full-cost recovery basis, the capability and infrastructure to develop, furnish, and conduct safety analyses for space nuclear systems for use in United States Government space systems.

(g) The Administrator of NASA shall conduct and support activities associated with development and use of SNPP systems to enable and achieve United States space science and exploration objectives. The Administrator of NASA shall establish the performance requirements for SNPP capabilities necessary to achieve those objectives. When appropriate, the Administrator of NASA shall facilitate private-sector engagement in NASA SNPP activities, and shall coordinate with the Secretary of Commerce and, as appropriate, the Secretary of State and the Secretary of Energy, to help facilitate private-sector SNPP activities.

(h) The Nuclear Regulatory Commission (NRC) has statutory authority under the AEA for licensing and regulatory safety and security oversight of commercial nuclear activities taking place within the United States. The NRC should, as appropriate and particularly in circumstances within NRC authority where DOE regulatory authorities cannot be applied, enable private-sector engagement in SNPP development and use activities in support of United States science, exploration, national security, and commercial objectives.

(i) The Director of the Office and Science and Technology Policy shall coordinate United States policy related to research and development of SNPP systems.

SEC. 5. *Roadmap*. The United States will pursue a coordinated roadmap for federally-supported SNPP activities to achieve the goals and uphold the principles established in this memorandum. This roadmap comprises the following elements, which the relevant agencies should pursue consistent with the following objective timeline, subject to relevant budgetary and regulatory processes and to the availability of appropriations:

(a) By the mid-2020s, develop uranium fuel processing capabilities that enable production of fuel that is

suitable for lunar and planetary surface and in-space power, NEP, and NTP applications, as needed.

(i) Identify relevant mission needs. DoD and NASA should provide to DOE any mission needs (e.g., power density, environment, and timelines) relevant to the identification of fuels suitable for planetary surface and in-space power, NEP, and NTP applications.

(ii) Identify candidate fuel or fuels. DoD and NASA, in cooperation with DOE and private-sector partners, as appropriate, should identify candidate fuel or fuels to meet the identified mission requirements. This review and assessment should account for current and expected United States capabilities to produce and qualify for use candidate fuels, and for potential commonality of fuels or fuel variants across multiple planetary surface and in-space power, in-space propulsion, and terrestrial applications.

(iii) Qualify at least one candidate fuel. DoD and NASA, in cooperation with DOE and private-sector partners, as appropriate, should qualify a fuel or fuels for demonstrations of a planetary surface power reactor and an in-space propulsion system. While seeking opportunities to use private-sector-partner capabilities, agencies should ensure that the Federal Government retains an ability for screening and qualification of candidate fuels.

(iv) Supply fuel for demonstrations. DOE, in cooperation with NASA and DoD, and with private-sector partners, as appropriate, should identify feedstock and uranium that can be made available for planetary surface power and in-space propulsion demonstrations. DOE shall ensure that any provision of nuclear material for SNPP will not disrupt enriched uranium supplies for the United States nuclear weapons program and the naval propulsion program, and that SNPP needs are included among broader considerations of nuclear fuel supply provisioning and management.

(b) By the mid- to late-2020s, demonstrate a fission power system on the surface of the Moon that is scalable to a power range of 40 kWe and higher to support sustained lunar presence and exploration of Mars.

(i) Initiate a surface power project. NASA should initiate a fission surface power project for lunar surface demonstration by 2027, with scalability to Mars exploration. NASA should consult with DoD and other agencies, and with the private sector, as appropriate, when developing project requirements.

(ii) Conduct technology and requirements assessment. NASA, in coordination with DoD and other agencies, and with private-sector partners, as appropriate, should evaluate technology options for a surface power system including reactor designs, power conversion, shielding, and thermal management. NASA should work with other agencies, and private-sector partners, as appropriate, to evaluate opportunities for commonality among other SNPP needs, including in-space power and terrestrial power needs, possible NEP technology needs, and reactor demonstrations planned by NASA, other agencies, or the private sector.

(iii) Engage the private sector. DOE and NASA should determine a mechanism or mechanisms for engaging with the private sector to meet NASA's SNPP surface power needs in an effective manner consistent with the guiding principles set forth in this memorandum. In evaluating mechanisms, DOE and NASA should consider the possibility of NASA issuing a request for proposal for the development and construction of the surface power reactor system or demonstration.

(iv) System development. NASA should work with DOE, and with other agencies and private-sector partners, as appropriate, to develop the lunar surface power demonstration project.

(v) Conduct demonstration mission. NASA, in coordination with other agencies and with private-sector partners, as appropriate, should launch and conduct the lunar surface power demonstration project.

(c) By the late-2020s, establish the technical foundations and capabilities—including through identification and resolution of the key technical challenges—that will enable NTP options to meet future DoD and NASA mission needs.

(i) Conduct requirements assessment. DoD and NASA, in cooperation with DOE, and with other agencies and private-sector partners, as appropriate, should assess the ability of NTP capabilities to enable and advance existing and potential future DoD and NASA mission requirements.

(ii) Conduct technology assessment. DoD and NASA, in cooperation with DOE, and with other agencies and private-sector partners, as appropriate, should evaluate technology options and associated key technical challenges for an NTP system, including reactor designs, power conversion, and thermal management. DoD and NASA should work with their partners to evaluate and use opportunities for commonality with other SNPP needs, terrestrial power needs, and reactor demonstration projects planned by agencies and the private sector.

(iii) Technology development. DoD, in coordination with DOE and other agencies, and with private-sector partners, as appropriate, should develop reactor and propulsion system technologies that will resolve the key technical challenges in areas such as reactor design and production, propulsion system and spacecraft design, and SNPP system integration.

(d) By 2030, develop advanced RPS capabilities that provide higher fuel efficiency, higher specific energy, and longer operational lifetime than existing RPS capabilities, thus enabling survivable surface elements to

support robotic and human exploration of the Moon and Mars and extending robotic exploration of the solar system.

(i) Maintain RPS capability. Mission sponsoring agencies should assess their needs for radioisotope heat source material to meet emerging mission requirements, and should work with DOE to jointly identify the means to produce or acquire the necessary material on a timeline that meets mission requirements.

(ii) Engage the private sector. NASA, in coordination with DOE and DOC, should conduct an assessment of opportunities for engaging the private sector to meet RPS needs in an effective manner consistent with the guiding principles established in this memorandum.

(iii) Conduct technology and requirements assessment. NASA, in coordination with DOE and DoD, and with other agencies and private-sector partners, as appropriate, should assess requirements for next-generation RPS systems and evaluate technology options for meeting those requirements.

(iv) System development. DOE, in coordination with NASA and DoD, and with other agencies and private-sector partners, as appropriate, should develop one or more next-generation RPS system or systems to meet the goals of higher fuel efficiency, higher specific energy, and longer operational lifetime for the required range of power.

SEC. 6. *Implementation*. The Vice President, through the National Space Council, shall coordinate implementation of this memorandum.

SEC. 7. *General Provisions*. (a) Nothing in this memorandum shall be construed to impair or otherwise affect:

(i) the authority granted by law to an executive department or agency, or the head thereof; or

(ii) the functions of the Director of the Office of Management and Budget relating to budgetary, administrative, or legislative proposals.

(b) This memorandum shall be implemented consistent with applicable law and subject to the availability of appropriations.

(c) This memorandum is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

(d) The Secretary of Energy is authorized and directed to publish this memorandum in the Federal Register.

DONALD J. TRUMP.

§20302. Vision for space exploration

(a) IN GENERAL.—The Administrator shall establish a program to develop a sustained human presence in cis-lunar space or on the Moon, including a robust precursor program, to promote exploration, science, commerce, and United States preeminence in space, and as a stepping-stone to future exploration of Mars and other destinations. The Administrator is further authorized to develop and conduct appropriate international collaborations in pursuit of these goals.

(b) FUTURE EXPLORATION OF MARS.—The Administrator shall manage human space flight programs, including the Space Launch System and Orion, to enable humans to explore Mars and other destinations by defining a series of sustainable steps and conducting mission planning, research, and technology development on a timetable that is technically and fiscally possible, consistent with section 70504.

(c) DEFINITIONS.—In this section:

(1) ORION.—The term "Orion" means the multipurpose crew vehicle described under section 303 of the National Aeronautics and Space Administration Authorization Act of 2010 (42 U.S.C. 18323).

(2) SPACE LAUNCH SYSTEM.—The term "Space Launch System" means has the meaning [1] given the term in section 3 of the National Aeronautics and Space Administration Authorization Act of 2010 (42 U.S.C. 18302).

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3356; Pub. L. 115–10, title IV, §413, Mar. 21, 2017, 131 Stat. 33.)

HISTORICAL AND REVISION NOTES

Revised

Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
20302	42 U.S.C. 16611(b).	Pub. L. 109–155, title I, §101(b), Dec. 30, 2005, 119 Stat. 2898.

EDITORIAL NOTES

AMENDMENTS

2017—Subsec. (a). Pub. L. 115–10, §413(1), inserted "in cis-lunar space or" after "sustained human presence".

Subsec. (b). Pub. L. 115–10, §413(2), amended subsec. (b) generally. Prior to amendment, text read as follows: "The Administrator shall manage human space flight programs to strive to achieve the following milestones (in conformity with section 70502 of this title):

"(1) Returning Americans to the Moon no later than 2020.

"(2) Launching the Crew Exploration Vehicle as close to 2010 as possible.

"(3) Increasing knowledge of the impacts of long duration stays in space on the human body using the most appropriate facilities available, including the International Space Station.

"(4) Enabling humans to land on and return from Mars and other destinations on a timetable that is technically and fiscally possible."

Subsec. (c). Pub. L. 115–10, §413(3), added subsec. (c).

STATUTORY NOTES AND RELATED SUBSIDIARIES

MOON TO MARS

Pub. L. 117–167, div. B, title VII, §10811, Aug. 9, 2022, 136 Stat. 1731, provided that:

"(a) SENSE OF CONGRESS.—It is the sense of Congress that—

"(1) advances in space technology and space exploration capabilities—

"(A) ensure the long-term technological preeminence, economic competitiveness, STEM workforce development, and national security of the United States; and

"(B) offer profound inspirational value for future generations;

"(2) the Artemis missions—

"(A) will make further progress on advancing the human exploration roadmap to achieve human presence beyond low-Earth orbit to the surface of Mars, as required under section 432 of the National Aeronautics and Space Administration Transition Authorization Act of 2017 (Public Law 115–10; 51 U.S.C. 20302 note);

"(B) should fulfill the goal of landing United States astronauts, including the first woman and the next man, on the Moon; and

"(C) should seek collaboration with commercial and international partners to establish sustainable lunar exploration, and should fund any sustainable lunar activities not directly required for the advancement of a human mission to Mars separately;

"(3) in carrying out the Artemis missions, the Administrator [of the National Aeronautics and Space Administration] should ensure that the entire Artemis program is inclusive and representative of all people of the United States, including women and minorities;

"(4) safe and successful execution of the roadmap to achieve human presence on Mars, including the Artemis missions, requires—

"(A) a clear strategic vision for achieving lunar and Mars exploration that is shared by NASA [National Aeronautics and Space Administration], international partners, nongovernmental partners, Congress, and the people of the United States;

"(B) a well-developed and executable timeline, budget, and mission architecture, to inform decisions, including decisions relating to workforce and infrastructure needs and the development of technical and nontechnical skills;

"(C) consistent NASA oversight of all relevant exploration activities, enabled by NASA leadership with authority, responsibility, and accountability for decisions and well-developed capabilities for systems engineering and integration;

"(D) clearly defined roles for NASA, international partners, and nongovernmental partners, including criteria for determining whether NASA should make, manage, or buy key capabilities; and

"(E) mechanisms to ensure NASA insight into the activities of its international and

nongovernmental partners, as required to identify and mitigate risks to mission safety and success.

"(b) MOON TO MARS OFFICE AND PROGRAM.—

"(1) MOON TO MARS OFFICE.—Not later than 120 days after the date of the enactment of this Act [Aug. 9, 2022], the Administrator shall establish within the Exploration Systems Development Mission Directorate a Moon to Mars Program Office (referred to in this section as the 'Office') to lead and manage the Moon to Mars program established under paragraph (2), including Artemis missions and activities.

"(2) MOON TO MARS PROGRAM.—

"(A) ESTABLISHMENT.—Not later than 120 days after the date of the enactment of this Act, the Administrator shall establish a Moon to Mars Program (referred to in this section as the 'Program') in accordance with sections 20302(b) and 70504 of title 51, United States Code, which shall include Artemis missions and activities, to achieve the goal of human exploration of Mars.

"(B) ELEMENTS.—The Program shall include the following elements:

"(i) The Space Launch System under section 20302 of title 51, United States Code.

"(ii) The Orion crew vehicle under such section.

"(iii) Exploration Ground Systems.

"(iv) An outpost in orbit around the Moon under section 70504 of such title [probably should be "section 70505 of such title"].

"(v) Human-rated landing systems.

"(vi) Spacesuits.

"(vii) Any other element needed to meet the requirements for the Program.

"(C) DIRECTION.—The Administrator shall ensure that—

"(i) each Artemis mission demonstrates or advances a technology or operational concept that will enable human missions to Mars;

"(ii) the Program incorporates each such mission into the human exploration roadmap under section 432 of the National Aeronautics and Space Administration Transition Authorization Act of 2017 (Public Law 115–10; 51 U.S.C. 20302 note); and

"(iii) the Program includes cislunar space exploration activities that—

"(I) use a combination of launches of the Space Launch System and space transportation services from United States commercial providers, as appropriate, for each such mission;

"(II) plan for not fewer than 1 Space Launch System launch annually beginning after the first successful crewed launch of Orion on the Space Launch System, with a goal of 2 Space Launch System launches annually as soon as practicable; and

"(III) establish an outpost in orbit around the Moon that—

"(aa) demonstrates technologies, systems, and operational concepts directly applicable to the space vehicle that will be used to transport humans to Mars;

"(bb) has the capability for periodic human habitation; and

"(cc) functions as a point of departure, return, or staging for missions to multiple locations on the lunar surface or other destinations.

"(3) DIRECTOR.—

"(A) IN GENERAL.—The Administrator shall appoint a Director for the Program, who shall lead the Office and report to the Associate Administrator of the Exploration Systems Development Mission Directorate.

"(B) ACCOUNTABILITY.—The Director shall have accountability for risk management and shall have authority, as consistent with NASA Space Flight Program and Project Management requirements—

"(i) to implement—

"(I) Program-level requirements; and

"(II) an architecture and program plan developed to meet such requirements;

"(ii) to manage resources, personnel, and contracts necessary to implement the Program, as appropriate;

"(iii) to manage cost, risk, schedule, and performance factors;

"(iv) to direct and oversee a Program-wide systems engineering and integration and integrated risk management function; and

"(v) to carry out other authorities, in accordance with [National Aeronautics and Space] Administration policies and procedures.

"(C) RESPONSIBILITIES.—The Director shall be responsible for—

"(i) developing and managing—

"(I) an integrated master plan, integrated master schedule, and integrated risk management procedures for

the Program;

"(II) a Program-wide systems engineering and integration function as described in subsection (c);

"(III) plans for technology and capabilities development;

"(IV) logistics support, science data management, communications, and other plans that are relevant to the functions of the Office; and

"(V) performance measures to assess the progress of the Program;

"(ii) advising the Associate Administrator of the Exploration Systems Development Mission Directorate on the development of—

"(I) Program-level requirements, including for a human Mars orbital mission and a human mission to the surface of Mars; and

"(II) an architecture based on the requirements described in subclause (I); and

"(iii) informing the Associate Administrator of the Administration on coordination among NASA centers, as required to most efficiently achieve the goals of the Program.

"(c) SYSTEMS ENGINEERING AND INTEGRATION.—The Director of the Office shall—

"(1) establish within the Office a Program-wide systems engineering and integration function; and

"(2) appoint a manager for such function to manage systems engineering and integration activities across the Program, including with respect to the Program elements described in subsection (b)(2).

"(d) IMPLEMENTATION.—In the implementation of the Program, the Administrator shall ensure that—

"(1) for the purposes of reducing risk and complexity and making the maximum use of taxpayer investments to date, in conducting Artemis activities, the Administration does not take any action in regard to the design of the Exploration Upper Stage-enhanced Space Launch System that would preclude it from carrying an integrated human-rated lunar landing system for crewed lunar landing missions;

"(2) the Program maintains a robust series of ground-based and in-flight testing activities, including, with respect to each crewed system design, not less than 1 uncrewed flight test, followed by a crewed flight test, as appropriate, prior to use of the design on a human-rated lunar landing system or Mars mission; and

"(3) human lunar landing missions under the Program, including surface and in-space activities, are carried out solely by government astronauts.

"(e) STUDY.—Not later than 180 days after the date of the enactment of this Act, the Administrator shall submit to the appropriate committees of Congress [Committee on Commerce, Science, and Transportation of the Senate and Committee on Science, Space, and Technology of the House of Representatives] a report detailing—

"(1) progress towards the establishment of—

"(A) the Office, the Program, and the Program architecture; and

"(B) the integrated master plan, integrated master schedule, and integrated risk management procedures for the Program;

"(2) performance measures and milestones for the Program and any interim assessment with respect to such performance measures, as practicable;

"(3) initial criteria for determining whether NASA should make, manage, or buy key capabilities within the Program or engage with international partners to access such capabilities;

"(4) strategies to ensure consistent insight into the activities of NASA partners, including nongovernmental partners, as required to identify and mitigate mission risks;

"(5) progress towards the establishment of a systems engineering and integration function; and

"(6) an annual budget profile for resources required to implement the Program during the 5-year period beginning on the date of the enactment of this Act."

[For definition of "STEM" as used in section 10811 of Pub. L. 117–167, set out above, see section 18901 of Title 42, The Public Health and Welfare.]

[For definitions of "Orion", "cislunar space", and "government astronauts" as used in section 10811 of Pub. L. 117–167, set out above, see section 10802 of Pub. L. 117–167, set out as a Definitions note under section 10101 of this title.]

HUMAN SPACE EXPLORATION

Pub. L. 115–10, title IV, §§431, 432, Mar. 21, 2017, 131 Stat. 38, as amended by Pub. L. 117–167, div. B, title VII, §10817(b), Aug. 9, 2022, 136 Stat. 1740, provided that:

"SEC. 431. FINDINGS ON HUMAN SPACE EXPLORATION.

"Congress makes the following findings:

"(1) In accordance with section 204 of the National Aeronautics and Space Administration Authorization Act of 2010 (124 Stat. 2813), the National Academies of Sciences, Engineering, and Medicine, through its Committee on Human Spaceflight, conducted a review of the goals, core capabilities,

and direction of human space flight, and published the findings and recommendations in a 2014 report entitled, 'Pathways to Exploration: Rationales and Approaches for a U.S. Program of Human Space Exploration'.

"(2) The Committee on Human Spaceflight included leaders from the aerospace, scientific, security, and policy communities.

"(3) With input from the public, the Committee on Human Spaceflight concluded that many practical and aspirational rationales for human space flight together constitute a compelling case for continued national investment and pursuit of human space exploration toward the horizon goal of Mars.

"(4) According to the Committee on Human Spaceflight, the rationales include economic benefits, national security, national prestige, inspiring students and other citizens, scientific discovery, human survival, and a sense of shared destiny.

"(5) The Committee on Human Spaceflight affirmed that Mars is the appropriate long-term goal for the human space flight program.

"(6) The Committee on Human Spaceflight recommended that NASA define a series of sustainable steps and conduct mission planning and technology development as needed to achieve the long-term goal of placing humans on the surface of Mars.

"(7) Expanding human presence beyond low-Earth orbit and advancing toward human missions to Mars requires early planning and timely decisions to be made in the near-term on the necessary courses of action for commitments to achieve short-term and long-term goals and objectives.

"(8) In addition to the 2014 report described in paragraph (1), there are several independently developed reports or concepts that describe potential Mars architectures or concepts and identify Mars as the long-term goal for human space exploration, including NASA's 'The Global Exploration Roadmap' of 2013, 'NASA's Journey to Mars–Pioneering Next Steps in Space Exploration' of 2015, NASA Jet Propulsion Laboratory's 'Minimal Architecture for Human Journeys to Mars' of 2015, and Explore Mars' 'The Humans to Mars Report 2016'.

"SEC. 432. HUMAN EXPLORATION ROADMAP.

"(a) SENSE OF CONGRESS.—It is the sense of Congress that—

"(1) expanding human presence beyond low-Earth orbit and advancing toward human missions to Mars in the 2030s requires early strategic planning and timely decisions to be made in the near-term on the necessary courses of action for commitments to achieve short-term and long-term goals and objectives;

"(2) for strong and sustained United States leadership, a need exists to advance a human exploration roadmap, addressing exploration objectives in collaboration with international, academic, and industry partners;

"(3) an approach that incrementally advances toward a long-term goal is one in which nearer-term developments and implementation would influence future development and implementation; and

"(4) a human exploration roadmap should begin with low-Earth orbit, then address in greater detail progress beyond low-Earth orbit to cis-lunar space, and then address future missions aimed at human arrival and activities near and then on the surface of Mars.

"(b) HUMAN EXPLORATION ROADMAP.—

"(1) IN GENERAL.—The Administrator shall develop a human exploration roadmap, including a critical decision plan, to expand human presence beyond low-Earth orbit to the surface of Mars and beyond, considering potential interim destinations such as cis-lunar space and the moons of Mars.

"(2) SCOPE.—The human exploration roadmap shall include—

"(A) an integrated set of exploration, science, and other goals and objectives of a United States human space exploration program to achieve the long-term goal of human missions near or on the surface of Mars in the 2030s;

"(B) opportunities for international, academic, and industry partnerships for exploration-related systems, services, research, and technology if those opportunities provide cost-savings, accelerate program schedules, or otherwise benefit the goals and objectives developed under subparagraph (A);

"(C) sets and sequences of precursor missions in cis-lunar space and other missions or activities necessary—

"(i) to demonstrate the proficiency of the capabilities and technologies identified under subparagraph (D); and

"(ii) to meet the goals and objectives developed under subparagraph (A), including anticipated timelines and missions for the Space Launch System and Orion;

"(D) an identification of the specific capabilities and technologies, including the Space Launch System, Orion, a deep space habitat, and other capabilities, that facilitate the goals and objectives developed under subparagraph (A);

"(E) a description of how cis-lunar elements, objectives, and activities advance the human exploration of Mars;

"(F) an assessment of potential human health and other risks, including radiation exposure;

"(G) mitigation plans, whenever possible, to address the risks identified in subparagraph (F);

"(H) a description of those technologies already under development across the Federal Government or by other entities that facilitate the goals and objectives developed under subparagraph (A);

"(I) a specific process for the evolution of the capabilities of the fully integrated Orion with the Space Launch System and a description of how these systems facilitate the goals and objectives developed under subparagraph (A) and demonstrate the capabilities and technologies described in subparagraph (D);

"(J) a description of the capabilities and technologies that need to be demonstrated or research data that could be gained through the utilization of the ISS and the status of the development of such capabilities and technologies;

"(K) a framework for international cooperation in the development of all capabilities and technologies identified under this section, including an assessment of the risks posed by relying on international partners for capabilities and technologies on the critical path of development;

"(L) a process for partnering with nongovernmental entities using Space Act Agreements or other acquisition instruments for future human space exploration; and

"(M) include [sic] information on the phasing of planned intermediate destinations, Mars mission risk areas and potential risk mitigation approaches, technology requirements and phasing of required technology development activities, the management strategy to be followed, related ISS activities, planned international collaborative activities, potential commercial contributions, and other activities relevant to the achievement of the goal established in this section.

"(3) CONSIDERATIONS.—In developing the human exploration roadmap, the Administrator shall consider—

"(A) using key exploration capabilities, namely the Space Launch System and Orion;

"(B) using existing commercially available technologies and capabilities or those technologies and capabilities being developed by industry for commercial purposes;

"(C) establishing an organizational approach to ensure collaboration and coordination among NASA's Mission Directorates under section 821 [set out as a note under section 20111 of this title], when appropriate, including to collect and return to Earth a sample from the Martian surface;

"(D) building upon the initial uncrewed mission, Artemis I, and first crewed mission, Artemis II, of the Space Launch System and Orion to establish a sustainable cadence of missions extending human exploration missions into cis-lunar space, including anticipated timelines and milestones;

"(E) developing the robotic and precursor missions and activities that will demonstrate, test, and develop key technologies and capabilities essential for achieving human missions to Mars, including long-duration human operations beyond low-Earth orbit, space suits, solar electric propulsion, deep space habitats, environmental control life support systems, Mars lander and ascent vehicle, entry, descent, landing, ascent, Mars surface systems, and in-situ resource utilization;

"(F) demonstrating and testing 1 or more habitat modules in cis-lunar space to prepare for Mars missions;

"(G) using public-private, firm fixed-price partnerships, where practicable;

"(H) collaborating with international, academic, and industry partners, when appropriate;

"(I) any risks to human health and sensitive onboard technologies, including radiation exposure;

"(J) any risks identified through research outcomes under the NASA Human Research Program's Behavioral Health Element; and

"(K) the recommendations and ideas of several independently developed reports or concepts that describe potential Mars architectures or concepts and identify Mars as the long-term goal for human space exploration, including the reports described under section 431.

"(4) CRITICAL DECISION PLAN ON HUMAN SPACE EXPLORATION.—As part of the human exploration roadmap, the Administrator shall include a critical decision plan—

"(A) identifying and defining key decisions guiding human space exploration priorities and plans that need to be made before June 30, 2020, including decisions that may guide human space exploration capability development, precursor missions, long-term missions, and activities;

"(B) defining decisions needed to maximize efficiencies and resources for reaching the near, intermediate, and long-term goals and objectives of human space exploration; and

"(C) identifying and defining timelines and milestones for a sustainable cadence of missions

beginning with Artemis III for the Space Launch System and Orion to extend human exploration from cis-lunar space to the surface of Mars.

"(5) REPORTS.—

"(A) INITIAL HUMAN EXPLORATION ROADMAP.—The Administrator shall submit to the appropriate committees of Congress—

"(i) an initial human exploration roadmap, including a critical decision plan, before December 1, 2017; and

"(ii) an updated human exploration roadmap periodically as the Administrator considers necessary but not less than biennially.

"(B) CONTENTS.—Each human exploration roadmap under this paragraph shall include a description of—

"(i) the achievements and goals accomplished in the process of developing such capabilities and technologies during the 2-year period prior to the submission of the human exploration roadmap; and

"(ii) the expected goals and achievements in the following 2-year period.

"(C) SUBMISSION WITH BUDGET.—Each human exploration roadmap under this section shall be included in the budget for that fiscal year transmitted to Congress under section 1105(a) of title 31, United States Code."

[Pub. L. 117–167, div. B, title VII, §10817(b), Aug. 9, 2022, 136 Stat. 1740, which directed amendment of section 432(b) of the National Aeronautics and Space Administration Authorization Act of 2017, was executed by amending section 432(b) of Pub. L. 115–10, set out above, which is section 432(b) of the National Aeronautics and Space Administration Transition Authorization Act of 2017, to reflect the probable intent of Congress.]

[For definitions of terms used in sections 431 and 432 of Pub. L. 115–10, set out above, see section 2 of Pub. L. 115–10, set out as a note under section 10101 of this title.]

[1] *So in original.*

§20303. Contribution to innovation

(a) PARTICIPATION IN INTERAGENCY ACTIVITIES.—The Administration shall be a full participant in any interagency effort to promote innovation and economic competitiveness through near-term and long-term basic scientific research and development and the promotion of science, technology, engineering, and mathematics education, consistent with the Administration's mission, including authorized activities.

(b) HISTORIC FOUNDATION.—In order to carry out the participation described in subsection (a), the Administrator shall build on the historic role of the Administration in stimulating excellence in the advancement of physical science and engineering disciplines and in providing opportunities and incentives for the pursuit of academic studies in science, technology, engineering, and mathematics.

(c) BALANCED SCIENCE PROGRAM AND ROBUST AUTHORIZATION LEVELS.—The balanced science program authorized by section 101(d) of the National Aeronautics and Space Administration Authorization Act of 2005 (42 U.S.C. 16611(d)) [1] shall be an element of the contribution by the Administration to the interagency programs.

(d) ANNUAL REPORT.—

(1) REQUIREMENT.—The Administrator shall submit to Congress and the President an annual report describing the activities conducted pursuant to this section, including a description of the goals and the objective metrics upon which funding decisions were made.

(2) CONTENT.—Each report submitted pursuant to paragraph (1) shall include, with regard to science, technology, engineering, and mathematics education programs, at a minimum, the following:

(A) A description of each program.

(B) The amount spent on each program.

(C) The number of students or teachers served by each program.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3356.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
20303(a)	42 U.S.C. 16611a(a).	Pub. L. 110–69, title II, §2001(a), (b), (c), (e), Aug. 9, 2007, 121 Stat. 582.
20303(b)	42 U.S.C. 16611a(b).	
20303(c)	42 U.S.C. 16611a(c).	
20303(d)	42 U.S.C. 16611a(e).	

EDITORIAL NOTES

REFERENCES IN TEXT

Section 101(d) of the National Aeronautics and Space Administration Authorization Act of 2005 (42 U.S.C. 16611(d)), referred to in subsec. (c), is section 101(d) of Pub. L. 109–155, title I, Dec. 30, 2005, 119 Stat. 2897, which was omitted from the Code following the enactment of this title by Pub. L. 111–314.

STATUTORY NOTES AND RELATED SUBSIDIARIES

INTERNATIONAL SPACE STATION'S CONTRIBUTION TO NATIONAL COMPETITIVENESS ENHANCEMENT

Pub. L. 111–358, title II, §204, Jan. 4, 2011, 124 Stat. 3994, provided that:

"(a) SENSE OF CONGRESS.—It is the sense of the Congress that the International Space Station represents a valuable and unique national asset which can be utilized to increase educational opportunities and scientific and technological innovation which will enhance the Nation's economic security and competitiveness in the global technology fields of endeavor. If the period for active utilization of the International Space Station is extended to at least the year 2020, the potential for such opportunities and innovation would be increased. Efforts should be made to fully realize that potential.

"(b) EVALUATION AND ASSESSMENT OF NASA'S INTERAGENCY CONTRIBUTION.—Pursuant to the authority provided in title II of the America COMPETES Act (Public Law 110–69 [see Tables for classification]), the Administrator [of NASA] shall evaluate and, where possible, expand efforts to maximize NASA's [National Aeronautics and Space Administration's] contribution to interagency efforts to enhance science, technology, engineering, and mathematics education capabilities, and to enhance the Nation's technological excellence and global competitiveness. The Administrator shall identify these enhancements in the annual reports required by section 2001(e) of that Act ([former] 42 U.S.C. 16611a(e)) [now 51 U.S.C. 20303(d)].

"(c) REPORT TO THE CONGRESS.—Within 120 days after the date of enactment of this Act [Jan. 4, 2011], the Administrator shall provide to the House of Representatives Committee on Science and Technology [now Committee on Science, Space, and Technology] and the Senate Committee on Commerce, Science, and Transportation a report on the assessment made pursuant to subsection (a). The report shall include—

"(1) a description of current and potential activities associated with utilization of the International Space Station which are supportive of the goals of educational excellence and innovation and competitive enhancement established or reaffirmed by this Act [see Short Title of 2011 Amendment note set out under section 1861 of Title 42, The Public Health and Welfare], including a summary of the goals supported, the number of individuals or organizations participating in or benefiting from such activities, and a summary of how such activities might be expanded or improved upon;

"(2) a description of government and private partnerships which are, or may be, established to effectively utilize the capabilities represented by the International Space Station to enhance United States competitiveness, innovation and science, technology, engineering, and mathematics education; and

"(3) a summary of proposed actions or activities to be undertaken to ensure the maximum utilization of the International Space Station to contribute to fulfillment of the goals and objectives of this Act, and the identification of any additional authority, assets, or funding that would be required to support such

activities."

[1] *See References in Text note below.*

§20304. Basic research enhancement

(a) DEFINITION OF BASIC RESEARCH.—In this section, the term "basic research" has the meaning given the term in Office of Management and Budget Circular No. A–11.

(b) COORDINATION.—The Administrator, the Director of the National Science Foundation, the Secretary of Energy, the Secretary of Defense, and the Secretary of Commerce shall, to the extent practicable, coordinate basic research activities related to physical sciences, technology, engineering, and mathematics.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3357.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
20304	42 U.S.C. 16658.	Pub. L. 110–69, title II, §2003, Aug. 9, 2007, 121 Stat. 583.

§20305. National Academies decadal surveys

(a) IN GENERAL.—The Administrator shall enter into agreements on a periodic basis with the National Academies for independent assessments, also known as decadal surveys, to take stock of the status and opportunities for Earth and space science discipline fields and Aeronautics research and to recommend priorities for research and programmatic areas over the next decade.

(b) INDEPENDENT COST ESTIMATES.—The agreements described in subsection (a) shall include independent estimates of the life cycle costs and technical readiness of missions assessed in the decadal surveys whenever possible.

(c) REEXAMINATION.—The Administrator shall request that each National Academies decadal survey committee identify any conditions or events, such as significant cost growth or scientific or technological advances, that would warrant the Administration asking the National Academies to reexamine the priorities that the decadal survey had established.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3357.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
20305	42 U.S.C. 17823.	Pub. L. 110–422, title XI, §1104, Oct. 15, 2008, 122 Stat. 4809.

STATUTORY NOTES AND RELATED SUBSIDIARIES

IMPLEMENTATION OF DECADAL SURVEY'S RECOMMENDED DECISION RULES

Pub. L. 112–55, div. B, title III, Nov. 18, 2011, 125 Stat. 622, provided in part: "That NASA shall implement the recommendations of the most recent National Research Council planetary decadal survey and shall follow the decadal survey's recommended decision rules regarding program implementation, including a strict adherence to the recommendation that NASA include in a balanced program a flagship class mission,

which may be executed in cooperation with one or more international partners, if such mission can be appropriately de-scoped and all NASA costs for such mission can be accommodated within the overall funding levels appropriated by Congress".

§20306. Special appropriations for Mars missions, Artemis missions, and Moon to Mars program

(a) IN GENERAL.—In addition to amounts otherwise available, there is appropriated to the Administration for fiscal year 2025, out of any money in the Treasury not otherwise appropriated, $9,995,000,000, to remain available until September 30, 2032, to use as follows:

(1) $700,000,000, to be obligated not later than fiscal year 2026, for the procurement, using a competitively bid, firm fixed-price contract with a United States commercial provider (as defined in section 50101(7)), of a high-performance Mars telecommunications orbiter—

(A) that—

(i) is capable of providing robust, continuous communications for—

(I) a Mars sample return mission, as described in section 432(3)(C) of the National Aeronautics and Space Administration Transition Authorization Act of 2017 (51 U.S.C. 20302 note; Public Law 115–10); and

(II) future Mars surface, orbital, and human exploration missions;

(ii) supports autonomous operations, onboard processing, and extended mission duration capabilities; and

(iii) is selected from among the commercial proposals that—

(I) received funding from the Administration in fiscal year 2024 or 2025 for commercial design studies for Mars Sample Return; and

(II) proposed a separate, independently launched Mars telecommunication orbiter supporting an end-to-end Mars sample return mission; and

(B) which shall be delivered to the Administration not later than December 31, 2028.

(2) $2,600,000,000 to meet the requirements of section 20302(a) using the program of record known, as of the date of the enactment of this section, as "Gateway", and as described in section 10811(b)(2)(B)(iv) of the National Aeronautics and Space Administration Authorization Act of 2022 (51 U.S.C. 20302 note; Public Law 117–167), of which not less than $750,000,000 shall be obligated for each of fiscal years 2026, 2027, and 2028.

(3) $4,100,000,000 for expenses related to meeting the requirements of section 10812 of the National Aeronautics and Space Administration Authorization Act of 2022 (51 U.S.C. 20301; [1] Public Law 117–167) for the procurement, transportation, integration, operation, and other necessary expenses of the Space Launch System for Artemis Missions IV and V, of which not less than $1,025,000,000 shall be obligated for each of fiscal years 2026, 2027, 2028, and 2029.

(4) $20,000,000 for expenses related to the continued procurement of the multi-purpose crew vehicle described in section 303 of the National Aeronautics and Space Administration Authorization Act of 2010 (42 U.S.C. 18323), known as the "Orion", for use with the Space Launch System on the Artemis IV Mission and reuse in subsequent Artemis Missions, of which not less than $20,000,000 shall be obligated not later than fiscal year 2026.

(5) $1,250,000,000 for expenses related to the operation of the International Space Station and for the purpose of meeting the requirement under section 503(a) of the National Aeronautics and Space Administration Authorization Act of 2010 (42 U.S.C. 18353(a)), of which not less than $250,000,000 shall be obligated for such expenses for each of fiscal years 2025, 2026, 2027, 2028, and 2029.

(6) $1,000,000,000 for infrastructure improvements at the manned spaceflight centers of the Administration, of which not less than—

(A) $120,000,000 shall be obligated not later than fiscal year 2026 for construction,

revitalization, recapitalization, or other infrastructure projects and improvements at the center described in Executive Order 12641 (53 Fed. Reg. 18816; relating to designating certain facilities of the National Aeronautics and Space Administration in the State of Mississippi as the John C. Stennis Space Center);

(B) $250,000,000 shall be obligated not later than fiscal year 2026 for construction, revitalization, recapitalization, or other infrastructure projects and improvements at the center described in Executive Order 11129 (28 Fed. Reg. 12787; relating to designating certain facilities of the National Aeronautics and Space Administration and of the Department of Defense, in the State of Florida, as the John F. Kennedy Space Center);

(C) $300,000,000 shall be obligated not later than fiscal year 2026 for construction, revitalization, recapitalization, or other infrastructure projects and improvements at the center described in the Joint Resolution entitled "Joint Resolution to designate the Manned Spacecraft Center in Houston, Texas, as the 'Lyndon B. Johnson Space Center' in honor of the late President", approved February 17, 1973 (Public Law 93–8; 87 Stat. 7);

(D) $100,000,000 shall be obligated not later than fiscal year 2026 for construction, revitalization, recapitalization, or other infrastructure projects and improvements at the center described in Executive Order 10870 (25 Fed. Reg. 2197; relating to designating the facilities of the National Aeronautics and Space Administration at Huntsville, Alabama, as the George C. Marshall Space Flight Center);

(E) $30,000,000 shall be obligated not later than fiscal year 2026 for construction, revitalization, recapitalization, or other infrastructure projects and improvements at the Michoud Assembly Facility in New Orleans, Louisiana; and

(F) $85,000,000 shall be obligated to carry out subsection (b), of which not less than $5,000,000 shall be obligated for the transportation of the space vehicle described in that subsection, with the remainder transferred not later than the date that is 18 months after the date of the enactment of this section to the entity designated under that subsection, for the purpose of construction of a facility to house the space vehicle referred to in that subsection.

(7) $325,000,000 to fulfill contract number 80JSC024CA002 issued by the National Aeronautics and Space Administration on June 26, 2024.

(b) SPACE VEHICLE TRANSFER.—

(1) IN GENERAL.—Not later than 30 days after the date of the enactment of this section, the Administrator shall identify a space vehicle described in paragraph (2) to be—

(A) transferred to a field center of the Administration that is involved in the administration of the Commercial Crew Program (as described in section 302 of the National Aeronautics and Space Administration Transition Authorization Act of 2017 (51 U.S.C. 50111 note; Public Law 115–10)); and

(B) placed on public exhibition at an entity within the Metropolitan Statistical Area where such center is located.

(2) SPACE VEHICLE DESCRIBED.—A space vehicle described in this paragraph is a vessel that—

(A) has flown into space;

(B) has carried astronauts; and

(C) is selected with the concurrence of an entity designated by the Administrator.

(3) TRANSFER.—Not later than 18 months after the date of the enactment of this section, the space vehicle identified under paragraph (1) shall be transferred to an entity designated by the Administrator.

(c) OBLIGATION OF FUNDS.—Funds appropriated under subsection (a) shall be obligated as follows:

(1) Not less than 50 percent of the total funds in subsection (a) shall be obligated not later than September 30, 2028.

(2) 100 percent of funds shall be obligated not later than September 30, 2029.

(3) All associated outlays shall occur not later than September 30, 2034.

(Added Pub. L. 119–21, title IV, §40005(a), July 4, 2025, 139 Stat. 133.)

EDITORIAL NOTES

REFERENCES IN TEXT

The date of the enactment of this section, referred to in subsecs. (a)(2), (6)(F) and (b)(1), (3), is the date of enactment of Pub. L. 119–21, which was approved July 4, 2025.

[1] *So in original. Probably should be "51 U.S.C. 20301 note;".*

Subtitle III—Administrative Provisions

CHAPTER 301—APPROPRIATIONS, BUDGETS, AND ACCOUNTING

Sec.
30101. Prior authorization of appropriations required.
30102. Working capital fund.
30103. Budgets.
30104. Baselines and cost controls.

§30101. Prior authorization of appropriations required

Notwithstanding the provisions of any other law, no appropriation may be made to the Administration unless previously authorized by legislation enacted by Congress.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3357.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
30101	42 U.S.C. 2460.	Pub. L. 86–45, §4, June 15, 1959, 73 Stat. 75.

The word "hereafter" is omitted as unnecessary.

§30102. Working capital fund

(a) ESTABLISHMENT.—There is hereby established in the United States Treasury an Administration working capital fund.

(b) AVAILABILITY OF AMOUNTS.—

(1) IN GENERAL.—Amounts in the fund are available for financing activities, services, equipment, information, and facilities as authorized by law to be provided—

(A) within the Administration;

(B) to other agencies or instrumentalities of the United States;

(C) to any State, territory, or possession or political subdivision thereof;

(D) to other public or private agencies; or

(E) to any person, firm, association, corporation, or educational institution on a reimbursable

basis.

(2) CAPITAL REPAIRS.—The fund shall also be available for the purpose of funding capital repairs, renovations, rehabilitation, sustainment, demolition, or replacement of Administration real property, on a reimbursable basis within the Administration.

(3) INFORMATION TECHNOLOGY (IT) MODERNIZATION.—The fund shall also be available for the purpose of funding IT Modernization activities, as described in section 1077(b)(3)(A)–(E) of Public Law 115–91, on a non-reimbursable basis.

(4) NO FISCAL YEAR LIMITATION.—Amounts in the fund are available without regard to fiscal year limitation.

(c) CONTENTS.—The capital of the fund consists of—

(1) amounts appropriated to the fund;

(2) the reasonable value of stocks of supplies, equipment, and other assets and inventories on order that the Administrator transfers to the fund, less the related liabilities and unpaid obligations;

(3) payments received for loss or damage to property of the fund; and

(4) refunds or rebates received on an on-going basis from a credit card services provider under the National Aeronautics and Space Administration's credit card programs.

(d) REIMBURSEMENT.—The fund shall be reimbursed, in advance, for supplies and services at rates that will approximate the expenses of operation, such as the accrual of annual leave, depreciation of plant, property, and equipment, and overhead.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3357; Pub. L. 113–6, div. B, title III, Mar. 26, 2013, 127 Stat. 264; Pub. L. 117–328, div. B, title III, Dec. 29, 2022, 136 Stat. 4549.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
30102	42 U.S.C. 2459i.	Pub. L. 108–7, div. K, title III, (last par. under heading "Administrative Provisions", at 117 Stat. 520), Feb. 20, 2003, 117 Stat. 520.

EDITORIAL NOTES

REFERENCES IN TEXT

Section 1077(b)(3)(A)–(E) of Public Law 115–91, referred to in subsec. (b)(3), is section 1077(b)(3)(A)–(E) of Pub. L. 115–91, div. A, title X, subtitle G, Dec. 12, 2017, 131 Stat. 1587, which is set out in a note under section 11301 of Title 40, Public Buildings, Property, and Works.

AMENDMENTS

2022—Subsec. (b)(3), (4). Pub. L. 117–328 added par. (3) and redesignated former par. (3) as (4).

2013—Subsec. (c)(4). Pub. L. 113–6 added par. (4).

STATUTORY NOTES AND RELATED SUBSIDIARIES

ESTABLISHMENT OF THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION NONRECURRING EXPENSES FUND

Pub. L. 119–74, div. A, title III, Jan. 23, 2026, 140 Stat. 44, provided that: "There is hereby established in the Treasury of the United States a fund to be known as the 'National Aeronautics and Space Administration Nonrecurring Expenses Fund' (the Fund). Unobligated balances of expired discretionary funds appropriated for this or any succeeding fiscal year from the General Fund of the Treasury to the National Aeronautics and Space Administration (NASA) by this or any other Act may be transferred (not later than the end of the fifth

fiscal year after the last fiscal year for which such funds are available for the purposes for which appropriated) into the Fund. Amounts deposited in the Fund shall be available until expended, and in addition to such other funds as may be available for such purposes, for facilities infrastructure improvements, including nonrecurring maintenance, necessary for the operation of NASA, subject to approval by the Office of Management and Budget. Amounts in the Fund may not be available for the purpose described in subsection (b)(3) of section 30102 of title 51, United States Code. Amounts in the Fund may be obligated only after the Committees on Appropriations of the House of Representatives and the Senate are notified at least 30 days in advance of the planned use of funds."

§30103. Budgets

(a) CATEGORIES.—The proposed budget for the Administration submitted by the President for each fiscal year shall be accompanied by documents showing—

(1) by program—

(A) the budget for space operations, including the International Space Station and the space shuttle;

(B) the budget for exploration systems;

(C) the budget for aeronautics;

(D) the budget for space science;

(E) the budget for Earth science;

(F) the budget for microgravity science;

(G) the budget for education;

(H) the budget for safety oversight; and

(I) the budget for public relations;

(2) the budget for technology transfer programs;

(3) the budget for the Integrated Enterprise Management Program, by individual element;

(4) the budget for the Independent Technical Authority, both total and by center;

(5) the total budget for the prize program under section 20144 of this title, and the administrative budget for that program; and

(6) the comparable figures for at least the 2 previous fiscal years for each item in the proposed budget.

(b) ADDITIONAL BUDGET INFORMATION UPON REQUEST BY COMMITTEES.—The Administration shall make available, upon request from the Committee on Science and Technology of the House of Representatives or the Committee on Commerce, Science, and Transportation of the Senate—

(1) information on corporate and center general and administrative costs and service pool costs, including—

(A) the total amount of funds being allocated for those purposes for any fiscal year for which the President has submitted an annual budget request to Congress;

(B) the amount of funds being allocated for those purposes for each center, for headquarters, and for each directorate; and

(C) the major activities included in each cost category; and

(2) the figures on the amount of unobligated funds and unexpended funds, by appropriations account—

(A) that remained at the end of the fiscal year prior to the fiscal year in which the budget is being presented that were carried over into the fiscal year in which the budget is being presented;

(B) that are estimated will remain at the end of the fiscal year in which the budget is being presented that are proposed to be carried over into the fiscal year for which the budget is being presented; and

(C) that are estimated will remain at the end of the fiscal year for which the budget is being presented.

(c) INFORMATION IN ANNUAL BUDGET JUSTIFICATION.—The Administration shall provide, at a minimum, the following information in its annual budget justification:

(1) The actual, current, proposed funding level, and estimated budgets for the next 5 fiscal years by directorate, theme, program, project and activity within each appropriations account.

(2) The proposed programmatic and non-programmatic construction of facilities.

(3) The budget for headquarters including—

(A) the budget by office, and any division thereof, for the actual, current, proposed funding level, and estimated budgets for the next 5 fiscal years;

(B) the travel budget for each office, and any division thereof, for the actual, current, and proposed funding level; and

(C) the civil service full time equivalent assignments per headquarters office, and any division thereof, including the number of Senior Executive Service, noncareer, detailee, and contract personnel per office.

(4) Within 14 days of the submission of the budget to Congress an accompanying volume shall be provided to the Committees on Appropriations containing the following information for each center, facility managed by any center, and federally funded research and development center operated on behalf of the Administration:

(A) The actual, current, proposed funding level, and estimated budgets for the next 5 fiscal years by directorate, theme, program, project, and activity.

(B) The proposed programmatic and non-programmatic construction of facilities.

(C) The number of civil service full time equivalent positions per center for each identified fiscal year.

(D) The number of civil service full time equivalent positions considered to be uncovered capacity at each location for each identified fiscal year.

(5) The proposed budget as designated by object class for each directorate, theme, and program.

(6) Sufficient narrative shall be provided to explain the request for each program, project, and activity, and an explanation for any deviation to previously adopted baselines for all justification materials provided to the Committees.

(d) ESTIMATE OF GROSS RECEIPTS AND PROPOSED USE OF FUNDS RELATED TO LEASE OF PROPERTY.—Each annual budget request shall include an annual estimate of gross receipts and collections and proposed use of all funds collected pursuant to section 20145 of this title.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3358.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
30103(a)	42 U.S.C. 16611(h)(1).	Pub. L. 109–155, title I, §101(h)(1), (i), Dec. 30, 2005, 119 Stat. 2903.
30103(b)	42 U.S.C. 16611(i).	
30103(c)	42 U.S.C. 16611b.	Pub. L. 110–161, div. B, title III, (7th par. under heading "Administrative Provisions", at 121 Stat. 1919), Dec. 26, 2007, 121 Stat. 1919.
30103(d)	42 U.S.C. 16611b note.	Pub. L. 111–8, div. B, title III, (3d proviso in par. under heading "Cross

		Agency Support", at 123 Stat. 589), Mar. 11, 2009, 123 Stat. 589.

In subsection (a)(5), the source law's reference to "section 104" of the National Aeronautics and Space Administration Authorization Act of 2005 (Public Law 109–155, 119 Stat. 2910) is translated as "section 20144" of title 51. Section 104 of the National Aeronautics and Space Administration Authorization Act of 2005 amended the National Aeronautics and Space Act of 1958 (Public Law 85–568, 72 Stat. 426) by inserting a new section 314, which is restated as section 20144 of title 51.

In subsection (b), in the matter before paragraph (1), the words "Committee on Science and Technology" are substituted for "Committee on Science" on authority of Rule X(1)(o) of the Rules of the House of Representatives, adopted by House Resolution No. 6 (110th Congress, January 5, 2007).

In subsection (c), in the matter before paragraph (1), the words "For fiscal year 2009 and hereafter" are omitted as unnecessary.

STATUTORY NOTES AND RELATED SUBSIDIARIES

CHANGE OF NAME

Committee on Science and Technology of House of Representatives changed to Committee on Science, Space, and Technology of House of Representatives by House Resolution No. 5, One Hundred Twelfth Congress, Jan. 5, 2011.

ESTIMATES OF RECEIPTS AND COLLECTIONS AND PROPOSED USE OF FUNDS FROM LEASES OF NON-EXCESS PROPERTY

Pub. L. 119–74, div. A, title III, Jan. 23, 2026, 140 Stat. 43, provided in part: "That each annual budget request shall include an annual estimate of gross receipts and collections and proposed use of all funds collected pursuant to section 20145 of title 51, United States Code."

Similar provisions were contained in the following prior appropriation acts:
Pub. L. 118–42, div. C, title III, Mar. 9, 2024, 138 Stat. 160.
Pub. L. 117–328, div. B, title III, Dec. 29, 2022, 136 Stat. 4548.
Pub. L. 117–103, div. B, title III, Mar. 15, 2022, 136 Stat. 137.
Pub. L. 116–260, div. B, title III, Dec. 27, 2020, 134 Stat. 1270.
Pub. L. 116–93, div. B, title III, Dec. 20, 2019, 133 Stat. 2418.
Pub. L. 116–6, div. C, title III, Feb. 15, 2019, 133 Stat. 123.
Pub. L. 115–141, div. B, title III, Mar. 23, 2018, 132 Stat. 431.
Pub. L. 115–31, div. B, title III, May 5, 2017, 131 Stat. 214.
Pub. L. 114–113, div. B, title III, Dec. 18, 2015, 129 Stat. 2318.
Pub. L. 113–235, div. B, title III, Dec. 16, 2014, 128 Stat. 2203.
Pub. L. 113–76, div. B, title III, Jan. 17, 2014, 128 Stat. 72.
Pub. L. 113–6, div. B, title III, Mar. 26, 2013, 127 Stat. 263.
Pub. L. 112–55, div. B, title III, Nov. 18, 2011, 125 Stat. 625.
Pub. L. 111–117, div. B, title III, Dec. 16, 2009, 123 Stat. 3144.

TRANSMISSION OF BUDGET ESTIMATES

Pub. L. 102–588, title II, §210, Nov. 4, 1992, 106 Stat. 5115, provided that: "The Administrator [of the National Aeronautics and Space Administration] shall, at the time of submission of the President's annual budget, transmit to the Congress—

"(1) a five-year budget detailing the estimated development costs for each individual program under the jurisdiction of the National Aeronautics and Space Administration for which development costs are expected to exceed $200,000,000; and

"(2) an estimate of the life-cycle costs associated with each such program."

Similar provisions were contained in the following prior appropriation authorization act:
Pub. L. 102–195, §11, Dec. 9, 1991, 105 Stat. 1612.

§30104. Baselines and cost controls

(a) DEFINITIONS.—In this section:

(1) DEVELOPMENT.—The term "development" means the phase of a program following the

formulation phase and beginning with the approval to proceed to implementation, as defined in the Administration's Procedural Requirements 7120.5E, dated August 14, 2012.

(2) DEVELOPMENT COST.—The term "development cost" means the total of all costs, including construction of facilities and civil servant costs, from the period beginning with the approval to proceed to implementation through the achievement of operational readiness, without regard to funding source or management control, for the life of the program.

(3) LIFE-CYCLE COST.—The term "life-cycle cost" means the total of the direct, indirect, recurring, and nonrecurring costs, including the construction of facilities and civil servant costs, and other related expenses incurred or estimated to be incurred in the design, development, verification, production, operation, maintenance, support, and retirement of a program over its planned lifespan, without regard to funding source or management control.

(4) MAJOR PROGRAM.—The term "major program" means an activity approved to proceed to implementation that has an estimated life-cycle cost of more than $250,000,000.

(b) CONDITIONS FOR DEVELOPMENT.—

(1) IN GENERAL.—The Administration shall not enter into a contract for the development of a major program unless the Administrator determines that—

(A) the technical, cost, and schedule risks of the program are clearly identified and the program has developed a plan to manage those risks;

(B) the technologies required for the program have been demonstrated in a relevant laboratory or test environment; and

(C) the program complies with all relevant policies, regulations, and directives of the Administration.

(2) REPORT.—The Administrator shall transmit a report describing the basis for the determination required under paragraph (1) to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate at least 30 days before entering into a contract for development under a major program.

(3) NONDELEGATION.—The Administrator may not delegate the determination requirement under this subsection, except in cases in which the Administrator has a conflict of interest.

(c) MAJOR PROGRAM ANNUAL REPORTS.—

(1) REQUIREMENT.—Annually, at the same time as the President's annual budget submission to Congress, the Administrator shall transmit to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a report that includes the information required by this section for each major program for which the Administration proposes to expend funds in the subsequent fiscal year. Reports under this paragraph shall be known as Major Program Annual Reports.

(2) BASELINE REPORT.—The first Major Program Annual Report for each major program shall include a Baseline Report that shall, at a minimum, include—

(A) the purposes of the program and key technical characteristics necessary to fulfill those purposes;

(B) an estimate of the life-cycle cost for the program, with a detailed breakout of the development cost, program reserves, and an estimate of the annual costs until development is completed;

(C) the schedule for development, including key program milestones;

(D) the plan for mitigating technical, cost, and schedule risks identified in accordance with subsection (b)(1)(A); and

(E) the name of the person responsible for making notifications under subsection (d), who shall be an individual whose primary responsibility is overseeing the program.

(3) INFORMATION UPDATES.—For major programs for which a Baseline Report has been submitted, each subsequent Major Program Annual Report shall describe any changes to the

information that had been provided in the Baseline Report, and the reasons for those changes.

(d) NOTIFICATION.—

(1) REQUIREMENT.—The individual identified under subsection (c)(2)(E) shall immediately notify the Administrator any time that individual has reasonable cause to believe that, for the major program for which he or she is responsible—

(A) the development cost of the program is likely to exceed the estimate provided in the Baseline Report of the program by 15 percent or more; or

(B) a milestone of the program is likely to be delayed by 6 months or more from the date provided for it in the Baseline Report of the program.

(2) REASONS.—Not later than 30 days after the notification required under paragraph (1), the individual identified under subsection (c)(2)(E) shall transmit to the Administrator a written notification explaining the reasons for the change in the cost or milestone of the program for which notification was provided under paragraph (1).

(3) NOTIFICATION OF CONGRESS.—Not later than 15 days after the Administrator receives a written notification under paragraph (2), the Administrator shall transmit the notification to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate.

(e) FIFTEEN PERCENT THRESHOLD.—

(1) DETERMINATION, REPORT, AND INITIATION OF ANALYSIS.—Not later than 30 days after receiving a written notification under subsection (d)(2), the Administrator shall determine whether the development cost of the program is likely to exceed the estimate provided in the Baseline Report of the program by 15 percent or more, or whether a milestone is likely to be delayed by 6 months or more. If the determination is affirmative, the Administrator shall—

(A) transmit to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate, not later than 15 days after making the determination, a report that includes—

(i) a description of the increase in cost or delay in schedule and a detailed explanation for the increase or delay;

(ii) a description of actions taken or proposed to be taken in response to the cost increase or delay; and

(iii) a description of any impacts the cost increase or schedule delay, or the actions described under clause (ii), will have on any other program within the Administration; and

(B) if the Administrator intends to continue with the program, promptly initiate an analysis of the program, which shall include, at a minimum—

(i) the projected cost and schedule for completing the program if current requirements of the program are not modified;

(ii) the projected cost and the schedule for completing the program after instituting the actions described under subparagraph (A)(ii); and

(iii) a description of, and the projected cost and schedule for, a broad range of alternatives to the program.

(2) COMPLETION OF ANALYSIS AND TRANSMITTAL TO COMMITTEES.—The Administration shall complete an analysis initiated under paragraph (1)(B) not later than 6 months after the Administrator makes a determination under this subsection. The Administrator shall transmit the analysis to the Committee on Science and Technology of the House of Representatives and Committee on Commerce, Science, and Transportation of the Senate not later than 30 days after its completion.

(f) THIRTY PERCENT THRESHOLD.—If the Administrator determines under subsection (e)

that the development cost of a program will exceed the estimate provided in the Baseline Report of the program by more than 30 percent, then, beginning 18 months after the date the Administrator transmits a report under subsection (e)(1)(A), the Administrator shall not expend any additional funds on the program, other than termination costs, unless Congress has subsequently authorized continuation of the program by law. An appropriation for the specific program enacted subsequent to a report being transmitted shall be considered an authorization for purposes of this subsection. If the program is continued, the Administrator shall submit a new Baseline Report for the program no later than 90 days after the date of enactment of the Act under which Congress has authorized continuation of the program.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3360; Pub. L. 115–10, title VIII, §828, Mar. 21, 2017, 131 Stat. 66.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
30104	42 U.S.C. 16613.	Pub. L. 109–155, title I, §103, Dec. 30, 2005, 119 Stat. 2907.

In subsections (b)(2), (c)(1), (d)(3), and (e)(1)(A), (2), the words "Committee on Science and Technology" are substituted for "Committee on Science" on authority of Rule X(1)(o) of the Rules of the House of Representatives, adopted by House Resolution No. 6 (110th Congress, January 5, 2007).

EDITORIAL NOTES

AMENDMENTS

2017—Subsec. (a)(1). Pub. L. 115–10 substituted "Procedural Requirements 7120.5E, dated August 14, 2012" for "Procedural Requirements 7120.5c, dated March 22, 2005".

STATUTORY NOTES AND RELATED SUBSIDIARIES

CHANGE OF NAME

Committee on Science and Technology of House of Representatives changed to Committee on Science, Space, and Technology of House of Representatives by House Resolution No. 5, One Hundred Twelfth Congress, Jan. 5, 2011.

CHAPTER 303—CONTRACTING AND PROCUREMENT

Sec.

30301. Guaranteed customer base.
30302. Quality assurance personnel.
30303. Tracking and data relay satellite services.
30304. Award of contracts to small businesses and disadvantaged individuals.
30305. Outreach program.
30306. Small business contracting.
30307. Requirement for independent cost analysis.
30308. Cost effectiveness calculations.
30309. Use of abandoned and underutilized buildings, grounds, and facilities.
30310. Exception to alternative fuel procurement requirement.

STATUTORY NOTES AND RELATED SUBSIDIARIES

ONE SMALL STEP TO PROTECT HUMAN HERITAGE IN SPACE

Pub. L. 116–275, Dec. 31, 2020, 134 Stat. 3358, provided that:

"SECTION 1. SHORT TITLE.

"This Act may be cited as the 'One Small Step to Protect Human Heritage in Space Act'.

"SEC. 2. FINDINGS; SENSE OF CONGRESS.

"(a) Findings.—Congress makes the following findings:

"(1) On July 16, 1969, the Apollo 11 spacecraft launched from the John F. Kennedy Space Center carrying Neil A. Armstrong, Edwin E. 'Buzz' Aldrin, Jr., and Michael Collins.

"(2) July 20, 2019, marked the 50th anniversary of the date on which the Apollo 11 spacecraft landed on the Moon and Neil Armstrong and Buzz Aldrin became the first humans to set foot on a celestial body off the Earth.

"(3) The landing of the Apollo 11 spacecraft and humanity's first off-world footprints are achievements unparalleled in history, a direct product of the work and perseverance of the more than 400,000 individuals who contributed to the development of the Apollo missions on the shoulders of centuries of science and engineering pioneers from all corners of the world.

"(4) Among the thousands of individuals who have contributed to the achievements of the National Aeronautics and Space Administration (in this section referred to as 'NASA') are African-American women such as Katherine Johnson, Dorothy Vaughn, Mary Jackson, and Dr. Christine Darden, who made critical contributions to NASA space programs. Katherine Johnson worked at NASA for 35 years and calculated the trajectory of the Apollo 11 landing and the trajectories for the spaceflights of astronauts Alan Shepard and John Glenn. Katherine Johnson, together with many other individuals the work of whom often went unacknowledged, helped broaden the scope of space travel and charted new frontiers for humanity's exploration of space.

"(5) The landing of the Apollo 11 spacecraft was made on behalf of all humankind, and Neil Armstrong and Buzz Aldrin were accompanied by messages of peace from the leaders of more than 70 countries.

"(6) The lunar landing sites of the Apollo 11 spacecraft, the robotic spacecraft that preceded the Apollo 11 mission, and the crewed and robotic spacecraft that followed, are of outstanding universal value to humanity.

"(7) Such landing sites—

"(A) are the first archaeological sites with human activity that are not on Earth;

"(B) provide evidence of the first achievements of humankind in the realm of space travel and exploration; and

"(C) contain artifacts and other evidence of human exploration activities that remain a potential source of cultural, historical, archaeological, anthropological, scientific, and engineering knowledge.

"(8) On July 20, 2011, NASA published the voluntary guidance entitled 'NASA's Recommendations to Space-Faring Entities: How to Protect and Preserve the Historic and Scientific Value of U.S. Government Lunar Artifacts'.

"(9) In March 2018, the Office of Science and Technology Policy published a report entitled 'Protecting & Preserving Apollo Program Lunar Landing Sites & Artifacts'.

"(10) Article one of the 'Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies,' commonly known as the 'Outer Space Treaty,' states '[o]uter space, including the moon and other celestial bodies, shall be free for exploration and use by all States without discrimination of any kind, on a basis of equality and in accordance with international law, and there shall be free access to all areas of celestial bodies.'

"(11) Article eight of the Outer Space Treaty states, '[a] State Party to the Treaty on whose registry an object launched into outer space is carried shall retain jurisdiction and control over such object, and over any personnel thereof, while in outer space or on a celestial body. Ownership of objects launched into outer space, including objects landed or constructed on a celestial body, and of their component parts, is not affected by their presence in outer space or on a celestial body or by their return to the Earth.'

"(12) Article nine of the Outer Space Treaty states, '[i]n the exploration and use of outer space, including the moon and other celestial bodies, States Parties to the Treaty shall be guided by the principle of co-operation and mutual assistance and shall conduct all their activities in outer space, including the moon and other celestial bodies, with due regard to the corresponding interests of all other States Parties to the Treaty,' and continues, '[i]f a State Party to the Treaty has reason to believe that an activity or experiment planned by it or its nationals in outer space, including the moon and other celestial bodies, would cause potentially harmful interference with activities of other States Parties in the peaceful exploration and use of outer space, including the moon and other celestial bodies, it shall undertake appropriate international consultations before proceeding with any such activity or experiment. A State Party to the Treaty which has

reason to believe that an activity or experiment planned by another State Party in outer space, including the moon and other celestial bodies, would cause potentially harmful interference with activities in the peaceful exploration and use of outer space, including the moon and other celestial bodies, may request consultation concerning the activity or experiment.

"(b) SENSE OF CONGRESS.—It is the sense of Congress that—

"(1) as commercial enterprises and more countries acquire the ability to land on the Moon, it is necessary to encourage the development of best practices to respect the principle of due regard and to limit harmful interference to the Apollo landing site artifacts in acknowledgment of the human effort and innovation they represent, as well as their archaeological, anthropological, historical, scientific, and engineering significance and value; and

"(2) the Administrator of the National Aeronautics and Space Administration should continue to develop best practices to respect the principle of due regard and limit harmful interference with historic Apollo lunar landing site artifacts.

"SEC. 3. BEST PRACTICES RELATED TO APOLLO HISTORIC LUNAR LANDING SITE ARTIFACTS.

"(a) IN GENERAL.—The Administrator of the National Aeronautics and Space Administration shall—

"(1) add the recommendations in subsection (b) as a condition or requirement to contracts, grants, agreements, partnerships or other arrangements pertaining to lunar activities carried out by, for, or in partnership with the National Aeronautics and Space Administration;

"(2) inform other relevant Federal agencies of the recommendations described in subsection (b); and

"(3) encourage the use of best practices, consistent with the recommendations in subsection (b), by other relevant Federal agencies.

"(b) RECOMMENDATIONS DESCRIBED.—The recommendations described in this subsection are—

"(1) 'NASA's Recommendations to Space-Faring Entities: How to Protect and Preserve the Historic and Scientific Value of U.S. Government Lunar Artifacts' issued by the National Aeronautics and Space Administration on July 20, 2011, and updated on October 28, 2011; and

"(2) any successor recommendations, guidelines, best practices, or standards relating to the principle of due regard and the limitation of harmful interference with Apollo landing site artifacts issued by the National Aeronautics and Space Administration.

"(c) EXEMPTION.—The Administrator may waive the conditions or requirements from subsection (a)(1) as it applies to an individual contract, grant, agreement, partnership or other arrangement pertaining to lunar activities carried out by, for, or in partnership with the National Aeronautics and Space Administration so long as—

"(1) such waiver is accompanied by a finding from the Administrator that carrying out the obligation of subsection (a)(1) would be unduly prohibitive to an activity or activities of legitimate and significant historical, archaeological, anthropological, scientific, or engineering value; and

"(2) the finding in paragraph (1) is provided to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate not later than 30 days prior to the waiver taking effect."

DETECTION AND AVOIDANCE OF COUNTERFEIT PARTS

Pub. L. 115–10, title VIII, §823, Mar. 21, 2017, 131 Stat. 62, as amended by Pub. L. 117–81, div. A, title XVII, §1702(l)(11), Dec. 27, 2021, 135 Stat. 2161, provided that:

"(a) FINDINGS.—Congress makes the following findings:

"(1) A 2012 investigation by the Committee on Armed Services of the Senate of counterfeit electronic parts in the Department of Defense supply chain from 2009 through 2010 uncovered 1,800 cases and over 1,000,000 counterfeit parts and exposed the threat such counterfeit parts pose to service members and national security.

"(2) Since 2010, the Comptroller General of the United States has identified in 3 separate reports the risks and challenges associated with counterfeit parts and counterfeit prevention at both the Department of Defense and NASA, including inconsistent definitions of counterfeit parts, poorly targeted quality control practices, and potential barriers to improvements to these practices.

"(b) SENSE OF CONGRESS.—It is the sense of Congress that the presence of counterfeit electronic parts in the NASA supply chain poses a danger to United States government astronauts, crew, and other personnel and a risk to the agency overall.

"(c) REGULATIONS.—

"(1) IN GENERAL.—Not later than 270 days after the date of enactment of this Act [Mar. 21, 2017], the Administrator shall revise the NASA Supplement to the Federal Acquisition Regulation to improve the detection and avoidance of counterfeit electronic parts in the supply chain.

"(2) CONTRACTOR RESPONSIBILITIES.—In revising the regulations under paragraph (1), the Administrator shall—

"(A) require each covered contractor—

"(i) to detect and avoid the use or inclusion of any counterfeit parts in electronic parts or products that contain electronic parts;

"(ii) to take such corrective actions as the Administrator considers necessary to remedy the use or inclusion described in clause (i); and

"(iii) including a subcontractor, to notify the applicable NASA contracting officer not later than 30 calendar days after the date the covered contractor becomes aware, or has reason to suspect, that any end item, component, part or material contained in supplies purchased by NASA, or purchased by a covered contractor or subcontractor for delivery to, or on behalf of, NASA, contains a counterfeit electronic part or suspect counterfeit electronic part; and

"(B) prohibit the cost of counterfeit electronic parts, suspect counterfeit electronic parts, and any corrective action described under subparagraph (A)(ii) from being included as allowable costs under agency contracts, unless—

"(i)(I) the covered contractor has an operational system to detect and avoid counterfeit electronic parts and suspect counterfeit electronic parts that has been reviewed and approved by NASA or the Department of Defense; and

"(II) the covered contractor has provided the notice under subparagraph (A)(iii); or

"(ii) the counterfeit electronic parts or suspect counterfeit electronic parts were provided to the covered contractor as Government property in accordance with part 45 of the Federal Acquisition Regulation.

"(3) SUPPLIERS OF ELECTRONIC PARTS.—In revising the regulations under paragraph (1), the Administrator shall—

"(A) require NASA and covered contractors, including subcontractors, at all tiers—

"(i) to obtain electronic parts that are in production or currently available in stock from—

"(I) the original manufacturers of the parts or their authorized dealers; or

"(II) suppliers who obtain such parts exclusively from the original manufacturers of the parts or their authorized dealers; and

"(ii) to obtain electronic parts that are not in production or currently available in stock from suppliers that meet qualification requirements established under subparagraph (C);

"(B) establish documented requirements consistent with published industry standards or Government contract requirements for—

"(i) notification of the agency; and

"(ii) inspection, testing, and authentication of electronic parts that NASA or a covered contractor, including a subcontractor, obtains from any source other than a source described in subparagraph (A);

"(C) establish qualification requirements, consistent with the requirements of section 3243 of title 10, United States Code, pursuant to which NASA may identify suppliers that have appropriate policies and procedures in place to detect and avoid counterfeit electronic parts and suspect counterfeit electronic parts; and

"(D) authorize a covered contractor, including a subcontractor, to identify and use additional suppliers beyond those identified under subparagraph (C) if—

"(i) the standards and processes for identifying such suppliers comply with established industry standards;

"(ii) the covered contractor assumes responsibility for the authenticity of parts provided by such suppliers under paragraph (2); and

"(iii) the selection of such suppliers is subject to review and audit by NASA.

"(d) DEFINITIONS.—In this section:

"(1) COVERED CONTRACTOR.—The term 'covered contractor' means a contractor that supplies an electronic part, or a product that contains an electronic part, to NASA.

"(2) ELECTRONIC PART.—The term 'electronic part' means a discrete electronic component, including a microcircuit, transistor, capacitor, resistor, or diode, that is intended for use in a safety or mission critical application."

[For definitions of terms used in section 823 of Pub. L. 115–10, set out above, see section 2 of Pub. L. 115–10, set out as a note under section 10101 of this title.]

AVOIDING ORGANIZATIONAL CONFLICTS OF INTEREST IN MAJOR ADMINISTRATION ACQUISITION PROGRAMS

Pub. L. 115–10, title VIII, §830, Mar. 21, 2017, 131 Stat. 66, provided that:

"(a) REVISED REGULATIONS REQUIRED.—Not later than 270 days after the date of enactment of this Act [Mar. 21, 2017], the Administrator [of the National Aeronautics and Space Administration] shall revise the [National Aeronautics and Space] Administration Supplement to the Federal Acquisition Regulation to provide uniform guidance and recommend revised requirements for organizational conflicts of interest by contractors in major acquisition programs in order to address the elements identified in subsection (b).

"(b) ELEMENTS.—The revised regulations under subsection (a) shall, at a minimum—

"(1) address organizational conflicts of interest that could potentially arise as a result of—

"(A) lead system integrator contracts on major acquisition programs and contracts that follow lead system integrator contracts on such programs, particularly contracts for production;

"(B) the ownership of business units performing systems engineering and technical assistance functions, professional services, or management support services in relation to major acquisition programs by contractors who simultaneously own business units competing to perform as either the prime contractor or the supplier of a major subsystem or component for such programs;

"(C) the award of major subsystem contracts by a prime contractor for a major acquisition program to business units or other affiliates of the same parent corporate entity, and particularly the award of subcontracts for software integration or the development of a proprietary software system architecture; or

"(D) the performance by, or assistance of, contractors in technical evaluations on major acquisition programs;

"(2) require the Administration to request advice on systems architecture and systems engineering matters with respect to major acquisition programs from objective sources independent of the prime contractor;

"(3) require that a contract for the performance of systems engineering and technical assistance functions for a major acquisition program contains a provision prohibiting the contractor or any affiliate of the contractor from participating as a prime contractor or a major subcontractor in the development of a system under the program; and

"(4) establish such limited exceptions to the requirement[s] in paragraphs (2) and (3) as the Administrator considers necessary to ensure that the Administration has continued access to advice on systems architecture and systems engineering matters from highly qualified contractors with domain experience and expertise, while ensuring that such advice comes from sources that are objective and unbiased."

§30301. Guaranteed customer base

No amount appropriated to the Administration may be used to fund grants, contracts, or other agreements with an expected duration of more than one year, when a primary effect of the grant, contract, or agreement is to provide a guaranteed customer base for or establish an anchor tenancy in new commercial space hardware or services unless an appropriations Act specifies the new commercial space hardware or services to be developed or used, or the grant, contract, or agreement is otherwise identified in such Act.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3363.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
30301	42 U.S.C. 2459d.	Pub. L. 102–139, title III, (1st par. under heading "Administrative Provisions", at 105 Stat. 771), Oct. 28, 1991, 105 Stat. 771.

The words "in this or any other Act with respect to any fiscal year" are omitted as unnecessary.

§30302. Quality assurance personnel

(a) EXCLUSION OF ADMINISTRATION PERSONNEL.—A person providing articles to the Administration under a contract entered into after December 9, 1991, may not exclude Administration quality assurance personnel from work sites except as provided in a contract provision that has been submitted to Congress as provided in subsection (b).

(b) CONTRACT PROVISIONS.—The Administration shall not enter into any contract which permits the exclusion of Administration quality assurance personnel from work sites unless the Administrator has submitted a copy of the provision permitting such exclusion to Congress at least 60 days before entering into the contract.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3363.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
30302	42 U.S.C. 2459e.	Pub. L. 102–195, §19, Dec. 9, 1991, 105 Stat. 1615.

In subsection (a), the date "December 9, 1991" is substituted for "the date of enactment of this Act" to reflect the date of enactment of the National Aeronautics and Space Administration Authorization Act, Fiscal Year 1992 (Public Law 102–195, 105 Stat. 1605).

In subsection (a), the words "that has been submitted to Congress as provided" are substituted for "described" for clarity.

§30303. Tracking and data relay satellite services

(a) CONTRACTS.—The Administration is authorized, when so provided in an appropriation Act, to enter into and to maintain a contract for tracking and data relay satellite services. Such services shall be furnished to the Administration in accordance with applicable authorization and appropriations Acts. The Government shall incur no costs under such contract prior to the furnishing of such services except that the contract may provide for the payment for contingent liability of the Government which may accrue in the event the Government should decide for its convenience to terminate the contract before the end of the period of the contract. Facilities which may be required in the performance of the contract may be constructed on Government-owned lands if there is included in the contract a provision under which the Government may acquire title to the facilities, under terms and conditions agreed upon in the contract, upon termination of the contract.

(b) REPORTS TO CONGRESS.—The Administrator shall in January of each year report to the Committee on Science and Technology and the Committee on Appropriations of the House of Representatives and the Committee on Commerce, Science, and Transportation and the Committee on Appropriations of the Senate the projected aggregate contingent liability of the Government under termination provisions of any contract authorized in this section through the next fiscal year. The authority of the Administration to enter into and to maintain the contract authorized hereunder shall remain in effect unless repealed by legislation enacted by Congress.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3363.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
30303(a)	42 U.S.C. 2463 (1st par.).	Pub. L. 95–76, §6, July 30, 1977, 91 Stat. 315; Pub. L. 103–437, §15(c)(3), Nov. 2, 1994, 108 Stat. 4592.
30303(b)	42 U.S.C. 2463 (last par.).	

In subsection (b), the words "Committee on Science and Technology" are substituted for "Committee on Science, Space, and Technology" on authority of section 1(a)(10) of Public Law 104–14 (2 U.S.C. note prec. 21), Rule X(1)(n) of the Rules of the House of Representatives, adopted by House Resolution No. 5 (106th Congress, January 6, 1999), and Rule X(1)(o) of the Rules of the House of Representatives, adopted by House Resolution No. 6 (110th Congress, January 5, 2007).

In subsection (b), the word "hereafter" is omitted as unnecessary.

STATUTORY NOTES AND RELATED SUBSIDIARIES

CHANGE OF NAME

Committee on Science and Technology of House of Representatives changed to Committee on Science, Space, and Technology of House of Representatives by House Resolution No. 5, One Hundred Twelfth Congress, Jan. 5, 2011.

§30304. Award of contracts to small businesses and disadvantaged individuals

The Administrator shall annually establish a goal of at least 8 percent of the total value of prime and subcontracts awarded in support of authorized programs, including the space station by the time operational status is obtained, which funds will be made available to small business concerns or other organizations owned or controlled by socially and economically disadvantaged individuals (within the meaning of paragraphs (5) and (6) of section 8(a) of the Small Business Act (15 U.S.C. 637(a))), including Historically Black Colleges and Universities that are part B institutions (as defined in section 322(2) of the Higher Education Act of 1965 (20 U.S.C. 1061(2))), Hispanic-serving institutions (as defined in section 502(a)(5) of that Act (20 U.S.C. 1101a(a)(5))), Tribal Colleges or Universities (as defined in section 316(b)(3) of that Act (20 U.S.C. 1059c(b)(3))), Alaska Native-serving institutions (as defined in section 317(b)(2) of that Act (20 U.S.C. 1059d(b)(2))), Native Hawaiian-serving institutions (as defined in section 317(b)(4) of that Act (20 U.S.C. 1059d(b)(4))), and minority educational institutions (as defined by the Secretary of Education pursuant to the General Education Provisions Act (20 U.S.C. 1221 et seq.)).

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3364.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
30304	42 U.S.C. 2473b (1st par.).	Pub. L. 101–144, title III, (1st par. under heading "Small and Disadvantaged Business", at 103 Stat. 863), Nov. 9, 1989, 103 Stat. 863; Pub. L. 109–155, title VI, §611, Dec. 30, 2005, 119 Stat. 2932.

The word "Alaska" is substituted for "Alaskan" in the phrase "Alaska Native-serving institutions (as defined in section 317(b)(2) of that Act (20 U.S.C. 1059d(b)(2)))" for consistency with the term defined in section 317(b)(2) of the Higher Education Act of 1965 (20 U.S.C. 1059d(b)(2)).

EDITORIAL NOTES

REFERENCES IN TEXT

The General Education Provisions Act, referred to in text, is title IV of Pub. L. 90–247, Jan. 2, 1968, 81 Stat. 814, which is classified generally to chapter 31 (§1221 et seq.) of Title 20, Education. For complete classification of this Act to the Code, see section 1221 of Title 20 and Tables.

§30305. Outreach program

(a) ESTABLISHMENT.—The Administration shall competitively select an organization to partner with Administration centers, aerospace contractors, and academic institutions to carry out a program to help promote the competitiveness of small, minority-owned, and women-owned businesses in communities across the United States through enhanced insight into the technologies of the Administration's space and aeronautics programs. The program shall support the mission of the Administration's Innovative Partnerships Program with its emphasis on joint partnerships with industry, academia, government agencies, and national laboratories.

(b) PROGRAM STRUCTURE.—In carrying out the program described in subsection (a), the organization shall support the mission of the Administration's Innovative Partnerships Program by undertaking the following activities:

(1) FACILITATING ENHANCED INSIGHT.—Facilitating the enhanced insight of the private sector into the Administration's technologies in order to increase the competitiveness of the private sector in producing viable commercial products.

(2) CREATING NETWORK.—Creating a network of academic institutions, aerospace contractors, and Administration centers that will commit to donating appropriate technical assistance to small businesses, giving preference to socially and economically disadvantaged small business concerns, small business concerns owned and controlled by service-disabled veterans, and HUBZone small business concerns. This paragraph shall not apply to any contracting actions entered into or taken by the Administration.

(3) CREATING NETWORK OF ECONOMIC DEVELOPMENT ORGANIZATIONS .—Creating a network of economic development organizations to increase the awareness and enhance the effectiveness of the program nationwide.

(c) REPORT.—Not later than one year after October 15, 2008, and annually thereafter, the Administrator shall submit a report to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate describing the efforts and accomplishments of the program established under subsection (a) in support of the Administration's Innovative Partnerships Program. As part of the report, the Administrator shall provide—

(1) data on the number of small businesses receiving assistance, jobs created and retained, and volunteer hours donated by the Administration, contractors, and academic institutions nationwide;

(2) an estimate of the total dollar value of the economic impact made by small businesses that received technical assistance through the program; and

(3) an accounting of the use of funds appropriated for the program.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3364.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
30305	42 U.S.C. 17824.	Pub. L. 110–422, title XI, §1107, Oct. 15, 2008, 122 Stat. 4810.

In subsection (c), in the matter before paragraph (1), the date "October 15, 2008" is substituted for "the date of enactment of this Act" to reflect the date of enactment of the National Aeronautics and Space Administration Authorization Act of 2008.

STATUTORY NOTES AND RELATED SUBSIDIARIES

CHANGE OF NAME

Committee on Science and Technology of House of Representatives changed to Committee on Science, Space, and Technology of House of Representatives by House Resolution No. 5, One Hundred Twelfth Congress, Jan. 5, 2011.

§30306. Small business contracting

(a) PLAN.—In consultation with the Small Business Administration, the Administrator shall develop a plan to maximize the number and amount of contracts awarded to small business concerns (within the meaning given that term in section 3 of the Small Business Act (15 U.S.C. 632)) and to meet established contracting goals for such concerns.

