#### 119TH CONGRESS 1ST SESSION

# H. R. 5174

To make revisions in title 51, United States Code, as necessary to keep the title current, and to make technical amendments to improve the United States Code.

#### IN THE HOUSE OF REPRESENTATIVES

**SEPTEMBER 8, 2025** 

Ms. Crockett introduced the following bill; which was referred to the Committee on the Judiciary

## A BILL

To make revisions in title 51, United States Code, as necessary to keep the title current, and to make technical amendments to improve the United States Code.

- 1 Be it enacted by the Senate and House of Representa-
- 2 tives of the United States of America in Congress assembled,
- 3 SECTION 1. TABLE OF CONTENTS.
- 4 The table of contents for this Act is as follows:
  - Sec. 1. Table of contents.
  - Sec. 2. Purposes; restatement does not change meaning or effect of existing law.
  - Sec. 3. Revision of title 51, United States Code.
  - Sec. 4. Technical amendments.
  - Sec. 5. Transitional and savings provisions.
  - Sec. 6. Repeals.

1	SEC. 2. PURPOSES; RESTATEMENT DOES NOT CHANGE
2	MEANING OR EFFECT OF EXISTING LAW.
3	(a) Purposes.—The purposes of this Act are—
4	(1) to make revisions in title 51, United States
5	Code, as necessary to keep the title current; and
6	(2) to make technical amendments to improve
7	the United States Code.
8	(b) RESTATEMENT DOES NOT CHANGE MEANING OR
9	EFFECT OF EXISTING LAW.—
10	(1) In general.—The restatement of existing
11	law enacted by this Act does not change the mean-
12	ing or effect of the existing law. The restatement in-
13	corporates in title 51, United States Code, various
14	provisions that were enacted separately over a period
15	of years, reorganizing them, conforming style and
16	terminology, modernizing obsolete language, and cor-
17	recting drafting errors. These changes serve to re-
18	move ambiguities, contradictions, and other imper-
19	fections, but they do not change the meaning or ef-
20	fect of the existing law or impair the precedential
21	value of earlier judicial decisions or other interpreta-
22	tions.
23	(2) Rule of construction.—
24	(A) In General.—Notwithstanding the
25	plain meaning rule or other rules of statutory
26	construction, a change in wording made in the

1	restatement of existing law enacted by this Act
2	serves to clarify the existing law as indicated in
3	paragraph (1), but not to change the meaning
4	or effect of the existing law.
5	(B) REVISION NOTES.—Subparagraph (A)
6	applies whether or not a change in wording is
7	explained by a revision note appearing in a con-
8	gressional report accompanying this Act. If
9	such a revision note does appear, a court shall
10	consider the revision note in interpreting the
11	change.
12	SEC. 3. REVISION OF TITLE 51, UNITED STATES CODE.
13	(a) REVISION OF TITLE TABLE OF CONTENTS.—The
14	title table of contents of title 51, United States Code, is
15	amended—
16	(1) by striking the item relating to chapter 301
17	and inserting the following:
	"301. Funding
18	(2) by striking the item relating to chapter 315
19	and inserting the following:
	"315. Facilities and Infrastructure
20	(3) by striking the item relating to chapter 409
21	and inserting the following:
	"409. Aeronautics and Space Technology40901"411 Through 497Reserved"499. Miscellaneous49901";

1	(4) by striking the items relating to chapters
2	513 and 515 and inserting the following:
	<ul> <li>"513. Space Resource Commercial Exploration and Utilization</li></ul>
3	(5) by striking the item relating to chapter 701
4	and inserting the following:
	"701. Use of Space Launch System or Alternatives
5	(6) by inserting after the item relating to chap-
6	ter 713 the following:
	"715. Human Space Flight and Exploration71501"717. Advancing Human Space Exploration71701".
7	(b) Revision of Section 20144.—
8	(1) Amendments.—Section 20144 of title 51,
9	United States Code, is amended—
10	(A) in subsection (a), by striking "The Ad-
11	ministration may carry out a program to award
12	prizes only in conformity with this section.";
13	and
14	(B) in subsection (i)(4), by striking "Com-
15	mittee on Science and Technology" and insert-
16	ing "Committee on Science, Space, and Tech-
17	nology".
18	(2) Effective date.—The amendment made
19	by paragraph (1)(A) is effective on January 4, 2011.
20	(c) Revision of Section 20145.—Section 20145 of
21	title 51, United States Code, is amended—

1	(1) by redesignating subsections (f) through (h)
2	as subsections (g) through (i), respectively;
3	(2) by inserting after subsection (e) the fol-
4	lowing:
5	"(f) Proceeds.—Proceeds from leases entered into
6	under this section shall be deposited in the Administration
7	Construction and Environmental Compliance and Restora-
8	tion appropriations account. The proceeds shall be avail-
9	able for a period of 5 years, to the extent and in amounts
10	provided in appropriations acts."; and
11	(3) in subsection (h) (as redesignated by para-
12	graph (1)), in the matter before paragraph (1), by
13	striking "the date of the enactment of the National
14	Aeronautics and Space Administration Authorization
15	Act of 2022," and inserting "August 9, 2022,".
16	(d) Revision of Section 20303.—Section 20303 of
17	title 51, United States Code, is amended—
18	(1) in subsection (c), by striking "(42 U.S.C.
19	16611(d))" and inserting "(Public Law 109–155,
20	119 Stat. 2900)";
21	(2) by redesignating subsection (d) as sub-
22	section (e); and
23	(3) by inserting after subsection (c) the fol-
24	lowing:

1	"(d) Evaluation and Expansion of Inter-
2	AGENCY CONTRIBUTION.—
3	"(1) In General.—The Administrator shall
4	evaluate and, to the extent possible—
5	"(A) expand efforts to maximize the Ad-
6	ministration's contribution to interagency ef-
7	forts to enhance science, technology, engineer-
8	ing, and mathematics education capabilities;
9	and
10	"(B) enhance the Nation's technological
11	excellence and global competitiveness.
12	"(2) Identification in Report.—The Admin-
13	istrator shall identify the expanded efforts and en-
14	hancements made under paragraph (1) in the annual
15	reports required by subsection (e).".
16	(e) REVISION OF CHAPTER 301.—
17	(1) Chapter heading.—The chapter heading
18	of chapter 301 of title 51, United States Code, is
19	amended by striking "APPROPRIATIONS,
20	BUDGETS, AND ACCOUNTING" and insert-
21	ing " <b>FUNDING</b> ".
22	(2) Chapter table of contents.—
23	(A) CONTENTS.—The chapter table of con-
24	tents of chapter 301 of title 51, United States
25	Code is amended to read as follows:  "SUBCHAPTER I—GENERAL PROVISIONS  "See

- "30101. Prior authorization of appropriations required.
- "30102. Working capital fund.
- "30103. Baselines and cost controls.
- "30104. Reports on estimated costs for certain programs.
- "30105. Annual report on program cost and control.

#### "SUBCHAPTER II—BUDGET PROVISIONS

- "30121. General budget documentation requirements.
- "30122. Consideration of decadal surveys.
- "30123. Two-year budget request with third-year estimate.".
- 1 (B) Typeface.—The chapter table of con2 tents of chapter 301 of title 51, United States
  3 Code, as amended by subparagraph (A), is
  4 amended so that the typeface of the subchapter
  5 headings and the typeface of the subchapter
  6 items conform to those appearing in other chap7 ter table of contents of title 51.
  8 (3) Redesignation of existing sections.—
  - (3) Redesignation of existing sections.—
    Chapter 301 of title 51, United States Code, is amended as follows:
  - (A) Section 30103 (Budgets) is redesignated as section 30121, and transferred to appear after section 30104 (Baselines and cost controls).
- 15 (B) Section 30104 (Baselines and cost 16 controls) is redesignated as section 30103.
- 17 (4) DESIGNATION OF SUBCHAPTERS.—Chapter 18 301 of title 51, United States Code, is amended 19 by—
- 20 (A) inserting a subchapter heading (in 21 typeface styled like other subchapter headings

9

10

11

12

13

1	in title 51) before section 30101 as follows:
2	"SUBCHAPTER I—GENERAL PROVI-
3	SIONS"; and
4	(B) inserting a subchapter heading (in
5	typeface styled like other subchapter headings
6	in title 51) before section 30121 (as redesig-
7	nated and transferred by paragraph (3)(A)) as
8	follows: "SUBCHAPTER II—BUDGET PRO-
9	VISIONS".
10	(5) REVISION OF SECTION 30103.—Section
11	30103 (Baselines and cost controls) of title 51,
12	United States Code (as redesignated by paragraph
13	(3)(B)), is amended by striking "Committee on
14	Science and Technology" and inserting "Committee
15	on Science, Space, and Technology" in—
16	(A) subsection (b)(2);
17	(B) subsection $(c)(1)$ ;
18	(C) subsection (d)(3);
19	(D) subsection (e)(1)(A) (matter before
20	clause (i)); and
21	(E) subsection $(e)(2)$ .
22	(6) Enactment of sections 30104 and
23	30105.—Chapter 301 of title 51, United States Code,
24	is amended by inserting after section 30103 (Base-
25	lines and cost controls) (as redesignated by para-

1 graph (3)(B) and amended by paragraph (5)) the 2 following: 3 "§ 30104. Reports on estimated costs for certain pro-4 grams 5 "For each program under the jurisdiction of the Administration for which development costs are expected to 6 7 exceed \$200,000,000, the Administrator shall submit to 8 Congress, at the time of submission of the President's an-9 nual budget— 10 "(1) a 5-year budget detailing the estimated de-11 velopment costs of the program; and 12 "(2) an estimate of the life-cycle costs associ-13 ated with the program. 14 "§ 30105. Annual report on program cost and control "(a) Annual Report.—Not later than April 30 of 15 each year, the Administrator shall submit to the Com-16 17 mittee on Commerce, Science, and Transportation of the 18 Senate and the Committee on Science, Space, and Technology of the House of Representatives a report on the 19 implementation during the preceding year of the corrective 20 21 action plan referred to in section 1203(a)(4) of the National Aeronautics and Space Administration Authoriza-23 tion Act of 2010 (Public Law 111–267, 124 Stat. 2842). 24 "(b) Contents.—A report under this section shall contain the following: 25

1	"(1) Description of over-budget or de-
2	LAYED PROGRAMS.—For the year covered by the re-
3	port, a description of each Administration program
4	that has exceeded its cost baseline by 15 percent or
5	more or is more than 2 years behind its projected
6	development schedule.
7	"(2) Corrective plans.—For each program
8	described under paragraph (1), a plan for a decrease
9	in scope or requirements, or other measures, to be
10	undertaken to control cost and schedule, including
11	any cost monitoring or corrective actions undertaken
12	pursuant to the National Aeronautics and Space Ad-
13	ministration Authorization Act of 2005 (Public Law
14	109–155, 119 Stat. 2895), and the amendments
15	made by that Act.".
16	(7) REVISION OF SECTION 30121.—Section
17	30121 of title 51, United States Code (as redesign
18	nated and transferred by paragraph (3)(A)), is
19	amended—
20	(A) in the section heading, by striking
21	"Budgets" and inserting "General budget
22	documentation requirements"; and
23	(B) in subsection (b) (matter before para-

graph (1)), by striking "Committee on Science

1	and Technology" and inserting "Committee on
2	Science, Space, and Technology".
3	(8) Enactment of sections 30122 and
4	30123.—Chapter 301 of title 51, United States Code,
5	is amended by adding at the end the following:
6	"§ 30122. Consideration of decadal surveys
7	"The Administration shall take into account the cur-
8	rent decadal surveys from the National Academies' Space
9	Studies Board when submitting the President's budget re-
10	quest to Congress.
11	"§ 30123. Two-year budget request with third-year
12	estimateEach fiscal year, the President
13	shall submit to Congress a budget re-
14	quest for the Administration that in-
	1
15	cludes—
15	cludes—
15 16	cludes— "(1) a budget request for the immediate fiscal
15 16 17	cludes—  "(1) a budget request for the immediate fiscal year and the following fiscal year; and
15 16 17 18	cludes—  "(1) a budget request for the immediate fiscal year and the following fiscal year; and  "(2) budget estimates for the third fiscal
15 16 17 18 19	cludes—  "(1) a budget request for the immediate fiscal year and the following fiscal year; and  "(2) budget estimates for the third fiscal year.".
15 16 17 18 19 20	cludes—  "(1) a budget request for the immediate fiscal year and the following fiscal year; and  "(2) budget estimates for the third fiscal year.".  (f) REVISION OF SECTION 30310.—Section 30310 of
15 16 17 18 19 20 21	cludes—  "(1) a budget request for the immediate fiscal year and the following fiscal year; and  "(2) budget estimates for the third fiscal year.".  (f) REVISION OF SECTION 30310.—Section 30310 of title 51, United States Code, is amended by striking "Sec-
15 16 17 18 19 20 21 22 23	cludes—  "(1) a budget request for the immediate fiscal year and the following fiscal year; and  "(2) budget estimates for the third fiscal year.".  (f) REVISION OF SECTION 30310.—Section 30310 of title 51, United States Code, is amended by striking "Section 526(a) of the Energy Independence and Security Act