(b) PRIORITY.—The Administrator shall establish as a priority meeting the contracting goals developed in conjunction with the Small Business Administration to maximize the amount of prime contracts, as measured in dollars, awarded in each fiscal year by the Administration to small business concerns (within the meaning given that term in section 3 of the Small Business Act (15 U.S.C. 632)).

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3365.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
30306	42 U.S.C. 16821.	Pub. L. 109–155, title VII, §707, Dec. 30, 2005, 119 Stat. 2937.

§30307. Requirement for independent cost analysis

(a) DEFINITION OF IMPLEMENTATION.—In this section, the term "implementation" means all activity in the life cycle of a project after preliminary design, independent assessment of the preliminary design, and approval to proceed into implementation, including critical design, development, certification, launch, operations, disposal of assets, and, for technology programs, development, testing, analysis, and communication of the results.

(b) REQUIREMENT.—Before any funds may be obligated for implementation of a project that is projected to cost more than $250,000,000 in total project costs, the Administrator shall conduct and consider an independent life-cycle cost analysis of the project and shall report the results to Congress. In developing cost accounting and reporting standards for carrying out this section, the Administrator shall, to the extent practicable and consistent with other laws, solicit the advice of experts outside of the Administration.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3365.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
30307	42 U.S.C. 2459g.	Pub. L. 106–391, title III, §301, Oct. 30, 2000, 114 Stat. 1591; Pub. L. 109–155, title VII, §704, Dec. 30, 2005, 119 Stat. 2936.

In subsection (b), in the first sentence, the words "the Administrator shall conduct" are substituted for "the Administrator for the National Aeronautics and Space Administration shall conduct" to eliminate unnecessary words.

In subsection (b), in the last sentence, the word "experts" is substituted for "expertise" for clarity.

STATUTORY NOTES AND RELATED SUBSIDIARIES

COST ESTIMATION

Pub. L. 115–10, title VIII, §836, Mar. 21, 2017, 131 Stat. 69, provided that:

"(a) SENSE OF CONGRESS.—It is the sense of Congress that—

"(1) realistic cost estimating is critically important to the ultimate success of major space development projects; and

"(2) the [National Aeronautics and Space] Administration has devoted significant efforts over the past 5 years to improving its cost estimating capabilities, but it is important that the Administration continue its efforts to develop and implement guidance in establishing realistic cost estimates.

"(b) GUIDANCE AND CRITERIA.—The Administrator [of the National Aeronautics and Space Administration] shall provide to its acquisition programs and projects, in a manner consistent with the Administration's Space Flight Program and Project Management Requirements—

"(1) guidance on when to use an Independent Cost Estimate and Independent Cost Assessment; and

"(2) criteria to use to make a determination under paragraph (1)."

§30308. Cost effectiveness calculations

(a) DEFINITIONS.—In this section:

(1) COMMERCIAL PROVIDER.—The term "commercial provider" means any person providing space transportation services or other space-related activities, the primary control of which is held by persons other than a Federal, State, local, or foreign government.

(2) STATE.—The term "State" means each of the several States of the United States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, and any other commonwealth, territory, or possession of the United States.

(b) IN GENERAL.—Except as otherwise required by law, in calculating the cost effectiveness of the cost of the Administration engaging in an activity as compared to a commercial provider, the Administrator shall compare the cost of the Administration engaging in the activity using full cost accounting principles with the price the commercial provider will charge for such activity.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3366.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
30308(a)	(no source)	
30308(b)	42 U.S.C. 2459h.	Pub. L. 106–391, title III, §304, Oct. 30, 2000, 114 Stat. 1592.

In subsection (a), definitions of "commercial provider" and "State" are added to carry forward the appropriate definitions from section 3 of the National Aeronautics and Space Administration Authorization Act of 2000 (Public Law 106–391, 114 Stat. 1579, 1580).

§30309. Use of abandoned and underutilized buildings, grounds, and facilities

(a) DEFINITION OF DEPRESSED COMMUNITIES.—In this section, the term "depressed communities" means rural and urban communities that are relatively depressed, in terms of age of housing, extent of poverty, growth of per capita income, extent of unemployment, job lag, or surplus labor.

(b) IN GENERAL.—In any case in which the Administrator considers the purchase, lease, or expansion of a facility to meet requirements of the Administration, the Administrator shall consider whether those requirements could be met by the use of one of the following:

(1) Abandoned or underutilized buildings, grounds, and facilities in depressed communities that can be converted to Administration usage at a reasonable cost, as determined by the Administrator.

(2) Any military installation that is closed or being closed, or any facility at such an installation.
(3) Any other facility or part of a facility that the Administrator determines to be—
(A) owned or leased by the United States for the use of another agency of the Federal Government; and
(B) considered by the head of the agency involved to be—
(i) excess to the needs of that agency; or
(ii) underutilized by that agency.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3366.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
30309	42 U.S.C. 2473d.	Pub. L. 106–391, title III, §325, Oct. 30, 2000, 114 Stat. 1600.

EDITORIAL NOTES

PRIOR PROVISIONS

Provisions similar to those in this section were contained in the following prior appropriation authorization act:
Pub. L. 102–588, title II, §220, Nov. 4, 1992, 106 Stat. 5118.

§30310. Exception to alternative fuel procurement requirement

Section 526(a) [1] of the Energy Independence and Security Act of 2007 (42 U.S.C. 17142(a)) does not prohibit the Administration from entering into a contract to purchase a generally available fuel that is not an alternative or synthetic fuel or predominantly produced from a nonconventional petroleum source, if—

(1) the contract does not specifically require the contractor to provide an alternative or synthetic fuel or fuel from a nonconventional petroleum source;

(2) the purpose of the contract is not to obtain an alternative or synthetic fuel or fuel from a nonconventional petroleum source; and

(3) the contract does not provide incentives for a refinery upgrade or expansion to allow a refinery to use or increase its use of fuel from a nonconventional petroleum source.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3366.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
30310	42 U.S.C. 17827.	Pub. L. 110–422, title XI, §1112, Oct. 15, 2008, 122 Stat. 4811.

EDITORIAL NOTES

REFERENCES IN TEXT

Section 526(a) of the Energy Independence and Security Act of 2007, referred to in text, probably means section 526 of Pub. L. 110–140, which is classified to section 17142 of Title 42, The Public Health and Welfare, but does not contain subsecs.

[1] *See References in Text note below.*

CHAPTER 305—MANAGEMENT AND REVIEW

Sec.
30501. Lessons learned and best practices.
30502. Whistleblower protection.
30503. Performance assessments.
30504. Assessment of science mission extensions.

STATUTORY NOTES AND RELATED SUBSIDIARIES

ASSESSMENT OF IMPEDIMENTS TO SPACE SCIENCE AND ENGINEERING WORKFORCE DEVELOPMENT FOR MINORITY AND UNDERREPRESENTED GROUPS AT NASA

Pub. L. 111–358, title II, §203, Jan. 4, 2011, 124 Stat. 3994, provided that:

"(a) ASSESSMENT.—The Administrator [of NASA] shall enter into an arrangement for an independent assessment of any impediments to space science and engineering workforce development for minority and underrepresented groups at NASA [National Aeronautics and Space Administration], including recommendations on—

"(1) measures to address such impediments;

"(2) opportunities for augmenting the impact of space science and engineering workforce development activities and for expanding proven, effective programs; and

"(3) best practices and lessons learned, as identified through the assessment, to help maximize the effectiveness of existing and future programs to increase the participation of minority and underrepresented groups in the space science and engineering workforce at NASA.

"(b) REPORT.—A report on the assessment carried out under subsection (a) shall be transmitted to the House of Representatives Committee on Science and Technology [now Committee on Science, Space, and Technology] and the Senate Committee on Commerce, Science, and Transportation not later than 15 months after the date of enactment of this Act [Jan. 4, 2011].

"(c) IMPLEMENTATION.—To the extent practicable, the Administrator shall take all necessary steps to address any impediments identified in the assessment."

EXECUTIVE DOCUMENTS

EX. ORD. NO. 11374. ABOLITION OF MISSILE SITES LABOR COMMISSION

Ex. Ord. No. 11374, Oct. 11, 1967, 32 F.R. 14199, provided:

By virtue of the authority vested in me as President of the United States, it is ordered as follows:

SECTION 1. The Missile Sites Labor Commission is hereby abolished and its functions and responsibilities are transferred to the Federal Mediation and Conciliation Service.

SEC. 2. The Director of the Federal Mediation and Conciliation Service shall establish within the Federal Mediation and Conciliation Service such procedures as may be necessary to provide for continued priority for resolution of labor disputes or potential labor disputes at missile and space sites, and shall seek the continued cooperation of manufacturers, contractors, construction concerns, and labor unions in avoiding uneconomical operations and work stoppages at missile and space sites.

SEC. 3. The Department of Defense, the National Aeronautics and Space Administration, and other appropriate government departments and agencies shall continue to cooperate in the avoidance of uneconomical operations and work stoppages at missile and space sites. They shall also assist the Federal Mediation and Conciliation Service in the discharge of its responsibilities under this order.

SEC. 4. All records and property of the Missile Sites Labor Commission are hereby transferred to the Federal Mediation and Conciliation Service.

SEC. 5. Any disputes now before the Missile Sites Labor Commission shall be resolved by the personnel now serving as members of the Missile Sites Labor Commissions under special assignment for such purposes by the Director of the Federal Mediation and Conciliation Service.

SEC. 6. Executive Order No. 10946 of May 26, 1961, is hereby revoked.

LYNDON B. JOHNSON.

TASK FORCE ON SPACE INDUSTRY WORKFORCE AND ECONOMIC DEVELOPMENT

Memorandum of President of the United States, May 3, 2010, 75 F.R. 24781, provided:

Memorandum for the Secretary of Defense[,] the Secretary of Commerce[,] the Secretary of Labor[,] the Secretary of Housing and Urban Development[,] the Secretary of Transportation[,] the Secretary of Education[,] the Director of the Office of Management and Budget[,] the Administrator of the Small Business Administration[,] the Administrator of the National Aeronautics and Space Administration[,] the Chair of the Council of Economic Advisers[,] the Director of National Intelligence[,] the Director of the Office of Science and Technology Policy[, and] the Director of the National Economic Council

My Administration is committed to implementing a bold, new approach to human spaceflight. Supported by a $6 billion increase to the National Aeronautics and Space Administration's (NASA) budget over the next 5 years, this strategy will foster the development of path-breaking technologies, increase the reach and reduce the cost of human and robotic exploration of space, and help create thousands of new jobs.

NASA's budget also includes $429 million next year, and $1.9 billion over the next 5 years, to modernize the Kennedy Space Center and other nearby space launch facilities in Florida. This modernization effort will help spur new commercial business and innovation and provide additional good jobs to the region. While all of the new aspects of my Administration's plan together will create thousands of new jobs in Florida, past decisions to end the Space Shuttle program will still affect families and communities along Florida's "Space Coast."

Building on this significant new investment at the Kennedy Space Center and my increased budget for NASA overall, I am committed to taking additional steps to help local economies like Florida's Space Coast adapt and thrive in the years ahead. The men and women who work in Florida's aerospace industry are some of the most talented and highly trained in the Nation. It is critical that their skills are tapped as we transform and expand the country's space exploration efforts. That is why I am launching a $40 million, multi-agency initiative to help the Space Coast transform their economies and prepare their workers for the opportunities of tomorrow. This effort will build on and complement ongoing local and Federal economic and workforce-development efforts through a Task Force composed of senior-level Administration officials from relevant agencies that will construct an economic development action plan by August 15, 2010.

To these ends, I hereby direct the following:

SECTION 1. *Establishment of the Task Force on Space Industry Workforce and Economic Development*. There is established a Task Force on Space Industry Workforce and Economic Development (Task Force) to develop, in collaboration with local stakeholders, an interagency action plan to facilitate economic development strategies and plans along the Space Coast and to provide training and other opportunities for affected aerospace workers so they are equipped to contribute to new developments in America's space program and related industries. The Secretary of Commerce and the Administrator of NASA shall serve as Co-Chairs of the Task Force.

(a) *Membership of the Task Force*. In addition to the Co-Chairs, the Task Force shall consist of the following members:

(i) the Secretary of Defense;

(ii) the Secretary of Labor;

(iii) the Secretary of Housing and Urban Development;

(iv) the Secretary of Transportation;

(v) the Secretary of Education;

(vi) the Chair of the Council of Economic Advisers;

(vii) the Director of the Office of Management and Budget;

(viii) the Administrator of the Small Business Administration;

(ix) the Director of National Intelligence;

(x) the Director of the Office of Science and Technology Policy;

(xi) the Director of the National Economic Council; and

(xii) the heads of such other executive departments, agencies, and offices as the President may, from time to time, designate.

A member of the Task Force may designate, to perform the Task Force functions of the member, a senior-level official who is a part of the member's department, agency, or office, and who is a full-time officer or employee of the Federal Government.

(b) *Administration*. The Co-Chairs shall convene regular meetings of the Task Force, determine its agenda, and direct its work. At the direction of the Co-Chairs, the Task Force may establish subgroups consisting exclusively of Task Force members or their designees, as appropriate.

SEC. 2. *Mission and Functions*. The Task Force shall work with local stakeholders and executive departments and agencies to equip Space Coast and other affected workers to take advantage of new opportunities and expand the region's economic base.

The Task Force will perform the following functions, to the extent permitted by law:

(a) provide leadership and coordination of Federal Government resources to facilitate workforce and economic development opportunities for aerospace communities and workers affected by new developments in America's space exploration program. Such support may include the use of personnel, technical expertise, and available financial resources, and may be used to provide a coordinated Federal response to the needs of individual States, regions, municipalities, and communities adversely affected by space industry changes;

(b) provide recommendations to the President on ways Federal policies and programs can address issues of special importance to aerospace communities and workers; and

(c) help ensure that officials from throughout the executive branch, including officials on existing committees or task forces addressing technological development, research, or aerospace issues, advance the President's agenda for the transformation of America's space exploration program and support the coordination of Federal economic adjustment assistance activities.

SEC. 3. *Outreach*. Consistent with the objectives set forth in this memorandum, the Task Force, in accordance with applicable law, in addition to holding regular meetings, shall conduct outreach to representatives of nonprofit organizations; business; labor[;] State, local, and tribal governments; elected officials; and other interested persons that will assist in bringing to the President's attention concerns, ideas, and policy options for expanding and improving efforts to create jobs and economic growth in affected aerospace communities. The Task Force shall hold inaugural meetings with stakeholders within 60 days of the date of this memorandum.

SEC. 4. *Task Force Plan for Space Industry Workforce and Economic Development*. On or before August 15, 2010, the Task Force shall develop and submit to the President a comprehensive plan that:

(a) recommends how best to invest $40 million in transition assistance funding to ensure robust workforce and economic development in those communities within Florida affected by transitions in America's space exploration program;

(b) describes how the plan will build on and complement ongoing economic and workforce development efforts;

(c) explores future workforce and economic development activities that could be undertaken for affected aerospace communities in other States, as appropriate;

(d) identifies areas of collaboration with other public or nongovernmental actors to achieve the objectives of the Task Force; and

(e) details a coordinated implementation strategy by executive departments and agencies to meet the objectives of the Task Force.

SEC. 5. *Termination*. The Task Force shall terminate 3 years after the date of this memorandum unless extended by the President.

SEC. 6. *General Provisions*. (a) The heads of executive departments and agencies shall assist and provide information to the Task Force, consistent with applicable law, as may be necessary to carry out the functions of the Task Force. Each executive department and agency shall bear its own expense for participating in the Task Force; and

(b) nothing in this memorandum shall be construed to impair or otherwise affect:

(i) authority granted by law to an executive department, agency, or the head thereof; or

(ii) functions of the Director of the Office of Management and Budget relating to budgetary, administrative, or legislative proposals.

(c) This memorandum shall be implemented consistent with applicable law and subject to the availability of appropriations.

(d) This memorandum is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

(e) The Administrator of the National Aeronautics and Space Administration shall publish this memorandum in the Federal Register.

BARACK OBAMA.

§30501. Lessons learned and best practices

(a) IN GENERAL.—The Administrator shall transmit to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate an implementation plan describing the Administration's approach for obtaining, implementing, and sharing lessons learned and best practices for its major programs and

projects not later than 180 days after December 30, 2005. The implementation plan shall be updated and maintained to ensure that it is current and consistent with the burgeoning culture of learning and safety that is emerging at the Administration.

(b) REQUIRED CONTENT.—The implementation plan shall contain at a minimum the lessons learned and best practices requirements for the Administration, the organizations or positions responsible for enforcement of the requirements, the reporting structure, and the objective performance measures indicating the effectiveness of the activity.

(c) INCENTIVES.—The Administrator shall provide incentives to encourage sharing and implementation of lessons learned and best practices by employees, projects, and programs, as well as penalties for programs and projects that are determined not to have demonstrated use of those resources.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3367.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
30501	42 U.S.C. 16615.	Pub. L. 109–155, title I, §107, Dec. 30, 2005, 119 Stat. 2912.

In subsection (a), the words "Committee on Science and Technology" are substituted for "Committee on Science" on authority of Rule X(1)(o) of the Rules of the House of Representatives, adopted by House Resolution No. 6 (110th Congress, January 5, 2007).

In subsection (a), the date "December 30, 2005" is substituted for "the date of enactment of this Act" to reflect the date of enactment of the National Aeronautics and Space Administration Authorization Act of 2005 (Public Law 109–155, 119 Stat. 2895).

STATUTORY NOTES AND RELATED SUBSIDIARIES

CHANGE OF NAME

Committee on Science and Technology of House of Representatives changed to Committee on Science, Space, and Technology of House of Representatives by House Resolution No. 5, One Hundred Twelfth Congress, Jan. 5, 2011.

§30502. Whistleblower protection

(a) IN GENERAL.—Not later than 1 year after December 30, 2005, the Administrator shall transmit to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a plan describing steps to be taken by the Administration to protect from retaliation Administration employees who raise concerns about substantial and specific dangers to public health and safety or about substantial and specific factors that could threaten the success of a mission. The plan shall be designed to ensure that Administration employees have the full protection required by law. The Administrator shall implement the plan not more than 1 year after its transmittal.

(b) GOAL.—The Administrator shall ensure that the plan describes a system that will protect employees who wish to raise or have raised concerns described in subsection (a).

(c) PLAN.—At a minimum, the plan shall include, consistent with Federal law—

(1) a reporting structure that ensures that the officials who are the subject of a whistleblower's complaint will not learn the identity of the whistleblower;

(2) a single point to which all complaints can be made without fear of retribution;

(3) procedures to enable the whistleblower to track the status of the case;

(4) activities to educate employees about their rights as whistleblowers and how they are protected by law;

(5) activities to educate employees about their obligations to report concerns and their

accountability before and after receiving the results of the investigations into their concerns; and

(6) activities to educate all appropriate Administration Human Resources professionals, and all Administration managers and supervisors, regarding personnel laws, rules, and regulations.

(d) REPORT.—Not later than February 15 of each year beginning February 15, 2007, the Administrator shall transmit a report to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate on the concerns described in subsection (a) that were raised during the previous fiscal year. At a minimum, the report shall provide—

(1) the number of concerns that were raised, divided into the categories of safety and health, mission assurance, and mismanagement, and the disposition of those concerns, including whether any employee was disciplined as a result of a concern having been raised; and

(2) any recommendations for reforms to further prevent retribution against employees who raise concerns.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3367.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
30502	42 U.S.C. 16618.	Pub. L. 109–155, title I, §110, Dec. 30, 2005, 119 Stat. 2914.

In subsection (a), the date "December 30, 2005" is substituted for "the date of enactment of this Act" to reflect the date of enactment of the National Aeronautics and Space Administration Authorization Act of 2005 (Public Law 109–155, 119 Stat. 2895).

In subsections (a) and (d), the words "Committee on Science and Technology" are substituted for "Committee on Science" on authority of Rule X(1)(o) of the Rules of the House of Representatives, adopted by House Resolution No. 6 (110th Congress, January 5, 2007).

In subsection (d), the words "Not later than February 15 of each year beginning February 15, 2007" are substituted for "Not later than February 15 of each year beginning with the year after the date of enactment of this Act" for clarity.

STATUTORY NOTES AND RELATED SUBSIDIARIES

CHANGE OF NAME

Committee on Science and Technology of House of Representatives changed to Committee on Science, Space, and Technology of House of Representatives by House Resolution No. 5, One Hundred Twelfth Congress, Jan. 5, 2011.

§30503. Performance assessments

(a) IN GENERAL.—The performance of each division in the Science directorate of the Administration shall be reviewed and assessed by the National Academy of Sciences at 5-year intervals.

(b) TIMING.—Beginning with the first fiscal year following December 30, 2005, the Administrator shall select at least one division for review under this section. The Administrator shall select divisions so that all disciplines will have received their first review within 6 fiscal years of December 30, 2005.

(c) REPORTS.—Not later than March 1 of each year, beginning with the first fiscal year after December 30, 2005, the Administrator shall transmit a report to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate—

(1) setting forth in detail the results of any external review under subsection (a);

(2) setting forth in detail actions taken by the Administration in response to any external review; and

(3) including a summary of findings and recommendations from any other relevant external reviews of the Administration's science mission priorities and programs.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3368.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
30503	42 U.S.C. 16651.	Pub. L. 109–155, title III, §301, Dec. 30, 2005, 119 Stat. 2916.

In subsections (b) and (c), the date "December 30, 2005" is substituted for "the date of enactment of this Act" to reflect the date of enactment of the National Aeronautics and Space Administration Authorization Act of 2005 (Public Law 109–155, 119 Stat. 2895).

In subsection (c), the words "Committee on Science and Technology" are substituted for "Committee on Science" on authority of Rule X(1)(o) of the Rules of the House of Representatives, adopted by House Resolution No. 6 (110th Congress, January 5, 2007).

STATUTORY NOTES AND RELATED SUBSIDIARIES

CHANGE OF NAME

Committee on Science and Technology of House of Representatives changed to Committee on Science, Space, and Technology of House of Representatives by House Resolution No. 5, One Hundred Twelfth Congress, Jan. 5, 2011.

§30504. Assessment of science mission extensions

(a) ASSESSMENTS.—

(1) IN GENERAL.—The Administrator shall carry out triennial reviews within each of the Science divisions to assess the cost and benefits of extending the date of the termination of data collection for those missions that exceed their planned missions' lifetime.

(2) CONSIDERATIONS.—In conducting an assessment under paragraph (1), the Administrator shall consider whether and how extending missions impacts the start of future missions.

(b) CONSULTATION AND CONSIDERATION OF POTENTIAL BENEFITS OF INSTRUMENTS ON MISSIONS.—When deciding whether to extend a mission that has an operational component, the Administrator shall—

(1) consult with any affected Federal agency; and

(2) take into account the potential benefits of instruments on missions that are beyond their planned mission lifetime.

(c) REPORTS.—The Administrator shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives, at the same time as the submission to Congress of the Administration's annual budget request for each fiscal year, a report detailing any assessment under subsection (a) that was carried out during the previous year.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3369; Pub. L. 115–10, title V, §513, Mar. 21, 2017, 131 Stat. 52.)

HISTORICAL AND REVISION NOTES

Revised

Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
30504(a)	42 U.S.C. 16654(a) (matter before par. (1)).	Pub. L. 109–155, title III, §304(a) (matter before par. (1)), (2), Dec. 30, 2005, 119 Stat. 2918.
30504(b)	42 U.S.C. 16654(a)(2).	

In subsection (a), the words "In addition—" are omitted as unnecessary.

EDITORIAL NOTES

AMENDMENTS

2017—Pub. L. 115–10 amended section generally. Prior to amendment, text read as follows:

"(a) ASSESSMENT.—The Administrator shall carry out biennial reviews within each of the Science divisions to assess the cost and benefits of extending the date of the termination of data collection for those missions that have exceeded their planned mission lifetime.

"(b) CONSULTATION AND CONSIDERATION OF POTENTIAL BENEFITS OF INSTRUMENTS ON MISSIONS.—For those missions that have an operational component, the National Oceanic and Atmospheric Administration or any other affected agency shall be consulted and the potential benefits of instruments on missions that are beyond their planned mission lifetime taken into account."

CHAPTER 307—INTERNATIONAL COOPERATION AND COMPETITION

Sec.

30701. Competitiveness and international cooperation.
30702. Foreign contract limitation.
30703. Foreign launch vehicles.
30704. Offshore performance of contracts for the procurement of goods and services.

§30701. Competitiveness and international cooperation

(a) LIMITATION.—

(1) SOLICITATION OF COMMENT.—As part of the evaluation of the costs and benefits of entering into an obligation to conduct a space mission in which a foreign entity will participate as a supplier of the spacecraft, spacecraft system, or launch system, the Administrator shall solicit comment on the potential impact of such participation through notice published in Commerce Business Daily at least 45 days before entering into such an obligation.

(2) AGREEMENTS WITH PEOPLE'S REPUBLIC OF CHINA.—The Administrator shall certify to Congress at least 15 days in advance of any cooperative agreement with the People's Republic of China, or any company owned by the People's Republic of China or incorporated under the laws of the People's Republic of China, involving spacecraft, spacecraft systems, launch systems, or scientific or technical information, that—

(A) the agreement is not detrimental to the United States space launch industry; and

(B) the agreement, including any indirect technical benefit that could be derived from the agreement, will not improve the missile or space launch capabilities of the People's Republic of China.

(3) ANNUAL AUDIT.—The Inspector General of the Administration, in consultation with appropriate agencies, shall conduct an annual audit of the policies and procedures of the Administration with respect to the export of technologies and the transfer of scientific and technical information, to assess the extent to which the Administration is carrying out its activities in compliance with Federal export control laws and with paragraph (2).

(b) NATIONAL INTERESTS.—

(1) DEFINITION OF UNITED STATES COMMERCIAL PROVIDER.—In this subsection, the term "United States commercial provider" means a commercial provider (as defined in section 30308(a) of this title), organized under the laws of the United States or of a State (as defined in section 30308(a) of this title), which is—

(A) more than 50 percent owned by United States nationals; or

(B) a subsidiary of a foreign company and the Secretary of Commerce finds that—

(i) such subsidiary has in the past evidenced a substantial commitment to the United States market through—

(I) investments in the United States in long-term research, development, and manufacturing (including the manufacture of major components and subassemblies); and

(II) significant contributions to employment in the United States; and

(ii) the country or countries in which such foreign company is incorporated or organized, and, if appropriate, in which it principally conducts its business, affords reciprocal treatment to companies described in subparagraph (A) comparable to that afforded to such foreign company's subsidiary in the United States, as evidenced by—

(I) providing comparable opportunities for companies described in subparagraph (A) to participate in Government sponsored research and development similar to that authorized under this section, section 30307, 30308, 30309, or 30702 of this title, or the National Aeronautics and Space Administration Authorization Act of 2000 (Public Law 106–391, 114 Stat. 1577);

(II) providing no barriers to companies described in subparagraph (A) with respect to local investment opportunities that are not provided to foreign companies in the United States; and

(III) providing adequate and effective protection for the intellectual property rights of companies described in subparagraph (A).

(2) IN GENERAL.—Before entering into an obligation described in subsection (a), the Administrator shall consider the national interests of the United States described in paragraph (3) of this subsection.

(3) DESCRIPTION OF NATIONAL INTERESTS.—International cooperation in space exploration and science activities most effectively serves the United States national interest when it—

(A)(i) reduces the cost of undertaking missions the United States Government would pursue unilaterally;

(ii) enables the United States to pursue missions that it could not otherwise afford to pursue unilaterally; or

(iii) enhances United States capabilities to use and develop space for the benefit of United States citizens;

(B) is undertaken in a manner that is sensitive to the desire of United States commercial providers to develop or explore space commercially;

(C) is consistent with the need for Federal agencies to use space to complete their missions; and

(D) is carried out in a manner consistent with United States export control laws.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3369.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
30701(a)	42 U.S.C. 2475a(a).	Pub. L. 106–391, title I, §126, Oct. 30, 2000, 114 Stat. 1585.
30701(b)(1)	(no source)	

30701(b)(2)	42 U.S.C. 2475a(b).	
30701(b)(3)	(no source)	

In subsection (b)(1), the definition of "United States commercial provider" is added to carry forward the appropriate definition from section 3 of the National Aeronautics and Space Administration Authorization Act of 2000 (Public Law 106–391, 114 Stat. 1580).

In subsection (b)(3), the description of national interests of the United States is added to carry forward the appropriate description of national interests of the United States from section 2(6) of the National Aeronautics and Space Administration Authorization Act of 2000 (Public Law 106–391, 114 Stat. 1578).

EDITORIAL NOTES

REFERENCES IN TEXT

The National Aeronautics and Space Administration Authorization Act of 2000, referred to in subsec. (b)(1)(B)(ii)(I), is Pub. L. 106–391, Oct. 30, 2000, 114 Stat. 1577. For complete classification of this Act to the Code, see Tables.

STATUTORY NOTES AND RELATED SUBSIDIARIES

LIMITATION ON INTERNATIONAL AGREEMENTS CONCERNING OUTER SPACE ACTIVITIES

Pub. L. 112–239, div. A, title IX, §913(a), (b), Jan. 2, 2013, 126 Stat. 1874, provided that:

"(a) CERTIFICATION REQUIRED.—If the United States becomes a signatory to a non-legally binding international agreement concerning an International Code of Conduct for Outer Space Activities or any similar agreement, at the same time as the United States becomes such a signatory—

"(1) the President shall submit to the congressional defense committees [Committees on Armed Services and Appropriations of the Senate and the House of Representatives], the Permanent Select Committee on Intelligence of the House of Representatives, and the Select Committee on Intelligence of the Senate a certification that such agreement has no legally-binding effect or basis for limiting the activities of the United States in outer space; and

"(2) the Secretary of Defense, the Chairman of the Joint Chiefs of Staff, and the Director of National Intelligence shall jointly submit to the congressional defense committees a certification that such agreement will be equitable, enhance national security, and have no militarily significant impact on the ability of the United States to conduct military or intelligence activities in space.

"(b) BRIEFINGS AND NOTIFICATIONS REQUIRED.—

"(1) RESTATEMENT OF POLICY FORMULATION UNDER THE ARMS CONTROL AND DISARMAMENT ACT WITH RESPECT TO OUTER SPACE.—No action shall be taken that would obligate the United States to reduce or limit the Armed Forces or armaments of the United States in outer space in a militarily significant manner, except pursuant to the treaty-making power of the President set forth in Article II, Section 2, Clause II of the Constitution or unless authorized by the enactment of further affirmative legislation by the Congress of the United States.

"(2) BRIEFINGS.—

"(A) REQUIREMENT.—The Secretary of Defense, the Secretary of State, and the Director of National Intelligence shall jointly provide to the covered congressional committees regular, detailed updates on the negotiation of a non-legally binding international agreement concerning an International Code of Conduct for Outer Space Activities or any similar agreement.

"(B) TERMINATION OF REQUIREMENT.—The requirement to provide regular briefings under subparagraph (A) shall terminate on the date on which the United States becomes a signatory to an agreement referred to in subparagraph (A), or on the date on which the President certifies to Congress that the United States is no longer negotiating an agreement referred to in subparagraph (A), whichever is earlier.

"(3) NOTIFICATIONS.—If the United States becomes a signatory to a non-legally binding international agreement concerning an International Code of Conduct for Outer Space Activities or any similar agreement, not less than 60 days prior to any action that will obligate the United States to reduce or limit the Armed Forces or armaments or activities of the United States in outer space, the head of each Department or agency of the Federal Government that is affected by such action shall submit to Congress notice of such action and the effect of such action on such Department or agency.

"(4) DEFINITION.—In this subsection, the term 'covered congressional committees' means—

"(A) the Committee on Armed Services, the Committee on Foreign Affairs, and the Permanent Select Committee on Intelligence of the House of Representatives; and

"(B) the Committee on Armed Services, the Committee on Foreign Relations, and the Select Committee on Intelligence of the Senate."

§30702. Foreign contract limitation

The Administration shall not enter into any agreement or contract with a foreign government that grants the foreign government the right to recover profit in the event that the agreement or contract is terminated.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3371.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
30702	42 U.S.C. 2475b.	Pub. L. 106–391, title III, §305, Oct. 30, 2000, 114 Stat. 1592.

§30703. Foreign launch vehicles

(a) ACCORD WITH SPACE TRANSPORTATION POLICY.—The Administration shall not launch a payload on a foreign launch vehicle except in accordance with the Space Transportation Policy announced by the President on December 21, 2004. This subsection shall not be construed to prevent the President from waiving the Space Transportation Policy.

(b) INTERAGENCY COORDINATION.—The Administration shall not launch a payload on a foreign launch vehicle unless the Administration commenced the interagency coordination required by the Space Transportation Policy announced by the President on December 21, 2004, at least 90 days before entering into a development contract for the payload.

(c) APPLICATION.—This section shall not apply to any payload for which development has begun prior to December 30, 2005, including the James Webb Space Telescope.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3371.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
30703	42 U.S.C. 16614.	Pub. L. 109–155, title I, §105, Dec. 30, 2005, 119 Stat. 2912.

In subsection (c), the date "December 30, 2005" is substituted for "the date of enactment of this Act" to reflect the date of enactment of the National Aeronautics and Space Administration Authorization Act of 2005 (Public Law 109–155, 119 Stat. 2895).

§30704. Offshore performance of contracts for the procurement of goods and services

The Administrator shall submit to Congress, not later than 120 days after the end of each fiscal year, a report on the contracts and subcontracts performed overseas and the amount of purchases directly or indirectly by the Administration from foreign entities in that fiscal year. The report shall separately indicate—

(1) the contracts and subcontracts and their dollar values for which the Administrator

determines that essential goods or services under the contract are available only from a source outside the United States; and

(2) the items and their dollar values for which the Buy American Act (41 U.S.C. 10a et seq.) [1] was waived pursuant to obligations of the United States under international agreements.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3371.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
30704	42 U.S.C. 16823.	Pub. L. 109–155, title VII, §709, Dec. 30, 2005, 119 Stat. 2938.

In the matter before paragraph (1), the words "beginning with the first fiscal year after the date of enactment of this Act [December 30, 2005]" are omitted as obsolete.

EDITORIAL NOTES

REFERENCES IN TEXT

The Buy American Act, referred to in par. (2), is title III of act Mar. 3, 1933, ch. 212, 47 Stat. 1520, which was classified generally to sections 10a, 10b, and 10c of former Title 41, Public Contracts, and was substantially repealed and restated in chapter 83 (§8301 et seq.) of Title 41, Public Contracts, by Pub. L. 111–350, §§3, 7(b), Jan. 4, 2011, 124 Stat. 3677, 3855. For complete classification of this Act to the Code, see Short Title of 1933 Act note set out under section 101 of Title 41 and Tables. For disposition of sections of former Title 41, see Disposition Table preceding section 101 of Title 41.

[1] *See References in Text note below.*

CHAPTER 309—AWARDS

Sec.

30901. Congressional Space Medal of Honor.
30902. Charles "Pete" Conrad Astronomy Awards.

§30901. Congressional Space Medal of Honor

(a) AUTHORITY TO AWARD.—The President may award, and present in the name of Congress, a medal of appropriate design, which shall be known as the Congressional Space Medal of Honor, to any astronaut who in the performance of the astronaut's duties has distinguished himself or herself by exceptionally meritorious efforts and contributions to the welfare of the Nation and of humankind.

(b) APPROPRIATIONS.—There is authorized to be appropriated from time to time such sums of money as may be necessary to carry out the purposes of this section.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3371.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
30901(a)	42 U.S.C. 2461 (1st par.).	Pub. L. 91–76, §1, Sept. 29, 1969, 83 Stat. 124.
30901(b)	42 U.S.C. 2461 (last par.).	Pub. L. 91–76, §2, Sept. 29, 1969, 83 Stat. 124.

§30902. Charles "Pete" Conrad Astronomy Awards

(a) SHORT TITLE.—This section may be cited as the "Charles 'Pete' Conrad Astronomy Awards Act".

(b) DEFINITIONS.—In this section:

(1) AMATEUR ASTRONOMER.—The term "amateur astronomer" means an individual whose employer does not provide any funding, payment, or compensation to the individual for the observation of asteroids and other celestial bodies, and does not include any individual employed as a professional astronomer.

(2) MINOR PLANET CENTER.—The term "Minor Planet Center" means the Minor Planet Center of the Smithsonian Astrophysical Observatory.

(3) NEAR-EARTH ASTEROID.—The term "near-Earth asteroid" means an asteroid with a perihelion distance of less than 1.3 Astronomical Units from the Sun.

(4) PROGRAM.—The term "Program" means the Charles "Pete" Conrad Astronomy Awards Program established under subsection (c).

(c) CHARLES "PETE" CONRAD ASTRONOMY AWARDS PROGRAM.—

(1) IN GENERAL.—The Administrator shall establish the Charles "Pete" Conrad Astronomy Awards Program.

(2) AWARDS.—The Administrator shall make awards under the Program based on the recommendations of the Minor Planet Center.

(3) AWARD CATEGORIES.—The Administrator shall make one annual award, unless there are no eligible discoveries or contributions, for each of the following categories:

(A) DISCOVERY OF BRIGHTEST NEAR-EARTH ASTEROID.—The amateur astronomer or group of amateur astronomers who in the preceding calendar year discovered the intrinsically brightest near-Earth asteroid among the near-Earth asteroids that were discovered during that year by amateur astronomers or groups of amateur astronomers.

(B) GREATEST CONTRIBUTION TO CATALOGUING NEAR-EARTH ASTEROIDS .—The amateur astronomer or group of amateur astronomers who made the greatest contribution to the Minor Planet Center's mission of cataloguing near-Earth asteroids during the preceding year.

(4) AWARD AMOUNT.—An award under the Program shall be in the amount of $3,000.

(5) GUIDELINES.—

(A) CITIZEN OR PERMANENT RESIDENT.—No individual who is not a citizen or permanent resident of the United States at the time of the individual's discovery or contribution may receive an award under this section.

(B) FINALITY.—The decisions of the Administrator in making awards under this section are final.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3372.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
30902	42 U.S.C. 16792.	Pub. L. 109–155, title VI, §613, Dec. 30, 2005, 119 Stat. 2932.

CHAPTER 311—SAFETY

Sec.

31101. Aerospace Safety Advisory Panel.

31102. Drug and alcohol testing.

§31101. Aerospace Safety Advisory Panel

(a) ESTABLISHMENT AND MEMBERS.—There is established an Aerospace Safety Advisory Panel consisting of a maximum of 9 members who shall be appointed by the Administrator for terms of 6 years each. Not more than 4 such members shall be chosen from among the officers and employees of the Administration.

(b) CHAIRMAN.—One member shall be designated by the Panel as its Chairman.

(c) DUTIES.—The Panel shall—

(1) review safety studies and operations plans referred to it, including evaluating the Administration's compliance with the return-to-flight and continue-to-fly recommendations of the Columbia Accident Investigation Board, and make reports thereon;

(2) advise the Administrator and Congress with respect to—

(A) the hazards of proposed or existing facilities and proposed operations;

(B) the adequacy of proposed or existing safety standards; and

(C) management and culture related to safety; and

(3) perform such other duties as the Administrator may request.

(d) COMPENSATION AND EXPENSES.—

(1) COMPENSATION.—

(A) FEDERAL OFFICERS AND EMPLOYEES.—A member of the Panel who is an officer or employee of the Federal Government shall receive no compensation for the member's services as such.

(B) MEMBERS APPOINTED FROM OUTSIDE THE FEDERAL GOVERNMENT.—A member of the Panel appointed from outside the Federal Government shall receive compensation, at a rate not to exceed the per diem rate equivalent to the maximum rate payable under section 5376 of title 5, for each day the member is engaged in the actual performance of duties vested in the Panel.

(2) EXPENSES.—A member of the Panel shall be allowed necessary travel expenses (or in the alternative, mileage for use of a privately owned vehicle and a per diem in lieu of subsistence not to exceed the rate and amount prescribed in sections 5702 and 5704 of title 5), and other necessary expenses incurred by the member in the performance of duties vested in the Panel, without regard to the provisions of subchapter I of chapter 57 of title 5, the Standardized Government Travel Regulations, or section 5731 of title 5.

(e) ANNUAL REPORT.—The Panel shall submit an annual report to the Administrator and to Congress. In the first annual report submitted after December 30, 2005, the Panel shall include an evaluation of the Administration's management and culture related to safety. Each annual report shall include an evaluation of the Administration's compliance with the recommendations of the Columbia Accident Investigation Board through retirement of the space shuttle.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3373.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
31101(a)	42 U.S.C. 2477(a) (1st, last sentences).	Pub. L. 90–67, §6, Aug. 21, 1967, 81 Stat. 170; Pub. L. 94–307, §8, June 4, 1976, 90 Stat. 681; Pub. L. 99–234, title I, §107(f), Jan. 2, 1986, 99 Stat. 1759; Pub. L. 109–155, title

		I, §106, Dec. 30, 2005, 119 Stat. 2912.
31101(b)	42 U.S.C. 2477(a) (3d sentence).	
31101(c)	42 U.S.C. 2477(a) (2d sentence).	
31101(d)	42 U.S.C. 2477(a) (4th, 5th sentences).	
31101(e)	42 U.S.C. 2477(b).	

In subsection (d)(1)(B), the words "maximum rate payable under section 5376 of title 5" are substituted for "rate for GS–18" because of section 101(c) of the Federal Employees Pay Comparability Act of 1990 (Public Law 101–509, 5 U.S.C. 5376 note).

In subsection (e), the date "December 30, 2005" is substituted for "the date of enactment of the National Aeronautics and Space Administration Authorization Act of 2005" to reflect the date of enactment of the National Aeronautics and Space Administration Authorization Act of 2005 (Public Law 109–155, 119 Stat. 2895).

§31102. Drug and alcohol testing

(a) DEFINITION OF CONTROLLED SUBSTANCE.—In this section, the term "controlled substance" means any substance under section 102(6) of the Controlled Substances Act (21 U.S.C. 802(6)) specified by the Administrator.

(b) TESTING PROGRAM.—

(1) EMPLOYEES OF ADMINISTRATION.—The Administrator shall establish a program applicable to employees of the Administration whose duties include responsibility for safety-sensitive, security, or national security functions. Such program shall provide for preemployment, reasonable suspicion, random, and post-accident testing for use, in violation of applicable law or Federal regulation, of alcohol or a controlled substance. The Administrator may also prescribe regulations, as the Administrator considers appropriate in the interest of safety, security, and national security, for the conduct of periodic recurring testing of such employees for such use in violation of applicable law or Federal regulation.

(2) EMPLOYEES OF CONTRACTORS.—The Administrator shall, in the interest of safety, security, and national security, prescribe regulations. Such regulations shall establish a program that requires Administration contractors to conduct preemployment, reasonable suspicion, random, and post-accident testing of contractor employees responsible for safety-sensitive, security, or national security functions (as determined by the Administrator) for use, in violation of applicable law or Federal regulation, of alcohol or a controlled substance. The Administrator may also prescribe regulations, as the Administrator considers appropriate in the interest of safety, security, and national security, for the conduct of periodic recurring testing of such employees for such use in violation of applicable law or Federal regulation.

(3) SUSPENSION, DISQUALIFICATION, OR DISMISSAL.—In prescribing regulations under the programs required by this subsection, the Administrator shall require, as the Administrator considers appropriate, the suspension, disqualification, or dismissal of any employee to which paragraph (1) or (2) applies, in accordance with the provisions of this section, in any instance where a test conducted and confirmed under this section indicates that such employee has used, in violation of applicable law or Federal regulation, alcohol or a controlled substance.

(c) PROHIBITION ON SERVICE.—

(1) PROHIBITION UNLESS PROGRAM OF REHABILITATION COMPLETED.—No individual who is determined by the Administrator under this section to have used, in violation of applicable law or Federal regulation, alcohol or a controlled substance after December 9, 1991, shall serve as an Administration employee with responsibility for safety-sensitive, security, or national security functions (as determined by the Administrator), or as an Administration

contractor employee with such responsibility, unless such individual has completed a program of rehabilitation described in subsection (d).

(2) UNCONDITIONAL PROHIBITION.—Any such individual determined by the Administrator under this section to have used, in violation of applicable law or Federal regulation, alcohol or a controlled substance after December 9, 1991, shall not be permitted to perform the duties that the individual performed prior to the date of the determination, if the individual—

(A) engaged in such use while on duty;

(B) prior to such use had undertaken or completed a rehabilitation program described in subsection (d);

(C) following such determination refuses to undertake such a rehabilitation program; or

(D) following such determination fails to complete such a rehabilitation program.

(d) PROGRAM FOR REHABILITATION.—

(1) REGULATIONS AND AVAILABILITY OF PROGRAM FOR CONTRACTOR EMPLOYEES.—The Administrator shall prescribe regulations setting forth requirements for rehabilitation programs which at a minimum provide for the identification and opportunity for treatment of employees referred to in subsection (b) in need of assistance in resolving problems with the use, in violation of applicable law or Federal regulation, of alcohol or a controlled substance. Each contractor is encouraged to make such a program available to all of its employees in addition to those employees referred to in subsection (b)(2). The Administrator shall determine the circumstances under which such employees shall be required to participate in such a program. Nothing in this subsection shall preclude any Administration contractor from establishing a program under this subsection in cooperation with any other such contractor.

(2) ESTABLISHMENT AND MAINTENANCE OF PROGRAM FOR ADMINISTRATION EMPLOYEES.—The Administrator shall establish and maintain a rehabilitation program which at a minimum provides for the identification and opportunity for treatment of those employees of the Administration whose duties include responsibility for safety-sensitive, security, or national security functions who are in need of assistance in resolving problems with the use of alcohol or controlled substances.

(e) PROCEDURES FOR TESTING.—In establishing the programs required under subsection (b), the Administrator shall develop requirements which shall—

(1) promote, to the maximum extent practicable, individual privacy in the collection of specimen samples;

(2) with respect to laboratories and testing procedures for controlled substances, incorporate the Department of Health and Human Services scientific and technical guidelines dated April 11, 1988, and any subsequent amendments thereto, including mandatory guidelines which—

(A) establish comprehensive standards for all aspects of laboratory controlled substances testing and laboratory procedures to be applied in carrying out this section, including standards which require the use of the best available technology for ensuring the full reliability and accuracy of controlled substances tests and strict procedures governing the chain of custody of specimen samples collected for controlled substances testing;

(B) establish the minimum list of controlled substances for which individuals may be tested; and

(C) establish appropriate standards and procedures for periodic review of laboratories and criteria for certification and revocation of certification of laboratories to perform controlled substances testing in carrying out this section;

(3) require that all laboratories involved in the controlled substances testing of any individual under this section shall have the capability and facility, at such laboratory, of performing screening and confirmation tests;

(4) provide that all tests which indicate the use, in violation of applicable law or Federal regulation, of alcohol or a controlled substance by any individual shall be confirmed by a

scientifically recognized method of testing capable of providing quantitative data regarding alcohol or a controlled substance;

(5) provide that each specimen sample be subdivided, secured, and labelled in the presence of the tested individual and that a portion thereof be retained in a secure manner to prevent the possibility of tampering, so that in the event the individual's confirmation test results are positive the individual has an opportunity to have the retained portion assayed by a confirmation test done independently at a second certified laboratory if the individual requests the independent test within 3 days after being advised of the results of the initial confirmation test;

(6) ensure appropriate safeguards for testing to detect and quantify alcohol in breath and body fluid samples, including urine and blood, through the development of regulations as may be necessary and in consultation with the Department of Health and Human Services;

(7) provide for the confidentiality of test results and medical information of employees; and

(8) ensure that employees are selected for tests by nondiscriminatory and impartial methods, so that no employee is harassed by being treated differently from other employees in similar circumstances.

(f) EFFECT ON OTHER LAWS AND REGULATIONS.—

(1) CONSISTENCY WITH FEDERAL REGULATION.—No State or local government shall adopt or have in effect any law, rule, regulation, ordinance, standard, or order that is inconsistent with the regulations promulgated under this section.

(2) CONTINUANCE OF REGULATIONS ISSUED BEFORE DECEMBER 9, 1991 .—Nothing in this section shall be construed to restrict the discretion of the Administrator to continue in force, amend, or further supplement any regulations issued before December 9, 1991, that govern the use of alcohol and controlled substances by Administration employees with responsibility for safety-sensitive, security, and national security functions (as determined by the Administrator), or by Administration contractor employees with such responsibility.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3374.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
31102(a)	42 U.S.C. 2473c(h).	Pub. L. 102–195, §21(c)–(h), Dec. 9, 1991, 105 Stat. 1616.
31102(b)	42 U.S.C. 2473c(c).	
31102(c)	42 U.S.C. 2473c(d).	
31102(d)	42 U.S.C. 2473c(e).	
31102(e)	42 U.S.C. 2473c(f).	
31102(f)	42 U.S.C. 2473c(g).	

In subsection (b)(2), the words "within 18 months after the date of enactment of this Act" are omitted as obsolete.

In paragraphs (1) and (2) of subsection (c), and in subsection (f)(2), the date "December 9, 1991" is substituted for "the date of enactment of this Act" to reflect the date of enactment of the National Aeronautics and Space Administration Authorization Act, Fiscal Year 1992 (Public Law 102–195, 105 Stat. 1605).

STATUTORY NOTES AND RELATED SUBSIDIARIES

FINDINGS

Pub. L. 102–195, §21(b), Dec. 9, 1991, 105 Stat. 1616, provided that: "The Congress finds that—

"(1) alcohol abuse and illegal drug use pose significant dangers to the safety and welfare of the Nation;

"(2) the success of the United States civil space program is contingent upon the safe and successful development and deployment of the many varied components of that program;

"(3) the greatest efforts must be expended to eliminate the abuse of alcohol and use of illegal drugs,

whether on duty or off duty, by those individuals who are involved in the positions affecting safety, security, and national security;

"(4) the use of alcohol and illegal drugs has been demonstrated to adversely affect the performance of individuals, and has been proven to have been a critical factor in accidents in the workplace;

"(5) the testing of uniformed personnel of the Armed Forces has shown that the most effective deterrent to abuse of alcohol and use of illegal drugs is increased testing, including random testing;

"(6) adequate safeguards can be implemented to ensure that testing for abuse of alcohol or use of illegal drugs is performed in a manner which protects an individual's right of privacy, ensures that no individual is harassed by being treated differently from other individuals, and ensures that no individual's reputation or career development is unduly threatened or harmed; and

"(7) rehabilitation is a critical component of any testing program for abuse of alcohol or use of illegal drugs, and should be made available to individuals, as appropriate."

CHAPTER 313—HEALTHCARE

Sec.
31301. Healthcare program.
31302. Astronaut healthcare survey.

§31301. Healthcare program

The Administrator shall develop a plan to better understand the longitudinal health effects of space flight on humans. In the development of the plan, the Administrator shall consider the need for the establishment of a lifetime healthcare program for Administration astronauts and their families or other methods to obtain needed health data from astronauts and retired astronauts.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3376.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
31301	42 U.S.C. 16822.	Pub. L. 109–155, title VII, §708, Dec. 30, 2005, 119 Stat. 2938.

§31302. Astronaut healthcare survey

(a) SURVEY.—The Administrator shall administer an anonymous survey of astronauts and flight surgeons to evaluate communication, relationships, and the effectiveness of policies. The survey questions and the analysis of results shall be evaluated by experts independent of the Administration. The survey shall be administered on at least a biennial basis.

(b) REPORT.—The Administrator shall transmit a report of the results of the survey to Congress not later than 90 days following completion of the survey.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3377.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
31302	42 U.S.C. 17822.	Pub. L. 110–422, title XI, §1103, Oct. 15, 2008, 122 Stat. 4808.

CHAPTER 315—MISCELLANEOUS

Sec.
31501. Orbital debris.
31502. Maintenance of facilities.
31503. Laboratory productivity.
31504. Cooperative unmanned aerial vehicle activities.
31505. Development of enhanced-use lease policy.

§31501. Orbital debris

The Administrator, in conjunction with the heads of other Federal agencies, shall take steps to develop or acquire technologies that will enable the Administration to decrease the risks associated with orbital debris.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3377.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
31501	42 U.S.C. 16781.	Pub. L. 109–155, title VI, §601, Dec. 30, 2005, 119 Stat. 2931.

§31502. Maintenance of facilities

In order to sustain healthy Centers that are capable of carrying out the Administration's missions, the Administrator shall ensure that adequate maintenance and upgrading of those Center facilities is performed on a regular basis.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3377.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
31502	42 U.S.C. 17811(a).	Pub. L. 110–422, title X, §1002(a), Oct. 15, 2008, 122 Stat. 4806.

STATUTORY NOTES AND RELATED SUBSIDIARIES

FACILITIES AND INFRASTRUCTURE

Pub. L. 115–10, title VIII, §837, Mar. 21, 2017, 131 Stat. 69, provided that:

"(a) SENSE OF CONGRESS.—It is the sense of Congress that—

"(1) the [National Aeronautics and Space] Administration must address, mitigate, and reverse, where possible, the deterioration of its facilities and infrastructure, as their condition is hampering the effectiveness and efficiency of research performed by both the Administration and industry participants making use of Administration facilities, thus harming the competitiveness of the United States aerospace industry;

"(2) the Administration has a role in providing laboratory capabilities to industry participants that are not economically viable as commercial entities and thus are not available elsewhere;

"(3) to ensure continued access to reliable and efficient world-class facilities by researchers, the Administration should establish strategic partnerships with other Federal agencies, State agencies, FAA-licensed spaceports, institutions of higher education, and industry, as appropriate; and

"(4) decisions on whether to dispose of, maintain, or modernize existing facilities must be made in the context of meeting Administration and other needs, including those required to meet the activities

supporting the human exploration roadmap under section 432 of this Act [set out in a note under section 20302 of this title], considering other national laboratory needs as the Administrator [of the National Aeronautics and Space Administration] deems appropriate.

"(b) POLICY.—It is the policy of the United States that the Administration maintain reliable and efficient facilities and infrastructure and that decisions on whether to dispose of, maintain, or modernize existing facilities or infrastructure be made in the context of meeting future Administration needs.

"(c) PLAN.—

"(1) IN GENERAL.—The Administrator shall develop a facilities and infrastructure plan.

"(2) GOAL.—The goal of the plan is to position the Administration to have the facilities and infrastructure, including laboratories, tools, and approaches, necessary to meet future Administration and other Federal agencies' laboratory needs.

"(3) CONTENTS.—The plan shall identify—

"(A) current Administration and other Federal agency laboratory needs;

"(B) future Administration research and development and testing needs;

"(C) a strategy for identifying facilities and infrastructure that are candidates for disposal, that is consistent with the national strategic direction set forth in—

"(i) the National Space Policy;

"(ii) the National Aeronautics Research, Development, Test, and Evaluation Infrastructure Plan;

"(iii) the National Aeronautics and Space Administration Authorization Act of 2005 (Public Law 109–155; 119 Stat. 2895) [see Tables for classification], National Aeronautics and Space Administration Authorization Act of 2008 (Public Law 110–422; 122 Stat. 4779) [see Tables for classification], and National Aeronautics and Space Administration Authorization Act of 2010 (42 U.S.C. 18301 et seq.); and

"(iv) the human exploration roadmap under section 432 of this Act [set out in a note under section 20302 of this title];

"(D) a strategy for the maintenance, repair, upgrading, and modernization of Administration facilities and infrastructure, including laboratories and equipment;

"(E) criteria for—

"(i) prioritizing deferred maintenance tasks;

"(ii) maintaining, repairing, upgrading, or modernizing Administration facilities and infrastructure; and

"(iii) implementing processes, plans, and policies for guiding the Administration's Centers on whether to maintain, repair, upgrade, or modernize a facility or infrastructure and for determining the type of instrument to be used;

"(F) an assessment of modifications needed to maximize usage of facilities that offer unique and highly specialized benefits to the aerospace industry and the American public; and

"(G) implementation steps, including a timeline, milestones, and an estimate of resources required for carrying out the plan.

"(d) REQUIREMENT TO ESTABLISH POLICY.—

"(1) IN GENERAL.—Not later than 180 days after the date of enactment of this Act [Mar. 21, 2017], the Administrator shall establish and make publicly available a policy that guides the Administration's use of existing authorities to out-grant, lease, excess to the General Services Administration, sell, decommission, demolish, or otherwise transfer property, facilities, or infrastructure.

"(2) CRITERIA.—The policy shall include criteria for the use of authorities, best practices, standardized procedures, and guidelines for how to appropriately manage property, facilities, and infrastructure.

"(e) SUBMISSION TO CONGRESS.—Not later than 1 year after the date of enactment of this Act, the Administrator shall submit to the appropriate committees of Congress [Committee on Commerce, Science, and Transportation of the Senate and Committee on Science, Space, and Technology of the House of Representatives] the plan developed under subsection (c)."

§31503. Laboratory productivity

The Administration's laboratories are a critical component of the Administration's research capabilities, and the Administrator shall ensure that those laboratories remain productive.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3377.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
31503	42 U.S.C. 17812(a).	Pub. L. 110–422, title X, §1003(a), Oct. 15, 2008, 122 Stat. 4807.

§31504. Cooperative unmanned aerial vehicle activities

The Administrator, in cooperation with the Administrator of the National Oceanic and Atmospheric Administration and in coordination with other agencies that have existing civil capabilities, shall continue to utilize the capabilities of unmanned aerial vehicles as appropriate in support of Administration and interagency cooperative missions. The Administrator may enter into cooperative agreements with universities with unmanned aerial vehicle programs and related assets to conduct collaborative research and development activities, including development of appropriate applications of small unmanned aerial vehicle technologies and systems in remote areas.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3377.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
31504	42 U.S.C. 17828.	Pub. L. 110–422, title XI, §1116, Oct. 15, 2008, 122 Stat. 4813.

§31505. Development of enhanced-use lease policy

(a) IN GENERAL.—The Administrator shall develop an agency-wide enhanced-use lease policy that—

(1) is based upon sound business practices and lessons learned from the demonstration centers; and

(2) establishes controls and procedures to ensure accountability and protect the interests of the Government.

(b) CONTENTS.—The policy required by subsection (a) shall include the following:

(1) CRITERIA FOR DETERMINING ECONOMIC VALUE.—Criteria for determining whether enhanced-use lease provides better economic value to the Government than other options, such as—

(A) Federal financing through appropriations; or

(B) sale of the property.

(2) SECURITY AND ACCESS.—Requirement for the identification of proposed physical and procedural changes needed to ensure security and restrict access to specified areas, coordination of proposed changes with existing site tenants, and development of estimated costs of such changes.

(3) MEASURES OF EFFECTIVENESS.—Measures of effectiveness for the enhanced-use lease program.

(4) ACCOUNTING CONTROLS.—Accounting controls and procedures to ensure accountability, such as an audit trail and documentation to readily support financial transactions.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3377.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
31505	42 U.S.C. 17829.	Pub. L. 110–422, title XI, §1117, Oct. 15, 2008, 122 Stat. 4813.

Subtitle IV—Aeronautics and Space Research and Education

CHAPTER 401—AERONAUTICS

SUBCHAPTER I—GENERAL

Sec.
40101. Definition of institution of higher education.
40102. Governmental interest in aeronautics research and development.
40103. Cooperation with other agencies on aeronautics activities.
40104. Cooperation among Mission Directorates.

SUBCHAPTER II—HIGH PRIORITY AERONAUTICS RESEARCH AND DEVELOPMENT PROGRAMS

40111. Fundamental research program.
40112. Research and technology programs.
40113. Airspace systems research.
40114. Aviation safety and security research.
40115. Aviation weather research.
40116. University-based Centers for Research on Aviation Training.

SUBCHAPTER III—SCHOLARSHIPS

40131. Aeronautics scholarships.

SUBCHAPTER IV—DATA REQUESTS

40141. Aviation data requests.

SUBCHAPTER I—GENERAL

§40101. Definition of institution of higher education

In this chapter, the term "institution of higher education" has the meaning given the term by section 101 of the Higher Education Act of 1965 (20 U.S.C. 1001).

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3378.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
40101	42 U.S.C. 16701.	Pub. L. 109–155, title IV, §401, Dec. 30, 2005, 119 Stat. 2923.

§40102. Governmental interest in aeronautics research and development

Congress reaffirms the national commitment to aeronautics research made in chapter 201 of this title. Aeronautics research and development remains a core mission of the Administration. The

Administration is the lead agency for civil aeronautics research. Further, the government of the United States shall promote aeronautics research and development that will expand the capacity, ensure the safety, and increase the efficiency of the Nation's air transportation system, promote the security of the Nation, protect the environment, and retain the leadership of the United States in global aviation.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3379.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
40102	42 U.S.C. 16711.	Pub. L. 109–155, title IV, §411, Dec. 30, 2005, 119 Stat. 2923.

STATUTORY NOTES AND RELATED SUBSIDIARIES

EXPERIMENTAL AIRCRAFT PROJECTS

Pub. L. 117–167, div. B, title VII, §10831, Aug. 9, 2022, 136 Stat. 1746, provided that:

"(a) SENSE OF CONGRESS.—It is the sense of Congress that—

"(1) developing high-risk, precompetitive aerospace technologies for which there is not yet a profit rationale is a fundamental role of the [National Aeronautics and Space] Administration;

"(2) large-scale flight test experimentation and validation are necessary for—

"(A) transitioning new technologies and materials, including associated manufacturing processes, for aviation and aeronautics use; and

"(B) capturing the full extent of benefits from investments made by the Aeronautics Research Mission Directorate; and

"(3) a level of funding that adequately supports large-scale flight test experimentation and validation, including related infrastructure, should be ensured over a sustained period of time to restore the capacity of the Administration—

"(A) to see legacy priority programs through to completion; and

"(B) to achieve national economic and security objectives.

"(b) STATEMENT OF POLICY.—It is the policy of the United States—

"(1) to maintain world leadership in—

"(A) civilian aeronautical science and technology; and

"(B) aerospace industrialization; and

"(2) to maintain as a fundamental objective of the aeronautics research of the Administration the steady progression and expansion of flight research and capabilities, including the science and technology of critical underlying disciplines and competencies, such as—

"(A) computational-based analytical and predictive tools and methodologies;

"(B) aerothermodynamics;

"(C) propulsion;

"(D) advanced materials and manufacturing processes;

"(E) high-temperature structures and materials; and

"(F) guidance, navigation, and flight controls.

"(c) EXPERIMENTAL AIRCRAFT FLIGHT DEMONSTRATIONS.—

"(1) IN GENERAL.—In meeting the objectives described in subsection (b), the Administrator [of the National Aeronautics and Space Administration] shall carry out experimental aircraft demonstrations, including—

"(A) a subsonic demonstrator to demonstrate the performance and feasibility of advanced, ultra-efficient, and low emissions subsonic flight demonstrator configurations;

"(B) a low boom flight demonstrator to validate design tools and technologies that can be applied to low sonic boom commercial supersonic aircraft and support the development of a noise-based standard for supersonic overland flight; and

"(C) a flight research demonstrator to test the performance and feasibility of advanced, ultra-efficient and net-zero emissions aircraft concepts and configurations.

"(2) ELEMENTS.—For each demonstration under paragraph (1), the Administrator shall—

"(A) include the development of experimental aircraft and all necessary supporting flight test assets;

"(B) pursue a robust technology maturation and flight test validation effort;

"(C) improve necessary facilities, flight testing capabilities, and computational tools to support the demonstration;

"(D) award any primary contracts for design, procurement, and manufacturing to United States persons, consistent with international obligations and commitments; and

"(E) coordinate research and flight test demonstration activities with other Federal agencies and the United States aviation community, as the Administrator considers appropriate.

"(3) UNITED STATES PERSON DEFINED.—In this subsection, the term 'United States person' means—

"(A) a United States citizen or an alien lawfully admitted for permanent residence to the United States; or

"(B) an entity organized under the laws of the United States or of any jurisdiction within the United States, including a foreign branch of such an entity.

"(d) COLLABORATION WITH INDUSTRY AND ACADEMIA.—The Administration shall seek means to expand collaboration with industry and academia on basic research and technology development related to experimental aircraft, and on the experimental aircraft demonstrations required by subsection (c).

"(e) ADVANCED MATERIALS AND MANUFACTURING TECHNOLOGY PROGRAM.—

"(1) IN GENERAL.—The Administrator may establish an advanced materials and manufacturing technology program—

"(A) to develop—

"(i) new materials, including composite and high-temperature materials, from base material formulation through full-scale structural validation and manufacture;

"(ii) advanced materials and manufacturing processes, including additive manufacturing, to reduce the cost of manufacturing scale-up and certification for use in aeronautics; and

"(iii) noninvasive or nondestructive techniques for testing or evaluating aviation and aeronautics structures, including for materials and manufacturing processes;

"(B) to reduce the time it takes to design, industrialize, and certify advanced materials and manufacturing processes;

"(C) to provide education and training opportunities for the aerospace workforce; and

"(D) to address global cost and human capital competitiveness for United States aeronautical industries and technological leadership in advanced materials and manufacturing technology.

"(2) ELEMENTS.—In carrying out a program under paragraph (1), the Administrator may—

"(A) build on work that was carried out by the Advanced Composites Project of the Administration;

"(B) partner with the private and academic sectors, such as members of the Advanced Composites Consortium of the Administration, the Joint Advanced Materials and Structures Center of Excellence of the Federal Aviation Administration, the Manufacturing USA institutes of the Department of Commerce, and national laboratories, as the Administrator considers appropriate;

"(C) provide a structure for managing intellectual property generated by the program based on or consistent with the structure established for the Advanced Composites Consortium of the Administration;

"(D) ensure adequate Federal cost share for applicable research; and

"(E) coordinate with advanced manufacturing and composites initiatives in other mission directorates of the Administration, as the Administrator considers appropriate.

"(f) RESEARCH PARTNERSHIPS.—In carrying out the demonstrations under subsection (c) and a program under subsection (e), the Administrator may engage in cooperative research programs with—

"(1) academia; and

"(2) commercial aviation and aerospace manufacturers."

[For definition of "Manufacturing USA institute" as used in section 10831 of Pub. L. 117–167, set out above, see section 18901 of Title 42, The Public Health and Welfare.]

EXECUTIVE DOCUMENTS

EX. ORD. NO. 13419. NATIONAL AERONAUTICS RESEARCH AND DEVELOPMENT

Ex. Ord. No. 13419, Dec. 20, 2006, 71 F.R. 77565, provided:

By the authority vested in me as President by the Constitution and the laws of the United States of America, including section 204 of the National Science and Technology Policy, Organization, and Priorities Act of

1976, as amended (42 U.S.C. 6613), section 101(c) of the National Aeronautics and Space Administration Authorization Act of 2005 (Public Law 109–155), and section 301 of title 3, United States Code, it is hereby ordered as follows:

SECTION 1. *National Aeronautics Research and Development Policy*. Continued progress in aeronautics, the science of flight, is essential to America's economic success and the protection of America's security interests at home and around the globe. Accordingly, it shall be the policy of the United States to facilitate progress in aeronautics research and development (R&D) through appropriate funding and activities of the Federal Government, in cooperation with State, territorial, tribal, local, and foreign governments, international organizations, academic and research institutions, private organizations, and other entities, as appropriate. The Federal Government shall only undertake roles in supporting aeronautics R&D that are not more appropriately performed by the private sector. The National Aeronautics Research and Development Policy prepared by the National Science and Technology Council should, to the extent consistent with this order and its implementation, guide the aeronautics R&D programs of the United States through 2020.

SEC. 2. *Functions of the Director of the Office of Science and Technology Policy*. To implement the policy set forth in section 1 of this order, the Director of the Office of Science and Technology Policy (the "Director") shall:

(a) review the funding and activities of the Federal Government relating to aeronautics R&D;

(b) recommend to the President, the Director of the Office of Management and Budget, and the heads of executive departments and agencies, as appropriate, such actions with respect to funding and activities of the Federal Government relating to aeronautics R&D as may be necessary to

(i) advance United States technological leadership in aeronautics;

(ii) support innovative research leading to significant advances in aeronautical concepts, technologies, and capabilities;

(iii) pursue and develop advanced aeronautics concepts and technologies, including those for advanced aircraft systems and air transportation management systems, to benefit America's security and effective and efficient national airspace management;

(iv) maintain and advance United States aeronautics research, development, test and evaluation infrastructure to provide effective experimental and computational capabilities in support of aeronautics R&D;

(v) facilitate the educational development of the future aeronautics workforce as needed to further Federal Government interests;

(vi) enhance coordination and communication among executive departments and agencies to maximize the effectiveness of Federal Government R&D resources; and

(vii) ensure appropriate Federal Government coordination with State, territorial, tribal, local, and foreign governments, international organizations, academic and research institutions, private organizations, and other entities.

SEC. 3. *Implementation of National Aeronautics Research and Development Policy*. To implement the policy set forth in section 1 of this order, the Director shall:

(a) develop and, not later than 1 year after the date of this order, submit for approval by the President a plan for national aeronautics R&D and for related infrastructure, (the "plan"), and thereafter submit, not less often than biennially, to the President for approval any changes to the plan;

(b) monitor and report to the President as appropriate on the implementation of the approved plan;

(c) ensure that executive departments and agencies conducting aeronautics R&D:

(i) obtain and exchange information and advice, as appropriate, from organizations and individuals outside the Federal Government in support of Federal Government planning and performance of aeronautics R&D;

(ii) develop and implement, as appropriate, measures for improving dissemination of R&D results and facilitating technology transition from R&D to applications; and

(iii) identify and promote innovative policies and approaches that complement and enhance Federal Government aeronautics R&D investment; and

(d) report to the President on the results of the efforts of executive departments and agencies to implement paragraphs (c)(i) through (iii) of this section.

SEC. 4. *General Provisions*. (a) In implementing this order, the Director shall:

(i) obtain as appropriate the assistance of the National Science and Technology Council in the performance of the Director's functions under this order, consistent with Executive Order 12881 of November 23, 1993, as amended;

(ii) coordinate as appropriate with the Director of the Office of Management and Budget; and

(iii) obtain information and advice from all sources as appropriate, including individuals associated with academic and research institutions and private organizations.

(b) The functions of the President under subsection (c) of section 101 of the National Aeronautics and

Space Administration Authorization Act of 2005, except the function of designation, are assigned to the Director of the Office of Science and Technology Policy. In performing these assigned functions, the Director shall, as appropriate, consult the Administrator of the National Aeronautics and Space Administration, the Secretary of Defense, the Secretary of Transportation, the Director of the Office of Management and Budget, and other heads of executive departments and agencies as appropriate. The Director also shall ensure that all actions taken in the performance of such functions are consistent with the authority set forth in subsections (a) through (d) of section 6 of Executive Order 13346 of July 8, 2004.

(c) This order shall be implemented in a manner consistent with:

(i) applicable law, including section 102A(i) [now 102A(h)] of the National Security Act of 1947, as amended ([former] 50 U.S.C. 403–1(i)) [now 50 U.S.C. 3024(h)], and subject to the availability of appropriations; and

(ii) statutory authority of the principal officers of executive departments and agencies as the heads of their respective departments and agencies.

(d) This order shall not be construed to impair or otherwise affect the functions of the Director of the Office of Management and Budget relating to budget, administrative, and legislative proposals.

(e) This order is not intended to, and does not, create any rights or benefits, substantive or procedural, enforceable at law or in equity by a party against the United States, its departments, agencies, instrumentalities, or entities, its officers, employees, or agents, or any other person.

GEORGE W. BUSH.

§40103. Cooperation with other agencies on aeronautics activities

The Administrator shall coordinate, as appropriate, the Administration's aeronautics activities with relevant programs in the Department of Transportation, the Department of Defense, the Department of Commerce, and the Department of Homeland Security, including the activities of the Next Generation Air Transportation System Joint Planning and Development Office established under section 709 of the Vision 100—Century of Aviation Reauthorization Act (Public Law 108–176, 49 U.S.C. 40101 note).

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3379.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
40103	42 U.S.C. 16712(b).	Pub. L. 110–69, title II, §2002(b), Aug. 9, 2007, 121 Stat. 583.

The words "Next Generation Air Transportation System" are inserted before "Joint Planning and Development Office" for consistency with section 709 of the Vision 100—Century of Aviation Reauthorization Act (Public Law 108–176, 49 U.S.C. 40101 note).

§40104. Cooperation among Mission Directorates

Research and development activities performed by the Aeronautics Research Mission Directorate with the primary objective of assisting in the development of a flight project in another Mission Directorate shall be funded by the Mission Directorate seeking assistance.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3379.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
40104	42 U.S.C. 17724.	Pub. L. 110–422, title III, §307, Oct. 15, 2008, 122 Stat. 4788.

SUBCHAPTER II—HIGH PRIORITY AERONAUTICS RESEARCH AND DEVELOPMENT PROGRAMS

§40111. Fundamental research program

(a) OBJECTIVE.—In order to ensure that the Nation maintains needed capabilities in fundamental areas of aeronautics research, the Administrator shall establish a program of long-term fundamental research in aeronautical sciences and technologies that is not tied to specific development projects.

(b) OPERATION.—The Administrator shall conduct the program under this section, in part by awarding grants to institutions of higher education. The Administrator shall encourage the participation of institutions of higher education located in States that participate in the Experimental Program to Stimulate Competitive Research. All grants to institutions of higher education under this section shall be awarded through merit review.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3379.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
40111	42 U.S.C. 16721(a), (b).	Pub. L. 109–155, title IV, §421(a), (b), Dec. 30, 2005, 119 Stat. 2924.

§40112. Research and technology programs

(a) SUPERSONIC TRANSPORT RESEARCH AND DEVELOPMENT.—The Administrator may establish an initiative with the objective of developing and demonstrating, in a relevant environment, airframe and propulsion technologies to enable efficient, economical overland flight of supersonic civil transport aircraft with no significant impact on the environment.

(b) RESEARCH AND DEVELOPMENT INITIATIVE ON REDUCTION OF GREENHOUSE GAS AND NOISE EMISSIONS FROM AIRCRAFT.—

(1) IN GENERAL.—The Administrator shall establish an initiative to research, develop, and demonstrate new technologies and concepts—

(A) to reduce greenhouse gas emissions from aviation, including carbon dioxide, nitrogen oxides, other greenhouse gases, water vapor, black carbon and sulfate aerosols, and increased cloudiness due to contrail formation;

(B) to reduce aviation noise emissions; and

(C) to enable associated aircraft performance characteristics.

(2) GOALS.—The goals of the initiative required by paragraph (1) shall be—

(A) to ensure United States leadership in research and technology innovation leading to substantial reductions in aviation noise and greenhouse gas emissions;

(B) to enhance and expand basic research, and the translation of basic research into applications, that may lead to transformational advances in reducing aviation noise and greenhouse gas emissions;

(C) to accelerate research and development that contributes to maturing new technologies for reducing aircraft noise and greenhouse gas emissions; and

(D) to obtain and disseminate associated testing and performance data that facilitates the incorporation of new technologies into commercial aircraft development as soon as practicable.

(3) OBJECTIVES.—The objectives of the initiative established under paragraph (1) and the

goals described in paragraph (2) shall include—

(A) as soon as practicable, a reduction of greenhouse gas emissions from new aircraft by at least 50 percent, as compared to the highest-performing aircraft technologies in service as of December 31, 2021;

(B) noise levels from aircraft throughout all phases of flight that do not exceed ambient noise levels in the absence of flight operations in the vicinity of the flight route;

(C) net-zero greenhouse gas emissions from aircraft by 2050; and

(D) demonstration of new technologies developed pursuant to such initiative on—

(i) regional aircraft intended to enter into service by 2030; and

(ii) single-aisle aircraft designed to accommodate more than 125 passengers intended to enter into service by 2040.

(c) ROTORCRAFT AND OTHER RUNWAY-INDEPENDENT AIR VEHICLES.—The Administrator may establish a rotorcraft and other runway-independent air vehicles initiative with the objective of developing and demonstrating improved safety, noise, and environmental impact in a relevant environment.

(d) HYPERSONICS RESEARCH.—The Administrator may establish a hypersonics research program with the objective of exploring the science and technology of hypersonic flight using air-breathing propulsion concepts, through a mix of theoretical work, basic and applied research, and development of flight research demonstration vehicles. The program may also include the transition to the hypersonic range of Mach 3 to Mach 5.

(e) REVOLUTIONARY AERONAUTICAL CONCEPTS.—The Administrator may establish a research program which covers a unique range of subsonic, fixed wing vehicles and propulsion concepts. This research is intended to push technology barriers beyond current subsonic technology. Propulsion concepts include advanced materials, morphing engines, hybrid engines, and fuel cells.

(f) FUEL CELL-POWERED AIRCRAFT RESEARCH.—

(1) OBJECTIVE.—The Administrator may establish a fuel cell-powered aircraft research program whose objective shall be to develop and test concepts to enable a hydrogen fuel cell-powered aircraft that would have no hydrocarbon or nitrogen oxide emissions into the environment.

(2) APPROACH.—The Administrator may establish a program of competitively awarded grants available to teams of researchers that may include the participation of individuals from universities, industry, and government for the conduct of this research.

(g) MARS AIRCRAFT RESEARCH.—

(1) OBJECTIVE.—The Administrator may establish a Mars Aircraft project whose objective shall be to develop and test concepts for an uncrewed aircraft that could operate for sustained periods in the atmosphere of Mars.

(2) APPROACH.—The Administrator may establish a program of competitively awarded grants available to teams of researchers that may include the participation of individuals from universities, industry, and government for the conduct of this research.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3379; Pub. L. 117–167, div. B, title VII, §10833(a), Aug. 9, 2022, 136 Stat. 1749.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
40112(a)	42 U.S.C. 16722(b).	Pub. L. 109–155, title IV, §422(b)–(g), Dec. 30, 2005, 119 Stat. 2925.
40112(b)	42 U.S.C. 16722(c).	
40112(c)	42 U.S.C. 16722(d).	
40112(d)	42 U.S.C. 16722(e).	

40112(e)	42 U.S.C. 16722(f).	
40112(f)	42 U.S.C. 16722(g).	

EDITORIAL NOTES

AMENDMENTS

2022—Subsecs. (b) to (g). Pub. L. 117–167 added subsec. (b) and redesignated former subsecs. (b) to (f) as (c) to (g), respectively.

STATUTORY NOTES AND RELATED SUBSIDIARIES

TECHNOLOGY FOCUS AREAS, IMPLEMENTATION, AND ANNUAL REPORT FOR THE RESEARCH AND DEVELOPMENT INITIATIVE

Pub. L. 117–167, div. B, title VII, §10833(b)–(d), Aug. 9, 2022, 136 Stat. 1750, 1751, provided that:

"(b) TECHNOLOGY FOCUS AREAS.—In carrying out the research and development initiative established under section 40112(b) of title 51, United States Code, the Administrator [of the National Aeronautics and Space Administration] shall advance research, development, and demonstration projects on promising technologies such as—

"(1) advanced subsonic propulsion technology, design, and integration;

"(2) electric and hybrid-electric propulsion, including battery electric and hydrogen fuel cell electric systems;

"(3) airframe concepts and configurations;

"(4) analysis of technology options, including cost-benefit analysis of greenhouse gas and noise emissions reduction technologies;

"(5) analytical tools for system-level and system-of-systems-level modeling and integration;

"(6) airspace operations improvements;

"(7) noise emissions reduction; and

"(8) any other effort, as determined by the [National Aeronautics and Space] Administration, that contributes to a sustainable future for aviation.

"(c) IMPLEMENTATION.—In implementing the initiative established under section 40112(b) of title 51, United States Code, the Administrator shall, to the extent practicable—

"(1) ensure that testing and performance data integrates the results of community acceptance surveys conducted by the Federal Aviation Administration and other relevant studies, including studies on the impacts of new noise effects from novel propulsion systems and from airspace operations changes;

"(2) provide testing and performance data on the technologies described in subsection (b) of this section to the Administrator of the Federal Aviation Administration to facilitate the work of the Federal Aviation Administration in identifying new requirements for policy, infrastructure, and administrative capacity necessary to enable the safe integration of such technologies on aircraft;

"(3) pursue partnerships with organizations, current commercial production aircraft providers, academic institutions, small businesses, and new entrants, including partnerships to advance research and development activities related to both regional aircraft and aircraft designed to accommodate more than 125 passengers;

"(4) include universities, academic institutions, and other research organizations in the partnerships described in paragraph (3);

"(5) expand basic research;

"(6) ensure equity in research sponsorship of, and partnership opportunities with, underrepresented students, faculty, and minority-serving-institutions [sic];

"(7) continue to coordinate with the Secretary of Energy on battery technology research;

"(8) make available the research and development carried out under the initiative established under subsection (b) of section 40112 of title 51, United States Code, to help enable an industry-wide shift toward aircraft concepts that reduce greenhouse gas emissions and aircraft noise to achieve the goals and objectives under paragraphs (2) and (3) of that subsection; and

"(9) continue to support research, development, and demonstration of aircraft concepts, including systems architecture, materials and components, integration of systems and airframe structures, human factors, airspace planning and operations, and the integration of related advanced technologies and concepts, with the goal of carrying out test flights with integrated subsystems by 2025.

"(d) ANNUAL REPORT.—Not later than 1 year after the date of the enactment of this Act [Aug. 9, 2022], and annually thereafter, the Administrator shall submit to the appropriate committees of Congress [Committee on Commerce, Science, and Transportation of the Senate and Committee on Science, Space, and Technology of the House of Representatives] a report on the progress of the efforts carried out under the initiative established under subsection (b) of section 40112 of title 51, United States Code, including—

"(1) the status of progress on such initiative;

"(2) an updated, anticipated timeframe for readiness of technologies and aircraft to be adopted by industry with the emissions reduction levels directed under that subsection; and

"(3) an identification of fundamental aeronautics research activities contributing to achieving the goals and objectives of such initiative, as described in paragraphs (2) and (3) of that subsection, and a description of any obstacles to achieving such goals and objectives."

[For definition of "minority-serving institution" as used in section 10833(b)–(d) of Pub. L. 117–167, set out above, see section 18901 of Title 42, The Public Health and Welfare.]

NATIONAL AERO-SPACE PLANE PROGRAM

Pub. L. 101–611, title I, §116, Nov. 16, 1990, 104 Stat. 3202, provided that:

"(a) NATIONAL AERO-SPACE PLANE PROGRAM.—The Secretary of Defense (hereafter in this section referred to as the 'Secretary') and the Administrator shall jointly pursue on a high priority basis a National Aero-Space Plane program whose objective shall be the development and demonstration, by 1997, of a primarily air breathing single-stage-to-orbit and long range hypersonic cruise research flight vehicle. The program shall be a research program, and to the extent practicable technological information developed shall be transferred to the military and to the domestic civil aviation and other private industries.

"(b) MANAGEMENT PLAN.—

"(1) The Secretary and the Adminstrator [sic] shall jointly develop a management plan for the program established under subsection (a), which shall include goals, major tasks, anticipated schedules, organizational structure, funding profiles, details of the respective responsibilities of the Secretary and the Administrator, and resource procurement strategies.