1	(g) Enactment of Section 30311.—
2	(1) CHAPTER TABLE OF CONTENTS.—The
3	chapter table of contents of chapter 303 of title 51,
4	United States Code, is amended by adding at the
5	end the following:
	"30311. Counterfeit parts.".
6	(2) Enactment of Section.—Chapter 303 of
7	title 51, United States Code, is amended by adding
8	at the end the following:
9	"§ 30311. Counterfeit parts
10	"(a) In General.—The Administrator shall plan,
11	develop, and implement a program, in coordination with
12	other Federal agencies, to detect, track, catalog, and re-
13	duce the number of counterfeit electronic parts in the Ad-
14	ministration supply chain.
15	"(b) Requirements.—In carrying out the program,
16	the Administrator shall establish—
17	"(1) counterfeit part identification training for
18	all employees who procure, process, distribute, and
19	install electronic parts that will—
20	"(A) teach employees how to identify coun-
21	terfeit parts;
22	"(B) educate employees on procedures to
23	follow if they suspect a part is counterfeit:

1	"(C) regularly update employees on new
2	threats, identification techniques, and reporting
3	requirements; and
4	"(D) integrate industry associations, man-
5	ufacturers, suppliers, and other Federal agen-
6	cies, as appropriate;
7	"(2) an internal database to track all suspected
8	and confirmed counterfeit electronic parts that will
9	maintain, at a minimum—
10	"(A) companies and individuals known and
11	suspected of selling counterfeit parts;
12	"(B) parts known and suspected of being
13	counterfeit, including lot and date codes, part
14	numbers, and part images;
15	"(C) countries of origin;
16	"(D) sources of reporting;
17	"(E) United States Customs seizures; and
18	"(F) Government-Industry Data Exchange
19	Program reports and other public- or private-
20	sector database notifications; and
21	"(3) a mechanism—
22	"(A) to report all information on suspected
23	and confirmed counterfeit electronic parts to
24	law enforcement agency databases, industry as-
25	sociation databases, and other databases; and

1	"(B) to issue bulletins to industry on coun-
2	terfeit electronic parts and related counterfeit
3	activity.
4	"(c) REVIEW OF PROCUREMENT AND ACQUISITION
5	Policy.—
6	"(1) In general.—In establishing the pro-
7	gram, the Administrator shall amend acquisition and
8	procurement policy in effect on October 11, 2010, to
9	require the purchase of electronic parts from trusted
10	or approved manufacturers. To determine trusted or
11	approved manufacturers, the Administrator shall es-
12	tablish a list, assessed and adjusted at least annu-
13	ally, and create criteria for manufacturers to meet
14	in order to be placed on the list.
15	"(2) Criteria.—The criteria may include—
16	"(A) authentication or encryption codes;
17	"(B) embedded security markings in parts;
18	"(C) unique, hard-to-copy labels and mark-
19	ings;
20	"(D) identification of distinct lot and serial
21	codes on external packaging;
22	"(E) radio frequency identification embed-
23	ded into high-value parts;

1	"(F) physical destruction of all defective,
2	damaged, and sub-standard parts that are by-
3	products of the manufacturing process;
4	"(G) testing certifications;
5	"(H) maintenance of procedures for han-
6	dling any counterfeit parts that slip through;
7	"(I) maintenance of secure facilities to pre-
8	vent unauthorized access to proprietary infor-
9	mation; and
10	"(J) maintenance of product return, buy
11	back, and inventory control practices that limit
12	counterfeiting.".
13	(h) Enactment of Sections 30505 and 30506.—
14	(1) Chapter table of contents.—The
15	chapter table of contents of chapter 305 of title 51,
16	United States Code, is amended by adding at the
17	end the following:
	"30505. Information security. "30506. Workforce development for minority and underrepresented groups.".
18	(2) Enactment of sections.—Chapter 305
19	of title 51, United States Code, is amended by add-
20	ing at the end the following:
21	"§ 30505. Information security
22	"(a) Definition of Information Infrastruc-
23	TURE.—In this section, the term 'information infrastruc-
24	ture' means the underlying framework that information

systems and assets rely on to process, transmit, receive, or store information electronically, including programmable electronic devices and communications networks 3 4 and any associated hardware, software, or data. 5 "(b) Monitoring Risk.— "(1) BIENNIAL UPDATE ON SYSTEM IMPLEMEN-6 7 TATION.—On a biennial basis, the Chief Information 8 Officer of the Administration, in coordination with 9 other national security agencies, shall provide to the 10 Committee on Commerce, Science, and Transpor-11 tation of the Senate and the Committee on Science, 12 Space, and Technology of the House of Representa-13 tives— "(A) an update on efforts to implement a 14 15 system to provide dynamic, comprehensive, real-16 time information regarding risk of unauthorized 17 remote, proximity, and insider use or access, for 18 all information infrastructure under the respon-19 sibility of the Chief Information Officer, and 20 mission-related networks, including contractor 21 networks: 22 "(B) an assessment of whether the system 23 has demonstrably and quantifiably reduced net-24 work risk compared with alternative methods of

measuring security; and

1	"(C) an assessment of the progress that
2	each center and facility has made toward imple-
3	menting the system.
4	"(2) Existing assessments.—The assess-
5	ments required of the Inspector General under sec-
6	tion 3555 of title 44 shall evaluate the effectiveness
7	of the system described in this subsection.
8	"(c) Information Security Awareness and Edu-
9	CATION.—
10	"(1) In General.—In consultation with the
11	Department of Education, other national security
12	agencies, and other agency directorates, the Chief
13	Information Officer shall institute an information se-
14	curity awareness and education program for all op-
15	erators and users of Administration information in-
16	frastructure, with the goal of reducing unauthorized
17	remote, proximity, and insider use or access.
18	"(2) Program requirements.—
19	"(A) Briefings, exercises, and exami-
20	NATIONS.—The program shall include, at a
21	minimum, ongoing classified and unclassified
22	threat-based briefings, and automated exercises
23	and examinations that simulate common attack

24

techniques.

1	"(B) Participation.—All agency employ-
2	ees and contractors engaged in the operation or
3	use of agency information infrastructure shall
4	participate in the program.
5	"(C) Access.—Access to Administration
6	information infrastructure shall be granted only
7	to operators and users who regularly satisfy the
8	requirements of the program.
9	"(D) REWARDING ACHIEVEMENT.—The
10	Chief Human Capital Officer of the Administra-
11	tion, in consultation with the Chief Information
12	Officer, shall create a system to reward opera-
13	tors and users of agency information infrastruc-
14	ture for continuous high achievement in the
15	program.
16	"§ 30506. Workforce development for minority and
17	underrepresented groups
18	"(a) Addressing Impediments.—To the extent
19	practicable, the Administrator shall take all necessary
20	steps to address any impediments identified in the assess-
21	ment described in subsection (b).
22	"(b) Assessment.—The assessment referred to in
23	subsection (a) is the independent assessment of impedi-
24	ments to space science and engineering workforce develop-

25 ment for minority and underrepresented groups at the Ad-

1	ministration that was prepared under section 203(a) of
2	the America COMPETES Reauthorization Act of 2010
3	(Public Law 111–358, 124 Stat. 3994).".
4	(i) Revision of Section 30704.—Section 30704(2)
5	of title 51, United States Code, is amended by striking
6	"the Buy American Act (41 U.S.C. 10a et seq.)" and in-
7	serting "chapter 83 of title 41".
8	(j) Enactment of Section 30705.—
9	(1) CHAPTER TABLE OF CONTENTS.—The
10	chapter table of contents of chapter 307 of title 51,
11	United States Code, is amended by adding at the
12	end the following:
	"30705. Limitation on international agreements concerning outer space activities.".
13	(2) Enactment of Section.—Chapter 307 of
14	title 51, United States Code, is amended by adding
15	at the end the following:
16	"§ 30705. Limitation on international agreements con-
17	cerning outer space activities
18	"(a) Definitions.—In this section:
19	"(1) Congressional defense commit-
20	TEES.—The term 'congressional defense committees'
21	means—
22	"(A) the Committee on Armed Services
23	and the Committee on Appropriations of the
24	Senate; and

1	"(B) the Committee on Armed Services
2	and the Committee on Appropriations of the
3	House of Representatives.
4	"(2) Covered congressional commit-
5	TEES.—The term 'covered congressional committees'
6	means—
7	"(A) the Committee on Armed Services,
8	the Committee on Foreign Relations, and the
9	Select Committee on Intelligence of the Senate;
10	and
11	"(B) the Committee on Armed Services,
12	the Committee on Foreign Affairs, and the Per-
13	manent Select Committee on Intelligence of the
14	House of Representatives.
15	"(b) Certification.—If the United States becomes
16	a signatory to a non-legally binding international agree-
17	ment concerning an International Code of Conduct for
18	Outer Space Activities or any similar agreement, at the
19	same time as the United States becomes a signatory—
20	"(1) the President shall submit to the congres-
21	sional defense committees, the Permanent Select
22	Committee on Intelligence of the House of Rep-
23	resentatives, and the Select Committee on Intel-
24	ligence of the Senate a certification that the agree-
25	ment has no legally binding effect or basis for lim-

iting 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 the agreement is equitable, enhances national security, and has no militarily significant impact on the ability of the United States to conduct military or intelligence activities in space.

> "(c) 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 under Article II, Section 2, Clause II of the Constitution or unless authorized by the enactment of further affirmative legislation by Congress.

#### "(2) Briefings.—

24 "(A) REQUIREMENT.—The Secretary of 25 Defense, the Secretary of State, and the Direc-

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

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 would obligate the United States to reduce or limit the Armed Forces, armaments, or activities of the United States in outer space, the head

1	of each department or agency of the Federal Gov-
2	ernment that would be affected by the action shall
3	submit to Congress a notice of the action and its ef-
4	fect on the department or agency.".
5	(k) Redesignation of Chapter 315 as Chapter
6	399.—
7	(1) Reserved Chapters.—Title 51, United
8	States Code, is amended by inserting after section
9	31302 the following:
10	"CHAPTERS 317 THROUGH 397—RE-
11	SERVED".
12	(2) Redesignation of Chapter.—Title 51,
13	United States Code, is amended by redesignating
14	chapter 315 as chapter 399.
15	(3) Redesignation of Sections.—Chapter
16	399 of title 51, United States Code (as redesignated
17	by paragraph (2)), is amended—
18	(A) in the chapter table of contents, by re-
19	designating the items for sections 31501
20	through 31505 as items for sections 39901
21	through 39905, respectively; and
22	(B) by redesignating sections 31501
23	through 31505 as sections 39901 through
24	39905, respectively.
25	(l) Enactment of Chapter 315.—

1	(1) Enactment of Chapter.—
2	(A) CONTENT.—Title 51, United States
3	Code, as amended by subsection (k), is amend-
4	ed by inserting after chapter 313 (and before
5	"CHAPTERS 317 THROUGH 397–RE-
6	SERVED" as inserted by subsection $(k)(1)$ the
7	following:
8	"Chapter 315—FACILITIES AND
9	INFRASTRUCTURE
	"Sec. "31501. Policy and plan. "31502. Maintenance and upgrade of center facilities.
10	"§ 31501. Policy and plan
11	"(a) Policy.—It is the policy of the United States
12	that the Administration maintain reliable and efficient fa-
13	cilities and infrastructure and that decisions on whether
14	to dispose of, maintain, or modernize existing facilities or
15	infrastructure be made in the context of meeting future
16	Administration needs.
17	"(b) Plan.—
18	"(1) In General.—The Administrator shall
19	develop a facilities and infrastructure plan.
20	"(2) GOAL.—The goal of the plan is to position
21	the Administration to have the facilities and infra-
22	structure, including laboratories, tools, and ap-
23	proaches, necessary to meet future Administration
24	and other Federal agencies' laboratory needs.

1	"(3) Contents.—The plan shall identify—
2	"(A) current Administration and other
3	Federal agency laboratory needs;
4	"(B) future Administration research and
5	development and testing needs;
6	"(C) a strategy for identifying facilities
7	and infrastructure that are candidates for dis-
8	posal, which strategy is consistent with the na-
9	tional strategic direction set forth in—
10	"(i) the National Space Policy;
11	"(ii) the National Aeronautics Re-
12	search, Development, Test, and Evaluation
13	Infrastructure Plan;
14	"(iii) the National Aeronautics and
15	Space Administration Authorization Act of
16	2005 (Public Law 109–155, 119 Stat.
17	2895), the National Aeronautics and Space
18	Administration Authorization Act of 2008
19	(Public Law 110–422, 122 Stat. 4779),
20	and the National Aeronautics and Space
21	Administration Authorization Act of 2010
22	(Public Law 111–267, 124 Stat. 2805);
23	and
24	"(iv) the human exploration roadmap
25	under section 71721 of this title;

1	"(D) a strategy for the maintenance, re-
2	pair, upgrading, and modernization of Adminis-
3	tration facilities and infrastructure, including
4	laboratories and equipment;
5	"(E) criteria for—
6	"(i) prioritizing deferred maintenance
7	tasks;
8	"(ii) maintaining, repairing, upgrad-
9	ing, or modernizing Administration facili-
10	ties and infrastructure; and
11	"(iii) implementing processes, plans,
12	and policies for guiding the Administra-
13	tion's centers on whether to maintain, re-
14	pair, upgrade, or modernize a facility or
15	infrastructure and for determining the type
16	of instrument to be used;
17	"(F) an assessment of modifications need-
18	ed to maximize usage of facilities that offer
19	unique and highly specialized benefits to the
20	aerospace industry and the American public;
21	and
22	"(G) implementation steps, including a
23	timeline, milestones, and an estimate of re-
24	sources required for carrying out the plan.
25	"(c) Requirement To Establish Policy.—

"(1) IN GENERAL.—Not later than 180 days
after March 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.
- "(d) SUBMISSION TO CONGRESS.—Not later than 1

  14 year after March 21, 2017, the Administrator shall submit

  15 to the Committee on Commerce, Science, and Transpor
  16 tation of the Senate and the Committee on Science, Space,

  17 and Technology of the House of Representatives the plan

  18 developed under subsection (b).".
- 19 (B) TYPEFACE.—The chapter heading of 20 chapter 315 of title 51, United States Code, as 21 inserted by subparagraph (A), is amended so 22 that the typeface of that chapter heading con-23 forms to the typeface of other chapter headings 24 in title 51, United States Code.

8

9

10

11

1	(2) Redesignation of Section 39902 as Sec-
2	TION 31502.—
3	(A) Redesignation and transfer.—
4	Section 39902 of title 51, United States Code,
5	as redesignated by subsection (k)(3)(B), is re-
6	designated as section 31502 of title 51, United
7	States Code, and transferred to appear after
8	section 31501 of title 51, United States Code,
9	as inserted by paragraph (1).
10	(B) Amendment of Section 31502.—Sec-
11	tion 31502 of title 51, United States Code, as
12	redesignated and transferred by subparagraph
13	(A), is amended—
14	(i) in the heading, by striking
15	"Maintenance of facilities" and in-
16	serting "Maintenance and upgrade
17	of center facilities";
18	(ii) by striking "healthy Centers" and
19	inserting "healthy centers"; and
20	(iii) by striking "Center facilities" and
21	inserting "center facilities".
22	(C) Conforming amendments to chap-
23	TER 399.—Chapter 399 of title 51, United
24	States Code, as redesignated and amended by
25	subsections (k) and (l)(2)(A), is amended—

1	(i) in the chapter table of contents—
2	(I) by striking the item relating
3	to section 39902; and
4	(II) by redesignating the items
5	relating to sections 39903, 39904,
6	and 39905 as items relating to sec-
7	tions 39902, 39903, and 39904, re-
8	spectively; and
9	(ii) by redesignating sections 39903,
10	39904, and 39905 as sections 39902,
11	39903, and 39904, respectively.
12	(m) Revision of Section 39901.—Section 39901
13	of title 51, United States Code (as redesignated by sub-
14	section (k)(3)), is amended—
15	(1) by redesignating the existing text as sub-
16	section (a) and inserting the subsection heading
17	"Technologies To Decrease Risk.—"; and
18	(2) by adding at the end the following:
19	"(b) International Discussion.—
20	"(1) IN GENERAL.—The Administrator shall, in
21	consultation with such other departments and agen-
22	cies of the Federal Government as the Administrator
23	considers appropriate, continue and strengthen dis-
24	cussions with the representatives of other space-
25	faring countries, within the Inter-Agency Space De-

- bris Coordination Committee and elsewhere, to dealwith orbital debris mitigation.
- "(2) Interagency effort.—For purposes of 3 carrying out this subsection, the Director of the Of-5 fice of Science and Technology Policy, in coordina-6 tion with the Director of the National Security Council and using the President's Council of Advi-7 8 sors on Science and Technology coordinating mecha-9 nism, shall develop an overall strategy for review by 10 the President, with recommendations for proposed 11 international collaborative efforts to address the
- (n) Redesignation of Chapter 409 as Chapter499.—

challenge of orbital debris mitigation.".

- 15 (1) RESERVED CHAPTERS.—Title 51, United 16 States Code, is amended by inserting after section 17 40704 the following:
- 18 "CHAPTERS 411 THROUGH 497—RE-19 SERVED".
- 20 (2) REDESIGNATION OF CHAPTER.—Title 51, 21 United States Code, is amended by redesignating 22 chapter 409 as chapter 499.
- 23 (3) REDESIGNATION OF SECTIONS.—Chapter 24 499 of title 51, United States Code (as redesignated 25 by paragraph (2)), is amended—

1	(A) in the chapter table of contents, by re-
2	designating the items for sections 40901
3	through 40909 as items for sections 49901
4	through 49909, respectively; and
5	(B) by redesignating sections 40901
6	through 40909 as sections 49901 through
7	49909, respectively.
8	(o) ENACTMENT OF CHAPTER 409.—Title 51, United
9	States Code, is amended by inserting after chapter 407
10	(and before "CHAPTERS 411 THROUGH 497—RE-
11	SERVED" as inserted by subsection (n)(1)) the following:
12	"Chapter 409—AERONAUTICS
13	AND SPACE TECHNOLOGY

#### 14 "§ 40901. Aeronautics research goals

- 15 "The Administrator should ensure that the Adminis-16 tration maintains a strong aeronautics research portfolio
- 17 ranging from fundamental research through systems re-
- 18 search with specific research goals, including the following:
- 19 "(1) AIRSPACE CAPACITY.—The Administra-
- 20 tion's Aeronautics Research Mission Directorate
- 21 shall address research needs of the Next Generation
- 22 Air Transportation System, including the ability of

<sup>&</sup>quot;Sec.

<sup>&</sup>quot;40901. Aeronautics research goals.

<sup>&</sup>quot;40902. Research collaboration.

<sup>&</sup>quot;40903. Goal for Administration space technology.

<sup>&</sup>quot;40904. National space technology policy.

<sup>&</sup>quot;40905. Commercial Reusable Suborbital Research Program.

1	the National Airspace System to handle up to 3
2	times the current travel demand by 2025.
3	"(2) Environmental sustainability.—The
4	Directorate shall—
5	"(A) consider and pursue concepts to re-
6	duce noise, emissions, and fuel consumption
7	while maintaining high safety standards; and
8	"(B) pursue research relating to alter-
9	native fuels.
10	"(3) AVIATION SAFETY.—The Directorate shall
11	proactively address safety challenges with new and
12	current air vehicles and with operations in the Na-
13	tion's current and future air transportation system.
14	"§ 40902. Research collaboration
15	"(a) Department of Defense.—The Adminis-
16	trator shall continue to coordinate with the Secretary of
17	Defense, through the National Partnership for Aero-
18	nautics Testing, to develop and implement joint plans for
19	those elements of the Nation's research, development, test-
20	ing, and engineering infrastructure that are of common
21	interest and use.
22	"(b) Federal Aviation Administration.—The
23	Administrator shall continue to coordinate with, and work
24	closely with, the Administrator of the Federal Aviation
25	Administration, under the framework of the Senior Policy

- 1 Council, in the development of the Next Generation Air
- 2 Transportation Program. The Administrator shall encour-
- 3 age the Council to explore areas for greater collaboration,
- 4 including areas in which the Administration can help to
- 5 accelerate the development and demonstration of NextGen
- 6 technologies.

#### 7 "§ 40903. Goal for Administration space technology

- 8 "Building on its Innovative Partnerships Program
- 9 and other partnering approaches, it is critical that the Ad-
- 10 ministration maintain an Administration space technology
- 11 base that helps align mission directorate investments and
- 12 supports long term needs—
- 13 "(1) to complement mission-directorate funded
- 14 research; and
- 15 "(2) where appropriate, to support multiple
- users.

### 17 "§ 40904. National space technology policy

- 18 "(a) In General.—The President, in consultation
- 19 with appropriate Federal agencies, shall develop a national
- 20 policy to guide the space technology development pro-
- 21 grams of the United States through 2020. The policy shall
- 22 include national goals for technology development and
- 23 shall describe the role and responsibilities of each Federal
- 24 agency that will carry out the policy. In developing the
- 25 policy, the President shall utilize external studies that

- 1 have been conducted on the state of United States tech-
- 2 nology development and have suggested policies to ensure
- 3 continued competitiveness.
- 4 "(b) Content.—At a minimum, the national space
- 5 technology development policy shall describe for the Ad-
- 6 ministration—
- 7 "(1) the priority areas of research for tech-
- 8 nology investment;
- 9 "(2) the basis on which and the process by
- which priorities for ensuing fiscal years will be se-
- 11 lected;
- 12 "(3) the facilities and personnel needed to carry
- out the technology development program; and
- 14 "(4) the budget assumptions on which the pol-
- icy is based, which for fiscal years 2011, 2012, and
- 16 2013 shall be the authorized level for the Adminis-
- tration's technology program authorized by the Na-
- 18 tional Aeronautics and Space Administration Au-
- 19 thorization Act of 2010 (Public Law 111–267, 124
- 20 Stat. 2805).
- 21 "(c) Policy Premise.—The policy shall be based on
- 22 the premise that the Federal Government has an estab-
- 23 lished interest in conducting research and development
- 24 programs that help preserve the role of the United States

- 1 as a global leader in space technologies and their applica-
- 2 tion.
- 3 "(d) Considerations.—In developing the national
- 4 space technology development policy, the President shall
- 5 consider the following issues:
- 6 "(1) Long term and incremental develop-
- 7 MENT.—The extent to which the Administration
- 8 should focus on long term, high-risk research or
- 9 more incremental technology development, and the
- 10 expected impact of that decision on the United
- 11 States economy.
- 12 "(2) MILITARY AND COMMERCIAL NEEDS.—The
- extent to which the Administration should address
- military and commercial needs.
- 15 "(3) Coordination with federal agen-
- 16 CIES.—How the Administration will coordinate its
- technology program with other Federal agencies.
- 18 "(4) Administration, university, and in-
- 19 DUSTRY RESEARCH.—The extent to which the Ad-
- 20 ministration will conduct research in-house, fund
- 21 university research, and collaborate on industry re-
- search and the expected impact of that mix of fund-
- ing on the supply of United States workers for in-
- 24 dustry.

- 1 "(e) Consultation.—In the development of the na-
- 2 tional space technology development policy, the President
- 3 shall consult widely with academic and industry experts
- 4 and with Federal agencies. The Administrator may enter
- 5 into an arrangement with the National Academy of
- 6 Sciences to help develop the policy.

#### 7 "§ 40905. Commercial Reusable Suborbital Research

- 8 Program
- 9 "(a) FINDING THAT SUBORBITAL SCIENCE MISSIONS
- 10 ARE CRITICAL.—The report entitled Revitalizing NASA's
- 11 Suborbital Program: Advancing Science, Driving Innova-
- 12 tion, and Developing a Workforce (prepared by the Com-
- 13 mittee on NASA's Suborbital Research Capabilities, Space
- 14 Studies Board, Division on Engineering and Physical
- 15 Sciences, National Research Council of the National Acad-
- 16 emies) found that suborbital science missions are abso-
- 17 lutely critical to building an aerospace workforce capable
- 18 of meeting the needs of current and future human and
- 19 robotic space exploration.
- 20 "(b) Establishment.—The Administrator shall es-
- 21 tablish a Commercial Reusable Suborbital Research Pro-
- 22 gram within the Space Technology Program.
- 23 "(c) Management.—The Administrator shall des-
- 24 ignate an officer or employee of the Space Technology
- 25 Program to act as the responsible official for the Commer-

- 1 cial Reusable Suborbital Research Program. The designee
- 2 shall be responsible for the development of short- and
- 3 long-term strategic plans for maintaining, renewing, and
- 4 extending suborbital facilities and capabilities.
- 5 "(d) ACTIVITIES.—The Commercial Reusable Sub-
- 6 orbital Research Program—
- 7 "(1) shall fund the development of payloads for
- 8 scientific research, technology development, and edu-
- 9 cation;
- 10 "(2) shall provide flight opportunities to micro-
- 11 gravity environments and suborbital altitudes for the
- payloads referred to in paragraph (1);
- 13 "(3) may fund engineering and integration
- demonstrations, proofs of concept, or educational ex-
- 15 periments for commercial reusable vehicle flights;
- 16 and
- 17 "(4) shall endeavor to work with the Adminis-
- tration's mission directorates to help achieve the Ad-
- ministration's research, technology, and education
- 20 goals.
- 21 "(e) Report.—The Administrator shall annually
- 22 submit to the Committee on Commerce, Science, and
- 23 Transportation of the Senate and the Committee on
- 24 Science, Space, and Technology of the House of Rep-
- 25 resentatives a report describing progress in carrying out

- 1 the Commercial Reusable Suborbital Research program,
- 2 including the number and type of suborbital missions
- 3 planned in each fiscal year.".
- 4 (p) Enactment of Sections 49910 Through
- 5 49912.—
- 6 (1) CHAPTER TABLE OF CONTENTS.—The
- 7 chapter table of contents of chapter 499 of title 51,
- 8 United States Code (as redesignated and amended
- 9 by subsection (n)), is amended by adding at the end
- the following:

- 11 (2) Enactment of Sections.—Chapter 499
- of title 51, United States Code (as redesignated and
- amended by subsection (n)), is amended by adding
- 14 at the end the following:

## 15 "§ 49910. Programs to support STEM education

- 16 "(a) Definition of STEM.—In this section, the
- 17 term 'STEM' means the academic and professional dis-
- 18 ciplines of science, technology, engineering, and mathe-
- 19 matics.
- 20 "(b) Educational Program Goals.—The Admin-
- 21 istration shall develop and maintain educational programs
- 22 to—

<sup>&</sup>quot;49910. Programs to support STEM education.

<sup>&</sup>quot;49911. Supporting women's involvement in the fields of aerospace and space exploration.

<sup>&</sup>quot;49912. Internship and fellowship opportunities.".