"(2) The management plan developed pursuant to paragraph (1) shall be submitted to the Congress within 120 days after the date of enactment of this Act [Nov. 16, 1990]."

[Pub. L. 101–611, title I, §127, Nov. 16, 1990, 104 Stat. 3205, provided that: "For purposes of this title [see Tables for classification], the term 'Administrator' means the Administrator of the National Aeronautics and Space Administration."]

§40113. Airspace systems research

(a) OBJECTIVE.—The Airspace Systems Research program shall pursue research and development to enable revolutionary improvements to and modernization of the National Airspace System, as well as to enable the introduction of new systems for vehicles that can take advantage of an improved, modern air transportation system.

(b) ALIGNMENT.—Not later than 1 year after December 30, 2005, the Administrator shall align the projects of the Airspace Systems Research program so that they directly support the objectives of the Joint Planning and Development Office's Next Generation Air Transportation System Integrated Plan.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3380.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
40113	42 U.S.C. 16723.	Pub. L. 109–155, title IV, §423, Dec. 30, 2005, 119 Stat. 2925.

In subsection (b), the date "December 30, 2005" is substituted for "the date of enactment of this Act" to reflect the date of enactment of the National Aeronautics and Space Administration Authorization Act of 2005 (Public Law 109–155, 119 Stat. 2895).

STATUTORY NOTES AND RELATED SUBSIDIARIES

UNMANNED AIRCRAFT SYSTEMS

Pub. L. 117–167, div. B, title VII, §10832, Aug. 9, 2022, 136 Stat. 1748, provided that:

"(a) UNMANNED AIRCRAFT SYSTEMS OPERATION PROGRAM.—The Administrator [of the National Aeronautics and Space Administration] shall—

"(1) research and test capabilities and concepts, including unmanned aircraft systems communications, for integrating unmanned aircraft systems into the national airspace system;

"(2) leverage the partnership NASA [National Aeronautics and Space Administration] has with industry focused on the advancement of technologies for future air traffic management systems for unmanned aircraft systems; and

"(3) continue to leverage the research and testing portfolio of NASA to inform the integration of unmanned aircraft systems into the national airspace system, consistent with public safety and national security objectives.

"(b) SENSE OF CONGRESS ON COORDINATION WITH FEDERAL AVIATION ADMINISTRATION .—It is the sense of Congress that—

"(1) NASA should continue—

"(A) to coordinate with the Federal Aviation Administration on research on air traffic management systems for unmanned aircraft systems; and

"(B) to assist the Federal Aviation Administration in the integration of air traffic management systems for unmanned aircraft systems into the national airspace system; and

"(2) the test ranges (as defined in section 44801 of title 49, United States Code) should continue to be leveraged for research on—

"(A) air traffic management systems for unmanned aircraft systems; and

"(B) the integration of such systems into the national airspace system."

[For definition of "unmanned aircraft system" as used in section 10832 of Pub. L. 117–167, set out above, see section 10802 of Pub. L. 117–167, set out as a Definitions note under section 10101 of this title.]

§40114. Aviation safety and security research

(a) OBJECTIVE.—The Aviation Safety and Security Research program shall pursue research and development activities that directly address the safety and security needs of the National Airspace System and the aircraft that fly in it. The program shall develop prevention, intervention, and mitigation technologies aimed at causal, contributory, or circumstantial factors of aviation accidents.

(b) ALIGNMENT.—Not later than 1 year after December 30, 2005, the Administrator shall align the projects of the Aviation Safety and Security Research program so that they directly support the objectives of the Joint Planning and Development Office's Next Generation Air Transportation System Integrated Plan.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3380.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
40114	42 U.S.C. 16724.	Pub. L. 109–155, title IV, §424, Dec. 30, 2005, 119 Stat. 2926.

In subsection (b), the date "December 30, 2005" is substituted for "the date of enactment of this Act" to reflect the date of enactment of the National Aeronautics and Space Administration Authorization Act of 2005 (Public Law 109–155, 119 Stat. 2895).

§40115. Aviation weather research

The Administrator may carry out a program of collaborative research with the National Oceanic and Atmospheric Administration on convective weather events, with the goal of significantly

improving the reliability of 2-hour to 6-hour aviation weather forecasts.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3381.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
40115	42 U.S.C. 16725.	Pub. L. 109–155, title IV, §425, Dec. 30, 2005, 119 Stat. 2926.

§40116. University-based Centers for Research on Aviation Training

(a) IN GENERAL.—The Administrator shall award grants to institutions of higher education (or consortia thereof) to establish one or more Centers for Research on Aviation Training under cooperative agreements with appropriate Administration Centers.

(b) PURPOSE.—The purpose of the Centers for Research on Aviation Training shall be to investigate the impact of new technologies and procedures, particularly those related to the aircraft flight deck and to the air traffic management functions, on training requirements for pilots and air traffic controllers.

(c) APPLICATION.—An institution of higher education (or a consortium of such institutions) seeking funding under this section shall submit an application to the Administrator at such time, in such manner, and containing such information as the Administrator may require, including, at a minimum, a 5-year research plan.

(d) AWARD DURATION.—An award made by the Administrator under this section shall be for a period of 5 years and may be renewed on the basis of—

(1) satisfactory performance in meeting the goals of the research plan proposed in the application submitted under subsection (c); and

(2) other requirements as specified by the Administrator.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3381.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
40116	42 U.S.C. 16727.	Pub. L. 109–155, title IV, §427, Dec. 30, 2005, 119 Stat. 2926; Pub. L. 110–422, title III, §308, Oct. 15, 2008, 122 Stat. 4788.

In subsection (b), the words "Centers for Research on Aviation Training" are substituted for "Centers" for clarity. There are references to both "Centers for Research on Aviation Training" and "Administration Centers" in subsection (a).

In subsection (d)(1), the words "proposed in the application submitted under subsection (c)" are substituted for "proposed by the Center in its application under subsection (c)" for clarity. Under section (c), applications are filed by an institution of higher education (or a consortium of such institutions) seeking funding, and not by the Center for which such funding is sought.

SUBCHAPTER III—SCHOLARSHIPS

§40131. Aeronautics scholarships

(a) ESTABLISHMENT.—The Administrator shall establish a program of scholarships for full-time graduate students who are United States citizens and are enrolled in, or have been accepted by and have indicated their intention to enroll in, accredited Masters degree programs in aeronautical engineering or equivalent programs at institutions of higher education. Each such scholarship shall cover the costs of room, board, tuition, and fees, and may be provided for a maximum of 2 years.

(b) IMPLEMENTATION.—Not later than 180 days after December 30, 2005, the Administrator shall publish regulations governing the scholarship program under this section.

(c) COOPERATIVE TRAINING OPPORTUNITIES.—Students who have been awarded a scholarship under this section shall have the opportunity for paid employment at one of the Administration Centers engaged in aeronautics research and development during the summer prior to the first year of the student's Masters program, and between the first and second year, if applicable.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3381.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
40131	42 U.S.C. 16741.	Pub. L. 109–155, title IV, §431, Dec. 30, 2005, 119 Stat. 2927.

In subsection (b), the date "December 30, 2005" is substituted for "the date of enactment of this Act" to reflect the date of enactment of the National Aeronautics and Space Administration Authorization Act of 2005 (Public Law 109–155, 119 Stat. 2895).

SUBCHAPTER IV—DATA REQUESTS

§40141. Aviation data requests

The Administrator shall make available upon request satellite imagery and aerial photography of remote terrain that the Administration owns at the time of the request to the Administrator of the Federal Aviation Administration or the Director of the Five Star Medallion Program, to assist and train pilots in navigating challenging topographical features of such terrain.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3382.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
40141	42 U.S.C. 16751.	Pub. L. 109–155, title IV, §441, Dec. 30, 2005, 119 Stat. 2927.

CHAPTER 403—NATIONAL SPACE GRANT COLLEGE AND FELLOWSHIP PROGRAM

Sec.

40301. Purposes.
40302. Definitions.
40303. National space grant college and fellowship program.
40304. Grants or contracts.
40305. Specific national needs.

40306. Space grant college and space grant regional consortium.
40307. Space grant fellowship program.
40308. Space grant review panel.
40309. Availability of other Federal personnel and data.
40310. Designation or award to be on competitive basis.
40311. Continuing emphasis.

§40301. Purposes

The purposes of this chapter are to—

(1) increase the understanding, assessment, development, and utilization of space resources by promoting a strong educational base, responsive research and training activities, and broad and prompt dissemination of knowledge and techniques;

(2) utilize the abilities and talents of the universities of the Nation to support and contribute to the exploration and development of the resources and opportunities afforded by the space environment;

(3) encourage and support, within the university community of the Nation, the existence of interdisciplinary and multidisciplinary programs of space research that—

(A) engage in integrated activities of training, research, and public service;

(B) have cooperative programs with industry; and

(C) are coordinated with the overall program of the Administration;

(4) encourage and support the existence of consortia, made up of university and industry members, in order to advance the exploration and development of space resources in cases in which national objectives can be better fulfilled through such consortia than through the programs of single universities;

(5) encourage and support Federal funding for graduate fellowships in fields related to space; and

(6) support activities in colleges and universities generally for the purpose of creating and operating a network of institutional programs that will enhance achievements resulting from efforts under this chapter.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3382.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
40301	42 U.S.C. 2486a.	Pub. L. 100–147, title II, §203, Oct. 30, 1987, 101 Stat. 869.

In paragraph (3), the word "that" is substituted for ", to" for clarity.

In paragraph (4), the words "in order to" are substituted for "to", and the words "through such consortia" are added, for clarity.

STATUTORY NOTES AND RELATED SUBSIDIARIES

CONGRESSIONAL STATEMENT OF FINDINGS

Pub. L. 100–147, title II, §202, Oct. 30, 1987, 101 Stat. 869, provided that: "The Congress finds that—

"(1) the vitality of the Nation and the quality of life of the citizens of the Nation depend increasingly on the understanding, assessment, development, and utilization of space resources;

"(2) research and development of space science, space technology, and space commercialization will contribute to the quality of life, national security, and the enhancement of commerce;

"(3) the understanding and development of the space frontiers require a broad commitment and an intense involvement on the part of the Federal Government in partnership with State and local governments, private industry, universities, organizations, and individuals concerned with the exploration and utilization

of space;

"(4) the National Aeronautics and Space Administration, through the national space grant college and fellowship program, offers the most suitable means for such commitment and involvement through the promotion of activities that will result in greater understanding, assessment, development, and utilization; and

"(5) Federal support of the establishment, development, and operation of programs and projects by space grant colleges, space grant regional consortia, institutions of higher education, institutes, laboratories, and other appropriate public and private entities is the most cost-effective way to promote such activities."

[For definition of terms used in section 202 of Pub. L. 100–147, set out above, see section 204 of Pub. L. 100–147, title II, Oct. 30, 1987, 101 Stat. 870, which was classified to former section 2486b of Title 42, The Public Health and Welfare, and was repealed and reenacted as section 40302 of this title by Pub. L. 111–314, §§3, 6, Dec. 18, 2010, 124 Stat. 3328, 3444.]

§40302. Definitions

In this chapter:

(1) AERONAUTICAL AND SPACE ACTIVITIES.—The term "aeronautical and space activities" has the meaning given the term in section 20103 of this title.

(2) FIELD RELATED TO SPACE.—The term "field related to space" means any academic discipline or field of study (including the physical, natural, and biological sciences, and engineering, space technology, education, economics, sociology, communications, planning, law, international affairs, and public administration) which is concerned with or likely to improve the understanding, assessment, development, and utilization of space.

(3) PANEL.—The term "panel" means the space grant review panel established pursuant to section 40308 of this title.

(4) PERSON.—The term "person" means any individual, any public or private corporation, partnership, or other association or entity (including any space grant college, space grant regional consortium, institution of higher education, institute, or laboratory), or any State, political subdivision of a State, or agency or officer of a State or political subdivision of a State.

(5) SPACE ENVIRONMENT.—The term "space environment" means the environment beyond the sensible atmosphere of the Earth.

(6) SPACE GRANT COLLEGE.—The term "space grant college" means any public or private institution of higher education which is designated as such by the Administrator pursuant to section 40306 of this title.

(7) SPACE GRANT PROGRAM.—The term "space grant program" means any program that—

(A) is administered by any space grant college, space grant regional consortium, institution of higher education, institute, laboratory, or State or local agency; and

(B) includes 2 or more projects involving education and one or more of the following activities in the fields related to space:

(i) Research.

(ii) Training.

(iii) Advisory services.

(8) SPACE GRANT REGIONAL CONSORTIUM.—The term "space grant regional consortium" means any association or other alliance that is designated as a space grant regional consortium by the Administrator pursuant to section 40306 of this title.

(9) SPACE RESOURCE.—The term "space resource" means any tangible or intangible benefit which can be realized only from—

(A) aeronautical and space activities; or

(B) advancements in any field related to space.

(10) STATE.—The term "State" means any State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, or any other territory or possession of the United

States.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3383.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
40302	42 U.S.C. 2486b.	Pub. L. 100–147, title II, §204, Oct. 30, 1987, 101 Stat. 870.

The definitions of "Administration" and "Administrator" in section 204 of the National Space Grant College and Fellowship Act (Public Law 100–147, title II, 101 Stat. 870) are omitted as unnecessary because of the definitions added by section 10101 of title 51.

§40303. National space grant college and fellowship program

(a) ESTABLISHMENT.—The Administrator shall establish and maintain, within the Administration, a program to be known as the national space grant college and fellowship program. The national space grant college and fellowship program shall consist of the financial assistance and other activities provided for in this chapter. The Administrator shall establish long-range planning guidelines and priorities, and adequately evaluate the program.

(b) FUNCTIONS.—Within the Administration, the program shall—

(1) apply the long-range planning guidelines and the priorities established by the Administrator under subsection (a);

(2) advise the Administrator with respect to the expertise and capabilities which are available through the national space grant college and fellowship program, and make such expertise available to the Administration as directed by the Administrator;

(3) evaluate activities conducted under grants and contracts awarded pursuant to sections 40304 and 40305 of this title to ensure that the purposes set forth in section 40301 of this title are implemented;

(4) encourage other Federal departments, agencies, and instrumentalities to use and take advantage of the expertise and capabilities which are available through the national space grant college and fellowship program, on a cooperative or other basis;

(5) encourage cooperation and coordination with other Federal programs concerned with the development of space resources and fields related to space;

(6) advise the Administrator on the designation of recipients supported by the national space grant college and fellowship program and, in appropriate cases, on the termination or suspension of any such designation; and

(7) encourage the formation and growth of space grant and fellowship programs.

(c) GENERAL AUTHORITIES.—To carry out the provisions of this chapter, the Administrator may—

(1) accept conditional or unconditional gifts or donations of services, money, or property, real, personal or mixed, tangible or intangible;

(2) accept and use funds from other Federal departments, agencies, and instrumentalities to pay for fellowships, grants, contracts, and other transactions; and

(3) issue such rules and regulations as may be necessary and appropriate.

(d) PROGRAM ADMINISTRATION COSTS.—In carrying out the provisions of this chapter, the Administrator—

(1) shall maximize appropriated funds for grants and contracts made under section 40304 in each fiscal year; and

(2) in each fiscal year, the Administrator shall limit its program administration costs to no more than 5 percent of funds appropriated for this program for that fiscal year.

(e) REPORTS.—For any fiscal year in which the Administrator cannot meet the administration cost target under subsection (d)(2), if the Administration is unable to limit program costs under subsection (b), the Administrator shall submit to the appropriate committees of Congress a report, including—

(1) a description of why the Administrator did not meet the cost target under subsection (d); and

(2) the measures the Administrator will take in the next fiscal year to meet the cost target under subsection (d) without drawing upon other Federal funding.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3383; Pub. L. 114–329, title III, §302(b), Jan. 6, 2017, 130 Stat. 3003.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
40303	42 U.S.C. 2486c.	Pub. L. 100–147, title II, §205, Oct. 30, 1987, 101 Stat. 871.

EDITORIAL NOTES

AMENDMENTS

2017—Subsecs. (d), (e). Pub. L. 114–329 added subsecs. (d) and (e).

§40304. Grants or contracts

(a) AUTHORITY OF ADMINISTRATOR.—The Administrator may make grants and enter into contracts or other transactions under this subsection to assist any space grant and fellowship program or project if the Administrator finds that the program or project will carry out the purposes set forth in section 40301 of this title. The total amount paid pursuant to a grant or contract may equal not more than 66 percent of the total cost of the space grant and fellowship program or project involved, except in the case of grants or contracts paid for with funds accepted by the Administrator pursuant to section 40303(c)(2) of this title.

(b) SPECIAL GRANTS.—The Administrator may make special grants under this subsection to carry out the purposes set forth in section 40301 of this title. The amount of a special grant may equal up to 100 percent of the total cost of the project involved. A special grant may be made under this subsection only if the Administrator finds that—

(1) no reasonable means is available through which the applicant can meet the matching requirement for a grant under subsection (a);

(2) the probable benefit of the project outweighs the public interest in the matching requirement; and

(3) the same or equivalent benefit cannot be obtained through the award of a contract or grant under subsection (a) or section 40305 of this title.

(c) APPLICATION.—Any person may apply to the Administrator for a grant or contract under this section. Application shall be made in such form and manner, and with such content and other submissions, as the Administrator shall by regulation prescribe.

(d) TERMS AND CONDITIONS.—

(1) IN GENERAL.—Any grant made, or contract entered into, under this section shall be subject to the limitations and provisions set forth in paragraphs (2) and (3) and to such other terms, conditions, and requirements as the Administrator considers necessary or appropriate.

(2) LIMITATIONS.—No payment under any grant or contract under this section may be applied to—

(A) the purchase of any land;
(B) the purchase, construction, preservation, or repair of any building; or
(C) the purchase or construction of any launch facility or launch vehicle.

(3) LEASES.—Notwithstanding paragraph (2), the items in subparagraphs (A), (B), and (C) of such paragraph may be leased upon written approval of the Administrator.

(4) RECORDS.—Any person that receives or utilizes any proceeds of any grant or contract under this section shall keep such records as the Administrator shall by regulation prescribe as being necessary and appropriate to facilitate effective audit and evaluation, including records which fully disclose the amount and disposition by such recipient of such proceeds, the total cost of the program or project in connection with which such proceeds were used, and the amount, if any, of such cost which was provided through other sources. Such records shall be maintained for 3 years after the completion of such a program or project. The Administrator and the Comptroller General of the United States, or any of their duly authorized representatives, shall have access, for the purpose of audit and evaluation, to any books, documents, papers, and records of receipts which, in the opinion of the Administrator or the Comptroller General, may be related or pertinent to such grants and contracts.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3384.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
40304	42 U.S.C. 2486d.	Pub. L. 100–147, title II, §206, Oct. 30, 1987, 101 Stat. 872.

In subsection (a), the words "not more than 66 percent" are substituted for "66 percent, or any lesser percent", and the word "except" is substituted for "except that this limitation shall not apply", for clarity and to eliminate unnecessary words.

In subsection (b), the words "up to 100 percent" are substituted for "100 percent, or any lesser percent" to eliminate unnecessary words.

§40305. Specific national needs

(a) IDENTIFICATION OF SPECIFIC NEEDS AND GRANT-MAKING AND CONTRACTING AUTHORITY.—The Administrator shall identify specific national needs and problems relating to space. The Administrator may make grants or enter into contracts under this section with respect to such needs or problems. The amount of any such grant or contract may equal up to 100 percent of the total cost of the project involved.

(b) APPLICATIONS FOR GRANTS OR CONTRACTS.—Any person may apply to the Administrator for a grant or contract under this section. In addition, the Administrator may invite applications with respect to specific national needs or problems identified under subsection (a). Application shall be made in such form and manner, and with such content and other submissions, as the Administrator shall by regulation prescribe. Any grant made, or contract entered into, under this section shall be subject to the limitations and provisions set forth in paragraphs (2) and (4) of section 40304(d) of this title and to such other terms, conditions, and requirements as the Administrator considers necessary or appropriate.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3385.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
40305	42 U.S.C. 2486e.	Pub. L. 100–147, title II, §207, Oct. 30,

		1987, 101 Stat. 873.

In subsection (a), the words "up to 100 percent" are substituted for "100 percent, or any lesser percent" to eliminate unnecessary words.

§40306. Space grant college and space grant regional consortium

(a) DESIGNATION AND QUALIFICATIONS.—

(1) AUTHORITY TO DESIGNATE.—The Administrator may designate—

(A) any institution of higher education as a space grant college; and

(B) any association or other alliance of 2 or more persons, other than individuals, as a space grant regional consortium.

(2) SPACE GRANT COLLEGE REQUIREMENTS.—No institution of higher education may be designated as a space grant college unless the Administrator finds that such institution—

(A) is maintaining a balanced program of research, education, training, and advisory services in fields related to space;

(B) will act in accordance with such guidelines as are prescribed under subsection (b)(2); and

(C) meets such other qualifications as the Administrator considers necessary or appropriate.

(3) SPACE GRANT REGIONAL CONSORTIUM REQUIREMENTS.—No association or other alliance of 2 or more persons may be designated as a space grant regional consortium unless the Administrator finds that such association or alliance—

(A) is established for the purpose of sharing expertise, research, educational facilities or training facilities, and other capabilities in order to facilitate research, education, training, and advisory services in any field related to space;

(B) will encourage and follow a regional approach to solving problems or meeting needs relating to space, in cooperation with appropriate space grant colleges, space grant programs, and other persons in the region;

(C) will act in accordance with such guidelines as are prescribed under subsection (b)(2); and

(D) meets such other qualifications as the Administrator considers necessary or appropriate.

(b) QUALIFICATIONS AND GUIDELINES.—The Administrator shall by regulation prescribe—

(1) the qualifications required to be met under paragraphs (2)(C) and (3)(D) of subsection (a); and

(2) guidelines relating to the activities and responsibilities of space grant colleges and space grant regional consortia.

(c) SUSPENSION OR TERMINATION OF DESIGNATION.—The Administrator may, for cause and after an opportunity for hearing, suspend or terminate any designation under subsection (a).

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3386.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
40306	42 U.S.C. 2486f.	Pub. L. 100–147, title II, §208, Oct. 30, 1987, 101 Stat. 873.

§40307. Space grant fellowship program

(a) AWARD OF FELLOWSHIPS.—The Administrator shall support a space grant fellowship

program to provide educational and training assistance to qualified individuals at the graduate level of education in fields related to space. Such fellowships shall be awarded pursuant to guidelines established by the Administrator. Space grant fellowships shall be awarded to individuals at space grant colleges, space grant regional consortia, other colleges and institutions of higher education, professional associations, and institutes in such a manner as to ensure wide geographic and institutional diversity in the pursuit of research under the fellowship program.

(b) LIMITATION ON AMOUNT PROVIDED.—The total amount which may be provided for grants under the space grant fellowship program during any fiscal year shall not exceed an amount equal to 50 percent of the total funds appropriated for such year pursuant to this chapter.

(c) AUTHORITY TO SPONSOR OTHER RESEARCH FELLOWSHIP PROGRAMS UNAFFECTED.—Nothing in this section shall be construed to prohibit the Administrator from sponsoring any research fellowship program, including any special emphasis program, which is established under an authority other than this chapter.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3387.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
40307	42 U.S.C. 2486g.	Pub. L. 100–147, title II, §209, Oct. 30, 1987, 101 Stat. 874.

§40308. Space grant review panel

(a) ESTABLISHMENT.—The Administrator shall establish an independent committee known as the space grant review panel, which shall not be subject to the provisions of chapter 10 of title 5.

(b) DUTIES.—The panel shall take such steps as may be necessary to review, and shall advise the Administrator with respect to—

(1) applications or proposals for, and performance under, grants and contracts awarded pursuant to sections 40304 and 40305 of this title;

(2) the space grant fellowship program;

(3) the designation and operation of space grant colleges and space grant regional consortia, and the operation of space grant and fellowship programs;

(4) the formulation and application of the planning guidelines and priorities pursuant to subsections (a) and (b)(1) of section 40303 of this title; and

(5) such other matters as the Administrator refers to the panel for review and advice.

(c) PERSONNEL AND ADMINISTRATIVE SERVICES.—The Administrator shall make available to the panel any information, personnel, and administrative services and assistance which is reasonable to carry out the duties of the panel.

(d) MEMBERS.—

(1) APPOINTMENT.—The Administrator shall appoint the voting members of the panel. A majority of the voting members shall be individuals who, by reason of knowledge, experience, or training, are especially qualified in one or more of the disciplines and fields related to space. The other voting members shall be individuals who, by reason of knowledge, experience, or training, are especially qualified in, or representative of, education, extension services, State government, industry, economics, planning, or any other activity related to efforts to enhance the understanding, assessment, development, or utilization of space resources. The Administrator shall consider the potential conflict of interest of any individual in making appointments to the panel.

(2) CHAIRMAN AND VICE CHAIRMAN.—The Administrator shall select one voting member to serve as the Chairman and another voting member to serve as the Vice Chairman. The Vice Chairman shall act as Chairman in the absence or incapacity of the Chairman.

(3) REIMBURSEMENT FOR EXPENSES.—Voting members of the panel who are not Federal

employees shall be reimbursed for actual and reasonable expenses incurred in the performance of such duties.

(4) MEETINGS.—The panel shall meet on a biannual basis and, at any other time, at the call of the Chairman or upon the request of a majority of the voting members or of the Administrator.

(5) POWERS.—The panel may exercise such powers as are reasonably necessary in order to carry out the duties enumerated in subsection (b).

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3387; Pub. L. 117–286, §4(a)(325), Dec. 27, 2022, 136 Stat. 4341.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
40308	42 U.S.C. 2486h.	Pub. L. 100–147, title II, §210, Oct. 30, 1987, 101 Stat. 874.

In subsection (a), the word "provisions" is substituted for "provisons" to correct an error in the law.

EDITORIAL NOTES

AMENDMENTS

2022—Subsec. (a). Pub. L. 117–286 substituted "chapter 10 of title 5." for "the Federal Advisory Committee Act (5 App. U.S.C.)."

§40309. Availability of other Federal personnel and data

Each department, agency, or other instrumentality of the Federal Government that is engaged in or concerned with, or that has authority over, matters relating to space—

(1) may, upon a written request from the Administrator, make available, on a reimbursable basis or otherwise, any personnel (with their consent and without prejudice to their position and rating), service, or facility which the Administrator considers necessary to carry out any provision of this chapter;

(2) may, upon a written request from the Administrator, furnish any available data or other information which the Administrator considers necessary to carry out any provision of this chapter; and

(3) may cooperate with the Administration.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3388.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
40309	42 U.S.C. 2486i.	Pub. L. 100–147, title II, §211, Oct. 30, 1987, 101 Stat. 875.

§40310. Designation or award to be on competitive basis

The Administrator shall not under this chapter designate any space grant college or space grant regional consortium or award any fellowship, grant, or contract unless such designation or award is made in accordance with the competitive, merit-based review process employed by the Administration on October 30, 1987.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3388.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
40310	42 U.S.C. 2486k.	Pub. L. 100–147, title II, §213, Oct. 30, 1987, 101 Stat. 875.

The date "October 30, 1987" is substituted for "the date of enactment of this Act" to reflect the date of enactment of the National Space Grant College and Fellowship Act, which is title II of the National Aeronautics and Space Administration Authorization Act of 1988 (Public Law 100–147, 101 Stat. 860).

§40311. Continuing emphasis

The Administration shall continue its emphasis on the importance of education to expand opportunities for Americans to understand and participate in the Administration's aeronautics and space projects by supporting and enhancing science and engineering education, research, and public outreach efforts.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3388.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
40311	42 U.S.C. 17781(c).	Pub. L. 110–422, title VII, §704(c), Oct. 15, 2008, 122 Stat. 4803.

CHAPTER 405—BIOMEDICAL RESEARCH IN SPACE

Sec.
40501. Biomedical research joint working group.
40502. Biomedical research grants.
40503. Biomedical research fellowships.
40504. Establishment of electronic data archive.
40505. Establishment of emergency medical service telemedicine capability.

§40501. Biomedical research joint working group

(a) ESTABLISHMENT.—The Administrator and the Director of the National Institutes of Health shall jointly establish a working group to coordinate biomedical research activities in areas where a microgravity environment may contribute to significant progress in the understanding and treatment of diseases and other medical conditions. The joint working group shall formulate joint and complementary programs in such areas of research.

(b) MEMBERSHIP.—The joint working group shall include equal representation from the Administration and the National Institutes of Health, and shall include representation from National Institutes of Health councils, as selected by the Director of the National Institutes of Health, and from the National Aeronautics and Space Administration Advisory Council.

(c) ANNUAL BIOMEDICAL RESEARCH SYMPOSIA.—The joint working group shall organize annual symposia on biomedical research described in subsection (a) under the joint sponsorship of the Administration and the National Institutes of Health.

(d) ANNUAL REPORTING REQUIREMENT.—The joint working group shall report annually to Congress on its progress in carrying out this section.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3389.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
40501	42 U.S.C. 2487a.	Pub. L. 102–588, title VI, §602, Nov. 4, 1992, 106 Stat. 5130.

STATUTORY NOTES AND RELATED SUBSIDIARIES

FINDINGS

Pub. L. 102–588, title VI, §601, Nov. 4, 1992, 106 Stat. 5130, provided that: "The Congress finds that—

"(1) the space program can make significant contributions to selected areas of health-related research and should be an integral part of the Nation's health research and development program;

"(2) the continuing development of trained scientists and engineers is essential to carrying out an effective and sustained program of biomedical research in space and on the ground;

"(3) the establishment and maintenance of an electronically accessible archive of data on space-related biomedical research is essential to advancement of the field;

"(4) cooperation with the republics of the former Soviet Union, including use of former Soviet orbital facilities, offers the potential for greatly enhanced biomedical research activities and progress; and

"(5) the establishment and maintenance of an international telemedicine consultation satellite capability to support emergency medical service provision can provide an important aid to disaster relief efforts."

§40502. Biomedical research grants

(a) ESTABLISHMENT OF PROGRAM.—The Administrator and the Director of the National Institutes of Health shall establish a joint program of biomedical research grants in areas described in section 40501(a) of this title, where such research requires access to a microgravity environment. Such program shall be consistent with actions taken by the joint working group under section 40501 of this title.

(b) RESEARCH OPPORTUNITY ANNOUNCEMENTS.—The grants program established under subsection (a) shall annually issue joint research opportunity announcements under the sponsorship of the National Institutes of Health and the Administration. Responses to the announcements shall be evaluated by a peer review committee whose members shall be selected by the Director of the National Institutes of Health and the Administrator, and shall include individuals not employed by the Administration or the National Institutes of Health.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3389.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
40502	42 U.S.C. 2487b.	Pub. L. 102–588, title VI, §603, Nov. 4, 1992, 106 Stat. 5130.

§40503. Biomedical research fellowships

The Administrator and the Director of the National Institutes of Health shall create a joint program of graduate research fellowships in biomedical research described in section 40501(a) of this title. Fellowships under such program may provide for participation in approved research conferences and symposia.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3389.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
40503	42 U.S.C. 2487c.	Pub. L. 102–588, title VI, §604, Nov. 4, 1992, 106 Stat. 5131.

§40504. Establishment of electronic data archive

The Administrator shall create and maintain a national electronic data archive for biomedical research data obtained from space-based experiments.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3389.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
40504	42 U.S.C. 2487e.	Pub. L. 102–588, title VI, §606, Nov. 4, 1992, 106 Stat. 5131.

§40505. Establishment of emergency medical service telemedicine capability

The Administrator, the Administrator of the Federal Emergency Management Agency, the Director of the Office of Foreign Disaster Assistance, and the Surgeon General of the United States shall jointly create and maintain an international telemedicine satellite consultation capability to support emergency medical services in disaster-stricken areas.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3389.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
40505	42 U.S.C. 2487f.	Pub. L. 102–588, title VI, §607, Nov. 4, 1992, 106 Stat. 5131; Pub. L. 109–295, title VI, §612(c), Oct. 4, 2006, 120 Stat. 1410.

The words "Office of Foreign Disaster Assistance" are substituted for "Office of Foreign Disaster" to correct an error in the law.

CHAPTER 407—ENVIRONMENTALLY FRIENDLY AIRCRAFT

Sec.

40701. Research and development initiative.
40702. Additional research and development initiative.
40703. Research alignment.
40704. Research program on perceived impact of sonic booms.

§40701. Research and development initiative

The Administrator may establish an initiative with the objective of developing, and demonstrating in a relevant environment, technologies to enable the following commercial aircraft performance

characteristics:

(1) NOISE LEVELS.—Noise levels on takeoff and on airport approach and landing that do not exceed ambient noise levels in the absence of flight operations in the vicinity of airports from which such commercial aircraft would normally operate.

(2) ENERGY CONSUMPTION.—Twenty-five percent reduction in the energy required for medium- to long-range flights, compared to aircraft in commercial service as of December 30, 2005.

(3) EMISSIONS.—Nitrogen oxides on take-off and landing that are significantly reduced, without adversely affecting hydrocarbons and smoke, relative to aircraft in commercial service as of December 30, 2005.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3390.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
40701	42 U.S.C. 16722(a).	Pub. L. 109–155, title IV, §422(a), Dec. 30, 2005, 119 Stat. 2924.

In paragraphs (2) and (3), the date "December 30, 2005" is substituted for "the date of enactment of this Act" to reflect the date of enactment of the National Aeronautics and Space Administration Authorization Act of 2005 (Public Law 109–155, 119 Stat. 2895).

§40702. Additional research and development initiative

The Administrator shall establish an initiative involving the Administration, universities, industry, and other research organizations as appropriate, of research, development, and demonstration, in a relevant environment, of technologies to enable the following commercial aircraft performance characteristics:

(1) NOISE LEVELS.—Noise levels on takeoff and on airport approach and landing that do not exceed ambient noise levels in the absence of flight operations in the vicinity of airports from which such commercial aircraft would normally operate, without increasing energy consumption or nitrogen oxide emissions compared to aircraft in commercial service as of October 15, 2008.

(2) GREENHOUSE GAS EMISSIONS.—Significant reductions in greenhouse gas emissions compared to aircraft in commercial services as of October 15, 2008.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3390.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
40702	42 U.S.C. 17721.	Pub. L. 110–422, title III, §302, Oct. 15, 2008, 122 Stat. 4786.

In paragraphs (1) and (2), the date "October 15, 2008" is substituted for "the date of enactment of this Act" to reflect the date of enactment of the National Aeronautics and Space Administration Authorization Act of 2008 (Public Law 110–422, 122 Stat. 4779).

§40703. Research alignment

In addition to pursuing the research and development initiative described in section 40702 of this title, the Administrator shall, to the maximum extent practicable within available funding, align the fundamental aeronautics research program to address high priority technology challenges of the National Academies' Decadal Survey of Civil Aeronautics, and shall work to increase the degree of

involvement of external organizations, and especially of universities, in the fundamental aeronautics research program.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3390.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
40703	42 U.S.C. 17722.	Pub. L. 110–422, title III, §303, Oct. 15, 2008, 122 Stat. 4787.

§40704. Research program on perceived impact of sonic booms

(a) ESTABLISHMENT.—The Administrator shall establish a cooperative research program with industry, including the conduct of flight demonstrations in a relevant environment, to collect data on the perceived impact of sonic booms. The data could enable the promulgation of appropriate standards for overland commercial supersonic flight operations.

(b) COORDINATION.—The Administrator shall ensure that sonic boom research is coordinated as appropriate with the Administrator of the Federal Aviation Administration, and as appropriate make use of the expertise of the Partnership for Air Transportation Noise and Emissions Reduction Center of Excellence sponsored by the Administration and the Federal Aviation Administration.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3391.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
40704(a)	42 U.S.C. 17723(b).	Pub. L. 110–422, title III, §304(b), (c), Oct. 15, 2008, 122 Stat. 4787.
40704(b)	42 U.S.C. 17723(c).	

STATUTORY NOTES AND RELATED SUBSIDIARIES

PURPOSE

Pub. L. 110–422, title III, §304(a), Oct. 15, 2008, 122 Stat. 4787, provided that: "The ability to fly commercial aircraft over land at supersonic speeds without adverse impacts on the environment or on local communities would open new markets and enable new transportation capabilities. In order to have the basis for establishing appropriate sonic boom standards for such flight operations, a research program is needed to assess the impact in a relevant environment of commercial supersonic flight operations."

CHAPTER 409—MISCELLANEOUS

Sec.

40901. Science, Space, and Technology Education Trust Fund.
40902. National Aeronautics and Space Administration Endeavor Teacher Fellowship Trust Fund.
40903. Experimental Program to Stimulate Competitive Research—merit grant competition requirements.[1]
40904. Microgravity research.
40905. Program to expand distance learning in rural underserved areas.
40906. Equal access to the Administration's education programs.

40907. Museums.
40908. Continuation of certain education programs.
40909. Compliance with title IX of Education Amendments of 1972.

STATUTORY NOTES AND RELATED SUBSIDIARIES

CYBERSECURITY IN STEM PROGRAMS OF THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Pub. L. 116–283, div. H, title XCIV, §9406, Jan. 1, 2021, 134 Stat. 4812, provided that: "In carrying out any STEM education program of the National Aeronautics and Space Administration (referred to in this section as 'NASA'), including a program of the Office of STEM Engagement, the Administrator of NASA shall, to the maximum extent practicable, encourage the inclusion of cybersecurity education opportunities in such program."

NASA INTERNSHIP AND FELLOWSHIP OPPORTUNITIES

Pub. L. 115–303, §3, Dec. 11, 2018, 132 Stat. 4399, provided that: "Not later than October 1, 2018, the Administrator of the National Aeronautics and Space Administration (in this section referred to as 'NASA') shall institute a process to encourage the recruitment of qualified candidates who are women or individuals who are underrepresented in the fields of science, technology, engineering, and mathematics (STEM) and computer science for internships and fellowships at NASA with relevance to the aerospace sector and related fields."

EDUCATION AND OUTREACH

Pub. L. 115–10, title VIII, §824, Mar. 21, 2017, 131 Stat. 64, provided that:

"(a) SENSE OF CONGRESS.—It is the sense of Congress that—

"(1) United States competitiveness in the 21st century requires engaging the science, technology, engineering, and mathematics (referred to in this section as 'STEM') talent in all States;

"(2) the [National Aeronautics and Space] Administration is uniquely positioned to educate and inspire students and the broader public on STEM subjects and careers;

"(3) the Administration's Education and Communication Offices, Mission Directorates, and Centers have been effective in delivering educational content because of the strong engagement of Administration scientists and engineers in the Administration's education and outreach activities;

"(4) the Administration's education and outreach programs, including the Experimental Program to Stimulate Competitive Research (EPSCoR) and the Space Grant College and Fellowship Program, reflect the Administration's successful commitment to growing and diversifying the national science and engineering workforce; and

"(5) in order to grow and diversify the Nation's engineering workforce, it is vital for the Administration to bolster programs, such as High Schools United with NASA to Create Hardware (HUNCH) program, that conduct outreach activities to underserved rural communities, vocational schools, and tribal colleges and universities and encourage new participation in the STEM workforce.

"(b) CONTINUATION OF EDUCATION AND OUTREACH ACTIVITIES AND PROGRAMS.—

"(1) IN GENERAL.—The Administrator [of the National Aeronautics and Space Administration] shall continue engagement with the public and education opportunities for students via all the Administration's mission directorates to the maximum extent practicable.

"(2) REPORT.—Not later than 60 days after the date of enactment of this Act [Mar. 21, 2017], the Administrator shall submit to the appropriate committees of Congress [Committee on Commerce, Science, and Transportation of the Senate and Committee on Science, Space, and Technology of the House of Representatives] a report on the Administration's near-term outreach plans for advancing space law education."

INSPIRING THE NEXT SPACE PIONEERS, INNOVATORS, RESEARCHERS, AND EXPLORERS (INSPIRE) WOMEN

Pub. L. 115–7, Feb. 28, 2017, 131 Stat. 13, provided that:

"SECTION 1. SHORT TITLE.

"This Act may be cited as the 'Inspiring the Next Space Pioneers, Innovators, Researchers, and Explorers (INSPIRE) Women Act'.

"SEC. 2. FINDINGS.

"The Congress finds that—

"(1) NASA GIRLS and NASA BOYS are virtual mentoring programs using commercially available video chat programs to pair National Aeronautics and Space Administration mentors with young students anywhere in the country. NASA GIRLS and NASA BOYS give young students the opportunity to interact and learn from real engineers, scientists, and technologists.

"(2) The Aspire to Inspire (A2I) program engages young girls to present science, technology, engineering, and mathematics (STEM) career opportunities through the real lives and jobs of early career women at NASA.

"(3) The Summer Institute in Science, Technology, Engineering, and Research (SISTER) program at the Goddard Space Flight Center is designed to increase awareness of, and provide an opportunity for, female middle school students to be exposed to and explore nontraditional career fields with Goddard Space Flight Center women engineers, mathematicians, scientists, technicians, and researchers.

"SEC. 3. SUPPORTING WOMEN'S INVOLVEMENT IN THE FIELDS OF AEROSPACE AND SPACE EXPLORATION.

"The Administrator of the National Aeronautics and Space Administration shall encourage women and girls to study science, technology, engineering, and mathematics, pursue careers in aerospace, and further advance the Nation's space science and exploration efforts through support of the following initiatives:

"(1) NASA GIRLS and NASA BOYS.

"(2) Aspire to Inspire.

"(3) Summer Institute in Science, Technology, Engineering, and Research.

"SEC. 4. PLAN.

"Not later than 90 days after the date of enactment of this Act [Feb. 28, 2017], the Administrator shall submit to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a plan for how NASA can best facilitate and support both current and retired astronauts, scientists, engineers, and innovators, including early career female astronauts, scientists, engineers, and innovators, to engage with K–12 female STEM students and inspire the next generation of women to consider participating in the fields of science, technology, engineering, and mathematics and to pursue careers in aerospace. This plan shall—

"(1) report on existing activities with current and retired NASA astronauts, scientists, engineers, and innovators;

"(2) identify how NASA could best leverage existing authorities to facilitate and support current and retired astronaut, scientist, engineer, and innovator participation in NASA outreach efforts;

"(3) propose and describe a program specific to retired astronauts, scientists, engineers, and innovators; and

"(4) identify any additional authorities necessary to institute such a program."

NASA'S CONTRIBUTION TO EDUCATION

Pub. L. 111–358, title II, §202, Jan. 4, 2011, 124 Stat. 3993, provided that:

"(a) SENSE OF CONGRESS.—It is the sense of Congress that NASA [National Aeronautics and Space Administration] is uniquely positioned to interest students in science, technology, engineering, and mathematics, not only by the example it sets, but through its education programs.

"(b) EDUCATIONAL PROGRAM GOALS.—NASA shall develop and maintain educational programs—

"(1) to carry out and support research based programs and activities designed to increase student interest and participation in STEM, including students from minority and underrepresented groups;

"(2) to improve public literacy in STEM;

"(3) that employ proven strategies and methods for improving student learning and teaching in STEM;

"(4) to provide curriculum support materials and other resources that—

"(A) are designed to be integrated with comprehensive STEM education;

"(B) are aligned with national science education standards;

"(C) promote the adoption and implementation of high-quality education practices that build toward college and career-readiness; and

"(5) to create and support opportunities for enhanced and ongoing professional development for teachers using best practices that improve the STEM content and knowledge of the teachers, including through programs linking STEM teachers with STEM educators at the higher education level."

[For definition of "STEM" as used in section 202 of Pub. L. 111–358, set out above, see section 2 of Pub. L. 111–358, set out as a note under section 6621 of Title 42, The Public Health and Welfare.]

REPORTS

Pub. L. 109–155, title I, §102, Dec. 30, 2005, 119 Stat. 2905, provided that:

"(a) NATIONAL AWARENESS CAMPAIGN.—

"(1) IN GENERAL.—The Administrator [of the National Aeronautics and Space Administration] shall implement, beginning not later than May 1, 2006, a national awareness campaign through various media, including print, radio, television, and the Internet, to articulate missions, publicize recent accomplishments, and facilitate efforts to encourage young Americans to enter the fields of science, mathematics, and engineering to help maintain United States leadership in those fields.

"(2) REPORTS.—(A) Not later than April 1, 2006, the Administrator shall transmit a plan to the Committee on Science [now Committee on Science, Space, and Technology] of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate describing the activities that will be undertaken as part of the national awareness campaign required by paragraph (1) and the expected cost of those activities. NASA [National Aeronautics and Space Administration] may undertake activities as part of the national awareness campaign prior to the transmittal of the plan required by this subparagraph, but the plan shall include a description of any activities undertaken prior to the transmittal and the estimated cost of those activities.

"(B) Not later than three years after the date of enactment of this Act [Dec. 30, 2005], the Administrator shall transmit to the Committee on Science of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate an assessment of the impact of the national awareness campaign.

"(b) BUDGET INFORMATION.—Not later than April 30, 2006, the Administrator shall transmit to the Committee on Science [now Committee on Science, Space, and Technology] of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a report describing—

"(1) the expected cost of the Crew Exploration Vehicle through fiscal year 2020, based on the public specifications for that development contract; and

"(2) the expected budgets for each fiscal year through 2020 for human spaceflight, aeronautics, space science, and earth science—

"(A) first assuming inflationary growth for the budget of NASA as a whole and including costs for the Crew Exploration Vehicle as projected under paragraph (1); and

"(B) then assuming inflationary growth for the budget of NASA as a whole and including at least two cost estimates for the Crew Exploration Vehicle that are higher than those projected under paragraph (1), based on NASA's past experience with cost increases for similar programs, along with a description of the reasons for selecting the cost estimates used for the calculations under this subparagraph and the confidence level for each of the cost estimates used in this section.

"(c) SPACE COMMUNICATIONS PLAN.—

"(1) PLAN.—The Administrator shall develop a plan, in consultation with relevant Federal agencies, for updating NASA's space communications architecture for both low-Earth orbital operations and deep space exploration so that it is capable of meeting NASA's needs over the next 20 years. The plan shall include life-cycle cost estimates, milestones, estimated performance capabilities, and 5-year funding profiles. The plan shall also include an estimate of the amounts of any reimbursements NASA is likely to receive from other Federal agencies during the expected life of the upgrades described in the plan. At a minimum, the plan shall include a description of the following:

"(A) Projected Deep Space Network requirements for the next 20 years, including those in support of human space exploration missions.

"(B) Upgrades needed to support Deep Space Network requirements.

"(C) Cost estimates for the maintenance of existing Deep Space Network capabilities.

"(D) Cost estimates and schedules for the upgrades described in subparagraph (B).

"(E) Projected Tracking and Data Relay Satellite System requirements for the next 20 years, including those in support of other relevant Federal agencies.

"(F) Cost and schedule estimates to maintain and upgrade the Tracking and Data Relay Satellite System to meet projected requirements.

"(2) CONSULTATIONS.—The Administrator shall consult with other relevant Federal agencies in developing the plan under this subsection.

"(3) SCHEDULE.—The Administrator shall transmit the plan under this subsection to the Committee on Science [now Committee on Science, Space, and Technology] of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate not later than February 17, 2007.

"(d) JOINT DARK ENERGY MISSION.—The Administrator and the Director of the Department of Energy Office of Science shall jointly transmit to the Committee on Science [now Committee on Science, Space, and Technology] of the House of Representatives and the Committee on Commerce, Science, and

Transportation of the Senate, not later than July 15, 2006, a report on plans for a Joint Dark Energy Mission. The report shall include the amount of funds each agency intends to expend on the Joint Dark Energy Mission for each of the fiscal years 2007 through 2011, and any specific milestones for the development and launch of the Mission.

"(e) OFFICE OF SCIENCE AND TECHNOLOGY POLICY.—

"(1) STUDY.—As part of ongoing efforts to coordinate research and development across the Federal agencies, the Director of the Office of Science and Technology Policy shall conduct a study to determine—

"(A) if any research and development programs of NASA are unnecessarily duplicating aspects of programs of other Federal agencies; and

"(B) if any research and development programs of NASA are neglecting any topics of national interest that are related to the mission of NASA.

"(2) REPORT.—Not later than one year after the date of enactment of this Act [Dec. 30, 2005], the Director of the Office of Science and Technology Policy shall transmit to the Committee on Science [now Committee on Science, Space, and Technology] of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a report that—

"(A) describes the results of the study under paragraph (1);

"(B) lists the research and development programs of Federal agencies other than NASA that were reviewed as part of the study, which shall include any program supporting research and development in an area related to the programs of NASA, and the most recent budget figures for those programs of other agencies;

"(C) recommends any changes to the research and development programs of NASA that should be made in response to the findings of the study required by paragraph (1); and

"(D) describes mechanisms the Office of Science and Technology Policy will use to ensure adequate coordination between NASA and Federal agencies that operate related programs.

"(3) CONTRACT.—The Director of the Office of Science and Technology Policy may contract with a nongovernmental entity to conduct the study required by paragraph (1)."

REVIEW OF MUST PROGRAM

Pub. L. 109–155, title VI, §617, Dec. 30, 2005, 119 Stat. 2934, directed the Administrator of the National Aeronautics and Space Administration to transmit a report to Congress on the legal status of the Motivating Undergraduates in Science and Technology program not later than 60 days after Dec. 30, 2005, and, if in compliance with law, implement the program as planned in the July 5, 2005, NASA Research Announcement.

DENIAL OF FINANCIAL ASSISTANCE TO CAMPUS DISRUPTERS

Pub. L. 92–304, §6, May 19, 1972, 86 Stat. 161, provided generally that any institution of higher education deny for a two-year period payment under programs authorized by the National Aeronautics and Space Act of 1958 (see 51 U.S.C. 20101 et seq.) to any individual attending or employed by such institution who has been convicted of any crime committed after May 19, 1972, which involved the use of force, disruption or seizure of property to prevent officers or students from engaging in their duties or pursuing their studies. Similar provisions were contained in the following prior appropriation acts:

Pub. L. 92–68, §6, Aug. 6, 1971, 85 Stat. 177.

Pub. L. 91–303, §6, July 2, 1970, 84 Stat. 372.

Pub. L. 91–119, §7, Nov. 18, 1969, 83 Stat. 201.

[1] Section catchline amended by Pub. L. 117–167 without corresponding amendment of chapter analysis.

§40901. Science, Space, and Technology Education Trust Fund

There is appropriated, by transfer from funds appropriated in the Department of Housing and Urban Development—Independent Agencies Appropriations Act, 1989 (Public Law 100–404, 102 Stat. 1014), for "Construction of facilities", the sum of $15,000,000 to the "Science, Space, and Technology Education Trust Fund", which is hereby established in the Treasury of the United States. The Secretary of the Treasury shall invest these funds in the United States Treasury special issue securities, and interest shall be credited to the Trust Fund on a quarterly basis. Such interest shall be available for the purpose of making grants for programs directed at improving science, space, and

technology education in the United States. The Administrator, after consultation with the Director of the National Science Foundation, shall review applications made for such grants and determine the distribution of available funds on a competitive basis. Grants shall be made available to any awardee only to the extent that the awardee provides matching funds from non-Federal sources to carry out the program for which grants from this Trust Fund are made. Of the funds made available by this Trust Fund, $250,000 shall be disbursed each calendar quarter to the Challenger Center for Space Science Education. The Administrator shall submit to Congress an annual report on the grants made pursuant to this section.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3391.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
40901	42 U.S.C. 2467.	Pub. L. 100–404, title II, (par. under heading "Science, Space, and Technology Education Trust Fund", at 102 Stat. 1028), Aug. 19, 1988, 102 Stat. 1028; Pub. L. 103–327, title III, Sept. 28, 1994, 108 Stat. 2328.

In the first sentence, the words "the Department of Housing and Urban Development—Independent Agencies Appropriations Act, 1989 (Public Law 100–404, 102 Stat. 1014)" are substituted for "this Act" to clarify the reference.

In the second sentence, the words "of the Treasury" are inserted after "the Secretary" for clarity.

In the sixth sentence, the word "hereafter", which appeared after "each calendar quarter", is omitted as unnecessary.

§40902. National Aeronautics and Space Administration Endeavor Teacher Fellowship Trust Fund

(a) ESTABLISHMENT.—There is established in the Treasury of the United States, in tribute to the dedicated crew of the Space Shuttle Challenger, a trust fund to be known as the National Aeronautics and Space Administration Endeavor Teacher Fellowship Trust Fund (hereafter in this section referred to as the "Trust Fund"). The Trust Fund shall consist of amounts which may from time to time, at the discretion of the Administrator, be transferred from the National Aeronautics and Space Administration Gifts and Donations Trust Fund.

(b) INVESTMENT OF TRUST FUND.—The Administrator shall direct the Secretary of the Treasury to invest and reinvest funds in the Trust Fund in public debt securities with maturities suitable for the needs of the Trust Fund, and bearing interest at rates determined by the Secretary of the Treasury, taking into consideration the current average market yield on outstanding marketable obligations of the United States of comparable maturities. Interest earned shall be credited to the Trust Fund.

(c) PURPOSE.—Income accruing from the Trust Fund principal shall be used to create the National Aeronautics and Space Administration Endeavor Teacher Fellowship Program, to the extent provided in advance in appropriation Acts. The Administrator is authorized to use such funds to award fellowships to selected United States nationals who are undergraduate students pursuing a course of study leading to certified teaching degrees in elementary education or in secondary education in mathematics, science, or technology disciplines. Awards shall be made pursuant to standards established for the fellowship program by the Administrator.

(d) AVAILABILITY OF FUNDS.—The interest accruing from the National Aeronautics and Space Administration Endeavor Teacher Fellowship Trust Fund principal shall be available in fiscal year 2012 for the purpose of the Endeavor Science Teacher Certificate Program.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3391; Pub. L. 112–55, div. B, title III, Nov. 18, 2011, 125 Stat. 626.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
40902	42 U.S.C. 2467a.	Pub. L. 102–195, §20, Dec. 9, 1991, 105 Stat. 1615.

In subsection (a), the words "The Trust Fund shall consist of amounts" are substituted for "The Trust Fund shall consist of gifts and donations accepted by the National Aeronautics and Space Administration pursuant to section 208 of the National Aeronautics and Space Act of 1958 (42 U.S.C. 2476b), as well as other amounts" because the Administration's authority to accept gifts or donations under section 208 of the National Aeronautics and Space Act of 1958 terminated 5 years after October 30, 1987.

EDITORIAL NOTES

AMENDMENTS

2011—Subsec. (d). Pub. L. 112–55 added subsec. (d).

§40903. Established Program to Stimulate Competitive Research—merit grant competition requirements

(a) DEFINITION OF ELIGIBLE STATE.—In this section, the term "eligible State" means a State designated by the Administrator as eligible to compete in the National Science Foundation's Established Program to Stimulate Competitive Research.

(b) COMPETITION.—Making use of the existing infrastructure established in eligible States by the National Science Foundation, the Administrator shall conduct a merit grant competition among the eligible States in areas of research important to the mission of the Administration. With respect to a grant application by an eligible State, the Administrator shall consider—

(1) the application's merit and relevance to the mission of the Administration;

(2) the potential for the grant to serve as a catalyst to enhance the ability of researchers in the State to become more competitive for regular Administration funding;

(3) the potential for the grant to improve the environment for science, mathematics, and engineering education in the State; and

(4) the need to ensure the maximum distribution of grants among eligible States, consistent with merit.

(c) SUPPLEMENTAL GRANTS.—The Administrator shall endeavor, where appropriate, to supplement grants made under subsection (b) with such grants for fellowships, traineeships, equipment, or instrumentation as are available.

(d) INFORMATION IN ANNUAL BUDGET SUBMISSION.—In order to ensure that research expertise and talent throughout the Nation is developed and engaged in Administration research and education activities, the Administration shall, as part of its annual budget submission, detail additional steps that can be taken to further integrate the participating eligible States in both existing and new or emerging Administration research programs and center activities.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3392; Pub. L. 117–167, div. B, title VII, §10851(e), Aug. 9, 2022, 136 Stat. 1754.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*

40903(a)	42 U.S.C. 2467b(c).	Pub. L. 102–588, title III, §304, Nov. 4, 1992, 106 Stat. 5120.
40903(b)	42 U.S.C. 2467b(a).	
40903(c)	42 U.S.C. 2467b(b).	
40903(d)	42 U.S.C. 17781(b).	Pub. L. 110–422, title VII, §704(b), Oct. 15, 2008, 122 Stat. 4802.

In subsection (d) the words "eligible States" are substituted for "EPSCoR States" for clarity and consistency in the section.

EDITORIAL NOTES

AMENDMENTS

2022—Pub. L. 117–167, §10851(e)(1), substituted "Established" for "Experimental" in section catchline. Subsec. (a). Pub. L. 117–167, §10851(e)(2), substituted "Established" for "Experimental".

STATUTORY NOTES AND RELATED SUBSIDIARIES

CONGRESSIONAL FINDINGS AND POLICY

Pub. L. 102–588, title III, §§301–303, Nov. 4, 1992, 106 Stat. 5119, provided that:

"SEC. 301. SHORT TITLE.

"This title [see Tables for classification] may be cited as the 'Experimental Program to Stimulate Competitive Research on Space and Aeronautics Act'.

"SEC. 302. FINDINGS.

"Congress finds that—

"(1) the report of the Advisory Committee on the Future of the United States Space Program has provided a framework within which a consensus on the goals of the space program can be developed;

"(2) the National Aeronautics and Space Administration's space science and applications, aeronautical research and technology, and space research and technology programs will serve as the fulcrum for future initiatives by the United States in civil space and aviation;

"(3) colleges and universities in many States are currently not able to compete successfully for research grants awarded by the National Aeronautics and Space Administration through its space science and applications, aeronautical research and technology, and space research and technology programs;

"(4) balanced programs of space science and applications, aeronautical research and technology, and space research and technology should include initiatives designed to foster competitive research capacity in all geographic areas of the Nation; and

"(5) by strengthening the competitive research capacity in those geographic areas of the Nation which are not currently fully competitive, the education and training of scientists and engineers important to the future of the United States civil space and aviation programs will be fostered.

"SEC. 303. POLICY.

"It is the policy of the United States that—

"(1) the Administrator [of the National Aeronautics and Space Administration], in planning for national programs in space science and applications, aeronautical research, space flight, and exploration, should ensure the resilience of the space and aeronautics research infrastructure;

"(2) a stable and balanced program of space science and applications, aeronautical research and technology, and space research and technology should include programs to assure that geographic areas of the United States that currently do not successfully participate in competitive space and aeronautical research activities are enabled to become more competitive; and

"(3) programs to improve competitive capabilities should be a part of the research and the educational activities of the National Aeronautics and Space Administration."

§40904. Microgravity research

The Administrator shall—

(1) ensure the capacity to support ground-based research leading to space-based basic and applied scientific research in a variety of disciplines with potential direct national benefits and applications that can be advanced significantly from the uniqueness of microgravity and the space environment; and

(2) carry out, to the maximum extent practicable, basic, applied, and commercial International Space Station research in fields such as molecular crystal growth, animal research, basic fluid physics, combustion research, cellular biotechnology, low-temperature physics, and cellular research at a level that will sustain the existing United States scientific expertise and research capability in microgravity research.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3393.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
40904(1)	42 U.S.C. 16655(2).	Pub. L. 109–155, title III, §305(2), (3), Dec. 30, 2005, 119 Stat. 2918.
40904(2)	42 U.S.C. 16655(3).	

§40905. Program to expand distance learning in rural underserved areas

(a) IN GENERAL.—The Administrator shall develop or expand programs to extend science and space educational outreach to rural communities and schools through video conferencing, interpretive exhibits, teacher education, classroom presentations, and student field trips.

(b) PRIORITIES.—In carrying out subsection (a), the Administrator shall give priority to existing programs, including Challenger Learning Centers—

(1) that utilize community-based partnerships in the field;

(2) that build and maintain video conference and exhibit capacity;

(3) that travel directly to rural communities and serve low-income populations; and

(4) with a special emphasis on increasing the number of women and minorities in the science and engineering professions.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3393.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
40905	42 U.S.C. 16791.	Pub. L. 109–155, title VI, §612, Dec. 30, 2005, 119 Stat. 2932.

§40906. Equal access to the Administration's education programs

(a) IN GENERAL.—The Administrator shall strive to ensure equal access for minority and economically disadvantaged students to the Administration's education programs.

(b) REPORT.—Every 2 years, the Administrator shall submit a report to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate describing the efforts by the Administrator to ensure equal access for minority and economically disadvantaged students under this section and the results of such efforts. As part of the report, the Administrator shall provide—

(1) data on minority participation in the Administration's education programs, at a minimum in the categories of—

(A) elementary and secondary education;

(B) undergraduate education; and
(C) graduate education; and

(2) the total value of grants the Administration made to Historically Black Colleges and Universities and to Hispanic Serving Institutions through education programs during the period covered by the report.

(c) PROGRAM.—The Administrator shall establish the Dr. Mae C. Jemison Grant Program to work with Minority Serving Institutions to bring more women of color into the field of space and aeronautics.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3393.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
40906	42 U.S.C. 16794.	Pub. L. 109–155, title VI, §615, Dec. 30, 2005, 119 Stat. 2934.

In subsection (b), in the matter before paragraph (1), the words "Every 2 years" are substituted for "Not later than 1 year after the date of enactment of this Act [December 30, 2005], and every 2 years thereafter" to eliminate obsolete language.

In subsection (b), in the matter before paragraph (1), the words "Committee on Science and Technology" are substituted for "Committee on Science" on authority of Rule X(1)(o) of the Rules of the House of Representatives, adopted by House Resolution No. 6 (110th Congress, January 5, 2007).

STATUTORY NOTES AND RELATED SUBSIDIARIES

CHANGE OF NAME

Committee on Science and Technology of House of Representatives changed to Committee on Science, Space, and Technology of House of Representatives by House Resolution No. 5, One Hundred Twelfth Congress, Jan. 5, 2011.

§40907. Museums

The Administrator may provide grants to, and enter into cooperative agreements with, museums and planetariums to enable them to enhance programs related to space exploration, aeronautics, space science, Earth science, or microgravity.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3394.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
40907	42 U.S.C. 16795.	Pub. L. 109–155, title VI, §616, Dec. 30, 2005, 119 Stat. 2934.

§40908. Continuation of certain education programs

From amounts appropriated to the Administration for education programs, the Administrator shall ensure the continuation of the Space Grant Program, the Experimental Program to Stimulate Competitive Research, and, consistent with the results of the review under section 614 of the National Aeronautics and Space Administration Authorization Act of 2005 (Public Law 109–155,

119 Stat. 2933), the Administration Explorer School program, to motivate and develop the next generation of explorers.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3394.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
40908	42 U.S.C. 16797.	Pub. L. 109–155, title VI, §618, Dec. 30, 2005, 119 Stat. 2934.

EDITORIAL NOTES

REFERENCES IN TEXT

Section 614 of the National Aeronautics and Space Administration Authorization Act of 2005, referred to in text, was classified to former section 16793 of Title 42, The Public Health and Welfare, and was omitted from the Code following the enactment of this title by Pub. L. 111–314.

§40909. Compliance with title IX of Education Amendments of 1972

To comply with title IX of the Education Amendments of 1972 (20 U.S.C. 1681 et seq.), the Administrator shall conduct compliance reviews of at least 2 grantees annually.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3394.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
40909	42 U.S.C. 16798(b).	Pub. L. 109–155, title VI, §619(b), Dec. 30, 2005, 119 Stat. 2935.

EDITORIAL NOTES

REFERENCES IN TEXT

The Education Amendments of 1972, referred to in text, is Pub. L. 92–318, June 23, 1972, 86 Stat. 235. Title IX of the Act, known as the Patsy Takemoto Mink Equal Opportunity in Education Act, is classified principally to chapter 38 (§1681 et seq.) of Title 20, Education. For complete classification of title IX to the Code, see Short Title note set out under section 1681 of Title 20 and Tables.

Subtitle V—Programs Targeting Commercial Opportunities

CHAPTER 501—SPACE COMMERCE

SUBCHAPTER I—GENERAL

Sec.
50101. Definitions.
SUBCHAPTER II—PROMOTION OF COMMERCIAL SPACE OPPORTUNITIES
50111. Commercialization of Space Station.
50112. Promotion of United States Global Positioning System standards.
50113. Acquisition of space science data.

50114. Administration of commercial space centers.
50115. Sources of Earth science data.
50116. Commercial technology transfer program.
SUBCHAPTER III—FEDERAL ACQUISITION OF SPACE TRANSPORTATION SERVICES
50131. Requirement to procure commercial space transportation services.
50132. Acquisition of commercial space transportation services.
[50133. Repealed.]
50134. Use of excess intercontinental ballistic missiles.

EDITORIAL NOTES

AMENDMENTS

2017—Pub. L. 115–10, title IV, §416(c), Mar. 21, 2017, 131 Stat. 35, struck out item 50133 "Shuttle privatization".

SUBCHAPTER I—GENERAL

§50101. Definitions

In this chapter:

(1) COMMERCIAL PROVIDER.—The term "commercial provider" means any person providing space transportation services or other space-related activities, primary control of which is held by persons other than Federal, State, local, and foreign governments.

(2) PAYLOAD.—The term "payload" means anything that a person undertakes to transport to, from, or within outer space, or in suborbital trajectory, by means of a space transportation vehicle, but does not include the space transportation vehicle itself except for its components which are specifically designed or adapted for that payload.

(3) SPACE-RELATED ACTIVITIES.—The term "space-related activities" includes research and development, manufacturing, processing, service, and other associated and support activities.

(4) SPACE TRANSPORTATION SERVICES.—The term "space transportation services" means the preparation of a space transportation vehicle and its payloads for transportation to, from, or within outer space, or in suborbital trajectory, and the conduct of transporting a payload to, from, or within outer space, or in suborbital trajectory.

(5) SPACE TRANSPORTATION VEHICLE.—The term "space transportation vehicle" means any vehicle constructed for the purpose of operating in, or transporting a payload to, from, or within, outer space, or in suborbital trajectory, and includes any component of such vehicle not specifically designed or adapted for a payload.

(6) STATE.—The term "State" means each of the several States of the Union, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, and any other commonwealth, territory, or possession of the United States.

(7) UNITED STATES COMMERCIAL PROVIDER.—The term "United States commercial provider" means a commercial provider, organized under the laws of the United States or of a State, that is—

(A) more than 50 percent owned by United States nationals; or

(B) a subsidiary of a foreign company and the Secretary of Transportation finds that—

(i) such subsidiary has in the past evidenced a substantial commitment to the United States market through—

(I) investments in the United States in long-term research, development, and manufacturing (including the manufacture of major components and subassemblies); and

(II) significant contributions to employment in the United States; and

(ii) the country or countries in which such foreign company is incorporated or organized, and, if appropriate, in which it principally conducts its business, affords reciprocal treatment to companies described in subparagraph (A) comparable to that afforded to such foreign company's subsidiary in the United States, as evidenced by—

(I) providing comparable opportunities for companies described in subparagraph (A) to participate in Government-sponsored research and development similar to that authorized under this chapter;

(II) providing no barriers, to companies described in subparagraph (A) with respect to local investment opportunities, that are not provided to foreign companies in the United States; and

(III) providing adequate and effective protection for the intellectual property rights of companies described in subparagraph (A).

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3394.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
50101	42 U.S.C. 14701.	Pub. L. 105–303, §2, Oct. 28, 1998, 112 Stat. 2843.

The definition of "Administrator" in section 2 of the Commercial Space Act of 1998 (Public Law 105–303, 112 Stat. 2843) is omitted as unnecessary because of the definition added by section 10101 of title 51.

EXECUTIVE DOCUMENTS

SPACE POLICY DIRECTIVE–2. STREAMLINING REGULATIONS ON COMMERCIAL USE OF SPACE

Space Policy Directive–2, May 24, 2018, 83 F.R. 24901, provided:

Memorandum for the Vice President[,] the Secretary of State[,] the Secretary of Defense[,] the Secretary of Commerce[,] the Secretary of Transportation[,] the Secretary of Homeland Security[,] the Secretary of Labor[,] the Director of National Intelligence[,] the Director of the Office of Management and Budget[,] the Assistant to the President for National Security Affairs[,] the Administrator of the National Aeronautics and Space Administration[,] the Director of the Office of Science and Technology Policy[,] the Assistant to the President for Homeland Security and Counterterrorism[, and] the Chairman of the Joint Chiefs of Staff

SECTION 1. *Policy*. It is the policy of the executive branch to be prudent and responsible when spending taxpayer funds, and to recognize how government actions, including Federal regulations, affect private resources. It is therefore important that regulations adopted and enforced by the executive branch promote economic growth; minimize uncertainty for taxpayers, investors, and private industry; protect national security, public-safety, and foreign policy interests; and encourage American leadership in space commerce.

SEC. 2. *Launch and Re-entry Licensing*. (a) No later than February 1, 2019, the Secretary of Transportation shall review regulations adopted by the Department of Transportation that provide for and govern licensing of commercial space flight launch and re-entry for consistency with the policy set forth in section 1 of this memorandum and shall rescind or revise those regulations, or publish for notice and comment proposed rules rescinding or revising those regulations, as appropriate and consistent with applicable law.

(b) Consistent with the policy set forth in section 1 of this memorandum, the Secretary of Transportation shall consider the following:

(i) requiring a single license for all types of commercial space flight launch and re-entry operations; and

(ii) replacing prescriptive requirements in the commercial space flight launch and re-entry licensing process with performance-based criteria.

(c) In carrying out the review required by subsection (a) of this section, the Secretary of Transportation shall coordinate with the members of the National Space Council.

(d) The Secretary of Defense, the Secretary of Transportation, and the Administrator of the National Aeronautics and Space Administration shall coordinate to examine all existing U.S. Government requirements, standards, and policies associated with commercial space flight launch and re-entry operations from Federal launch ranges and, as appropriate and consistent with applicable law, to minimize those

requirements, except those necessary to protect public safety and national security, that would conflict with the efforts of the Secretary of Transportation in implementing the Secretary's responsibilities under this section.

SEC. 3. *Commercial Remote Sensing*. (a) Within 90 days of the date of this memorandum [May 24, 2018], the Secretary of Commerce shall review the regulations adopted by the Department of Commerce under Title II of the Land Remote Sensing Policy Act of 1992 ([now] 51 U.S.C. 60101 *et seq*.) for consistency with the policy set forth in section 1 of this memorandum and shall rescind or revise those regulations, or publish for notice and comment proposed rules rescinding or revising those regulations, as appropriate and consistent with applicable law.

(b) In carrying out the review required by subsection (a) of this section, the Secretary of Commerce shall coordinate with the Secretary of State, the Secretary of Defense, the Administrator of the National Aeronautics and Space Administration, and, as appropriate, the Chairman of the Federal Communications Commission.

(c) Within 120 days of the date of the completion of the review required by subsection (a) of this section, the Secretary of Commerce, in coordination with the Secretary of State and the Secretary of Defense, shall transmit to the Director of the Office of Management and Budget a legislative proposal to encourage expansion of the licensing of commercial remote sensing activities. That proposal shall be consistent with the policy set forth in section 1 of this memorandum.

SEC. 4. *Reorganization of the Department of Commerce*. (a) To the extent permitted by law, the Secretary of Commerce shall consolidate in the Office of the Secretary of Commerce the responsibilities of the Department of Commerce with respect to the Department's regulation of commercial space flight activities.

(b) Within 30 days of the date of this memorandum, the Secretary of Commerce shall transmit to the Director of the Office of Management and Budget a legislative proposal to create within the Department of Commerce an entity with primary responsibility for administering the Department's regulation of commercial space flight activities.

SEC. 5. *Radio Frequency Spectrum*. (a) The Secretary of Commerce, in coordination with the Director of the Office of Science and Technology Policy, shall work with the Federal Communications Commission to ensure that Federal Government activities related to radio frequency spectrum are, to the extent permitted by law, consistent with the policy set forth in section 1 of this memorandum.

(b) Within 120 days of the date of this memorandum, the Secretary of Commerce and the Director of the Office of Science and Technology Policy, in consultation with the Chairman of the Federal Communications Commission, and in coordination with the members of the National Space Council, shall provide to the President, through the Executive Secretary of the National Space Council, a report on improving the global competitiveness of the United States space sector through radio frequency spectrum policies, regulation, and United States activities at the International Telecommunication Union and other multilateral forums.

SEC. 6. *Review of Export Licensing Regulations*. The Executive Secretary of the National Space Council, in coordination with the members of the National Space Council, shall:

(a) initiate a review of export licensing regulations affecting commercial space flight activity;

(b) develop recommendations to revise such regulations consistent with the policy set forth in section 1 of this memorandum and with applicable law; and

(c) submit such recommendations to the President, through the Vice President, no later than 180 days from the date of this memorandum.

SEC. 7. *General Provisions*. (a) Nothing in this memorandum shall be construed to impair or otherwise affect:

(i) the authority granted by law to an executive department or agency, or the head thereof; or

(ii) the functions of the Director of the Office of Management and Budget relating to budgetary, administrative, or legislative proposals.

(b) This memorandum shall be implemented consistent with applicable law and subject to the availability of appropriations.

(c) This memorandum is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

(d) The Secretary of Transportation is authorized and directed to publish this memorandum in the Federal Register.

DONALD J. TRUMP.

SUBCHAPTER II—PROMOTION OF COMMERCIAL SPACE OPPORTUNITIES

§50111. Commercialization of Space Station

(a) POLICY.—Congress declares that a priority goal of constructing the International Space Station is the economic development of Earth orbital space. Congress further declares that free and competitive markets create the most efficient conditions for promoting economic development, and should therefore govern the economic development of Earth orbital space. Congress further declares that the use of free market principles in operating, servicing, allocating the use of, and adding capabilities to the Space Station, and the resulting fullest possible engagement of commercial providers and participation of commercial users, will reduce Space Station operational costs for all partners and the Federal Government's share of the United States burden to fund operations.

(b) USE OF UNITED STATES COMMERCIALLY PROVIDED SERVICES.—

(1) IN GENERAL.—In order to stimulate commercial use of space, help maximize the utility and productivity of the International Space Station, and enable a commercial means of providing crew transfer and crew rescue services for the International Space Station, the Administration shall—

(A) make use of United States commercially provided International Space Station crew transfer and crew rescue services to the maximum extent practicable, if those commercial services have demonstrated the capability to meet Administration-specified ascent, entry, and International Space Station proximity operations safety requirements;

(B) limit, to the maximum extent practicable, the use of the Crew Exploration Vehicle to missions carrying astronauts beyond low Earth orbit once commercial crew transfer and crew rescue services that meet safety requirements become operational;

(C) facilitate, to the maximum extent practicable, the transfer of Administration-developed technologies to potential United States commercial crew transfer and rescue service providers, consistent with United States law; and

(D) issue a notice of intent, not later than 180 days after October 15, 2008, to enter into a funded, competitively awarded Space Act Agreement with 2 or more commercial entities for a Phase 1 Commercial Orbital Transportation Services crewed vehicle demonstration program.

(2) CONGRESSIONAL INTENT.—It is the intent of Congress that funding for the program described in paragraph (1)(D) shall not come at the expense of full funding of the amounts authorized under section 101(3)(A) of the National Aeronautics and Space Administration Authorization Act of 2008 (Public Law 110–422, 122 Stat. 4783), and for future fiscal years, for Orion Crew Exploration Vehicle development, Ares I Crew Launch Vehicle development, or International Space Station cargo delivery.

(3) ADDITIONAL TECHNOLOGIES.—The Administration shall make International Space Station-compatible docking adaptors and other relevant technologies available to the commercial crew providers selected to service the International Space Station.

(4) CREW TRANSFER AND CREW RESCUE SERVICES CONTRACT.—If a commercial provider demonstrates the capability to provide International Space Station crew transfer and crew rescue services and to satisfy Administration ascent, entry, and International Space Station proximity operations safety requirements, the Administration shall enter into an International Space Station crew transfer and crew rescue services contract with that commercial provider for a portion of the Administration's anticipated International Space Station crew transfer and crew rescue requirements from the time the commercial provider commences operations under contract with the Administration through calendar year 2016, with an option to extend the period of performance through calendar year 2020.

(c) ISS TRANSITION PLAN.—

(1) IN GENERAL.—The Administrator, in coordination with the ISS management entity (as defined in section 2 of the National Aeronautics and Space Administration Transition Authorization Act of 2017), ISS partners, the scientific user community, and the commercial space sector, shall develop a plan to transition in a step-wise approach from the current regime that relies heavily on NASA sponsorship to a regime where NASA could be one of many customers of a low-Earth orbit non-governmental human space flight enterprise.

(2) REPORTS.—Not later than December 1, 2017, and biennially thereafter until 2028, the Administrator shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives a report that includes—

(A) a description of the progress in achieving the Administration's deep space human exploration objectives on ISS and prospects for accomplishing future mission requirements, space exploration objectives, and other research objectives on future commercially supplied low-Earth orbit platforms or migration of those objectives to cis-lunar space;

(B) the steps NASA is taking and will take, including demonstrations that could be conducted on the ISS, to stimulate and facilitate commercial demand and supply of products and services in low-Earth orbit;

(C) an identification of barriers preventing the commercialization of low-Earth orbit, including issues relating to policy, regulations, commercial intellectual property, data, and confidentiality, that could inhibit the use of the ISS as a commercial incubator;

(D) the criteria for defining the ISS as a research success;

(E) the criteria used to determine whether the ISS is meeting the objective under section 301(b)(2) of the National Aeronautics and Space Administration Transition Authorization Act of 2017;

(F) an assessment of whether the criteria under subparagraphs (D) and (E) are consistent with the research areas defined in, and recommendations and schedules under, the current National Academies of Sciences, Engineering, and Medicine Decadal Survey on Biological and Physical Sciences in Space;

(G) any necessary contributions that ISS extension would make to enabling execution of the human exploration roadmap under section 432 of the National Aeronautics and Space Administration Transition Authorization Act of 2017;

(H) the cost estimates for operating the ISS to achieve the criteria required under subparagraphs (D) and (E) and the contributions identified under subparagraph (G);

(I) the cost estimates for extending operations of the ISS to 2024, 2028, and 2030;

(J) an evaluation of the feasible and preferred service life of the ISS beyond the period described in section 503 of the National Aeronautics and Space Administration Authorization Act of 2010 (42 U.S.C. 18353), through at least 2030, as a unique scientific, commercial, and space exploration-related facility, including—

(i) a general discussion of international partner capabilities and prospects for extending the partnership;

(ii) the cost associated with extending the service life;

(iii) an assessment on the technical limiting factors of the service life of the ISS, including a list of critical components and their expected service life and availability; and

(iv) such other information as may be necessary to fully describe the justification for and feasibility of extending the service life of the ISS, including the potential scientific or technological benefits to the Federal Government, public, or to academic or commercial entities;

(K) an identification of the necessary actions and an estimate of the costs to deorbit the ISS once it has reached the end of its service life;

(L) the impact on deep space exploration capabilities, including a crewed mission to Mars in the 2030s, if the preferred service life of the ISS is extended beyond 2024 and NASA maintains a flat budget profile; and

(M) an evaluation of the functions, roles, and responsibilities for management and operation of the ISS and a determination of—

(i) those functions, roles, and responsibilities the Federal Government should retain during the lifecycle of the ISS;

(ii) those functions, roles, and responsibilities that could be transferred to the commercial space sector;

(iii) the metrics that would indicate the commercial space sector's readiness and ability to assume the functions, roles, and responsibilities described in clause (ii); and

(iv) any necessary changes to any agreements or other documents and the law to enable the activities described in subparagraphs (A) and (B).

(3) DEMONSTRATIONS.—If additional Government crew, power, and transportation resources are available after meeting the Administration's requirements for ISS activities defined in the human exploration roadmap and related research, demonstrations identified under paragraph (2) may—

(A) test the capabilities needed to meet future mission requirements, space exploration objectives, and other research objectives described in paragraph (2)(A); and

(B) demonstrate or test capabilities, including commercial modules or deep space habitats, Environmental Control and Life Support Systems, orbital satellite assembly, exploration space suits, a node that enables a wide variety of activity, including multiple commercial modules and airlocks, additional docking or berthing ports for commercial crew and cargo, opportunities for the commercial space sector to cost share for transportation and other services on the ISS, other commercial activities, or services obtained through alternate acquisition approaches.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3396; Pub. L. 115–10, title III, §303(c), Mar. 21, 2017, 131 Stat. 27; Pub. L. 117–167, div. B, title VII, §10815(e), Aug. 9, 2022, 136 Stat. 1738.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
50111(a)	42 U.S.C. 14711(a).	Pub. L. 105–303, title I, §101(a), Oct. 28, 1998, 112 Stat. 2845.
50111(b)	42 U.S.C. 17801.	Pub. L. 110–422, title IX, §902, Oct. 15, 2008, 122 Stat. 4805.

In subsection (b)(1)(D), the date "October 15, 2008" is substituted for "the date of enactment of this Act" to reflect the date of enactment of the National Aeronautics and Space Administration Authorization Act of 2008 (Public Law 110–422, 122 Stat. 4779).

EDITORIAL NOTES

REFERENCES IN TEXT

Section 101(3)(A) of the National Aeronautics and Space Administration Authorization Act of 2008, referred to in subsec. (b)(2), is section 101(3)(A) of Pub. L. 110–422, Oct. 15, 2008, 122 Stat. 4783, which was not classified to the Code.

The National Aeronautics and Space Administration Transition Authorization Act of 2017, referred to in subsec. (c)(1), (2)(E), (G), is Pub. L. 115–10, Mar. 21, 2017, 131 Stat. 18. Section 2 of the Act is set out as a note under section 10101 of this title, section 301(b)(2) of the Act is set out in a note under this section, and section 432 of the Act is set out in a note under section 20302 of this title.

AMENDMENTS

2022—Subsec. (c)(2). Pub. L. 117–167, §10815(e)(1), substituted "2028" for "2023" in introductory provisions.

Subsec. (c)(2)(J). Pub. L. 117–167, §10815(e)(2), substituted "2030" for "2028" in introductory provisions.

2017—Subsec. (c). Pub. L. 115–10 added subsec. (c).

STATUTORY NOTES AND RELATED SUBSIDIARIES

MAXIMIZING UTILIZATION OF ISS

Pub. L. 115–10, title III, §§301–303, Mar. 21, 2017, 131 Stat. 22–26, provided that:

"SEC. 301. OPERATION OF THE ISS.