1	"(1) carry out and support research-based pro-
2	grams and activities designed to increase student in-
3	terest and participation in STEM, including stu-
4	dents from minority and underrepresented groups;
5	"(2) improve public literacy in STEM;
6	"(3) employ proven strategies and methods for
7	improving student learning and teaching in STEM;
8	"(4) provide curriculum support materials and
9	other resources that—
10	"(A) are designed to be integrated with
11	comprehensive STEM education;
12	"(B) are aligned with national science edu-
13	cation standards; and
14	"(C) promote the adoption and implemen-
15	tation of high-quality education practices that
16	build toward college and career-readiness; and
17	"(5) create and support opportunities for en-
18	hanced and ongoing professional development for
19	teachers using best practices that improve the
20	STEM content and knowledge of the teachers, in-
21	cluding through programs linking STEM teachers
22	with STEM educators at the higher education level.
23	"(c) Cybersecurity in STEM Programs.—In car-
24	rying out any STEM education program of the Adminis-
25	tration, including a program of the Office of STEM En-

- 1 gagement, the Administrator shall, to the maximum extent
- 2 practicable, encourage the inclusion of cybersecurity edu-
- 3 cation opportunities in the program.
- 4 "§ 49911. Supporting women's involvement in the
- 5 fields of aerospace and space exploration
- 6 "The Administrator shall encourage women and girls
- 7 to study science, technology, engineering, and mathe-
- 8 matics, pursue careers in aerospace, and further advance
- 9 the Nation's space science and exploration efforts through
- 10 support of the following initiatives:
- "(1) NASA GIRLS and NASA BOYS.
- 12 "(2) Aspire to Inspire.
- 13 "(3) Summer Institute in Science, Technology,
- Engineering, and Research.
- 15 "§ 49912. Internship and fellowship opportunities
- 16 "Not later than October 1, 2018, the Administrator
- 17 shall institute a process to encourage the recruitment of
- 18 qualified candidates who are women or individuals who are
- 19 underrepresented in the fields of science, technology, engi-
- 20 neering, and mathematics (STEM) and computer science
- 21 for internships and fellowships at the Administration with
- 22 relevance to the aerospace sector and related fields.".
- 23 (q) Revision of Section 50905.—Section 50905 of
- 24 title 51, United States Code, is amended—

1 (1) in the 2d sentence of subsection (a)(1), by 2 striking "subsection (b)(2)(D)" and inserting "sub-3 section (b)(2)(E)"; 4 (2) in the 3d sentence of subsection (a)(1), by striking "subsection (b)(2)(D)" and inserting "sub-5 6 section (b)(2)(E)"; 7 (3) in the last sentence of subsection (a)(1), by 8 striking "Committee on Science" and inserting 9 "Committee on Science, Space, and Technology"; 10 (4) in subsection (b)(4)(B), by striking "the 11 date of enactment of the Commercial Space Launch Amendments Act of 2004" and inserting "December 12 23, 2004"; 13 14 (5) in subsection (b)(6)(A), by striking "the 15 date of enactment of the Commercial Space Launch Amendments Act of 2004" and inserting "December 16 17 23, 2004"; and 18 (6) in subsection (b)(6)(B), by striking "the 19 date of enactment of the Commercial Space Launch Amendments Act of 2004" and inserting "December 20 21 23, 2004". 22 (r) REVISION OF SECTION 50922.—Section 50922 of title 51, United States Code, is amended—

1	(1) in subsection (a) (matter before paragraph
2	(1)), by striking "the date of the enactment of this
3	section," and inserting "October 28, 1998,";
4	(2) in subsection (b) (matter before paragraph
5	(1)), by striking "the date of the enactment of this
6	section," and inserting "October 28, 1998,";
7	(3) in subsection $(c)(1)$ —
8	(A) by striking "the date of enactment of
9	the Commercial Space Launch Amendments
10	Act of 2004," and inserting "December 23,
11	2004,";
12	(B) by striking "that Act," and inserting
13	"the Commercial Space Launch Amendments
14	Act of 2004,"; and
15	(C) by striking "such date of enactment,"
16	and inserting "December 23, 2004,";
17	(4) in subsection $(c)(2)(A)$ —
18	(A) by striking "the date of enactment of
19	the Commercial Space Launch Amendments
20	Act of 2004," and inserting "December 23,
21	2004,"; and
22	(B) by striking "the Congress." and insert-
23	ing "Congress.";
24	(5) in subsection $(d)(2)$ —

1	(A) by striking "the date of enactment of
2	the Commercial Space Launch Amendments
3	Act of 2004," and inserting "December 23,
4	2004,"; and
5	(B) by striking "that Act" and inserting
6	"the Commercial Space Launch Amendments
7	Act of 2004"; and
8	(6) in subsection (d)(3), by striking "the date
9	of enactment of the Commercial Space Launch
10	Amendments Act of 2004" and inserting "December
11	23, 2004,".
12	(s) Revision of Chapter 515.—
13	(1) Table of contents.—Chapter 515 of
14	title 51, United States Code, is amended by insert-
15	ing after the chapter heading the following:
	"Sec. "51501. Establishment of Office of Spaceports.".
16	(2) REVISION OF SECTION 51501.—Section
17	51501 of title 51, United States Code, is amended—
18	(A) by redesignating subsections (a), (b),
19	(c), (d), and (e) as subsections (b), (c), (d), (e),
20	and (a), respectively, and transferring sub-
21	section (a), as redesignated, to appear at the
22	beginning of the section;

1	(B) in the heading for subsection (a), as
2	redesignated, by striking "Definition" and in-
3	serting "Definition of Spaceport";
4	(C) in subsection (a), as redesignated, by
5	inserting a comma after "In this section";
6	(D) in subsection (b), as redesignated, by
7	striking "the date of enactment of this section,"
8	and inserting "October 5, 2018,"; and
9	(E) in subsection (d), as redesignated—
10	(i) by striking "functions assigned in
11	subsection (b)," and inserting "functions
12	assigned in subsection (e),"; and
13	(ii) by striking "host" from the end of
14	the matter before paragraph (1) and in-
15	serting "host" at the beginning of para-
16	graph (1).
17	(t) Enactment of Chapter 517.—Title 51, United
18	States Code, is amended by inserting after chapter 515
19	the following:
20	"Chapter 517—DEVELOPMENT
21	AND USE OF COMMERCIAL
22	CARGO AND CREW TRANS-
23	PORTATION CAPABILITIES

<sup>&</sup>quot;Sec.

 $<sup>\</sup>hbox{``51701. Commercial development of cargo transportation capabilities}.$ 

<sup>&</sup>quot;51702. Commercial development of crew transportation capabilities.

<sup>&</sup>quot;51703. Commercial Crew Program.

"51704. Policy regarding fair and open competition for space transportation

	services. "51705. Transparency.
1	"§ 51701. Commercial development of cargo transpor-
2	tation capabilities
3	"The Administrator shall continue to support the ex-
4	isting Commercial Resupply Services program, aimed at
5	enabling the commercial space industry in support of the
6	Administration to develop reliable means of launching
7	cargo and supplies to the International Space Station
8	throughout the duration of the facility's operation. The
9	Administrator may apply funds toward the reduction of
10	risk to the timely start of the services, specifically—
11	"(1) efforts to conduct a flight test;
12	"(2) the acceleration of development; and
13	"(3) the development of the ground infrastruc-
14	ture needed for commercial cargo capability.
15	"§ 51702. Commercial development of crew transpor-
16	tation capabilities
17	"For the duration of the commercial crew develop-
18	ment program, the Administrator may support follow-on
19	commercially developed crew transportation systems de-
20	pendent on the completion of each of the following:
21	"(1) Human rating requirements.—The
22	Administrator shall develop and make available to
23	the public detailed human rating processes and re-
24	quirements to guide the design of commercially de-

1 veloped crew transportation capabilities, which re-2 quirements shall be at least equivalent to proven requirements for crew transportation in use as of Oc-3 tober 11, 2010. 4 "(2) Procurement system review.— 6 "(A) REVIEW OF CURRENT PRACTICES 7 AND PROCESSES.—The Administrator shall re-8 view current Government procurement and ac-9 quisition practices and processes, including 10 agreement authorities under chapter 201 of this 11 title, to determine the most cost-effective means 12 of procuring commercial crew transportation ca-13 pabilities and related services in a manner that 14 appropriate accountability, ensures 15 parency, and maximum efficiency in the procurement of the capabilities and services. The 16 17 review shall include identification of proposed 18 measures to address— 19 "(i) risk management and means of 20 indemnification of commercial providers of 21 the capabilities and services; 22 "(ii) quality control; 23 "(iii) safety oversight; and

1 "(iv) the application of Federal over-2 sight processes within the jurisdiction of 3 other Federal agencies.

> "(B) REVIEW OF PROPOSED PROCURE-MENT.—A description of the proposed procurement process and justification of the proposed procurement for its selection shall be included in any proposed initiation of procurement activity for commercially developed crew transportation capabilities and services and shall be subject to review by the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives before the initiation of any competitive process to procure the capabilities or services. In support of the review by the committees, the Comptroller General shall undertake an assessment of the proposed procurement process and provide a report to the committees not later than 90 days after the date on which the Administrator provides the description and justification to the committees.

"(3) Use of government-supplied capa-Bilities and infrastructure.—In evaluating any

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

proposed development activity for commercially developed crew or cargo launch capabilities, the Administrator shall identify the anticipated contribution of Government personnel, expertise, technologies, and infrastructure to be utilized in support of design, development, or operations of the capabilities. This assessment shall include a clear delineation of the full requirements for the commercial crew service (including the contingency for crew rescue). The Administrator shall include details and associated costs of such support as part of any proposed development initiative for the procurement of commercially developed crew or cargo launch capabilities or services.

"(4) FLIGHT DEMONSTRATION AND READINESS REQUIREMENTS.—The Administrator shall establish appropriate milestones and minimum performance objectives to be achieved before authority is granted to proceed to the procurement of commercially developed crew transportation capabilities or services. The guidelines shall include a procedure to provide independent assurance of flight safety and flight readiness before the authorization of United States government personnel to participate as crew onboard

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

any commercial launch vehicle developed pursuant to this section.

"(5) Commercial crew rescue capabili-TIES.—The provision of a commercial capability to provide International Space Station crew services shall include crew rescue requirements, and shall be undertaken through the procurement process initiated in conformance with this section. In the event such development is initiated, the Administrator shall make available any relevant government-owned intellectual property deriving from the development of a multipurpose crew vehicle authorized by this section and sections 71522 and 71523 of this title to commercial entities involved with such crew rescue capability development which shall be relevant to the design of a crew rescue capability. In addition, the Administrator shall seek to ensure that contracts for development of the multipurpose crew vehicle contain provisions for the licensing of relevant intellectual property to participating commercial providers of any crew rescue capability development undertaken pursuant to this section. If 1 or more contractors involved with development of the multipurpose crew vehicle seek to compete in development of a commercial crew service with crew rescue capa-

- 1 bility, separate legislative authority must be enacted
- 2 to enable the Administrator to provide funding for
- any modifications of the multipurpose crew vehicle
- 4 necessary to fulfill the International Space Station
- 5 crew rescue function.

### 6 "§ 51703. Commercial Crew Program

- 7 "(a) Objective.—The objective of the Commercial
- 8 Crew Program shall be to assist in the development and
- 9 certification of commercially provided transportation
- 10 that—
- "(1) can carry United States government astro-
- nauts (meaning a United States government astro-
- naut as defined in section 50902 of this title, except
- it does not include an individual who is an inter-
- 15 national partner astronaut) safely, reliably, and
- affordably to and from the International Space Sta-
- tion;
- 18 "(2) can serve as a crew rescue vehicle; and
- 19 "(3) can accomplish the goals stated in para-
- graphs (1) and (2) as soon as practicable.
- 21 "(b) Primary Consideration.—The objective de-
- 22 scribed in subsection (a) shall be the primary consider-
- 23 ation in the acquisition strategy for the Commercial Crew
- 24 Program.
- 25 "(c) Safety.—

"(1) IN GENERAL.—The Administrator shall protect the safety of government astronauts (as defined in section 50902 of this title) by ensuring that each commercially provided transportation system under this section meets all applicable human rating requirements in accordance with section 51702(1) of this title.

"(2) 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.

"(d) 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.

## 19 "§ 51704. Policy regarding fair and open competition

## 20 for space transportation services

"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 Gov-

8

9

10

11

12

1	ernment access to and return from the International
2	Space Station, whenever practicable, via fair and open
3	competition for well-defined, milestone-based, Federal Ac-
4	quisition Regulation-based contracts under section
5	71511(a) of this title.
6	"§ 51705. Transparency
7	"The Administrator shall, to the greatest extent prac-
8	ticable and in a manner that does not add costs or sched-
9	ule delays to the program, ensure all Commercial Crew
10	Program and Commercial Resupply Services Program pro-
11	viders provide evidence-based support for their costs and
12	schedules.".
13	(u) Revision of Section 60304.—
14	(1) Revision of Section.—Section 60304 of
15	title 51, United States Code, is amended—
16	(A) in the section heading, by striking
17	"Program evaluation" and inserting "Ad-
18	visory committee";
19	(B) in subsection (a), by striking the sub-
20	section designation "(a)" and the subsection
21	heading "Advisory Committee.—"; and
22	(C) by striking subsection (b).
23	(2) Conforming amendment.—The chapter
24	table of contents of chapter 603 of title 51, United

- 1 States Code, is amended by striking the item relat-
- 2 ing to section 60304 and inserting the following: "60304. Advisory committee.".
- 3 (v) Enactment of Sections 60507 Through
- 4 60510.—
- 5 (1) CHAPTER TABLE OF CONTENTS.—The
- 6 chapter table of contents of chapter 605 of title 51,
- 7 United States Code, is amended by adding at the
- 8 end the following:

- 9 (2) Enactment of Sections.—Chapter 605
- of title 51, United States Code, is amended by add-
- ing at the end the following:
- 12 "§ 60507. Interagency collaboration implementation
- 13 approach
- 14 "The Director of the Office of Science and Tech-
- 15 nology Policy shall establish a mechanism to ensure great-
- 16 er coordination of the research, operations, and activities
- 17 relating to civilian Earth observation of Federal agencies,
- 18 including the Administration, that have active programs
- 19 that contribute either directly or indirectly to those areas.
- 20 The mechanism should include the development of a stra-
- 21 tegic implementation plan that is updated at least every

<sup>&</sup>quot;60507. Interagency collaboration implementation approach.