"(a) SENSE OF CONGRESS.—It is the sense of Congress that—

"(1) after 15 years of continuous human presence in low-Earth orbit, the ISS continues to overcome challenges and operate safely;

"(2) the ISS is a unique testbed for future space exploration systems development, including long-duration space travel;

"(3) the expansion of partnerships, scientific research, and commercial applications of the ISS is essential to ensuring the greatest return on investments made by the United States and its international space partners in the development, assembly, and operations of that unique facility;

"(4) utilization of the ISS will sustain United States leadership and progress in human space exploration by—

"(A) facilitating the commercialization and economic development of low-Earth orbit;

"(B) serving as a testbed for technologies and a platform for scientific research and development; and

"(C) serving as an orbital facility enabling research upon—

"(i) the health, well-being, and performance of humans in space; and

"(ii) the development of in-space systems enabling human space exploration beyond low-Earth orbit; and

"(5) the ISS provides a platform for fundamental, microgravity, discovery-based space life and physical sciences research that is critical for enabling space exploration, protecting humans in space, increasing pathways for commercial space development that depend on advances in basic research, and contributes to advancing science, technology, engineering, and mathematics research.

"(b) OBJECTIVES.—The primary objectives of the ISS program shall be—

"(1) to achieve the long term goal and objectives under section 202 of the National Aeronautics and Space Administration Authorization Act of 2010 (42 U.S.C. 18312); and

"(2) to pursue a research program that advances knowledge and provides other benefits to the Nation.

"(c) CONTINUATION OF THE ISS.—[Amended section 18351 of Title 42, The Public Health and Welfare.]

"SEC. 302. TRANSPORTATION TO ISS.

"(a) FINDINGS.—Congress finds that reliance on foreign carriers for United States crew transfer is unacceptable, and the Nation's human space flight program must acquire the capability to launch United States government astronauts on vehicles using United States rockets from United States soil as soon as is safe, reliable, and affordable to do so.

"(b) SENSE OF CONGRESS ON COMMERCIAL CREW PROGRAM AND COMMERCIAL RESUPPLY SERVICES PROGRAM.—It is the sense of Congress that—

"(1) once developed and certified to meet the Administration's safety and reliability requirements, United States commercially provided crew transportation systems can serve as the primary means of transporting United States government astronauts and international partner astronauts to and from the ISS and serving as ISS crew rescue vehicles;

"(2) previous budgetary assumptions used by the Administration in its planning for the Commercial Crew Program assumed significantly higher funding levels than were authorized and appropriated by Congress;

"(3) credibility in the Administration's budgetary estimates for the Commercial Crew Program can be enhanced by an independently developed cost estimate;

"(4) such credibility in budgetary estimates is an important factor in understanding program risk;

"(5) United States access to low-Earth orbit is paramount to the continued success of the ISS and ISS National Laboratory;

"(6) a stable and successful Commercial Resupply Services Program and Commercial Crew Program are critical to ensuring timely provisioning of the ISS and to reestablishing the capability to launch United

States government astronauts from United States soil into orbit, ending reliance upon Russian transport of United States government astronauts to the ISS which has not been possible since the retirement of the Space Shuttle program in 2011;

"(7) NASA should build upon the success of the Commercial Orbital Transportation Services Program and Commercial Resupply Services Program that have allowed private sector companies to partner with NASA to deliver cargo and scientific experiments to the ISS since 2012;

"(8) the 21st Century Launch Complex Program has enabled significant modernization and infrastructure improvements at launch sites across the United States to support NASA's Commercial Resupply Services Program and other civil and commercial space flight missions; and

"(9) the 21st Century Launch Complex Program should be continued in a manner that leverages State and private investments to achieve the goals of that program.

"(c) REAFFIRMATION.—Congress reaffirms—

"(1) its commitment to the use of a commercially developed, private sector launch and delivery system to the ISS for crew missions as expressed in the National Aeronautics and Space Administration Authorization Act of 2005 (Public Law 109–155; 119 Stat. 2895) [see Tables for classification], the National Aeronautics and Space Administration Authorization Act of 2008 (Public Law 110–422; 122 Stat. 4779) [see Tables for classification], and the National Aeronautics and Space Administration Authorization Act of 2010 (42 U.S.C. 18301 et seq.); and

"(2) the requirement under section 50111(b)(1)(A) of title 51, United States Code, that the Administration shall make use of United States commercially provided ISS crew transfer and crew rescue services to the maximum extent practicable.

"(d) USE OF NON-UNITED STATES HUMAN SPACE FLIGHT TRANSPORTATION CAPABILITIES .—[Amended section 18311 of Title 42.]

"(e) COMMERCIAL CREW PROGRAM.—

"(1) OBJECTIVE.—The objective of the Commercial Crew Program shall be to assist in the development and certification of commercially provided transportation that—

"(A) can carry United States government astronauts safely, reliably, and affordably to and from the ISS;

"(B) can serve as a crew rescue vehicle; and

"(C) can accomplish subparagraphs (A) and (B) as soon as practicable.

"(2) PRIMARY CONSIDERATION.—The objective described in paragraph (1) shall be the primary consideration in the acquisition strategy for the Commercial Crew Program.

"(3) SAFETY.—

"(A) IN GENERAL.—The Administrator shall protect the safety of government astronauts by ensuring that each commercially provided transportation system under this subsection meets all applicable human rating requirements in accordance with section 403(b)(1) of the National Aeronautics and Space Administration Authorization Act of 2010 (42 U.S.C. 18342(b)(1)).

"(B) LESSONS LEARNED.—Consistent with the findings and recommendations of the Columbia Accident Investigation Board, the Administration shall ensure that safety and the minimization of the probability of loss of crew are the critical priorities of the Commercial Crew Program.

"(4) COST MINIMIZATION.—The Administrator shall strive through the competitive selection process to minimize the life cycle cost to the Administration through the planned period of commercially provided crew transportation services.

"(f) COMMERCIAL CARGO PROGRAM.—[Amended section 18341 of Title 42.]

"(g) COMPETITION.—It is the policy of the United States that, to foster the competitive development, operation, improvement, and commercial availability of space transportation services, and to minimize the life cycle cost to the Administration, the Administrator shall procure services for Federal Government access to and return from the ISS, whenever practicable, via fair and open competition for well-defined, milestone-based, Federal Acquisition Regulation-based contracts under section 201(a) of the National Aeronautics and Space Administration Authorization Act of 2010 (42 U.S.C. 18311(a)).

"(h) TRANSPARENCY.—

"(1) SENSE OF CONGRESS.—It is the sense of Congress that cost transparency and schedule transparency aid in effective program management and risk assessment.

"(2) IN GENERAL.—The Administrator shall, to the greatest extent practicable and in a manner that does not add costs or schedule delays to the program, ensure all Commercial Crew Program and Commercial Resupply Services Program providers provide evidence-based support for their costs and schedules.

"(i) ISS CARGO RESUPPLY SERVICES LESSONS LEARNED.—Not later than 120 days after the date

of enactment of this Act [Mar. 21, 2017], the Administrator shall submit to the appropriate committees of Congress a report that—

"(1) identifies the lessons learned to date from previous and existing Commercial Resupply Services contracts;

"(2) indicates whether changes are needed to the manner in which the Administration procures and manages similar services prior to the issuance of future Commercial Resupply Services procurement opportunities; and

"(3) identifies any lessons learned from the Commercial Resupply Services contracts that should be applied to the procurement and management of commercially provided crew transfer services to and from the ISS or to other future procurements.

"SEC. 303. ISS TRANSITION PLAN.

"(a) FINDINGS.—Congress finds that—

"(1) NASA has been both the primary supplier and consumer of human space flight capabilities and services of the ISS and in low-Earth orbit; and

"(2) according to the National Research Council report 'Pathways to Exploration: Rationales and Approaches for a U.S. Program of Human Space Exploration' extending ISS beyond 2020 to 2024 or 2028 will have significant negative impacts on the schedule of crewed missions to Mars, without significant increases in funding.

"(b) SENSE OF CONGRESS.—It is the sense of Congress that—

"(1) an orderly transition for United States human space flight activities in low-Earth orbit from the current regime, that relies heavily on NASA sponsorship, to a regime where NASA is one of many customers of a low-Earth orbit commercial human space flight enterprise may be necessary; and

"(2) decisions about the long-term future of the ISS impact the ability to conduct future deep space exploration activities, and that such decisions regarding the ISS should be considered in the context of the human exploration roadmap under section 432 of this Act [set out in a note under section 20302 of this title].

"(c) REPORTS.—[Amended this section.]"

[For definitions of terms used in sections 301 to 303 of Pub. L. 115–10, set out above, see section 2 of Pub. L. 115–10, set out as a note under section 10101 of this title.]

§50112. Promotion of United States Global Positioning System standards

In order to support and sustain the Global Positioning System in a manner that will most effectively contribute to the national security, public safety, scientific, and economic interests of the United States, Congress encourages the President to—

(1) ensure the operation of the Global Positioning System on a continuous worldwide basis free of direct user fees;

(2) enter into international agreements that promote cooperation with foreign governments and international organizations to—

(A) establish the Global Positioning System and its augmentations as an acceptable international standard; and

(B) eliminate any foreign barriers to applications of the Global Positioning System worldwide; and

(3) provide clear direction and adequate resources to the Assistant Secretary of Commerce for Communications and Information so that on an international basis the Assistant Secretary can—

(A) achieve and sustain efficient management of the electromagnetic spectrum used by the Global Positioning System; and

(B) protect that spectrum from disruption and interference.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3397.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*

50112	42 U.S.C. 14712(b).	Pub. L. 105–303, title I, §104(b), Oct. 28, 1998, 112 Stat. 2852.

STATUTORY NOTES AND RELATED SUBSIDIARIES

FINDING

Pub. L. 105–303, title I, §104(a), Oct. 28, 1998, 112 Stat. 2852, provided that: "The Congress finds that the Global Positioning System, including satellites, signal equipment, ground stations, data links, and associated command and control facilities, has become an essential element in civil, scientific, and military space development because of the emergence of a United States commercial industry which provides Global Positioning System equipment and related services."

§50113. Acquisition of space science data

(a) DEFINITION OF SPACE SCIENCE DATA.—In this section, the term "space science data" includes scientific data concerning—

(1) the elemental and mineralogical resources of the moon, asteroids, planets and their moons, and comets;

(2) microgravity acceleration; and

(3) solar storm monitoring.

(b) ACQUISITION FROM COMMERCIAL PROVIDERS.—The Administrator shall, to the extent possible and while satisfying the scientific or educational requirements of the Administration, and where appropriate, of other Federal agencies and scientific researchers, acquire, where cost effective, space science data from a commercial provider.

(c) TREATMENT OF SPACE SCIENCE DATA AS COMMERCIAL PRODUCT OR COMMERCIAL SERVICE UNDER ACQUISITION LAWS.—Acquisitions of space science data by the Administrator shall be carried out in accordance with applicable acquisition laws and regulations (including applicable provisions of chapters 201 through 285, 341 through 343, and 363 of title 10). For purposes of such law and regulations, space science data shall be considered to be a commercial product or commercial service. Nothing in this subsection shall be construed to preclude the United States from acquiring, through contracts with commercial providers, sufficient rights in data to meet the needs of the scientific and educational community or the needs of other government activities.

(d) SAFETY STANDARDS.—Nothing in this section shall be construed to prohibit the Federal Government from requiring compliance with applicable safety standards.

(e) LIMITATION.—This section does not authorize the Administration to provide financial assistance for the development of commercial systems for the collection of space science data.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3397; Pub. L. 115–232, div. A, title VIII, §836(g)(10)(A), Aug. 13, 2018, 132 Stat. 1874; Pub. L. 117–81, div. A, title XVII, §1702(l)(10), Dec. 27, 2021, 135 Stat. 2161.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
50113	42 U.S.C. 14713.	Pub. L. 105–303, title I, §105, Oct. 28, 1998, 112 Stat. 2852.

EDITORIAL NOTES

AMENDMENTS

2021—Subsec. (c). Pub. L. 117–81 substituted "including applicable provisions of chapters 201 through 285, 341 through 343, and 363" for "including chapters 137 and 140".

2018—Subsec. (c). Pub. L. 115–232 substituted "Commercial Product or Commercial Service" for "Commercial Item" in heading and "commercial product or commercial service" for "commercial item" in text.

STATUTORY NOTES AND RELATED SUBSIDIARIES

EFFECTIVE DATE OF 2018 AMENDMENT

Amendment by Pub. L. 115–232 effective Jan. 1, 2020, subject to a savings provision, see section 836(h) of Pub. L. 115–232, set out as an Effective Date of 2018 Amendment; Savings Provision note under section 453b of Title 6, Domestic Security.

§50114. Administration of commercial space centers

The Administrator shall administer the Commercial Space Center program in a coordinated manner from Administration headquarters in Washington, D.C.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3398.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
50114	42 U.S.C. 14714.	Pub. L. 105–303, title I, §106, Oct. 28, 1998, 112 Stat. 2853.

§50115. Sources of Earth science data

(a) ACQUISITION.—The Administrator shall, to the extent possible and while satisfying the scientific or educational requirements of the Administration, and where appropriate, of other Federal agencies and scientific researchers, acquire, where cost-effective, space-based and airborne Earth remote sensing data, services, distribution, and applications from a commercial provider.

(b) TREATMENT AS COMMERCIAL PRODUCT OR COMMERCIAL SERVICE UNDER ACQUISITION LAWS.—Acquisitions by the Administrator of the data, services, distribution, and applications referred to in subsection (a) shall be carried out in accordance with applicable acquisition laws and regulations (including applicable provisions of chapters 201 through 285, 341 through 343, and 363 of title 10). For purposes of such law and regulations, such data, services, distribution, and applications shall be considered to be a commercial product or commercial service. Nothing in this subsection shall be construed to preclude the United States from acquiring, through contracts with commercial providers, sufficient rights in data to meet the needs of the scientific and educational community or the needs of other government activities.

(c) SAFETY STANDARDS.—Nothing in this section shall be construed to prohibit the Federal Government from requiring compliance with applicable safety standards.

(d) ADMINISTRATION AND EXECUTION.—This section shall be carried out as part of the Commercial Remote Sensing Program at the Stennis Space Center.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3398; Pub. L. 115–232, div. A, title VIII, §836(g)(10)(B), Aug. 13, 2018, 132 Stat. 1874; Pub. L. 117–81, div. A, title XVII, §1702(l)(10), Dec. 27, 2021, 135 Stat. 2161.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*

50115(a)	42 U.S.C. 14715(a).	Pub. L. 105–303, title I, §107(a), (b), (d), (e), Oct. 28, 1998, 112 Stat. 2853, 2854.
50115(b)	42 U.S.C. 14715(b).	
50115(c)	42 U.S.C. 14715(d).	
50115(d)	42 U.S.C. 14715(e).	

EDITORIAL NOTES

AMENDMENTS

2021—Subsec. (b). Pub. L. 117–81 substituted "including applicable provisions of chapters 201 through 285, 341 through 343, and 363" for "including chapters 137 and 140".

2018—Subsec. (b). Pub. L. 115–232, in heading, substituted "Commercial Product or Commercial Service" for "Commercial Item" and, in text, substituted "commercial product or commercial service" for "commercial item".

STATUTORY NOTES AND RELATED SUBSIDIARIES

EFFECTIVE DATE OF 2018 AMENDMENT

Amendment by Pub. L. 115–232 effective Jan. 1, 2020, subject to a savings provision, see section 836(h) of Pub. L. 115–232, set out as an Effective Date of 2018 Amendment; Savings Provision note under section 453b of Title 6, Domestic Security.

§50116. Commercial technology transfer program

(a) IN GENERAL.—The Administrator shall execute a commercial technology transfer program with the goal of facilitating the exchange of services, products, and intellectual property between the Administration and the private sector. This program shall place at least as much emphasis on encouraging the transfer of Administration technology to the private sector ("spinning out") as on encouraging use of private sector technology by the Administration. This program shall be maintained in a manner that provides clear benefits for the Administration, the domestic economy, and the research community, while protecting national security.

(b) PROGRAM STRUCTURE.—In carrying out the program described in subsection (a), the Administrator shall provide program participants with at least 45 days notice of any proposed changes to the structure of the Administration's technology transfer and commercialization organizations that is in effect as of December 30, 2005.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3399; Pub. L. 115–10, title VIII, §829, Mar. 21, 2017, 131 Stat. 66.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
50116	42 U.S.C. 16811.	Pub. L. 109–155, title VI, §621, Dec. 30, 2005, 119 Stat. 2935.

This section restates provisions originally enacted as part of the National Aeronautics and Space Administration Authorization Act of 2005 (Public Law 109–155, 119 Stat. 2895), and not as part of the Commercial Space Act of 1998 (Public Law 105–303, 112 Stat. 2843), which is generally restated in this chapter.

In subsection (a), in the last sentence, the word "Administration" is substituted for "agency" for clarity and because of the definition of "Administration" added by section 10101 of title 51.

In subsection (b), the date "December 30, 2005" is substituted for "the date of enactment of this Act" to

reflect the date of enactment of the National Aeronautics and Space Administration Authorization Act of 2005 (Public Law 109–155, 119 Stat. 2895).

EDITORIAL NOTES

AMENDMENTS

2017—Subsec. (a). Pub. L. 115–10 inserted ", while protecting national security" after "research community".

SUBCHAPTER III—FEDERAL ACQUISITION OF SPACE TRANSPORTATION SERVICES

§50131. Requirement to procure commercial space transportation services

(a) IN GENERAL.—Except as otherwise provided in this section or in section 70102, the Federal Government shall acquire space transportation services from United States commercial providers whenever such services are required in the course of its activities. To the maximum extent practicable, the Federal Government shall plan missions to accommodate the space transportation services capabilities of United States commercial providers.

(b) EXCEPTIONS.—The Federal Government shall not be required to acquire space transportation services under subsection (a) if, on a case-by-case basis, the Administrator or, in the case of a national security issue, the Secretary of the Air Force, determines that—

(1) a payload requires the unique capabilities of the space shuttle;

(2) cost effective space transportation services that meet specific mission requirements would not be reasonably available from United States commercial providers when required;

(3) the use of space transportation services from United States commercial providers poses an unacceptable risk of loss of a unique scientific opportunity;

(4) the use of space transportation services from United States commercial providers is inconsistent with national security objectives;

(5) the use of space transportation services from United States commercial providers is inconsistent with international agreements for international collaborative efforts relating to science and technology;

(6) it is more cost effective to transport a payload in conjunction with a test or demonstration of a space transportation vehicle owned by the Federal Government; or

(7) a payload can make use of the available cargo space on a space shuttle mission as a secondary payload, and such payload is consistent with the requirements of research, development, demonstration, scientific, commercial, and educational programs authorized by the Administrator.

(c) AGREEMENTS WITH FOREIGN ENTITIES.—Nothing in this section shall prevent the Administrator from planning or negotiating agreements with foreign entities for the launch of Federal Government payloads for international collaborative efforts relating to science and technology.

(d) DELAYED EFFECT.—Subsection (a) shall not apply to space transportation services and space transportation vehicles acquired or owned by the Federal Government before October 28, 1998, or with respect to which a contract for such acquisition or ownership has been entered into before October 28, 1998.

(e) HISTORICAL PURPOSES.—This section shall not be construed to prohibit the Federal Government from acquiring, owning, or maintaining space transportation vehicles solely for historical display purposes.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3399; Pub. L. 114–90, title I, §117(b)(3), Nov. 25, 2015, 129 Stat. 718.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
50131(a)	42 U.S.C. 14731(a).	Pub. L. 105–303, title II, §201, Oct. 28, 1998, 112 Stat. 2854.
50131(b)	42 U.S.C. 14731(b) (less last sentence).	
50131(c)	42 U.S.C. 14731(b) (last sentence).	
50131(d)	42 U.S.C. 14731(c).	
50131(e)	42 U.S.C. 14731(d).	

In subsection (d), the date "October 28, 1998" is substituted for "the date of the enactment of this Act" and for "such date" to reflect the date of enactment of the Commercial Space Act of 1998 (Public Law 105–303, 112 Stat. 2843).

EDITORIAL NOTES

AMENDMENTS

2015—Subsec. (a). Pub. L. 114–90 inserted "or in section 70102" after "in this section".

STATUTORY NOTES AND RELATED SUBSIDIARIES

NASA LAUNCH CAPABILITIES COLLABORATION

Pub. L. 115–10, title VIII, §822, Mar. 21, 2017, 131 Stat. 61, provided that:

"(a) FINDINGS.—Congress makes the following findings:

"(1) The Launch Services Program is responsible for the acquisition, management, and technical oversight of commercial launch services for NASA's [National Aeronautics and Space Administration's] science and robotic missions.

"(2) The Commercial Crew Program is responsible for the acquisition, management, and technical oversight of commercial crew transportation systems.

"(3) The Launch Services Program and Commercial Crew Program have worked together to gain exceptional technical insight into the contracted launch service providers that are common to both programs.

"(4) The Launch Services Program has a long history of oversight of 12 different launch vehicles and over 80 launches.

"(5) Co-location of the Launch Services Program and Commercial Crew Program has enabled the Commercial Crew Program to efficiently obtain the launch vehicle technical expertise of and provide engineering and analytical support to the Commercial Crew Program.

"(b) SENSE OF CONGRESS.—It is the sense of Congress that—

"(1) the Launch Services Program and Commercial Crew Program each benefit from communication and coordination of launch manifests, technical information, and common launch vehicle insight between the programs; and

"(2) such communication and coordination is enabled by the co-location of the programs.

"(c) IN GENERAL.—The Administrator [of the National Aeronautics and Space Administration] shall pursue a strategy for acquisition of crewed transportation services and non-crewed launch services that continues to enhance communication, collaboration, and coordination between the Launch Services Program and the Commercial Crew Program."

LEVERAGING COMMERCIAL SATELLITE SERVICING CAPABILITIES ACROSS MISSION DIRECTORATES

Pub. L. 115–10, title VIII, §825, Mar. 21, 2017, 131 Stat. 65, provided that:

"(a) FINDINGS.—Congress makes the following findings:

"(1) Refueling and relocating aging satellites to extend their operational lifetimes is a capacity that NASA [National Aeronautics and Space Administration] will substantially benefit from and is important for lowering the costs of ongoing scientific, national security, and commercial satellite operations.

"(2) The technologies involved in satellite servicing, such as dexterous robotic arms, propellant transfer systems, and solar electric propulsion, are all critical capabilities to support a human exploration mission to Mars.

"(b) SENSE OF CONGRESS.—It is the sense of Congress that—

"(1) satellite servicing is a vital capability that will bolster the capacity and affordability of NASA's ongoing scientific and human exploration operations while simultaneously enhancing the ability of domestic companies to compete in the global marketplace; and

"(2) future NASA satellites and spacecraft across mission directorates should be constructed in a manner that allows for servicing in order to maximize operational longevity and affordability.

"(c) LEVERAGING OF CAPABILITIES.—The Administrator [of the National Aeronautics and Space Administration] shall—

"(1) identify orbital assets in both the Science Mission Directorate and the Human Exploration and Operations Mission Directorate that could benefit from satellite servicing-related technologies; and

"(2) work across all NASA mission directorates to evaluate opportunities for the private sector to perform such services or advance technical capabilities by leveraging the technologies and techniques developed by NASA programs and other industry programs."

§50132. Acquisition of commercial space transportation services

(a) TREATMENT OF COMMERCIAL SPACE TRANSPORTATION SERVICES AS COMMERCIAL SERVICE UNDER ACQUISITION LAWS.—Acquisitions of space transportation services by the Federal Government shall be carried out in accordance with applicable acquisition laws and regulations (including applicable provisions of chapters 201 through 285, 341 through 343, and 363 of title 10). For purposes of such law and regulations, space transportation services shall be considered to be a commercial service.

(b) SAFETY STANDARDS.—Nothing in this section shall be construed to prohibit the Federal Government from requiring compliance with applicable safety standards.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3400; Pub. L. 115–232, div. A, title VIII, §836(g)(10)(C), Aug. 13, 2018, 132 Stat. 1874; Pub. L. 117–81, div. A, title XVII, §1702(l)(10), Dec. 27, 2021, 135 Stat. 2161.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
50132	42 U.S.C. 14732.	Pub. L. 105–303, title II, §202, Oct. 28, 1998, 112 Stat. 2855.

EDITORIAL NOTES

AMENDMENTS

2021—Subsec. (a). Pub. L. 117–81 substituted "including applicable provisions of chapters 201 through 285, 341 through 343, and 363" for "including chapters 137 and 140".

2018—Subsec. (a). Pub. L. 115–232 substituted "Commercial Service" for "Commercial Item" in heading and "commercial service" for "commercial item" in text.

STATUTORY NOTES AND RELATED SUBSIDIARIES

EFFECTIVE DATE OF 2018 AMENDMENT

Amendment by Pub. L. 115–232 effective Jan. 1, 2020, subject to a savings provision, see section 836(h) of

Pub. L. 115–232, set out as an Effective Date of 2018 Amendment; Savings Provision note under section 453b of Title 6, Domestic Security.

[§50133. Repealed. Pub. L. 115–10, title IV, §416(c), Mar. 21, 2017, 131 Stat. 35]

Section, Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3400, related to shuttle privatization.

§50134. Use of excess intercontinental ballistic missiles

(a) IN GENERAL.—The Federal Government shall not—

(1) convert any missile described in subsection (c) to a space transportation vehicle configuration; or

(2) transfer ownership of any such missile to another person, except as provided in subsection (b).

(b) AUTHORIZED FEDERAL USES.—

(1) IN GENERAL.—A missile described in subsection (c) may be converted for use as a space transportation vehicle by the Federal Government if, except as provided in paragraph (2) and at least 30 days before such conversion, the agency seeking to use the missile as a space transportation vehicle transmits to the Committee on Armed Services and the Committee on Science and Technology of the House of Representatives, and to the Committee on Armed Services and the Committee on Commerce, Science, and Transportation of the Senate, a certification that the use of such missile—

(A) would result in cost savings to the Federal Government when compared to the cost of acquiring space transportation services from United States commercial providers;

(B) meets all mission requirements of the agency, including performance, schedule, and risk requirements;

(C) is consistent with international obligations of the United States; and

(D) is approved by the Secretary of Defense or the designee of the Secretary of Defense.

(2) EXCEPTION TO REQUIREMENT THAT CERTIFICATION BE TRANSMITTED 30 DAYS BEFORE CONVERSION.—The requirement under paragraph (1) that the certification described in that paragraph must be transmitted at least 30 days before conversion of the missile shall not apply if the Secretary of Defense determines that compliance with that requirement would be inconsistent with meeting immediate national security requirements.

(c) MISSILES REFERRED TO.—The missiles referred to in this section are missiles owned by the United States that—

(1) were formerly used by the Department of Defense for national defense purposes as intercontinental ballistic missiles; and

(2) have been declared excess to United States national defense needs and are in compliance with international obligations of the United States.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3400.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
50134	42 U.S.C. 14734.	Pub. L. 105–303, title II, §205, Oct. 28, 1998, 112 Stat. 2857; Pub. L. 106–65, div. A, title X, §1067(21), Oct. 5, 1999, 113 Stat. 775.

In subsection (b)(1), in the matter before subparagraph (A), the words "Committee on Science and Technology" are substituted for "Committee on Science" on authority of Rule X(1)(o) of the Rules of the House of Representatives, adopted by House Resolution No. 6 (110th Congress, January 5, 2007).

STATUTORY NOTES AND RELATED SUBSIDIARIES

CHANGE OF NAME

Committee on Science and Technology of House of Representatives changed to Committee on Science, Space, and Technology of House of Representatives by House Resolution No. 5, One Hundred Twelfth Congress, Jan. 5, 2011.

CHAPTER 503—COMMERCIAL REUSABLE IN-SPACE TRANSPORTATION

Sec.
50301. Definitions.
50302. Loan guarantees for production of commercial reusable in-space transportation.

§50301. Definitions

In this chapter:

(1) COMMERCIAL PROVIDER.—The term "commercial provider" means any person or entity providing commercial reusable in-orbit space transportation services or systems, primary control of which is held by persons other than the Federal Government, a State or local government, or a foreign government.

(2) IN-SPACE TRANSPORTATION SERVICES.—The term "in-space transportation services" means operations and activities involved in the direct transportation or attempted transportation of a payload or object from one orbit to another by means of an in-space transportation vehicle.

(3) IN-SPACE TRANSPORTATION SYSTEM.—The term "in-space transportation system" means the space and ground elements, including in-space transportation vehicles and support space systems, and ground administration and control facilities and associated equipment, necessary for the provision of in-space transportation services.

(4) IN-SPACE TRANSPORTATION VEHICLE.—The term "in-space transportation vehicle" means a vehicle designed—

(A) to be based and operated in space;

(B) to transport various payloads or objects from one orbit to another orbit; and

(C) to be reusable and refueled in space.

(5) SECRETARY.—The term "Secretary" means the Secretary of Defense.

(6) UNITED STATES COMMERCIAL PROVIDER.—The term "United States commercial provider" means any commercial provider organized under the laws of the United States that is more than 50 percent owned by United States nationals.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3401.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
50301	42 U.S.C. 14753.	Pub. L. 107–248, title IX, §904, Oct. 23, 2002, 116 Stat. 1576.

STATUTORY NOTES AND RELATED SUBSIDIARIES

FINDINGS

Pub. L. 107–248, title IX, §902, Oct. 23, 2002, 116 Stat. 1573, provided that: "Congress makes the following findings:

"(1) It is in the national interest to encourage the production of cost-effective, in-space transportation systems, which would be built and operated by the private sector on a commercial basis.

"(2) The use of reusable in-space transportation systems will enhance performance levels of in-space operations, enhance efficient and safe disposal of satellites at the end of their useful lives, and increase the capability and reliability of existing ground-to-space launch vehicles.

"(3) Commercial reusable in-space transportation systems will enhance the economic well-being and national security of the United States by reducing space operations costs for commercial and national space programs and by adding new space capabilities to space operations.

"(4) Commercial reusable in-space transportation systems will provide new cost-effective space capabilities (including orbital transfers from low altitude orbits to high altitude orbits and return, the correction of erroneous satellite orbits, and the recovery, refurbishment, and refueling of satellites) and the provision of upper stage functions to increase ground-to-orbit launch vehicle payloads to geostationary and other high energy orbits.

"(5) Commercial reusable in-space transportation systems can enhance and enable the space exploration of the United States by providing lower cost trajectory injection from earth orbit, transit trajectory control, and planet arrival deceleration to support potential National Aeronautics and Space Administration missions to Mars, Pluto, and other planets.

"(6) Satellites stranded in erroneous earth orbit due to deficiencies in their launch represent substantial economic loss to the United States and present substantial concerns for the current backlog of national space assets.

"(7) Commercial reusable in-space transportation systems can provide new options for alternative planning approaches and risk management to enhance the mission assurance of national space assets.

"(8) Commercial reusable in-space transportation systems developed by the private sector can provide in-space transportation services to the National Aeronautics and Space Administration, the Department of Defense, the National Reconnaissance Office, and other agencies without the need for the United States to bear the cost of production of such systems.

"(9) The availability of loan guarantees, with the cost of credit risk to the United States paid by the private-sector, is an effective means by which the United States can help qualifying private-sector companies secure otherwise unattainable private financing for the production of commercial reusable in-space transportation systems, while at the same time minimizing Government commitment and involvement in the development of such systems."

§50302. Loan guarantees for production of commercial reusable in-space transportation

(a) AUTHORITY TO MAKE LOAN GUARANTEES.—The Secretary may guarantee loans made to eligible United States commercial providers for purposes of producing commercial reusable in-space transportation services or systems.

(b) ELIGIBLE UNITED STATES COMMERCIAL PROVIDERS.—The Secretary shall prescribe requirements for the eligibility of United States commercial providers for loan guarantees under this section. Such requirements shall ensure that eligible providers are financially capable of undertaking a loan guaranteed under this section.

(c) LIMITATION ON LOANS GUARANTEED.—The Secretary may not guarantee a loan for a United States commercial provider under this section unless the Secretary determines that credit would not otherwise be reasonably available at the time of the guarantee for the commercial reusable in-space transportation service or system to be produced utilizing the proceeds of the loan.

(d) CREDIT SUBSIDY.—

(1) COLLECTION REQUIRED.—The Secretary shall collect from each United States commercial provider receiving a loan guarantee under this section an amount equal to the amount, as determined by the Secretary, to cover the cost, as defined in section 502(5) of the Federal Credit Reform Act of 1990 (2 U.S.C. 661a(5)), of the loan guarantee.

(2) PERIODIC DISBURSEMENTS.—In the case of a loan guarantee in which proceeds of the loan are disbursed over time, the Secretary shall collect the amount required under this subsection on a pro rata basis, as determined by the Secretary, at the time of each disbursement.

(e) OTHER TERMS AND CONDITIONS.—

(1) PROHIBITION ON SUBORDINATION.—A loan guaranteed under this section may not be subordinated to another debt contracted by the United States commercial provider concerned, or to any other claims against such provider.

(2) RESTRICTION ON INCOME.—A loan guaranteed under this section may not—

(A) provide income which is excluded from gross income for purposes of chapter 1 of the Internal Revenue Code of 1986 (26 U.S.C. 1 et seq.); or

(B) provide significant collateral or security, as determined by the Secretary, for other obligations the income from which is so excluded.

(3) TREATMENT OF GUARANTEE.—The guarantee of a loan under this section shall be conclusive evidence of the following:

(A) That the guarantee has been properly obtained.

(B) That the loan qualifies for the guarantee.

(C) That, but for fraud or material misrepresentation by the holder of the loan, the guarantee is valid, legal, and enforceable.

(4) OTHER TERMS AND CONDITIONS.—The Secretary may establish any other terms and conditions for a guarantee of a loan under this section as the Secretary considers appropriate to protect the financial interests of the United States.

(f) ENFORCEMENT OF RIGHTS.—

(1) IN GENERAL.—The Attorney General may take any action the Attorney General considers appropriate to enforce any right accruing to the United States under a loan guarantee under this section.

(2) FORBEARANCE.—The Attorney General may, with the approval of the parties concerned, forbear from enforcing any right of the United States under a loan guaranteed under this section for the benefit of a United States commercial provider if such forbearance will not result in any cost, as defined in section 502(5) of the Federal Credit Reform Act of 1990 (2 U.S.C. 661a(5)), to the United States.

(3) UTILIZATION OF PROPERTY.—Notwithstanding any other provision of law and subject to the terms of a loan guaranteed under this section, upon the default of a United States commercial provider under the loan, the Secretary may, at the election of the Secretary—

(A) assume control of the physical asset financed by the loan; and

(B) complete, recondition, reconstruct, renovate, repair, maintain, operate, or sell the physical asset.

(g) CREDIT INSTRUMENTS.—

(1) AUTHORITY TO ISSUE INSTRUMENTS.—Notwithstanding any other provision of law, the Secretary may, subject to such terms and conditions as the Secretary considers appropriate, issue credit instruments to United States commercial providers of in-space transportation services or systems, with the aggregate cost (as determined under the provisions of the Federal Credit Reform Act of 1990 (2 U.S.C. 661 et seq.)) of such instruments not to exceed $1,500,000,000, but only to the extent that new budget authority to cover such costs is provided in subsequent appropriations Acts or authority is otherwise provided in subsequent appropriations Acts.

(2) CREDIT SUBSIDY.—The Secretary shall provide a credit subsidy for any credit instrument issued under this subsection in accordance with the provisions of the Federal Credit Reform Act of 1990 (2 U.S.C. 661 et seq.).

(3) CONSTRUCTION.—The eligibility of a United States commercial provider of in-space

transportation services or systems for a credit instrument under this subsection is in addition to any eligibility of such provider for a loan guarantee under other provisions of this section.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3402.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
50302	42 U.S.C. 14752.	Pub. L. 107–248, title IX, §903, Oct. 23, 2002, 116 Stat. 1574.

In subsection (f)(2), the word "forbear" is substituted for "forebear" to correct an error in the law.

In subsection (g)(1), the words "services or systems" are substituted for "services or system" to correct an error in the law.

EDITORIAL NOTES

REFERENCES IN TEXT

The Federal Credit Reform Act of 1990, referred to in subsec. (g)(1), (2), is title V of Pub. L. 93–344, as added by Pub. L. 101–508, title XIII, §13201(a), Nov. 5, 1990, 104 Stat. 1388–609, which is classified generally to subchapter III (§661 et seq.) of chapter 17A of Title 2, The Congress. For complete classification of this Act to the Code, see Short Title note set out under section 621 of Title 2 and Tables.

CHAPTER 505—COMMERCIAL SPACE COMPETITIVENESS

Sec.

50501. Definitions.
50502. Launch voucher demonstration program.
50503. Anchor tenancy and termination liability.
50504. Use of Government facilities.
50505. Test facilities.
50506. Commercial Space Achievement Award.

§50501. Definitions

In this chapter:

(1) AGENCY.—The term "agency" means an executive agency as defined in section 105 of title 5.

(2) ANCHOR TENANCY.—The term "anchor tenancy" means an arrangement in which the United States Government agrees to procure sufficient quantities of a commercial space product or service needed to meet Government mission requirements so that a commercial venture is made viable.

(3) COMMERCIAL.—The term "commercial" means having—

(A) private capital at risk; and

(B) primary financial and management responsibility for the activity reside with the private sector.

(4) COST EFFECTIVE.—The term "cost effective" means costing no more than the available alternatives, determined by a comparison of all related direct and indirect costs including, in the case of Government costs, applicable Government labor and overhead costs as well as contractor charges, and taking into account the ability of each alternative to accommodate mission requirements as well as the related factors of risk, reliability, schedule, and technical performance.

(5) LAUNCH.—The term "launch" means to place, or attempt to place, a launch vehicle and its

payload, if any, in a suborbital trajectory, in Earth orbit in outer space, or otherwise in outer space.

(6) LAUNCH SERVICES.—The term "launch services" means activities involved in the preparation of a launch vehicle and its payload for launch and the conduct of a launch.

(7) LAUNCH SUPPORT FACILITIES.—The term "launch support facilities" means facilities located at launch sites or launch ranges that are required to support launch activities, including launch vehicle assembly, launch vehicle operations and control, communications, flight safety functions, and payload operations, control, and processing.

(8) LAUNCH VEHICLE.—The term "launch vehicle" means any vehicle constructed for the purpose of operating in or placing a payload in outer space or in suborbital trajectories, and includes components of that vehicle.

(9) PAYLOAD.—The term "payload" means an object which a person undertakes to launch, and includes subcomponents of the launch vehicle specifically designed or adapted for that object.

(10) PAYLOAD INTEGRATION SERVICES.—The term "payload integration services" means activities involved in integrating multiple payloads into a single payload for launch or integrating a payload with a launch vehicle.

(11) SPACE RECOVERY SUPPORT FACILITIES.—The term "space recovery support facilities" means facilities required to support activities related to the recovery of payloads returned from space to a space recovery site, including operations and control, communications, flight safety functions, and payload processing.

(12) SPACE TRANSPORTATION INFRASTRUCTURE.—The term "space transportation infrastructure" means facilities, associated equipment, and real property (including launch sites, launch support facilities, space recovery sites, and space recovery support facilities) required to perform launch or space recovery activities.

(13) STATE.—The term "State" means the several States, the District of Columbia, Puerto Rico, American Samoa, the United States Virgin Islands, Guam, the Northern Mariana Islands, and any other commonwealth, territory, or possession of the United States.

(14) UNITED STATES.—The term "United States" means the States, collectively.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3404.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
50501	15 U.S.C. 5802.	Pub. L. 102–588, title V, §502, Nov. 4, 1992, 106 Stat. 5123.

STATUTORY NOTES AND RELATED SUBSIDIARIES

FINDINGS

Pub. L. 102–588, title V, §501, Nov. 4, 1992, 106 Stat. 5122, provided that: "The Congress finds that—

"(1) commercial activities of the private sector have substantially contributed to the strength of both the United States space program and the national economy;

"(2) a robust United States space transportation capability remains a vital cornerstone of the United States space program;

"(3) the availability of commercial launch services is essential for the continued growth of the United States commercial space sector;

"(4) a timely extension of the excess third party claims payment provisions of the Commercial Space Launch Act [now 51 U.S.C. 50901 et seq.] is appropriate and necessary to enable the private sector to continue covering maximum probable liability risks while protecting the private sector from uninsurable levels of liability which could hinder international competitiveness;

"(5) a program to demonstrate how recipients of Federal grants can purchase launch services directly from the private sector has the potential to improve the capabilities of the United States commercial launch industry;

"(6) improvements and additions to the Nation's space transportation infrastructure contribute to a

robust and cost effective space transportation capability for both public sector and private sector users;

"(7) private sector use of available Government facilities on a reimbursable basis contributes to a stronger commercial space sector;

"(8) the Federal Government should purchase space goods and services which are commercially available, or could be made available commercially in response to a Government procurement request, whenever such goods or services meet Government mission requirements in a cost effective manner;

"(9) it is appropriate for the Government to act as an anchor tenant for commercial space development projects which have a reasonable potential to develop non-Federal markets and which meet Federal needs in a cost effective manner; and

"(10) the provision of compensation to commercial providers of space goods and services for termination of contracts at the convenience of the Government assists in enabling the private sector to invest in space activities which are initially dependent on Government purchases."

[For definition of terms used in section 501 of Pub. L. 102–588, set out above, see section 502 of Pub. L. 102–588, title V, Nov. 4, 1992, 106 Stat. 5123, which was classified to former section 5802 of Title 15, Commerce and Trade, and was repealed and reenacted as this section by Pub. L. 111–314, §§3, 6, Dec. 18, 2010, 124 Stat. 3328, 3444.]

§50502. Launch voucher demonstration program

(a) REQUIREMENT TO ESTABLISH PROGRAM.—The Administrator shall establish a demonstration program to award vouchers for the payment of commercial launch services and payload integration services for the purpose of launching payloads funded by the Administration.

(b) AWARD OF VOUCHERS.—The Administrator shall award vouchers under subsection (a) to appropriate individuals as a part of grants administered by the Administration for the launch of—

(1) payloads to be placed in suborbital trajectories; and

(2) small payloads to be placed in orbit.

(c) ASSISTANCE.—The Administrator may provide voucher award recipients with such assistance (including contract formulation and technical support during the proposal evaluation) as may be necessary to ensure the purchase of cost effective and reasonably reliable commercial launch services and payload integration services.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3405.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
50502	15 U.S.C. 5803(a)–(c).	Pub. L. 102–588, title V, §504(a)–(c), Nov. 4, 1992, 106 Stat. 5124; Pub. L. 105–303, title I, §103, Oct. 28, 1998, 112 Stat. 2851.

In subsection (a), the words "to become effective October 1, 1993", which appeared at the end, are omitted as obsolete.

§50503. Anchor tenancy and termination liability

(a) ANCHOR TENANCY CONTRACTS.—Subject to appropriations, the Administrator or the Administrator of the National Oceanic and Atmospheric Administration may enter into multiyear anchor tenancy contracts for the purchase of a good or service if the appropriate Administrator determines that—

(1) the good or service meets the mission requirements of the Administration or the National Oceanic and Atmospheric Administration, as appropriate;

(2) the commercially procured good or service is cost effective;

(3) the good or service is procured through a competitive process;

(4) existing or potential customers for the good or service other than the United States Government have been specifically identified;

(5) the long-term viability of the venture is not dependent upon a continued Government market or other nonreimbursable Government support; and

(6) private capital is at risk in the venture.

(b) TERMINATION LIABILITY.—

(1) IN GENERAL.—Contracts entered into under subsection (a) may provide for the payment of termination liability in the event that the Government terminates such contracts for its convenience.

(2) FIXED SCHEDULE OF PAYMENTS AND LIMITATION ON LIABILITY.—Contracts that provide for the payment of termination liability, as described in paragraph (1), shall include a fixed schedule of such termination liability payments. Liability under such contracts shall not exceed the total payments which the Government would have made after the date of termination to purchase the good or service if the contract were not terminated.

(3) USE OF FUNDS.—Subject to appropriations, funds available for such termination liability payments may be used for purchase of the good or service upon successful delivery of the good or service pursuant to the contract. In such case, sufficient funds shall remain available to cover any remaining termination liability.

(c) LIMITATIONS.—

(1) DURATION.—Contracts entered into under this section shall not exceed 10 years in duration.

(2) FIXED PRICE.—Such contracts shall provide for delivery of the good or service on a firm, fixed price basis.

(3) PERFORMANCE SPECIFICATIONS.—To the extent practicable, reasonable performance specifications shall be used to define technical requirements in such contracts.

(4) FAILURE TO PERFORM.—In any such contract, the appropriate Administrator shall reserve the right to completely or partially terminate the contract without payment of such termination liability because of the contractor's actual or anticipated failure to perform its contractual obligations.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3405.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
50503	15 U.S.C. 5806.	Pub. L. 102–588, title V, §507, Nov. 4, 1992, 106 Stat. 5127.

§50504. Use of Government facilities

(a) AUTHORITY.—

(1) IN GENERAL.—Federal agencies, including the Administration and the Department of Defense, may allow non-Federal entities to use their space-related facilities on a reimbursable basis if the Administrator, the Secretary of Defense, or the appropriate agency head determines that—

(A) the facilities will be used to support commercial space activities;

(B) such use can be supported by existing or planned Federal resources;

(C) such use is compatible with Federal activities;

(D) equivalent commercial services are not available on reasonable terms; and

(E) such use is consistent with public safety, national security, and international treaty

obligations.

(2) CONSULTATION.—In carrying out paragraph (1)(E), each agency head shall consult with appropriate Federal officials.

(b) REIMBURSEMENT PAYMENT.—

(1) AMOUNT.—The reimbursement referred to in subsection (a) may be an amount equal to the direct costs (including salaries of United States civilian and contractor personnel) incurred by the United States as a result of the use of such facilities by the private sector. For the purposes of this paragraph, the term "direct costs" means the actual costs that can be unambiguously associated with such use, and would not be borne by the United States Government in the absence of such use.

(2) CREDIT TO APPROPRIATION.—The amount of any payment received by the United States for use of facilities under this subsection shall be credited to the appropriation from which the cost of providing such facilities was paid.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3406.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
50504	15 U.S.C. 5807.	Pub. L. 102–588, title V, §508, Nov. 4, 1992, 106 Stat. 5128.

§50505. Test facilities

(a) CHARGES.—The Administrator shall establish a policy of charging users of the Administration's test facilities for the costs associated with their tests at a level that is competitive with alternative test facilities. The Administrator shall not implement a policy of seeking full cost recovery for a facility until at least 30 days after transmitting a notice to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate.

(b) FUNDING ACCOUNT.—In planning and budgeting, the Administrator shall establish a funding account that shall be used for all test facilities. The account shall be sufficient to maintain the viability of test facilities during periods of low utilization.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3407.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
50505	42 U.S.C. 16634.	Pub. L. 109–155, title II, §205, Dec. 30, 2005, 119 Stat. 2916.

This section restates provisions originally enacted as part of the National Aeronautics and Space Administration Authorization Act of 2005 (Public Law 109–155, 119 Stat. 2895), and not as part of title V of the National Aeronautics and Space Administration Authorization Act, Fiscal Year 1993 (Public Law 102–588, 106 Stat. 5107), which is generally restated in this chapter.

In subsection (a), the words "Committee on Science and Technology" are substituted for "Committee on Science" on authority of Rule X(1)(o) of the Rules of the House of Representatives, adopted by House Resolution No. 6 (110th Congress, January 5, 2007).

STATUTORY NOTES AND RELATED SUBSIDIARIES

CHANGE OF NAME

Committee on Science and Technology of House of Representatives changed to Committee on Science, Space, and Technology of House of Representatives by House Resolution No. 5, One Hundred Twelfth Congress, Jan. 5, 2011.

§50506. Commercial Space Achievement Award

(a) ESTABLISHMENT.—There is established a Commercial Space Achievement Award. The award shall consist of a medal, which shall be of such design and materials and bear such inscriptions as determined by the Secretary of Commerce. A cash prize may also be awarded if funding for the prize is available under subsection (d).

(b) CRITERIA FOR AWARD.—The Secretary of Commerce shall periodically make awards under this section to individuals, corporations, corporate divisions, or corporate subsidiaries substantially engaged in commercial space activities that in the opinion of the Secretary of Commerce best meet the following criteria:

(1) NON-GOVERNMENTAL REVENUE.—For corporate entities, at least half of the revenues from the space-related activities of the corporation, division, or subsidiary is derived from sources other than the United States Government.

(2) SUBSTANTIAL CONTRIBUTION.—The activities and achievements of the individual, corporation, division, or subsidiary have substantially contributed to the United States gross national product and the stature of United States industry in international markets, with due consideration for both the economic magnitude and the technical quality of the activities and achievements.

(3) SUBSTANTIAL ADVANCEMENT OF TECHNOLOGY.—The individual, corporation, division, or subsidiary has substantially advanced space technology and space applications directly related to commercial space activities.

(c) LIMITATIONS.—No individual or corporate entity may receive an award under this section more than once every 5 years.

(d) FUNDING FOR AWARD.—The Secretary of Commerce may seek and accept gifts of money from public and private sources for the purpose of making cash prize awards under this section. Such money may be used only for that purpose, and only such money may be used for that purpose. The Secretary of Commerce shall make publicly available an itemized list of the sources of such funding.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3407.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
50506	15 U.S.C. 5808.	Pub. L. 102–588, title V, §510, Nov. 4, 1992, 106 Stat. 5129.

In subsection (b), in the matter before paragraph (1), the words "The Secretary of Commerce shall periodically make awards" are substituted for "The Secretary of Commerce shall periodically make, and the Chairman of the National Space Council shall present, awards" to eliminate obsolete language. The reference to the Chairman of the National Space Council is obsolete because the National Space Council (established by section 501 of the National Aeronautics and Space Administration Authorization Act, Fiscal Year 1989 (Public Law 100–685, 102 Stat. 4102)) has not functioned or been staffed since 1993.

CHAPTER 507—OFFICE OF SPACE COMMERCE

Sec.

50701. Definition of Office.

50702. Establishment.
50703. Annual report.

EDITORIAL NOTES

AMENDMENTS

2015—Pub. L. 114–90, title III, §301(a)(1), Nov. 25, 2015, 129 Stat. 720, substituted "COMMERCE" for "COMMERCIALIZATION" in chapter heading.

§50701. Definition of Office

In this chapter, the term "Office" means the Office of Space Commerce established in section 50702 of this title.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3408; Pub. L. 114–90, title III, §301(b), Nov. 25, 2015, 129 Stat. 720.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
50701	(no source)	

A chapter-wide definition for the term "Office" is added for clarity and convenience.

EDITORIAL NOTES

AMENDMENTS

2015—Pub. L. 114–90 substituted "Commerce" for "Commercialization".

§50702. Establishment

(a) IN GENERAL.—There is established within the Department of Commerce an Office of Space Commerce.

(b) DIRECTOR.—The Office shall be headed by a Director, who shall be a senior executive and shall be compensated at a level in the Senior Executive Service under section 5382 of title 5 as determined by the Secretary of Commerce.

(c) FUNCTIONS OF OFFICE.—The Office shall be the principal unit for the coordination of space-related issues, programs, and initiatives within the Department of Commerce, including—

(1) to foster the conditions for the economic growth and technological advancement of the United States space commerce industry;

(2) to coordinate space commerce policy issues and actions within the Department of Commerce;

(3) to represent the Department of Commerce in the development of United States policies and in negotiations with foreign countries to promote United States space commerce;

(4) to promote the advancement of United States geospatial technologies related to space commerce, in cooperation with relevant interagency working groups; and

(5) to provide support to Federal Government organizations working on Space-Based Positioning Navigation, and Timing policy, including the National Coordination Office for Space-Based Position,[1] Navigation, and Timing.

(d) DUTIES OF DIRECTOR.—The primary responsibilities of the Director in carrying out the functions of the Office shall include—

(1) promoting commercial provider investment in space activities by collecting, analyzing, and disseminating information on space markets, and conducting workshops and seminars to increase awareness of commercial space opportunities;

(2) assisting United States commercial providers in the efforts of those providers to conduct business with the United States Government;

(3) acting as an industry advocate within the executive branch of the Federal Government to ensure that the Federal Government meets the space-related requirements of the Federal Government, to the fullest extent feasible, using commercially available space goods and services;

(4) ensuring that the United States Government does not compete with United States commercial providers in the provision of space hardware and services otherwise available from United States commercial providers;

(5) promoting the export of space-related goods and services;

(6) representing the Department of Commerce in the development of United States policies and in negotiations with foreign countries to ensure free and fair trade internationally in the area of space commerce; and

(7) seeking the removal of legal, policy, and institutional impediments to space commerce.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3408; Pub. L. 114–90, title III, §§301(c), 302, Nov. 25, 2015, 129 Stat. 720.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
50702	15 U.S.C. 1511e.	Pub. L. 105–309, §8, Oct. 30, 1998, 112 Stat. 2937; Pub. L. 107–305, §14, Nov. 27, 2002, 116 Stat. 2380; Pub. L. 108–447, div. B, title II, Dec. 8, 2004, 118 Stat. 2878.

EDITORIAL NOTES

AMENDMENTS

2015—Subsec. (a). Pub. L. 114–90, §301(c), substituted "Space Commerce" for "Space Commercialization".

Subsec. (c). Pub. L. 114–90, §302, substituted "Commerce, including—" for "Commerce." and added pars. (1) to (5).

STATUTORY NOTES AND RELATED SUBSIDIARIES

COOPERATION WITH FORMER SOVIET REPUBLICS

Pub. L. 102–588, title II, §218, Nov. 4, 1992, 106 Stat. 5117, provided that:

"(a) REPORT TO CONGRESS.—Within one year after the date of enactment of this Act [Nov. 4, 1992], the President shall submit to Congress a report describing—

"(1) the opportunities for increased space related trade with the independent states of the former Soviet Union;

"(2) a technology procurement plan for identifying and evaluating all unique space hardware, space technology, and space services available to the United States from the independent states of the former Soviet Union, specifically including those technologies the National Aeronautics and Space Administration has identified as high priority in its Space Research and Technology Integrated Technology Plan.[;]

"(3) the trade missions carried out pursuant to subsection (c), including the private participation and the results of such missions;

"(4) the offices and accounts of the National Aeronautics and Space Administration to which expenses for either cooperative activities or procurement actions, involving the independent states of the former Soviet Union, are charged;

"(5) any barriers, regulatory or practical, that inhibit space-related trade between the United States and the independent states of the former Soviet Union, including such barriers in either the United States or the independent states; and

"(6) any anticompetitive issues raised by a potential acquisition.

"(b) NOTIFICATION TO CONGRESS.—If any United States Government agency denies a request for a license or other approval that may be necessary to conduct discussions on space-related matters with the independent states of the former Soviet Union, that agency shall immediately notify the Speaker of the House of Representatives and President of the Senate. Each such notification shall include a statement of the reasons for the denial.

"(c) ROLE OF THE OFFICE OF SPACE COMMERCE.—The Office of Space Commerce of the Department of Commerce is authorized and encouraged to conduct trade missions to appropriate independent states of the former Soviet Union for the purpose of familiarizing United States aerospace industry representatives with space hardware, space technologies, and space services that may be available from the independent states, and with the business practices and overall business climate in the independent states. The Office of Space Commerce shall also advise the Administrator [of the National Aeronautics and Space Administration] as to the impact on United States industry of each potential acquisition of space hardware, space technology, or space services from the independent states of the former Soviet Union, specifically including any anticompetitive issues the Office may observe."

[1] *So in original. Probably should be "Positioning,".*

§50703. Annual report

The Secretary of Commerce shall submit an annual report on the activities of the Office, including planned programs and expenditures, to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science and Technology of the House of Representatives.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3408.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
50703	15 U.S.C. 1535.	Pub. L. 101–611, title I, §115(b), Nov. 16, 1990, 104 Stat. 3201.

The words "The Secretary of Commerce shall submit an annual report" are substituted for "Commencing in fiscal year 1992, and every fiscal year thereafter, the Secretary of Commerce shall submit . . . a report" to eliminate unnecessary words.

The word "Office", meaning the Office of Space Commercialization, is substituted for "Office of Space Commerce" to correct an error in the law.

The words "Committee on Science and Technology" are substituted for "Committee on Science, Space, and Technology" on authority of section 1(a)(10) of Public Law 104–14 (2 U.S.C. note prec. 21), Rule X(1)(n) of the Rules of the House of Representatives, adopted by House Resolution No. 5 (106th Congress, January 6, 1999), and Rule X(1)(o) of the Rules of the House of Representatives, adopted by House Resolution No. 6 (110th Congress, January 5, 2007).

STATUTORY NOTES AND RELATED SUBSIDIARIES

CHANGE OF NAME

Committee on Science and Technology of House of Representatives changed to Committee on Science, Space, and Technology of House of Representatives by House Resolution No. 5, One Hundred Twelfth Congress, Jan. 5, 2011.

CHAPTER 509—COMMERCIAL SPACE LAUNCH ACTIVITIES

Sec.

50901. Findings and purposes.

50902. Definitions.
50903. General authority.
50904. Restrictions on launches, operations, and reentries.
50905. License applications and requirements.
50906. Experimental permits.
50907. Monitoring activities.
50908. Effective periods, and modifications, suspensions, and revocations, of licenses.
50909. Prohibition, suspension, and end of launches, operation of launch sites and reentry sites, and reentries.
50910. Preemption of scheduled launches or reentries.
50911. Space advertising.
50912. Administrative hearings and judicial review.
50913. Acquiring United States Government property and services.
50914. Liability insurance and financial responsibility requirements.
50915. Paying claims exceeding liability insurance and financial responsibility requirements.
50916. Disclosing information.
50917. Enforcement and penalty.
50918. Consultation.
50919. Relationship to other executive agencies, laws, and international obligations.
50920. User fees.
50921. Office of Commercial Space Transportation.
50922. Regulations.
50923. Report to Congress.
50924. Space launch and reentry licensing and permitting user fees.

EDITORIAL NOTES

AMENDMENTS

2025—Pub. L. 119–21, title IV, §40004(b), July 4, 2025, 139 Stat. 133, added item 50924.

2010—Pub. L. 111–314, §4(d)(2), (3), Dec. 18, 2010, 124 Stat. 3440, transferred analysis for chapter 701 of Title 49, Transportation, and renumbered as analysis for chapter 509 of this title and renumbered items 70101 to 70105, 70105a, 70106 to 70109, 70109a, and 70110 to 70121 as 50901 to 50923, respectively.

2004—Pub. L. 108–492, §2(c)(26), Dec. 23, 2004, 118 Stat. 3982, added item 70105a.

2000—Pub. L. 106–405, §3(b), Nov. 1, 2000, 114 Stat. 1752, substituted "Office of Commercial Space Transportation" for "Authorization of appropriations" in item 70119.

Pub. L. 106–391, title III, §322(d), Oct. 30, 2000, 114 Stat. 1598, added item 70109a.

1998—Pub. L. 105–303, title I, §102(a)(1), Oct. 28, 1998, 112 Stat. 2846, substituted "launches, operations, and reentries" for "launches and operations" in item 70104, "launches, operation of launch sites and reentry sites, and reentries" for "launches and operation of launch sites" in item 70108, inserted "or reentries" after "scheduled launches" in item 70109, and added items 70120 and 70121.

1994—Pub. L. 103–429, §6(78), Oct. 31, 1994, 108 Stat. 4388, made technical amendment to chapter heading.

§50901. Findings and purposes

(a) FINDINGS.—Congress finds that—

(1) the peaceful uses of outer space continue to be of great value and to offer benefits to all mankind;

(2) private applications of space technology have achieved a significant level of commercial and economic activity and offer the potential for growth in the future, particularly in the United States;

(3) new and innovative equipment and services are being sought, produced, and offered by entrepreneurs in telecommunications, information services, microgravity research, human space flight, and remote sensing technologies;

(4) the private sector in the United States has the capability of developing and providing private launching, reentry, and associated services that would complement the launching, reentry, and

associated capabilities of the United States Government;

(5) the development of commercial launch vehicles, reentry vehicles, and associated services would enable the United States to retain its competitive position internationally, contributing to the national interest and economic well-being of the United States;

(6) providing launch services and reentry services by the private sector is consistent with the national security and foreign policy interests of the United States and would be facilitated by stable, minimal, and appropriate regulatory guidelines that are fairly and expeditiously applied;

(7) the United States should encourage private sector launches, reentries, and associated services and, only to the extent necessary, regulate those launches, reentries, and services to ensure compliance with international obligations of the United States and to protect the public health and safety, safety of property, and national security and foreign policy interests of the United States;

(8) space transportation, including the establishment and operation of launch sites, reentry sites, and complementary facilities, the providing of launch services and reentry services, the establishment of support facilities, and the providing of support services, is an important element of the transportation system of the United States, and in connection with the commerce of the United States there is a need to develop a strong space transportation infrastructure with significant private sector involvement;

(9) the participation of State governments in encouraging and facilitating private sector involvement in space-related activity, particularly through the establishment of a space transportation-related infrastructure, including launch sites, reentry sites, complementary facilities, and launch site and reentry site support facilities, is in the national interest and is of significant public benefit;

(10) the goal of safely opening space to the American people and their private commercial, scientific, and cultural enterprises should guide Federal space investments, policies, and regulations;

(11) private industry has begun to develop commercial launch vehicles capable of carrying human beings into space and greater private investment in these efforts will stimulate the Nation's commercial space transportation industry as a whole;

(12) space transportation is inherently risky, and the future of the commercial human space flight industry will depend on its ability to continually improve its safety performance;

(13) a critical area of responsibility for the Department of Transportation is to regulate the operations and safety of the emerging commercial human space flight industry;

(14) the public interest is served by creating a clear legal, regulatory, and safety regime for commercial human space flight; and

(15) the regulatory standards governing human space flight must evolve as the industry matures so that regulations neither stifle technology development nor expose crew, government astronauts, or space flight participants to avoidable risks as the public comes to expect greater safety for crew, government astronauts, and space flight participants from the industry.

(b) PURPOSES.—The purposes of this chapter are—

(1) to promote economic growth and entrepreneurial activity through use of the space environment for peaceful purposes;

(2) to encourage the United States private sector to provide launch vehicles, reentry vehicles, and associated services by—

(A) simplifying and expediting the issuance and transfer of commercial licenses;

(B) facilitating and encouraging the use of Government-developed space technology; and

(C) promoting the continuous improvement of the safety of launch vehicles designed to carry humans, including through the issuance of regulations, to the extent permitted by this chapter;

(3) to provide that the Secretary of Transportation is to oversee and coordinate the conduct of commercial launch and reentry operations, issue permits and commercial licenses and transfer commercial licenses authorizing those operations, and protect the public health and safety, safety of property, and national security and foreign policy interests of the United States; and

(4) to facilitate the strengthening and expansion of the United States space transportation infrastructure, including the enhancement of United States launch sites and launch-site support facilities, and development of reentry sites, with Government, State, and private sector involvement, to support the full range of United States space-related activities.

(Pub. L. 103–272, §1(e), July 5, 1994, 108 Stat. 1330, §70101 of title 49; Pub. L. 105–303, title I, §102(a)(2), Oct. 28, 1998, 112 Stat. 2846; Pub. L. 108–492, §2(a), Dec. 23, 2004, 118 Stat. 3974; renumbered §70101 then §50901 of title 51, Pub. L. 111–314, §4(d)(2), (3)(A), Dec. 18, 2010, 124 Stat. 3440; Pub. L. 114–90, title I, §112(a), Nov. 25, 2015, 129 Stat. 711.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70101(a)	49 App.:2601.	Oct. 30, 1984, Pub. L. 98–575, §§2, 3, 98 Stat. 3055; Nov. 16, 1990, Pub. L. 101–611, §117(c), (d), 104 Stat. 3202.
70101(b)	49 App.:2602.	

In subsection (a), before clause (1), the words "and declares" are omitted as surplus.
In subsection (b), before clause (1), the word "therefore" is omitted as surplus.

EDITORIAL NOTES

AMENDMENTS

2015—Subsec. (a)(15). Pub. L. 114–90, which directed amendment of section "50901(15)" by inserting ", government astronauts," after "crew" wherever appearing, was executed by making the insertion in subsec. (a)(15) in two places, to reflect the probable intent of Congress.

2010—Pub. L. 111–314 successively renumbered section 70101 of title 49 and section 70101 of this title as this section.

2004—Subsec. (a)(3). Pub. L. 108–492, §2(a)(1), inserted "human space flight," after "microgravity research,".

Subsec. (a)(4). Pub. L. 108–492, §2(a)(2), struck out "satellite" after "providing private" and substituted "capabilities of" for "services now available from".

Subsec. (a)(10) to (15). Pub. L. 108–492, §2(a)(3)–(5), added pars. (10) to (15).

Subsec. (b)(2)(C). Pub. L. 108–492, §2(a)(6), added subpar. (C).

Subsec. (b)(3). Pub. L. 108–492, §2(a)(7), substituted "issue permits and commercial licenses and transfer" for "issue and transfer".

1998—Subsec. (a)(3). Pub. L. 105–303, §102(a)(2)(A), inserted "microgravity research," after "information services,".

Subsec. (a)(4). Pub. L. 105–303, §102(a)(2)(B), inserted ", reentry," after "launching" in two places.

Subsec. (a)(5). Pub. L. 105–303, §102(a)(2)(C), inserted ", reentry vehicles," after "launch vehicles".

Subsec. (a)(6). Pub. L. 105–303, §102(a)(2)(D), inserted "and reentry services" after "launch services".

Subsec. (a)(7). Pub. L. 105–303, §102(a)(2)(E), inserted ", reentries," after "launches" in two places.

Subsec. (a)(8). Pub. L. 105–303, §102(a)(2)(F), (G), inserted ", reentry sites," after "launch sites" and "and reentry services" after "launch services".

Subsec. (a)(9). Pub. L. 105–303, §102(a)(2)(H), (I), inserted "reentry sites," after "launch sites," and "and reentry site" after "launch site".

Subsec. (b)(2). Pub. L. 105–303, §102(a)(2)(J), inserted ", reentry vehicles," after "launch vehicles" in introductory provisions.

Subsec. (b)(2)(A). Pub. L. 105–303, §102(a)(2)(K), struck out "launch" before "licenses".

Subsec. (b)(3). Pub. L. 105–303, §102(a)(2)(L), (M), inserted "and reentry" after "conduct of commercial launch" and struck out "launch" before "licenses".

Subsec. (b)(4). Pub. L. 105–303, §102(a)(2)(N), inserted "and development of reentry sites," after "launch-site support facilities,".

STATUTORY NOTES AND RELATED SUBSIDIARIES

FINDINGS

Pub. L. 106–405, §2, Nov. 1, 2000, 114 Stat. 1751, provided that: "The Congress finds that—

"(1) a robust United States space transportation industry is vital to the Nation's economic well-being and national security;

"(2) enactment of a 5-year extension of the excess third party claims payment provision of [former] chapter 701 of title 49, United States Code [now 51 U.S.C. 50901 et seq.] (Commercial Space Launch Activities), will have a beneficial impact on the international competitiveness of the United States space transportation industry;

"(3) space transportation may evolve into airplane-style operations;

"(4) during the next 3 years the Federal Government and the private sector should analyze the liability risk-sharing regime to determine its appropriateness and effectiveness, and, if needed, develop and propose a new regime to Congress at least 2 years prior to the expiration of the extension contained in this Act [see Tables for classification];

"(5) the areas of responsibility of the Office of the Associate Administrator for Commercial Space Transportation have significantly increased as a result of—

"(A) the rapidly expanding commercial space transportation industry and associated government licensing requirements;

"(B) regulatory activity as a result of the emerging commercial reusable launch vehicle industry; and

"(C) the increased regulatory activity associated with commercial operation of launch and reentry sites; and

"(6) the Office of the Associate Administrator for Commercial Space Transportation should continue to limit its promotional activities to those which support its regulatory mission."

§50902. Definitions

In this chapter—

(1) "citizen of the United States" means—

(A) an individual who is a citizen of the United States;

(B) an entity organized or existing under the laws of the United States or a State; or

(C) an entity organized or existing under the laws of a foreign country if the controlling interest (as defined by the Secretary of Transportation) is held by an individual or entity described in subclause (A) or (B) of this clause.

(2) "crew" means any employee of a licensee or transferee, or of a contractor or subcontractor of a licensee or transferee, who performs activities in the course of that employment directly relating to the launch, reentry, or other operation of or in a launch vehicle or reentry vehicle that carries human beings.

(3) "executive agency" has the same meaning given that term in section 105 of title 5.

(4) "government astronaut" means an individual who—

(A) is designated by the National Aeronautics and Space Administration under section 20113(n);

(B) is carried within a launch vehicle or reentry vehicle in the course of his or her employment, which may include performance of activities directly relating to the launch, reentry, or other operation of the launch vehicle or reentry vehicle; and

(C) is either—

(i) an employee of the United States Government, including the uniformed services, engaged in the performance of a Federal function under authority of law or an Executive act; or

(ii) an international partner astronaut.

(5) "international partner astronaut" means an individual designated under Article 11 of the International Space Station Intergovernmental Agreement, by a partner to that agreement other

than the United States, as qualified to serve as an International Space Station crew member.

(6) "International Space Station Intergovernmental Agreement" means the Agreement Concerning Cooperation on the International Space Station, signed at Washington January 29, 1998 (TIAS 12927).

(7) "launch" means to place or try to place a launch vehicle or reentry vehicle and any payload or human being from Earth—

(A) in a suborbital trajectory;

(B) in Earth orbit in outer space; or

(C) otherwise in outer space,

including activities involved in the preparation of a launch vehicle or payload for launch, when those activities take place at a launch site in the United States.

(8) "launch property" means an item built for, or used in, the launch preparation or launch of a launch vehicle.

(9) "launch services" means—

(A) activities involved in the preparation of a launch vehicle, payload, crew (including crew training), government astronaut, or space flight participant for launch; and

(B) the conduct of a launch.

(10) "launch site" means the location on Earth from which a launch takes place (as defined in a license the Secretary issues or transfers under this chapter) and necessary facilities at that location.

(11) "launch vehicle" means—

(A) a vehicle built to operate in, or place a payload or human beings in, outer space; and

(B) a suborbital rocket.

(12) "obtrusive space advertising" means advertising in outer space that is capable of being recognized by a human being on the surface of the Earth without the aid of a telescope or other technological device.

(13) "payload" means an object that a person undertakes to place in outer space by means of a launch vehicle or reentry vehicle, including components of the vehicle specifically designed or adapted for that object.

(14) except in section 50904(c), "permit" means an experimental permit issued under section 50906.

(15) "person" means an individual and an entity organized or existing under the laws of a State or country.

(16) "reenter" and "reentry" mean to return or attempt to return, purposefully, a reentry vehicle and its payload or human beings, if any, from Earth orbit or from outer space to Earth.

(17) "reentry services" means—

(A) activities involved in the preparation of a reentry vehicle and payload, crew (including crew training), government astronaut, or space flight participant, if any, for reentry; and

(B) the conduct of a reentry.

(18) "reentry site" means the location on Earth to which a reentry vehicle is intended to return (as defined in a license the Secretary issues or transfers under this chapter).

(19) "reentry vehicle" means a vehicle designed to return from Earth orbit or outer space to Earth, or a reusable launch vehicle designed to return from Earth orbit or outer space to Earth, substantially intact.

(20) "space flight participant" means an individual, who is not crew or a government astronaut, carried within a launch vehicle or reentry vehicle.

(21) "space support vehicle flight" means a flight in the air that—

(A) is not a launch or reentry; but

(B) is conducted by a space support vehicle.

(22) "space support vehicle" means a vehicle that is—
(A) a launch vehicle;
(B) a reentry vehicle; or
(C) a component of a launch or reentry vehicle.

(23) "State" means a State of the United States, the District of Columbia, and a territory or possession of the United States.

(24) unless and until regulations take effect under section 50922(c)(2), "suborbital rocket" means a vehicle, rocket-propelled in whole or in part, intended for flight on a suborbital trajectory, and the thrust of which is greater than its lift for the majority of the rocket-powered portion of its ascent.

(25) "suborbital trajectory" means the intentional flight path of a launch vehicle, reentry vehicle, or any portion thereof, whose vacuum instantaneous impact point does not leave the surface of the Earth.

(26) "third party" means a person except—
(A) the United States Government or the Government's contractors or subcontractors involved in launch services or reentry services;
(B) a licensee or transferee under this chapter;
(C) a licensee's or transferee's contractors, subcontractors, or customers involved in launch services or reentry services;
(D) the customer's contractors or subcontractors involved in launch services or reentry services; or
(E) crew, government astronauts, or space flight participants.

(27) "United States" means the States of the United States, the District of Columbia, and the territories and possessions of the United States.

(Pub. L. 103–272, §1(e), July 5, 1994, 108 Stat. 1331, §70102 of title 49; Pub. L. 104–287, §5(92), Oct. 11, 1996, 110 Stat. 3398; Pub. L. 105–303, title I, §102(a)(3), Oct. 28, 1998, 112 Stat. 2846; Pub. L. 106–391, title III, §322(a), Oct. 30, 2000, 114 Stat. 1598; Pub. L. 108–492, §2(b), Dec. 23, 2004, 118 Stat. 3975; renumbered §70102 then §50902 of title 51 and amended Pub. L. 111–314, §4(d)(2), (3)(B), (5)(A), (B), Dec. 18, 2010, 124 Stat. 3440, 3441; Pub. L. 114–90, title I, §112(c), (e)–(j), Nov. 25, 2015, 129 Stat. 712, 713; Pub. L. 115–254, div. B, title V, §581(a), Oct. 5, 2018, 132 Stat. 3397.)

HISTORICAL AND REVISION NOTES
PUB. L. 103–272

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70102(1)	49 App.:2603(9).	Oct. 30, 1984, Pub. L. 98–575, §4(1)–(9), 98 Stat. 3056.
	49 App.:2603(12).	Oct. 30, 1984, Pub. L. 98–575, §4(12), 98 Stat. 3056; Nov. 15, 1988, Pub. L. 100–657, §3(2), 102 Stat. 3900.
70102(2)–(9)	49 App.:2603(1)–(8).	
70102(10)	49 App.:2603(10).	Oct. 30, 1984, Pub. L. 98–575, §4(10), 98 Stat. 3056; Nov. 15, 1988, Pub. L. 100–657, §3(1), 102 Stat. 3900.
70102(11)	49 App.:2603(11).	Oct. 30, 1984, Pub. L. 98–575, 98 Stat. 3055, §4(11); added Nov. 15, 1988, Pub. L. 100–657, §3(3), 102 Stat. 3900.
70102(12)	49 App.:2603(10).	

In this chapter, the word "country" is substituted for "nation" for consistency in the revised title and with other titles of the United States Code.

In clause (1), before subclause (A), the text of 49 App.:2603(9) is omitted as surplus because the complete name of the Secretary of Transportation is used the first time the term appears in a section. In subclauses (B) and (C), the words "corporation, partnership, joint venture, association, or other" are omitted as surplus. In subclause (C), the words "in regulations" and "in such entity" are omitted as surplus.

In clause (4), the words "propellants, launch vehicles and components thereof, and other physical" are omitted as surplus.

In clause (6), the words "includes all . . . located on a launch site which are . . . to conduct a launch" are omitted as surplus.

In clause (9), the words "corporation, partnership, joint venture, association, or other" are omitted as surplus.

Clauses (10) and (12) are substituted for 49 App.:2603(10) to eliminate unnecessary words.

In clause (11), before subclause (A), the words "or entity" are omitted as surplus. In subclause (A), the words "its agencies" are omitted as surplus.

PUB. L. 104–287

This amends 49:70102(6) to correct an error in the codification enacted by section 1 of the Act of July 5, 1994 (Public Law 103–272, 108 Stat. 1331).

EDITORIAL NOTES

AMENDMENTS

2018—Pars. (21) to (27). Pub. L. 115–254 added pars. (21) and (22) and redesignated former pars. (21) to (25) as (23) to (27), respectively.

2015—Pars. (4) to (6). Pub. L. 114–90, §112(c)(2), added pars. (4) to (6). Former pars. (4) to (6) redesignated (7) to (9), respectively.

Par. (7). Pub. L. 114–90, §112(c)(1), (e), redesignated par. (4) as (7) and substituted "and any payload or human being" for "and any payload, crew, or space flight participant" in introductory provisions. Former par. (7) redesignated (10).

Par. (8). Pub. L. 114–90, §112(c)(1), redesignated par. (5) as (8). Former par. (8) redesignated (11).

Par. (9). Pub. L. 114–90, §112(c)(1), (f), redesignated par. (6) as (9) and substituted "payload, crew (including crew training), government astronaut, or space flight participant" for "payload, crew (including crew training), or space flight participant" in subpar. (A). Former par. (9) redesignated (12).

Pars. (10) to (15). Pub. L. 114–90, §112(c)(1), redesignated pars. (7) to (12) as (10) to (15), respectively. Former pars. (10) to (15) redesignated (13) to (18), respectively.

Par. (16). Pub. L. 114–90, §112(c)(1), (g), redesignated par. (13) as (16) and substituted "and its payload or human beings, if any," for "and its payload, crew, or space flight participants, if any,". Former par. (16) redesignated (19).

Par. (17). Pub. L. 114–90, §112(c)(1), (h), redesignated par. (14) as (17) and substituted "payload, crew (including crew training), government astronaut, or space flight participant, if any," for "payload, crew (including crew training), or space flight participant, if any," in subpar. (A). Former par. (17) redesignated (20).

Pars. (18), (19). Pub. L. 114–90, §112(c)(1), redesignated pars. (15) and (16) as (18) and (19), respectively. Former pars. (18) and (19) redesignated (21) and (22), respectively.

Par. (20). Pub. L. 114–90, §112(c)(1), (i), redesignated par. (17) as (20) and amended it generally. Prior to amendment, par. (20) read as follows: " 'space flight participant' means an individual, who is not crew, carried within a launch vehicle or reentry vehicle."

Pars. (21) to (23). Pub. L. 114–90, §112(c)(1), redesignated pars. (18) to (20) as (21) to (23), respectively. Former pars. (21) and (22) redesignated (24) and (25), respectively.

Par. (24). Pub. L. 114–90, §112(c)(1), (j), redesignated par. (21) as (24) and inserted ", government astronauts," after "crew" in subpar. (E).

Par. (25). Pub. L. 114–90, §112(c)(1), redesignated par. (22) as (25).

2010—Pub. L. 111–314, §4(d)(2), (3)(B), successively renumbered section 70102 of title 49 and section 70102 of this title as this section.

Par. (11). Pub. L. 111–314, §4(d)(5)(A), substituted "section 50904(c)" for "section 70104(c)" and "section 50906" for "section 70105a".

Par. (19). Pub. L. 111–314, §4(d)(5)(B), substituted "section 50922(c)(2)" for "section 70120(c)(2)".

2004—Par. (2). Pub. L. 108–492, §2(b)(2), added par. (2). Former par. (2) redesignated (3).

Par. (3). Pub. L. 108–492, §2(b)(1), redesignated par. (2) as (3). Former par. (3) redesignated (4).

Par. (4). Pub. L. 108–492, §2(b)(1), (3), redesignated par. (3) as (4) and inserted ", crew, or space flight participant" after "any payload" in introductory provisions. Former par. (4) redesignated (5).

Par. (5). Pub. L. 108–492, §2(b)(1), redesignated par. (4) as (5). Former par. (5) redesignated (6).

Par. (6). Pub. L. 108–492, §2(b)(1), (4), redesignated par. (5) as (6) and substituted ", payload, crew (including crew training), or space flight participant" for "and payload" in subpar. (A). Former par. (6) redesignated (7).

Par. (7). Pub. L. 108–492, §2(b)(1), redesignated par. (6) as (7). Former par. (7) redesignated (8).

Par. (8). Pub. L. 108–492, §2(b)(1), (5), redesignated par. (7) as (8) and inserted "or human beings" after "place a payload" in subpar. (A). Former par. (8) redesignated (9).

Pars. (9), (10). Pub. L. 108–492, §2(b)(1), redesignated pars. (8) and (9) as (9) and (10), respectively. Former par. (10) redesignated (12).

Par. (11). Pub. L. 108–492, §2(b)(6), added par. (11). Former par. (11) redesignated (13).

Par. (12). Pub. L. 108–492, §2(b)(1), redesignated par. (10) as (12). Former par. (12) redesignated (14).

Par. (13). Pub. L. 108–492, §2(b)(1), (7), redesignated par. (11) as (13) and inserted "crew, or space flight participants," after "and its payload,". Former par. (13) redesignated (15).

Par. (14). Pub. L. 108–492, §2(b)(1), (8), redesignated par. (12) as (14) and substituted "and payload, crew (including crew training), or space flight participant" for "and its payload" in subpar. (A). Former par. (14) redesignated (16).

Pars. (15), (16). Pub. L. 108–492, §2(b)(1), redesignated pars. (13) and (14) as (15) and (16), respectively. Former pars. (15) and (16) redesignated (18) and (21), respectively.

Par. (17). Pub. L. 108–492, §2(b)(9), added par. (17). Former par. (17) redesignated (22).

Par. (18). Pub. L. 108–492, §2(b)(1), redesignated par. (15) as (18).

Pars. (19), (20). Pub. L. 108–492, §2(b)(10), added pars. (19) and (20).

Par. (21). Pub. L. 108–492, §2(b)(1), (11), redesignated par. (16) as (21) and added subpar. (E).

Par. (22). Pub. L. 108–492, §2(b)(1), redesignated par. (17) as (22).

2000—Pars. (8) to (17). Pub. L. 106–391 added par. (8) and redesignated former pars. (8) to (16) as (9) to (17), respectively.

1998—Par. (3). Pub. L. 105–303, §102(a)(3)(A), substituted "or reentry vehicle and any payload from Earth" for "and any payload" in introductory provisions and a comma for the period at end of subpar. (C) and inserted concluding provisions.

Par. (8). Pub. L. 105–303, §102(a)(3)(B), inserted "or reentry vehicle" after "means of a launch vehicle".

Pars. (10) to (13). Pub. L. 105–303, §102(a)(3)(D), added pars. (10) to (13). Former pars. (10) to (12) redesignated (14) to (16), respectively.

Par. (14). Pub. L. 105–303, §102(a)(3)(C), redesignated par. (10) as (14).

Par. (15). Pub. L. 105–303, §102(a)(3)(C), (E), redesignated par. (11) as (15) and inserted "or reentry services" after "launch services" wherever appearing.

Par. (16). Pub. L. 105–303, §102(a)(3)(C), redesignated par. (12) as (16).

1996—Par. (6). Pub. L. 104–287 substituted "facilities at that location" for "facilities".

STATUTORY NOTES AND RELATED SUBSIDIARIES

EFFECTIVE DATE OF 1996 AMENDMENT

Amendment by Pub. L. 104–287 effective July 5, 1994, see section 8(1) of Pub. L. 104–287, set out as a note under section 5303 of Title 49, Transportation.

§50903. General authority

(a) GENERAL.—The Secretary of Transportation shall carry out this chapter.

(b) FACILITATING COMMERCIAL LAUNCHES AND REENTRIES.—In carrying out this chapter, the Secretary shall—

(1) encourage, facilitate, and promote commercial space launches and reentries by the private sector, including those involving space flight participants; and

(2) take actions to facilitate private sector involvement in commercial space transportation

activity, and to promote public-private partnerships involving the United States Government, State governments, and the private sector to build, expand, modernize, or operate a space launch and reentry infrastructure.

(c) SAFETY.—In carrying out the responsibilities under subsection (b), the Secretary shall encourage, facilitate, and promote the continuous improvement of the safety of launch vehicles designed to carry humans, and the Secretary may, consistent with this chapter, promulgate regulations to carry out this subsection.

(d) EXECUTIVE AGENCY ASSISTANCE.—When necessary, the head of an executive agency shall assist the Secretary in carrying out this chapter.

(Pub. L. 103–272, §1(e), July 5, 1994, 108 Stat. 1332, §70103 of title 49; Pub. L. 105–303, title I, §102(a)(4), Oct. 28, 1998, 112 Stat. 2847; Pub. L. 108–492, §2(c)(1), (2), Dec. 23, 2004, 118 Stat. 3976; renumbered §70103 then §50903 of title 51, Pub. L. 111–314, §4(d)(2), (3)(C), Dec. 18, 2010, 124 Stat. 3440.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70103(a)	49 App.:2604(a) (1st–10th words).	Oct. 30, 1984, Pub. L. 98–575, §5(a) (1st–10th words, (b)), 98 Stat. 3057.
70103(b)	49 App.:2604(a) (11th–15th words, cls. (1), (3)).	Oct. 30, 1984, Pub. L. 98–575, §5(a) (11th–15th words, cls. (1), (3)), 98 Stat. 3057; Nov. 16, 1990, Pub. L. 101–611, §117(e)(1), (3), 104 Stat. 3203.
70103(c)	49 App.:2604(b).	

In subsection (a), the words "be responsible for" are omitted as surplus.

In subsection (c), the words "To the extent permitted by law" are omitted as surplus. The words "the head of an executive agency" are substituted for "Federal agencies" for consistency in the revised title and with other titles of the United States Code.

EDITORIAL NOTES

AMENDMENTS

2010—Pub. L. 111–314 successively renumbered section 70103 of title 49 and section 70103 of this title as this section.

2004—Subsec. (b)(1). Pub. L. 108–492, §2(c)(1), inserted ", including those involving space flight participants" after "private sector".

Subsecs. (c), (d). Pub. L. 108–492, §2(c)(2), added subsec. (c) and redesignated former subsec. (c) as (d).

1998—Subsec. (b). Pub. L. 105–303, §102(a)(4)(A), inserted "and Reentries" after "Launches" in heading.

Subsec. (b)(1). Pub. L. 105–303, §102(a)(4)(B), inserted "and reentries" after "commercial space launches".

Subsec. (b)(2). Pub. L. 105–303, §102(a)(4)(C), inserted "and reentry" after "space launch".

STATUTORY NOTES AND RELATED SUBSIDIARIES

LAUNCH SERVICES STRATEGY

Pub. L. 110–422, title VI, §621, Oct. 15, 2008, 122 Stat. 4801, provided that:

"(a) IN GENERAL.—In preparation for the award of contracts to follow up on the current NASA [National Aeronautics and Space Administration] Launch Services (NLS) contracts, the Administrator shall develop a strategy for providing domestic commercial launch services in support of NASA's small and medium-sized Science, Space Operations, and Exploration missions, consistent with current law and policy.

"(b) REPORT.—The Administrator [of NASA] shall transmit a report to the Committee on Science and Technology [now Committee on Science, Space, and Technology] of the House of Representatives and the

Committee on Commerce, Science, and Transportation of the Senate describing the strategy developed under subsection (a) not later than 90 days after the date of enactment of this Act [Oct. 15, 2008]. The report shall provide, at a minimum—

"(1) the results of the Request for Information on small to medium-sized launch services released on April 22, 2008;

"(2) an analysis of possible alternatives to maintain small and medium-sized lift capabilities after June 30, 2010, including the use of the Department of Defense's Evolved Expendable Launch Vehicle (EELV);

"(3) the recommended alternatives, and associated 5-year budget plans starting in October 2010 that would enable their implementation; and

"(4) a contingency plan in the event the recommended alternatives described in paragraph (3) are not available when needed."

EXECUTIVE DOCUMENTS

EX. ORD. NO. 12465. COORDINATION AND ENCOURAGEMENT OF COMMERCIAL EXPENDABLE LAUNCH VEHICLE ACTIVITIES

Ex. Ord. No. 12465, Feb. 24, 1984, 49 F.R. 7211, provided:

By the authority vested in me as President by the Constitution and laws of the United States of America, and in order to encourage, facilitate and coordinate the development of commercial expendable launch vehicle (ELV) operations by private United States enterprises, it is hereby ordered as follows:

SECTION 1. The Department of Transportation is designated as the lead agency within the Federal government for encouraging and facilitating commercial ELV activities by the United States private sector.

SEC. 2. *Responsibilities of Lead Agency*. The Secretary of Transportation shall, to the extent permitted by law and subject to the availability of appropriations, perform the following functions:

(a) act as a focal point within the Federal government for private sector space launch contacts related to commercial ELV operations;

(b) promote and encourage commercial ELV operations in the same manner that other private United States commercial enterprises are promoted by United States agencies;

(c) provide leadership in the establishment, within affected departments and agencies, of procedures that expedite the processing of private sector requests to obtain licenses necessary for commercial ELV launches and the establishment and operation of commercial launch ranges;

(d) consult with other affected agencies to promote consistent application of ELV licensing requirements for the private sector and assure fair and equitable treatment for all private sector applicants;

(e) serve as a single point of contact for collection and dissemination of documentation related to commercial ELV licensing applications;

(f) make recommendations to affected agencies and, as appropriate, to the President, concerning administrative measures to streamline Federal government procedures for licensing of commercial ELV activities;

(g) identify Federal statutes, treaties, regulations and policies which may have an adverse impact on ELV commercialization efforts and recommend appropriate changes to affected agencies and, as appropriate, to the President; and

(h) conduct appropriate planning regarding long-term effects of Federal activities related to ELV commercialization.

SEC. 3. An interagency group, chaired by the Secretary of Transportation and composed of representatives from the Department of State, the Department of Defense, the Department of Commerce, the Federal Communications Commission, and the National Aeronautics and Space Administration, is hereby established. This group shall meet at the call of the Chair and shall advise and assist the Department of Transportation in performing its responsibilities under this Order.

SEC. 4. *Responsibilities of Other Agencies*. All executive departments and agencies shall assist the Secretary of Transportation in carrying out this Order. To the extent permitted by law and in consultation with the Secretary of Transportation, they shall:

(a) provide the Secretary of Transportation with information concerning agency regulatory actions which may affect development of commercial ELV operations;

(b) review and revise their regulations and procedures to eliminate unnecessary regulatory obstacles to the development of commercial ELV operations and to ensure that those regulations and procedures found essential are administered as efficiently as possible; and

(c) establish timetables for the expeditious handling of and response to applications for licenses and approvals for commercial ELV activities.

SEC. 5. The powers granted to the Secretary of Transportation to encourage, facilitate and coordinate the overall ELV commercialization process shall not diminish or abrogate any statutory or operational authority exercised by any other Federal agency.

SEC. 6. Nothing contained in this Order or in any procedures promulgated hereunder shall confer any substantive or procedural right or privilege on any person or organization, enforceable against the United States, its agencies, its officers or any person.

SEC. 7. This Order shall be effective immediately.

RONALD REAGAN.

§50904. Restrictions on launches, operations, and reentries

(a) REQUIREMENT.—A license issued or transferred under this chapter, or a permit, is required for the following:

(1) for a person to launch a launch vehicle or to operate a launch site or reentry site, or to reenter a reentry vehicle, in the United States.

(2) for a citizen of the United States (as defined in section 50902(1)(A) or (B) of this title) to launch a launch vehicle or to operate a launch site or reentry site, or to reenter a reentry vehicle, outside the United States.

(3) for a citizen of the United States (as defined in section 50902(1)(C) of this title) to launch a launch vehicle or to operate a launch site or reentry site, or to reenter a reentry vehicle, outside the United States and outside the territory of a foreign country unless there is an agreement between the United States Government and the government of the foreign country providing that the government of the foreign country has jurisdiction over the launch or operation or reentry.

(4) for a citizen of the United States (as defined in section 50902(1)(C) of this title) to launch a launch vehicle or to operate a launch site or reentry site, or to reenter a reentry vehicle, in the territory of a foreign country if there is an agreement between the United States Government and the government of the foreign country providing that the United States Government has jurisdiction over the launch or operation or reentry.

Notwithstanding this subsection, a permit shall not authorize a person to operate a launch site or reentry site.

(b) COMPLIANCE WITH PAYLOAD REQUIREMENTS.—The holder of a license or permit under this chapter may launch or reenter a payload only if the payload complies with all requirements of the laws of the United States related to launching or reentering a payload.

(c) PREVENTING LAUNCHES AND REENTRIES.—The Secretary of Transportation shall establish whether all required licenses, authorizations, and permits required for a payload have been obtained. If no license, authorization, or permit is required, the Secretary may prevent the launch or reentry if the Secretary decides the launch or reentry would jeopardize the public health and safety, safety of property, or national security or foreign policy interest of the United States.

(d) SINGLE LICENSE OR PERMIT.—The Secretary of Transportation shall ensure that only 1 license or permit is required from the Department of Transportation to conduct activities involving crew, government astronauts, or space flight participants, including launch and reentry, for which a license or permit is required under this chapter. The Secretary shall ensure that all Department of Transportation regulations relevant to the licensed or permitted activity are satisfied.

(Pub. L. 103–272, §1(e), July 5, 1994, 108 Stat. 1332, §70104 of title 49; Pub. L. 105–303, title I, §102(a)(5), Oct. 28, 1998, 112 Stat. 2847; Pub. L. 108–492, §2(c)(3)–(5), Dec. 23, 2004, 118 Stat. 3976; renumbered §70104 then §50904 of title 51 and amended Pub. L. 111–314, §4(d)(2), (3)(D), (5)(C)–(E), Dec. 18, 2010, 124 Stat. 3440, 3441; Pub. L. 114–90, title I, §112(k), Nov. 25, 2015, 129 Stat. 713.)

HISTORICAL AND REVISION NOTES

Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70104(a)	49 App.:2605(a).	Oct. 30, 1984, Pub. L. 98–575, §6(a), (b), 98 Stat. 3057.
70104(b)	49 App.:2605(b)(1) (1st sentence).	
70104(c)	49 App.:2605(b)(1) (last sentence), (2).	

In subsection (a)(2)–(4), the cross-reference is to section 70102(1) of the revised title (restating 49 App.:2603(12)) rather than to section 70102(11) (restating 49 App.:2603(11)) to correct a mistake. Section 3(2) of the Commercial Space Launch Act Amendments of 1988 (Public Law 100–657, 102 Stat. 3900) redesignated 49 App.:2603(11) as 49 App.:2603(12) but did not amend the cross-reference in 49 App.:2605(a).

In subsection (a)(3) and (4), the words "the government of" are added for consistency in the revised title and with other titles of the United States Code. The words "in force" are omitted as surplus.

In subsection (a)(3), the words "at any place which is both" are omitted as surplus.

In subsection (a)(4), the text of 49 App.:2605(a)(3)(B)(i) is omitted as surplus.

In subsection (c), the words "by Federal law", "which is to be launched", "by any Federal law", "take such action under this chapter as the Secretary deems necessary to", and "of a payload by a holder of a launch license under this chapter" are omitted as surplus.

EDITORIAL NOTES

AMENDMENTS

2015—Subsec. (d). Pub. L. 114–90 substituted "activities involving crew, government astronauts, or space flight participants" for "activities involving crew or space flight participants".

2010—Pub. L. 111–314, §4(d)(2), (3)(D), successively renumbered section 70104 of title 49 and section 70104 of this title as this section.

Subsec. (a)(2). Pub. L. 111–314, §4(d)(5)(C), substituted "section 50902(1)(A) or (B)" for "section 70102(1)(A) or (B)".

Subsec. (a)(3). Pub. L. 111–314, §4(d)(5)(D), substituted "section 50902(1)(C)" for "section 70102(1)(C)".

Subsec. (a)(4). Pub. L. 111–314, §4(d)(5)(E), substituted "section 50902(1)(C)" for "section 70102(1)(C)".

2004—Subsec. (a). Pub. L. 108–492, §2(c)(3), substituted "Requirement" for "License Requirement" in heading and "A license issued or transferred under this chapter, or a permit," for "A license issued or transferred under this chapter" in introductory provisions and inserted concluding provisions.

Subsec. (b). Pub. L. 108–492, §2(c)(4), inserted "or permit" after "holder of a license".

Subsec. (d). Pub. L. 108–492, §2(c)(5), added subsec. (d).

1998—Pub. L. 105–303, §102(a)(5)(A), substituted "Restrictions on launches, operations, and reentries" for "Restrictions on launches and operations" in section catchline.

Subsec. (a)(1), (2). Pub. L. 105–303, §102(a)(5)(B), inserted "or reentry site, or to reenter a reentry vehicle," after "operate a launch site".

Subsec. (a)(3), (4). Pub. L. 105–303, §102(a)(5)(B), (C), inserted "or reentry site, or to reenter a reentry vehicle," after "operate a launch site" and "or reentry" after "launch or operation".

Subsec. (b). Pub. L. 105–303, §102(a)(5)(D), struck out "launch" before "license" and inserted "or reenter" after "may launch" and "or reentering" after "related to launching".

Subsec. (c). Pub. L. 105–303, §102(a)(5)(E), substituted "Preventing Launches and Reentries" for "Preventing Launches" in heading and inserted "or reentry" after "prevent the launch" and after "decides the launch" in second sentence.

§50905. License applications and requirements

(a) APPLICATIONS.—(1) A person may apply to the Secretary of Transportation for a license or transfer of a license under this chapter in the form and way the Secretary prescribes. Consistent with the public health and safety, safety of property, and national security and foreign policy interests of the United States, the Secretary, not later than 180 days after accepting an application in accordance

with criteria established pursuant to subsection (b)(2)(D),[1] shall issue or transfer a license if the Secretary decides in writing that the applicant complies, and will continue to comply, with this chapter and regulations prescribed under this chapter. The Secretary shall inform the applicant of any pending issue and action required to resolve the issue if the Secretary has not made a decision not later than 120 days after accepting an application in accordance with criteria established pursuant to subsection (b)(2)(D).[1] The Secretary shall transmit to the Committee on Science of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a written notice not later than 30 days after any occurrence when the Secretary has not taken action on a license application within the deadline established by this subsection.

(2) In carrying out paragraph (1), the Secretary may establish procedures for safety approvals of launch vehicles, reentry vehicles, safety systems, processes, services, or personnel (including approval procedures for the purpose of protecting the health and safety of crew, government astronauts, and space flight participants, to the extent permitted by subsections (b) and (c)) that may be used in conducting licensed commercial space launch or reentry activities.

(b) REQUIREMENTS.—(1) Except as provided in this subsection, all requirements of the laws of the United States applicable to the launch of a launch vehicle or the operation of a launch site or a reentry site, or the reentry of a reentry vehicle, are requirements for a license or permit under this chapter.

(2) The Secretary may prescribe—

(A) any term necessary to ensure compliance with this chapter, including on-site verification that a launch, operation, or reentry complies with representations stated in the application;

(B) any additional requirement necessary to protect the public health and safety, safety of property, national security interests, and foreign policy interests of the United States;

(C) by regulation that a requirement of a law of the United States not be a requirement for a license or permit if the Secretary, after consulting with the head of the appropriate executive agency, decides that the requirement is not necessary to protect the public health and safety, safety of property, and national security and foreign policy interests of the United States;

(D) additional license requirements, for a launch vehicle carrying a human being for compensation or hire, necessary to protect the health and safety of crew, government astronauts, or space flight participants, only if such requirements are imposed pursuant to final regulations issued in accordance with subsection (c); and

(E) regulations establishing criteria for accepting or rejecting an application for a license or permit under this chapter within 60 days after receipt of such application.

(3) The Secretary may waive a requirement, including the requirement to obtain a license, for an individual applicant if the Secretary decides that the waiver is in the public interest and will not jeopardize the public health and safety, safety of property, and national security and foreign policy interests of the United States. The Secretary may not grant a waiver under this paragraph that would permit the launch or reentry of a launch vehicle or a reentry vehicle without a license or permit if a human being will be on board.

(4) The holder of a license or a permit under this chapter may launch or reenter crew only if—

(A) the crew has received training and has satisfied medical or other standards specified in the license or permit in accordance with regulations promulgated by the Secretary;

(B) the holder of the license or permit has informed any individual serving as crew in writing, prior to executing any contract or other arrangement to employ that individual (or, in the case of an individual already employed as of the date of enactment of the Commercial Space Launch Amendments Act of 2004, as early as possible, but in any event prior to any launch in which the individual will participate as crew), that the United States Government has not certified the launch vehicle as safe for carrying crew or space flight participants; and

(C) the holder of the license or permit and crew have complied with all requirements of the laws of the United States that apply to crew.

(5) The holder of a license or a permit under this chapter may launch or reenter a space flight

participant only if—

(A) in accordance with regulations promulgated by the Secretary, the holder of the license or permit has informed the space flight participant in writing about the risks of the launch and reentry, including the safety record of the launch or reentry vehicle type, and the Secretary has informed the space flight participant in writing of any relevant information related to risk or probable loss during each phase of flight gathered by the Secretary in making the determination required by section 50914(a)(2) and (c);

(B) the holder of the license or permit has informed any space flight participant in writing, prior to receiving any compensation from that space flight participant or (in the case of a space flight participant not providing compensation) otherwise concluding any agreement to fly that space flight participant, that the United States Government has not certified the launch vehicle as safe for carrying crew or space flight participants;

(C) in accordance with regulations promulgated by the Secretary, the space flight participant has provided written informed consent to participate in the launch and reentry and written certification of compliance with any regulations promulgated under paragraph (6)(A); and

(D) the holder of the license or permit has complied with any regulations promulgated by the Secretary pursuant to paragraph (6).

(6)(A) The Secretary may issue regulations requiring space flight participants to undergo an appropriate physical examination prior to a launch or reentry under this chapter. This subparagraph shall cease to be in effect three years after the date of enactment of the Commercial Space Launch Amendments Act of 2004.

(B) The Secretary may issue additional regulations setting reasonable requirements for space flight participants, including medical and training requirements. Such regulations shall not be effective before the expiration of 3 years after the date of enactment of the Commercial Space Launch Amendments Act of 2004.

(c) SAFETY REGULATIONS.—

(1) IN GENERAL.—The Secretary may issue regulations governing the design or operation of a launch vehicle to protect the health and safety of crew, government astronauts, and space flight participants.

(2) REGULATIONS.—Regulations issued under this subsection shall—

(A) describe how such regulations would be applied when the Secretary is determining whether to issue a license under this chapter;

(B) apply only to launches in which a vehicle will be carrying a human being for compensation or hire;

(C) be limited to restricting or prohibiting design features or operating practices that—

(i) have resulted in a serious or fatal injury (as defined in 49 CFR 830, as in effect on November 10, 2004) to crew, government astronauts, or space flight participants during a licensed or permitted commercial human space flight; or

(ii) contributed to an unplanned event or series of events during a licensed or permitted commercial human space flight that posed a high risk of causing a serious or fatal injury (as defined in 49 CFR 830, as in effect on November 10, 2004) to crew, government astronauts, or space flight participants; and

(D) be issued with a description of the instance or instances when the design feature or operating practice being restricted or prohibited contributed to a result or event described in subparagraph (C).

(3) FACILITATION OF STANDARDS.—The Secretary shall continue to work with the commercial space sector, including the Commercial Space Transportation Advisory Committee, or its successor organization, to facilitate the development of voluntary industry consensus standards based on recommended best practices to improve the safety of crew, government astronauts, and space flight participants as the commercial space sector continues to mature.

(4) COMMUNICATION AND TRANSPARENCY.—Nothing in this subsection shall be construed to limit the authority of the Secretary to discuss potential regulatory approaches, potential performance standards, or any other topic related to this subsection with the commercial space industry, including observations, findings, and recommendations from the Commercial Space Transportation Advisory Committee, or its successor organization, prior to the issuance of a notice of proposed rulemaking. Such discussions shall not be construed to permit the Secretary to promulgate industry regulations except as otherwise provided in this section.

(5) INTERIM VOLUNTARY INDUSTRY CONSENSUS STANDARDS REPORTS.—

(A) IN GENERAL.—Not later than December 31, 2016, and every 30 months thereafter until December 31, 2021, the Secretary, in consultation and coordination with the commercial space sector, including the Commercial Space Transportation Advisory Committee, or its successor organization, shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives a report on the progress of the commercial space transportation industry in developing voluntary industry consensus standards that promote best practices to improve industry safety.

(B) CONTENTS.—The report shall include, at a minimum—

(i) any voluntary industry consensus standards that have been accepted by the industry at large;

(ii) the identification of areas that have the potential to become voluntary industry consensus standards that are currently under consideration by the industry at large;

(iii) an assessment from the Secretary on the general progress of the industry in adopting voluntary industry consensus standards;

(iv) any lessons learned about voluntary industry consensus standards, best practices, and commercial space launch operations;

(v) any lessons learned associated with the development, potential application, and acceptance of voluntary industry consensus standards, best practices, and commercial space launch operations; and

(vi) recommendations, findings, or observations from the Commercial Space Transportation Advisory Committee, or its successor organization, on the progress of the industry in developing voluntary industry consensus standards that promote best practices to improve industry safety.

(6) REPORT.—Not later than 270 days after the date of enactment of the SPACE Act of 2015, the Secretary, in consultation and coordination with the commercial space sector, including the Commercial Space Transportation Advisory Committee, or its successor organization, shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives a report specifying key industry metrics that might indicate readiness of the commercial space sector and the Department of Transportation to transition to a safety framework that may include regulations under paragraph (9) that considers space flight participant, government astronaut, and crew safety.

(7) REPORTS.—Not later than March 31 of each of 2018 and 2022, the Secretary, in consultation and coordination with the commercial space sector, including the Commercial Space Transportation Advisory Committee, or its successor organization, shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives a report that identifies the activities, described in this subsection and subsection (d) most appropriate for a new safety framework that may include regulatory action, if any, and a proposed transition plan for such safety framework.

(8) INDEPENDENT REVIEW.—Not later than December 31, 2022, an independent systems engineering and technical assistance organization or standards development organization contracted by the Secretary shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House

of Representatives an assessment of the readiness of the commercial space industry and the Federal Government to transition to a safety framework that may include regulations. As part of the review, the contracted organization shall evaluate—

(A) the progress of the commercial space industry in adopting voluntary industry consensus standards as reported by the Secretary in the interim assessments included in the reports under paragraph (5);

(B) the progress of the commercial space industry toward meeting the key industry metrics identified by the report under paragraph (6), including the knowledge and operational experience obtained by the commercial space industry while providing services for compensation or hire; and

(C) whether the areas identified in the reports under paragraph (5) are appropriate for regulatory action, or further development of voluntary industry consensus standards, considering the progress evaluated in subparagraphs (A) and (B) of this paragraph.

(9) LEARNING PERIOD.—Beginning on January 1, 2028, the Secretary may propose regulations under this subsection without regard to subparagraphs (C) and (D) of paragraph (2). The development of any such regulations shall take into consideration the evolving standards of the commercial space flight industry as identified in the reports published under paragraphs (5), (6), and (7).

(10) RULE OF CONSTRUCTION.—Nothing in this subsection shall be construed to limit the authority of the Secretary to issue requirements or regulations to protect the public health and safety, safety of property, national security interests, and foreign policy interests of the United States.

(d) PROCEDURES AND TIMETABLES.—The Secretary shall establish procedures and timetables that expedite review of a license or permit application and reduce the regulatory burden for an applicant.

(Pub. L. 103–272, §1(e), July 5, 1994, 108 Stat. 1333, §70105 of title 49; Pub. L. 105–303, title I, §102(a)(6), Oct. 28, 1998, 112 Stat. 2848; Pub. L. 108–492, §2(c)(6)–(15), Dec. 23, 2004, 118 Stat. 3976–3979; renumbered §70105 then §50905 of title 51 and amended Pub. L. 111–314, §4(d)(2), (3)(E), (5)(F), Dec. 18, 2010, 124 Stat. 3440, 3441; Pub. L. 112–95, title VIII, §827, Feb. 14, 2012, 126 Stat. 133; Pub. L. 114–55, title I, §102(e), Sept. 30, 2015, 129 Stat. 523; Pub. L. 114–90, title I, §§111, 112(l), Nov. 25, 2015, 129 Stat. 709, 713; Pub. L. 118–15, div. B, title II, §2202(k), Sept. 30, 2023, 137 Stat. 83; Pub. L. 118–34, title I, §102(k), Dec. 26, 2023, 137 Stat. 1114; Pub. L. 118–41, title I, §102(k), Mar. 8, 2024, 138 Stat. 22; Pub. L. 118–63, title XI, §1111, May 16, 2024, 138 Stat. 1419; Pub. L. 118–159, div. E, title LVII, §5702(1), Dec. 23, 2024, 138 Stat. 2461.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70105(a)	49 App.:2606 (1st sentence). 49 App.:2608(a) (1st sentence), (b) (1st, 3d, last sentences).	Oct. 30, 1984, Pub. L. 98–575, §§7 (1st sentence), 8, 9(a), (b), 98 Stat. 3058.
70105(b)(1)	49 App.:2607(a)(1).	
70105(b) (2)(A)	49 App.:2608(b) (2d sentence).	
70105(b) (2)(B)	49 App.:2607(b).	
70105(b) (2)(C)	49 App.:2607(a)(2).	
70105(b)(3)	49 App.:2607(c).	
70105(c)	49 App.:2608(a) (last sentence).	

In subsection (a), the words "for launching one or more launch vehicles or for operating one or more launch

sites, or both" in 49 App.:2606 are omitted as surplus.

In subsection (b)(2)(C), the words "that would otherwise apply to the launch of a launch vehicle or the operation of a launch site" are omitted as surplus. The words "the head of" are added for consistency in the revised title and with other titles of the United States Code.

EDITORIAL NOTES

REFERENCES IN TEXT

Subsection (b)(2)(D), referred to in subsec. (a)(1), was redesignated subsection (b)(2)(E) by Pub. L. 108–492, §2(c)(10), Dec. 23, 2004, 118 Stat. 3977.

The date of enactment of the Commercial Space Launch Amendments Act of 2004, referred to in subsec. (b)(4)(B), (6), is the date of enactment of Pub. L. 108–492, which was approved Dec. 23, 2004.

The date of enactment of the SPACE Act of 2015, referred to in subsec. (c)(6), is the date of enactment of title I of Pub. L. 114–90, which was approved Nov. 25, 2015.

AMENDMENTS

2024—Subsec. (c)(9). Pub. L. 118–159 substituted "January 1, 2028" for "January 1, 2025".

Pub. L. 118–63 substituted "January 1, 2025" for "May 11, 2024".

Pub. L. 118–41 substituted "May 11, 2024" for "March 9, 2024".

2023—Subsec. (c)(9). Pub. L. 118–34 substituted "March 9, 2024" for "January 1, 2024".

Pub. L. 118–15 substituted "January 1, 2024" for "October 1, 2023".

2015—Subsec. (a)(2). Pub. L. 114–90, §112(l)(1), substituted "crew, government astronauts, and space flight participants" for "crews and space flight participants".

Subsec. (b)(2)(D). Pub. L. 114–90, §112(l)(2), substituted "crew, government astronauts, or space flight participants" for "crew or space flight participants".

Subsec. (c)(1). Pub. L. 114–90, §§111(1), 112(l)(3)(A), inserted "IN GENERAL.—" before "The Secretary" and substituted "crew, government astronauts, and space flight participants" for "crew and space flight participants".

Subsec. (c)(2). Pub. L. 114–90, §111(2), inserted "REGULATIONS.—" before "Regulations" in introductory provisions.

Subsec. (c)(2)(C). Pub. L. 114–90, §112(l)(3)(B), substituted "to crew, government astronauts, or space flight participants" for "to crew or space flight participants" in cls. (i) and (ii).

Subsec. (c)(3). Pub. L. 114–90, §111(3), (5), added par. (3) and struck out former par. (3) which read as follows: "Beginning on April 1, 2016, the Secretary may propose regulations under this subsection without regard to paragraph (2)(C) and (D). Any such regulations shall take into consideration the evolving standards of safety in the commercial space flight industry."

Pub. L. 114–55 substituted "April 1, 2016," for "October 1, 2015,".

Subsec. (c)(4). Pub. L. 114–90, §111(5), added par. (4). Former par. (4) redesignated (10).

Subsec. (c)(5) to (9). Pub. L. 114–90, §111(5), added pars. (5) to (9).

Subsec. (c)(10). Pub. L. 114–90, §111(4), (6), redesignated par. (4) as (10) and inserted "RULE OF CONSTRUCTION.—" before "Nothing".

2012—Subsec. (c)(3). Pub. L. 112–95 substituted "Beginning on October 1, 2015," for "Beginning 8 years after the date of enactment of the Commercial Space Launch Amendments Act of 2004,".

2010—Pub. L. 111–314, §4(d)(2), (3)(E), successively renumbered section 70105 of title 49 and section 70105 of this title as this section.

Subsec. (b)(5)(A). Pub. L. 111–314, §4(d)(5)(F), substituted "section 50914(a)(2) and (c)" for "section 70112(a)(2) and (c)".

2004—Subsec. (a)(1). Pub. L. 108–492, §2(c)(6)(A), substituted "the Secretary has not taken action on a license application" for "a license is not issued".

Subsec. (a)(2). Pub. L. 108–492, §2(c)(6)(B), inserted "(including approval procedures for the purpose of protecting the health and safety of crews and space flight participants, to the extent permitted by subsections (b) and (c))" after "or personnel".

Subsec. (b)(1). Pub. L. 108–492, §2(c)(7), inserted "or permit" after "for a license".

Subsec. (b)(2)(B). Pub. L. 108–492, §2(c)(8), substituted "any" for "an".

Subsec. (b)(2)(C). Pub. L. 108–492, §2(c)(9), inserted "or permit" after "for a license" and struck out "and" at end.

Subsec. (b)(2)(D). Pub. L. 108–492, §2(c)(10), added subpar. (D). Former subpar. (D) redesignated (E).

Subsec. (b)(2)(E). Pub. L. 108–492, §2(c)(10), (11), redesignated subpar. (D) as (E) and inserted "or

permit" after "for a license".

Subsec. (b)(3). Pub. L. 108–492, §2(c)(12), inserted at end "The Secretary may not grant a waiver under this paragraph that would permit the launch or reentry of a launch vehicle or a reentry vehicle without a license or permit if a human being will be on board."

Subsec. (b)(4) to (6). Pub. L. 108–492, §2(c)(13), added pars. (4) to (6).

Subsec. (c). Pub. L. 108–492, §2(c)(14), added subsec. (c). Former subsec. (c) redesignated (d).

Subsec. (d). Pub. L. 108–492, §2(c)(14), (15), redesignated subsec. (c) as (d) and inserted "or permit" after "of a license".

1998—Subsec. (a). Pub. L. 105–303, §102(a)(6)(B), substituted "accepting an application in accordance with criteria established pursuant to subsection (b)(2)(D)" for "receiving an application" in two places.

Pub. L. 105–303, §102(a)(6)(A), (C), designated existing provisions as par. (1), inserted "The Secretary shall transmit to the Committee on Science of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a written notice not later than 30 days after any occurrence when a license is not issued within the deadline established by this subsection." at end of par. (1), and added par. (2).

Subsec. (b)(1). Pub. L. 105–303, §102(a)(6)(D), inserted "or a reentry site, or the reentry of a reentry vehicle," after "operation of a launch site".

Subsec. (b)(2)(A). Pub. L. 105–303, §102(a)(6)(E), substituted ", operation, or reentry" for "or operation".

Subsec. (b)(2)(D). Pub. L. 105–303, §102(a)(6)(F)–(H), added subpar. (D).

Subsec. (b)(3). Pub. L. 105–303, §102(a)(6)(I), inserted ", including the requirement to obtain a license," after "waive a requirement".

STATUTORY NOTES AND RELATED SUBSIDIARIES

CHANGE OF NAME

Committee on Science of House of Representatives changed to Committee on Science and Technology of House of Representatives by House Resolution No. 6, One Hundred Tenth Congress, Jan. 5, 2007. Committee on Science and Technology of House of Representatives changed to Committee on Science, Space, and Technology of House of Representatives by House Resolution No. 5, One Hundred Twelfth Congress, Jan. 5, 2011.

[1] *See References in Text note below.*

§50906. Experimental permits

(a) A person may apply to the Secretary of Transportation for an experimental permit under this section in the form and manner the Secretary prescribes. Consistent with the protection of the public health and safety, safety of property, and national security and foreign policy interests of the United States, the Secretary, not later than 120 days after receiving an application pursuant to this section, shall issue a permit if the Secretary decides in writing that the applicant complies, and will continue to comply, with this chapter and regulations prescribed under this chapter. The Secretary shall inform the applicant of any pending issue and action required to resolve the issue if the Secretary has not made a decision not later than 90 days after receiving an application. The Secretary shall transmit to the Committee on Science of the House of Representatives and Committee on Commerce, Science, and Transportation of the Senate a written notice not later than 15 days after any occurrence when the Secretary has failed to act on a permit within the deadline established by this section.

(b) In carrying out subsection (a), the Secretary may establish procedures for safety approvals of launch vehicles, reentry vehicles, safety systems, processes, services, or personnel that may be used in conducting commercial space launch or reentry activities pursuant to a permit.

(c) In order to encourage the development of a commercial space flight industry, the Secretary may when issuing permits use the authority granted under section 50905(b)(2)(C).

(d) The Secretary may issue a permit only for reusable suborbital rockets or reusable launch vehicles that will be launched into a suborbital trajectory or reentered under that permit solely for—

(1) research and development to test design concepts, equipment, or operating techniques;

(2) showing compliance with requirements as part of the process for obtaining a license under

this chapter; or

(3) crew training for a launch or reentry using the design of the rocket or vehicle for which the permit would be issued.

(e) Permits issued under this section shall—

(1) authorize an unlimited number of launches and reentries for a particular suborbital rocket or suborbital rocket design, or for a particular reusable launch vehicle or reusable launch vehicle design, for the uses described in subsection (d); and

(2) specify the type of modifications that may be made to the suborbital rocket or launch vehicle without changing the design to an extent that would invalidate the permit.

(f) Permits shall not be transferable.

(g) The Secretary may issue a permit under this section notwithstanding any license issued under this chapter. The issuance of a license under this chapter may not invalidate a permit issued under this section.

(h) No person may operate a reusable suborbital rocket or reusable launch vehicle under a permit for carrying any property or human being for compensation or hire.

(i) For the purposes of sections 50907, 50908, 50909, 50910, 50912, 50914, 50917, 50918, 50919, and 50923 of this chapter—

(1) a permit shall be considered a license;

(2) the holder of a permit shall be considered a licensee;

(3) a vehicle operating under a permit shall be considered to be licensed; and

(4) the issuance of a permit shall be considered licensing.

This subsection shall not be construed to allow the transfer of a permit.

(Added Pub. L. 108–492, §2(c)(16), Dec. 23, 2004, 118 Stat. 3979, §70105a of title 49; renumbered §70105a then §50906 of title 51 and amended Pub. L. 111–314, §4(d)(2), (3)(F), (5)(G), (H), Dec. 18, 2010, 124 Stat. 3440–3442; Pub. L. 114–90, title I, §104, Nov. 25, 2015, 129 Stat. 706.)

EDITORIAL NOTES

AMENDMENTS

2015—Subsec. (d). Pub. L. 114–90, §104(1)(A), substituted "or reusable launch vehicles that will be launched into a suborbital trajectory or reentered under that permit" for "that will be launched or reentered" in introductory provisions.

Subsec. (d)(1). Pub. L. 114–90, §104(1)(B), amended par. (1) generally. Prior to amendment, par. (1) read as follows: "research and development to test new design concepts, new equipment, or new operating techniques;".

Subsec. (d)(3). Pub. L. 114–90, §104(1)(C), struck out "prior to obtaining a license" after "crew training" and inserted "or vehicle" after "design of the rocket".

Subsec. (e)(1). Pub. L. 114–90, §104(2)(A), substituted "suborbital rocket or suborbital rocket design, or for a particular reusable launch vehicle or reusable launch vehicle design," for "suborbital rocket design".

Subsec. (e)(2). Pub. L. 114–90, §104(2)(B), inserted "or launch vehicle" after "the suborbital rocket".

Subsec. (g). Pub. L. 114–90, §104(3), amended subsec. (g) generally. Prior to amendment, subsec. (g) read as follows: "A permit may not be issued for, and a permit that has already been issued shall cease to be valid for, a particular design for a reusable suborbital rocket after a license has been issued for the launch or reentry of a rocket of that design."

Subsec. (h). Pub. L. 114–90, §104(4), inserted "or reusable launch vehicle" after "suborbital rocket".

2010—Pub. L. 111–314, §4(d)(2), (3)(F), successively renumbered section 70105a of title 49 and section 70105a of this title as this section.

Subsec. (c). Pub. L. 111–314, §4(d)(5)(G), substituted "section 50905(b)(2)(C)" for "section 70105(b)(2)(C)".

Subsec. (i). Pub. L. 111–314, §4(d)(5)(H), substituted "sections 50907, 50908, 50909, 50910, 50912, 50914, 50917, 50918, 50919, and 50923" for "sections 70106, 70107, 70108, 70109, 70110, 70112, 70115, 70116, 70117, and 70121" in introductory provisions.

STATUTORY NOTES AND RELATED SUBSIDIARIES

CHANGE OF NAME

Committee on Science of House of Representatives changed to Committee on Science and Technology of House of Representatives by House Resolution No. 6, One Hundred Tenth Congress, Jan. 5, 2007. Committee on Science and Technology of House of Representatives changed to Committee on Science, Space, and Technology of House of Representatives by House Resolution No. 5, One Hundred Twelfth Congress, Jan. 5, 2011.

§50907. Monitoring activities

(a) GENERAL REQUIREMENTS.—A licensee under this chapter must allow the Secretary of Transportation to place an officer or employee of the United States Government or another individual as an observer at a launch site or reentry site the licensee uses, at a production facility or assembly site a contractor of the licensee uses to produce or assemble a launch vehicle or reentry vehicle, at a site not owned or operated by the Federal Government or a foreign government used for crew, government astronaut, or space flight participant training, or at a site at which a payload is integrated with a launch vehicle or reentry vehicle. The observer will monitor the activity of the licensee or contractor at the time and to the extent the Secretary considers reasonable to ensure compliance with the license or to carry out the duties of the Secretary under sections 50904(c), 50905, and 50906 of this title. A licensee must cooperate with an observer carrying out this subsection.

(b) CONTRACTS.—To the extent provided in advance in an appropriation law, the Secretary may make a contract with a person to carry out subsection (a) of this section.

(Pub. L. 103–272, §1(e), July 5, 1994, 108 Stat. 1334, §70106 of title 49; Pub. L. 105–303, title I, §102(a)(7), Oct. 28, 1998, 112 Stat. 2848; Pub. L. 108–492, §2(c)(17), Dec. 23, 2004, 118 Stat. 3980; renumbered §70106 then §50907 of title 51 and amended Pub. L. 111–314, §4(d)(2), (3)(G), (5)(I), Dec. 18, 2010, 124 Stat. 3440–3442; Pub. L. 114–90, title I, §112(m), Nov. 25, 2015, 129 Stat. 713.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70106(a)	49 App.:2613(a).	Oct. 30, 1984, Pub. L. 98–575, §14, 98 Stat. 3060.
70106(b)	49 App.:2613(b).	

In subsection (a), the word "duties" is substituted for "responsibilities" for consistency in the revised title and with other titles of the United States Code.

EDITORIAL NOTES

AMENDMENTS

2015—Subsec. (a). Pub. L. 114–90 substituted "at a site not owned or operated by the Federal Government or a foreign government used for crew, government astronaut, or space flight participant training" for "at a site used for crew or space flight participant training".

2010—Pub. L. 111–314, §4(d)(2), (3)(G), successively renumbered section 70106 of title 49 and section 70106 of this title as this section.

Subsec. (a). Pub. L. 111–314, §4(d)(5)(I), substituted "sections 50904(c), 50905, and 50906" for "sections 70104(c), 70105, and 70105a".

2004—Subsec. (a). Pub. L. 108–492 inserted "at a site used for crew or space flight participant training," after "assemble a launch vehicle or reentry vehicle," and substituted "sections 70104(c), 70105, and 70105a"

for "section 70104(c)".

1998—Subsec. (a). Pub. L. 105–303, in first sentence, inserted "or reentry site" after "observer at a launch site" and "or reentry vehicle" after "assemble a launch vehicle" and after "with a launch vehicle".

§50908. Effective periods, and modifications, suspensions, and revocations, of licenses

(a) EFFECTIVE PERIODS OF LICENSES.—The Secretary of Transportation shall specify the period for which a license issued or transferred under this chapter is in effect.

(b) MODIFICATIONS.—(1) On the initiative of the Secretary or on application of the licensee, the Secretary may modify a license issued or transferred under this chapter if the Secretary decides the modification will comply with this chapter.

(2) The Secretary shall modify a license issued or transferred under this chapter whenever a modification is needed for the license to be in conformity with a regulation that was issued pursuant to section 50905(c) after the issuance of the license. This paragraph shall not apply to permits.

(c) SUSPENSIONS AND REVOCATIONS.—The Secretary may suspend or revoke a license if the Secretary decides that—

(1) the licensee has not complied substantially with a requirement of this chapter or a regulation prescribed under this chapter; or

(2) the suspension or revocation is necessary to protect the public health and safety, the safety of property, or a national security or foreign policy interest of the United States.

(d) ADDITIONAL SUSPENSIONS.—(1) The Secretary may suspend a license when a previous launch or reentry under the license has resulted in a serious or fatal injury (as defined in 49 CFR 830, as in effect on November 10, 2004) to any human being and the Secretary has determined that continued operations under the license are likely to cause additional serious or fatal injury (as defined in 49 CFR 830, as in effect on November 10, 2004) to any human being.

(2) Any suspension imposed under this subsection shall be for as brief a period as possible and, in any event, shall cease when the Secretary—

(A) has determined that the licensee has taken sufficient steps to reduce the likelihood of a recurrence of the serious or fatal injury; or

(B) has modified the license pursuant to subsection (b) to sufficiently reduce the likelihood of a recurrence of the serious or fatal injury.

(3) This subsection shall not apply to permits.

(e) EFFECTIVE PERIODS OF MODIFICATIONS, SUSPENSIONS, AND REVOCATIONS .—Unless the Secretary specifies otherwise, a modification, suspension, or revocation under this section takes effect immediately and remains in effect during a review under section 50912 of this title.

(f) NOTIFICATION.—The Secretary shall notify the licensee in writing of the decision of the Secretary under this section and any action the Secretary takes or proposes to take based on the decision.

(Pub. L. 103–272, §1(e), July 5, 1994, 108 Stat. 1334, §70107 of title 49; Pub. L. 108–492, §2(c)(18), (19), Dec. 23, 2004, 118 Stat. 3980; renumbered §70107 then §50908 of title 51 and amended Pub. L. 111–314, §4(d)(2), (3)(H), (5)(J), (K), Dec. 18, 2010, 124 Stat. 3440–3442; Pub. L. 114–90, title I, §112(n), Nov. 25, 2015, 129 Stat. 713.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70107(a)	49 App.:2606 (last sentence).	Oct. 30, 1984, Pub. L. 98–575, §§7 (last sentence), 10, 98 Stat. 3058,

		3059.
70107(b)	49 App.:2609(b).	
70107(c)	49 App.:2609(a).	
70107(d)	49 App.:2609(c).	
70107(e)	49 App.:2609(d).	

In subsection (a), the words "of time" and "in accordance with regulations issued under this chapter" are omitted as surplus.

In subsection (b), the words "the requirements of" are omitted as surplus.

In subsection (e), the words "Whenever the Secretary takes any action" are omitted as surplus.

EDITORIAL NOTES

AMENDMENTS

2015—Subsec. (d)(1). Pub. L. 114–90 substituted "to any human being" for "to crew or space flight participants" in two places.

2010—Pub. L. 111–314, §4(d)(2), (3)(H), successively renumbered section 70107 of title 49 and section 70107 of this title as this section.

Subsec. (b)(2). Pub. L. 111–314, §4(d)(5)(J), substituted "section 50905(c)" for "section 70105(c)".

Subsec. (e). Pub. L. 111–314, §4(d)(5)(K), substituted "section 50912" for "section 70110".

2004—Subsec. (b). Pub. L. 108–492, §2(c)(18), designated existing text as par. (1) and added par. (2).

Subsecs. (d) to (f). Pub. L. 108–492, §2(c)(19), added subsec. (d) and redesignated former subsecs. (d) and (e) as (e) and (f), respectively.

§50909. Prohibition, suspension, and end of launches, operation of launch sites and reentry sites, and reentries

(a) GENERAL AUTHORITY.—The Secretary of Transportation may prohibit, suspend, or end immediately the launch of a launch vehicle or the operation of a launch site or reentry site, or reentry of a reentry vehicle, licensed under this chapter if the Secretary decides the launch or operation or reentry is detrimental to the public health and safety, the safety of property, or a national security or foreign policy interest of the United States.

(b) EFFECTIVE PERIODS OF ORDERS.—An order under this section takes effect immediately and remains in effect during a review under section 50912 of this title.

(Pub. L. 103–272, §1(e), July 5, 1994, 108 Stat. 1334, §70108 of title 49; Pub. L. 105–303, title I, §102(a)(8), Oct. 28, 1998, 112 Stat. 2848; renumbered §70108 then §50909 of title 51 and amended Pub. L. 111–314, §4(d)(2), (3)(I), (5)(L), Dec. 18, 2010, 124 Stat. 3440–3442.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70108(a)	49 App.:2610(a).	Oct. 30, 1984, Pub. L. 98–575, §11, 98 Stat. 3059.
70108(b)	49 App.:2610(b).	

EDITORIAL NOTES

AMENDMENTS

2010—Pub. L. 111–314, §4(d)(2), (3)(I), successively renumbered section 70108 of title 49 and section 70108 of this title as this section.

Subsec. (b). Pub. L. 111–314, §4(d)(5)(L), substituted "section 50912" for "section 70110".

1998—Pub. L. 105–303, §102(a)(8)(A), substituted "Prohibition, suspension, and end of launches,

operation of launch sites and reentry sites, and reentries" for "Prohibition, suspension, and end of launches and operation of launch sites" in section catchline.

Subsec. (a). Pub. L. 105–303, §102(a)(8)(B), inserted "or reentry site, or reentry of a reentry vehicle," after "operation of a launch site" and "or reentry" after "launch or operation".

§50910. Preemption of scheduled launches or reentries

(a) GENERAL.—With the cooperation of the Secretary of Defense and the Administrator of the National Aeronautics and Space Administration, the Secretary of Transportation shall act to ensure that a launch or reentry of a payload is not preempted from access to a United States Government launch site, reentry site, or launch property, except for imperative national need, when a launch date commitment or reentry date commitment from the Government has been obtained for a launch or reentry licensed under this chapter. A licensee or transferee preempted from access to a launch site, reentry site, or launch property does not have to pay the Government any amount for launch services, or services related to a reentry, attributable only to the scheduled launch or reentry prevented by the preemption.

(b) IMPERATIVE NATIONAL NEED DECISIONS.—In consultation with the Secretary of Transportation, the Secretary of Defense or the Administrator shall decide when an imperative national need requires preemption under subsection (a) of this section. That decision may not be delegated.

(c) REPORTS.—In cooperation with the Secretary of Transportation, the Secretary of Defense or the Administrator, as appropriate, shall submit to Congress not later than 7 days after a decision to preempt under subsection (a) of this section, a report that includes an explanation of the circumstances justifying the decision and a schedule for ensuring the prompt launching or reentry of a preempted payload.

(Pub. L. 103–272, §1(e), July 5, 1994, 108 Stat. 1335, §70109 of title 49; Pub. L. 105–303, title I, §102(a)(9), Oct. 28, 1998, 112 Stat. 2849; renumbered §70109 then §50910 of title 51, Pub. L. 111–314, §4(d)(2), (3)(J), Dec. 18, 2010, 124 Stat. 3440, 3441.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70109(a)	49 App.:2614(b)(4)(A) (1st, last sentences).	Oct. 30, 1984, Pub. L. 98–575, 98 Stat. 3055, §15(b)(4); added Nov. 15, 1988, Pub. L. 100–657, §7, 102 Stat. 3906.
70109(b)	49 App.:2614(b)(4)(A) (2d sentence).	
70109(c)	49 App.:2614(b)(4)(B).	

EDITORIAL NOTES

AMENDMENTS

2010—Pub. L. 111–314 successively renumbered section 70109 of title 49 and section 70109 of this title as this section.

1998—Pub. L. 105–303, §102(a)(9)(A), substituted "Preemption of scheduled launches or reentries" for "Preemption of scheduled launches" in section catchline.

Subsec. (a). Pub. L. 105–303, §102(a)(9)(B), inserted "or reentry" after "ensure that a launch", ", reentry site," after "United States Government launch site", "or reentry date commitment" after "launch date commitment", "or reentry" after "obtained for a launch", ", reentry site," after "access to a launch site", ", or services related to a reentry," after "amount for launch services", and "or reentry" after "the scheduled launch".

Subsec. (c). Pub. L. 105–303, §102(a)(9)(C), inserted "or reentry" after "prompt launching".

§50911. Space advertising

(a) LICENSING.—Notwithstanding the provisions of this chapter or any other provision of law, the Secretary may not, for the launch of a payload containing any material to be used for the purposes of obtrusive space advertising—

(1) issue or transfer a license under this chapter; or

(2) waive the license requirements of this chapter.

(b) LAUNCHING.—No holder of a license under this chapter may launch a payload containing any material to be used for purposes of obtrusive space advertising.

(c) COMMERCIAL SPACE ADVERTISING.—Nothing in this section shall apply to nonobtrusive commercial space advertising, including advertising on—

(1) commercial space transportation vehicles;

(2) space infrastructure payloads;

(3) space launch facilities; and

(4) launch support facilities.

(Added Pub. L. 106–391, title III, §322(b), Oct. 30, 2000, 114 Stat. 1598, §70109a of title 49; renumbered §70109a then §50911 of title 51, Pub. L. 111–314, §4(d)(2), (3)(K), Dec. 18, 2010, 124 Stat. 3440, 3441.)

EDITORIAL NOTES

AMENDMENTS

2010—Pub. L. 111–314 successively renumbered section 70109a of title 49 and section 70109a of this title as this section.

STATUTORY NOTES AND RELATED SUBSIDIARIES

NEGOTIATION WITH FOREIGN LAUNCHING NATIONS

Pub. L. 106–391, title III, §322(c), Oct. 30, 2000, 114 Stat. 1598, provided that:

"(1) The President is requested to negotiate with foreign launching nations for the purpose of reaching one or more agreements that prohibit the use of outer space for obtrusive space advertising purposes.

"(2) It is the sense of the Congress that the President should take such action as is appropriate and feasible to enforce the terms of any agreement to prohibit the use of outer space for obtrusive space advertising purposes.

"(3) As used in this subsection, the term 'foreign launching nation' means a nation—

"(A) that launches, or procures the launching of, a payload into outer space; or

"(B) from the territory or facility of which a payload is launched into outer space."

§50912. Administrative hearings and judicial review

(a) ADMINISTRATIVE HEARINGS.—The Secretary of Transportation shall provide an opportunity for a hearing on the record to—

(1) an applicant under this chapter, for a decision of the Secretary under section 50905(a) or 50906 of this title to issue or transfer a license with terms or deny the issuance or transfer of a license;

(2) an owner or operator of a payload under this chapter, for a decision of the Secretary under section 50904(c) of this title to prevent the launch or reentry of the payload; and

(3) a licensee under this chapter, for a decision of the Secretary under—

(A) section 50908(b) or (c) of this title to modify, suspend, or revoke a license; or

(B) section 50909(a) of this title to prohibit, suspend, or end a launch or operation of a launch site or reentry site, or reentry of a reentry vehicle, licensed by the Secretary.

(b) JUDICIAL REVIEW.—A final action of the Secretary under this chapter is subject to judicial review as provided in chapter 7 of title 5.

(Pub. L. 103–272, §1(e), July 5, 1994, 108 Stat. 1335, §70110 of title 49; Pub. L. 105–303, title I, §102(a)(10), Oct. 28, 1998, 112 Stat. 2849; Pub. L. 108–492, §2(c)(20), Dec. 23, 2004, 118 Stat. 3981; renumbered §70110 then §50912 of title 51 and amended Pub. L. 111–314, §4(d)(2), (3)(L), (5)(M)–(P), Dec. 18, 2010, 124 Stat. 3440–3442.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70110(a)(1)	49 App.:2611(a)(1) (1st sentence).	Oct. 30, 1984, Pub. L. 98–575, §12, 98 Stat. 3060.
70110(a)(2)	49 App.:2611(a)(1) (last sentence).	
70110(a)(3)	49 App.:2611(a)(2).	
70110(b)	49 App.:2611(b).	

In subsection (a), before clause (1), the words "The Secretary of Transportation shall provide an opportunity for a hearing on the record to" are substituted for "shall be entitled to a determination on the record after an opportunity for a hearing" for consistency in the revised title. The words "in accordance with section 554 of title 5" are omitted for consistency and because 5:554 applies to a hearing on the record unless otherwise stated. In clause (1), the words "and a proposed transferee of a license" are omitted as being included in "applicant".

In subsection (b), the words "to issue, transfer, deny the issuance or transfer of, suspend, revoke, or modify a license or to terminate, prohibit, or suspend any launch or operation of a launch site licensed by the Secretary or to prevent the launch of a payload" are omitted as surplus.

EDITORIAL NOTES

AMENDMENTS

2010—Pub. L. 111–314, §4(d)(2), (3)(L), successively renumbered section 70110 of title 49 and section 70110 of this title as this section.

Subsec. (a)(1). Pub. L. 111–314, §4(d)(5)(M), substituted "section 50905(a) or 50906" for "section 70105(a) or 70105a".

Subsec. (a)(2). Pub. L. 111–314, §4(d)(5)(N), substituted "section 50904(c)" for "section 70104(c)".

Subsec. (a)(3)(A). Pub. L. 111–314, §4(d)(5)(O), substituted "section 50908(b) or (c)" for "section 70107(b) or (c)".

Subsec. (a)(3)(B). Pub. L. 111–314, §4(d)(5)(P), substituted "section 50909(a)" for "section 70108(a)".

2004—Subsec. (a)(1). Pub. L. 108–492 inserted "or 70105a" after "70105(a)".

1998—Subsec. (a)(2). Pub. L. 105–303, §102(a)(10)(A), inserted "or reentry" after "prevent the launch".

Subsec. (a)(3)(B). Pub. L. 105–303, §102(a)(10)(B), inserted "or reentry site, or reentry of a reentry vehicle," after "operation of a launch site"

§50913. Acquiring United States Government property and services

(a) GENERAL REQUIREMENTS AND CONSIDERATIONS.—(1) The Secretary of Transportation shall facilitate and encourage the acquisition by the private sector and State governments of—

(A) launch or reentry property of the United States Government that is excess or otherwise is not needed for public use; and

(B) launch services and reentry services, including utilities, of the Government otherwise not needed for public use.

(2) In acting under paragraph (1) of this subsection, the Secretary shall consider the commercial availability on reasonable terms of substantially equivalent launch property or launch services or reentry services from a domestic source, whether such source is located on or off a Federal range.

(b) PRICE.—(1) In this subsection, "direct costs" means the actual costs that—

(A) can be associated unambiguously with a commercial launch or reentry effort; and

(B) the Government would not incur if there were no commercial launch or reentry effort.

(2) In consultation with the Secretary, the head of the executive agency providing the property or service under subsection (a) of this section shall establish the price for the property or service. The price for—

(A) acquiring launch property by sale or transaction instead of sale is the fair market value;

(B) acquiring launch property (except by sale or transaction instead of sale) is an amount equal to the direct costs, including specific wear and tear and property damage, the Government incurred because of acquisition of the property; and

(C) launch services or reentry services is an amount equal to the direct costs, including the basic pay of Government civilian and contractor personnel, the Government incurred because of acquisition of the services.

(3) The Secretary shall ensure the establishment of uniform guidelines for, and consistent implementation of, this section by all Federal agencies.

(c) COLLECTION BY SECRETARY.—The Secretary may collect a payment under this section with the consent of the head of the executive agency establishing the price. Amounts collected under this subsection shall be deposited in the Treasury. Amounts (except for excess launch property) shall be credited to the appropriation from which the cost of providing the property or services was paid.

(d) COLLECTION BY OTHER GOVERNMENTAL HEADS.—The head of a department, agency, or instrumentality of the Government may collect a payment for an activity involved in producing a launch vehicle or reentry vehicle, or the payload of either, for launch or reentry if the activity was agreed to by the owner or manufacturer of the launch vehicle, reentry vehicle, or payload.

(Pub. L. 103–272, §1(e), July 5, 1994, 108 Stat. 1335, §70111 of title 49; Pub. L. 105–303, title I, §102(a)(11), Oct. 28, 1998, 112 Stat. 2849; renumbered §70111 then §50913 of title 51, Pub. L. 111–314, §4(d)(2), (3)(M), Dec. 18, 2010, 124 Stat. 3440, 3441.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70111(a)	49 App.:2614(a).	Oct. 30, 1984, Pub. L. 98–575, §15(a), 98 Stat. 3060; Nov. 15, 1988, Pub. L. 100–657, §4(a), 102 Stat. 3900; Nov. 16, 1990, Pub. L. 101–611, §117(b), 104 Stat. 3202.
70111(b)	49 App.:2614(b)(1).	Oct. 30, 1984, Pub. L. 98–575, §15(b)(1), 98 Stat. 3061; Nov. 15, 1988, Pub. L. 100–657, §4(b), 102 Stat. 3901.
70111(c)	49 App.:2614(b)(2), (3).	Oct. 30, 1984, Pub. L. 98–575, §15(b)(2), (3), 98 Stat. 3061.
70111(d)	49 App.:2614(d).	Oct. 30, 1984, Pub. L. 98–575, 98 Stat. 3055, §15(d); added Nov. 15, 1988, Pub. L. 100–657, §4(c), 102 Stat. 3901.

In subsection (a)(1), before clause (A), the words "take such actions as may be necessary to" and "(by lease, sale, transaction in lieu of sale, or otherwise)" are omitted as surplus.

In subsections (b)(2) and (c), the words "the head of" are added for consistency in the revised title and with other titles of the United States Code.

In subsection (b)(2), before clause (A), the word "price" is substituted for "amount to be paid to the United States" and "the amount of such payment" to eliminate unnecessary words. The words "by any person who acquires launch property or launch services, including utilities" are omitted as surplus. In clause (C), the words "including utilities" are omitted as surplus. The words "basic pay" are substituted for "salaries" for clarity.

In subsection (c), the word "collected" is substituted for "received" for consistency in this section. The words "by the United States for launch property or launch services, including utilities" and "the general fund of" are omitted as surplus.

In subsection (d), the words "department, agency, or instrumentality of the Government" are substituted for "Federal agency or department" for consistency in the revised title and with other titles of the Code.

EDITORIAL NOTES

AMENDMENTS

2010—Pub. L. 111–314 successively renumbered section 70111 of title 49 and section 70111 of this title as this section.

1998—Subsec. (a)(1)(A). Pub. L. 105–303, §102(a)(11)(A), inserted "or reentry" after "launch".

Subsec. (a)(1)(B). Pub. L. 105–303, §102(a)(11)(B), inserted "and reentry services" after "launch services".

Subsec. (a)(2). Pub. L. 105–303, §102(a)(11)(C), (D), inserted "or reentry services" after "or launch services" and substituted "source, whether such source is located on or off a Federal range" for "source".

Subsec. (b)(1)(A), (B). Pub. L. 105–303, §102(a)(11)(E), inserted "or reentry" after "commercial launch".

Subsec. (b)(2)(C). Pub. L. 105–303, §102(a)(11)(F), inserted "or reentry services" after "launch services".

Subsec. (b)(3). Pub. L. 105–303, §102(a)(11)(G), added par. (3).

Subsec. (d). Pub. L. 105–303, §102(a)(11)(H), (I), substituted "or reentry vehicle, or the payload of either, for launch or reentry" for "or its payload for launch" and inserted ", reentry vehicle," after "manufacturer of the launch vehicle".

§50914. Liability insurance and financial responsibility requirements

(a) GENERAL REQUIREMENTS.—(1) When a launch or reentry license is issued or transferred under this chapter, the licensee or transferee shall obtain liability insurance or demonstrate financial responsibility in amounts to compensate for the maximum probable loss from claims by—

(A) a third party for death, bodily injury, or property damage or loss resulting from an activity carried out under the license; and

(B) the United States Government against a person for damage or loss to Government property resulting from an activity carried out under the license.

(2) The Secretary of Transportation shall determine the amounts required under paragraph (1)(A) and (B) of this subsection, after consulting with the Administrator of the National Aeronautics and Space Administration, the Secretary of the Air Force, and the heads of other appropriate executive agencies.

(3) For the total claims related to one launch or reentry, a licensee or transferee is not required to obtain insurance or demonstrate financial responsibility of more than—

(A)(i) $500,000,000 under paragraph (1)(A) of this subsection; or

(ii) $100,000,000 under paragraph (1)(B) of this subsection; or

(B) the maximum liability insurance available on the world market at reasonable cost if the amount is less than the applicable amount in clause (A)(i) or (ii) of this paragraph.

(4) An insurance policy or demonstration of financial responsibility under this subsection shall protect the following, to the extent of their potential liability for involvement in launch services or reentry services, at no cost to the Government:

(A) the Government.
(B) executive agencies and personnel, contractors, and subcontractors of the Government.
(C) contractors, subcontractors, and customers of the licensee or transferee.
(D) contractors and subcontractors of the customer.
(E) space flight participants.

(5) Subparagraph (E) of paragraph (4) ceases to be effective September 30, 2028.

(b) RECIPROCAL WAIVER OF CLAIMS.—(1)(A) A launch or reentry license issued or transferred under this chapter shall contain a provision requiring the licensee or transferee to make a reciprocal waiver of claims with applicable parties involved in launch services or reentry services under which each party to the waiver agrees to be responsible for personal injury to, death of, or property damage or loss sustained by it or its own employees resulting from an activity carried out under the applicable license.

(B) In this paragraph, the term "applicable parties" means—
(i) contractors, subcontractors, and customers of the licensee or transferee;
(ii) contractors and subcontractors of the customers; and
(iii) space flight participants.

(C) Clause (iii) of subparagraph (B) ceases to be effective September 30, 2028.

(2) The Secretary of Transportation shall make, for the Government, executive agencies of the Government involved in launch services or reentry services, and contractors and subcontractors involved in launch services or reentry services, a reciprocal waiver of claims with the licensee or transferee, contractors, subcontractors, crew, space flight participants, and customers of the licensee or transferee, and contractors and subcontractors of the customers, involved in launch services or reentry services under which each party to the waiver agrees to be responsible for property damage or loss it sustains, or for personal injury to, death of, or property damage or loss sustained by its own employees or by space flight participants, resulting from an activity carried out under the applicable license. The waiver applies only to the extent that claims are more than the amount of insurance or demonstration of financial responsibility required under subsection (a)(1)(B) of this section. After consulting with the Administrator and the Secretary of the Air Force, the Secretary of Transportation may waive, for the Government and a department, agency, and instrumentality of the Government, the right to recover damages for damage or loss to Government property to the extent insurance is not available because of a policy exclusion the Secretary of Transportation decides is usual for the type of insurance involved.

(c) DETERMINATION OF MAXIMUM PROBABLE LOSSES.—The Secretary of Transportation shall determine the maximum probable losses under subsection (a)(1)(A) and (B) of this section associated with an activity under a license not later than 90 days after a licensee or transferee requires a determination and submits all information the Secretary requires. The Secretary shall amend the determination as warranted by new information.

(d) ANNUAL REPORT.—(1) Not later than November 15 of each year, the Secretary of Transportation shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science of the House of Representatives a report on current determinations made under subsection (c) of this section related to all issued licenses and the reasons for the determinations.

(2) Not later than May 15 of each year, the Secretary of Transportation shall review the amounts specified in subsection (a)(3)(A) of this section and submit a report to Congress that contains proposed adjustments in the amounts to conform with changed liability expectations and availability of insurance on the world market. The proposed adjustment takes effect 30 days after a report is submitted.

(e) LAUNCHES OR REENTRIES INVOLVING GOVERNMENT FACILITIES AND PERSONNEL.—The Secretary of Transportation shall establish requirements consistent with this chapter for proof of financial responsibility and other assurances necessary to protect the Government and its executive agencies and personnel from liability, death, bodily injury, or property

damage or loss as a result of a launch or operation of a launch site or reentry site or a reentry involving a facility or personnel of the Government. The Secretary may not relieve the Government of liability under this subsection for death, bodily injury, or property damage or loss resulting from the willful misconduct of the Government or its agents.

(f) COLLECTION AND CREDITING PAYMENTS.—The head of a department, agency, or instrumentality of the Government shall collect a payment owed for damage or loss to Government property under its jurisdiction or control resulting from an activity carried out under a launch or reentry license issued or transferred under this chapter. The payment shall be credited to the current applicable appropriation, fund, or account of the department, agency, or instrumentality.

(g) FEDERAL JURISDICTION.—Any claim by a third party or space flight participant for death, bodily injury, or property damage or loss resulting from an activity carried out under the license shall be the exclusive jurisdiction of the Federal courts.

(Pub. L. 103–272, §1(e), July 5, 1994, 108 Stat. 1336, §70112 of title 49; Pub. L. 104–287, §5(74), (93), Oct. 11, 1996, 110 Stat. 3396, 3398; Pub. L. 105–303, title I, §102(a)(12), Oct. 28, 1998, 112 Stat. 2850; Pub. L. 108–492, §2(c)(21), Dec. 23, 2004, 118 Stat. 3981; renumbered §70112 then §50914 of title 51, Pub. L. 111–314, §4(d)(2), (3)(N), Dec. 18, 2010, 124 Stat. 3440, 3441; Pub. L. 114–90, title I, §§103(a)(1), 106, 107, Nov. 25, 2015, 129 Stat. 706, 707; Pub. L. 118–159, div. E, title LVII, §5702(2), Dec. 23, 2024, 138 Stat. 2461.)

HISTORICAL AND REVISION NOTES
PUB. L. 103–272

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70112(a)(1), (2)	49 App.:2615(a)(1)(A) (1st sentence), (B) (1st sentence).	Oct. 30, 1984, Pub. L. 98–575, §16(a), (c), 98 Stat. 3061; restated Nov. 15, 1988, Pub. L. 100–657, §5(a), 102 Stat. 3901, 3905.
70112(a)(3)	49 App.:2615(a)(1)(A) (last sentence), (B) (last sentence).	
70112(a)(4)	49 App.:2615(a)(2).	
70112(b)(1)	49 App.:2615(a)(1)(C).	
70112(b)(2)	49 App.:2615(a)(1)(D).	
70112(c)	49 App.:2615(a)(3) (1st, 2d sentences).	
70112(d)(1)	49 App.:2615(a)(3) (last sentence).	
70112(d)(2)	49 App.:2615(a)(4).	
70112(e)	49 App.:2614(c).	Oct. 30, 1984, Pub. L. 98–575, §15(c), 98 Stat. 3061; restated Nov. 15, 1988, Pub. L. 100–657, §5(b), 102 Stat. 3905.
70112(f)	49 App.:2615(c).	

In subsection (a), the word "particular" is omitted as surplus.

In subsection (a)(1), before clause (A), the word "sufficient" is omitted as surplus. In clauses (A) and (B), the words "in connection with any particular launch" are omitted as surplus.

In subsection (a)(4), before clause (A), the words "made . . . a requirement described in" are omitted as surplus.

In subsection (b)(2), the words "department, agency, and instrumentality of the Government" are substituted for "Federal agency" for consistency in the revised title and with other titles of the United States Code.

In subsection (d)(2), the words "if appropriate" are omitted as surplus.

In subsection (f), the words "department, agency, or instrumentality of the Government" are substituted for "Federal agency or department" for consistency in the revised title and with other titles of the Code. The

words "insurance proceeds or . . . other" and "proceeds or other" are omitted as surplus.

PUB. L. 104–287, §5(93)

This amends 49:70112(a)(3)(B) to clarify a cross-reference in the codification enacted by section 1 of the Act of July 5, 1994 (Public Law 103–272, 108 Stat. 1337).

EDITORIAL NOTES

AMENDMENTS

2024—Subsec. (a)(5). Pub. L. 118–159, §5702(2)(A), substituted "September 30, 2028" for "September 30, 2025".

Subsec. (b)(1)(C). Pub. L. 118–159, §5702(2)(B), substituted "September 30, 2028" for "September 30, 2025".

2015—Subsec. (a)(4)(E). Pub. L. 114–90, §103(a)(1)(A), added subpar. (E).

Subsec. (a)(5). Pub. L. 114–90, §103(a)(1)(B), added par. (5).

Subsec. (b)(1). Pub. L. 114–90, §107, amended par. (1) generally. Prior to amendment, par. (1) read as follows: "A launch or reentry license issued or transferred under this chapter shall contain a provision requiring the licensee or transferee to make a reciprocal waiver of claims with its contractors, subcontractors, and customers, and contractors and subcontractors of the customers, involved in launch services or reentry services under which each party to the waiver agrees to be responsible for property damage or loss it sustains, or for personal injury to, death of, or property damage or loss sustained by its own employees resulting from an activity carried out under the applicable license."

Subsec. (g). Pub. L. 114–90, §106, added subsec. (g).

2010—Pub. L. 111–314 successively renumbered section 70112 of title 49 and section 70112 of this title as this section.

2004—Subsec. (b)(2). Pub. L. 108–492 inserted "crew, space flight participants," after "transferee, contractors, subcontractors," and "or by space flight participants," after "its own employees".

1998—Subsec. (a)(1). Pub. L. 105–303, §102(a)(12)(A), inserted "launch or reentry" before "license is issued".

Subsec. (a)(3). Pub. L. 105–303, §102(a)(12)(B), inserted "or reentry" after "one launch" in introductory provisions.

Subsec. (a)(4). Pub. L. 105–303, §102(a)(12)(C), inserted "or reentry services" after "launch services" in introductory provisions.

Subsec. (b)(1). Pub. L. 105–303, §102(a)(12)(D)–(F), inserted "launch or reentry" before "license issued or transferred", "or reentry services" after "launch services", and "applicable" after "carried out under the".

Subsec. (b)(2). Pub. L. 105–303, §102(a)(12)(E), (F), inserted "or reentry services" after "launch services" wherever appearing and "applicable" after "carried out under the".

Subsec. (e). Pub. L. 105–303, §102(a)(12)(G), (H), inserted "or Reentries" after "Launches" in heading and "or reentry site or a reentry" after "launch site" in text.

Subsec. (f). Pub. L. 105–303, §102(a)(12)(I), inserted "launch or reentry" before "license issued or transferred".

1996—Subsec. (a)(3)(B). Pub. L. 104–287, §5(93), substituted "clause (A)(i) or (ii)" for "clause (A)".

Subsec. (d)(1). Pub. L. 104–287, §5(74), substituted "Committee on Science" for "Committee on Science, Space, and Technology".

STATUTORY NOTES AND RELATED SUBSIDIARIES

CHANGE OF NAME

Committee on Science of House of Representatives changed to Committee on Science and Technology of House of Representatives by House Resolution No. 6, One Hundred Tenth Congress, Jan. 5, 2007. Committee on Science and Technology of House of Representatives changed to Committee on Science, Space, and Technology of House of Representatives by House Resolution No. 5, One Hundred Twelfth Congress, Jan. 5, 2011.

EFFECTIVE DATE OF 1996 AMENDMENT

Amendment by section 5(93) of Pub. L. 104–287 effective July 5, 1994, see section 8(1) of Pub. L. 104–287, set out as a note under section 5303 of Title 49, Transportation.

TERMINATION OF REPORTING REQUIREMENTS

For termination, effective May 15, 2000, of provisions of law requiring submittal to Congress of any annual, semiannual, or other regular periodic report listed in House Document No. 103–7 (in which the 2nd item on page 133 identifies a reporting provision which, as subsequently amended, is contained in subsec. (d)(1) of this section), see section 3003 of Pub. L. 104–66, as amended, set out as a note under section 1113 of Title 31, Money and Finance.

§50915. Paying claims exceeding liability insurance and financial responsibility requirements

(a) GENERAL REQUIREMENTS.—(1) To the extent provided in advance in an appropriation law or to the extent additional legislative authority is enacted providing for paying claims in a compensation plan submitted under subsection (d) of this section, the Secretary of Transportation shall provide for the payment by the United States Government of a successful claim (including reasonable litigation or settlement expenses) of a third party against a person described in paragraph (3)(A) resulting from an activity carried out under the license issued or transferred under this chapter for death, bodily injury, or property damage or loss resulting from an activity carried out under the license. However, claims may be paid under this section only to the extent the total amount of successful claims related to one launch or reentry—

(A) is more than the amount of insurance or demonstration of financial responsibility required under section 50914(a)(1)(A) of this title; and

(B) is not more than $1,500,000,000 (plus additional amounts necessary to reflect inflation occurring after January 1, 1989) above that insurance or financial responsibility amount.

(2) The Secretary may not provide for paying a part of a claim for which death, bodily injury, or property damage or loss results from willful misconduct by the licensee or transferee. To the extent insurance required under section 50914(a)(1)(A) of this title is not available to cover a successful third party liability claim because of an insurance policy exclusion the Secretary decides is usual for the type of insurance involved, the Secretary may provide for paying the excluded claims without regard to the limitation contained in section 50914(a)(1).

(3)(A) A person described in this subparagraph is—

(i) a licensee or transferee under this chapter;

(ii) a contractor, subcontractor, or customer of the licensee or transferee;

(iii) a contractor or subcontractor of a customer; or

(iv) a space flight participant.

(B) Clause (iv) of subparagraph (A) ceases to be effective September 30, 2028.

(b) NOTICE, PARTICIPATION, AND APPROVAL.—Before a payment under subsection (a) of this section is made—

(1) notice must be given to the Government of a claim, or a civil action related to the claim, against a party described in subsection (a)(1) of this section for death, bodily injury, or property damage or loss;

(2) the Government must be given an opportunity to participate or assist in the defense of the claim or action; and

(3) the Secretary must approve any part of a settlement to be paid out of appropriations of the Government.

(c) WITHHOLDING PAYMENTS.—The Secretary may withhold a payment under subsection (a) of this section if the Secretary certifies that the amount is not reasonable. However, the Secretary shall deem to be reasonable the amount of a claim finally decided by a court of competent jurisdiction.

(d) SURVEYS, REPORTS, AND COMPENSATION PLANS.—(1) If as a result of an activity carried out under a license issued or transferred under this chapter the total of claims related to one

launch or reentry is likely to be more than the amount of required insurance or demonstration of financial responsibility, the Secretary shall—

(A) survey the causes and extent of damage; and

(B) submit expeditiously to Congress a report on the results of the survey.

(2) Not later than 90 days after a court determination indicates that the liability for the total of claims related to one launch or reentry may be more than the required amount of insurance or demonstration of financial responsibility, the President, on the recommendation of the Secretary, shall submit to Congress a compensation plan that—

(A) outlines the total dollar value of the claims;

(B) recommends sources of amounts to pay for the claims;

(C) includes legislative language required to carry out the plan if additional legislative authority is required; and

(D) for a single event or incident, may not be for more than $1,500,000,000.

(3) A compensation plan submitted to Congress under paragraph (2) of this subsection shall—

(A) have an identification number; and

(B) be submitted to the Senate and the House of Representatives on the same day and when the Senate and House are in session.

(e) CONGRESSIONAL RESOLUTIONS.—(1) In this subsection, "resolution"—

(A) means a joint resolution of Congress the matter after the resolving clause of which is as follows: "That the Congress approves the compensation plan numbered _____ submitted to the Congress on _____ XX, 20____.", with the blank spaces being filled appropriately; but

(B) does not include a resolution that includes more than one compensation plan.

(2) The Senate shall consider under this subsection a compensation plan requiring additional appropriations or legislative authority not later than 60 calendar days of continuous session of Congress after the date on which the plan is submitted to Congress.

(3) A resolution introduced in the Senate shall be referred immediately to a committee by the President of the Senate. All resolutions related to the same plan shall be referred to the same committee.

(4)(A) If the committee of the Senate to which a resolution has been referred does not report the resolution within 20 calendar days after it is referred, a motion is in order to discharge the committee from further consideration of the resolution or to discharge the committee from further consideration of the plan.

(B) A motion to discharge may be made only by an individual favoring the resolution and is highly privileged (except that the motion may not be made after the committee has reported a resolution on the plan). Debate on the motion is limited to one hour, to be divided equally between those favoring and those opposing the resolution. An amendment to the motion is not in order. A motion to reconsider the vote by which the motion is agreed to or disagreed to is not in order.

(C) If the motion to discharge is agreed to or disagreed to, the motion may not be renewed and another motion to discharge the committee from another resolution on the same plan may not be made.

(5)(A) After a committee of the Senate reports, or is discharged from further consideration of, a resolution, a motion to proceed to the consideration of the resolution is in order at any time, even though a similar previous motion has been disagreed to. The motion is highly privileged and is not debatable. An amendment to the motion is not in order. A motion to reconsider the vote by which the motion is agreed to or disagreed to is not in order.

(B) Debate on the resolution referred to in subparagraph (A) of this paragraph is limited to not more than 10 hours, to be divided equally between those favoring and those opposing the resolution.

A motion further to limit debate is not debatable. An amendment to, or motion to recommit, the resolution is not in order. A motion to reconsider the vote by which the resolution is agreed to or disagreed to is not in order.

(6) The following shall be decided in the Senate without debate:

(A) a motion to postpone related to the discharge from committee.

(B) a motion to postpone consideration of a resolution.

(C) a motion to proceed to the consideration of other business.

(D) an appeal from a decision of the chair related to the application of the rules of the Senate to the procedures related to a resolution.

(f) APPLICATION.—This section applies to a license issued or transferred under this chapter for which the Secretary receives a complete and valid application not later than September 30, 2028. This section does not apply to permits.

(Pub. L. 103–272, §1(e), July 5, 1994, 108 Stat. 1338, §70113 of title 49; Pub. L. 104–287, §5(94), Oct. 11, 1996, 110 Stat. 3398; Pub. L. 105–303, title I, §102(a)(13), Oct. 28, 1998, 112 Stat. 2850; Pub. L. 106–74, title IV, §433, Oct. 20, 1999, 113 Stat. 1097; Pub. L. 106–377, §1(a)(1) [title IV, §429], Oct. 27, 2000, 114 Stat. 1441, 1441A–56; Pub. L. 106–405, §§5(b), 6(a), Nov. 1, 2000, 114 Stat. 1752; Pub. L. 108–428, §1, Nov. 30, 2004, 118 Stat. 2432; Pub. L. 108–492, §2(c)(22), (23), Dec. 23, 2004, 118 Stat. 3981; Pub. L. 111–125, §1, Dec. 28, 2009, 123 Stat. 3486; renumbered §70113 then §50915 of title 51 and amended Pub. L. 111–314, §4(d)(2), (3)(O), (5)(Q), (R), Dec. 18, 2010, 124 Stat. 3440–3442; Pub. L. 112–273, §3, Jan. 14, 2013, 126 Stat. 2454; Pub. L. 113–76, §8, Jan. 17, 2014, 128 Stat. 7; Pub. L. 114–90, title I, §§102(d), 103(a)(2), Nov. 25, 2015, 129 Stat. 706; Pub. L. 118–159, div. E, title LVII, §5702(3), Dec. 23, 2024, 138 Stat. 2461.)

HISTORICAL AND REVISION NOTES
PUB. L. 103–272

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70113(a)	49 App.:2615(b)(1).	Oct. 30, 1984, Pub. L. 98–575, §16(b)(1)–(4), 98 Stat. 3061; restated Nov. 15, 1988, Pub. L. 100–657, §5(a), 102 Stat. 3903.
70113(b)	49 App.:2615(b)(2).	
70113(c)	49 App.:2615(b)(3).	
70113(d)(1)	49 App.:2615(b)(4)(A).	
70113(d)(2)	49 App.:2615(b)(4)(B).	
70113(d)(3)	49 App.:2615(b)(4)(C).	
70113(e)(1)	49 App.:2615(b) (4)(D)(i), (iii).	
70113(e)(2)	49 App.:2615(b) (4)(D)(ii).	
70113(e)(3)	49 App.:2615(b) (4)(D)(iv).	
70113(e)(4)	49 App.:2615(b) (4)(D)(v).	
70113(e)(5)	49 App.:2615(b) (4)(D)(vi).	
70113(e)(6)	49 App.:2615(b) (4)(D)(vii).	
70113(f)	49 App.:2615(b)(5).	Oct. 30, 1984, Pub. L. 98–575, §16(b)(5), 98 Stat. 3061; restated Nov. 15, 1988, Pub. L. 100–657, §5(a), 102 Stat. 3903; Nov. 4, 1992, Pub. L. 102–588, §503, 106 Stat. 5124.

In subsection (a)(1), before clause (A), the word "particular" is omitted as surplus. In clause (B), the words "the level that is" are omitted as surplus.

In subsection (b)(1), the words "civil action" are substituted for "suit" for consistency in the revised title and with other titles of the United States Code and rule 2 of the Federal Rules of Civil Procedure (28 App. U.S.C.).

In subsection (b)(2), the words "the Government must be given an opportunity" are substituted for "by the United States, at its election" for clarity.

In subsection (c), the words "just and" and "judgment" are omitted as surplus.

In subsection (d), the word "particular" is omitted as surplus.

In subsection (d)(2), before clause (A), the words "or plans" are omitted because of 1:1.

In subsection (e)(1), before clause (A), the text of 49 App.:2615(b)(4)(D)(i) is omitted as surplus. In clause (A), the word "only" is omitted as surplus. The word "Congress" is substituted for "the first blank space therein being filled with the name of the resolving House" to correct an error in the law.

In subsection (e)(3), the words "once introduced with respect to a compensation plan" are omitted as surplus.

In subsection (e)(4)(A), the word "either" is omitted as surplus.

In subsection (f), the word "only" is omitted as surplus.

PUB. L. 104–287

This amends 49:70113(e)(6)(D) to correct an error in the codification enacted by section 1 of the Act of July 5, 1994 (Public Law 103–272, 108 Stat. 1340).

EDITORIAL NOTES

AMENDMENTS

2024—Subsec. (a)(3)(B). Pub. L. 118–159, §5702(3)(A) substituted "September 30, 2028" for "September 30, 2025".

Subsec. (f). Pub. L. 118–159, §5702(3)(B), substituted "September 30, 2028" for "September 30, 2025".