<sup>&</sup>quot;60508. Transitioning experimental research to operations.

<sup>&</sup>quot;60509. Decadal Survey missions implementation for Earth observation.

<sup>&</sup>quot;60510. Instrument testbeds and venture class missions.".

3 years with a process for external independent advisory input. The strategic implementation plan should include— 3 "(1) a description of the responsibilities of the 4 various Federal agency roles in Earth observations; "(2) recommended cost-sharing and procure-6 ment arrangements between Federal agencies and 7 other entities, including international arrangements; 8 and 9 "(3) a plan for ensuring the provision of sus-10 tained, long-term space-based climate observations. 11 "§ 60508. Transitioning experimental research to op-12 erations 13 "Based on the implementation plan provided to Congress in March 2011, the Administrator shall coordinate 14 15 with the Administrator of the National Oceanic and Atmospheric Administration and the Director of the United 16 States Geological Survey to establish a formal mechanism that plans, coordinates, and supports the transitioning of 18 the research findings, assets, and capabilities of the Ad-19 ministration to the operations of the National Oceanic and 20 21 Atmospheric Administration and the United States Geological Survey. In defining the mechanism, the Administration should consider the establishment of a formal or

informal interagency transition office.

1	"§ 60509. Decadal Survey missions implementation
2	for Earth observation
3	"The Administrator shall undertake to implement, as
4	appropriate, missions identified in the National Research
5	Council's Earth Science Decadal Survey within the scope
6	of the funds authorized for the Earth Science Mission Di-
7	rectorate.
8	" $\S$ 60510. Instrument testbeds and venture class mis-
9	sions
10	"The Administrator shall pursue innovative ways to
11	fly instrument-level payloads for early demonstration or
12	as co-manifested payloads. Congress encourages the use
13	of the International Space Station as an accessible plat-
14	form for the conduct of such activities. Additionally, in
15	order to address the cost and schedule challenges associ-
16	ated with large flight systems, the Administrator should
17	pursue smaller systems to the extent practicable and war-
18	ranted.".
19	(w) Revision of Chapter 709.—
20	(1) Chapter table of contents.—The
21	chapter table of contents of chapter 709 of title 51,
22	United States Code, is amended by adding at the
23	end the following:
	"70908. Continuation of the International Space Station. "70909. Maximum utilization of the International Space Station.

<sup>&</sup>quot;70910. Operation, maintenance, and maximum utilization of United States segment.

"70911. Management of national laboratory. "70912. Primary objectives of International Space Station program.". 1 (2)TECHNICAL AMENDMENT TO SECTION 2 70902.—Section 70902 of title 51, United States Code, is amended by striking "section 40904" and 3 4 inserting "section 49904". 5 (3)TECHNICAL AMENDMENT TO SECTION 6 70903.—Section 70903(1) of title 51, United States Code, is amended by striking "section 40904" and 7 8 inserting "section 49904". 9 TECHNICAL AMENDMENTS TOSECTION 10 70904.—Section 70904 of title 51, United States 11 Code, is amended— 12 (A) in subsection (b)(2), by striking "sec-13 tion 40904" and inserting "section 49904"; 14 (B) in subsection (b)(3), by striking "Com-15 mittee on Science and Technology" and insert-16 ing "Committee on Science, Space, and Tech-17 nology"; and 18 (C) in subsection (c)(2), by striking "Com-19 mittee on Science and Technology" and insert-20 ing "Committee on Science, Space, and Tech-21 nology".

(5) Enactment of Sections 70908 through

70912.—Chapter 709 of title 51, United States Code,

is amended by adding at the end the following:

22

23

1	"§ 70908. Continuation of the International Space
2	Station
3	"(a) Policy.—It shall be the policy of the United
4	States, in consultation with its international partners in
5	the International Space Station program, to support full
6	and complete utilization of the International Space Station
7	through at least September 30, 2030.
8	"(b) ACTIONS.—In furtherance of the policy set forth
9	in subsection (a), the Administration shall—
10	"(1) pursue international, commercial, and
11	intragovernmental means to maximize International
12	Space Station logistics supply, maintenance, and
13	operational capabilities, reduce risks to International
14	Space Station systems sustainability, and offset and
15	minimize United States operations costs relating to
16	the International Space Station;
17	"(2) utilize, to the extent practicable, the Inter-
18	national Space Station for the development of capa-
19	bilities and technologies needed for the future of
20	human space exploration beyond low-Earth orbit;
21	and
22	"(3) utilize, if practical and cost effective, the
23	International Space Station for Science Mission Di-
24	rectorate missions in low-Earth orbit.

1	"§ 70909. Maximum utilization of the International
2	Space Station
3	"(a) In General.—With assembly of the Inter-
4	national Space Station complete, the Administration shall
5	take steps to maximize the productivity and use of the
6	International Space Station with respect to scientific and
7	technological research and development, advancement of
8	space exploration, and international collaboration.
9	"(b) Actions.—In carrying out subsection (a), the
10	Administration shall, at a minimum, undertake the fol-
11	lowing:
12	"(1) Innovative use of u.s. segment.—The
13	United States segment of the International Space
14	Station, which has been designated as a national
15	laboratory, shall be developed, managed, and utilized
16	in a manner that enables the effective and innovative
17	use of the facility, as provided in section 70911 of
18	this title.
19	"(2) International cooperation.—
20	"(A) DEFINITION OF NEAR-EARTH
21	SPACE.—In this paragraph, the term 'near-
22	Earth space' means the region of space that in-
23	cludes low-Earth orbit and extends out to and
24	includes geo-synchronous orbit.
25	"(B) USE OF INTERNATIONAL SPACE STA-
26	TION.—The International Space Station shall

1 continue to be utilized as a key component of 2 international efforts to build missions and capabilities that further the development of a 3 4 human presence beyond near-Earth space and advance United States security and economic 6 goals. The Administrator shall actively seek 7 ways to encourage and enable the use of Inter-8 national Space Station capabilities to support 9 those efforts.

"(3) Domestic collaboration.—The operations, management, and utilization of the International Space Station shall be conducted in a manner that provides opportunities for collaboration with other research programs and objectives of the United States Government in cooperation with commercial suppliers, users, and developers.

# 17 "§ 70910. Operation, maintenance, and maximum uti-

## 18 lization of United States segment

- 19 "(a) In General.—The Administrator shall take all
- 20 actions necessary to ensure the safe and effective oper-
- 21 ation, maintenance, and maximum utilization of the
- 22 United States segment of the International Space Station
- 23 through at least September 30, 2030.
- 24 "(b) Planning, Management, and Support.—
- 25 Utilization of research facilities and capabilities aboard

10

11

12

13

14

15

- 1 the International Space Station (other than exploration-
- 2 related research and technology development facilities and
- 3 capabilities, and associated ground support and logistics)
- 4 shall be planned, managed, and supported as provided in
- 5 section 70911 of this title. Exploration-related research
- 6 and technology development facilities, capabilities, and as-
- 7 sociated ground support and logistics shall be planned,
- 8 managed, and supported by the appropriate Administra-
- 9 tion organizations and officials in a manner that does not
- 10 interfere with other activities under section 70911 of this
- 11 title.

### 12 "§ 70911. Management of national laboratory

- 13 "(a) Cooperative Agreement With Not-for-
- 14 Profit Organization for Management of National
- 15 Laboratory.—
- 16 "(1) IN GENERAL.—The Administrator shall
- provide initial financial assistance and enter into a
- cooperative agreement with an appropriate organiza-
- 19 tion that is exempt from taxation under section
- 501(c)(3) of the Internal Revenue Code of 1986 (26
- U.S.C. 501(c)(3)) to manage the activities of the
- 22 International Space Station national laboratory in
- accordance with this section.
- 24 "(2) QUALIFICATIONS.—The organization with
- 25 which the Administrator enters into the cooperative

agreement shall develop the capabilities to implement research and development projects utilizing the International Space Station national laboratory and to otherwise manage the activities of the International Space Station national laboratory.

"(3) Prohibition on other activities.—
The cooperative agreement shall require the organization entering into the agreement to engage exclusively in activities relating to the management of the International Space Station national laboratory and activities that promote its long-term research and development mission as required by this section, without any other organizational objectives or responsibilities on behalf of the organization or any parent organization or other entity.

### "(b) Administration Liaison.—

"(1) Designation.—The Administrator shall designate an official or employee of the Space Operations Mission Directorate of the Administration to act as liaison between the Administration and the organization with which the Administrator enters into a cooperative agreement under subsection (a) with regard to the management of the International Space Station national laboratory.

"(2) Consultation with Liaison.—The cooperative agreement shall require the organization entering into the agreement to carry out its responsibilities under the agreement in cooperation and consultation with the official or employee designated under paragraph (1).

- 7 "(c) Planning and Coordination of National 8 Laboratory Research Activities.—The Adminis-9 trator shall provide initial financial assistance to the orga-10 nization with which the Administrator enters into a coop-11 erative agreement under subsection (a), in order for the 12 organization to initiate the following:
- 13 "(1) Planning and coordination of the Inter-14 national Space Station national laboratory research 15 activities.
  - "(2) Development and implementation of guidelines, selection criteria, and flight support requirements for non-Administration scientific utilization of International Space Station research capabilities and facilities available in United States-owned modules of the International Space Station or in partnerowned facilities of the International Space Station allocated to United States utilization by international agreement.

16

17

18

19

20

21

22

23

"(3) Interaction with and integration of the International Space Station National Laboratory Advisory Committee established under section 70906 of this title with the governance of the organization, and review of recommendations provided by that Committee regarding agreements with non-Administration departments and agencies of the United States Government, academic institutions and consortia, and commercial entities leading to the utilization of the International Space Station national laboratory facilities.

- "(4) Coordination of transportation requirements in support of the International Space Station national laboratory research and development objectives, including provision for delivery of instruments, logistics support, and related experiment materials, and provision for return to Earth of collected samples, materials, and scientific instruments in need of replacement or upgrade.
- "(5) Cooperation with the Administration, other departments and agencies of the United States Government, the States, and commercial entities in ensuring the enhancement and sustained operations of non-exploration-related research payload ground support facilities for the International Space Sta-

- tion, including the Space Life Sciences Laboratory,
  the Space Station Processing Facility, and the Payload Operations Integration Center.
- "(6) Development and implementation of sci-5 entific outreach and education activities designed to 6 ensure effective utilization of International Space 7 Station research capabilities, including the conduct 8 of scientific assemblies, conferences, and other fora 9 for the presentation of research findings, methods, 10 and mechanisms for the dissemination of non-re-11 stricted research findings and the development of 12 educational programs, course supplements, 13 interaction with educational programs at all grade 14 levels, including student-focused research opportuni-15 ties for conduct of research in the International 16 Space Station national laboratory facilities.
  - "(7) Other matters relating to the utilization of the International Space Station national laboratory facilities for research and development as the Administrator considers appropriate.
- 21 "(d) Research Capacity Allocation and Inte-
- 22 GRATION OF RESEARCH PAYLOADS.—
- 23 "(1) ALLOCATION OF INTERNATIONAL SPACE 24 STATION RESEARCH CAPACITY.—The International 25 Space Station national laboratory managed experi-

18

19

ments shall be guaranteed access to, and utilization of, not less than 50 percent of the United States research capacity allocation, including power, cold stowage, and requisite crew time onboard the International Space Station through at least September 30, 2030. Access to the International Space Station research capacity includes provision for the adequate upmass and downmass capabilities to utilize the International Space Station research capacity, as available. The Administrator may allocate additional capacity to the International Space Station national laboratory should such capacity be in excess of Administration research requirements.

"(2) Addinistration research plan is determined to require research capacity onboard the International Space Station beyond the percentage allocated under paragraph (1), the research plan shall be prepared in the form of a requested research opportunity to be submitted to the process established under this section for the consideration of proposed research within the capacity allocated to the International Space Station national laboratory. A proposal for such a research plan may include the establishment of partnerships with non-Administration institutions

eligible to propose research to be conducted within the International Space Station national laboratory capacity. Until at least September 30, 2030, the official or employee designated under subsection (b) may grant an exception to this requirement in the case of a proposed experiment considered essential for purposes of preparing for exploration beyond low-Earth orbit, as determined by joint agreement between the organization with which the Administrator enters into a cooperative agreement under subsection (a) and the official or employee designated under subsection (b).

- "(3) Research priorities and enhanced Capacity.—The organization with which the Administrator enters into the cooperative agreement shall consider recommendations of the National Academies Decadal Survey on Biological and Physical Sciences in Space in establishing research priorities and in developing proposed enhancements of research capacity and opportunities for the International Space Station national laboratory.
- "(4) RESPONSIBILITY FOR RESEARCH PAY-LOAD.—The Administration shall retain its roles and responsibilities in providing research payload physical, analytical, and operations integration during

- 1 pre-flight, post-flight, transportation, and orbital
- 2 phases essential to ensure safe and effective flight
- 3 readiness and vehicle integration of research activi-
- 4 ties approved and prioritized by the organization
- 5 with which the Administrator enters into the cooper-
- 6 ative agreement and the official or employee des-
- 7 ignated under subsection (b).

### 8 "§ 70912. Primary objectives of International Space

## 9 Station program

- 10 "The primary objectives of the International Space
- 11 Station program shall be—
- "(1) to achieve the long term goal and objec-
- tives under section 71512 of this title; and
- 14 "(2) to pursue a research program that ad-
- vances knowledge and provides other benefits to the
- Nation.".
- 17 (x) REVISION OF SECTION 71102.—Section 71102(1)
- 18 of title 51, United States Code, is amended by striking
- 19 "attaching a tracking device," and inserting "attaching a
- 20 tracking device to,".
- 21 (y) ENACTMENT OF CHAPTER 715.—Title 51, United
- 22 States Code, is amended as follows:
- 23 (1) Content.—Title 51, United States Code,
- is amended by adding after chapter 713 the fol-
- lowing:

# "Chapter 715—HUMAN SPACE

## 2 FLIGHT AND EXPLORATION

### "SUBCHAPTER I—GENERAL PROVISIONS

- "Sec.
- "71501. Definitions.

### "SUBCHAPTER II—POLICY, GOALS, AND OBJECTIVES

- "71511. Human space flight policy.
- "71512. Goals and objectives.

### "SUBCHAPTER III—EXPANSION OF HUMAN SPACE FLIGHT BEYOND THE INTERNATIONAL SPACE STA-TION AND LOW-EARTH ORBIT

- "71521. Space Launch System as follow-on launch vehicle to the space shuttle.
- "71522. Multipurpose crew vehicle.
- "71523. Utilization of existing workforce and assets in development of Space Launch System and multipurpose crew vehicle.
- "71524. Launch support and infrastructure modernization program.
- "71525. Development of technologies and in-space capabilities for beyond near-Earth space missions.

### "SUBCHAPTER IV—SPACE SCIENCE

- "71541. Technology development.
- "71542. Suborbital research activities.
- "71543. In-space servicing.
- "71544. Ongoing restoration of radioisotope thermoelectric generator material production.
- "71545. Coordinated approach for robotic missions.
- "71546. Near-Earth object survey and policy with respect to threats posed.

# 3 "Subchapter I—GENERAL

## 4 PROVISIONS

### 5 "§ **71501. Definitions**

- 6 "In this chapter:
- 7 "(1) CIS-LUNAR SPACE.—The term 'cis-lunar
- 8 space' means the region of space from the Earth out
- 9 to and including the region around the surface of
- the Moon.
- 11 "(2) DEEP SPACE.—The term 'deep space'
- means the region of space beyond cis-lunar space.

1	"(3) Near-earth space.—The term 'near-
2	Earth space' means the region of space that includes
3	low-Earth orbit and extends out to and includes geo-
4	synchronous orbit.
5	"(4) SPACE LAUNCH SYSTEM.—The term
6	'Space Launch System' means the follow-on Govern-
7	ment-owned civil launch system developed, managed,
8	and operated by the Administration to serve as a
9	key component to expand human presence beyond
10	low-Earth orbit.
11	"Subchapter II—POLICY, GOALS,
12	AND OBJECTIVES
13	"§ 71511. Human space flight policy
14	"(a) USE OF NON-UNITED STATES HUMAN SPACE
15	FLIGHT TRANSPORTATION SERVICES.—
16	"(1) Definitions.—In this subsection:
17	"(A) COMMERCIAL PROVIDER.—The term
18	'commercial provider' means any person pro-
19	viding human space flight transportation serv-
20	ices, primary control of which is held by persons
21	other than the Federal Government, a State or
22	local government, or a foreign government.
23	"(B) QUALIFIED FOREIGN ENTITY.—The
24	term 'qualified foreign entity' means a foreign
25	entity that is in compliance with all applicable

1	safety standards and is not prohibited from
2	providing space transportation services under
3	other law.
4	"(C) United States commercial pro-
5	VIDER.—The term 'United States commercial
6	provider' means a commercial provider, orga-
7	nized under the laws of the United States or of
8	a State, that is more than 50 percent owned by
9	United States nationals.
10	"(2) In General.—The Federal Government
11	may not acquire human space flight transportation
12	services from a foreign entity unless—
13	"(A) no United States Government-oper-
14	ated human space flight capability is available;
15	"(B) no United States commercial provider
16	is available; and
17	"(C) it is a qualified foreign entity.
18	"(3) Arrangements with foreign enti-
19	TIES.—Nothing in this subsection shall prevent the
20	Administrator from negotiating or entering into
21	human space flight transportation arrangements
22	with foreign entities to ensure safety of flight and
23	continued International Space Station operations.
24	"(b) United States Human Space Flight Capa-
25	BILITIES.—Congress reaffirms the policy stated in section

- 1 70501(a) of this title that the United States shall main-
- 2 tain an uninterrupted capability for human space flight
- 3 and operations in low-Earth orbit, and beyond, as an es-
- 4 sential instrument of national security and of the capacity
- 5 to ensure continued United States participation and lead-
- 6 ership in the exploration and utilization of space.

### 7 "§ 71512. Goals and objectives

- 8 "(a) Long-Term Goals.—The long-term goals of
- 9 the human space flight and exploration efforts of the Ad-
- 10 ministration shall be—
- "(1) to expand permanent human presence be-
- 12 yound low-Earth orbit and to do so, where practical,
- in a manner involving international, academic, and
- industry partners;
- 15 "(2) crewed missions and progress toward
- achieving the goal in paragraph (1) to enable the po-
- tential for subsequent human exploration and the ex-
- tension of human presence throughout the solar sys-
- tem; and
- 20 "(3) to enable a capability to extend human
- 21 presence, including potential human habitation on
- another celestial body and a thriving space economy
- in the 21st century.
- 24 "(b) Key Objectives.—The key objectives of the
- 25 United States for human expansion into space shall be—

1	"(1) to sustain the capability for long-duration
2	presence in low-Earth orbit, initially through con-
3	tinuation of the International Space Station and full
4	utilization of the United States segment of the
5	International Space Station as a national laboratory,
6	and through assisting and enabling an expanded
7	commercial presence in, and access to, low-Earth
8	orbit, as elements of a low-Earth orbit infrastruc-
9	ture;
10	"(2) to determine whether humans can live for
11	extended periods in space with decreasing reliance
12	on Earth, starting with utilization of low-Earth orbit
13	infrastructure, to—
14	"(A) identify potential roles that space re-
15	sources such as energy and materials can play;
16	"(B) meet national and global needs and
17	challenges such as potential cataclysmic threats;
18	and
19	"(C) explore the viability of and lay the
20	foundation for sustainable economic activities in
21	space;
22	"(3) to maximize the role that human explo-
23	ration of space can play in—
24	"(A) advancing overall knowledge of the
25	universe;

1	"(B) supporting United States national
2	and economic security and the United States
3	global competitive posture; and
4	"(C) inspiring young people in their edu-
5	cational pursuits;
6	"(4) to build on the cooperative and mutually
7	beneficial framework established by the International
8	Space Station partnership agreements and experi-
9	ence in developing and undertaking programs and
10	meeting objectives designed to realize the goal of
11	human space flight set forth in subsection (a); and
12	"(5) to achieve human exploration of Mars and
13	beyond through the prioritization of those tech-
14	nologies and capabilities best suited for such a mis-
15	sion in accordance with the stepping stone approach
16	to exploration under section 70504 of this title.
17	"Subchapter III—EXPANSION OF
18	HUMAN SPACE FLIGHT BE-
19	YOND THE INTERNATIONAL
20	SPACE STATION AND LOW-
21	EARTH ORBIT
22	"§ 71521. Space Launch System as follow-on launch
23	vehicle to the space shuttle
24	"(a) Policy.—It is the policy of the United States
25	that the Administration develop a Space Launch System

- 1 as a follow-on to the space shuttle that can access cis-
- 2 lunar space and the regions of space beyond low-Earth
- 3 orbit in order to enable the United States to participate
- 4 in global efforts to access and develop that increasingly
- 5 strategic region.
- 6 "(b) Initiation of Development.—
- 7 "(1) IN GENERAL.—As soon as practicable 8 after October 11, 2010, the Administrator shall ini-9 tiate development of a Space Launch System meet-
- ing the minimum capability requirements specified
- in subsection (c).
- 12 "(2) Modification of current con-
- 13 TRACTS.—In order to limit the Administration's ter-
- mination liability costs and support critical capabili-
- ties, the Administrator shall, to the extent prac-
- ticable, extend or modify existing (as of October 11,
- 17 2010) vehicle development and associated contracts
- necessary to meet the requirement in paragraph (1),
- including contracts for ground testing of solid rocket
- 20 motors, if necessary, to ensure their availability for
- development of the Space Launch System.
- 22 "(c) Minimum Capability Requirements.—
- 23 "(1) IN GENERAL.—The Space Launch System
- developed pursuant to subsection (b) shall be de-
- signed to have, at a minimum, the following:

1	"(A) The initial capability of the core ele-
2	ments, without an upper stage, of lifting pay-
3	loads weighing between 70 and 100 tons into
4	low-Earth orbit in preparation for transit for
5	missions beyond low-Earth orbit.
6	"(B) The capability to carry an integrated
7	upper Earth departure stage bringing the total
8	lift capability of the Space Launch System to
9	130 tons or more.
10	"(C) The capability to lift the multipur-
11	pose crew vehicle.
12	"(D) The capability to serve as a backup
13	system for supplying and supporting Inter-
14	national Space Station cargo delivery require-
15	ments or crew delivery requirements not other-
16	wise met by available commercial or partner-
17	supplied vehicles.
18	"(E) The capacity for efficient and timely
19	evolution, including the incorporation of new
20	technologies, competition of sub-elements, and
21	commercial operations.
22	"(2) Flexibility.—The Space Launch System
23	shall be designed from inception as a fully integrated
24	vehicle capable of carrying a total payload of 130

tons or more into low-Earth orbit in preparation for

transit for missions beyond low-Earth orbit. The Space Launch System shall, to the extent prac-ticable, incorporate capabilities for evolutionary growth to carry heavier payloads. Developmental work and testing of the core elements and the upper stage should proceed in parallel subject to appropria-tions. Priority should be placed on the core elements with the goal for operational capability for the core elements not later than December 31, 2016.

"(3) Transition Needs.—The Administrator shall ensure that critical skills and capabilities are retained, modified, and developed, as appropriate, in areas relating to solid and liquid engines, large diameter fuel tanks, rocket propulsion, and other ground test capabilities for an effective transition to the follow-on Space Launch System.

### **"§ 71522. Multipurpose crew vehicle**

- 18 "(a) Initiation of Development.—
  - "(1) IN GENERAL.—The Administrator shall continue the development of a multipurpose crew vehicle to be available as soon as practicable, and no later than for use with the Space Launch System.

    The vehicle shall continue to advance development of the human safety features, designs, and systems in the Orion project.

- 1 "(2) Goal for operational capability.—It 2 shall be the goal to achieve full operational capa-3 bility for the transportation vehicle developed pursu-4 ant to this subsection by not later than December 5 31, 2016. For purposes of meeting such goal, the 6 Administrator may undertake a test of the transportation vehicle at the International Space Station be-7 8 fore that date. 9 "(b) MINIMUM CAPABILITY REQUIREMENTS.—The multipurpose crew vehicle developed pursuant to sub-10 11 section (a) shall be designed to have, at a minimum, the following: 12 13 "(1) The capability to serve as the primary 14 crew vehicle for missions beyond low-Earth orbit. "(2) The capability to conduct regular in-space 15 16 operations, such as rendezvous, docking, and extra-17 vehicular activities, in conjunction with payloads de-18 livered by the Space Launch System developed pur-19 suant to section 71521 of this title, or other vehicles, 20 in preparation for missions beyond low-Earth orbit
  - "(3) The capability to provide an alternative means of delivery of crew and cargo to the International Space Station, in the event other vehicles,

this title, or other assets in cis-lunar space.

or servicing of assets described in section 71543 of

21

22

23

24

1	whether commercial vehicles or partner-supplied ve-
2	hicles, are unable to perform that function.
3	"(4) The capacity for efficient and timely evo-
4	lution, including the incorporation of new tech-
5	nologies, competition of sub-elements, and commer-
6	cial operations.
7	"§ 71523. Utilization of existing workforce and assets
8	in development of Space Launch System
9	and multipurpose crew vehicle
10	"(a) In General.—In developing the Space Launch
11	System pursuant to section 71521 of this title and the
12	multipurpose crew vehicle pursuant to section 71522 of
13	this title, the Administrator shall, to the extent prac-
14	ticable, utilize—
15	"(1) existing (as of October 11, 2010) con-
16	tracts, investments, workforce, industrial base, and
17	capabilities from the space shuttle and Orion and
18	Ares 1 projects, including—
19	"(A) spacesuit development activities for
20	application to, and coordinated development of,
21	a multipurpose crew vehicle suit and associated
22	life-support requirements with potential devel-
23	opment of standard Administration-certified
24	suit and life support systems for use in alter-

1	native commercially developed crew transpor-
2	tation systems; and
3	"(B) space shuttle-derived components and
4	Ares 1 components that use existing (as of Oc-
5	tober 11, 2010) United States propulsion sys-
6	tems, including liquid fuel engines, external
7	tank or tank-related capability, and solid rocket
8	motor engines; and
9	"(2) associated testing facilities in existence or
10	under construction as of October 11, 2010.
11	"(b) Discharge of Requirements.—In meeting
12	the requirements of subsection (a), the Administrator—
13	"(1) shall, to the extent practicable, utilize
14	ground-based manufacturing capability, ground test-
15	ing activities, launch and operations infrastructure,
16	and workforce expertise;
17	"(2) shall, to the extent practicable, minimize
18	the modification and development of ground infra-
19	structure and maximize the utilization of existing (as
20	of October 11, 2010) software, vehicle, and mission
21	operations processes;
22	"(3) shall complete construction and activation
23	of the A–3 test stand with a completion goal of Sep-
24	tember 30, 2013:

- 1 "(4) may procure, develop, and flight test appli2 cable components; and
- "(5) shall take appropriate actions to ensure timely and cost-effective development of the Space Launch System and the multipurpose crew vehicle, including the use of a procurement approach that incorporates adequate and effective oversight, the facilitation of contractor efficiencies, and the streamlining of contract and procurement requirements.
- "(c) CONTINUATION OF CONTRACTOR SUPPORT.—

  The Administrator may not terminate any contract that

  provides the system transitions necessary for shuttle-de
  rived hardware to be used on the Space Launch System

  described in section 71521 of this title or the multipurpose

# 16 "§ 71524. Launch support and infrastructure mod-17 ernization program

crew vehicle described in section 71522 of this title.