2015—Subsec. (a)(1). Pub. L. 114–90, §103(a)(2)(A), in introductory provisions, substituted "a person described in paragraph (3)(A)" for "a licensee or transferee under this chapter, a contractor, subcontractor, or customer of the licensee or transferee, or a contractor or subcontractor of a customer, but not against a space flight participant,".

Subsec. (a)(3). Pub. L. 114–90, §103(a)(2)(B), added par. (3).

Subsec. (f). Pub. L. 114–90, §102(d), substituted "September 30, 2025" for "December 31, 2016".

2014—Subsec. (f). Pub. L. 113–76 substituted "December 31, 2016" for "December 31, 2013".

2013—Subsec. (f). Pub. L. 112–273 substituted "December 31, 2013" for "December 31, 2012".

2010—Pub. L. 111–314, §4(d)(2), (3)(O), successively renumbered section 70113 of title 49 and section 70113 of this title as this section.

Subsec. (a)(1)(A). Pub. L. 111–314, §4(d)(5)(Q), substituted "section 50914(a)(1)(A)" for "section 70112(a)(1)(A)".

Subsec. (a)(2). Pub. L. 111–314, §4(d)(5)(R), substituted "section 50914(a)(1)(A)" for "section 70112(a)(1)(A)" and "section 50914(a)(1)" for "section 70112(a)(1)".

2009—Subsec. (f). Pub. L. 111–125 substituted "December 31, 2012." for "December 31, 2009."

2004—Subsec. (a)(1). Pub. L. 108–492, §2(c)(22), inserted "but not against a space flight participant," after "subcontractor of a customer,".

Subsec. (f). Pub. L. 108–492, §2(c)(23), inserted at end "This section does not apply to permits."

Pub. L. 108–428 substituted "December 31, 2009" for "December 31, 2004".

2000—Subsec. (e)(1)(A). Pub. L. 106–405, §6(a), substituted "20____" for "19____".

Subsec. (f). Pub. L. 106–405, §5(b), substituted "December 31, 2004" for "December 31, 2001".

Pub. L. 106–377 substituted "December 31, 2001" for "December 31, 2000".

1999—Subsec. (f). Pub. L. 106–74 substituted "December 31, 2000" for "December 31, 1999".

1998—Subsecs. (a)(1), (d)(1), (2). Pub. L. 105–303 inserted "or reentry" after "one launch".

1996—Subsec. (e)(6)(D). Pub. L. 104–287 substituted "related to a resolution" for "related to resolution".

STATUTORY NOTES AND RELATED SUBSIDIARIES

EFFECTIVE DATE OF 2000 AMENDMENT

Pub. L. 106–405, §6(b), Nov. 1, 2000, 114 Stat. 1752, provided that: "The amendment made by subsection (a) [amending this section] takes effect on January 1, 2000."

§50916. Disclosing information

The Secretary of Transportation, an officer or employee of the United States Government, or a person making a contract with the Secretary under section 50907(b) of this title may disclose information under this chapter that qualifies for an exemption under section 552(b)(4) of title 5 or is designated as confidential by the person or head of the executive agency providing the information only if the Secretary decides withholding the information is contrary to the public or national interest.

(Pub. L. 103–272, §1(e), July 5, 1994, 108 Stat. 1340, §70114 of title 49; renumbered §70114 then §50916 of title 51 and amended Pub. L. 111–314, §4(d)(2), (3)(P), (5)(S), Dec. 18, 2010, 124 Stat. 3440–3442.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70114	49 App.:2608(c).	Oct. 30, 1984, Pub. L. 98–575, §9(c), 98 Stat. 3059.

The words "data or" are omitted as surplus. The words "the head of" and "executive" are added for consistency in the revised title and with other titles of the United States Code.

EDITORIAL NOTES

AMENDMENTS

2010—Pub. L. 111–314, §4(d)(5)(S), substituted "section 50907(b)" for "section 70106(b)".

Pub. L. 111–314, §4(d)(2), (3)(P), successively renumbered section 70114 of title 49 and section 70114 of this title as this section.

§50917. Enforcement and penalty

(a) PROHIBITIONS.—A person may not violate this chapter, a regulation prescribed under this chapter, or any term of a license issued or transferred under this chapter.

(b) GENERAL AUTHORITY.—(1) In carrying out this chapter, the Secretary of Transportation may—

(A) conduct investigations and inquiries;

(B) administer oaths;

(C) take affidavits; and

(D) under lawful process—

(i) enter at a reasonable time a launch site, reentry site, production facility, assembly site of a launch vehicle or reentry vehicle, crew or space flight participant training site, or site at which a payload is integrated with a launch vehicle or reentry vehicle to inspect an object to which this chapter applies or a record or report the Secretary requires be made or kept under this chapter; and

(ii) seize the object, record, or report when there is probable cause to believe the object, record, or report was used, is being used, or likely will be used in violation of this chapter.

(2) The Secretary may delegate a duty or power under this chapter related to enforcement to an officer or employee of another executive agency with the consent of the head of the agency.

(c) CIVIL PENALTY.—(1) After notice and an opportunity for a hearing on the record, a person the Secretary finds to have violated subsection (a) of this section is liable to the United States Government for a civil penalty of not more than $100,000. A separate violation occurs for each day

the violation continues.

(2) In conducting a hearing under paragraph (1) of this subsection, the Secretary may—

(A) subpena witnesses and records; and

(B) enforce a subpena in an appropriate district court of the United States.

(3) The Secretary shall impose the civil penalty by written notice. The Secretary may compromise or remit a penalty imposed, or that may be imposed, under this section.

(4) The Secretary shall recover a civil penalty not paid after the penalty is final or after a court enters a final judgment for the Secretary.

(Pub. L. 103–272, §1(e), July 5, 1994, 108 Stat. 1341, §70115 of title 49; Pub. L. 105–303, title I, §102(a)(14), Oct. 28, 1998, 112 Stat. 2850; Pub. L. 108–492, §2(c)(24), Dec. 23, 2004, 118 Stat. 3981; renumbered §70115 then §50917 of title 51, Pub. L. 111–314, §4(d)(2), (3)(Q), Dec. 18, 2010, 124 Stat. 3440, 3441.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70115(a)	49 App.:2617.	Oct. 30, 1984, Pub. L. 98–575, §§17–19, 98 Stat. 3061.
70115(b)(1)	49 App.:2616(b).	
70115(b)(2)	49 App.:2616(a).	
70115(c)(1)	49 App.:2618(a) (1st, 2d sentences).	
70115(c)(2)	49 App.:2618(c).	
70115(c)(3)	49 App.:2618(a) (3d, last sentences).	
70115(c)(4)	49 App.:2618(b).	

In subsection (a), the words "a requirement of" are omitted as surplus. The word "prescribed" is substituted for "issued" for consistency in the revised title and with other titles of the United States Code. The words "condition, or restriction" are omitted as surplus.

In subsection (b)(1)(A)–(C), the words "concerning any matter relating to enforcement of this chapter" are omitted as surplus.

In subsection (b)(1)(B) and (C), the words "from any person" are omitted as surplus.

In subsection (b)(1)(B), the word "affirmation" is omitted because of 1:1.

In subsection (b)(2), the text of 49 App.:2616(a) (1st sentence) is omitted as surplus because the Secretary of Transportation enforces programs the Secretary carries out unless otherwise provided. The words "the exercise of" are omitted as surplus. The words "duty or power" are substituted for "authority" for consistency in the revised title and with other titles of the Code. The words "to any officer or employee of the Department of Transportation" are omitted as surplus because of 49:322(b).

In subsection (c)(1), the words "in accordance with section 554 of title 5" are omitted for consistency in the revised title and because 5:554 applies to a hearing on the record unless otherwise stated. The words "for each violation" are omitted as surplus.

In subsection (c)(2), the words "relevant papers, books, documents, and other" are omitted as surplus. The words "(3) administer oaths and affirmatives" are omitted as surplus because of subsection (b)(1)(B) of this section.

In subsection (c)(3), the word "impose" is substituted for "assessed" for consistency in the revised title and with other titles of the Code. The words "amount of such" and "modify . . . with or without conditions" are omitted as surplus.

Subsection (c)(4) is substituted for 49 App.:2618(b) to eliminate unnecessary words.

EDITORIAL NOTES

AMENDMENTS

2010—Pub. L. 111–314 successively renumbered section 70115 of title 49 and section 70115 of this title as this section.

2004—Subsec. (b)(1)(D)(i). Pub. L. 108–492 inserted "crew or space flight participant training site," after "site of a launch vehicle or reentry vehicle,".

1998—Subsec. (b)(1)(D)(i). Pub. L. 105–303 inserted "reentry site," after "launch site," and inserted "or reentry vehicle" after "launch vehicle" in two places.

§50918. Consultation

(a) MATTERS AFFECTING NATIONAL SECURITY.—The Secretary of Transportation shall consult with the Secretary of Defense on a matter under this chapter affecting national security. The Secretary of Defense shall identify and notify the Secretary of Transportation of a national security interest relevant to an activity under this chapter.

(b) MATTERS AFFECTING FOREIGN POLICY.—The Secretary of Transportation shall consult with the Secretary of State on a matter under this chapter affecting foreign policy. The Secretary of State shall identify and notify the Secretary of Transportation of a foreign policy interest or obligation relevant to an activity under this chapter.

(c) OTHER MATTERS.—In carrying out this chapter, the Secretary of Transportation shall consult with the head of another executive agency—

(1) to provide consistent application of licensing requirements under this chapter;

(2) to ensure fair treatment for all license applicants; and

(3) when appropriate.

(Pub. L. 103–272, §1(e), July 5, 1994, 108 Stat. 1341, §70116 of title 49; renumbered §70116 then §50918 of title 51, Pub. L. 111–314, §4(d)(2), (3)(R), Dec. 18, 2010, 124 Stat. 3440, 3441.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70116(a)	49 App.:2619(a).	Oct. 30, 1984, Pub. L. 98–575, §20, 98 Stat. 3062.
70116(b)	49 App.:2619(b).	
70116(c)	49 App.:2604(a)(2).	Oct. 30, 1984, Pub. L. 98–575, §5(a)(2), 98 Stat. 3057; Nov. 16, 1990, Pub. L. 101–611, §117(e)(2), 104 Stat. 3203.
	49 App.:2619(c).	

In subsections (a) and (b), the words "including the issuance or transfer of each license" and "be responsible for" are omitted as surplus.

In subsection (c), before clause (1), the words "the head of" and "executive" are added for consistency in the revised title and with other titles of the United States Code. In clause (2), the words "and equitable" in 49 App.:2604(a)(2) are omitted as surplus.

EDITORIAL NOTES

AMENDMENTS

2010—Pub. L. 111–314 successively renumbered section 70116 of title 49 and section 70116 of this title as this section.

STATUTORY NOTES AND RELATED SUBSIDIARIES

STREAMLINE COMMERCIAL SPACE LAUNCH ACTIVITIES

Pub. L. 114–92, div. A, title XVI, §1617, Nov. 25, 2015, 129 Stat. 1106, as amended by Pub. L. 115–232,

div. A, title XVI, §1606, Aug. 13, 2018, 132 Stat. 2107, provided that:

"(a) SENSE OF CONGRESS.—It is the sense of Congress that eliminating duplicative requirements and approvals for commercial launch and reentry operations will promote and encourage the development of the commercial space sector.

"(b) REAFFIRMATION OF POLICY.—Congress reaffirms that the Secretary of Transportation, in overseeing and coordinating commercial launch and reentry operations, should—

"(1) promote commercial space launches and reentries by the private sector;

"(2) facilitate Government, State, and private sector involvement in enhancing United States launch sites and facilities;

"(3) protect public health and safety, safety of property, national security interests, and foreign policy interests of the United States; and

"(4) consult with the head of another executive agency, including the Secretary of Defense or the Administrator of the National Aeronautics and Space Administration, as necessary to provide consistent application of licensing requirements under chapter 509 of title 51, United States Code.

"(c) REQUIREMENTS.—

"(1) IN GENERAL.—The Secretary of Transportation under section 50918 of title 51, United States Code, and subject to section 50905(b)(2)(C) of that title, shall consult with the Secretary of Defense, the Administrator of the National Aeronautics and Space Administration, and the heads of other executive agencies, as appropriate—

"(A) to identify all requirements that are imposed to protect the public health and safety, safety of property, national security interests, and foreign policy interests of the United States relevant to any commercial launch of a launch vehicle or commercial reentry of a reentry vehicle; and

"(B) to evaluate the requirements identified in subparagraph (A) and, in coordination with the licensee or transferee and the heads of the relevant executive agencies—

"(i) determine whether the satisfaction of a requirement of one agency could result in the satisfaction of a requirement of another agency; and

"(ii) resolve any inconsistencies and remove any outmoded or duplicative requirements or approvals of the Federal Government relevant to any commercial launch of a launch vehicle or commercial reentry of a reentry vehicle.

"(2) STREAMLINING.—

"(A) IN GENERAL.—With respect to any licensed activity under chapter 509 of title 51, United States Code, the Secretary of Defense may not impose any requirement on a licensee or transferee that is duplicative of, or overlaps in intent with, any requirement imposed by the Secretary of Transportation under that chapter.

"(B) WAIVER.—The Secretary of the Air Force may waive the limitation under subparagraph (A) if—

"(i) the Secretary determines that imposing a requirement described in that subparagraph is necessary to avoid negative consequences for the national security space program; and

"(ii) the Secretary notifies the Secretary of Transportation of such determination before making such waiver.

"(3) REPORTS.—Not later than 180 days after the date of enactment of this Act [Nov. 25, 2015], and annually thereafter until the Secretary of Transportation determines no outmoded or duplicative requirements or approvals of the Federal Government exist, the Secretary of Transportation, in consultation with the Secretary of Defense, the Administrator of the National Aeronautics and Space Administration, the commercial space sector, and the heads of other executive agencies, as appropriate, shall submit to the appropriate congressional committees a report that includes the following:

"(A) A description of the process for the application for and approval of a permit or license under chapter 509 of title 51, United States Code, for the commercial launch of a launch vehicle or commercial reentry of a reentry vehicle, including the identification of—

"(i) any unique requirements for operating on a United States Government launch site, reentry site, or launch property; and

"(ii) any inconsistent, outmoded, or duplicative requirements or approvals.

"(B) A description of current efforts, if any, to coordinate and work across executive agencies to define interagency processes and procedures for sharing information, avoiding duplication of effort, and resolving common agency requirements.

"(C) Recommendations for legislation that may further—

"(i) streamline requirements in order to improve efficiency, reduce unnecessary costs, resolve inconsistencies, remove duplication, and minimize unwarranted constraints; and

"(ii) consolidate or modify requirements across affected agencies into a single application set that satisfies the requirements identified in paragraph (1)(A).

"(4) DEFINITIONS.—For purposes of this subsection—

"(A) any applicable definitions set forth in section 50902 of title 51, United States Code, shall apply;

"(B) the term 'appropriate congressional committees' means—

"(i) the congressional defense committees [Committees on Armed Services and Appropriations of the Senate and the House of Representatives];

"(ii) the Committee on Commerce, Science, and Transportation of the Senate;

"(iii) the Committee on Science, Space, and Technology of the House of Representatives; and

"(iv) the Committee on Transportation and Infrastructure of the House of Representatives;

"(C) the terms 'launch', 'reenter', and 'reentry' include landing of a launch vehicle or reentry vehicle; and

"(D) the terms 'United States Government launch site' and 'United States Government reentry site' include any necessary facility, at that location, that is commercially operated on United States Government property.

"(d) RULE OF CONSTRUCTION.—Nothing in this section shall be construed to limit the ability of the Secretary of Defense to consult with the Secretary of Transportation with respect to requirements and approvals under chapter 509 of title 51, United States Code."

Substantially identical provisions were contained in the following act:

Pub. L. 114–90, title I, §113, Nov. 25, 2015, 129 Stat. 714.

§50919. Relationship to other executive agencies, laws, and international obligations

(a) EXECUTIVE AGENCIES.—Except as provided in this chapter, a person is not required to obtain from an executive agency a license, approval, waiver, or exemption to launch a launch vehicle or operate a launch site or reentry site, or to reenter a reentry vehicle.

(b) FEDERAL COMMUNICATIONS COMMISSION AND SECRETARY OF COMMERCE .—This chapter does not affect the authority of—

(1) the Federal Communications Commission under the Communications Act of 1934 (47 U.S.C. 151 et seq.); or

(2) the Secretary of Commerce under chapter 601 of this title.

(c) STATES AND POLITICAL SUBDIVISIONS.—A State or political subdivision of a State—

(1) may not adopt or have in effect a law, regulation, standard, or order inconsistent with this chapter; but

(2) may adopt or have in effect a law, regulation, standard, or order consistent with this chapter that is in addition to or more stringent than a requirement of, or regulation prescribed under, this chapter.

(d) CONSULTATION.—The Secretary of Transportation is encouraged to consult with a State to simplify and expedite the approval of a space launch or reentry activity.

(e) FOREIGN COUNTRIES.—The Secretary of Transportation shall—

(1) carry out this chapter consistent with an obligation the United States Government assumes in a treaty, convention, or agreement in force between the Government and the government of a foreign country; and

(2) consider applicable laws and requirements of a foreign country when carrying out this chapter.

(f) LAUNCH NOT AN EXPORT; REENTRY NOT AN IMPORT.—A launch vehicle, reentry vehicle, or payload that is launched or reentered is not, because of the launch or reentry, an export or import, respectively, for purposes of a law controlling exports or imports, except that payloads

launched pursuant to foreign trade zone procedures as provided for under the Foreign Trade Zones Act (19 U.S.C. 81a–81u) shall be considered exports with regard to customs entry.

(g) NONAPPLICATION.—

(1) IN GENERAL.—This chapter does not apply to—

(A) a launch, reentry, operation of a launch vehicle or reentry vehicle, operation of a launch site or reentry site, or other space activity the Government carries out for the Government; or

(B) planning or policies related to the launch, reentry, operation, or activity under subparagraph (A).

(2) RULE OF CONSTRUCTION.—The following activities are not space activities the Government carries out for the Government under paragraph (1):

(A) A government astronaut being carried within a launch vehicle or reentry vehicle under this chapter.

(B) A government astronaut performing activities directly relating to the launch, reentry, or other operation of the launch vehicle or reentry vehicle under this chapter.

(Pub. L. 103–272, §1(e), July 5, 1994, 108 Stat. 1342, §70117 of title 49; Pub. L. 104–287, §5(95), Oct. 11, 1996, 110 Stat. 3398; Pub. L. 105–303, title I, §102(a)(15), Oct. 28, 1998, 112 Stat. 2850; renumbered §70117 then §50919 of title 51 and amended Pub. L. 111–314, §4(d)(2), (3)(S), (5)(T), Dec. 18, 2010, 124 Stat. 3440–3442; Pub. L. 114–90, title I, §112(o), Nov. 25, 2015, 129 Stat. 713.)

HISTORICAL AND REVISION NOTES

PUB. L. 103–272

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70117(a)	49 App.:2605(c)(1).	Oct. 30, 1984, Pub. L. 98–575, §§6(c), 21, 98 Stat. 3058, 3063.
70117(b)	49 App.:2605(c)(2).	
70117(c)	49 App.:2620(a) (1st, 2d sentences).	
70117(d)	49 App.:2620(a) (last sentence).	
70117(e)	49 App.:2620(d).	
70117(f)	49 App.:2620(b).	
70117(g)	49 App.:2620(c).	

In subsection (e)(1), the words "government of a foreign country" are substituted for "foreign nation" for consistency in the revised title and with other titles of the United States Code.

PUB. L. 104–287

This amends 49:70117(b)(2) by updating a cross-reference. Section 4 of the Land Remote Sensing Policy Act of 1992 (Public Law 102–555, 106 Stat. 4166) repealed the Land Remote-Sensing Commercialization Act of 1984 (15 U.S.C. 4201 et seq.). The substantive provisions of the Land Remote Sensing Policy Act of 1992, which replaced the Land Remote-Sensing Commercialization Act of 1984, were classified to the United States Code at 15 U.S.C. 5601 et seq.

EDITORIAL NOTES

REFERENCES IN TEXT

The Communications Act of 1934, referred to in subsec. (b)(1), is act June 19, 1934, ch. 652, 48 Stat. 1064, which is classified principally to section 151 et seq. of Title 47, Telecommunications. For complete classification of this Act to the Code, see section 609 of Title 47 and Tables.

The Foreign Trade Zones Act, referred to in subsec. (f), is act June 18, 1934, ch. 590, 48 Stat. 998, which is classified generally to chapter 1A (§81a et seq.) of Title 19, Customs Duties. For complete classification of this Act to the Code, see Tables.

AMENDMENTS

2015—Subsec. (g). Pub. L. 114–90 amended subsec. (g) generally. Prior to amendment, text read as follows: "This chapter does not apply to—

"(1) a launch, reentry, operation of a launch vehicle or reentry vehicle, operation of a launch site or reentry site, or other space activity the Government carries out for the Government; or

"(2) planning or policies related to the launch, reentry, operation, or activity."

2010—Pub. L. 111–314, §4(d)(2), (3)(S), successively renumbered section 70117 of title 49 and section 70117 of this title as this section.

Subsec. (b)(2). Pub. L. 111–314, §4(d)(5)(T), substituted "chapter 601 of this title" for "the Land Remote Sensing Policy Act of 1992 (15 U.S.C. 5601 et seq.)".

1998—Subsec. (a). Pub. L. 105–303, §102(a)(15)(A), inserted "or reentry site, or to reenter a reentry vehicle" after "operate a launch site".

Subsec. (d). Pub. L. 105–303, §102(a)(15)(B), inserted "or reentry" after "approval of a space launch".

Subsec. (f). Pub. L. 105–303, §102(a)(15)(C), amended heading and text of subsec. (f) generally. Prior to amendment, text read as follows: "A launch vehicle or payload that is launched is not, because of the launch, an export for purposes of a law controlling exports."

Subsec. (g)(1). Pub. L. 105–303, §102(a)(15)(D)(i), substituted "reentry, operation of a launch vehicle or reentry vehicle, operation of a launch site or reentry site," for "operation of a launch vehicle or launch site,".

Subsec. (g)(2). Pub. L. 105–303, §102(a)(15)(D)(ii), inserted "reentry," after "launch,".

1996—Subsec. (b)(2). Pub. L. 104–287 substituted "Land Remote Sensing Policy Act of 1992 (15 U.S.C. 5601 et seq.)" for "Land Remote-Sensing Commercialization Act of 1984 (15 U.S.C. 4201 et seq.)".

§50920. User fees

The Secretary of Transportation may collect a user fee for a regulatory or other service conducted under this chapter only if specifically authorized by this chapter.

(Pub. L. 103–272, §1(e), July 5, 1994, 108 Stat. 1342, §70118 of title 49; renumbered §70118 then §50920 of title 51, Pub. L. 111–314, §4(d)(2), (3)(T), Dec. 18, 2010, 124 Stat. 3440, 3441.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70118	49 App.:2623 (last sentence).	Oct. 30, 1984, Pub. L. 98–575, §24 (last sentence), 98 Stat. 3064; Dec. 5, 1985, Pub. L. 99–170, §301, 99 Stat. 1018; Oct. 30, 1987, Pub. L. 100–147, §120, 101 Stat. 868; Nov. 17, 1988, Pub. L. 100–685, §213, 102 Stat. 4093; Nov. 16, 1990, Pub. L. 101–611, §117(a), 104 Stat. 3202; restated Dec. 9, 1991, Pub. L. 102–195, §13, 105 Stat. 1613; Nov. 4, 1992, Pub. L. 102–588, §211, 106 Stat. 5115.

EDITORIAL NOTES

AMENDMENTS

2010—Pub. L. 111–314 successively renumbered section 70118 of title 49 and section 70118 of this title as this section.

§50921. Office of Commercial Space Transportation

There are authorized to be appropriated to the Secretary of Transportation for the activities of the Office of the Associate Administrator for Commercial Space Transportation—

(1) $11,941,000 for fiscal year 2005;
(2) $12,299,000 for fiscal year 2006;
(3) $12,668,000 for fiscal year 2007;
(4) $13,048,000 for fiscal year 2008; and
(5) $13,440,000 for fiscal year 2009.

(Pub. L. 103–272, §1(e), July 5, 1994, 108 Stat. 1343, §70119 of title 49, Pub. L. 105–303, title I, §102(b), Oct. 28, 1998, 112 Stat. 2851; Pub. L. 106–405, §3(a), Nov. 1, 2000, 114 Stat. 1752; Pub. L. 108–360, title III, §301, Oct. 25, 2004, 118 Stat. 1680; renumbered §70119 then §50921 of title 51, Pub. L. 111–314, §4(d)(2), (3)(U), Dec. 18, 2010, 124 Stat. 3440, 3441.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70119	49 App.:2623 (less last sentence).	Oct. 30, 1984, Pub. L. 98–575, §24 (less last sentence), 98 Stat. 3064; Dec. 5, 1985, Pub. L. 99–170, §301, 99 Stat. 1018; Oct. 30, 1987, Pub. L. 100–147, §120, 101 Stat. 868; Nov. 17, 1988, Pub. L. 100–685, §213, 102 Stat. 4093; Nov. 16, 1990, Pub. L. 101–611, §117(a), 104 Stat. 3202; restated Dec. 9, 1991, Pub. L. 102–195, §13, 105 Stat. 1613; Nov. 4, 1992, Pub. L. 102–588, §211, 106 Stat. 5115.

In this section, the amendment by section 211 of the National Aeronautics and Space Administration Authorization Act, Fiscal Year 1993 (Pub. L. 102–588, 106 Stat. 5115) was executed to carry out the probable intent of Congress by omitting the period after "1993".

As to the applicability of section 219 of the Act (Pub. L. 102–588, 106 Stat. 5118) to amounts authorized by this section for fiscal year 1993, see section 6(b) of the bill.

EDITORIAL NOTES

AMENDMENTS

2010—Pub. L. 111–314 successively renumbered section 70119 of title 49 and section 70119 of this title as this section.

2004—Pars. (1) to (5). Pub. L. 108–360 added pars. (1) to (5) and struck out former pars. (1) and (2) which read as follows:

"(1) $12,607,000 for fiscal year 2001; and
"(2) $16,478,000 for fiscal year 2002."

2000—Pub. L. 106–405 amended section catchline and text generally. Prior to amendment, text read as follows: "There are authorized to be appropriated to the Secretary of Transportation for the activities of the Office of the Associate Administrator for Commercial Space Transportation—

"(1) $6,275,000 for the fiscal year ending September 30, 1999; and
"(2) $6,600,000 for the fiscal year ending September 30, 2000."

1998—Pub. L. 105–303 reenacted section catchline without change and amended text generally. Prior to amendment, text read as follows: "The following amounts may be appropriated to the Secretary of Transportation for the fiscal year ending September 30, 1993:

"(1) $4,900,000 to carry out this chapter.
"(2) $20,000,000 for a program to ensure the resiliency of the space launch infrastructure of the United

States if a law is enacted to establish that program in the Department of Transportation."

§50922. Regulations

(a) IN GENERAL.—The Secretary of Transportation, within 9 months after the date of the enactment of this section, shall issue regulations to carry out this chapter that include—

(1) guidelines for industry and State governments to obtain sufficient insurance coverage for potential damages to third parties;

(2) procedures for requesting and obtaining licenses to launch a commercial launch vehicle;

(3) procedures for requesting and obtaining operator licenses for launch;

(4) procedures for requesting and obtaining launch site operator licenses; and

(5) procedures for the application of government indemnification.

(b) REENTRY.—The Secretary of Transportation, within 6 months after the date of the enactment of this section, shall issue a notice of proposed rulemaking to carry out this chapter that includes—

(1) procedures for requesting and obtaining licenses to reenter a reentry vehicle;

(2) procedures for requesting and obtaining operator licenses for reentry; and

(3) procedures for requesting and obtaining reentry site operator licenses.

(c) AMENDMENTS.—(1) Not later than 12 months after the date of enactment of the Commercial Space Launch Amendments Act of 2004, the Secretary shall publish proposed regulations to carry out that Act, including regulations relating to crew, space flight participants, and permits for launch or reentry of reusable suborbital rockets. Not later than 18 months after such date of enactment, the Secretary shall issue final regulations.

(2)(A) Starting 3 years after the date of enactment of the Commercial Space Launch Amendments Act of 2004, the Secretary may issue final regulations changing the definition of suborbital rocket under this chapter. No such regulation may take effect until 180 days after the Secretary has submitted the regulation to the Congress.

(B) The Secretary may issue regulations under this paragraph only if the Secretary has determined that the definition in section 50902 does not describe, or will not continue to describe, all appropriate vehicles and only those vehicles. In making that determination, the Secretary shall take into account the evolving nature of the commercial space launch industry.

(d) EFFECTIVE DATE.—(1) Licenses for the launch or reentry of launch vehicles or reentry vehicles with human beings on board and permits may be issued by the Secretary prior to the issuance of the regulations described in subsection (c).

(2) As soon as practicable after the date of enactment of the Commercial Space Launch Amendments Act of 2004, the Secretary shall issue guidelines or advisory circulars to guide the implementation of that Act until regulations are issued.

(3) Notwithstanding paragraphs (1) and (2), no licenses for the launch or reentry of launch vehicles or reentry vehicles with human beings on board or permits may be issued starting three years after the date of enactment of the Commercial Space Launch Amendments Act of 2004 unless the final regulations described in subsection (c) have been issued.

(Added Pub. L. 105–303, title I, §102(a)(16), Oct. 28, 1998, 112 Stat. 2850, §70120 of title 49; amended Pub. L. 108–492, §2(c)(25), Dec. 23, 2004, 118 Stat. 3981; renumbered §70120 then §50922 of title 51 and amended Pub. L. 111–314, §4(d)(2), (3)(V), (5)(U), Dec. 18, 2010, 124 Stat. 3440–3442.)

EDITORIAL NOTES

REFERENCES IN TEXT

The date of the enactment of this section, referred to in subsecs. (a) and (b), is the date of enactment of Pub. L. 105–303, which was approved Oct. 28, 1998.

The Commercial Space Launch Amendments Act of 2004, referred to in subsecs. (c) and (d), is Pub. L.

108–492, Dec. 23, 2004, 118 Stat. 3974, which was approved Dec. 23, 2004. For complete classification of this Act to the Code, see Short Title of 2004 Act note set out under section 10101 of this title and Tables.

AMENDMENTS

2010—Pub. L. 111–314, §4(d)(2), (3)(V), successively renumbered section 70120 of title 49 and section 70120 of this title as this section.

Subsec. (c)(2)(B). Pub. L. 111–314, §4(d)(5)(U), substituted "section 50902" for "section 70102".

2004—Subsecs. (c), (d). Pub. L. 108–492 added subsecs. (c) and (d).

§50923. Report to Congress

The Secretary of Transportation shall submit to Congress an annual report to accompany the President's budget request that—

(1) describes all activities undertaken under this chapter, including a description of the process for the application for and approval of licenses under this chapter and recommendations for legislation that may further commercial launches and reentries; and

(2) reviews the performance of the regulatory activities and the effectiveness of the Office of Commercial Space Transportation.

(Added Pub. L. 105–303, title I, §102(a)(16), Oct. 28, 1998, 112 Stat. 2851, §70121 of title 49; renumbered §70121 then §50923 of title 51, Pub. L. 111–314, §4(d)(2), (3)(W), Dec. 18, 2010, 124 Stat. 3440, 3441.)

EDITORIAL NOTES

AMENDMENTS

2010—Pub. L. 111–314 successively renumbered section 70121 of title 49 and section 70121 of this title as this section.

§50924. Space launch and reentry licensing and permitting user fees

(a) FEES.—

(1) IN GENERAL.—The Secretary of Transportation shall impose a fee, which shall be deposited in the account established under subsection (b), on each launch or reentry carried out under a license or permit issued under section 50904 during 2026 or a subsequent year, in an amount equal to the lesser of—

(A) the amount specified in paragraph (2) for the year involved per pound of the weight of the payload; or

(B) the amount specified in paragraph (3) for the year involved.

(2) PARAGRAPH (2) SPECIFIED AMOUNT.—The amount specified in this paragraph is—

(A) for 2026, $0.25;

(B) for 2027, $0.35;

(C) for 2028, $0.50;

(D) for 2029, $0.60;

(E) for 2030, $0.75;

(F) for 2031, $1;

(G) for 2032, $1.25;

(H) for 2033, $1.50; and

(I) for 2034 and each subsequent year, the amount specified in this paragraph for the previous year increased by the percentage increase in the consumer price index for all urban consumers (all items; United States city average) over the previous year.

(3) PARAGRAPH (3) SPECIFIED AMOUNT.—The amount specified in this paragraph is—

(A) for 2026, $30,000;
(B) for 2027, $40,000;
(C) for 2028, $50,000;
(D) for 2029, $75,000;
(E) for 2030, $100,000;
(F) for 2031, $125,000;
(G) for 2032, $170,000;
(H) for 2033, $200,000; and
(I) for 2034 and each subsequent year, the amount specified in this paragraph for the previous year increased by the percentage increase in the consumer price index for all urban consumers (all items; United States city average) over the previous year.

(b) OFFICE OF COMMERCIAL SPACE TRANSPORTATION LAUNCH AND REENTRY LICENSING AND PERMITTING FUND.—There is established in the Treasury of the United States a separate account, which shall be known as the "Office of Commercial Space Transportation Launch and Reentry Licensing and Permitting Fund", for the purposes of expenses of the Office of Commercial Space Transportation of the Federal Aviation Administration and to carry out section 630(b) of the FAA Reauthorization Act of 2024. 70 percent of the amounts deposited into the fund shall be available for such purposes and shall be available without further appropriation and without fiscal year limitation.

(Added Pub. L. 119–21, title IV, §40004(a), July 4, 2025, 139 Stat. 132.)

EDITORIAL NOTES

REFERENCES IN TEXT

Section 630(b) of the FAA Reauthorization Act of 2024, referred to in subsec. (b), is section 630(b) of Pub. L. 118–63, May 16, 2024, 138 Stat. 1245, which relates to funds for developing technology for space launch and reentry reintegration and is not classified to the Code.

CHAPTER 511—SPACE TRANSPORTATION INFRASTRUCTURE MATCHING GRANTS

Sec.
51101. Definitions.
51102. Grant authority.
51103. Grant applications.
51104. Environmental requirements.
51105. Authorization of appropriations.

EDITORIAL NOTES

AMENDMENTS

2010—Pub. L. 111–314, §4(d)(2), (4), Dec. 18, 2010, 124 Stat. 3440, 3441, transferred analysis for chapter 703 of Title 49, Transportation, and renumbered as analysis for chapter 511 of this title and renumbered items 70301 to 70305 as 51101 to 51105, respectively.

§51101. Definitions

In this chapter—
(1) the definitions in section 50501 of this title apply.
(2) "commercial space transportation infrastructure development" includes—
(A) construction, improvement, design, and engineering of space transportation infrastructure in the United States; and

(B) technical studies to define how new or enhanced space transportation infrastructure can best meet the needs of the United States commercial space transportation industry.

(3) "project" means a project (or separate projects submitted together) to carry out commercial space transportation infrastructure development, including the combined submission of all projects to be undertaken at a particular site in a fiscal year.

(4) "project grant" means a grant of an amount by the Secretary of Transportation to a sponsor for one or more projects.

(5) "public agency" means a State or an agency of a State, a political subdivision of a State, or a tax-supported organization.

(6) "sponsor" means a public agency that, individually or jointly with one or more other public agencies, submits to the Secretary under this chapter an application for a project grant.

(Pub. L. 103–272, §1(e), July 5, 1994, 108 Stat. 1343, §70301 of title 49; renumbered §70301 then §51101 of title 51 and amended Pub. L. 111–314, §4(d)(2), (4)(A), (6)(A), Dec. 18, 2010, 124 Stat. 3440–3442.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70301	15:5804(a).	Nov. 4, 1992, Pub. L. 102–588, §505(a), 106 Stat. 5124.

Clause (1) is added to incorporate the definitions in 15:5802.

In clause (2), the word "includes" is substituted for "may include" for consistency in the revised title and with other titles of the United States Code.

In clause (5), the words "municipality or other" are omitted for consistency.

The text of 15:5804(5) is omitted as unnecessary because the complete name of the Secretary of Transportation is used the first time the term appears in a section.

EDITORIAL NOTES

AMENDMENTS

2010—Pub. L. 111–314, §4(d)(2), (4)(A), successively renumbered section 70301 of title 49 and section 70301 of this title as this section.

Par. (1). Pub. L. 111–314, §4(d)(6)(A), substituted "section 50501 of this title" for "section 502 of the National Aeronautics and Space Administration Authorization Act, Fiscal Year 1993 (15 U.S.C. 5802)".

§51102. Grant authority

(a) GENERAL AUTHORITY.—To ensure the resiliency of the space transportation infrastructure of the United States, the Secretary of Transportation may make project grants to sponsors as provided in this chapter.

(b) LIMITATIONS.—The Secretary may make a project grant under this chapter only if—

(1) at least 10 percent of the total cost of the project will be paid by the private sector; and

(2) the grant will not be for more than 50 percent of the total cost of the project.

(Pub. L. 103–272, §1(e), July 5, 1994, 108 Stat. 1343, §70302 of title 49; renumbered §70302 then §51102 of title 51, Pub. L. 111–314, §4(d)(2), (4)(B), Dec. 18, 2010, 124 Stat. 3440, 3441.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70302(a)	15:5804(b) (1st sentence).	Nov. 4, 1992, Pub. L. 102–588,

70302(b)	15:5804(f).	§505(b) (1st sentence), (f), 106 Stat. 5125, 5127.

In subsection (a), the words "of the United States" are substituted for "Nation's" for consistency.

EDITORIAL NOTES

AMENDMENTS

2010—Pub. L. 111–314 successively renumbered section 70302 of title 49 and section 70302 of this title as this section.

§51103. Grant applications

(a) GENERAL.—A sponsor may submit to the Secretary of Transportation an application for a project grant. The application must state the project to be undertaken and be in the form and contain the information the Secretary requires.

(b) CONSIDERATIONS AND CONSULTATION.—(1) In selecting proposed projects for grants under this section, the Secretary of Transportation shall consider—

(A) the contribution of the project to industry capabilities that serve the United States Government's space transportation needs;

(B) the extent of industry's financial contribution to the project;

(C) the extent of industry's participation in the project;

(D) the positive impact of the project on the international competitiveness of the United States space transportation industry;

(E) the extent of State contributions to the project; and

(F) the impact of the project on launch operations and other activities at Government launch ranges.

(2) The Secretary of Transportation shall consult with the Secretary of Defense, the Administrator of the National Space and Aeronautics Administration, and the heads of other appropriate agencies of the Government about paragraph (1)(A) and (F) of this subsection.

(c) REQUIREMENTS.—The Secretary of Transportation may approve an application only if the Secretary is satisfied that—

(1) the project will contribute to the purposes of this chapter;

(2) the project is reasonably consistent with plans (existing at the time of approval of the project) of public agencies that are—

(A) authorized by the State in which the project is located; and

(B) responsible for the development of the area surrounding the project site;

(3) if the application proposes to use Government property, the specific consent of the head of the appropriate agency has been obtained;

(4) the project will be completed without unreasonable delay;

(5) the sponsor submitting the application has the legal authority to engage in the project; and

(6) any additional requirements prescribed by the Secretary have been met.

(d) PREFERENCE FOR INDUSTRY CONTRIBUTIONS.—The Secretary of Transportation shall give preference to applications for projects for which there will be greater industry financial contributions, all other factors being equal.

(Pub. L. 103–272, §1(e), July 5, 1994, 108 Stat. 1344, §70303 of title 49; renumbered §70303 then §51103 of title 51, Pub. L. 111–314, §4(d)(2), (4)(C), Dec. 18, 2010, 124 Stat. 3440, 3441.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70303(a)	15:5804(d)(1).	Nov. 4, 1992, Pub. L. 102–588, §505(c), (d), 106 Stat. 5125.
70303(b)(1)	15:5804(c)(1).	
70303(b)(2)	15:5804(c)(2).	
70303(c)	15:5804(d)(2).	
70303(d)	15:5804(c)(3).	

In subsection (a), the words "for one or more projects" are omitted as unnecessary because of the definition of "project" in section 70301 of the revised title.

In subsection (c)(5), the words "as proposed" are omitted as surplus.

EDITORIAL NOTES

AMENDMENTS

2010—Pub. L. 111–314 successively renumbered section 70303 of title 49 and section 70303 of this title as this section.

§51104. Environmental requirements

(a) POLICY.—It is the policy of the United States that projects selected under this chapter shall provide for the protection and enhancement of the natural resources and the quality of the environment of the United States. In carrying out this policy, the Secretary of Transportation shall consult with the Secretary of the Interior and the Administrator of the Environmental Protection Agency about a project that may have a significant effect on natural resources, including fish and wildlife, natural, scenic, and recreational assets, water and air quality, and other factors affecting the environment. If the Secretary of Transportation finds that a project will have a significant adverse effect, the Secretary may approve the application for the project only if, after a complete review that is a matter of public record, the Secretary makes a written finding that no feasible and prudent alternative to the project exists and that all reasonable steps have been taken to minimize the adverse effect.

(b) PUBLIC HEARING REQUIREMENT.—The Secretary of Transportation may approve an application only if the sponsor of the project certifies to the Secretary that an opportunity for a public hearing has been provided to consider the economic, social, and environmental effects of the project and its consistency with the goals of any planning carried out by the community. When a hearing is held under this paragraph, the sponsor shall submit a copy of the transcript of the hearing to the Secretary.

(c) COMPLIANCE WITH AIR AND WATER QUALITY STANDARDS.—(1) The Secretary of Transportation may approve an application only if the chief executive officer of the State in which the project is located certifies in writing to the Secretary that there is reasonable assurance that the project will be located, designed, constructed, and operated to comply with applicable air and water quality standards. If the Administrator has not prescribed those standards, certification shall be obtained from the Administrator. Notice of certification or refusal to certify shall be provided not later than 60 days after the Secretary receives the application.

(2) The Secretary of Transportation shall condition the approval of an application on compliance with applicable air and water quality standards during construction and operation.

(d) COMPLIANCE WITH LAWS AND REGULATIONS.—The Secretary of Transportation may require a certification from a sponsor that the sponsor will comply with all applicable laws and regulations. The Secretary may rescind at any time acceptance of a certification from a sponsor under this subsection. This subsection does not affect any responsibility of the Secretary under another law, including—

(1) section 303 of title 49;

(2) title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d et seq.);
(3) title VIII of the Act of April 11, 1968 (42 U.S.C. 3601 et seq.);
(4) the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.); and
(5) the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (42 U.S.C. 4601 et seq.).

(Pub. L. 103–272, §1(e), July 5, 1994, 108 Stat. 1344, §70304 of title 49; renumbered §70304 then §51104 of title 51 and amended Pub. L. 111–314, §4(d)(2), (4)(D), (6)(B), Dec. 18, 2010, 124 Stat. 3440, 3441, 3443.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70304	15:5804(e).	Nov. 4, 1992, Pub. L. 102–588, §505(e), 106 Stat. 5126.

In subsection (a), the words "policy of the United States" are substituted for "national policy", and the words "of the United States" are substituted for "of the Nation", for consistency. The words "included in a project grant application" and "full and" are omitted as surplus.

In subsection (b), the words "of objectives" are omitted as surplus.

In subsection (c), the words "chief executive officer" are substituted for "Governor" for consistency in the revised title and because the word "State" includes the territories and possessions of the United States.

In subsection (d), before clause (1), the words "in connection with any project", "imposed on such sponsor under this section in connection with such project", and "or discharge" are omitted as surplus. The words "laws and regulations" are substituted for "statutory and administrative requirements" for consistency in the revised title.

EDITORIAL NOTES

REFERENCES IN TEXT

The Civil Rights Act of 1964, referred to in subsec. (d)(2), is Pub. L. 88–352, July 2, 1964, 78 Stat. 241. Title VI of the Act is classified to subchapter V (§2000d et seq.) of chapter 21 of Title 42, The Public Health and Welfare. For complete classification of this Act to the Code, see Short Title note set out under section 2000a of Title 42 and Tables.

Title VIII of the Act of April 11, 1968, referred to in subsec. (d)(3), is title VIII of Pub. L. 90–284, Apr. 11, 1968, 82 Stat. 81, known as the Fair Housing Act, which is classified principally to subchapter I (§3601 et seq.) of chapter 45 of Title 42, The Public Health and Welfare. For complete classification of this Act to the Code, see Short Title note set out under section 3601 of Title 42 and Tables.

The National Environmental Policy Act of 1969, referred to in subsec. (d)(4), is Pub. L. 91–190, Jan. 1, 1970, 83 Stat. 852, which is classified generally to chapter 55 (§4321 et seq.) of Title 42, The Public Health and Welfare. For complete classification of this Act to the Code, see Short Title note set out under section 4321 of Title 42 and Tables.

The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, referred to in subsec. (d)(5), is Pub. L. 91–646, Jan. 2, 1971, 84 Stat. 1894, which is classified principally to chapter 61 (§4601 et seq.) of Title 42, The Public Health and Welfare. For complete classification of this Act to the Code, see Short Title note set out under section 4601 of Title 42 and Tables.

AMENDMENTS

2010—Pub. L. 111–314, §4(d)(2), (4)(D), successively renumbered section 70304 of title 49 and section 70304 of this title as this section.

Subsec. (d)(1). Pub. L. 111–314, §4(d)(6)(B), substituted "section 303 of title 49" for "section 303 of this title".

§51105. Authorization of appropriations

Not more than $10,000,000 may be appropriated to the Secretary of Transportation to make grants

under this chapter. Amounts appropriated under this section remain available until expended.

(Pub. L. 103–272, §1(e), July 5, 1994, 108 Stat. 1345, §70305 of title 49; renumbered §70305 then §51105 of title 51, Pub. L. 111–314, §4(d)(2), (4)(E), Dec. 18, 2010, 124 Stat. 3440, 3441.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70305	15:5804(b) (2d, last sentences).	Nov. 4, 1992, Pub. L. 102–588, §505(b) (2d, last sentences), 106 Stat. 5125.

EDITORIAL NOTES

AMENDMENTS

2010—Pub. L. 111–314 successively renumbered section 70305 of title 49 and section 70305 of this title as this section.

CHAPTER 513—SPACE RESOURCE COMMERCIAL EXPLORATION AND UTILIZATION

Sec.

51301. Definitions.
51302. Commercial exploration and commercial recovery.
51303. Asteroid resource and space resource rights.

EDITORIAL NOTES

AMENDMENTS

2015—Pub. L. 114–90, title IV, §402(a), Nov. 25, 2015, 129 Stat. 720, added chapter 513 and items 51301 to 51303.

§51301. Definitions

In this chapter:

(1) ASTEROID RESOURCE.—The term "asteroid resource" means a space resource found on or within a single asteroid.

(2) SPACE RESOURCE.—

(A) IN GENERAL.—The term "space resource" means an abiotic resource in situ in outer space.

(B) INCLUSIONS.—The term "space resource" includes water and minerals.

(3) UNITED STATES CITIZEN.—The term "United States citizen" has the meaning given the term "citizen of the United States" in section 50902.

(Added Pub. L. 114–90, title IV, §402(a), Nov. 25, 2015, 129 Stat. 721.)

§51302. Commercial exploration and commercial recovery

(a) IN GENERAL.—The President, acting through appropriate Federal agencies, shall—

(1) facilitate commercial exploration for and commercial recovery of space resources by United States citizens;

(2) discourage government barriers to the development in the United States of economically

viable, safe, and stable industries for commercial exploration for and commercial recovery of space resources in manners consistent with the international obligations of the United States; and

(3) promote the right of United States citizens to engage in commercial exploration for and commercial recovery of space resources free from harmful interference, in accordance with the international obligations of the United States and subject to authorization and continuing supervision by the Federal Government.

(b) REPORT.—Not later than 180 days after the date of enactment of this section, the President shall submit to Congress a report on commercial exploration for and commercial recovery of space resources by United States citizens that specifies—

(1) the authorities necessary to meet the international obligations of the United States, including authorization and continuing supervision by the Federal Government; and

(2) recommendations for the allocation of responsibilities among Federal agencies for the activities described in paragraph (1).

(Added Pub. L. 114–90, title IV, §402(a), Nov. 25, 2015, 129 Stat. 721.)

EDITORIAL NOTES

REFERENCES IN TEXT

The date of enactment of this section, referred to in subsec. (b), is the date of enactment of Pub. L. 114–90, which was approved Nov. 25, 2015.

EXECUTIVE DOCUMENTS

EX. ORD. NO. 13914. ENCOURAGING INTERNATIONAL SUPPORT FOR THE RECOVERY AND USE OF SPACE RESOURCES

Ex. Ord. No. 13914, Apr. 6, 2020, 85 F.R. 20381, provided:

By the authority vested in me as President by the Constitution and the laws of the United States of America, including title IV of the U.S. Commercial Space Launch Competitiveness Act (Public Law 114–90) [enacting this chapter], it is hereby ordered as follows:

SECTION 1. *Policy*. Space Policy Directive–1 of December 11, 2017 (Reinvigorating America's Human Space Exploration Program) [82 F.R. 59501], provides that commercial partners will participate in an "innovative and sustainable program" headed by the United States to "lead the return of humans to the Moon for long-term exploration and utilization, followed by human missions to Mars and other destinations." Successful long-term exploration and scientific discovery of the Moon, Mars, and other celestial bodies will require partnership with commercial entities to recover and use resources, including water and certain minerals, in outer space.

Uncertainty regarding the right to recover and use space resources, including the extension of the right to commercial recovery and use of lunar resources, however, has discouraged some commercial entities from participating in this enterprise. Questions as to whether the 1979 Agreement Governing the Activities of States on the Moon and Other Celestial Bodies (the "Moon Agreement") establishes the legal framework for nation states concerning the recovery and use of space resources have deepened this uncertainty, particularly because the United States has neither signed nor ratified the Moon Agreement. In fact, only 18 countries have ratified the Moon Agreement, including just 17 of the 95 Member States of the United Nations Committee on the Peaceful Uses of Outer Space. Moreover, differences between the Moon Agreement and the 1967 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies—which the United States and 108 other countries have joined—also contribute to uncertainty regarding the right to recover and use space resources.

Americans should have the right to engage in commercial exploration, recovery, and use of resources in outer space, consistent with applicable law. Outer space is a legally and physically unique domain of human activity, and the United States does not view it as a global commons. Accordingly, it shall be the policy of the United States to encourage international support for the public and private recovery and use of resources in outer space, consistent with applicable law.

SEC. 2. *The Moon Agreement*. The United States is not a party to the Moon Agreement. Further, the United States does not consider the Moon Agreement to be an effective or necessary instrument to guide nation states

regarding the promotion of commercial participation in the long-term exploration, scientific discovery, and use of the Moon, Mars, or other celestial bodies. Accordingly, the Secretary of State shall object to any attempt by any other state or international organization to treat the Moon Agreement as reflecting or otherwise expressing customary international law.

SEC. 3. *Encouraging International Support for the Recovery and Use of Space Resources*. The Secretary of State, in consultation with the Secretary of Commerce, the Secretary of Transportation, the Administrator of the National Aeronautics and Space Administration, and the head of any other executive department or agency the Secretary of State determines to be appropriate, shall take all appropriate actions to encourage international support for the public and private recovery and use of resources in outer space, consistent with the policy set forth in section 1 of this order. In carrying out this section, the Secretary of State shall seek to negotiate joint statements and bilateral and multilateral arrangements with foreign states regarding safe and sustainable operations for the public and private recovery and use of space resources.

SEC. 4. *Report on Efforts to Encourage International Support for the Recovery and Use of Space Resources* . No later than 180 days after the date of this order [Apr. 6, 2020], the Secretary of State shall report to the President, through the Chair of the National Space Council and the Assistant to the President for National Security Affairs, regarding activities carried out under section 3 of this order.

SEC. 5. *General Provisions*. (a) Nothing in this order shall be construed to impair or otherwise affect:

(i) the authority granted by law to an executive department or agency, or the head thereof; or

(ii) the functions of the Director of the Office of Management and Budget relating to budgetary, administrative, or legislative proposals.

(b) This order shall be implemented consistent with applicable law and subject to the availability of appropriations.

(c) This order is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

DONALD J. TRUMP.

§51303. Asteroid resource and space resource rights

A United States citizen engaged in commercial recovery of an asteroid resource or a space resource under this chapter shall be entitled to any asteroid resource or space resource obtained, including to possess, own, transport, use, and sell the asteroid resource or space resource obtained in accordance with applicable law, including the international obligations of the United States.

(Added Pub. L. 114–90, title IV, §402(a), Nov. 25, 2015, 129 Stat. 721.)

CHAPTER 515—OFFICE OF SPACEPORTS

Sec.[1]

51501.[1] Establishment of Office of Spaceports.[1]

EDITORIAL NOTES

AMENDMENTS

2018—Pub. L. 115–254, div. B, title V, §580(b)(1), Oct. 5, 2018, 132 Stat. 3395, added chapter 515 and item 51501.

[1] Editorially supplied. Section added by Pub. L. 115–254 without corresponding amendment of chapter analysis.

§51501. Establishment of Office of Spaceports

(a) ESTABLISHMENT OF OFFICE.—Not later than 90 days after the date of enactment of this section, the Secretary of Transportation shall identify, within the Office of Commercial Space

Transportation, a centralized policy office to be known as the Office of Spaceports.

(b) FUNCTIONS.—The Office of Spaceports shall—

(1) support licensing activities for operation of launch and reentry sites;

(2) develop policies that promote infrastructure improvements at spaceports;

(3) provide technical assistance and guidance to spaceports;

(4) promote United States spaceports within the Department; and

(5) strengthen the Nation's competitiveness in commercial space transportation infrastructure and increase resilience for the Federal Government and commercial customers.

(c) RECOGNITION.—In carrying out the functions assigned in subsection (b), the Secretary shall recognize the unique needs and distinctions of spaceports that host— [1]

(1) launches to or reentries from orbit; and

(2) are involved in suborbital launch activities.

(d) DIRECTOR.—The head of the Office of the Associate Administrator for Commercial Space Transportation shall designate a Director of the Office of Spaceports.

(e) DEFINITION.—In this section the term "spaceport" means a launch or reentry site that is operated by an entity licensed by the Secretary of Transportation.

(Added Pub. L. 115–254, div. B, title V, §580(b)(1), Oct. 5, 2018, 132 Stat. 3395.)

EDITORIAL NOTES

REFERENCES IN TEXT

The date of enactment of this section, referred to in subsec. (a), is the date of enactment of Pub. L. 115–254, which was approved Oct. 5, 2018.

[1] So in original. The dash probably should follow "that" and the word "host" probably should appear at the beginning of par. (1).

Subtitle VI—Earth Observations

CHAPTER 601—LAND REMOTE SENSING POLICY

SUBCHAPTER I—GENERAL

Sec.
60101. Definitions.

SUBCHAPTER II—LANDSAT

60111. Landsat Program Management.
60112. Transfer of Landsat 6 program responsibilities.
60113. Data policy for Landsat 7.

SUBCHAPTER III—LICENSING OF PRIVATE REMOTE SENSING SPACE SYSTEMS

60121. General licensing authority.
60122. Conditions for operation.
60123. Administrative authority of Secretary.
60124. Regulatory authority of Secretary.
60125. Agency activities.
60126. Annual reports.

SUBCHAPTER IV—RESEARCH, DEVELOPMENT, AND DEMONSTRATION

60131. Continued Federal research and development.
60132. Availability of federally gathered unenhanced data.

60133. Technology demonstration program.
60134. Preference for private sector land remote sensing system.
SUBCHAPTER V—GENERAL PROVISIONS
60141. Nondiscriminatory data availability.
60142. Archiving of data.
60143. Nonreproduction.
60144. Reimbursement for assistance.
60145. Acquisition of equipment.
60146. Radio frequency allocation.
60147. Consultation.
60148. Enforcement.
SUBCHAPTER VI—PROHIBITION OF COMMERCIALIZATION OF WEATHER SATELLITES
60161. Prohibition.
60162. Future considerations.

EDITORIAL NOTES

AMENDMENTS

2015—Pub. L. 114–90, title II, §201(b), Nov. 25, 2015, 129 Stat. 719, added item 60126.

SUBCHAPTER I—GENERAL

§60101. Definitions

In this chapter:

(1) COST OF FULFILLING USER REQUESTS.—The term "cost of fulfilling user requests" means the incremental costs associated with providing product generation, reproduction, and distribution of unenhanced data in response to user requests and shall not include any acquisition, amortization, or depreciation of capital assets originally paid for by the United States Government or other costs not specifically attributable to fulfilling user requests.

(2) DATA CONTINUITY.—The term "data continuity" means the continued acquisition and availability of unenhanced data which are, from the point of view of the user—

(A) sufficiently consistent (in terms of acquisition geometry, coverage characteristics, and spectral characteristics) with previous Landsat data to allow comparisons for global and regional change detection and characterization; and

(B) compatible with such data and with methods used to receive and process such data.

(3) DATA PREPROCESSING.—The term "data preprocessing"—

(A) may include—

(i) rectification of system and sensor distortions in land remote sensing data as it is received directly from the satellite in preparation for delivery to a user;

(ii) registration of such data with respect to features of the Earth; and

(iii) calibration of spectral response with respect to such data; but

(B) does not include conclusions, manipulations, or calculations derived from such data, or a combination of such data with other data.

(4) LAND REMOTE SENSING.—The term "land remote sensing" means the collection of data which can be processed into imagery of surface features of the Earth from an unclassified satellite or satellites, other than an operational United States Government weather satellite.

(5) LANDSAT PROGRAM MANAGEMENT.—The term "Landsat Program Management" means the integrated program management structure—

(A) established by, and responsible to, the Administrator and the Secretary of Defense pursuant to section 60111(a) of this title; and

(B) consisting of appropriate officers and employees of the Administration, the Department of Defense, and any other United States Government agencies the President designates as responsible for the Landsat program.

(6) LANDSAT SYSTEM.—The term "Landsat system" means Landsats 1, 2, 3, 4, 5, and 6, and any follow-on land remote sensing system operated and owned by the United States Government, along with any related ground equipment, systems, and facilities owned by the United States Government.

(7) LANDSAT 6 CONTRACTOR.—The term "Landsat 6 contractor" means the private sector entity which was awarded the contract for spacecraft construction, operations, and data marketing rights for the Landsat 6 spacecraft.

(8) LANDSAT 7.—The term "Landsat 7" means the follow-on satellite to Landsat 6.

(9) NATIONAL SATELLITE LAND REMOTE SENSING DATA ARCHIVE.—The term "National Satellite Land Remote Sensing Data Archive" means the archive established by the Secretary of the Interior pursuant to the archival responsibilities defined in section 60142 of this title.

(10) NONCOMMERCIAL PURPOSES.—The term "noncommercial purposes" means activities undertaken by individuals or entities on the condition, upon receipt of unenhanced data, that—

(A) such data shall not be used in connection with any bid for a commercial contract, development of a commercial product, or any other non-United States Government activity that is expected, or has the potential, to be profitmaking;

(B) the results of such activities are disclosed in a timely and complete fashion in the open technical literature or other method of public release, except when such disclosure by the United States Government or its contractors would adversely affect the national security or foreign policy of the United States or violate a provision of law or regulation; and

(C) such data shall not be distributed in competition with unenhanced data provided by the Landsat 6 contractor.

(11) SECRETARY.—The term "Secretary" means the Secretary of Commerce.

(12) UNENHANCED DATA.—The term "unenhanced data" means land remote sensing signals or imagery products that are unprocessed or subject only to data preprocessing.

(13) UNITED STATES GOVERNMENT AND ITS AFFILIATED USERS.—The term "United States Government and its affiliated users" means—

(A) United States Government agencies;

(B) researchers involved with the United States Global Change Research Program and its international counterpart programs; and

(C) other researchers and international entities that have signed with the United States Government a cooperative agreement involving the use of Landsat data for noncommercial purposes.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3409.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
60101	15 U.S.C. 5602.	Pub. L. 102–555, §3, Oct. 28, 1992, 106 Stat. 4164.

The definition of "Administrator" in section 3 of the Land Remote Sensing Policy Act of 1992 (Public Law 102–555, 106 Stat. 4164) is omitted as unnecessary because of the definition added by section 10101 of title 51.

STATUTORY NOTES AND RELATED SUBSIDIARIES

FINDINGS

Pub. L. 102–555, §2, Oct. 28, 1992, 106 Stat. 4163, provided that: "The Congress finds and declares the following:

"(1) The continuous collection and utilization of land remote sensing data from space are of major benefit in studying and understanding human impacts on the global environment, in managing the Earth's natural resources, in carrying out national security functions, and in planning and conducting many other activities of scientific, economic, and social importance.

"(2) The Federal Government's Landsat system established the United States as the world leader in land remote sensing technology.

"(3) The national interest of the United States lies in maintaining international leadership in satellite land remote sensing and in broadly promoting the beneficial use of remote sensing data.

"(4) The cost of Landsat data has impeded the use of such data for scientific purposes, such as for global environmental change research, as well as for other public sector applications.

"(5) Given the importance of the Landsat program to the United States, urgent actions, including expedited procurement procedures, are required to ensure data continuity.

"(6) Full commercialization of the Landsat program cannot be achieved within the foreseeable future, and thus should not serve as the near-term goal of national policy on land remote sensing; however, commercialization of land remote sensing should remain a long-term goal of United States policy.

"(7) Despite the success and importance of the Landsat system, funding and organizational uncertainties over the past several years have placed its future in doubt and have jeopardized United States leadership in land remote sensing.

"(8) Recognizing the importance of the Landsat program in helping to meet national and commercial objectives, the President approved, on February 11, 1992, a National Space Policy Directive which was developed by the National Space Council and commits the United States to ensuring the continuity of Landsat coverage into the 21st century.

"(9) Because Landsat data are particularly important for national security purposes and global environmental change research, management responsibilities for the program should be transferred from the Department of Commerce to an integrated program management involving the Department of Defense and the National Aeronautics and Space Administration.

"(10) Regardless of management responsibilities for the Landsat program, the Nation's broad civilian, national security, commercial, and foreign policy interests in remote sensing will best be served by ensuring that Landsat remains an unclassified program that operates according to the principles of open skies and nondiscriminatory access.

"(11) Technological advances aimed at reducing the size and weight of satellite systems hold the potential for dramatic reductions in the cost, and substantial improvements in the capabilities, of future land remote sensing systems, but such technological advances have not been demonstrated for land remote sensing and therefore cannot be relied upon as the sole means of achieving data continuity for the Landsat program.

"(12) A technology demonstration program involving advanced remote sensing technologies could serve a vital role in determining the design of a follow-on spacecraft to Landsat 7, while also helping to determine whether such a spacecraft should be funded by the United States Government, by the private sector, or by an international consortium.

"(13) To maximize the value of the Landsat program to the American public, unenhanced Landsat 4 through 6 data should be made available, at a minimum, to United States Government agencies, to global environmental change researchers, and to other researchers who are financially supported by the United States Government, at the cost of fulfilling user requests, and unenhanced Landsat 7 data should be made available to all users at the cost of fulfilling user requests.

"(14) To stimulate development of the commercial market for unenhanced data and value-added services, the United States Government should adopt a data policy for Landsat 7 which allows competition within the private sector for distribution of unenhanced data and value-added services.

"(15) Development of the remote sensing market and the provision of commercial value-added services based on remote sensing data should remain exclusively the function of the private sector.

"(16) It is in the best interest of the United States to maintain a permanent, comprehensive Government archive of global Landsat and other land remote sensing data for long-term monitoring and study of the changing global environment."

[For definition of terms used in section 2 of Pub. L. 102–555, set out above, see section 3 of Pub. L. 102–555, Oct. 28, 1992, 106 Stat. 4164, which was classified to former section 5602 of Title 15, Commerce and Trade, and was repealed and reenacted as this section by Pub. L. 111–314, §§3, 6, Dec. 18, 2010, 124 Stat. 3328, 3444.]

SUBCHAPTER II—LANDSAT

§60111. Landsat Program Management

(a) ESTABLISHMENT.—The Administrator and the Secretary of Defense shall be responsible for management of the Landsat program. Such responsibility shall be carried out by establishing an integrated program management structure for the Landsat system.

(b) MANAGEMENT PLAN.—The Administrator, the Secretary of Defense, and any other United States Government official the President designates as responsible for part of the Landsat program shall establish, through a management plan, the roles, responsibilities, and funding expectations for the Landsat program of the appropriate United States Government agencies. The management plan shall—

(1) specify that the fundamental goal of the Landsat Program Management is the continuity of unenhanced Landsat data through the acquisition and operation of a Landsat 7 satellite as quickly as practicable which is, at a minimum, functionally equivalent to the Landsat 6 satellite, with the addition of a tracking and data relay satellite communications capability;

(2) include a baseline funding profile that—

(A) is mutually acceptable to the Administration and the Department of Defense for the period covering the development and operation of Landsat 7; and

(B) provides for total funding responsibility of the Administration and the Department of Defense, respectively, to be approximately equal to the funding responsibility of the other as spread across the development and operational life of Landsat 7;

(3) specify that any improvements over the Landsat 6 functional equivalent capability for Landsat 7 will be funded by a specific sponsoring agency or agencies, in a manner agreed to by the Landsat Program Management, if the required funding exceeds the baseline funding profile required by paragraph (2), and that additional improvements will be sought only if the improvements will not jeopardize data continuity; and

(4) provide for a technology demonstration program whose objective shall be the demonstration of advanced land remote sensing technologies that may potentially yield a system which is less expensive to build and operate, and more responsive to data users, than is the current Landsat system.

(c) RESPONSIBILITIES.—The Landsat Program Management shall be responsible for—

(1) Landsat 7 procurement, launch, and operations;

(2) ensuring that the operation of the Landsat system is responsive to the broad interests of the civilian, national security, commercial, and foreign users of the Landsat system;

(3) ensuring that all unenhanced Landsat data remain unclassified and that, except as provided in subsections (a) and (b) of section 60146 of this title, no restrictions are placed on the availability of unenhanced data;

(4) ensuring that land remote sensing data of high priority locations will be acquired by the Landsat 7 system as required to meet the needs of the United States Global Change Research Program, as established in the Global Change Research Act of 1990 (15 U.S.C. 2921 et seq.), and to meet the needs of national security users;

(5) Landsat data responsibilities pursuant to this chapter;

(6) oversight of Landsat contracts entered into under sections 102 [1] and 103 [1] of the Land

Remote Sensing Policy Act of 1992 (Public Law 102–555, 106 Stat. 4168);

(7) coordination of a technology demonstration program pursuant to section 60133 of this title; and

(8) ensuring that copies of data acquired by the Landsat system are provided to the National Satellite Land Remote Sensing Data Archive.

(d) AUTHORITY TO CONTRACT.—The Landsat Program Management may, subject to appropriations and only under the existing contract authority of the United States Government agencies that compose the Landsat Program Management, enter into contracts with the private sector for services such as satellite operations and data preprocessing.

(e) LANDSAT ADVISORY PROCESS.—

(1) ADVICE AND COMMENTS.—The Landsat Program Management shall seek impartial advice and comments regarding the status, effectiveness, and operation of the Landsat system, using existing advisory committees and other appropriate mechanisms. Such advice shall be sought from individuals who represent—

(A) a broad range of perspectives on basic and applied science and operational needs with respect to land remote sensing data;

(B) the full spectrum of users of Landsat data, including representatives from United States Government agencies, State and local government agencies, academic institutions, nonprofit organizations, value-added companies, the agricultural, mineral extraction, and other user industries, and the public; and

(C) a broad diversity of age groups, sexes, and races.

(2) REPORTS.—The Landsat Program Management shall prepare and submit biennially a report to Congress which—

(A) reports the public comments received pursuant to paragraph (1); and

(B) includes—

(i) a response to the public comments received pursuant to paragraph (1);

(ii) information on the volume of use, by category, of data from the Landsat system; and

(iii) any recommendations for policy or programmatic changes to improve the utility and operation of the Landsat system.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3411.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
60111	15 U.S.C. 5611.	Pub. L. 102–555, title I, §101, Oct. 28, 1992, 106 Stat. 4166.

In subsection (b), in the matter before paragraph (1), after the words "funding expectations for the Landsat", the word "program" is set out without being capitalized to correct an error in the law.

In subsection (c)(6), the words "sections 102 and 103 of the Land Remote Sensing Policy Act of 1992 (Public Law 102–555, 106 Stat. 4168)" are substituted for "sections 102 and 103" to clarify the reference. The reference to sections 102 and 103 of the Land Remote Sensing Policy Act of 1992 is retained in text, notwithstanding the fact that sections 102 and 103 of the Act are repealed as obsolete, because oversight responsibilities may continue for contracts entered into under the now obsolete provisions.

In subsection (e)(2), in the matter before subparagraph (A), the word "biennially" is substituted for "Within 1 year after the date of the enactment of this Act and biennially thereafter," to eliminate obsolete language.

EDITORIAL NOTES

REFERENCES IN TEXT

The Global Change Research Act of 1990, referred to in subsec. (c)(4), is Pub. L. 101–606, Nov. 16, 1990, 104 Stat. 3096, which is classified generally to chapter 56A (§2921 et seq.) of Title 15, Commerce and Trade.

For complete classification of this Act to the Code, see Short Title note set out under section 2921 of Title 15 and Tables.

Sections 102 and 103 of the Land Remote Sensing Policy Act of 1992, referred to in subsec. (c)(6), which were classified to sections 5612 and 5613, respectively, of Title 15, Commerce and Trade, were repealed by Pub. L. 111–314, §6, Dec. 18, 2010, 124 Stat. 3444, which Act enacted this title.

STATUTORY NOTES AND RELATED SUBSIDIARIES

DEVELOPMENT, PROCUREMENT, AND SUPPORT

Pub. L. 102–484, div. A, title II, §243, Oct. 23, 1992, 106 Stat. 2360, as amended by Pub. L. 103–35, title II, §202(a)(3), May 31, 1993, 107 Stat. 101, provided that: "The Secretary of Defense is authorized to contract for the development and procurement of, and support for operations of, the Landsat vehicle designated as Landsat 7."

Similar provisions were contained in the following prior appropriation act:

Pub. L. 102–396, title IX, §9082A, Oct. 6, 1992, 106 Stat. 1920.

[1] *See References in Text note below.*

§60112. Transfer of Landsat 6 program responsibilities

The responsibilities of the Secretary with respect to Landsat 6 shall be transferred to the Landsat Program Management, as agreed to between the Secretary and the Landsat Program Management, pursuant to section 60111 of this title.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3413.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
60112	15 U.S.C. 5614.	Pub. L. 102–555, title I, §104, Oct. 28, 1992, 106 Stat. 4170.

§60113. Data policy for Landsat 7

(a) LANDSAT 7 DATA POLICY.—The Landsat Program Management, in consultation with other appropriate United States Government agencies, shall develop a data policy for Landsat 7 which should—

(1) ensure that unenhanced data are available to all users at the cost of fulfilling user requests;

(2) ensure timely and dependable delivery of unenhanced data to the full spectrum of civilian, national security, commercial, and foreign users and the National Satellite Land Remote Sensing Data Archive;

(3) ensure that the United States retains ownership of all unenhanced data generated by Landsat 7;

(4) support the development of the commercial market for remote sensing data;

(5) ensure that the provision of commercial value-added services based on remote sensing data remains exclusively the function of the private sector; and

(6) to the extent possible, ensure that the data distribution system for Landsat 7 is compatible with the Earth Observing System Data and Information System.

(b) ADDITIONAL DATA POLICY CONSIDERATIONS.—In addition, the data policy for Landsat 7 may provide for—

(1) United States private sector entities to operate ground receiving stations in the United States for Landsat 7 data;

(2) other means for direct access by private sector entities to unenhanced data from Landsat 7; and

(3) the United States Government to charge a per image fee, license fee, or other such fee to entities operating ground receiving stations or distributing Landsat 7 data.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3413.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
60113	15 U.S.C. 5615(a), (b).	Pub. L. 102–555, title I, §105(a), (b), Oct. 28, 1992, 106 Stat. 4170.

SUBCHAPTER III—LICENSING OF PRIVATE REMOTE SENSING SPACE SYSTEMS

§60121. General licensing authority

(a) LICENSING AUTHORITY OF SECRETARY.—

(1) IN GENERAL.—In consultation with other appropriate United States Government agencies, the Secretary is authorized to license private sector parties to operate private remote sensing space systems for such period as the Secretary may specify and in accordance with the provisions of this subchapter.

(2) LIMITATION WITH RESPECT TO SYSTEM USED FOR OTHER PURPOSES.—In the case of a private space system that is used for remote sensing and other purposes, the authority of the Secretary under this subchapter shall be limited only to the remote sensing operations of such space system.

(b) COMPLIANCE WITH LAW, REGULATIONS, INTERNATIONAL OBLIGATIONS, AND NATIONAL SECURITY.—

(1) IN GENERAL.—No license shall be granted by the Secretary unless the Secretary determines in writing that the applicant will comply with the requirements of this chapter, any regulations issued pursuant to this chapter, and any applicable international obligations and national security concerns of the United States.

(2) LIST OF REQUIREMENTS FOR COMPLETE APPLICATION.—The Secretary shall publish in the Federal Register a complete and specific list of all information required to comprise a complete application for a license under this subchapter. An application shall be considered complete when the applicant has provided all information required by the list most recently published in the Federal Register before the date the application was first submitted. Unless the Secretary has, within 30 days after receipt of an application, notified the applicant of information necessary to complete an application, the Secretary may not deny the application on the basis of the absence of any such information.

(c) DEADLINE FOR ACTION ON APPLICATION.—The Secretary shall review any application and make a determination thereon within 120 days of the receipt of such application. If final action has not occurred within such time, the Secretary shall inform the applicant of any pending issues and of actions required to resolve them.

(d) IMPROPER BASIS FOR DENIAL.—The Secretary shall not deny such license in order to protect any existing licensee from competition.

(e) REQUIREMENT TO PROVIDE UNENHANCED DATA.—

(1) DESIGNATION OF DATA.—The Secretary, in consultation with other appropriate United

States Government agencies and pursuant to paragraph (2), shall designate in a license issued pursuant to this subchapter any unenhanced data required to be provided by the licensee under section 60122(b)(3) of this title.

(2) PRELIMINARY DETERMINATION.—The Secretary shall make a designation under paragraph (1) after determining that—

(A) such data are generated by a system for which all or a substantial part of the development, fabrication, launch, or operations costs have been or will be directly funded by the United States Government; or

(B) it is in the interest of the United States to require such data to be provided by the licensee consistent with section 60122(b)(3) of this title, after considering the impact on the licensee and the importance of promoting widespread access to remote sensing data from United States and foreign systems.

(3) CONSISTENCY WITH CONTRACT OR OTHER ARRANGEMENT.—A designation made by the Secretary under paragraph (1) shall not be inconsistent with any contract or other arrangement entered into between a United States Government agency and the licensee.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3413.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
60121	15 U.S.C. 5621.	Pub. L. 102–555, title II, §201, Oct. 28, 1992, 106 Stat. 4171; Pub. L. 105–303, title I, §107(f)(1), Oct. 28, 1998, 112 Stat. 2854.

In subsection (b)(2), the words "within 6 months after the date of the enactment of the Commercial Space Act of 1998" are omitted as obsolete.

STATUTORY NOTES AND RELATED SUBSIDIARIES

PROHIBITION ON COLLECTION AND RELEASE OF DETAILED SATELLITE IMAGERY RELATING TO ISRAEL

Pub. L. 104–201, div. A, title X, §1064, Sept. 23, 1996, 110 Stat. 2653, provided that:

"(a) COLLECTION AND DISSEMINATION.—A department or agency of the United States may issue a license for the collection or dissemination by a non-Federal entity of satellite imagery with respect to Israel only if such imagery is no more detailed or precise than satellite imagery of Israel that is available from commercial sources.

"(b) DECLASSIFICATION AND RELEASE.—A department or agency of the United States may declassify or otherwise release satellite imagery with respect to Israel only if such imagery is no more detailed or precise than satellite imagery of Israel that is available from commercial sources."

§60122. Conditions for operation

(a) LICENSE REQUIRED FOR OPERATION.—No person that is subject to the jurisdiction or control of the United States may, directly or through any subsidiary or affiliate, operate any private remote sensing space system without a license pursuant to section 60121 of this title.

(b) LICENSING REQUIREMENTS.—Any license issued pursuant to this subchapter shall specify that the licensee shall comply with all of the requirements of this chapter and shall—

(1) operate the system in such manner as to preserve the national security of the United States and to observe the international obligations of the United States in accordance with section 60146 of this title;

(2) make available to the government of any country (including the United States) unenhanced

data collected by the system concerning the territory under the jurisdiction of such government as soon as such data are available and on reasonable terms and conditions;

(3) make unenhanced data designated by the Secretary in the license pursuant to section 60121(e) of this title available in accordance with section 60141 of this title;

(4) upon termination of operations under the license, make disposition of any satellites in space in a manner satisfactory to the President;

(5) furnish the Secretary with complete orbit and data collection characteristics of the system, and inform the Secretary immediately of any deviation; and

(6) notify the Secretary of any significant or substantial agreement the licensee intends to enter with a foreign nation, entity, or consortium involving foreign nations or entities.

(c) ADDITIONAL LICENSING REQUIREMENTS FOR LANDSAT 6 CONTRACTOR.—In addition to the requirements of subsection (b), any license issued pursuant to this subchapter to the Landsat 6 contractor shall specify that the Landsat 6 contractor shall—

(1) notify the Secretary of any value added activities (as defined by the Secretary by regulation) that will be conducted by the Landsat 6 contractor or by a subsidiary or affiliate; and

(2) if such activities are to be conducted, provide the Secretary with a plan for compliance with section 60141 of this title.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3415.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
60122	15 U.S.C. 5622.	Pub. L. 102–555, title II, §202, Oct. 28, 1992, 106 Stat. 4172; Pub. L. 105–303, title I, §107(f)(2), Oct. 28, 1998, 112 Stat. 2854.

In subsection (c), in the matter before paragraph (1), the words "subsection (b)" are substituted for "paragraph (b)" to correct an error in the law.

§60123. Administrative authority of Secretary

(a) FUNCTIONS.—In order to carry out the responsibilities specified in this subchapter, the Secretary may—

(1) grant, condition, or transfer licenses under this chapter;

(2) seek an order of injunction or similar judicial determination from a district court of the United States with personal jurisdiction over the licensee to terminate, modify, or suspend licenses under this subchapter and to terminate licensed operations on an immediate basis, if the Secretary determines that the licensee has substantially failed to comply with any provisions of this chapter, with any terms, conditions, or restrictions of such license, or with any international obligations or national security concerns of the United States;

(3) provide penalties for noncompliance with the requirements of licenses or regulations issued under this subchapter, including civil penalties not to exceed $10,000 (each day of operation in violation of such licenses or regulations constituting a separate violation);

(4) compromise, modify, or remit any such civil penalty;

(5) issue subpoenas for any materials, documents, or records, or for the attendance and testimony of witnesses for the purpose of conducting a hearing under this section;

(6) seize any object, record, or report pursuant to a warrant from a magistrate based on a showing of probable cause to believe that such object, record, or report was used, is being used, or is likely to be used in violation of this chapter or the requirements of a license or regulation issued thereunder; and

(7) make investigations and inquiries and administer to or take from any person an oath, affirmation, or affidavit concerning any matter relating to the enforcement of this chapter.

(b) REVIEW OF AGENCY ACTION.—Any applicant or licensee that makes a timely request for review of an adverse action pursuant to paragraph (1), (3), (5), or (6) of subsection (a) shall be entitled to adjudication by the Secretary on the record after an opportunity for any agency hearing with respect to such adverse action. Any final action by the Secretary under this subsection shall be subject to judicial review under chapter 7 of title 5.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3415.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
60123	15 U.S.C. 5623.	Pub. L. 102–555, title II, §203, Oct. 28, 1992, 106 Stat. 4172.

In subsection (a), at the end of paragraph (2), a semicolon is substituted for the period to correct an error in the law.

§60124. Regulatory authority of Secretary

The Secretary may issue regulations to carry out this subchapter. Such regulations shall be promulgated only after public notice and comment in accordance with the provisions of section 553 of title 5.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3416.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
60124	15 U.S.C. 5624.	Pub. L. 102–555, title II, §204, Oct. 28, 1992, 106 Stat. 4173.

§60125. Agency activities

(a) LICENSE APPLICATION AND ISSUANCE.—A private sector party may apply for a license to operate a private remote sensing space system which utilizes, on a space-available basis, a civilian United States Government satellite or vehicle as a platform for such system. The Secretary, pursuant to this subchapter, may license such system if it meets all conditions of this subchapter and—

(1) the system operator agrees to reimburse the Government in a timely manner for all related costs incurred with respect to such utilization, including a reasonable and proportionate share of fixed, platform, data transmission, and launch costs; and

(2) such utilization would not interfere with or otherwise compromise intended civilian Government missions, as determined by the agency responsible for such civilian platform.

(b) ASSISTANCE.—The Secretary may offer assistance to private sector parties in finding appropriate opportunities for such utilization.

(c) AGREEMENTS.—To the extent provided in advance by appropriation Acts, any United States Government agency may enter into agreements for such utilization if such agreements are consistent with such agency's mission and statutory authority, and if such remote sensing space system is licensed by the Secretary before commencing operation.

(d) APPLICABILITY.—This section does not apply to activities carried out under subchapter IV.

(e) EFFECT ON FCC AUTHORITY.—Nothing in this subchapter shall affect the authority of the Federal Communications Commission pursuant to the Communications Act of 1934 (47 U.S.C. 151 et seq.).

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3416.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
60125	15 U.S.C. 5625.	Pub. L. 102–555, title II, §205, Oct. 28, 1992, 106 Stat. 4173.

EDITORIAL NOTES

REFERENCES IN TEXT

The Communications Act of 1934, referred to in subsec. (e), is act June 19, 1934, ch. 652, 48 Stat. 1064, which is classified principally to chapter 5 (§ 151 et seq.) of Title 47, Telecommunications. For complete classification of this Act to the Code, see section 609 of Title 47 and Tables.

§60126. Annual reports

(a) IN GENERAL.—The Secretary shall submit a report to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives not later than 180 days after the date of enactment of the U.S. Commercial Space Launch Competitiveness Act, and annually thereafter, on—

(1) the Secretary's implementation of section 60121, including—

(A) a list of all applications received in the previous calendar year;

(B) a list of all applications that resulted in a license under section 60121;

(C) a list of all applications denied and an explanation of why each application was denied, including any information relevant to the interagency adjudication process of a licensing request;

(D) a list of all applications that required additional information; and

(E) a list of all applications whose disposition exceeded the 120 day deadline established in section 60121(c), the total days overdue for each application that exceeded such deadline, and an explanation for the delay;

(2) all notifications and information provided to the Secretary under section 60122; and

(3) a description of all actions taken by the Secretary under the administrative authority granted by paragraphs (4), (5), and (6) of section 60123(a).

(b) CLASSIFIED ANNEXES.—Each report under subsection (a) may include classified annexes as necessary to protect the disclosure of sensitive or classified information.

(c) SUNSET.—The reporting requirement under this section terminates effective September 30, 2020.

(Added Pub. L. 114–90, title II, §201(a), Nov. 25, 2015, 129 Stat. 719.)

EDITORIAL NOTES

REFERENCES IN TEXT

The date of enactment of the U.S. Commercial Space Launch Competitiveness Act, referred to in subsec. (a), is the date of enactment of Pub. L. 114–90, which was approved Nov. 25, 2015.

SUBCHAPTER IV—RESEARCH, DEVELOPMENT, AND DEMONSTRATION

§60131. Continued Federal research and development

(a) ROLES OF ADMINISTRATION AND DEPARTMENT OF DEFENSE.—

(1) IN GENERAL.—The Administrator and the Secretary of Defense are directed to continue and to enhance programs of remote sensing research and development.

(2) ADMINISTRATION ACTIVITIES AUTHORIZED AND ENCOURAGED.—The Administrator is authorized and encouraged to—

(A) conduct experimental space remote sensing programs (including applications demonstration programs and basic research at universities);

(B) develop remote sensing technologies and techniques, including those needed for monitoring the Earth and its environment; and

(C) conduct such research and development in cooperation with other United States Government agencies and with public and private research entities (including private industry, universities, non-profit organizations, State and local governments, foreign governments, and international organizations) and to enter into arrangements (including joint ventures) which will foster such cooperation.

(b) ROLES OF DEPARTMENT OF AGRICULTURE AND DEPARTMENT OF THE INTERIOR.—

(1) IN GENERAL.—In order to enhance the ability of the United States to manage and utilize its renewable and nonrenewable resources, the Secretary of Agriculture and the Secretary of the Interior are authorized and encouraged to conduct programs of research and development in the applications of remote sensing using funds appropriated for such purposes.

(2) ACTIVITIES THAT MAY BE INCLUDED.—Such programs may include basic research at universities, demonstrations of applications, and cooperative activities involving other Government agencies, private sector parties, and foreign and international organizations.

(c) ROLE OF OTHER FEDERAL AGENCIES.—Other United States Government agencies are authorized and encouraged to conduct research and development on the use of remote sensing in the fulfillment of their authorized missions, using funds appropriated for such purposes.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3417.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
60131	15 U.S.C. 5631.	Pub. L. 102–555, title III, §301, Oct. 28, 1992, 106 Stat. 4174.

§60132. Availability of federally gathered unenhanced data

(a) IN GENERAL.—All unenhanced land remote sensing data gathered and owned by the United States Government, including unenhanced data gathered under the technology demonstration program carried out pursuant to section 60133 of this title, shall be made available to users in a timely fashion.

(b) PROTECTION FOR COMMERCIAL DATA DISTRIBUTOR.—The President shall seek to ensure that unenhanced data gathered under the technology demonstration program carried out pursuant to section 60133 of this title shall, to the extent practicable, be made available on terms that

would not adversely affect the commercial market for unenhanced data gathered by the Landsat 6 spacecraft.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3417.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
60132	15 U.S.C. 5632.	Pub. L. 102–555, title III, §302, Oct. 28, 1992, 106 Stat. 4174.

In subsection (b), the word "affect" is substituted for "effect" to correct an error in the law.

§60133. Technology demonstration program

(a) ESTABLISHMENT.—As a fundamental component of a national land remote sensing strategy, the President shall establish, through appropriate United States Government agencies, a technology demonstration program. The goals of the program shall be to—

(1) seek to launch advanced land remote sensing system components within 5 years after October 28, 1992;

(2) demonstrate within such 5-year period advanced sensor capabilities suitable for use in the anticipated land remote sensing program; and

(3) demonstrate within such 5-year period an advanced land remote sensing system design that could be less expensive to procure and operate than the Landsat system projected to be in operation through the year 2000, and that therefore holds greater potential for private sector investment and control.

(b) EXECUTION OF PROGRAM.—In executing the technology demonstration program, the President shall seek to apply technologies associated with United States National Technical Means of intelligence gathering, to the extent that such technologies are appropriate for the technology demonstration and can be declassified for such purposes without causing adverse harm to United States national security interests.

(c) BROAD APPLICATION.—To the greatest extent practicable, the technology demonstration program established under subsection (a) shall be designed to be responsive to the broad civilian, national security, commercial, and foreign policy needs of the United States.

(d) PRIVATE SECTOR FUNDING.—The technology demonstration program under this section may be carried out in part with private sector funding.

(e) LANDSAT PROGRAM MANAGEMENT COORDINATION.—The Landsat Program Management shall have a coordinating role in the technology demonstration program carried out under this section.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3418.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
60133	15 U.S.C. 5633(a)–(e).	Pub. L. 102–555, title III, §303(a)–(e), Oct. 28, 1992, 106 Stat. 4174.

In subsection (a)(1), the date "October 28, 1992" is substituted for "the date of the enactment of this Act" to reflect the date of enactment of the Land Remote Sensing Policy Act of 1992 (Public Law 102–555, 106 Stat. 4163). At the end of paragraph (1), a semicolon is substituted for the period to correct an error in the law.

§60134. Preference for private sector land remote sensing system

(a) IN GENERAL.—If a successor land remote sensing system to Landsat 7 can be funded and managed by the private sector while still achieving the goals stated in subsection (b) without jeopardizing the domestic, national security, and foreign policy interests of the United States, preference should be given to the development of such a system by the private sector without competition from the United States Government.

(b) GOALS.—The goals referred to in subsection (a) are—

(1) to encourage the development, launch, and operation of a land remote sensing system that adequately serves the civilian, national security, commercial, and foreign policy interests of the United States;

(2) to encourage the development, launch, and operation of a land remote sensing system that maintains data continuity with the Landsat system; and

(3) to incorporate system enhancements, including any such enhancements developed under the technology demonstration program under section 60133 of this title, which may potentially yield a system that is less expensive to build and operate, and more responsive to data users, than is the Landsat system otherwise projected to be in operation in the future.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3418.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
60134(a)	15 U.S.C. 5641(c).	Pub. L. 102–555, title IV, §401(b), (c), Oct. 28, 1992, 106 Stat. 4176.
60134(b)	15 U.S.C. 5641(b).	

In subsection (b), in the matter before paragraph (1), the words "In carrying out subsection (a), the Landsat Program Management shall consider the ability of each of the options to" are omitted as obsolete. The omitted words refer to section 401(a) of the Land Remote Sensing Policy Act of 1992 (15 U.S.C. 5641(a)), which required, within 5 years after October 28, 1992, the Landsat Program Management, in consultation with representatives of appropriate United States Government agencies, to assess and report to Congress on options for a successor land remote sensing system to Landsat 7.

In subsection (b)(3), the words "otherwise projected to be in operation in the future" are substituted for "projected to be in operation through the year 2000" to eliminate obsolete language.

SUBCHAPTER V—GENERAL PROVISIONS

§60141. Nondiscriminatory data availability

(a) IN GENERAL.—Except as provided in subsection (b), any unenhanced data generated by the Landsat system or any other land remote sensing system funded and owned by the United States Government shall be made available to all users without preference, bias, or any other special arrangement (except on the basis of national security concerns pursuant to section 60146 of this title) regarding delivery, format, pricing, or technical considerations which would favor one customer or class of customers over another.

(b) EXCEPTIONS.—Unenhanced data generated by the Landsat system or any other land remote sensing system funded and owned by the United States Government may be made available to the United States Government and its affiliated users at reduced prices, in accordance with this chapter, on the condition that such unenhanced data are used solely for noncommercial purposes.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3419.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
60141	15 U.S.C. 5651.	Pub. L. 102–555, title V, §501, Oct. 28, 1992, 106 Stat. 4176.

§60142. Archiving of data

(a) PUBLIC INTEREST.—It is in the public interest for the United States Government to—

(1) maintain an archive of land remote sensing data for historical, scientific, and technical purposes, including long-term global environmental monitoring;

(2) control the content and scope of the archive; and

(3) ensure the quality, integrity, and continuity of the archive.

(b) ARCHIVING PRACTICES.—The Secretary of the Interior, in consultation with the Landsat Program Management, shall provide for long-term storage, maintenance, and upgrading of a basic, global, land remote sensing data set (hereafter in this section referred to as the "basic data set") and shall follow reasonable archival practices to ensure proper storage and preservation of the basic data set and timely access for parties requesting data.

(c) DETERMINATION OF CONTENT OF BASIC DATA SET.—In determining the initial content of, or in upgrading, the basic data set, the Secretary of the Interior shall—

(1) use as a baseline the data archived on October 28, 1992;

(2) take into account future technical and scientific developments and needs, paying particular attention to the anticipated data requirements of global environmental change research;

(3) consult with and seek the advice of users and producers of remote sensing data and data products;

(4) consider the need for data which may be duplicative in terms of geographical coverage but which differ in terms of season, spectral bands, resolution, or other relevant factors;

(5) include, as the Secretary of the Interior considers appropriate, unenhanced data generated either by the Landsat system, pursuant to subchapter II, or by licensees under subchapter III;

(6) include, as the Secretary of the Interior considers appropriate, data collected by foreign ground stations or by foreign remote sensing space systems; and

(7) ensure that the content of the archive is developed in accordance with section 60146 of this title.

(d) PUBLIC DOMAIN.—After the expiration of any exclusive right to sell, or after relinquishment of such right, the data provided to the National Satellite Land Remote Sensing Data Archive shall be in the public domain and shall be made available to requesting parties by the Secretary of the Interior at the cost of fulfilling user requests.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3419.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
60142	15 U.S.C. 5652.	Pub. L. 102–555, title V, §502, Oct. 28, 1992, 106 Stat. 4176.

In subsection (b), the words "hereafter in this section" are substituted for "hereinafter" for clarity.

In subsection (c), in the matter before paragraph (1), the words "of the Interior" are substituted for "of Interior" to correct an error in the law.

In subsection (c)(1), the date "October 28, 1992" is substituted for "the date of enactment of this Act" to reflect the date of enactment of the Land Remote Sensing Policy Act of 1992 (Public Law 102–555, 106 Stat. 4163).

§60143. Nonreproduction

Unenhanced data distributed by any licensee under subchapter III may be sold on the condition that such data will not be reproduced or disseminated by the purchaser for commercial purposes.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3420.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
60143	15 U.S.C. 5653.	Pub. L. 102–555, title V, §503, Oct. 28, 1992, 106 Stat. 4177.

§60144. Reimbursement for assistance

The Administrator, the Secretary of Defense, and the heads of other United States Government agencies may provide assistance to land remote sensing system operators under the provisions of this chapter. Substantial assistance shall be reimbursed by the operator, except as otherwise provided by law.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3420.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
60144	15 U.S.C. 5654.	Pub. L. 102–555, title V, §504, Oct. 28, 1992, 106 Stat. 4177.

§60145. Acquisition of equipment

The Landsat Program Management may, by means of a competitive process, allow a licensee under subchapter III or any other private party to buy, lease, or otherwise acquire the use of equipment from the Landsat system, when such equipment is no longer needed for the operation of such system or for the sale of data from such system. Officials of other United States Government civilian agencies are authorized and encouraged to cooperate with the Secretary in carrying out this section.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3420.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
60145	15 U.S.C. 5655.	Pub. L. 102–555, title V, §505, Oct. 28, 1992, 106 Stat. 4177.

§60146. Radio frequency allocation

(a) APPLICATION TO FEDERAL COMMUNICATIONS COMMISSION.—To the extent required by the Communications Act of 1934 (47 U.S.C. 151 et seq.), an application shall be filed with the Federal Communications Commission for any radio facilities involved with commercial remote sensing space systems licensed under subchapter III.

(b) DEADLINE FOR FCC ACTION.—It is the intent of Congress that the Federal Communications Commission complete the radio licensing process under the Communications Act of 1934 (47 U.S.C. 151 et seq.), upon the application of any private sector party or consortium operator of any commercial land remote sensing space system subject to this chapter, within 120 days of the receipt of an application for such licensing. If final action has not occurred within 120 days of the receipt of such an application, the Federal Communications Commission shall inform the applicant of any pending issues and of actions required to resolve them.

(c) DEVELOPMENT AND CONSTRUCTION OF UNITED STATES SYSTEMS.—Authority shall not be required from the Federal Communications Commission for the development and construction of any United States land remote sensing space system (or component thereof), other than radio transmitting facilities or components, while any licensing determination is being made.

(d) CONSISTENCY WITH INTERNATIONAL OBLIGATIONS AND PUBLIC INTEREST .—Frequency allocations made pursuant to this section by the Federal Communications Commission shall be consistent with international obligations and with the public interest.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3420.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
60146	15 U.S.C. 5656.	Pub. L. 102–555, title V, §506, Oct. 28, 1992, 106 Stat. 4177.

EDITORIAL NOTES

REFERENCES IN TEXT

The Communications Act of 1934, referred to in subsecs. (a) and (b), is act June 19, 1934, ch. 652, 48 Stat. 1064, which is classified principally to chapter 5 (§151 et seq.) of Title 47, Telecommunications. For complete classification of this Act to the Code, see section 609 of Title 47 and Tables.

§60147. Consultation

(a) CONSULTATION WITH SECRETARY OF DEFENSE.—The Secretary and the Landsat Program Management shall consult with the Secretary of Defense on all matters under this chapter affecting national security. The Secretary of Defense shall be responsible for determining those conditions, consistent with this chapter, necessary to meet national security concerns of the United States and for notifying the Secretary and the Landsat Program Management promptly of such conditions.

(b) CONSULTATION WITH SECRETARY OF STATE.—

(1) IN GENERAL.—The Secretary and the Landsat Program Management shall consult with the Secretary of State on all matters under this chapter affecting international obligations. The Secretary of State shall be responsible for determining those conditions, consistent with this chapter, necessary to meet international obligations and policies of the United States and for notifying promptly the Secretary and the Landsat Program Management of such conditions.

(2) INTERNATIONAL AID.—Appropriate United States Government agencies are authorized and encouraged to provide remote sensing data, technology, and training to developing nations as a component of programs of international aid.

(3) REPORTING DISCRIMINATORY DISTRIBUTION.—The Secretary of State shall promptly report to the Secretary and Landsat Program Management any instances outside the United States of discriminatory distribution of Landsat data.

(c) STATUS REPORT.—The Landsat Program Management shall, as often as necessary, provide

to Congress complete and updated information about the status of ongoing operations of the Landsat system, including timely notification of decisions made with respect to the Landsat system in order to meet national security concerns and international obligations and policies of the United States Government.

(d) REIMBURSEMENTS.—If, as a result of technical modifications imposed on a licensee under subchapter III on the basis of national security concerns, the Secretary, in consultation with the Secretary of Defense or with other Federal agencies, determines that additional costs will be incurred by the licensee, or that past development costs (including the cost of capital) will not be recovered by the licensee, the Secretary may require the agency or agencies requesting such technical modifications to reimburse the licensee for such additional or development costs, but not for anticipated profits. Reimbursements may cover costs associated with required changes in system performance, but not costs ordinarily associated with doing business abroad.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3421.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
60147	15 U.S.C. 5657.	Pub. L. 102–555, title V, §507, Oct. 28, 1992, 106 Stat. 4178.

§60148. Enforcement

(a) IN GENERAL.—In order to ensure that unenhanced data from the Landsat system received solely for noncommercial purposes are not used for any commercial purpose, the Secretary (in collaboration with private sector entities responsible for the marketing and distribution of unenhanced data generated by the Landsat system) shall develop and implement a system for enforcing this prohibition, in the event that unenhanced data from the Landsat system are made available for noncommercial purposes at a different price than such data are made available for other purposes.

(b) AUTHORITY OF SECRETARY.—Subject to subsection (d), the Secretary may impose any of the enforcement mechanisms described in subsection (c) against a person that—

(1) receives unenhanced data from the Landsat system under this chapter solely for noncommercial purposes (and at a different price than the price at which such data are made available for other purposes); and

(2) uses such data for other than noncommercial purposes.

(c) ENFORCEMENT MECHANISMS.—Enforcement mechanisms referred to in subsection (b) may include civil penalties of not more than $10,000 (per day per violation), denial of further unenhanced data purchasing privileges, and any other penalties or restrictions the Secretary considers necessary to ensure, to the greatest extent practicable, that unenhanced data provided for noncommercial purposes are not used to unfairly compete in the commercial market against private sector entities not eligible for data at the cost of fulfilling user requests.

(d) PROCEDURES AND REGULATIONS.—The Secretary shall issue any regulations necessary to carry out this section and shall establish standards and procedures governing the imposition of enforcement mechanisms under subsection (b). The standards and procedures shall include a procedure for potentially aggrieved parties to file formal protests with the Secretary alleging instances where such unenhanced data have been, or are being, used for commercial purposes in violation of the terms of receipt of such data. The Secretary shall promptly act to investigate any such protest, and shall report annually to Congress on instances of such violations.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3421.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
60148	15 U.S.C. 5658.	Pub. L. 102–555, title V, §508, Oct. 28, 1992, 106 Stat. 4179.

In subsection (d), in the second sentence, the words "have been, or are being" are substituted for "has been, or is being" to correct an error in the law.

SUBCHAPTER VI—PROHIBITION OF COMMERCIALIZATION OF WEATHER SATELLITES

§60161. Prohibition

Neither the President nor any other official of the Government shall make any effort to lease, sell, or transfer to the private sector, or commercialize, any portion of the weather satellite systems operated by the Department of Commerce or any successor agency.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3422.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
60161	15 U.S.C. 5671.	Pub. L. 102–555, title VI, §601, Oct. 28, 1992, 106 Stat. 4179.

§60162. Future considerations

Regardless of any change in circumstances subsequent to October 28, 1992, even if such change makes it appear to be in the national interest to commercialize weather satellites, neither the President nor any official shall take any action prohibited by section 60161 of this title unless this subchapter has first been repealed.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3422.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
60162	15 U.S.C. 5672.	Pub. L. 102–555, title VI, §602, Oct. 28, 1992, 106 Stat. 4180.

The date "October 28, 1992" is substituted for "the enactment of this Act" to reflect the date of enactment of the Land Remote Sensing Policy Act of 1992 (Public Law 102–555, 106 Stat. 4163).

CHAPTER 603—REMOTE SENSING

Sec.

60301. Definitions.
60302. General responsibilities.
60303. Pilot projects to encourage public sector applications.
60304. Program evaluation.

60305. Data availability.
60306. Education.

§60301. Definitions

In this chapter:

(1) GEOSPATIAL INFORMATION.—The term "geospatial information" means knowledge of the nature and distribution of physical and cultural features on the landscape based on analysis of data from airborne or spaceborne platforms or other types and sources of data.

(2) HIGH RESOLUTION.—The term "high resolution" means resolution better than five meters.

(3) INSTITUTION OF HIGHER EDUCATION.—The term "institution of higher education" has the meaning given the term in section 101(a) of the Higher Education Act of 1965 (20 U.S.C. 1001(a)).

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3423.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
60301	42 U.S.C. 16671.	Pub. L. 109–155, title III, §311, Dec. 30, 2005, 119 Stat. 2920.

§60302. General responsibilities

The Administrator shall—

(1) develop a sustained relationship with the United States commercial remote sensing industry and, consistent with applicable policies and law, to the maximum practicable, rely on their services; and

(2) in conjunction with United States industry and universities, research, develop, and demonstrate prototype Earth science applications to enhance Federal, State, local, and tribal governments' use of government and commercial remote sensing data, technologies, and other sources of geospatial information for improved decision support to address their needs.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3423.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
60302	42 U.S.C. 16672.	Pub. L. 109–155, title III, §312, Dec. 30, 2005, 119 Stat. 2920.

§60303. Pilot projects to encourage public sector applications

(a) IN GENERAL.—The Administrator shall establish a program of grants for competitively awarded pilot projects to explore the integrated use of sources of remote sensing and other geospatial information to address State, local, regional, and tribal agency needs.

(b) PREFERRED PROJECTS.—In awarding grants under this section, the Administrator shall give preference to projects that—

(1) make use of commercial data sets, including high resolution commercial satellite imagery and derived satellite data products, existing public data sets where commercial data sets are not available or applicable, or the fusion of such data sets;

(2) integrate multiple sources of geospatial information, such as geographic information system data, satellite-provided positioning data, and remotely sensed data, in innovative ways;

(3) include funds or in-kind contributions from non-Federal sources;

(4) involve the participation of commercial entities that process raw or lightly processed data, often merging that data with other geospatial information, to create data products that have significant value added to the original data; and

(5) taken together demonstrate as diverse a set of public sector applications as possible.

(c) OPPORTUNITIES.—In carrying out this section, the Administrator shall seek opportunities to assist—

(1) in the development of commercial applications potentially available from the remote sensing industry; and

(2) State, local, regional, and tribal agencies in applying remote sensing and other geospatial information technologies for growth management.

(d) DURATION.—Assistance for a pilot project under subsection (a) shall be provided for a period not to exceed 3 years.

(e) REPORT.—Each recipient of a grant under subsection (a) shall transmit a report to the Administrator on the results of the pilot project within 180 days of the completion of that project.

(f) WORKSHOP.—Each recipient of a grant under subsection (a) shall, not later than 180 days after the completion of the pilot project, conduct at least one workshop for potential users to disseminate the lessons learned from the pilot project as widely as feasible.

(g) REGULATIONS.—The Administrator shall issue regulations establishing application, selection, and implementation procedures for pilot projects, and guidelines for reports and workshops required by this section.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3423.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
60303	42 U.S.C. 16673.	Pub. L. 109–155, title III, §313, Dec. 30, 2005, 119 Stat. 2921.

§60304. Program evaluation

(a) ADVISORY COMMITTEE.—The Administrator shall establish an advisory committee, consisting of individuals with appropriate expertise in State, local, regional, and tribal agencies, the university research community, and the remote sensing and other geospatial information industries, to monitor the program established under section 60303 of this title. The advisory committee shall consult with the Federal Geographic Data Committee and other appropriate industry representatives and organizations. Notwithstanding section 1013 of title 5, the advisory committee established under this subsection shall remain in effect until the termination of the program under section 60303 of this title.

(b) EFFECTIVENESS EVALUATION.—Not later than December 31, 2009, the Administrator shall transmit to Congress an evaluation of the effectiveness of the program established under section 60303 of this title in exploring and promoting the integrated use of sources of remote sensing and other geospatial information to address State, local, regional, and tribal agency needs. Such evaluation shall have been conducted by an independent entity.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3424; Pub. L. 117–286, §4(a)(326), Dec. 27, 2022, 136 Stat. 4341.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
60304	42 U.S.C. 16674.	Pub. L. 109–155, title III, §314, Dec. 30, 2005, 119 Stat. 2921.

EDITORIAL NOTES

AMENDMENTS

2022—Subsec. (a). Pub. L. 117–286 substituted "section 1013 of title 5," for "section 14 of the Federal Advisory Committee Act (5 App. U.S.C.),".

§60305. Data availability

The Administrator shall ensure that the results of each of the pilot projects completed under section 60303 of this title shall be retrievable through an electronic, internet-accessible database.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3424.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
60305	42 U.S.C. 16675.	Pub. L. 109–155, title III, §315, Dec. 30, 2005, 119 Stat. 2922.

§60306. Education

The Administrator shall establish an educational outreach program to increase awareness at institutions of higher education and State, local, regional, and tribal agencies of the potential applications of remote sensing and other geospatial information and awareness of the need for geospatial workforce development.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3424.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
60306	42 U.S.C. 16676.	Pub. L. 109–155, title III, §316, Dec. 30, 2005, 119 Stat. 2922.

CHAPTER 605—EARTH SCIENCE

Sec.

60501. Goal.
60502. Transitioning experimental research into operational services.
60503. Reauthorization of Glory Mission.
60504. Tornadoes and other severe storms.
60505. Coordination with the National Oceanic and Atmospheric Administration.
60506. Sharing of climate related data.

§60501. Goal

The goal for the Administration's Earth Science program shall be to pursue a program of Earth observations, research, and applications activities to better understand the Earth, how it supports life, and how human activities affect its ability to do so in the future. In pursuit of this goal, the Administration's Earth Science program shall ensure that securing practical benefits for society will be an important measure of its success in addition to securing new knowledge about the Earth system and climate change. In further pursuit of this goal, the Administration shall, together with the National Oceanic and Atmospheric Administration and other relevant agencies, provide United States leadership in developing and carrying out a cooperative international Earth observations-based research program.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3425.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
60501	42 U.S.C. 17711.	Pub. L. 110–422, title II, §201, Oct. 15, 2008, 122 Stat. 4784.

STATUTORY NOTES AND RELATED SUBSIDIARIES

EARTH SCIENCE MISSIONS AND PROGRAMS

Pub. L. 117–167, div. B, title VII, §10824, Aug. 9, 2022, 136 Stat. 1742, provided that:

"(a) SENSE OF CONGRESS.—It is the sense of Congress that—

"(1) the Earth science and applications program of the [National Aeronautics and Space] Administration provides increasingly valuable data for natural resource management, agriculture, forestry, food security, air quality monitoring, and many other application areas; and

"(2) a robust and balanced Earth science and applications program contributes significantly to—

"(A) the scientific discovery and economic growth of the United States; and

"(B) supporting the health and safety of the people of the United States and the citizens of the world.

"(b) REAFFIRMATION.—Congress reaffirms the goal for the Administration's Earth science and applications program set forth in section 60501 of title 51, United States Code, which states: 'The goal for the Administration's Earth Science program shall be to pursue a program of Earth observations, research, and applications activities to better understand the Earth, how it supports life, and how human activities affect its ability to do so in the future. In pursuit of this goal, the Administration's Earth Science program shall ensure that securing practical benefits for society will be an important measure of its success in addition to securing new knowledge about the Earth system and climate change. In further pursuit of this goal, the Administration shall, together with the National Oceanic and Atmospheric Administration and other relevant agencies, provide United States leadership in developing and carrying out a cooperative international Earth observations-based research program.'.[sic]

"(c) EARTH SCIENCE MISSIONS AND PROGRAMS.—With respect to the missions and programs of the Earth Science Division, the Administrator [of the National Aeronautics and Space Administration] shall, to the maximum extent practicable, follow the recommendations and guidance provided by the scientific community through the decadal survey for Earth science and applications from space of the National Academies of Sciences, Engineering, and Medicine, including—

"(1) the science priorities described in such survey;

"(2) the execution of the series of existing or previously planned observations (commonly known as the 'program of record'); and

"(3) the development of a range of missions of all classes, including opportunities for principal investigator-led, competitively selected missions.

"(d) EARTH SYSTEM OBSERVATORY.—The Administrator shall pursue an Earth System Observatory, which shall consist of an array of new and complementary Earth-observing scientific satellites, instruments, and missions—

"(1) to address the recommendations of the 2018 Earth science and applications decadal survey of the

National Academies of Sciences, Engineering, and Medicine entitled 'Thriving on our Changing Planet', including by conducting priority observations in—

"(A) aerosols;

"(B) cloud convection and precipitation;

"(C) mass change;

"(D) surface biology and geology;

"(E) surface deformation and change; and

"(F) other observation areas designated as high-priority by such decadal survey; and

"(2) to achieve the goal of the Earth Science Program set forth in section 60501 of title 51, United States Code.

"(e) SURVEY OF USE OF EARTH OBSERVATION DATA BY STATES, TRIBES, AND TERRITORIES.—

"(1) SURVEY.—The Administrator shall arrange for the conduct of a survey of the use of NASA [National Aeronautics and Space Administration] Earth observation data by States, Tribal organizations, and territories.

"(2) SUBMISSION.—Not later than 18 months after the date of the enactment of this Act [Aug. 9, 2022], the Administrator shall submit to the appropriate committees of Congress [Committee on Commerce, Science, and Transportation of the Senate and Committee on Science, Space, and Technology of the House of Representatives] the results of the survey conducted under paragraph (1).

"(f) CLIMATE ARCHITECTURE PLAN.—The Administrator shall—

"(1) maintain a comprehensive, strategic Climate Architecture Plan for Earth Observations and Applications from Space that describes an integrated and balanced program of Earth science and applications observations to advance science, policy, and applications and societal benefits; and

"(2) update such plan every 5 years so as to align with the release of the decadal surveys in Earth science and applications from space and the mid-decade assessments of the National Academics of Sciences, Engineering, and Medicine [probably should be "National Academies of Sciences, Engineering, and Medicine"]."

CARBON CYCLE REMOTE SENSING APPLICATIONS RESEARCH

Pub. L. 106–391, title III, §315, Oct. 30, 2000, 114 Stat. 1595, provided that:

"(a) CARBON CYCLE REMOTE SENSING APPLICATIONS RESEARCH PROGRAM.—

"(1) IN GENERAL.—The Administrator [of the National Aeronautics and Space Administration] shall develop a carbon cycle remote sensing applications research program—

"(A) to provide a comprehensive view of vegetation conditions;

"(B) to assess and model agricultural carbon sequestration; and

"(C) to encourage the development of commercial products, as appropriate.

"(2) USE OF CENTERS.—The Administrator of the National Aeronautics and Space Administration shall use regional earth science application centers to conduct applications research under this section.

"(3) RESEARCHED AREAS.—The areas that shall be the subjects of research conducted under this section include—

"(A) the mapping of carbon-sequestering land use and land cover;

"(B) the monitoring of changes in land cover and management;

"(C) new approaches for the remote sensing of soil carbon; and

"(D) region-scale carbon sequestration estimation.

"(b) AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated to carry out this section $5,000,000 of funds authorized by section 102 [114 Stat. 1581] for fiscal years 2001 through 2002."

EARTH OBSERVING SYSTEM

Pub. L. 102–588, title I, §102(g), Nov. 4, 1992, 106 Stat. 5111, directed the Administrator of the National Aeronautics and Space Administration to carry out an Earth Observing System program addressing highest priority international climate change research goals; within 180 days after Nov. 4, 1992, submit to Congress a plan to ensure that the highest priority measurements were maintained on schedule to the greatest extent practicable while lower priority measurements were deferred or deleted; and within 90 days after Nov. 4, 1992, submit to Congress a Development Plan.

§60502. Transitioning experimental research into operational services

(a) INTERAGENCY PROCESS.—The Director of the Office of Science and Technology Policy,

in consultation with the Administrator, the Administrator of the National Oceanic and Atmospheric Administration, and other relevant stakeholders, shall develop a process to transition, when appropriate, Administration Earth science and space weather missions or sensors into operational status. The process shall include coordination of annual agency budget requests as required to execute the transitions.

(b) RESPONSIBLE AGENCY OFFICIAL.—The Administrator and the Administrator of the National Oceanic and Atmospheric Administration shall each designate an agency official who shall have the responsibility for and authority to lead the Administration's and the National Oceanic and Atmospheric Administration's transition activities and interagency coordination.

(c) PLAN.—For each mission or sensor that is determined to be appropriate for transition under subsection (a), the Administration and the National Oceanic and Atmospheric Administration shall transmit to Congress a joint plan for conducting the transition. The plan shall include the strategy, milestones, and budget required to execute the transition. The transition plan shall be transmitted to Congress no later than 60 days after the successful completion of the mission or sensor critical design review.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3425.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
60502(a)	42 U.S.C. 17712(b).	Pub. L. 110–422, title II, §204(b), (c), (d), Oct. 15, 2008, 122 Stat. 4785.
60502(b)	42 U.S.C. 17712(c).	
60502(c)	42 U.S.C. 17712(d).	

§60503. Reauthorization of Glory Mission

Congress reauthorizes the Administration to continue with development of the Glory Mission, which will examine how aerosols and solar energy affect the Earth's climate.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3425.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
60503	42 U.S.C. 17713(a).	Pub. L. 110–422, title II, §206(a), Oct. 15, 2008, 122 Stat. 4785.

§60504. Tornadoes and other severe storms

The Administrator shall ensure that the Administration gives high priority to those parts of its existing cooperative activities with the National Oceanic and Atmospheric Administration that are related to the study of tornadoes and other severe storms, tornado-force winds, and other factors determined to influence the development of tornadoes and other severe storms, with the goal of improving the Nation's ability to predict tornados and other severe storms. Further, the Administrator shall examine whether there are additional cooperative activities with the National Oceanic and Atmospheric Administration that should be undertaken in the area of tornado and severe storm research.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3425.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
60504	42 U.S.C. 17714.	Pub. L. 110–422, title II, §208, Oct. 15, 2008, 122 Stat. 4786.

§60505. Coordination with the National Oceanic and Atmospheric Administration

(a) JOINT WORKING GROUP.—The Administrator and the Administrator of the National Oceanic and Atmospheric Administration shall appoint a Joint Working Group, which shall review and monitor missions of the two agencies to ensure maximum coordination in the design, operation, and transition of missions where appropriate. The Joint Working Group shall also prepare the plans required by subsection (c).

(b) COORDINATION REPORT.—Not later than February 15 of each year, the Administrator and the Administrator of the National Oceanic and Atmospheric Administration shall jointly transmit a report to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate on how the Earth science programs of the Administration and the National Oceanic and Atmospheric Administration will be coordinated during the fiscal year following the fiscal year in which the report is transmitted.

(c) COORDINATION OF TRANSITION PLANNING AND REPORTING.—The Administrator, in conjunction with the Administrator of the National Oceanic and Atmospheric Administration and in consultation with other relevant agencies, shall evaluate relevant Administration science missions for their potential operational capabilities and shall prepare transition plans for the existing and future Earth observing systems found to have potential operational capabilities.

(d) LIMITATION.—The Administrator shall not transfer any Administration Earth science mission or Earth observing system to the National Oceanic and Atmospheric Administration until the plan required under subsection (c) has been approved by the Administrator and the Administrator of the National Oceanic and Atmospheric Administration and until financial resources have been identified to support the transition or transfer in the President's budget request for the National Oceanic and Atmospheric Administration.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3426.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
60505	42 U.S.C. 16656.	Pub. L. 109–155, title III, §306, Dec. 30, 2005, 119 Stat. 2919.

In subsection (b), the words "beginning with the first fiscal year after the date of enactment of this Act [December 30, 2005]" are omitted as obsolete.

In subsection (b), the words "Committee on Science and Technology" are substituted for "Committee on Science" on authority of Rule X(1)(o) of the Rules of the House of Representatives, adopted by House Resolution No. 6 (110th Congress, January 5, 2007).

STATUTORY NOTES AND RELATED SUBSIDIARIES

CHANGE OF NAME

Committee on Science and Technology of House of Representatives changed to Committee on Science, Space, and Technology of House of Representatives by House Resolution No. 5, One Hundred Twelfth Congress, Jan. 5, 2011.

§60506. Sharing of climate related data

The Administrator shall work to ensure that the Administration's policies on the sharing of climate related data respond to the recommendations of the Government Accountability Office's report on climate change research and data-sharing policies and to the recommendations on the processing, distribution, and archiving of data by the National Academies Earth Science Decadal Survey, "Earth Science and Applications from Space", and other relevant National Academies reports, to enhance and facilitate their availability and widest possible use to ensure public access to accurate and current data on global warming.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3426.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
60506	42 U.S.C. 17825(c).	Pub. L. 110–422, title XI, §1109(c), Oct. 15, 2008, 122 Stat. 4811.

CHAPTER 606—SPACE WEATHER

Sec.

60601. Space weather.
60602. Integrated strategy.
60603. Sustaining and advancing critical space weather observations.
60604. Research activities.
60605. Space weather data.
60606. Space weather knowledge transfer and information exchange.
60607. Pilot program for obtaining commercial sector space weather data.
60608. Space weather benchmarks.

§60601. Space weather

(a) FINDINGS.—

(1) SPACE WEATHER.—Congress makes the following findings with respect to space weather:

(A) Space weather phenomena pose a significant threat to ground-based and space-based critical infrastructure, modern technological systems, and humans working in space.

(B) The effects of severe space weather on the electric power grid, satellites and satellite communications and information, aviation operations, astronauts living and working in space, and space-based position, navigation, and timing systems could have significant societal, economic, national security, and health impacts.

(C) Space-based and ground-based observations provide crucial data necessary to understand, forecast, and prepare for space weather phenomena.

(D) Clear roles and accountability of Federal departments and agencies are critical for efficient and effective response to threats posed by space weather.

(E) Space weather observation and forecasting are essential for the success of human and robotic space exploration.

(F) In October 2015, the National Science and Technology Council published a National Space Weather Strategy and a National Space Weather Action Plan seeking to integrate national space weather efforts and add new capabilities to meet increasing demand for space weather information.

(G) In March 2019, the National Science and Technology Council published an updated National Space Weather Strategy and Action Plan to enhance the preparedness and resilience of

the United States to space weather.

(2) ROLE OF FEDERAL AGENCIES.—Congress makes the following findings with respect to the role of Federal agencies on space weather:

(A) The National Oceanic and Atmospheric Administration provides operational space weather monitoring, forecasting, and long-term data archiving and access for civil applications, maintains ground-based and space-based assets to provide observations needed for space weather forecasting, prediction, and warnings, provides research to support operational responsibilities, and develops requirements for space weather forecasting technologies and science.

(B) The Department of Defense provides operational space weather research, monitoring, and forecasting for the Department's unique missions and applications.

(C) The National Aeronautics and Space Administration provides increased understanding of the fundamental physics of the Sun-Earth system through basic research, space-based observations and modeling, developing new space-based technologies and missions, and monitoring of space weather for the National Aeronautics and Space Administration's space missions.

(D) The National Science Foundation provides increased understanding of the Sun-Earth system through ground-based measurements, technologies, and modeling.

(E) The Department of the Interior collects, distributes, and archives operational ground-based magnetometer data in the United States and its territories, works with the international community to improve global geophysical monitoring, and develops crustal conductivity models to assess and mitigate risks from space weather-induced electric ground currents.

(F) The Federal Aviation Administration provides operational requirements for space weather services in support of aviation and for coordination of these requirements with the International Civil Aviation Organization, and integrates space weather data and products into the Next Generation Air Transportation System.

(b) COORDINATION BY OFFICE OF SCIENCE AND TECHNOLOGY POLICY.—The Director of the Office of Science and Technology Policy shall—

(1) coordinate the development and implementation of Federal Government activities conducted with respect to space weather to improve the ability of the United States to prepare for, avoid, mitigate, respond to, and recover from potentially devastating impacts of space weather; and

(2) coordinate the activities of the interagency working group on space weather established under subsection (c).

(c) SPACE WEATHER INTERAGENCY WORKING GROUP.—Not later than 90 days after the date of enactment of the PROSWIFT Act, the National Science and Technology Council shall establish an interagency working group on space weather (in this chapter referred to as the "interagency working group") to coordinate executive branch actions that improve the understanding and prediction of and preparation for space weather phenomena, and coordinate Federal space weather activities.

(1) MEMBERSHIP.—The following entities shall be members of the interagency working group:

(A) The National Oceanic and Atmospheric Administration.

(B) The National Aeronautics and Space Administration.

(C) The National Science Foundation.

(D) The Department of Defense.

(E) The Department of the Interior.

(F) Such other Federal agencies as the Director of the Office of Science and Technology Policy deems appropriate.

(2) INTERAGENCY AGREEMENTS.—

(A) The members of the interagency working group may enter into one or more interagency agreements providing for cooperation and collaboration in the development of space weather spacecraft, instruments, technologies, and research to operations and operations to research in accordance with this chapter.

(B) The Administrator of the National Aeronautics and Space Administration and the Administrator of the National Oceanic and Atmospheric Administration shall enter into one or more interagency agreements providing for cooperation and collaboration in the development of space weather spacecraft, instruments, and technologies in accordance with this chapter.

(3) INTERNATIONAL, ACADEMIC COMMUNITY, AND COMMERCIAL SECTOR COLLABORATION.—Each Federal agency participating in the space weather interagency working group established under this subsection shall, to the extent practicable, increase engagement and cooperation with the international community, academic community, and commercial space weather sector on the observational infrastructure, data, and scientific research necessary to advance the monitoring, forecasting, and prediction of, preparation for, and protection from, space weather phenomena.

(d) SPACE WEATHER ADVISORY GROUP.—

(1) IN GENERAL.—

(A) ESTABLISHMENT.—Not later than 180 days after the date of the enactment of the PROSWIFT Act, the Administrator of the National Oceanic and Atmospheric Administration, in consultation with other relevant Federal agencies, shall establish a space weather advisory group (in this chapter referred to as the "advisory group") for the purposes of receiving advice from the academic community, the commercial space weather sector, and space weather end users that informs the interests and work of the interagency working group.

(B) COMPOSITION.—The advisory group shall be composed of not more than 15 members appointed by the interagency working group, of whom—

(i) 5 members shall be representatives of the academic community;

(ii) 5 members shall be representatives of the commercial space weather sector; and

(iii) 5 members shall be nongovernmental representatives of the space weather end user community.

(C) CHAIR.—Not later than 30 days after the date on which the last member of the advisory group is appointed under subparagraph (B), the Administrator of the National Oceanic and Atmospheric Administration shall appoint 1 member as the Chair of the advisory group.

(D) TERMS.—The length of the term of each member of the advisory group shall be 3 years beginning on the date on which the member is appointed.

(E) TERM LIMITS.—

(i) IN GENERAL.—A member of the advisory group may not serve on the advisory group for more than 2 consecutive terms.

(ii) CHAIR.—A member of the advisory group may not serve as the Chair of the advisory group for more than 2 terms, regardless of whether the terms are consecutive.

(2) DUTIES.—The advisory group shall advise the interagency working group on the following:

(A) Facilitating advances in the space weather enterprise of the United States.

(B) Improving the ability of the United States to prepare for, mitigate, respond to, and recover from space weather phenomena.

(C) Enabling the coordination and facilitation of research to operations and operations to research, as described in section 60604(d).

(D) Developing and implementing the integrated strategy under section 60602 including subsequent updates and reevaluations.

(3) USER SURVEY.—

(A) IN GENERAL.—Not later than 180 days after the establishment of the advisory group, the advisory group shall conduct a comprehensive survey of the needs of users of space weather products to identify the space weather research, observations, forecasting, prediction, and modeling advances required to improve space weather products.

(B) SURVEY CONSIDERATIONS.—The survey conducted under subparagraph (A) shall—

(i) assess the adequacy of current Federal Government goals for lead time, accuracy, coverage, timeliness, data rate, and data quality for space weather observations and forecasting;

(ii) identify options and methods to, in consultation with the academic community and the commercial space weather sector, improve upon the advancement of the goals described in clause (i);

(iii) identify opportunities for collection of new data to address the needs of the space weather user community;

(iv) identify methods to increase coordination of space weather research to operations and operations to research;

(v) identify opportunities for new technologies, research, and instrumentation to aid in research, understanding, monitoring, modeling, prediction, forecasting, and warning of space weather; and

(vi) identify methods and technologies to improve preparedness for potential space weather phenomena.

(C) COORDINATION WITH AGENCIES.—In carrying out the requirements of this subsection, the advisory group shall communicate and coordinate with the interagency working group to ensure the needs of the governmental space weather user community are adequately and appropriately identified by the survey under subparagraph (A).

(D) BRIEFING TO CONGRESS.—Not later than 30 days after the completion of the survey under subparagraph (A), the advisory group shall provide to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a briefing on the results of the survey under subparagraph (A).

(E) PUBLICATION.—Within 30 days of the briefing to Congress, the advisory group shall make the results of the survey under subparagraph (A) publicly available.

(F) REEVALUATION.—The advisory group shall review and assess the survey under subparagraph (A) not less than every 3 years and update, resubmit, and republish the survey in accordance with the requirements of subparagraphs (D) and (E).

(4) FEDERAL ADVISORY COMMITTEE ACT.—Section 14 of the Federal Advisory Committee Act (5 U.S.C. App.) [1] shall not apply to the advisory group.

(Pub. L. 116–181, §2(b), Oct. 21, 2020, 134 Stat. 882.)

EDITORIAL NOTES

REFERENCES IN TEXT

The date of enactment of the PROSWIFT Act, referred to in subsecs. (c) and (d)(1)(A), is the date of enactment of Pub. L. 116–181, which was approved Oct. 21, 2020.

Section 14 of the Federal Advisory Committee Act, referred to in subsec. (d)(4), is section 14 of Pub. L. 92–463, which was set out in the Appendix to Title 5, Government Organization and Employees, and was repealed and restated as section 1013 of Title 5 by Pub. L. 117–286, §§3(a), 7, Dec. 27, 2022, 136 Stat. 4204, 4361.

STATUTORY NOTES AND RELATED SUBSIDIARIES

SPACE WEATHER POLICY

Pub. L. 116–181, §2(a), Oct. 21, 2020, 134 Stat. 882, provided that: "It shall be the policy of the United States to prepare and protect against the social and economic impacts of space weather phenomena by supporting actions to improve space weather forecasts and predictions including: sustaining and enhancing critical observations, identifying research needs and promoting opportunities for research-to-operations and operations-to-research collaborations both within and outside of the Federal Government, advancing space weather models, engaging with all sectors of the space weather community, including academia, the commercial sector, and international partners, and understanding the needs of space weather end users."

EXECUTIVE DOCUMENTS

EX. ORD. NO. 13744. COORDINATING EFFORTS TO PREPARE THE NATION FOR SPACE WEATHER EVENTS

Ex. Ord. No. 13744, Oct. 13, 2016, 81 F.R. 71573, provided:

By the authority vested in me as President by the Constitution and the laws of the United States of America, and to prepare the Nation for space weather events, it is hereby ordered as follows:

SECTION 1. *Policy*. Space weather events, in the form of solar flares, solar energetic particles, and geomagnetic disturbances, occur regularly, some with measurable effects on critical infrastructure systems and technologies, such as the Global Positioning System (GPS), satellite operations and communication, aviation, and the electrical power grid. Extreme space weather events—those that could significantly degrade critical infrastructure—could disable large portions of the electrical power grid, resulting in cascading failures that would affect key services such as water supply, healthcare, and transportation. Space weather has the potential to simultaneously affect and disrupt health and safety across entire continents. Successfully preparing for space weather events is an all-of-nation endeavor that requires partnerships across governments, emergency managers, academia, the media, the insurance industry, non-profits, and the private sector.

It is the policy of the United States to prepare for space weather events to minimize the extent of economic loss and human hardship. The Federal Government must have (1) the capability to predict and detect a space weather event, (2) the plans and programs necessary to alert the public and private sectors to enable mitigating actions for an impending space weather event, (3) the protection and mitigation plans, protocols, and standards required to reduce risks to critical infrastructure prior to and during a credible threat, and (4) the ability to respond to and recover from the effects of space weather. Executive departments and agencies (agencies) must coordinate their efforts to prepare for the effects of space weather events.

SEC. 2. *Objectives*. This order defines agency roles and responsibilities and directs agencies to take specific actions to prepare the Nation for the hazardous effects of space weather. These activities are to be implemented in conjunction with those identified in the 2015 National Space Weather Action Plan (Action Plan) and any subsequent updates. Implementing this order and the Action Plan will require the Federal Government to work across agencies and to develop, as appropriate, enhanced and innovative partnerships with State, tribal, and local governments; academia; non-profits; the private sector; and international partners. These efforts will enhance national preparedness and speed the creation of a space-weather-ready Nation.

SEC. 3. *Coordination*. (a) The Director of the Office of Science and Technology Policy (OSTP), in consultation with the Assistant to the President for Homeland Security and Counterterrorism and the Director of the Office of Management and Budget (OMB), shall coordinate the development and implementation of Federal Government activities to prepare the Nation for space weather events, including the activities established in section 5 of this order and the recommendations of the National Science and Technology Council (NSTC), established by Executive Order 12881 of November 23, 1993 (Establishment of the National Science and Technology Council).

(b) To ensure accountability for and coordination of research, development, and implementation of activities identified in this order and in the Action Plan, the NSTC shall establish a Space Weather Operations, Research, and Mitigation Subcommittee (Subcommittee). The Subcommittee member agencies shall conduct activities to advance the implementation of this order, to achieve the goals identified in the 2015 National Space Weather Strategy and any subsequent updates, and to coordinate and monitor the implementation of the activities specified in the Action Plan and provide subsequent updates.

SEC. 4. *Roles and Responsibilities*. To the extent permitted by law, the agencies below shall adopt the following roles and responsibilities, which are key to ensuring enhanced space weather forecasting, situational awareness, space weather preparedness, and continuous Federal Government operations during and after space weather events.

(a) The Secretary of Defense shall ensure the timely provision of operational space weather observations,

analyses, forecasts, and other products to support the mission of the Department of Defense and coalition partners, including the provision of alerts and warnings for space weather phenomena that may affect weapons systems, military operations, or the defense of the United States.

(b) The Secretary of the Interior shall support the research, development, deployment, and operation of capabilities that enhance the understanding of variations of the Earth's magnetic field associated with solar-terrestrial interactions.

(c) The Secretary of Commerce shall:

(i) provide timely and accurate operational space weather forecasts, watches, warnings, alerts, and real-time space weather monitoring for the government, civilian, and commercial sectors, exclusive of the responsibilities of the Secretary of Defense; and

(ii) ensure the continuous improvement of operational space weather services, utilizing partnerships, as appropriate, with the research community, including academia and the private sector, and relevant agencies to develop, validate, test, and transition space weather observation platforms and models from research to operations and from operations to research.

(d) The Secretary of Energy shall facilitate the protection and restoration of the reliability of the electrical power grid during a presidentially declared grid security emergency associated with a geomagnetic disturbance pursuant to 16 U.S.C. 824o–1.

(e) The Secretary of Homeland Security shall:

(i) ensure the timely redistribution of space weather alerts and warnings that support national preparedness, continuity of government, and continuity of operations; and

(ii) coordinate response and recovery from the effects of space weather events on critical infrastructure and the broader community.

(f) The Administrator of the National Aeronautics and Space Administration (NASA) shall:

(i) implement and support a national research program to understand the Sun and its interactions with Earth and the solar system to advance space weather modeling and prediction capabilities applicable to space weather forecasting;

(ii) develop and operate space-weather-related research missions, instrument capabilities, and models; and

(iii) support the transition of space weather models and technology from research to operations and from operations to research.

(g) The Director of the National Science Foundation (NSF) shall support fundamental research linked to societal needs for space weather information through investments and partnerships, as appropriate.

(h) The Secretary of State, in consultation with the heads of relevant agencies, shall carry out diplomatic and public diplomacy efforts to strengthen global capacity to respond to space weather events.

(i) The Secretaries of Defense, the Interior, Commerce, Transportation, Energy, and Homeland Security, along with the Administrator of NASA and the Director of NSF, shall work together, consistent with their ongoing activities, to develop models, observation systems, technologies, and approaches that inform and enhance national preparedness for the effects of space weather events, including how space weather events may affect critical infrastructure and change the threat landscape with respect to other hazards.

(j) The heads of all agencies that support National Essential Functions, defined by Presidential Policy Directive 40 (PPD–40) of July 15, 2016 (National Continuity Policy), shall ensure that space weather events are adequately addressed in their all-hazards preparedness planning, including mitigation, response, and recovery, as directed by PPD–8 of March 30, 2011 (National Preparedness).

(k) NSTC member agencies shall coordinate through the NSTC to establish roles and responsibilities beyond those identified in section 4 of this order to enhance space weather preparedness, consistent with each agency's legal authority.

SEC. 5. *Implementation*. (a) Within 120 days of the date of this order, the Secretary of Energy, in consultation with the Secretary of Homeland Security, shall develop a plan to test and evaluate available devices that mitigate the effects of geomagnetic disturbances on the electrical power grid through the development of a pilot program that deploys such devices, *in situ*, in the electrical power grid. After the development of the plan, the Secretary shall implement the plan in collaboration with industry. In taking action pursuant to this subsection, the Secretaries of Energy and Homeland Security shall consult with the Chairman of the Federal Energy Regulatory Commission.

(b) Within 120 days of the date of this order, the heads of the sector-specific agencies that oversee the lifeline critical infrastructure functions as defined by the National Infrastructure Protection Plan of 2013—including communications, energy, transportation, and water and wastewater systems—as well as the Nuclear Reactors, Materials, and Waste Sector, shall assess their executive and statutory authority, and limits

of that authority, to direct, suspend, or control critical infrastructure operations, functions, and services before, during, and after a space weather event. The heads of each sector-specific agency shall provide a summary of these assessments to the Subcommittee.

(c) Within 90 days of receipt of the assessments ordered in section 5(b) of this order, the Subcommittee shall provide a report on the findings of these assessments with recommendations to the Director of OSTP, the Assistant to the President for Homeland Security and Counterterrorism, and the Director of OMB. The assessments may be used to inform the development and implementation of policy establishing authorities and responsibilities for agencies in response to a space weather event.

(d) Within 60 days of the date of this order, the Secretaries of Defense and Commerce, the Administrator of NASA, and the Director of NSF, in collaboration with other agencies as appropriate, shall identify mechanisms for advancing space weather observations, models, and predictions, and for sustaining and transitioning appropriate capabilities from research to operations and operations to research, collaborating with industry and academia to the extent possible.

(e) Within 120 days of the date of this order, the Secretaries of Defense and Commerce shall make historical data from the GPS constellation and other U.S. Government satellites publicly available, in accordance with Executive Order 13642 of May 9, 2013 (Making Open and Machine Readable the New Default for Government Information), to enhance model validation and improvements in space weather forecasting and situational awareness.

(f) Within 120 days of the date of this order, the Secretary of Homeland Security, through the Administrator of the Federal Emergency Management Agency and in coordination with relevant agencies, shall lead the development of a coordinated Federal operating concept and associated checklist to coordinate Federal assets and activities to respond to notification of, and protect against, impending space weather events. Within 180 days of the publication of the operating concept and checklist, agencies shall develop operational plans documenting their procedures and responsibilities to prepare for, protect against, and mitigate the effects of impending space weather events, in support of the Federal operating concept and compatible with the National Preparedness System described in PPD–8.

SEC. 6. *Stakeholder Engagement*. The agencies identified in this order shall seek public-private and international collaborations to enhance observation networks, conduct research, develop prediction models and mitigation approaches, enhance community resilience and preparedness, and supply the services necessary to protect life and property and promote economic prosperity, as consistent with law.

SEC. 7. *Definitions*. As used in this order:

(a) "Prepare" and "preparedness" have the same meaning they have in PPD–8. They refer to the actions taken to plan, organize, equip, train, and exercise to build and sustain the capabilities necessary to prevent, protect against, mitigate the effects of, respond to, and recover from those threats that pose the greatest risk to the security of the Nation. This includes the prediction and notification of space weather events.

(b) "Space weather" means variations in the space environment between the Sun and Earth (and throughout the solar system) that can affect technologies in space and on Earth. The primary types of space weather events are solar flares, solar energetic particles, and geomagnetic disturbances.

(c) "Solar flare" means a brief eruption of intense energy on or near the Sun's surface that is typically associated with sunspots.

(d) "Solar energetic particles" means ions and electrons ejected from the Sun that are typically associated with solar eruptions.

(e) "Geomagnetic disturbance" means a temporary disturbance of Earth's magnetic field resulting from solar activity.

(f) "Critical infrastructure" has the meaning provided in section 1016(e) of the USA Patriot Act of 2001 (42 U.S.C. 5195c(e)), namely systems and assets, whether physical or virtual, so vital to the United States that the incapacity or destruction of such systems and assets would have a debilitating impact on security, national economic security, national public health or safety, or any combination of those matters.

(g) "Sector-Specific Agency" means the agencies designated under PPD–21 of February 12, 2013 (Critical Infrastructure Security and Resilience), or any successor directive, to be responsible for providing institutional knowledge and specialized expertise as well as leading, facilitating, or supporting the security and resilience programs and associated activities of its designated critical infrastructure sector in the all-hazards environment.

SEC. 8. *General Provisions*. (a) Nothing in this order shall be construed to impair or otherwise affect:

(i) the authority granted by law to an agency, or the head thereof; or

(ii) the functions of the Director of OMB relating to budgetary, administrative, or legislative proposals.

(b) This order shall be implemented consistent with applicable law and subject to the availability of appropriations.

(c) This order is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

BARACK OBAMA.

[Reference to a Sector Specific Agency (including any permutations or conjugations thereof) deemed to be a reference to the Sector Risk Management Agency of the relevant critical infrastructure sector and have the meaning given such term in section 650 of Title 6, Domestic Security, see section 652a(c)(3) of Title 6, enacted Jan. 1, 2021.]

[1] *See References in Text note below.*

§60602. Integrated strategy

(a) IN GENERAL.—The Director of the Office of Science and Technology Policy, in collaboration with the interagency working group and upon the advice of the advisory group, shall develop a strategy for coordinated observation of space weather among members of the interagency working group (in this chapter, referred to as the "integrated strategy"). The integrated strategy shall identify—

(1) observations and measurements that must be sustained beyond the lifetime of current ground-based and space-based assets, as described under section 60603, that are essential for space weather research, models, forecasting, and prediction;

(2) new observations and measurements that may significantly improve space weather forecasting and prediction; and

(3) plans for follow-on space-based observations under section 60603.

(b) CONSIDERATIONS.—In developing the integrated strategy in subsection (a), the Director of the Office of Science and Technology Policy shall consider, as appropriate, the following:

(1) Potential contributions of commercial solutions, prize authority, academic and international partnerships, microsatellites, small satellite options, ground-based instruments, and hosted payloads for observations identified in section 60602(a)(2).

(2) Work conducted before the date of enactment of the PROSWIFT Act by the National Science and Technology Council with respect to space weather.

(3) The survey under section 60601(d).

(4) Any relevant recommendations from the most recent National Academies of Sciences, Engineering, and Medicine Decadal Survey for Solar and Space Physics (Heliophysics).

(c) REVIEW OF INTEGRATED STRATEGY.—

(1) REVIEW.—The Administrator of the National Aeronautics and Space Administration and the Administrator of the National Oceanic and Atmospheric Administration, in consultation with Federal agencies participating in the interagency working group, shall enter into an agreement with the National Academies of Sciences, Engineering, and Medicine to review the integrated strategy developed in this section.

(2) CONSIDERATIONS.—The review from paragraph (1) shall also consider the current state, capability, and feasibility of the commercial space weather sector to provide new and supplemental observations and measurements that may significantly improve space weather forecasting and prediction.

(3) TRANSMITTAL.—The Director of the Office of Science and Technology Policy, the Administrator of the National Aeronautics and Space Administration, and the Administrator of the National Oceanic and Atmospheric Administration shall transmit the integrated strategy and the results of the review required under paragraph (1) to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate not later than 1 year after the date of the completion of the survey

under section 60601(d)(3). The integrated strategy and its review shall be made publicly available within 30 days of submittal to Congress.

(d) IMPLEMENTATION PLAN.—Not later than 180 days after delivery of the review of the integrated strategy in subsection (c)(3), the interagency working group shall develop a plan to implement the integrated strategy, including an estimate of the cost and schedule required for implementation. Upon completion, the interagency working group shall submit the implementation plan to the Committees on Science, Space, and Technology and Armed Services of the House of Representatives and the Committees on Commerce, Science, and Transportation and Armed Services of the Senate. The implementation plan shall be made publicly available within 30 days of submittal to Congress.

(e) REEVALUATION.—The Director, in collaboration with the interagency working group, shall update the integrated strategy not later than 1 year after the reevaluation of the user survey from section 60601(d)(3)(F) in accordance with the requirements of subsections (a) through (d).

(Pub. L. 116–181, §2(b), Oct. 21, 2020, 134 Stat. 886.)

EDITORIAL NOTES

REFERENCES IN TEXT

The date of enactment of the PROSWIFT Act, referred to in subsec. (b)(2), is the date of enactment of Pub. L. 116–181, which was approved Oct. 21, 2020.

§60603. Sustaining and advancing critical space weather observations

(a) POLICY.—It is the policy of the United States to—

(1) establish and sustain a baseline capability for space weather observations and to make such observations and data publicly available; and

(2) obtain enhanced space weather observations, as practicable, to advance forecasting and prediction capability, as informed by the integrated strategy in section 60602.

(b) SUSTAINING BASELINE SPACE-BASED OBSERVATIONAL CAPABILITIES.—

(1) The Administrator of the National Aeronautics and Space Administration shall, in cooperation with the European Space Agency and other international and interagency partners, maintain operations of the Solar and Heliospheric Observatory/Large Angle and Spectrometric Coronagraph (referred to in this section as "SOHO/LASCO") for as long as the satellite continues to deliver quality observations.

(2) The Administrator of the National Aeronautics and Space Administration shall prioritize the reception of SOHO/LASCO data.

(3) The Administrator of the National Oceanic and Atmospheric Administration shall maintain, for as long as is practicable, operations of current space-based observational assets, including but not limited to the Geostationary Operational Environmental Satellites system, and the Deep Space Climate Observatory.

(c) BACKUP SPACE-BASED OBSERVATIONAL CAPABILITY.—The Administrator of the National Oceanic and Atmospheric Administration, in coordination with the Secretary of Defense and the Administrator of the National Aeronautics and Space Administration, shall work with Federal and international partners in order to secure reliable backup baseline capability for near real-time coronal mass ejection imagery, solar wind, solar imaging, coronal imagery, and other relevant observations required to provide space weather forecasts.

(d) SOHO/LASCO OPERATIONAL CONTINGENCY PLAN.—The Administrator of the National Oceanic and Atmospheric Administration shall develop an operational contingency plan to provide continuous space weather forecasting in the event of an unexpected SOHO/LASCO failure,

and prior to the implementation of the backup space-based baseline observational capability in section 60603(c).

(e) BRIEFING.—Not later than 120 days after the date of enactment of the PROSWIFT Act, the Administrator of the National Oceanic and Atmospheric Administration shall provide a briefing to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate on the plan to secure reliable backup baseline capability described in subsection (c) and the SOHO/LASCO operational contingency plan developed under subsection (d).

(f) SUSTAINING GROUND-BASED OBSERVATIONAL CAPABILITY.—The Director of the National Science Foundation, the Director of the United States Geological Survey, the Secretary of the Air Force, and, as practicable in support of the Air Force, the Secretary of the Navy, shall each—

(1) maintain and improve ground-based observations of the Sun, as necessary and advisable, to help meet the needs identified in the survey under section 60601(d)(3); and

(2) continue to provide space weather data through ground-based facilities, including radars, lidars, magnetometers, neutron monitors, radio receivers, aurora and airglow imagers, spectrometers, interferometers, and solar observatories.

(g) CONSIDERATIONS.—In implementing subsections (b), (c), and (d), the Administrators of the National Aeronautics and Space Administration and the National Oceanic and Atmospheric Administration, the Directors of the National Science Foundation and United States Geological Survey, and the Secretaries of the Air Force and the Navy shall prioritize cost-effective and reliable solutions.

(h) GROUND-BASED OBSERVATIONAL DATA.—The Director of the National Science Foundation shall—

(1) make available to the public key data streams from the platforms and facilities described in subsection (d) for research and to support space weather model development;

(2) develop experimental models for scientific purposes; and

(3) support the transition of the experimental models to operations where appropriate.

(i) ENHANCED SPACE-BASED OBSERVATIONS.—The Administrator of the National Oceanic and Atmospheric Administration, in coordination with the Secretary of Defense, should develop options to build and deploy space-based observational capabilities, beyond the baseline capabilities referenced in subsection (b), that may improve space weather measurements and observations. These supplemental observational capabilities could include commercial solutions, prize authority, academic partnerships, microsatellites, ground-based instruments, and opportunities to deploy the instrument or instruments as a secondary payload on an upcoming planned launch.

(Pub. L. 116–181, §2(b), Oct. 21, 2020, 134 Stat. 888.)

EDITORIAL NOTES

REFERENCES IN TEXT

The date of enactment of the PROSWIFT Act, referred to in subsec. (e), is the date of enactment of Pub. L. 116–181, which was approved Oct. 21, 2020.

§60604. Research activities

(a) BASIC RESEARCH.—The Director of the National Science Foundation, the Administrator of the National Aeronautics and Space Administration, and the Secretary of Defense, shall—

(1) continue to carry out basic research on heliophysics, geospace science, and space weather; and

(2) support competitive, peer-reviewed proposals for conducting research, advancing modeling, and monitoring of space weather and its impacts, including the science goals outlined in decadal

surveys in solar and space physics conducted by the National Academies of Sciences, Engineering, and Medicine.

(b) MULTIDISCIPLINARY RESEARCH.—

(1) FINDINGS.—Congress finds that the multidisciplinary nature of solar and space physics creates funding challenges that require coordination across scientific disciplines and Federal agencies.

(2) SENSE OF CONGRESS.—It is the sense of Congress that science centers could coordinate multidisciplinary solar and space physics research. The Administrator of the National Aeronautics and Space Administration and Director of the National Science Foundation should support competitively awarded grants for multidisciplinary science centers that advance solar and space physics research, including research-to-operations and operations-to-research processes.

(3) MULTIDISCIPLINARY RESEARCH.—The Director of the National Science Foundation, the Administrator of the National Oceanic and Atmospheric Administration, and the Administrator of the National Aeronautics and Space Administration, shall each pursue multidisciplinary research in subjects that further the understanding of solar physics, space physics, and space weather.

(c) SCIENCE MISSIONS.—The Administrator of the National Aeronautics and Space Administration should implement missions that meet the science objectives identified in solar and space physics decadal surveys conducted by the National Academies of Sciences, Engineering, and Medicine.

(d) RESEARCH TO OPERATIONS; OPERATIONS TO RESEARCH.—The interagency working group shall, upon consideration of the advice of the advisory group, develop formal mechanisms to—

(1) transition the space weather research findings, models, and capabilities of the National Aeronautics and Space Administration, the National Science Foundation, the United States Geological Survey, and other relevant Federal agencies, as appropriate, to the National Oceanic and Atmospheric Administration and the Department of Defense;

(2) enhance coordination between research modeling centers and forecasting centers; and

(3) communicate the operational needs of space weather forecasters of the National Oceanic and Atmospheric Administration and Department of Defense, as appropriate, to the National Aeronautics and Space Administration, the National Science Foundation, and the United States Geological Survey.

(Pub. L. 116–181, §2(b), Oct. 21, 2020, 134 Stat. 889.)

§60605. Space weather data

(a) IN GENERAL.—The Administrator of the National Aeronautics and Space Administration and the Director of the National Science Foundation shall continue to—

(1) make space weather-related data obtained for scientific research purposes available to space weather forecasters and operations centers; and

(2) support model development and model applications to space weather forecasting.

(b) RESEARCH.—The Administrator of the National Oceanic and Atmospheric Administration shall make space weather-related data obtained from operational forecasting available for research.

(Pub. L. 116–181, §2(b), Oct. 21, 2020, 134 Stat. 890.)

§60606. Space weather knowledge transfer and information exchange

Not later than 180 days after the date of enactment of the PROSWIFT Act, the Administrator of the National Oceanic and Atmospheric Administration, in collaboration with the Administrator of the

National Aeronautics and Space Administration and the Director of the National Science Foundation, shall enter into an arrangement with the National Academies of Sciences, Engineering, and Medicine to establish a Space Weather Government-Academic-Commercial Roundtable to facilitate communication and knowledge transfer among Government participants in the space weather interagency working group established under section 60601(c), the academic community, and the commercial space weather sector to—

(1) facilitate advances in space weather prediction and forecasting;

(2) increase coordination of space weather research to operations and operations to research; and

(3) improve preparedness for potential space weather phenomena.

(Pub. L. 116–181, §2(b), Oct. 21, 2020, 134 Stat. 891.)

EDITORIAL NOTES

REFERENCES IN TEXT

The date of enactment of the PROSWIFT Act, referred to in text, is the date of enactment of Pub. L. 116–181, which was approved Oct. 21, 2020.

§60607. Pilot program for obtaining commercial sector space weather data

(a) ESTABLISHMENT.—Not later than 12 months after the date of enactment of the PROSWIFT Act, the Administrator of the National Oceanic and Atmospheric Administration may establish a pilot program under which the Administrator will offer to enter into contracts with one or more entities in the commercial space weather sector for the provision to the Administrator of space weather data generated by such an entity that meets the standards and specifications published under subsection (b).

(b) DATA STANDARD AND SPECIFICATIONS.—Not later than 18 months after the date of enactment of the PROSWIFT Act, the Administrator of the National Oceanic and Atmospheric Administration, in consultation with the Secretary of Defense, may publish standards and specifications for ground-based, ocean-based, air-based, and space-based commercial space weather data and metadata.

(c) CONTRACTS.—

(1) IN GENERAL.—Within 12 months after the date of transmission of the review of the integrated strategy to Congress under section 60602(c)(3) and taking into account the results of the review, the Administrator of the National Oceanic and Atmospheric Administration may offer to enter, through an open competition, into at least one contract with one or more commercial space weather sector entities capable of providing space weather data that—

(A) meets the standards and specifications established for providing such data under subsection (b); and

(B) is provided in a manner that allows the Administrator of the National Oceanic and Atmospheric Administration to calibrate and evaluate the data for use in space weather research and forecasting models of the National Oceanic and Atmospheric Administration, the Department of Defense, or both.

(2) ASSESSMENT.—If one or more contract is entered into under paragraph (1), not later than 4 years after the date of enactment of the PROSWIFT Act, the Administrator of the National Oceanic and Atmospheric Administration shall assess, and submit to the Committees on Science, Space, and Technology and Armed Services of the House of Representatives and the Committees on Commerce, Science, and Transportation and Armed Services of the Senate, a report on the extent to which the pilot program has demonstrated data provided under contracts described in paragraph (1) meet the standards and specifications established under subsection (b) and the extent to which the pilot program has demonstrated—

(A) the viability of assimilating the commercially provided data into National Oceanic and Atmospheric Administration space weather research and forecasting models;

(B) whether, and by how much, the data so provided add value to space weather forecasts of the National Oceanic and Atmospheric Administration and the Department of Defense; and

(C) the accuracy, quality, timeliness, validity, reliability, usability, information technology security, and cost-effectiveness of obtaining commercial space weather data from commercial sector providers.

(Pub. L. 116–181, §2(b), Oct. 21, 2020, 134 Stat. 891.)

EDITORIAL NOTES

REFERENCES IN TEXT

The date of enactment of the PROSWIFT Act, referred to in subsecs. (a), (b), and (c)(2), is the date of enactment of Pub. L. 116–181, which was approved Oct. 21, 2020.

§60608. Space weather benchmarks

The interagency working group established under section 60601(c) shall periodically review and update the benchmarks described in the report of the National Science and Technology Council entitled "Space Weather Phase 1 Benchmarks" and dated June 2018, as necessary, based on—

(1) any significant new data or advances in scientific understanding that become available; or

(2) the evolving needs of entities impacted by space weather phenomena.

(Pub. L. 116–181, §2(b), Oct. 21, 2020, 134 Stat. 892.)

Subtitle VII—Access to Space

CHAPTER 701—USE OF SPACE LAUNCH SYSTEM OR ALTERNATIVES

Sec.

70101. Recovery of fair value of placing Department of Defense payloads in orbit with space launch system.
70102. Space launch system use policy.
70103. Commercial payloads on space launch system.
70104. Definition of Space Launch System.

EDITORIAL NOTES

AMENDMENTS

2015—Pub. L. 114–90, title I, §117(a)(1), (b)(2), Nov. 25, 2015, 129 Stat. 717, 718, added item 70104, substituted "SPACE LAUNCH SYSTEM" for "SPACE SHUTTLE" in chapter heading, "space launch system" for "space shuttle" in items 70101 and 70103, and "Space launch system" for "Space shuttle" in item 70102.

§70101. Recovery of fair value of placing Department of Defense payloads in orbit with space launch system

Notwithstanding any other provision of law, or any interagency agreement, the Administrator shall charge such prices as are necessary to recover the fair value of placing Department of Defense payloads into orbit by means of the space launch system.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3427; Pub. L. 114–90, title I, §117(a)(2), Nov. 25, 2015, 129 Stat. 717.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70101	42 U.S.C. 2464.	Pub. L. 97–324, title I, §106(a), Oct. 15, 1982, 96 Stat. 1600.

EDITORIAL NOTES

AMENDMENTS

2015—Pub. L. 114–90 substituted "space launch system" for "space shuttle" in section catchline and text.

§70102. Space launch system use policy

(a) IN GENERAL.—The Space Launch System may be used for the following circumstances:

(1) Payloads and missions that contribute to extending human presence beyond low-Earth orbit and substantially benefit from the unique capabilities of the Space Launch System.

(2) Other payloads and missions that substantially benefit from the unique capabilities of the Space Launch System.

(3) On a space available basis, Federal Government or educational payloads that are consistent with NASA's mission for exploration beyond low-Earth orbit.

(4) Compelling circumstances, as determined by the Administrator.

(b) AGREEMENTS WITH FOREIGN ENTITIES.—The Administrator may plan, negotiate, or implement agreements with foreign entities for the launch of payloads for international collaborative efforts relating to science and technology using the Space Launch System.

(c) COMPELLING CIRCUMSTANCES.—Not later than 30 days after the date the Administrator makes a determination under subsection (a)(4), the Administrator shall transmit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science of the House of Representatives written notification of the Administrator's intent to select the Space Launch System for a specific mission under that subsection, including justification for the determination.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3427; Pub. L. 114–90, title I, §117(a)(3), Nov. 25, 2015, 129 Stat. 717.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70102(a)	42 U.S.C. 2465a(a).	Pub. L. 101–611, title I, §112(a), (c), (d), Nov. 16, 1990, 104 Stat. 3198, 3199.
70102(b)	42 U.S.C. 2465a(c).	
70102(c)	42 U.S.C. 2465a(d).	

EDITORIAL NOTES

AMENDMENTS

2015—Pub. L. 114–90 amended section generally. Prior to amendment, section related to space shuttle use policy.

STATUTORY NOTES AND RELATED SUBSIDIARIES

FLIGHT OPPORTUNITIES

Pub. L. 115–10, title VIII, §826, Mar. 21, 2017, 131 Stat. 65, provided that:

"(a) DEVELOPMENT OF PAYLOADS.—

"(1) IN GENERAL.—In order to conduct necessary research, the Administrator [of the National Aeronautics and Space Administration] shall continue and, as the Administrator considers appropriate, expand the development of technology payloads for—

"(A) scientific research; and

"(B) investigating new or improved capabilities.

"(2) FUNDS.—For the purpose of carrying out paragraph (1), the Administrator shall make funds available for—

"(A) flight testing;

"(B) payload development; and

"(C) hardware related to subparagraphs (A) and (B).

"(b) REAFFIRMATION OF POLICY.—Congress reaffirms that the Administrator should provide flight opportunities for payloads to microgravity environments and suborbital altitudes as authorized by section 907 of the National Aeronautics and Space Administration Authorization Act of 2010 (42 U.S.C. 18405)."

SECONDARY PAYLOAD CAPABILITY

Pub. L. 109–155, title VI, §602, Dec. 30, 2005, 119 Stat. 2931, provided that:

"(a) IN GENERAL.—In order to provide more routine and affordable access to space for a broad range of scientific payloads, the Administrator is encouraged to provide the capabilities to support secondary payload flight opportunities on United States launch vehicles, or free flyers, for satellites or scientific payloads weighing less than 500 kilograms.

"(b) FEASIBILITY STUDY.—The Administrator shall initiate a feasibility study for designating a National Free Flyer Launch Coordination Center as a means of coordinating, consolidating, and integrating secondary launch capabilities, launch opportunities, and payloads.

"(c) ASSESSMENT.—The feasibility study required by subsection (b) shall include an assessment of the feasibility of integrating a National Free Flyer Launch Coordination Center within the operations and facilities of an existing nonprofit organization such as the Inland Northwest Space Alliance in Missoula, Montana, or a similar entity, and shall include an assessment of the potential utilization of existing launch and launch support facilities and capabilities, including but not limited to those in the States of Montana and New Mexico and their respective contiguous States, and the State of Alaska, for the integration and launch of secondary payloads, including an assessment of the feasibility of establishing cooperative agreements among such facilities, existing or future commercial launch providers, payload developers, and the designated Coordination Center."

§70103. Commercial payloads on space launch system

(a) DEFINITIONS.—In this section:

(1) LAUNCH VEHICLE.—The term "launch vehicle" means any vehicle constructed for the purpose of operating in, or placing a payload in, outer space.

(2) PAYLOAD.—The term "payload" means an object which a person undertakes to place in outer space by means of a launch vehicle, and includes subcomponents of the launch vehicle specifically designed or adapted for that object.

(b) IN GENERAL.—Commercial payloads may not be accepted for launch as primary payloads on the space launch system unless the Administrator determines that—

(1) the payload requires the unique capabilities of the space launch system; or

(2) launching of the payload on the space launch system is important for either national security or foreign policy purposes.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3428; Pub. L. 114–90, title I, §117(a)(4), Nov. 25, 2015, 129 Stat. 718.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70103(a)	42 U.S.C. 2465c.	Pub. L. 101–611, title II, §203, Nov. 16, 1990, 104 Stat. 3206; Pub. L. 105–303, title II, §203(2), Oct. 28, 1998, 112 Stat. 2855.
70103(b)	42 U.S.C. 2465f.	Pub. L. 101–611, title II, §206, Nov. 16, 1990, 104 Stat. 3207; Pub. L. 105–303, title II, §203(4), Oct. 28, 1998, 112 Stat. 2855.

In subsection (a), the words "this section" are substituted for "this title", meaning title II of Public Law 101–611, because title II of Public Law 101–611 was previously repealed except for section 201 (a short title provision, classified to 42 U.S.C. 2451 note, in which neither defined term appears) and sections 203 (42 U.S.C. 2465c) and 206 (42 U.S.C. 2465f) of Public Law 101–611, which are restated in this section.

EDITORIAL NOTES

AMENDMENTS

2015—Pub. L. 114–90 substituted "space launch system" for "space shuttle" in section catchline and wherever appearing in text.

§70104. Definition of Space Launch System

In this chapter, the term "Space Launch System" means the Space Launch System authorized under section 302 of the National Aeronautics and Space Administration Authorization Act of 2010 (42 U.S.C. 18322).

(Added Pub. L. 114–90, title I, §117(a)(5), Nov. 25, 2015, 129 Stat. 718.)

[CHAPTER 703—REPEALED]

[§§70301 to 70304. Repealed. Pub. L. 115–10, title IV, §416(b), Mar. 21, 2017, 131 Stat. 35]

Section 70301, Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3428, set out Congressional findings.

Section 70302, Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3429, related to purpose, policy, and goals of chapter.

Section 70303, Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3429, defined "additive cost".

Section 70304, Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3429, related to duties of Administrator.

CHAPTER 705—EXPLORATION INITIATIVES

Sec.
70501. Space shuttle follow-on.
70502. Exploration plan and programs.
70503. Ground-based analog capabilities.
70504. Stepping stone approach to exploration.
70505. Lunar outpost.
70506. Exploration technology research.
70507. Technology development.

70508. Robotic or human servicing of spacecraft.

§70501. Space shuttle follow-on

(a) POLICY STATEMENT.—In order to ensure continuous United States participation and leadership in the exploration and utilization of space and as an essential instrument of national security, it is the policy of the United States to maintain an uninterrupted capability for human space flight and operations—

(1) in low-Earth orbit; and

(2) beyond low-Earth orbit once the capabilities described in section 421(f) of the National Aeronautics and Space Administration Transition Authorization Act of 2017 become available.

(b) ANNUAL REPORT.—The Administrator shall transmit an annual report to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives describing the progress being made toward developing the Space Launch System and Orion and the estimated time before they will demonstrate crewed, orbital spaceflight.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3430; Pub. L. 115–10, title IV, §417, Mar. 21, 2017, 131 Stat. 35.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70501(a)	42 U.S.C. 16761(a).	Pub. L. 109–155, title V, §501(a), (b), Dec. 30, 2005, 119 Stat. 2927.
70501(b)	42 U.S.C. 16761(b).	

In subsection (b), the words "The Administrator shall transmit an annual report" are substituted for "Not later than 180 days after the date of enactment of this Act [December 30, 2005] and annually thereafter, the Administrator shall transmit a report" to eliminate obsolete language.

In subsection (b), the words "Committee on Science and Technology" are substituted for "Committee on Science" on authority of Rule X(1)(o) of the Rules of the House of Representatives, adopted by House Resolution No. 6 (110th Congress, January 5, 2007).

EDITORIAL NOTES

REFERENCES IN TEXT

Section 421(f) of the National Aeronautics and Space Administration Transition Authorization Act of 2017, referred to in subsec. (a)(2), is section 421(f) of Pub. L. 115–10, which is set out as a note under section 20301 of this title.

AMENDMENTS

2017—Subsec. (a). Pub. L. 115–10, §417(1), amended subsec. (a) generally. Prior to amendment, text read as follows: "It is the policy of the United States to possess the capability for human access to space on a continuous basis."

Subsec. (b). Pub. L. 115–10, §417(2), substituted "Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives describing the progress being made toward developing the Space Launch System and Orion" for "Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate describing the progress being made toward developing the Crew Exploration Vehicle and the Crew Launch Vehicle".

STATUTORY NOTES AND RELATED SUBSIDIARIES

CHANGE OF NAME

Committee on Science and Technology of House of Representatives changed to Committee on Science, Space, and Technology of House of Representatives by House Resolution No. 5, One Hundred Twelfth Congress, Jan. 5, 2011.

TRANSITION

Pub. L. 110–422, title VI, §613, Oct. 15, 2008, 122 Stat. 4799, provided that:

"(a) DISPOSITION OF SHUTTLE-RELATED ASSETS.—

"(1) IN GENERAL.—Not later than 90 days after the date of enactment of this Act [Oct. 15, 2008], the Administrator [of NASA] shall submit to Congress a plan describing the process for the disposition of the remaining Space Shuttle Orbiters and other Space Shuttle program-related hardware after the retirement of the Space Shuttle fleet.

"(2) PLAN REQUIREMENTS.—The plan submitted under paragraph (1) shall include a description of a process by which educational institutions, science museums, and other appropriate organizations may acquire, through loan or disposal by the Federal Government, Space Shuttle program hardware.

"(3) PROHIBITION ON DISPOSITION BEFORE COMPLETION OF PLAN.—The Administrator shall not dispose of any Space Shuttle program hardware before the plan required by paragraph (1) is submitted to Congress.

"(b) SPACE SHUTTLE TRANSITION LIAISON OFFICE.—

"(1) ESTABLISHMENT.—The Administrator shall develop a plan and establish a Space Shuttle Transition Liaison Office within the Office of Human Capital Management of NASA [National Aeronautics and Space Administration] to assist local communities affected by the termination of the Space Shuttle program in mitigating the negative impacts on such communities caused by such termination. The plan shall define the size of the affected local community that would receive assistance described in paragraph (2).

"(2) MANNER OF ASSISTANCE.—In providing assistance under paragraph (1), the office established under such paragraph shall—

"(A) offer nonfinancial, technical assistance to communities described in such paragraph to assist in the mitigation described in such paragraph; and

"(B) serve as a clearinghouse to assist such communities in identifying services available from other Federal, State, and local agencies to assist in such mitigation.