"(a) IN GENERAL.—The Administrator shall carry out a program the primary purpose of which is to prepare infrastructure at the Kennedy Space Center that is needed to enable processing and launch of the Space Launch System. Vehicle interfaces and other ground processing and payload integration areas should be simplified to minimize overall costs, enhance safety, and complement the purpose

of this section.

1	"(b) Elements.—The program required by this sec-
2	tion shall include—
3	"(1) investments to improve civil and national
4	security operations at the Kennedy Space Center, to
5	enhance the overall capabilities of the Center, and to
6	reduce the long-term cost of operations and mainte-
7	nance;
8	"(2) measures to provide multi-vehicle support
9	improvements in payload processing, and partnering
10	at the Kennedy Space Center; and
11	"(3) other measures that the Administrator
12	considers appropriate, including investments to im-
13	prove launch infrastructure at Administration flight
14	facilities scheduled to launch cargo to the Inter-
15	national Space Station under the program to develop
16	commercial cargo transportation capabilities.
17	"§ 71525. Development of technologies and in-space
18	capabilities for beyond near-Earth space
19	missions
20	"(a) Development Authorized.—The Adminis-
21	trator may initiate activities to develop the following:
22	"(1) Technologies identified as necessary ele-
23	ments of missions beyond low-Earth orbit.
24	"(2) In-space capabilities such as refueling and
25	storage technology, orbital transfer stages, innova-

1	tive in-space propulsion technology, communications,
2	and data management that facilitate a broad range
3	of users (including military and commercial).
4	"(3) Applications defining the architecture and
5	design of missions beyond low-Earth orbit.
6	"(4) Spacesuit development and associated life
7	support technology.
8	"(5) Flagship missions.
9	"(b) Investments.—In developing technologies and
10	capabilities under subsection (a), the Administrator may
11	make investments in—
12	"(1) space technologies such as advanced pro-
13	pulsion, propellant depots, in situ resource utiliza-
14	tion, and robotic payloads or capabilities that enable
15	human missions beyond low-Earth orbit ultimately
16	leading to Mars;
17	"(2) a space-based transfer vehicle including
18	technologies described in paragraph (1) with an abil-
19	ity to conduct space-based operations that provide
20	capabilities—
21	"(A) to integrate with the Space Launch
22	System and other space-based systems;
23	"(B) to provide opportunities for in-space
24	servicing of and delivery to multiple space-based
25	platforms: and

1	"(C) to facilitate international efforts to
2	expand human presence to deep space destina-
3	tions;
4	"(3) advanced life support technologies and ca-
5	pabilities;
6	"(4) technologies and capabilities relating to in-
7	space power, propulsion, and energy systems;
8	"(5) technologies and capabilities relating to in-
9	space propellant transfer and storage;
10	"(6) technologies and capabilities relating to in
11	situ resource utilization; and
12	"(7) expanded research to understand the
13	greatest biological impediments to human deep space
14	missions, especially the radiation challenge.
15	"(c) Utilization of International Space Sta-
16	TION AS TESTBED.—The Administrator may utilize the
17	International Space Station as a testbed for any tech-
18	nology or capability developed under subsection (a) in a
19	manner consistent with sections 70908 through 70911 of
20	this title.
21	"(d) Coordination.—The Administrator shall co-
22	ordinate development of technologies and capabilities
23	under this section through an overall Administration tech-
24	nology approach consistent with the plan required by sec-
25	tion 905 of the National Aeronautics and Space Adminis-

- 1 tration Authorization Act of 2010 (Public Law 111–267,
- 2 124 Stat. 2836), which outlines how the Administration's
- 3 space technology program will meet the goal described in
- 4 section 40903 of this title, including an explanation of how
- 5 the plan will link to other mission-directorate technology
- 6 efforts.

# 7 "Subchapter IV—SPACE SCIENCE

### 8 "§ 71541. Technology development

- 9 "The Administrator shall ensure that the Science
- 10 Mission Directorate maintains a long-term technology de-
- 11 velopment program for space and Earth science. That ef-
- 12 fort should be coordinated with an overall Administration
- 13 technology investment approach consistent with the plan
- 14 required by section 905 of the National Aeronautics and
- 15 Space Administration Authorization Act of 2010 (Public
- 16 Law 111–267, 124 Stat. 2836), which outlines how the
- 17 Administration's space technology program will meet the
- 18 goal described in section 40903 of this title, including an
- 19 explanation of how the plan will link to other mission-di-
- 20 rectorate technology efforts.

### 21 "§ 71542. Suborbital research activities

- 22 "(a) Management.—The Administrator shall des-
- 23 ignate an officer or employee of the Science Mission Direc-
- 24 torate to act as the responsible official for all Suborbital

- 1 Research in the Science Mission Directorate. The designee
- 2 shall be responsible for—
- 3 "(1) the development of short- and long-term
- 4 strategic plans for maintaining, renewing, and ex-
- 5 tending suborbital facilities and capabilities;
- 6 "(2) monitoring progress toward goals in the
- 7 plans; and
- 8 "(3) integration of suborbital activities and
- 9 workforce development within the Administration,
- thereby ensuring the long-term recognition of their
- 11 combined value to the Directorate, to the Adminis-
- tration, and to the Nation.
- 13 "(b) Establishment of Suborbital Research
- 14 Program.—The Administrator shall establish a Sub-
- 15 orbital Research Program within the Science Mission Di-
- 16 rectorate that shall include the use of sounding rockets,
- 17 aircraft, high altitude balloons, suborbital reusable launch
- 18 vehicles, and commercial launch vehicles to advance
- 19 science and train the next generation of scientists and en-
- 20 gineers in systems engineering and systems integration,
- 21 which are vital to maintaining critical skills in the aero-
- 22 space workforce. The program shall integrate existing (as
- 23 of October 11, 2010) suborbital research programs with
- 24 orbital missions at the discretion of the designated officer
- 25 or employee and shall emphasize the participation of un-

- 1 dergraduate and graduate students and post-doctoral re-
- 2 searchers when formulating announcements of oppor-
- 3 tunity.
- 4 "(c) Annual Report.—The Administrator shall re-
- 5 port annually to the Committee on Commerce, Science,
- 6 and Transportation of the Senate and the Committee on
- 7 Science, Space, and Technology of the House of Rep-
- 8 resentatives on the number and type of suborbital missions
- 9 conducted in each fiscal year under this section and the
- 10 number of undergraduate and graduate students that par-
- 11 ticipated in the missions.

### 12 "§ 71543. In-space servicing

- 13 "The Administrator shall continue to take all nec-
- 14 essary steps to ensure that provisions are made for robotic
- 15 or human in-space servicing and repair of all future ob-
- 16 servatory-class scientific spacecraft intended to be de-
- 17 ployed in Earth-orbit or at a Lagrangian point to the ex-
- 18 tent practicable and appropriate. The Administrator
- 19 should ensure that Administration investments and future
- 20 capabilities for space technology, robotics, and human
- 21 space flight take the ability to service and repair observ-
- 22 atory-class scientific spacecraft into account, as appro-
- 23 priate, and incorporate those capabilities into design and
- 24 operational plans.

1	"§ 71544. Ongoing restoration of radioisotope thermo-
2	electric generator material production

- 3 "The Administrator shall, in coordination with the
- 4 Secretary of Energy, pursue a joint approach beginning
- 5 in fiscal year 2011 toward restarting and sustaining the
- 6 domestic production of radioisotope thermoelectric gener-
- 7 ator material for deep space and other science and explo-
- 8 ration missions. Funds authorized by the National Aero-
- 9 nautics and Space Administration Authorization Act of
- 10 2010 (Public Law 111–267, 124 Stat. 2805) for the Ad-
- 11 ministration shall be made available under a reimbursable
- 12 agreement with the Department of Energy for the purpose
- 13 of reestablishing facilities to produce fuel required for ra-
- 14 dioisotope thermoelectric generators to enable future mis-
- 15 sions.

## 16 "§ 71545. Coordinated approach for robotic missions

- 17 "The Administrator shall ensure that the Exploration
- 18 Systems Mission Directorate and the Space Operations
- 19 Mission Directorate coordinate with the Science Mission
- 20 Directorate on an overall approach and plan for inter-
- 21 agency and international collaboration on robotic missions
- 22 that are developed by the Administration or internation-
- 23 ally developed, including lunar, Lagrangian, near-Earth
- 24 orbit, and Mars spacecraft, such as the International
- 25 Lunar Network.

1	"§ 71546. Near-Earth object survey and policy with
2	respect to threats posed
3	"(a) Policy Reaffirmation.—Congress reaffirms
4	the policy set forth in section 20102(g) of this title relat-
5	ing to surveying near-Earth asteroids and comets.
6	"(b) Implementation.—Consistent with section
7	71103 of this title, the Director of the Office of Science
8	and Technology Policy shall implement, before September
9	30, 2012, a policy for notifying Federal agencies and rel-
10	evant emergency response institutions of an impending
11	near-Earth object threat if near-term public safety is at
12	risk, and assign a Federal agency or agencies to be respon-
13	sible for protecting the United States and working with
14	the international community on such threats.".
15	(2) Chapter heading typeface.—The chap-
16	ter heading of chapter 715 of title 51, United States
17	Code, as added by paragraph (1), is amended so
18	that the typeface of that chapter heading conforms
19	to the typeface of other chapter headings in title 51,
20	United States Code.
21	(3) Chapter table of contents type-
22	FACE.—The chapter table of contents of chapter 715
23	of title 51, United States Code, as added by para-
24	graph (1), is amended so that the typeface of the

subchapter headings and the typeface of the sub-

1	chapter items conform to those appearing in other
2.	chapter table of contents of title 51

- 3 (4) Subchapter Heading Typeface.—The 4 subchapter headings for subchapters I through IV of 5 chapter 715 of title 51, United States Code, as 6 added by paragraph (1), are amended so that the 7 typeface of those subchapter headings conforms to 8 the typeface of subchapter headings in other chap-9 ters of title 51, United States Code.
- 10 (z) ENACTMENT OF CHAPTER 717.—Title 51, United
- 11 States Code, is amended as follows:
- 12 (1) CONTENT.—Title 51, United States Code,
- as amended by subsection (y), is amended by adding
- 14 after chapter 715 the following:

# 15 "Chapter 717—ADVANCING

## 16 **HUMAN SPACE EXPLORATION**

#### "SUBCHAPTER I—GENERAL PROVISIONS

# "SUBCHAPTER II—ADVANCING HUMAN DEEP SPACE EXPLORATION

# "Part A—Assuring Core Capabilities for Exploration

"71711. Space launch system, Orion, and exploration ground systems.

#### "Part B—Journey to Mars

#### "SUBCHAPTER III—ADVANCING SPACE SCIENCE

- "71731. Policy on maintaining balanced space science portfolio.
- "71732. Mission priorities for planetary science.
- "71733. Extrasolar planet exploration strategy.
- "71734. Astrobiology strategy.
- "71735. Collaboration.

### "SUBCHAPTER IV—SPACE TECHNOLOGY

- "71741. Space technology infusion.
- "71742. Space technology program.

<sup>&</sup>quot;Sec.

<sup>&</sup>quot;71701. Definitions.

<sup>&</sup>quot;71721. Human exploration roadmap.

#### "SUBCHAPTER V-MAXIMIZING EFFICIENCY

# "Part A—Administration Information Technology and Cybersecurity

- "71751. Information technology governance.
- "71752. Information technology strategic plan.
- "71753. Information security plan for cybersecurity.

# "Part B—Collaboration Among Mission Directorates and Other Matters

- "71761. Collaboration among mission directorates.
- "71762. Administration launch capabilities collaboration.
- "71763. Education and outreach.
- "71764. Leveraging commercial satellite servicing capabilities across mission directorates.
- "71765. Flight opportunities.
- "71766. Space Act Agreements.

# "Subchapter I—GENERAL

## 2 **PROVISIONS**

### 3 **"§ 71701. Definitions**

- 4 "In this chapter:
- 5 "(1) APPROPRIATE COMMITTEES OF CON-
- 6 GRESS.—The term 'appropriate committees of Con-
- 7 gress' means—
- 8 "(A) the Committee on Commerce,
- 9 Science, and Transportation of the Senate; and
- 10 "(B) the Committee on Science, Space,
- and Technology of the House of Representa-
- tives.
- 13 "(2) 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.