"(3) TERMINATION OF OFFICE.—The office established under paragraph (1) shall terminate 2 years after the completion of the last Space Shuttle flight.

"(4) SUBMISSION.—Not later than 180 days after the date of enactment of this Act [Oct. 15, 2008], NASA shall provide a copy of the plan required by paragraph (1) to the Congress."

Pub. L. 110–161, div. B, title III, Dec. 26, 2007, 121 Stat. 1919, provided that: "The Administrator of the National Aeronautics and Space Administration shall prepare a strategy for minimizing job losses when the National Aeronautics and Space Administration transitions from the Space Shuttle to a successor human-rated space transport vehicle. This strategy shall include: (1) specific initiatives that the National Aeronautics and Space Administration has undertaken, or plans to undertake, to maximize the utilization of existing civil service and contractor workforces at each of the affected Centers; (2) efforts to equitably distribute tasks and workload between the Centers to mitigate the brunt of job losses being borne by only certain Centers; (3) new workload, tasks, initiatives, and missions being secured for the affected Centers; and (4) overall projections of future civil service and contractor workforce levels at the affected Centers. The Administrator shall transmit this strategy to Congress not later than 90 days after the date of enactment of this Act [Dec. 26, 2007]. The Administrator shall update and transmit to Congress this strategy not less than every six months thereafter until the successor human-rated space transport vehicle is fully operational."

Pub. L. 109–155, title V, §502, Dec. 30, 2005, 119 Stat. 2928, provided that:

"(a) IN GENERAL.—The Administrator [of the National Aeronautics and Space Administration] shall, to the fullest extent possible consistent with a successful development program, use the personnel, capabilities, assets, and infrastructure of the Space Shuttle program in developing the Crew Exploration Vehicle, Crew Launch Vehicle, and a heavy-lift launch vehicle.

"(b) PLAN.—Not later than 180 days after the date of enactment of this Act [Dec. 30, 2005], the Administrator shall transmit to the Committee on Science [now Committee on Science, Space, and Technology] of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a plan describing how NASA [National Aeronautics and Space Administration] will proceed with its human space flight programs, which, at a minimum, shall describe—

"(1) how NASA will deploy personnel from, and use the facilities of, the Space Shuttle program to ensure that the Space Shuttle operates as safely as possible through its final flight and to ensure that

personnel and facilities from the Space Shuttle program are used in NASA's exploration programs in accordance with subsection (a);

"(2) the planned number of flights the Space Shuttle will make before its retirement;

"(3) the means, other than the Space Shuttle and the Crew Exploration Vehicle, including commercial vehicles, that may be used to ferry crew and cargo to and from the ISS [International Space Station];

"(4) the intended purpose of lunar missions and the architecture for those missions; and

"(5) the extent to which the Crew Exploration Vehicle will allow for the escape of the crew in an emergency.

"(c) PERSONNEL.—The Administrator shall consult with other appropriate Federal agencies and with NASA contractors and employees to develop a transition plan for any Federal and contractor personnel engaged in the Space Shuttle program who can no longer be retained because of the retirement of the Space Shuttle. The plan shall include actions to assist Federal and contractor personnel in taking advantage of training, retraining, job placement and relocation programs, and any other actions that NASA will take to assist the employees. The plan shall also describe how the Administrator will ensure that NASA and its contractors will have an appropriate complement of employees to allow for the safest possible use of the Space Shuttle through its final flight. The Administrator shall transmit the plan to the Committee on Science [now Committee on Science, Space, and Technology] of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate not later than March 31, 2006."

§70502. Exploration plan and programs

The Administrator shall—

(1) construct an architecture and implementation plan for the Administration's human exploration program that is not critically dependent on the achievement of milestones by fixed dates;

(2) implement an exploration research and technology development program to enable human and robotic operations consistent with section 20302(b) of this title;

(3) conduct an in-situ resource utilization technology program to develop the capability to use space resources to increase independence from Earth, and sustain exploration beyond low-Earth orbit; and

(4) pursue aggressively automated rendezvous and docking capabilities that can support the International Space Station and other mission requirements.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3430; Pub. L. 115–10, title IV, §415, Mar. 21, 2017, 131 Stat. 34.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70502	42 U.S.C. 16763.	Pub. L. 109–155, title V, §503, Dec. 30, 2005, 119 Stat. 2929.

EDITORIAL NOTES

AMENDMENTS

2017—Par. (2). Pub. L. 115–10 amended par. (2) generally. Prior to amendment, par. (2) read as follows: "implement an exploration technology development program to enable lunar human and robotic operations consistent with section 20302(b) of this title, including surface power to use on the Moon and other locations;".

§70503. Ground-based analog capabilities

(a) IN GENERAL.—The Administrator may establish a ground-based analog capability in remote

United States locations in order to assist in the development of lunar operations, life support, and in-situ resource utilization experience and capabilities.

(b) ENVIRONMENTAL CHARACTERISTICS.—The Administrator shall select locations for the activities described in subsection (a) that—

(1) are regularly accessible;

(2) have significant temperature extremes and range; and

(3) have access to energy and natural resources (including geothermal, permafrost, volcanic, or other potential resources).

(c) INVOLVEMENT OF LOCAL POPULATIONS AND PRIVATE SECTOR PARTNERS.—In carrying out this section, the Administrator shall involve local populations, academia, and industrial partners as much as possible to ensure that ground-based benefits and applications are encouraged and developed.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3430.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70503	42 U.S.C. 16764.	Pub. L. 109–155, title V, §504, Dec. 30, 2005, 119 Stat. 2929.

§70504. Stepping stone approach to exploration

(a) IN GENERAL.—The Administration—

(1) may conduct missions to intermediate destinations in sustainable steps in accordance with section 20302(b) of this title, and on a timetable determined by the availability of funding, in order to achieve the objective of human exploration of Mars specified in section 202(b)(5) of the National Aeronautics and Space Administration Authorization Act of 2010 (42 U.S.C. 18312(b)(5)); and

(2) shall incorporate any such missions into the human exploration roadmap under section 432 of the National Aeronautics and Space Administration Transition Authorization Act of 2017.

(b) COST-EFFECTIVENESS.—In order to maximize the cost-effectiveness of the long-term space exploration and utilization activities of the United States, the Administrator shall take all necessary steps, including engaging international, academic, and industry partners, to ensure that activities in the Administration's human space exploration program balance how those activities might also help meet the requirements of future exploration and utilization activities leading to human habitation on the surface of Mars.

(c) COMPLETION.—Within budgetary considerations, once an exploration-related project enters its development phase, the Administrator shall seek, to the maximum extent practicable, to complete that project without undue delays.

(d) INTERNATIONAL PARTICIPATION.—In order to achieve the goal of successfully conducting a crewed mission to the surface of Mars, the President may invite the United States partners in the ISS program and other nations, as appropriate, to participate in an international initiative under the leadership of the United States.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3431; Pub. L. 115–10, title IV, §414, Mar. 21, 2017, 131 Stat. 34.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*

70504	42 U.S.C. 17731.	Pub. L. 110–422, title IV, §403, Oct. 15, 2008, 122 Stat. 4789.

EDITORIAL NOTES

REFERENCES IN TEXT

Section 432 of the National Aeronautics and Space Administration Transition Authorization Act of 2017, referred to in subsec. (a)(2), is section 432 of Pub. L. 115–10, which is set out in a note under section 20302 of this title.

AMENDMENTS

2017—Pub. L. 115–10 amended section generally. Prior to amendment, text read as follows: "In order to maximize the cost-effectiveness of the long-term exploration and utilization activities of the United States, the Administrator shall take all necessary steps, including engaging international partners, to ensure that activities in its lunar exploration program shall be designed and implemented in a manner that gives strong consideration to how those activities might also help meet the requirements of future exploration and utilization activities beyond the Moon. The timetable of the lunar phase of the long-term international exploration initiative shall be determined by the availability of funding. However, once an exploration-related project enters its development phase, the Administrator shall seek, to the maximum extent practicable, to complete that project without undue delays."

§70505. Lunar outpost

(a) ESTABLISHMENT.—As the Administration works toward the establishment of a lunar outpost, the Administration shall make no plans that would require a lunar outpost to be occupied to maintain its viability. Any such outpost shall be operable as a human-tended facility capable of remote or autonomous operation for extended periods.

(b) DESIGNATION.—The United States portion of the first human-tended outpost established on the surface of the Moon shall be designated the "Neil A. Armstrong Lunar Outpost".

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3431.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70505(a)	42 U.S.C. 17732(a).	Pub. L. 110–422, title IV, §404(a), (b), Oct. 15, 2008, 122 Stat. 4789.
70505(b)	42 U.S.C. 17732(b).	

§70506. Exploration technology research

The Administrator shall carry out a program of long-term exploration-related technology research and development, including such things as in-space propulsion, power systems, life support, and advanced avionics, that is not tied to specific flight projects. The program shall have the funding goal of ensuring that the technology research and development can be completed in a timely manner in order to support the safe, successful, and sustainable exploration of the solar system. In addition, in order to ensure that the broadest range of innovative concepts and technologies are captured, the long-term technology program shall have the goal of having a significant portion of its funding available for external grants and contracts with universities, research institutions, and industry.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3431.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70506	42 U.S.C. 17733(b).	Pub. L. 110–422, title IV, §405(b), Oct. 15, 2008, 122 Stat. 4789.

STATUTORY NOTES AND RELATED SUBSIDIARIES

PURPOSE

Pub. L. 110–422, title IV, §405(a), Oct. 15, 2008, 122 Stat. 4789, provided that: "A robust program of long-term exploration-related technology research and development will be essential for the success and sustainability of any enduring initiative of human and robotic exploration of the solar system."

INNOVATIVE TECHNOLOGIES FOR HUMAN SPACE FLIGHT

Pub. L. 106–391, title III, §313, Oct. 30, 2000, 114 Stat. 1594, provided that:

"(a) ESTABLISHMENT OF PROGRAM.—In order to promote a 'faster, cheaper, better' approach to the human exploration and development of space, the Administrator [of the National Aeronautics and Space Administration] shall establish a Human Space Flight Innovative Technologies program of ground-based and space-based research and development in innovative technologies. The program shall be part of the Technology and Commercialization program.

"(b) AWARDS.—At least 75 percent of the amount appropriated for Technology and Commercialization under section 101(b)(4) [114 Stat. 1581] for any fiscal year shall be awarded through broadly distributed announcements of opportunity that solicit proposals from educational institutions, industry, nonprofit institutions, National Aeronautics and Space Administration Centers, the Jet Propulsion Laboratory, other Federal agencies, and other interested organizations, and that allow partnerships among any combination of those entities, with evaluation, prioritization, and recommendations made by external peer review panels.

"(c) PLAN.—The Administrator shall provide to the Committee on Science [now Committee on Science, Space, and Technology] of the House of Representatives and to the Committee on Commerce, Science, and Transportation of the Senate, not later than December 1, 2000, a plan to implement the program established under subsection (a)."

§70507. Technology development

The Administrator shall establish an intra-Directorate long-term technology development program for space and Earth science within the Science Mission Directorate for the development of new technology. The program shall be independent of the flight projects under development. The Administration shall have a goal of funding the intra-Directorate technology development program at a level of 5 percent of the total Science Mission Directorate annual budget. The program shall be structured to include competitively awarded grants and contracts.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3431.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70507	42 U.S.C. 17741.	Pub. L. 110–422, title V, §501, Oct. 15, 2008, 122 Stat. 4791.

§70508. Robotic or human servicing of spacecraft

The Administrator shall take all necessary steps to ensure that provision is made in the design and construction of all future observatory-class scientific spacecraft intended to be deployed in Earth orbit or at a Lagrangian point in space for robotic or human servicing and repair to the extent practicable and appropriate.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3432.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70508	42 U.S.C. 17742.	Pub. L. 110–422, title V, §502, Oct. 15, 2008, 122 Stat. 4791.

CHAPTER 707—HUMAN SPACE FLIGHT INDEPENDENT INVESTIGATION COMMISSION

Sec.

70701. Definitions.
70702. Establishment of Commission.
70703. Tasks of Commission.
70704. Composition of Commission.
70705. Powers of Commission.
70706. Public meetings, information, and hearings.
70707. Staff of Commission.
70708. Compensation and travel expenses.
70709. Security clearances for Commission members and staff.
70710. Reporting requirements and termination.

§70701. Definitions

In this chapter:

(1) COMMISSION.—The term "Commission" means a Commission established under this chapter.

(2) INCIDENT.—The term "incident" means either an accident or a deliberate act.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3432.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70701	42 U.S.C. 16841.	Pub. L. 109–155, title VIII, §821, Dec. 30, 2005, 119 Stat. 2941.

§70702. Establishment of Commission

(a) ESTABLISHMENT.—The President shall establish an independent, nonpartisan Commission within the executive branch to investigate any incident that results in the loss of—

(1) a space shuttle;

(2) the International Space Station or its operational viability;

(3) any other orbital or suborbital space vehicle carrying humans that is—

(A) owned by the Federal Government; or

(B) being used pursuant to a contract or Space Act Agreement with the Federal Government for carrying a government astronaut or a researcher funded by the Federal Government; or

(4) a crew member or passenger of any space vehicle described in this subsection.

(b) DEADLINE FOR ESTABLISHMENT.—The President shall establish a Commission within 7 days after an incident specified in subsection (a).

(c) DEFINITIONS.—In this section:

(1) GOVERNMENT ASTRONAUT.—The term "government astronaut" has the meaning given the term in section 50902.

(2) SPACE ACT AGREEMENT.—The term "Space Act Agreement" means an agreement entered into by the Administration pursuant to its other transactions authority under section 20113(e).

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3432; Pub. L. 115–10, title VIII, §838, Mar. 21, 2017, 131 Stat. 71.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70702	42 U.S.C. 16842.	Pub. L. 109–155, title VIII, §822, Dec. 30, 2005, 119 Stat. 2941.

EDITORIAL NOTES

AMENDMENTS

2017—Subsec. (a)(3). Pub. L. 115–10, §838(1), amended par. (3) generally. Prior to amendment, par. (3) read as follows: "any other United States space vehicle carrying humans that is owned by the Federal Government or that is being used pursuant to a contract with the Federal Government; or".

Subsec. (c). Pub. L. 115–10, §838(2), added subsec. (c).

§70703. Tasks of Commission

A Commission established pursuant to this chapter shall, to the extent possible, undertake the following tasks:

(1) INVESTIGATION.—Investigate the incident.

(2) CAUSE.—Determine the cause of the incident.

(3) CONTRIBUTING FACTORS.—Identify all contributing factors to the cause of the incident.

(4) RECOMMENDATIONS.—Make recommendations for corrective actions.

(5) ADDITIONAL FINDINGS OR RECOMMENDATIONS.—Provide any additional findings or recommendations deemed by the Commission to be important, whether or not they are related to the specific incident under investigation.

(6) REPORT.—Prepare a report to Congress, the President, and the public.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3432.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70703	42 U.S.C. 16843.	Pub. L. 109–155, title VIII, §823, Dec. 30, 2005, 119 Stat. 2941.

§70704. Composition of Commission

(a) NUMBER OF COMMISSIONERS.—A Commission established pursuant to this chapter shall consist of 15 members.

(b) SELECTION.—The members of a Commission shall be chosen in the following manner:

(1) APPOINTMENT BY PRESIDENT.—The President shall appoint the members, and shall designate the Chairman and Vice Chairman of the Commission from among its members.

(2) LISTS PROVIDED BY LEADERS OF CONGRESS.—The majority leader of the Senate, the minority leader of the Senate, the Speaker of the House of Representatives, and the minority leader of the House of Representatives shall each provide to the President a list of candidates for membership on the Commission. The President may select one of the candidates from each of the 4 lists for membership on the Commission.

(3) PROHIBITION REGARDING FEDERAL OFFICERS AND EMPLOYEES AND MEMBERS OF CONGRESS.—No officer or employee of the Federal Government or Member of Congress shall serve as a member of the Commission.

(4) PROHIBITION REGARDING CONTRACTORS.—No member of the Commission shall have, or have pending, a contractual relationship with the Administration.

(5) PROHIBITION REGARDING CONFLICT OF INTEREST.—The President shall not appoint any individual as a member of a Commission under this section who has a current or former relationship with the Administrator that the President determines would constitute a conflict of interest.

(6) EXPERIENCE.—To the extent practicable, the President shall ensure that the members of the Commission include some individuals with experience relative to human carrying spacecraft, as well as some individuals with investigative experience and some individuals with legal experience.

(7) DIVERSITY.—To the extent practicable, the President shall seek diversity in the membership of the Commission.

(c) DEADLINE FOR APPOINTMENT.—All members of a Commission established under this chapter shall be appointed no later than 30 days after the incident.

(d) INITIAL MEETING.—A Commission shall meet and begin operations as soon as practicable.

(e) SUBSEQUENT MEETINGS.—After its initial meeting, a Commission shall meet upon the call of the Chairman or a majority of its members.

(f) QUORUM.—Eight members of a Commission shall constitute a quorum.

(g) VACANCIES.—Any vacancy in a Commission shall not affect its powers, but shall be filled in the same manner in which the original appointment was made.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3433.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70704(a)	42 U.S.C. 16844(a).	Pub. L. 109–155, title VIII, §824, Dec. 30, 2005, 119 Stat. 2942.
70704(b)	42 U.S.C. 16844(b).	
70704(c)	42 U.S.C. 16844(c).	
70704(d)	42 U.S.C. 16844(d).	
70704(e)	42 U.S.C. 16844(e) (1st sentence).	
70704(f)	42 U.S.C. 16844(e) (2d sentence).	
70704(g)	42 U.S.C. 16844(e) (last sentence).	

§70705. Powers of Commission

(a) HEARINGS AND EVIDENCE.—A Commission or, on the authority of the Commission, any subcommittee or member thereof, may, for the purpose of carrying out this chapter—

(1) hold such hearings and sit and act at such times and places, take such testimony, receive such evidence, administer such oaths; and

(2) require, by subpoena or otherwise, the attendance and testimony of such witnesses and the production of such books, records, correspondence, memoranda, papers, and documents,

as the Commission or such designated subcommittee or member may determine advisable.

(b) CONTRACTING.—A Commission may, to such extent and in such amounts as are provided in appropriation Acts, enter into contracts to enable the Commission to discharge its duties under this chapter.

(c) INFORMATION FROM FEDERAL AGENCIES.—

(1) IN GENERAL.—A Commission may secure directly from any executive department, bureau, agency, board, commission, office, independent establishment, or instrumentality of the Government, information, suggestions, estimates, and statistics for the purposes of this chapter. Each department, bureau, agency, board, commission, office, independent establishment, or instrumentality shall, to the extent authorized by law, furnish such information, suggestions, estimates, and statistics directly to the Commission, upon request made by the Chairman, the chairman of any subcommittee created by a majority of the Commission, or any member designated by a majority of the Commission.

(2) RECEIPT, HANDLING, STORAGE, AND DISSEMINATION.—Information shall only be received, handled, stored, and disseminated by members of the Commission and its staff consistent with all applicable statutes, regulations, and Executive orders.

(d) ASSISTANCE FROM FEDERAL AGENCIES.—

(1) GENERAL SERVICES ADMINISTRATION.—The Administrator of General Services shall provide to a Commission on a reimbursable basis administrative support and other services for the performance of the Commission's tasks.

(2) OTHER DEPARTMENTS AND AGENCIES.—In addition to the assistance prescribed in paragraph (1), departments and agencies of the United States may provide to the Commission such services, funds, facilities, staff, and other support services as they may determine advisable and as may be authorized by law.

(3) ADMINISTRATION ENGINEERING AND SAFETY CENTER.—The Administration Engineering and Safety Center shall provide data and technical support as requested by the Commission.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3433.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70705	42 U.S.C. 16845.	Pub. L. 109–155, title VIII, §825, Dec. 30, 2005, 119 Stat. 2942.

§70706. Public meetings, information, and hearings

(a) PUBLIC MEETINGS AND RELEASE OF PUBLIC VERSIONS OF REPORTS.—A Commission shall—

(1) hold public hearings and meetings to the extent appropriate; and

(2) release public versions of the reports required under this chapter.

(b) PUBLIC HEARINGS.—Any public hearings of a Commission shall be conducted in a manner consistent with the protection of information provided to or developed for or by the Commission as

required by any applicable statute, regulation, or Executive order.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3434.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70706	42 U.S.C. 16846.	Pub. L. 109–155, title VIII, §826, Dec. 30, 2005, 119 Stat. 2943.

§70707. Staff of Commission

(a) APPOINTMENT AND COMPENSATION.—The Chairman, in consultation with the Vice Chairman, in accordance with rules agreed upon by a Commission, may appoint and fix the compensation of a staff director and such other personnel as may be necessary to enable the Commission to carry out its functions.

(b) DETAILEES.—Any Federal Government employee, except for an employee of the Administration, may be detailed to a Commission without reimbursement from the Commission, and such detailee shall retain the rights, status, and privileges of his or her regular employment without interruption.

(c) CONSULTANT SERVICES.—A Commission may procure the services of experts and consultants in accordance with section 3109 of title 5, but at rates not to exceed the daily equivalent of the annual rate of basic pay in effect for positions at level IV of the Executive Schedule under section 5315 of title 5. An expert or consultant whose services are procured under this subsection shall disclose any contract or association the expert or consultant has with the Administration or any Administration contractor.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3435.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70707	42 U.S.C. 16847.	Pub. L. 109–155, title VIII, §827, Dec. 30, 2005, 119 Stat. 2943.

In subsection (c), in the 1st sentence, the words "the daily equivalent of the annual rate of basic pay in effect for positions at level IV of the Executive Schedule under section 5315 of title 5" are substituted for "the daily rate paid a person occupying a position at level IV of the Executive Schedule under section 5315 of title 5" for consistency in title 51.

In subsection (c), in the last sentence, the words "the expert or consultant" are substituted for "it" for clarity.

§70708. Compensation and travel expenses

(a) COMPENSATION.—Each member of a Commission may be compensated at a rate not to exceed the daily equivalent of the annual rate of basic pay in effect for positions at level IV of the Executive Schedule under section 5315 of title 5 for each day during which that member is engaged in the actual performance of the duties of the Commission.

(b) TRAVEL EXPENSES.—While away from their homes or regular places of business in the performance of services for the Commission, members of a Commission shall be allowed travel expenses, including per diem in lieu of subsistence, in the same manner as persons employed intermittently in the Government service are allowed expenses under section 5703 of title 5.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3435.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70708	42 U.S.C. 16848.	Pub. L. 109–155, title VIII, §828, Dec. 30, 2005, 119 Stat. 2944.

In subsection (a), the words "at a rate not to exceed the daily equivalent of the annual rate" for "at not to exceed the daily equivalent of the annual rate" for consistency in title 51.

In subsection (b), the words "section 5703 of title 5" are substituted for "section 5703(b) of title 5" to correct an error in the law. Section 5703 of title 5, United States Code, does not contain a subsection (b).

§70709. Security clearances for Commission members and staff

The appropriate Federal agencies or departments shall cooperate with a Commission in expeditiously providing to the Commission members and staff appropriate security clearances to the extent possible pursuant to existing procedures and requirements. No person shall be provided with access to classified information under this chapter without the appropriate security clearances.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3435.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70709	42 U.S.C. 16849.	Pub. L. 109–155, title VIII, §829, Dec. 30, 2005, 119 Stat. 2944.

§70710. Reporting requirements and termination

(a) INTERIM REPORTS.—A Commission may submit to the President and Congress interim reports containing such findings, conclusions, and recommendations for corrective actions as have been agreed to by a majority of Commission members.

(b) FINAL REPORT.—A Commission shall submit to the President and Congress, and make concurrently available to the public, a final report containing such findings, conclusions, and recommendations for corrective actions as have been agreed to by a majority of Commission members. Such report shall include any minority views or opinions not reflected in the majority report.

(c) TERMINATION.—

(1) IN GENERAL.—A Commission, and all the authorities of this chapter with respect to that Commission, shall terminate 60 days after the date on which the final report is submitted under subsection (b).

(2) ADMINISTRATIVE ACTIVITIES BEFORE TERMINATION.—A Commission may use the 60-day period referred to in paragraph (1) for the purpose of concluding its activities, including providing testimony to committees of Congress concerning its reports and disseminating the final report.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3436.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70710	42 U.S.C. 16850.	Pub. L. 109–155, title VIII, §830, Dec. 30, 2005, 119 Stat. 2944.

CHAPTER 709—INTERNATIONAL SPACE STATION

Sec.

70901. Peaceful uses of space station.
70902. Allocation of International Space Station research budget.
70903. International Space Station research.
70904. International Space Station completion.
70905. National laboratory designation.
70906. International Space Station National Laboratory Advisory Committee.
70907. Maintaining use through at least 2030.

EDITORIAL NOTES

AMENDMENTS

2022—Pub. L. 117–167, div. B, title VII, §10815(d)(2), Aug. 9, 2022, 136 Stat. 1738, substituted "Maintaining use through at least 2030." for "Maintaining use through at least 2024." in item 70907.

2015—Pub. L. 114–90, title I, §114(b)(5)(B), Nov. 25, 2015, 129 Stat. 716, substituted "Maintaining use through at least 2024." for "Maintaining use through at least 2020." in item 70907.

§70901. Peaceful uses of space station

No civil space station authorized under section 103(a)(1) of the National Aeronautics and Space Administration Authorization Act, Fiscal Year 1991 (Public Law 101–611, 104 Stat. 3190) may be used to carry or place in orbit any nuclear weapon or any other weapon of mass destruction, to install any such weapon on any celestial body, or to station any such weapon in space in any other manner. This civil space station may be used only for peaceful purposes.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3436.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70901	(not previously classified)	Pub. L. 101–611, title I, §123, Nov. 16, 1990, 104 Stat. 3204.

The words "the National Aeronautics and Space Administration Authorization Act, Fiscal Year 1991 (Public Law 101–611, 104 Stat. 3190)" are substituted for "this Act" to clarify the reference.

EDITORIAL NOTES

REFERENCES IN TEXT

Section 103(a)(1) of the National Aeronautics and Space Administration Authorization Act, Fiscal Year 1991 (Public Law 101–611, 104 Stat. 3190), referred to in text, is not classified to the Code.

STATUTORY NOTES AND RELATED SUBSIDIARIES

PRIORITIES FOR INTERNATIONAL SPACE STATION

Pub. L. 117–167, div. B, title VII, §10816, Aug. 9, 2022, 136 Stat. 1739, provided that:

"(a) IN GENERAL.—The Administrator [of the National Aeronautics and Space Administration] shall assess International Space Station research activities and shall ensure that crew time and resources allocated to the [National Aeronautics and Space] Administration for use on the International Space Station prioritize—

"(1) the research of the Human Research Program, including research on and development of countermeasures relevant to reducing human health and performance risks, behavioral and psychological risks, and other astronaut safety risks related to long-duration human spaceflight;

"(2) risk reduction activities relevant to exploration technologies, including for the Environmental

Control and Life Support System, extravehicular activity and space suits, environmental monitoring, safety, emergency response, and deep space communications;

"(3) the advancement of United States leadership in basic and applied space life and physical science research, consistent with the priorities of the most recent space life and physical sciences decadal survey of the National Academies of Sciences, Engineering, and Medicine; and

"(4) other research and development activities identified by the Administrator as essential to Moon to Mars activities.

"(b) REPORTS.—

"(1) ASSESSMENT AND PRIORITIZATION.—Not later than 180 days after the date of the enactment of this Act [Aug. 9, 2022], the Administrator shall submit to the appropriate committees of Congress [Committee on Commerce, Science, and Transportation of the Senate and Committee on Science, Space, and Technology of the House of Representatives] a report on—

"(A) the assessment; and

"(B) the steps taken to achieve the prioritization required by subsection (a).

"(2) SPACE FLIGHT PARTICIPANTS.—Not later than 120 days after the date of the enactment of this Act, the Administrator shall submit to the appropriate committees of Congress a report on measures taken, with respect to space flight participants aboard the ISS [International Space Station], to ensure government astronaut safety, to avoid interference in ISS operations and research priorities, and to prevent undue demands on crew time and resources.

"(3) ANNUAL PROGRESS REPORTS.—Concurrent with the annual budget submission of the President to Congress under section 1105(a) of title 31, United States Code, the Administrator shall provide to the appropriate committees of Congress an annual accounting of the use of Administration crew time and ISS resources, including the allocation of such resources toward the priorities described in subsection (a)."

[For definitions of "deep space", "space flight participant", and "government astronaut" as used in section 10816 of Pub. L. 117–167, set out above, see section 10802 of Pub. L. 117–167, set out as a Definitions note under section 10101 of this title.]

INTERNATIONAL SPACE STATION

Pub. L. 110–69, title II, §2006, Aug. 9, 2007, 121 Stat. 584, provided that:

"(a) SENSE OF CONGRESS.—It is the sense of Congress that the International Space Station National Laboratory offers unique opportunities for educational activities and provides a unique resource for research and development in science, technology, and engineering, which can enhance the global competitiveness of the United States.

"(b) DEVELOPMENT OF EDUCATIONAL PROJECTS.—The Administrator of the National Aeronautics and Space Administration shall develop a detailed plan for implementation of 1 or more education projects that utilize the resources offered by the International Space Station. In developing any detailed plan according to this paragraph, the Administrator shall make use of the findings and recommendations of the International Space Station National Laboratory Education Concept Development Task Force.

"(c) DEVELOPMENT OF RESEARCH PLANS FOR COMPETITIVENESS ENHANCEMENT.—The Administrator shall develop a detailed plan for identification and support of research to be conducted aboard the International Space Station, which offers the potential for enhancement of United States competitiveness in science, technology, and engineering. In developing any detailed plan pursuant to this subsection, the Administrator shall consult with agencies and entities with which cooperative agreements have been reached regarding utilization of International Space Station National Laboratory facilities."

Pub. L. 106–391, title II, §§201–203, 205, Oct. 30, 2000, 114 Stat. 1586–1590, as amended by Pub. L. 108–271, §8(b), July 7, 2004, 118 Stat. 814; Pub. L. 109–155, title II, §207(b), title VII, §706(a), Dec. 30, 2005, 119 Stat. 2916, 2937, provided that:

"SEC. 201. INTERNATIONAL SPACE STATION CONTINGENCY PLAN.

"(a) BIMONTHLY REPORTING ON RUSSIAN STATUS.—Not later than the first day of the first month beginning more than 60 days after the date of the enactment of this Act [Oct. 30, 2000], and semiannually thereafter until December 31, 2011, the Administrator [of the National Aeronautics and Space Administration] shall report to Congress whether or not the Russians have performed work expected of them and necessary to complete the International Space Station. Each such report shall also include a statement of the Administrator's judgment concerning Russia's ability to perform work anticipated and required to complete the International Space Station before the next report under this subsection. Each such report shall also identify each Russian entity or person to whom NASA has, since the date of the enactment of the Iran Nonproliferation Amendments Act of 2005 [Nov. 22, 2005], made a payment in cash or in-kind for work to be performed or services to be rendered under the Agreement Concerning Cooperation on the Civil International

Space Station, with annex, signed at Washington January 29, 1998, and entered into force March 27, 2001, or any protocol, agreement, memorandum of understanding, or contract related thereto. Each report shall include the specific purpose of each payment made to each entity or person identified in the report.

"(b) DECISION ON RUSSIAN CRITICAL PATH ITEMS.—The President shall notify Congress within 90 days after the date of the enactment of this Act [Oct. 30, 2000] of the decision on whether or not to proceed with permanent replacement of any Russian elements in the critical path [as defined in section 3 of Pub. L. 106–391, 51 U.S.C. 10101 note] of the International Space Station or any Russian launch services. Such notification shall include the reasons and justifications for the decision and the costs associated with the decision. Such decision shall include a judgment of when all elements identified in Revision E assembly sequence as of June 1999 will be in orbit and operational. If the President decides to proceed with a permanent replacement for any Russian element in the critical path or any Russian launch services, the President shall notify Congress of the reasons and the justification for the decision to proceed with the permanent replacement and the costs associated with the decision.

"(c) ASSURANCES.—The United States shall seek assurances from the Russian Government that it places a higher priority on fulfilling its commitments to the International Space Station than it places on extending the life of the Mir Space Station, including assurances that Russia will not utilize assets allocated by Russia to the International Space Station for other purposes, including extending the life of Mir.

"(d) EQUITABLE UTILIZATION.—In the event that any International Partner in the International Space Station Program willfully violates any of its commitments or agreements for the provision of agreed-upon Space Station-related hardware or related goods or services, the Administrator should, in a manner consistent with relevant international agreements, seek a commensurate reduction in the utilization rights of that Partner until such time as the violated commitments or agreements have been fulfilled.

"(e) OPERATION COSTS.—The Administrator shall, in a manner consistent with relevant international agreements, seek to reduce the National Aeronautics and Space Administration's share of International Space Station common operating costs, based upon any additional capabilities provided to the International Space Station through the National Aeronautics and Space Administration's Russian Program Assurance activities.

"[SEC. 202. REPEALED. PUB. L. 109–155, TITLE II, §207(B), DEC. 30, 2005, 119 STAT. 2916, EFFECTIVE 30 DAYS AFTER DEC. 1, 2006.]

"SEC. 203. RESEARCH ON INTERNATIONAL SPACE STATION.

"(a) STUDY.—The Administrator [of the National Aeronautics and Space Administration] shall enter into a contract with the National Research Council and the National Academy of Public Administration to jointly conduct a study of the status of life and microgravity research as it relates to the International Space Station. The study shall include—

"(1) an assessment of the United States scientific community's readiness to use the International Space Station for life and microgravity research;

"(2) an assessment of the current and projected factors limiting the United States scientific community's ability to maximize the research potential of the International Space Station, including, but not limited to, the past and present availability of resources in the life and microgravity research accounts within the Office of Human Spaceflight and the Office of Life and Microgravity Sciences and Applications and the past, present, and projected access to space of the scientific community; and

"(3) recommendations for improving the United States scientific community's ability to maximize the research potential of the International Space Station, including an assessment of the relative costs and benefits of—

"(A) dedicating an annual mission of the Space Shuttle to life and microgravity research during assembly of the International Space Station; and

"(B) maintaining the schedule for assembly in place at the time of the enactment [Oct. 30, 2000].

"(b) REPORT.—Not later than 1 year after the date of the enactment of this Act [Oct. 30, 2000], the Administrator shall transmit to the Committee on Science [now Committee on Science, Space, and Technology] of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a report on the results of the study conducted under this section.

"SEC. 205. SPACE STATION RESEARCH UTILIZATION AND COMMERCIALIZATION MANAGEMENT.

"(a) RESEARCH UTILIZATION AND COMMERCIALIZATION MANAGEMENT ACTIVITIES.—The Administrator of the National Aeronautics and Space Administration shall enter into an agreement with a non-government organization to conduct research utilization and commercialization management activities of

the International Space Station subsequent to substantial completion as defined in section 202(b)(3). The agreement may not take effect less than 120 days after the implementation plan for the agreement is submitted to the Congress under subsection (b).

"(b) IMPLEMENTATION PLAN.—Not later than September 30, 2001, the Administrator shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science [now Committee on Science, Space, and Technology] of the House of Representatives an implementation plan to incorporate the use of a non-government organization for the International Space Station. The implementation plan shall include—

"(1) a description of the respective roles and responsibilities of the Administration and the non-government organization;

"(2) a proposed structure for the non-government organization;

"(3) a statement of the resources required;

"(4) a schedule for the transition of responsibilities; and

"(5) a statement of the duration of the agreement."

[Pub. L. 109–155, title VII, §706(a)(2), Dec. 30, 2005, 119 Stat. 2937, which directed insertion of two sentences at end of section 201 of Pub. L. 106–391, set out above, was executed by making the insertion at the end of section 201(a) of Pub. L. 106–391, to reflect the probable intent of Congress.]

PERMANENTLY MANNED SPACE STATION

Pub. L. 100–147, title I, §§106–112, Oct. 30, 1987, 101 Stat. 863–865, as amended by Pub. L. 102–195, §16, Dec. 9, 1991, 105 Stat. 1614; Pub. L. 105–362, title XI, §1101(c), Nov. 10, 1998, 112 Stat. 3292, provided that:

"SEC. 106. (a) The Administrator [of the National Aeronautics and Space Administration] is directed to undertake the construction of a permanently manned space station (hereinafter referred to as the 'space station') to become operational in 1995. The space station will be used for the following purposes—

"(1) the conduct of scientific experiments, applications experiments, and engineering experiments;

"(2) the servicing, rehabilitation, and construction of satellites and space vehicles;

"(3) the development and demonstration of commercial products and processes; and

"(4) the establishment of a space base for other civilian and commercial space activities.

"(b) The space station shall be developed and operated in a manner that supports other science and space activities.

"(c) In order to reduce the cost of operations of the space station and its ground support system, the Administrator shall undertake the development of such advanced technologies as may be appropriate within the level of funding authorized in this Act [see Tables for classification].

"(d) The Administrator shall seek to have portions of the space station constructed and operated by the private sector, where appropriate.

"(e) The Administrator shall promote international cooperation in the space station program by undertaking the development, construction, and operation of the space station in conjunction with (but not limited to) the Governments of Europe, Japan, and Canada.

"(f) The space station shall be designed, developed, and operated in a manner that enables evolutionary enhancement.

"[SEC. 107. Repealed. Pub. L. 105–362, title XI, §1101(c), Nov. 10, 1998, 112 Stat. 3292.]

"SEC. 108. In order to ensure that the development of the space station is part of a balanced civilian space program, the Administrator is instructed to establish as a goal a funding profile that limits (1) space station total annual costs under the capital development plan in section 107 to 25 percent of the total budget request for the National Aeronautics and Space Administration and (2) all space station direct operations costs, except for those costs associated with the utilization of the space station, to 10 percent of the total budget request for the National Aeronautics and Space Administration.

"SEC. 109. (a) It is the sense of the Congress that the launching and servicing of the space station should be accomplished by the most cost-effective use of space transportation systems, including the space shuttle and expendable launch vehicles.

"(b) Not later than January 15, 1988, the Administrator shall submit a preliminary report on the cost-effective use of space transportation systems for the launch of space station elements during the development and operation of the space station. The Administrator shall consider—

"(1) the potential use of future advanced or heavy lift expendable launch vehicles for purposes of the assembly and operation of the space station;

"(2) the use of existing expendable launch vehicles of the National Aeronautics and Space Administration, the Department of Defense, and the Private Sector;

"(3) the requirement for space shuttle launches; and

"(4) the risk of capital losses from the use of expendable launch vehicles and the space shuttle.

"SEC. 110. (a) The Administrator shall set and collect reasonable user fees for the use and maintenance of the space station.

"(b) The Administrator shall set user fees so as to—

"(1) promote the use of the space station consistent with the policy set forth in section 106;

"(2) recover the costs of the use of the space station, including reasonable charges for any enhancement needed for such use; and

"(3) conserve and efficiently allocate the resources of the space station.

"(c) The Administrator may, on a case-by-case basis, waive or modify such user fees when in the Administrator's judgment such waiver or modification will further the goals and purposes of the National Aeronautics and Space Act of 1958 [see 51 U.S.C. 20101 et seq.], including—

"(1) the advancement of scientific or engineering knowledge;

"(2) international cooperation; and

"(3) the commercial use of space.

"SEC. 111. No later than September 30, 1988, the Administrator shall submit a detailed plan for collecting reimbursements for the utilization of the space station under section 110, including the services to be offered, the methodology and bases by which prices will be charged, and the estimated revenues.

"SEC. 112. The Intergovernmental Agreement currently being negotiated between the United States Government and Canada, Japan, and member governments of the European Space Agency, and the Memorandum of Understanding currently being negotiated between the National Aeronautics and Space Administration and its counterpart agencies in Canada, Japan, and Europe concerning the detailed design, development, construction, operation, or utilization of the space station shall be submitted to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives. No such agreement shall take effect until 30 days have passed after the receipt by such committees of the agreement."

§70902. Allocation of International Space Station research budget

The Administrator shall allocate at least 15 percent of the funds budgeted for International Space Station research to ground-based, free-flyer, and International Space Station life and microgravity science research that is not directly related to supporting the human exploration program, consistent with section 40904 of this title.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3436.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70902	42 U.S.C. 16633.	Pub. L. 109–155, title II, §204, Dec. 30, 2005, 119 Stat. 2916.

The words "Beginning with fiscal year 2006", which appeared at the beginning of this section, are omitted as obsolete.

§70903. International Space Station research

The Administrator shall—

(1) carry out a program of microgravity research consistent with section 40904 of this title; and

(2) consider the need for a life sciences centrifuge and any associated holding facilities.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3436.)

HISTORICAL AND REVISION NOTES

Revised

Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70903	42 U.S.C. 16766(1), (2).	Pub. L. 109–155, title V, §506(1), (2), Dec. 30, 2005, 119 Stat. 2930.

§70904. International Space Station completion

(a) POLICY.—It is the policy of the United States to achieve diverse and growing utilization of, and benefits from, the International Space Station.

(b) ELEMENTS, CAPABILITIES, AND CONFIGURATION CRITERIA.—The Administrator shall ensure that the International Space Station will—

(1) be assembled and operated in a manner that fulfills international partner agreements, as long as the Administrator determines that the shuttle can safely enable the United States to do so;

(2) be used for a diverse range of microgravity research, including fundamental, applied, and commercial research, consistent with section 40904 of this title;

(3) have an ability to support a crew size of at least 6 persons, unless the Administrator transmits to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate not later than 60 days after December 30, 2005, a report explaining why such a requirement should not be met, the impact of not meeting the requirement on the International Space Station research agenda and operations and international partner agreements, and what additional funding or other steps would be required to have an ability to support a crew size of at least 6 persons;

(4) support Crew Exploration Vehicle docking and automated docking of cargo vehicles or modules launched by either heavy-lift or commercially-developed launch vehicles;

(5) support any diagnostic human research, on-orbit characterization of molecular crystal growth, cellular research, and other research that the Administration believes is necessary to conduct, but for which the Administration lacks the capacity to return the materials that need to be analyzed to Earth; and

(6) be operated at an appropriate risk level.

(c) CONTINGENCIES.—

(1) POLICY.—The Administrator shall ensure that the International Space Station can have available, if needed, sufficient logistics and on-orbit capabilities to support any potential period during which the space shuttle or its follow-on crew and cargo systems are unavailable, and can have available, if needed, sufficient surge delivery capability or prepositioning of spares and other supplies needed to accommodate any such hiatus.

(2) PLAN.—Before making any change in the International Space Station assembly sequence in effect on December 30, 2005, the Administrator shall transmit to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a plan to carry out the policy described in paragraph (1).

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3437.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70904	42 U.S.C. 16765.	Pub. L. 109–155, title V, §505, Dec. 30, 2005, 119 Stat. 2929.

In subsections (b)(3) and (c)(2), the words "Committee on Science and Technology" are substituted for "Committee on Science" on authority of Rule X(1)(o) of the Rules of the House of Representatives, adopted by House Resolution No. 6 (110th Congress, January 5, 2007).

In subsections (b)(3) and (c)(2), the date "December 30, 2005" is substituted for "the date of enactment of this Act" to reflect the date of enactment of the National Aeronautics and Space Administration Authorization

Act of 2005 (Public Law 109–155, 119 Stat. 2895).

In subsection (c)(2) the words "Not later than 60 days after the date of enactment of this Act [December 30, 2005], and" are omitted as obsolete.

STATUTORY NOTES AND RELATED SUBSIDIARIES

CHANGE OF NAME

Committee on Science and Technology of House of Representatives changed to Committee on Science, Space, and Technology of House of Representatives by House Resolution No. 5, One Hundred Twelfth Congress, Jan. 5, 2011.

§70905. National laboratory designation

(a) DEFINITION OF UNITED STATES SEGMENT OF THE INTERNATIONAL SPACE STATION.—In this section the term "United States segment of the International Space Station" means those elements of the International Space Station manufactured—

(1) by the United States; or

(2) for the United States by other nations in exchange for funds or launch services.

(b) DESIGNATION.—To further the policy described in section 70501(a) of this title, the United States segment of the International Space Station is hereby designated a national laboratory.

(c) MANAGEMENT.—

(1) PARTNERSHIPS.—The Administrator shall seek to increase the utilization of the International Space Station by other Federal entities and the private sector through partnerships, cost-sharing agreements, and other arrangements that would supplement Administration funding of the International Space Station.

(2) CONTRACTING.—The Administrator may enter into a contract with a nongovernmental entity to operate the International Space Station national laboratory, subject to all applicable Federal laws and regulations.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3437.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70905(a)	42 U.S.C. 16767(d).	Pub. L. 109–155, title V, §507(a), (b), (d), Dec. 30, 2005, 119 Stat. 2930, 2931.
70905(b)	42 U.S.C. 16767(a).	
70905(c)	42 U.S.C. 16767(b).	

§70906. International Space Station National Laboratory Advisory Committee

(a) ESTABLISHMENT.—Not later than one year after October 15, 2008, the Administrator shall establish under chapter 10 of title 5 a committee to be known as the "International Space Station National Laboratory Advisory Committee" (hereafter in this section referred to as the "Committee").

(b) MEMBERSHIP.—

(1) COMPOSITION.—The Committee shall be composed of individuals representing organizations that have formal agreements with the Administration to utilize the United States portion of the International Space Station, including allocations within partner elements.

(2) CHAIR.—The Administrator shall appoint a chair from among the members of the Committee, who shall serve for a 2-year term.

(c) DUTIES OF THE COMMITTEE.—

(1) IN GENERAL.—The Committee shall monitor, assess, and make recommendations regarding effective utilization of the International Space Station as a national laboratory and platform for research.

(2) ANNUAL REPORT.—The Committee shall submit to the Administrator, on an annual basis or more frequently as considered necessary by a majority of the members of the Committee, a report containing the assessments and recommendations required by paragraph (1).

(d) DURATION.—The Committee shall exist for the life of the International Space Station.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3438; Pub. L. 117–286, §4(a)(327), Dec. 27, 2022, 136 Stat. 4342.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70906	42 U.S.C. 17752.	Pub. L. 110–422, title VI, §602, Oct. 15, 2008, 122 Stat. 4795.

In subsection (a), the date "October 15, 2008" is substituted for "the date of enactment of this Act" to reflect the date of enactment of the National Aeronautics and Space Administration Authorization Act of 2008 (Public Law 110–422, 122 Stat. 4779).

EDITORIAL NOTES

AMENDMENTS

2022—Subsec. (a). Pub. L. 117–286 substituted "chapter 10 of title 5" for "the Federal Advisory Committee Act".

§70907. Maintaining use through at least 2030

(a) POLICY.—The Administrator shall take all necessary steps to ensure that the International Space Station remains a viable and productive facility capable of potential United States utilization through at least September 30, 2030.

(b) NASA ACTIONS.—In furtherance of the policy under subsection (a), the Administrator shall ensure, to the extent practicable, that the International Space Station, as a designated national laboratory—

(1) remains viable as an element of overall exploration and partnership strategies and approaches;

(2) is considered for use by all NASA mission directorates, as appropriate, for technically appropriate scientific data gathering or technology risk reduction demonstrations; and

(3) remains an effective, functional vehicle providing research and test bed capabilities for the United States through at least September 30, 2030.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3438; Pub. L. 114–90, title I, §114(b)(4), Nov. 25, 2015, 129 Stat. 716; Pub. L. 117–167, div. B, title VII, §10815(d)(1), Aug. 9, 2022, 136 Stat. 1738.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70907	42 U.S.C. 17751(a).	Pub. L. 110–422, title VI, §601(a), Oct. 15, 2008, 122 Stat. 4793.

EDITORIAL NOTES

AMENDMENTS

2022—Pub. L. 117–167, §10815(d)(1)(A), substituted "2030" for "2024" in section catchline.

Subsec. (a). Pub. L. 117–167, §10815(d)(1)(B), substituted "September 30, 2030" for "September 30, 2024".

Subsec. (b)(3). Pub. L. 117–167, §10815(d)(1)(C), substituted "September 30, 2030" for "September 30, 2024".

2015—Pub. L. 114–90 amended section generally. Prior to amendment, section related to maintaining the International Space Station as a viable and productive facility capable of potential United States utilization through at least 2020.

CHAPTER 711—NEAR-EARTH OBJECTS

Sec.

71101. Reaffirmation of policy.
71102. Requests for information.
71103. Developing policy and recommending responsible Federal agency.
71104. Planetary radar.

STATUTORY NOTES AND RELATED SUBSIDIARIES

PLANETARY DEFENSE COORDINATION OFFICE

Pub. L. 117–167, div. B, title VII, §10825, Aug. 9, 2022, 136 Stat. 1744, provided that:

"(a) FINDINGS.—Congress makes the following findings:

"(1) Near-Earth objects remain a threat to the United States.

"(2) Section 321(d)(1) of the National Aeronautics and Space Administration Authorization Act of 2005 (Public Law 109–155; 119 Stat. 2922; 51 U.S.C. 71101 note prec.) [set out below], established a requirement that the Administrator [of the National Aeronautics and Space Administration] plan, develop, and implement a Near-Earth Object Survey program to detect, track, catalogue, and characterize the physical characteristics of near-Earth objects equal to, or greater than, 140 meters in diameter in order to assess the threat of such near-Earth objects to the Earth, with the goal of 90 percent completion of the catalogue of such near-Earth objects by December 30, 2020.

"(3) The goal described in paragraph (2) has not be met.

"(4) The report of the National Academies of Sciences, Engineering, and Medicine entitled 'Finding Hazardous Asteroids Using Infrared and Visible Wavelength Telescopes', issued in 2019, states that—

"(A) NASA [National Aeronautics and Space Administration] should develop and launch a dedicated space-based infrared survey telescope to meet the requirements of section 321(d)(1) of the National Aeronautics and Space Administration Authorization Act of 2005 (Public Law 109–155; 119 Stat. 2922; 51 U.S.C. 71101 note prec.); and

"(B) the early detection of potentially hazardous near-Earth objects enabled by a space-based infrared survey telescope is important to enable deflection of a dangerous asteroid.

"(b) MAINTENANCE OF PLANETARY DEFENSE COORDINATION OFFICE.—The Administrator shall maintain an office within the Planetary Science Division of the Science Mission Directorate, to be known as the 'Planetary Defense Coordination Office'—

"(1) to plan, develop, and implement a program to survey threats posed by near-Earth objects equal to or greater than 140 meters in diameter, as required by section 321(d)(1) of the National Aeronautics and Space Administration Authorization Act of 2005 (Public Law 109–155; 119 Stat. 2922; 51 U.S.C. 71101 note prec.);

"(2) identify, track, and characterize potentially hazardous near-Earth objects, issue warnings of the effects of potential impacts of such objects, and investigate strategies and technologies for mitigating the potential impacts of such objects; and

"(3) assist in coordinating government planning for response to a potential impact of a near-Earth object.

"(c) DEDICATED SURVEY MISSION.—

"(1) SENSE OF CONGRESS.—It is the sense of Congress that—

"(A) the Near-Earth Object Surveyor mission, as designed, is anticipated to make significant progress toward carrying out congressional policy and direction, as set forth in section 321(d)(1) of the National Aeronautics and Space Administration Authorization Act of 2005 (Public Law 109–155; 119 Stat. 2922; 51 U.S.C. 71101 note prec.), to detect 90 percent of near-Earth objects equal to, or greater than, 140 meters in diameter; and

"(B) the Administrator should prioritize the public safety role of the Near-Earth Object Surveyor mission and should not delay the development and launch of the mission due to cost growth on other planetary science missions.

"(2) CONTINUATION OF MISSION.—

"(A) IN GENERAL.—The Administrator shall continue the development of a dedicated space-based infrared survey telescope mission, known as the 'Near-Earth Object Surveyor', on a schedule to achieve a launch-readiness date not later than March 30, 2026, or the earliest practicable date, for the purpose of accomplishing the objectives set forth in section 321(d)(1) of the National Aeronautics and Space Administration Authorization Act of 2005 (Public Law 109–155; 119 Stat. 2922; 51 U.S.C. 71101 note prec.).

"(B) CONSIDERATION OF RECOMMENDATIONS.—The design of the mission described in subparagraph (A) shall take into account the recommendations of the 2019 report of the National Academies of Sciences, Engineering, and Medicine entitled 'Finding Hazardous Asteroids Using Infrared and Visible Wavelength Telescopes', the planetary science decadal survey, and the 2018 United States National Near-Earth Object Preparedness Strategy and Action Plan.

"(d) Annual Report.—[Amended section 321(f) of Pub. L. 109–155, set out below.]

"(e) NEAR-EARTH OBJECT DEFINED.—In this section, the term 'near-Earth object' has the meaning given the term in section 321(c) of the National Aeronautics and Space Administration Authorization Act of 2005 (Public Law 109–155; 119 Stat. 2922; 51 U.S.C. 71101 note prec.)."

GEORGE E. BROWN, JR. NEAR-EARTH OBJECT SURVEY

Pub. L. 109–155, title III, §321, Dec. 30, 2005, 119 Stat. 2922, as amended by Pub. L. 115–10, title V, §511, Mar. 21, 2017, 131 Stat. 51; Pub. L. 117–167, div. B, title VII, §10825(d), Aug. 9, 2022, 136 Stat. 1745, provided that:

"(a) SHORT TITLE.—This section may be cited as the 'George E. Brown, Jr. Near-Earth Object Survey Act'.

"(b) FINDINGS.—The Congress makes the following findings:

"(1) Near-Earth objects pose a serious and credible threat to humankind, as many scientists believe that a major asteroid or comet was responsible for the mass extinction of the majority of the Earth's species, including the dinosaurs, nearly 65,000,000 years ago.

"(2) Similar objects have struck the Earth or passed through the Earth's atmosphere several times in the Earth's history and pose a similar threat in the future.

"(3) Several such near-Earth objects have only been discovered within days of the objects' closest approach to Earth, and recent discoveries of such large objects indicate that many large near-Earth objects remain undiscovered.

"(4) The efforts taken to date by NASA [National Aeronautics and Space Administration] for detecting and characterizing the hazards of near-Earth objects are not sufficient to fully determine the threat posed by such objects to cause widespread destruction and loss of life.

"(c) DEFINITIONS.—For purposes of this section the term 'near-Earth object' means an asteroid or comet with a perihelion distance of less than 1.3 Astronomical Units from the Sun.

"(d) NEAR-EARTH OBJECT SURVEY.—

"(1) SURVEY PROGRAM.—The Administrator [of the National Aeronautics and Space Administration] shall plan, develop, and implement a Near-Earth Object Survey program to detect, track, catalogue, and characterize the physical characteristics of near-Earth objects equal to or greater than 140 meters in diameter in order to assess the threat of such near-Earth objects to the Earth. It shall be the goal of the Survey program to achieve 90 percent completion of its near-Earth object catalogue (based on statistically predicted populations of near-Earth objects) within 15 years after the date of enactment of this Act [Dec. 30, 2005].

"(2) [Amended former section 2451 of Title 42, The Public Health and Welfare.]

"(3) FIFTH-YEAR REPORT.—The Administrator shall transmit to the Congress, not later than February 28 of the fifth year after the date of enactment of this Act, a report that provides the following:

"(A) A summary of all activities taken pursuant to paragraph (1) since the date of enactment of this Act.

"(B) A summary of expenditures for all activities pursuant to paragraph (1) since the date of enactment of this Act.

"(4) INITIAL REPORT.—The Administrator shall transmit to Congress not later than 1 year after the date of enactment of this Act an initial report that provides the following:

"(A) An analysis of possible alternatives that NASA may employ to carry out the Survey program, including ground-based and space-based alternatives with technical descriptions.

"(B) A recommended option and proposed budget to carry out the Survey program pursuant to the recommended option.

"(C) Analysis of possible alternatives that NASA could employ to divert an object on a likely collision course with Earth.

"(e) PROGRAM REPORT.—The Director of the Office of Science and Technology Policy and the Administrator shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives, not later than 1 year after the date of enactment of the National Aeronautics and Space Administration Transition Authorization Act of 2017 [Mar. 21, 2017], an initial report that provides—

"(1) recommendations for carrying out the Survey program and an associated proposed budget;

"(2) an analysis of possible options that the Administration could employ to divert an object on a likely collision course with Earth; and

"(3) a description of the status of efforts to coordinate and cooperate with other countries to discover hazardous asteroids and comets, plan a mitigation strategy, and implement that strategy in the event of the discovery of an object on a likely collision course with Earth.

"(f) ANNUAL REPORT.—Not later than 180 days after the date of the enactment of the National Aeronautics and Space Administration Authorization Act of 2022 [Aug. 9, 2022] and annually thereafter through 90-percent completion of the catalogue required by subsection (d)(1), the Administrator shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives a report that includes the following:

"(1) A summary of all activities carried out by the Planetary Defense Coordination Office established under section 10825 of the National Aeronautics and Space Administration Authorization Act of 2022 [Pub. L. 117–167, set out above] since the date of enactment of that Act.

"(2) A description of the progress with respect to the design, development, and launch of the space-based infrared survey telescope required by section 10825(c) of the National Aeronautics and Space Administration Authorization Act of 2022.

"(3) An assessment of the progress toward meeting the requirements under subsection (d)(1).

"(4) A description of the status of efforts to coordinate and cooperate with other countries to detect hazardous asteroids and comets, plan a mitigation strategy, and implement that strategy in the event of the discovery of an object on a likely collision course with Earth.

"(5) A summary of expenditures for all activities carried out by the Planetary Defense Coordination Office since the date of enactment of the National Aeronautics and Space Administration Authorization Act of 2022[.]

"(g) ASSESSMENT.—The Administrator, in collaboration with other relevant Federal agencies, shall carry out a technical and scientific assessment of the capabilities and resources—

"(1) to accelerate the survey described in subsection (d); and

"(2) to expand the Administration's Near-Earth Object Program to include the detection, tracking, cataloguing, and characterization of potentially hazardous near-Earth objects less than 140 meters in diameter.

"(h) TRANSMITTAL.—Not later than 270 days after the date of enactment of the National Aeronautics and Space Administration Transition Authorization Act of 2017, the Administrator shall transmit the results of the assessment under subsection (g) to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives."

§71101. Reaffirmation of policy

Congress reaffirms the policy set forth in section 20102(g) of this title (relating to surveying near-Earth asteroids and comets).

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3439.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
71101	42 U.S.C. 17791(a).	Pub. L. 110–422, title VIII, §801(a), Oct. 15, 2008, 122 Stat. 4803.

STATUTORY NOTES AND RELATED SUBSIDIARIES

FINDINGS

Pub. L. 110–422, title VIII, §802, Oct. 15, 2008, 122 Stat. 4803, provided that: "Congress makes the following findings:

"(1) Near-Earth objects pose a serious and credible threat to humankind, as many scientists believe that a major asteroid or comet was responsible for the mass extinction of the majority of the Earth's species, including the dinosaurs, nearly 65,000,000 years ago.

"(2) Several such near-Earth objects have only been discovered within days of the objects' closest approach to Earth and recent discoveries of such large objects indicate that many large near-Earth objects remain undiscovered.

"(3) Asteroid and comet collisions rank as one of the most costly natural disasters that can occur.

"(4) The time needed to eliminate or mitigate the threat of a collision of a potentially hazardous near-Earth object with Earth is measured in decades.

"(5) Unlike earthquakes and hurricanes, asteroids and comets can provide adequate collision information, enabling the United States to include both asteroid-collision and comet-collision disaster recovery and disaster avoidance in its public-safety structure.

"(6) Basic information is needed for technical and policy decisionmaking for the United States to create a comprehensive program in order to be ready to eliminate and mitigate the serious and credible threats to humankind posed by potentially hazardous near-Earth asteroids and comets.

"(7) As a first step to eliminate and to mitigate the risk of such collisions, situation and decision analysis processes, as well as procedures and system resources, must be in place well before a collision threat becomes known."

§71102. Requests for information

The Administrator shall issue requests for information on—

(1) a low-cost space mission with the purpose of rendezvousing with, attaching a tracking device,[1] and characterizing the Apophis asteroid; and

(2) a medium-sized space mission with the purpose of detecting near-Earth objects equal to or greater than 140 meters in diameter.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3439.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
71102	42 U.S.C. 17793.	Pub. L. 110–422, title VIII, §803, Oct. 15, 2008, 122 Stat. 4803.

[1] *So in original. The comma probably should be preceded by "to".*

§71103. Developing policy and recommending responsible Federal agency

Within 2 years after October 15, 2008, the Director of the Office of Science and Technology Policy shall—

(1) develop a policy for notifying Federal agencies and relevant emergency response institutions

of an impending near-Earth object threat, if near-term public safety is at risk; and

(2) recommend a Federal agency or agencies to be responsible for—

(A) protecting the United States from a near-Earth object that is expected to collide with Earth; and

(B) implementing a deflection campaign, in consultation with international bodies, should one be necessary.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3439.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
71103	42 U.S.C. 17794.	Pub. L. 110–422, title VIII, §804, Oct. 15, 2008, 122 Stat. 4804.

In the matter before paragraph (1), the date "October 15, 2008" is substituted for "the date of enactment of this Act" to reflect the date of enactment of the National Aeronautics and Space Administration Authorization Act of 2008.

§71104. Planetary radar

The Administrator shall maintain a planetary radar that is comparable to the capability provided through the Deep Space Network Goldstone facility of the Administration.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3439.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
71104	42 U.S.C. 17795.	Pub. L. 110–422, title VIII, §805, Oct. 15, 2008, 122 Stat. 4804.

CHAPTER 713—COOPERATION FOR SAFETY AMONG SPACEFARING NATIONS

Sec.

71301. Common docking system standard to enable rescue.
71302. Information sharing to avoid physical or radio-frequency interference.

§71301. Common docking system standard to enable rescue

In order to maximize the ability to rescue astronauts whose space vehicles have become disabled, the Administrator shall enter into discussions with the appropriate representatives of spacefaring nations who have or plan to have crew transportation systems capable of orbital flight or flight beyond low Earth orbit for the purpose of agreeing on a common docking system standard.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3439.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
71301	42 U.S.C. 17734.	Pub. L. 110–422, title IV, §407, Oct. 15, 2008, 122 Stat. 4790.

§71302. Information sharing to avoid physical or radio-frequency interference

The Administrator shall, in consultation with other agencies of the Federal Government as the Administrator considers appropriate, initiate discussions with the appropriate representatives of spacefaring nations to determine an appropriate frame-work under which information intended to promote safe access into outer space, operations in outer space, and return from outer space to Earth free from physical or radio-frequency interference can be shared among the nations.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3440.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
71302	42 U.S.C. 17821(b).	Pub. L. 110–422, title XI, §1102(b), Oct. 15, 2008, 122 Stat. 4808.

STATUTORY NOTES AND RELATED SUBSIDIARIES

FINDING

Pub. L. 110–422, title XI, §1102(a), Oct. 15, 2008, 122 Stat. 4808, provided that: "Congress finds that as more countries acquire the capability for launching payloads into outer space, there is an increasing need for a framework under which information intended to promote safe access into outer space, operations in outer space, and return from outer space to Earth free from physical or radio-frequency interference can be shared among those countries."

EXECUTIVE DOCUMENTS

SPACE POLICY DIRECTIVE–3. NATIONAL SPACE TRAFFIC MANAGEMENT POLICY

Space Policy Directive–3, June 18, 2018, 83 F.R. 28969, provided:

Memorandum for the Vice President[,] the Secretary of State[,] the Secretary of Defense[,] the Secretary of Commerce[,] the Secretary of Transportation[,] the Secretary of Homeland Security[,] the Director of National Intelligence[,] the Director of the Office of Management and Budget[,] the Assistant to the President for National Security Affairs[,] the Administrator of the National Aeronautics and Space Administration[,] the Director of the Office of Science and Technology Policy[,] the Deputy Assistant to the President for Homeland Security and Counterterrorism[, and] the Chairman of the Joint Chiefs of Staff

SECTION 1. *Policy*. For decades, the United States has effectively reaped the benefits of operating in space to enhance our national security, civil, and commercial sectors. Our society now depends on space technologies and space-based capabilities for communications, navigation, weather forecasting, and much more. Given the significance of space activities, the United States considers the continued unfettered access to and freedom to operate in space of vital interest to advance the security, economic prosperity, and scientific knowledge of the Nation.

Today, space is becoming increasingly congested and contested, and that trend presents challenges for the safety, stability, and sustainability of U.S. space operations. Already, the Department of Defense (DoD) tracks over 20,000 objects in space, and that number will increase dramatically as new, more capable sensors come online and are able to detect smaller objects. DoD publishes a catalog of space objects and makes notifications of potential conjunctions (that is, two or more objects coming together at the same or nearly the same point in time and space). As the number of space objects increases, however, this limited traffic management activity and architecture will become inadequate. At the same time, the contested nature of space is increasing the demand for DoD focus on protecting and defending U.S. space assets and interests.

The future space operating environment will also be shaped by a significant increase in the volume and diversity of commercial activity in space. Emerging commercial ventures such as satellite servicing, debris

removal, in-space manufacturing, and tourism, as well as new technologies enabling small satellites and very large constellations of satellites, are increasingly outpacing efforts to develop and implement government policies and processes to address these new activities.

To maintain U.S. leadership in space, we must develop a new approach to space traffic management (STM) that addresses current and future operational risks. This new approach must set priorities for space situational awareness (SSA) and STM innovation in science and technology (S&T), incorporate national security considerations, encourage growth of the U.S. commercial space sector, establish an updated STM architecture, and promote space safety standards and best practices across the international community.

The United States recognizes that spaceflight safety is a global challenge and will continue to encourage safe and responsible behavior in space while emphasizing the need for international transparency and STM data sharing. Through this national policy for STM and other national space strategies and policies, the United States will enhance safety and ensure continued leadership, preeminence, and freedom of action in space.

SEC. 2. *Definitions*. For the purposes of this memorandum, the following definitions shall apply:

(a) Space Situational Awareness shall mean the knowledge and characterization of space objects and their operational environment to support safe, stable, and sustainable space activities.

(b) Space Traffic Management shall mean the planning, coordination, and on-orbit synchronization of activities to enhance the safety, stability, and sustainability of operations in the space environment.

(c) Orbital debris, or space debris, shall mean any human-made space object orbiting Earth that no longer serves any useful purpose.

SEC. 3. *Principles*. The United States recognizes, and encourages other nations to recognize, the following principles:

(a) Safety, stability, and operational sustainability are foundational to space activities, including commercial, civil, and national security activities. It is a shared interest and responsibility of all spacefaring nations to create the conditions for a safe, stable, and operationally sustainable space environment.

(b) Timely and actionable SSA data and STM services are essential to space activities. Consistent with national security constraints, basic U.S. Government-derived SSA data and basic STM services should be available free of direct user fees.

(c) Orbital debris presents a growing threat to space operations. Debris mitigation guidelines, standards, and policies should be revised periodically, enforced domestically, and adopted internationally to mitigate the operational effects of orbital debris.

(d) A STM framework consisting of best practices, technical guidelines, safety standards, behavioral norms, pre-launch risk assessments, and on-orbit collision avoidance services is essential to preserve the space operational environment.

SEC. 4. *Goals*. Consistent with the principles listed in section 3 of this memorandum, the United States should continue to lead the world in creating the conditions for a safe, stable, and operationally sustainable space environment. Toward this end, executive departments and agencies (agencies) shall pursue the following goals as required in section 6 of this memorandum:

(a) *Advance SSA and STM Science and Technology*. The United States should continue to engage in and enable S&T research and development to support the practical applications of SSA and STM. These activities include improving fundamental knowledge of the space environment, such as the characterization of small debris, advancing the S&T of critical SSA inputs such as observational data, algorithms, and models necessary to improve SSA capabilities, and developing new hardware and software to support data processing and observations.

(b) *Mitigate the effect of orbital debris on space activities*. The volume and location of orbital debris are growing threats to space activities. It is in the interest of all to minimize new debris and mitigate effects of existing debris. This fact, along with increasing numbers of active satellites, highlights the need to update existing orbital debris mitigation guidelines and practices to enable more efficient and effective compliance, and establish standards that can be adopted internationally. These trends also highlight the need to establish satellite safety design guidelines and best practices.

(c) *Encourage and facilitate U.S. commercial leadership in S&T, SSA, and STM*. Fostering continued growth and innovation in the U.S. commercial space sector, which includes S&T, SSA, and STM activities, is in the national interest of the United States. To achieve this goal, the U.S. Government should streamline processes and reduce regulatory burdens that could inhibit commercial sector growth and innovation, enabling the U.S. commercial sector to continue to lead the world in STM-related technologies, goods, data, and services on the international market.

(d) *Provide U.S. Government-supported basic SSA data and basic STM services to the public*. The United States should continue to make available basic SSA data and basic STM services (including conjunction and reentry notifications) free of direct user fees while supporting new opportunities for U.S. commercial and

non-profit SSA data and STM services.

(e) *Improve SSA data interoperability and enable greater SSA data sharing*. SSA data must be timely and accurate. It is in the national interest of the United States to improve SSA data interoperability and enable greater SSA data sharing among all space operators, consistent with national security constraints. The United States should seek to lead the world in the development of improved SSA data standards and information sharing.

(f) *Develop STM standards and best practices*. As the leader in space, the United States supports the development of operational standards and best practices to promote safe and responsible behavior in space. A critical first step in carrying out that goal is to develop U.S.-led minimum safety standards and best practices to coordinate space traffic. U.S. regulatory agencies should, as appropriate, adopt these standards and best practices in domestic regulatory frameworks and use them to inform and help shape international consensus practices and standards.

(g) *Prevent unintentional radio frequency (RF) interference*. Growing orbital congestion is increasing the risk to U.S. space assets from unintentional RF interference. The United States should continue to improve policies, processes, and technologies for spectrum use (including allocations and licensing) to address these challenges and ensure appropriate spectrum use for current and future operations.

(h) *Improve the U.S. domestic space object registry*. Transparency and data sharing are essential to safe, stable, and sustainable space operations. Consistent with national security constraints, the United States should streamline the interagency process to ensure accurate and timely registration submissions to the United Nations (UN), in accordance with our international obligations under the Convention on Registration of Objects Launched into Outer Space.

(i) *Develop policies and regulations for future U.S. orbital operations*. Increasing congestion in key orbits and maneuver-based missions such as servicing, survey, and assembly will drive the need for policy development for national security, civil, and commercial sector space activities. Consistent with U.S. law and international obligations, the United States should regularly assess existing guidelines for non-government orbital activities, and maintain a timely and responsive regulatory environment for licensing these activities.

SEC. 5. *Guidelines*. In pursuit of the principles and goals of this policy, agencies should observe the following guidelines:

(a) *Managing the Integrity of the Space Operating Environment.*

(i) Improving SSA coverage and accuracy. Timely, accurate, and actionable data are essential for effective SSA and STM. The United States should seek to minimize deficiencies in SSA capability, particularly coverage in regions with limited sensor availability and sensitivity in detection of small debris, through SSA data sharing, the purchase of SSA data, or the provision of new sensors.

New U.S. sensors are expected to reveal a substantially greater volume of debris and improve our understanding of space object size distributions in various regions of space. However, very small debris may not be sufficiently tracked to enable or justify actionable collision avoidance decisions. As a result, close conjunctions and even collisions with unknown objects are possible, and satellite operators often lack sufficient insight to assess their level of risk when making maneuvering decisions. The United States should develop better tracking capabilities, and new means to catalog such debris, and establish a quality threshold for actionable collision avoidance warning to minimize false alarms.

Through both Government and commercial sector S&T investment, the United States should advance concepts and capabilities to improve SSA in support of debris mitigation and collision avoidance decisions.

(ii) Establishing an Open Architecture SSA Data Repository. Accurate and timely tracking of objects orbiting Earth is essential to preserving the safety of space activities for all. Consistent with section 2274 of title 10, United States Code, a basic level of SSA data in the form of the publicly releasable portion of the DoD catalog is and should continue to be provided free of direct user fees. As additional sources of space tracking data become available, the United States has the opportunity to incorporate civil, commercial, international, and other available data to allow users to enhance and refine this service. To facilitate greater data sharing with satellite operators and enable the commercial development of enhanced space safety services, the United States must develop the standards and protocols for creation of an open architecture data repository. The essential features of this repository would include:

- Data integrity measures to ensure data accuracy and availability;
- Data standards to ensure sufficient quality from diverse sources;
- Measures to safeguard proprietary or sensitive data, including national security information;
- The inclusion of satellite owner-operator ephemerides to inform orbital location and planned maneuvers; and
- Standardized formats to enable development of applications to leverage the data.

To facilitate this enhanced data sharing, and in recognition of the need for DoD to focus on maintaining

access to and freedom of action in space, a civil agency should, consistent with applicable law, be responsible for the publicly releasable portion of the DoD catalog and for administering an open architecture data repository. The Department of Commerce should be that civil agency.

(iii) Mitigating Orbital Debris. It is in the interest of all space operators to minimize the creation of new orbital debris. Rapid international expansion of space operations and greater diversity of missions have rendered the current U.S. Government Orbital Debris Mitigation Standard Practices (ODMSP) inadequate to control the growth of orbital debris. These standard practices should be updated to address current and future space operating environments. The United States should develop a new protocol of standard practices to set broader expectations of safe space operations in the 21st century. This protocol should begin with updated ODMSP, but also incorporate sections to address operating practices for large constellations, rendezvous and proximity operations, small satellites, and other classes of space operations. These overarching practices will provide an avenue to promote efficient and effective space safety practices with U.S. industry and internationally.

The United States should pursue active debris removal as a necessary long-term approach to ensure the safety of flight operations in key orbital regimes. This effort should not detract from continuing to advance international protocols for debris mitigation associated with current programs.

(b) *Operating in a Congested Space Environment.*

(i) Minimum Safety Standards and Best Practices. The creation of minimum standards for safe operation and debris mitigation derived in part from the U.S. Government ODMSP, but incorporating other standards and best practices, will best ensure the safe operation of U.S. space activities. These safety guidelines should consider maneuverability, tracking, reliability, and disposal.

The United States should eventually incorporate appropriate standards and best practices into Federal law and regulation through appropriate rulemaking or licensing actions. These guidelines should encompass protocols for all stages of satellite operation from design through end-of-life.

Satellite and constellation owners should participate in a pre-launch certification process that should, at a minimum, consider the following factors:

- Coordination of orbit utilization to prevent conjunctions;
- Constellation owner-operators' management of self-conjunctions;
- Owner-operator notification of planned maneuvers and sharing of satellite orbital location data;
- On-orbit tracking aids, including beacons or sensing enhancements, if such systems are needed;
- Encryption of satellite command and control links and data protection measures for ground site operations;
- Appropriate minimum reliability based on type of mission and phase of operations;
- Effect on the national security or foreign policy interests of the United States, or international obligations; and
- Self-disposal upon the conclusion of operational lifetime, or owner-operator provision for disposal using active debris removal methods.

(ii) On-Orbit Collision Avoidance Support Service. Timely warning of potential collisions is essential to preserving the safety of space activities for all. Basic collision avoidance information services are and should continue to be provided free of direct user fees. The imminent activation of more sensitive tracking sensors is expected to reveal a significantly greater population of the existing orbital debris background as well as provide an improved ability to track currently catalogued objects. Current and future satellites, including large constellations of satellites, will operate in a debris environment much denser than presently tracked. Preventing on-orbit collisions in this environment requires an information service that shares catalog data, predicts close approaches, and provides actionable warnings to satellite operators. The service should provide data to allow operators to assess proposed maneuvers to reduce risk. To provide on-orbit collision avoidance, the United States should:

- Provide services based on a continuously updated catalog of satellite tracking data;
- Utilize automated processes for collision avoidance;
- Provide actionable and timely conjunction assessments; and
- Provide data to operators to enable assessment of maneuver plans.

To ensure safe coordination of space traffic in this future operating environment, and in recognition of the need for DoD to focus on maintaining access to and freedom of action in space, a civil agency should be the focal point for this collision avoidance support service. The Department of Commerce should be that civil agency.

(c) *Strategies for Space Traffic Management in a Global Context.*

(i) Protocols to Prevent Orbital Conjunctions. As increased satellite operations make lower Earth orbits more congested, the United States should develop a set of standard techniques for mitigating the collision risk

of increasingly congested orbits, particularly for large constellations. Appropriate methods, which may include licensing assigned volumes for constellation operation and establishing processes for satellites passing through the volumes, are needed. The United States should explore strategies that will lead to the establishment of common global best practices, including:

• A common process addressing the volume of space used by a large constellation, particularly in close proximity to an existing constellation;

• A common process by which individual spacecraft may transit volumes used by existing satellites or constellations; and

• A set of best practices for the owner-operators of utilized volumes to minimize the long-term effects of constellation operations on the space environment (including the proper disposal of satellites, reliability standards, and effective collision avoidance).

(ii) Radio Frequency Spectrum and Interference Protection. Space traffic and RF spectrum use have traditionally been independently managed processes. Increased congestion in key orbital regimes creates a need for improved and increasingly dynamic methods to coordinate activities in both the physical and spectral domains, and may introduce new interdependencies. U.S. Government efforts in STM should address the following spectrum management considerations:

• Where appropriate, verify consistency between policy and existing national and international regulations and goals regarding global access to, and operation in, the RF spectrum for space services;

• Investigate the advantages of addressing spectrum in conjunction with the development of STM systems, standards, and best practices;

• Promote flexible spectrum use and investigate emerging technologies for potential use by space systems; and

• Ensure spectrum-dependent STM components, such as inter-satellite safety communications and active debris removal systems, can successfully access the required spectrum necessary to their missions.

(iii) Global Engagement. In its role as a major spacefaring nation, the United States should continue to develop and promote a range of norms of behavior, best practices, and standards for safe operations in space to minimize the space debris environment and promote data sharing and coordination of space activities. It is essential that other spacefaring nations also adopt best practices for the common good of all spacefaring states. The United States should encourage the adoption of new norms of behavior and best practices for space operations by the international community through bilateral and multilateral discussions with other spacefaring nations, and through U.S. participation in various organizations such as the Inter-Agency Space Debris Coordination Committee, International Standards Organization, Consultative Committee for Space Data Systems, and UN Committee on the Peaceful Uses of Outer Space.

SEC. 6. *Roles and Responsibilities*. In furtherance of the goals described in section 4 and the guidelines described in section 5 of this memorandum, agencies shall carry out the following roles and responsibilities:

(a) Advance SSA and STM S&T. Members of the National Space Council, or their delegees, shall coordinate, prioritize, and advocate for S&T, SSA, and STM, as appropriate, as it relates to their respective missions. They should seek opportunities to engage with the commercial sector and academia in pursuit of this goal.

(b) Mitigate the Effect of Orbital Debris on Space Activities.

(i) The Administrator of the National Aeronautics and Space Administration (NASA Administrator), in coordination with the Secretaries of State, Defense, Commerce, and Transportation, and the Director of National Intelligence, and in consultation with the Chairman of the Federal Communications Commission (FCC), shall lead efforts to update the U.S. Orbital Debris Mitigation Standard Practices and establish new guidelines for satellite design and operation, as appropriate and consistent with applicable law.

(ii) The Secretaries of Commerce and Transportation, in consultation with the Chairman of the FCC, will assess the suitability of incorporating these updated standards and best practices into their respective licensing processes, as appropriate and consistent with applicable law.

(c) Encourage and Facilitate U.S. Commercial Leadership in S&T, SSA, and STM. The Secretary of Commerce, in coordination with the Secretaries of Defense and Transportation, and the NASA Administrator, shall lead efforts to encourage and facilitate continued U.S. commercial leadership in SSA, STM, and related S&T.

(d) Provide U.S. Government-Derived Basic SSA Data and Basic STM Services to the Public.

(i) The Secretaries of Defense and Commerce, in coordination with the Secretaries of State and Transportation, the NASA Administrator, and the Director of National Intelligence, should cooperatively develop a plan for providing basic SSA data and basic STM services either directly or through a partnership with industry or academia, consistent with the guidelines of sections 5(a)(ii) and 5(b)(ii) of this memorandum.

(ii) The Secretary of Defense shall maintain the authoritative catalog of space objects.

(iii) The Secretaries of Defense and Commerce shall assess whether statutory and regulatory changes are necessary to effect the plan developed under subsection (d)(i) of this section, and shall pursue such changes, along with any other needed changes, as appropriate.

(e) Improve SSA Data Interoperability and Enable Greater SSA Data Sharing.

(i) The Secretary of Commerce, in coordination with the Secretaries of State, Defense, and Transportation, the NASA Administrator, and the Director of National Intelligence, shall develop standards and protocols for creation of an open architecture data repository to improve SSA data interoperability and enable greater SSA data sharing.

(ii) The Secretary of Commerce shall develop options, either in-house or through partnerships with industry or academia, assessing both the technical and economic feasibility of establishing such a repository.

(iii) The Secretary of Defense shall ensure that release of data regarding national security activities to any person or entity with access to the repository is consistent with national security interests.

(f) Develop Space Traffic Standards and Best Practices. The Secretaries of Defense, Commerce, and Transportation, in coordination with the Secretary of State, the NASA Administrator, and the Director of National Intelligence, and in consultation with the Chairman of the FCC, shall develop space traffic standards and best practices, including technical guidelines, minimum safety standards, behavioral norms, and orbital conjunction prevention protocols related to pre-launch risk assessment and on-orbit collision avoidance support services.

(g) Prevent Unintentional Radio Frequency Interference. The Secretaries of Commerce and Transportation, in coordination with the Secretaries of State and Defense, the NASA Administrator, and the Director of National Intelligence, and in consultation with the Chairman of the FCC, shall coordinate to mitigate the risk of harmful interference and promptly address any harmful interference that may occur.

(h) Improve the U.S. Domestic Space Object Registry. The Secretary of State, in coordination with the Secretaries of Defense, Commerce, and Transportation, the NASA Administrator, and the Director of National Intelligence, and in consultation with the Chairman of the FCC, shall lead U.S. Government efforts on international engagement related to international transparency and space object registry on SSA and STM issues.

(i) Develop Policies and Regulations for Future U.S. Orbital Operations. The Secretaries of Defense, Commerce, and Transportation, in coordination with the Secretary of State, the NASA Administrator, and the Director of National Intelligence, shall regularly evaluate emerging trends in space missions to recommend revisions, as appropriate and necessary, to existing SSA and STM policies and regulations.

SEC. 7. *General Provisions*. (a) Nothing in this memorandum shall be construed to impair or otherwise affect:

(i) the authority granted by law to an executive department or agency, or the head thereof; or

(ii) the functions of the Director of the Office of Management and Budget relating to budgetary, administrative, or legislative proposals.

(b) This memorandum shall be implemented consistent with applicable law and subject to the availability of appropriations.

(c) This memorandum is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

(d) The Secretary of Commerce is authorized and directed to publish this memorandum in the Federal Register.

DONALD J. TRUMP.