1	"(3) Deep space.—The term 'deep space'
2	means the region of space beyond low-Earth orbit,
3	to include cis-lunar space.
4	"(4) Orion.—The term 'Orion' means the mul-
5	tipurpose crew vehicle described under section 71522
6	of this title.
7	"(5) SPACE LAUNCH SYSTEM.—The term
8	'Space Launch System' has the meaning given the
9	term in section 71501 of this title.
10	"Subchapter II—ADVANCING
11	HUMAN DEEP SPACE EXPLO-
12	RATION
13	"Part A—Assuring Core
14	Capabilities for Exploration
15	"§71711. Space launch system, Orion, and explo-
16	ration ground systems
17	"(a) Reaffirmation.—Congress reaffirms the pol-
18	icy and minimum capability requirements for the Space
19	Launch System under section 71521 of this title.
20	"(b) Continued Development of Fully Inte-
21	GRATED SPACE LAUNCH SYSTEM.—The Administrator
22	shall continue the development of the fully integrated
23	Space Launch System, including an upper stage needed
24	to go beyond low-Earth orbit, in order to safely enable
25	human space exploration of the Moon, Mars, and beyond

- 1 over the course of the next century as required in section
- 2 71521(c) of this title.
- 3 "(c) Exploration Missions.—The Administrator
- 4 shall continue development of—
- 5 "(1) an uncrewed exploration mission to dem-
- 6 onstrate the capability of both the Space Launch
- 7 System and Orion as an integrated system by 2018;
- 8 "(2) subject to applicable human rating proc-
- 9 esses and requirements, a crewed exploration mis-
- sion to demonstrate the Space Launch System, in-
- 11 cluding the Core Stage and Exploration Upper
- 12 Stages, by 2021;
- 13 "(3) subsequent missions beginning with
- 14 Artemis III at operational flight rate sufficient to
- maintain safety and operational readiness using the
- 16 Space Launch System and Orion to extend into cis-
- lunar space and eventually to Mars; and
- 18 "(4) a deep space habitat as a key element in
- a deep space exploration architecture along with the
- 20 Space Launch System and Orion.
- 21 "(d) Other Uses.—The Administrator shall assess
- 22 the utility of the Space Launch System for use by the
- 23 science community and for other Federal Government
- 24 launch needs, including consideration of overall cost and
- 25 schedule savings from reduced transit times and increased

- 93 science returns enabled by the unique capabilities of the 1 2 Space Launch System. "Part B—Journey to Mars 3 "§ 71721. Human exploration roadmap "(a) IN GENERAL.—The Administrator shall develop 5 a human exploration roadmap, including a critical decision plan, to expand human presence beyond low-Earth orbit 8 to the surface of Mars and beyond, considering potential interim destinations such as cis-lunar space and the moons of Mars. 10
- 11 "(b) Scope.—The human exploration roadmap shall
- "(1) 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;
  - "(2) 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 paragraph (1);

12

18

19

20

21

22

23

include—

1	"(3) sets and sequences of precursor missions
2	in cis-lunar space and other missions or activities
3	necessary—
4	"(A) to demonstrate the proficiency of the
5	capabilities and technologies identified under
6	paragraph (4); and
7	"(B) to meet the goals and objectives de-
8	veloped under paragraph (1), including antici-
9	pated timelines and missions for the Space
10	Launch System and Orion;
11	"(4) an identification of the specific capabilities
12	and technologies, including the Space Launch Sys-
13	tem, Orion, a deep space habitat, and other capabili-
14	ties, that facilitate the goals and objectives developed
15	under paragraph (1);
16	"(5) a description of how cis-lunar elements.
17	objectives, and activities advance the human explo-
18	ration of Mars;
19	"(6) an assessment of potential human health
20	and other risks, including radiation exposure;
21	"(7) mitigation plans, whenever possible, to ad-
22	dress the risks identified in paragraph (6);
23	"(8) a description of those technologies already
24	under development across the Federal Government

or by other entities that facilitate the goals and objectives developed under paragraph (1);

"(9) 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 paragraph (1) and demonstrate the capabilities and technologies described in paragraph (4);

"(10) a description of the capabilities and technologies that need to be demonstrated or research data that could be gained through the utilization of the International Space Station and the status of the development of such capabilities and technologies;

"(11) 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;

"(12) a process for partnering with nongovernmental entities using Space Act Agreements or other acquisition instruments for future human space exploration; and

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

1	"(13) information on the phasing of planned in-
2	termediate destinations, Mars mission risk areas and
3	potential risk mitigation approaches, technology re-
4	quirements and phasing of required technology de-
5	velopment activities, the management strategy to be
6	followed, related International Space Station activi-
7	ties, planned international collaborative activities,
8	potential commercial contributions, and other activi-
9	ties relevant to the achievement of the goal estab-
10	lished in this section.
11	"(c) Considerations.—In developing the human ex-
12	ploration roadmap, the Administrator shall consider—
13	"(1) using key exploration capabilities, namely
14	the Space Launch System and Orion;
15	"(2) using existing commercially available tech-
16	nologies and capabilities or those technologies and
17	capabilities being developed by industry for commer-
18	cial purposes;
19	"(3) establishing an organizational approach to
20	ensure collaboration and coordination among the Ad-
21	ministration's mission directorates under section
22	71761 of this title, when appropriate, including to
23	collect and return to Earth a sample from the Mar-
24	tian surface;

- "(4) 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;
  - "(5) 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 insitu resource utilization;
    - "(6) demonstrating and testing 1 or more habitat modules in cis-lunar space to prepare for Mars missions;
    - "(7) using public-private, firm fixed-price partnerships, where practicable;
  - "(8) collaborating with international, academic, and industry partners, when appropriate;
- 24 "(9) any risks to human health and sensitive 25 onboard technologies, including radiation exposure;

1	"(10) any risks identified through research out-
2	comes under the Administration Human Research
3	Program's Behavioral Health Element; and
4	"(11) the recommendations and ideas of several
5	independently developed reports or concepts that de-
6	scribe potential Mars architectures or concepts and
7	identify Mars as the long-term goal for human space
8	exploration, including the reports described under
9	section 431 of the National Aeronautics and Space
10	Administration Transition Authorization Act of
11	2017 (Public Law 115–10, 131 Stat. 38).
12	"(d) Critical Decision Plan on Human Space
13	Exploration.—As part of the human exploration road-
14	map, the Administrator shall include a critical decision
15	plan—
16	"(1) identifying and defining key decisions
17	guiding human space exploration priorities and plans
18	that need to be made before June 30, 2020, includ-
19	ing decisions that may guide human space explo-
20	ration capability development, precursor missions,
21	long-term missions, and activities;
22	"(2) defining decisions needed to maximize effi-
23	ciencies and resources for reaching the near-, inter-
24	mediate-, and long-term goals and objectives of
25	human space exploration; and

1	"(3) identifying and defining timelines and
2	milestones for a sustainable cadence of missions be-
3	ginning with Artemis III for the Space Launch Sys-
4	tem and Orion to extend human exploration from
5	cis-lunar space to the surface of Mars.
6	"(e) Reports.—
7	"(1) Initial Human exploration road-
8	MAP.—The Administrator shall submit to the appro-
9	priate committees of Congress—
10	"(A) an initial human exploration road-
11	map, including a critical decision plan, before
12	December 1, 2017; and
13	"(B) an updated human exploration road-
14	map periodically as the Administrator considers
15	necessary but not less than biennially.
16	"(2) Contents.—Each human exploration
17	roadmap under this subsection shall include a de-
18	scription of—
19	"(A) the achievements and goals accom-
20	plished in the process of developing capabilities
21	and technologies described in this section dur-
22	ing the 2-year period prior to the submission of
23	the human exploration roadmap; and
24	"(B) the expected goals and achievements
25	in the following 2-year period.

1	"(3) Submission with Budget.—Each human
2	exploration roadmap under this section shall be in-
3	cluded in the budget for that fiscal year transmitted
4	to Congress under section 1105(a) of title 31.
5	"Subchapter III—ADVANCING
6	SPACE SCIENCE
7	"§ 71731. Policy on maintaining balanced space
8	science portfolio
9	"It is the policy of the United States to ensure, to
10	the extent practicable, a steady cadence of large, medium,
11	and small science missions.
12	"§ 71732. Mission priorities for planetary science
13	"(a) In General.—In accordance with the priorities
14	established in the most recent Planetary Science Decadal
15	Survey, the Administrator shall ensure, to the greatest ex-
16	tent practicable, the completion of a balanced set of Dis-
17	covery, New Frontiers, and Flagship missions at the ca-
18	dence recommended by the most recent Planetary Science
19	Decadal Survey.
20	"(b) Mission Priority Adjustments.—Consistent
21	with the set of missions described in subsection (a), and
22	while maintaining the continuity of scientific data and
23	steady development of capabilities and technologies, the
24	Administrator may seek, if necessary, adjustments to mis-

1	sion priorities, schedule, and scope in light of changing
2	budget projections.
3	"§ 71733. Extrasolar planet exploration strategy
4	"(a) Strategy.—
5	"(1) In General.—The Administrator shall
6	enter into an arrangement with the National Acad-
7	emies to develop a science strategy for the study and
8	exploration of extrasolar planets, including the use
9	of the Transiting Exoplanet Survey Satellite, the
10	James Webb Space Telescope, a potential Wide-
11	Field Infrared Survey Telescope mission, or any
12	other telescope, spacecraft, or instrument, as appro-
13	priate.
14	"(2) Requirements.—The strategy shall—
15	"(A) outline key scientific questions;
16	"(B) identify the most promising research
17	in the field;
18	"(C) indicate the extent to which the mis-
19	sion priorities in existing decadal surveys ad-
20	dress the key extrasolar planet research and ex-
21	ploration goals;
22	"(D) identify opportunities for coordina-
23	tion with international partners, commercial
24	partners, and not-for-profit partners; and

1	"(E) make recommendations regarding the
2	activities under subparagraphs (A) through
3	(D), as appropriate.
4	"(b) Use of Strategy.—The Administrator shall
5	use the strategy—
6	"(1) to inform roadmaps, strategic plans, and
7	other activities of the Administration as they relate
8	to extrasolar planet research and exploration; and
9	"(2) to provide a foundation for future activi-
10	ties and initiatives related to extrasolar planet re-
11	search and exploration.
12	"(c) Report to Congress.—Not later than 18
13	months after March 21, 2017, the National Academies
14	shall submit to the Administrator and to the appropriate
15	committees of Congress a report containing the strategy
16	developed under subsection (a).
17	"§ 71734. Astrobiology strategy
18	"(a) Strategy.—
19	"(1) In general.—The Administrator shall
20	enter into an arrangement with the National Acad-
21	emies to develop a science strategy for astrobiology
22	that would outline key scientific questions, identify
23	the most promising research in the field, and indi-
24	cate the extent to which the mission priorities in ex-
25	isting decadal surveys address the search for life's

- 1 origin, evolution, distribution, and future in the uni-
- 2 verse.
- 3 "(2) Recommendations.—The strategy shall
- 4 include recommendations for coordination with inter-
- 5 national partners.
- 6 "(b) Use of Strategy.—The Administrator shall
- 7 use the strategy developed under subsection (a) in plan-
- 8 ning and funding research and other activities and initia-
- 9 tives in the field of astrobiology.
- 10 "(c) Report to Congress.—Not later than 18
- 11 months after March 21, 2017, the National Academies
- 12 shall submit to the Administrator and to the appropriate
- 13 committees of Congress a report containing the strategy
- 14 developed under subsection (a).

### 15 **"§ 71735. Collaboration**

- 16 "The Administration shall continue to develop first-
- 17 of-a-kind instruments that, once proved, can be
- 18 transitioned to other agencies for operations. Whenever re-
- 19 sponsibilities for the development of sensors or for meas-
- 20 urements are transferred to the Administration from an-
- 21 other agency, the Administration shall seek, to the extent
- 22 possible, to be reimbursed for the assumption of such re-
- 23 sponsibilities.

### "Subchapter IV—SPACE 1 **TECHNOLOGY** 2 3 "§ 71741. Space technology infusion "(a) Policy.—It is the policy of the United States 4 that the Administrator shall develop technologies to sup-5 port the Administration's core missions, as described in 6 7 section 2(3) of the National Aeronautics and Space Administration Authorization Act of 2010 (Public Law 111-8 267, 124 Stat. 2807), and support sustained investments 10 in early stage innovation, fundamental research, and tech-11 nologies to expand the boundaries of the national aero-12 space enterprise. 13 "(b) Propulsion Technologies.—A goal of propulsion technologies developed under subsection (a) shall 15 be to significantly reduce human travel time to Mars. "§ 71742. Space technology program 16 17 "(a) Space Technology Program Authorized.— 18 The Administrator shall conduct a space technology pro-19 gram (referred to in this section as the 'Program') to re-20 search and develop advanced space technologies that could deliver innovative solutions across the Administration's 22 space exploration and science missions. 23 "(b) Considerations.—In conducting the Program, the Administrator shall consider— 24

1	"(1) the recommendations of the National
2	Academies' review of the Administration's Space
3	Technology roadmaps and priorities; and
4	"(2) the applicable enabling aspects of the step-
5	ping stone approach to exploration under section
6	70504 of this title.
7	"(c) Requirements.—In conducting the Program,
8	the Administrator shall—
9	"(1) to the extent practicable, use a competitive
10	process to select research and development projects;
11	"(2) to the extent practicable and appropriate,
12	use small satellites and the Administration's sub-
13	orbital and ground-based platforms to demonstrate
14	space technology concepts and developments; and
15	"(3) as appropriate, partner with other Federal
16	agencies, universities, private industry, and foreign
17	countries.
18	"(d) Small Business Programs.—The Adminis-
19	trator shall organize and manage the Administration's
20	Small Business Innovation Research Program and Small
21	Business Technology Transfer Program within the Pro-
22	gram.
23	"(e) Nonduplication Certification.—The Ad-
24	ministrator shall submit a budget for each fiscal year, as
25	transmitted to Concress under section 1105(a) of title 31

- 1 that avoids duplication of projects, programs, or missions
- 2 conducted by the Program with other projects, programs,
- 3 or missions conducted by another office or directorate of
- 4 the Administration.
- 5 "(f) Collaboration, Coordination, and Align-
- 6 MENT.—The Administrator shall—
- 7 "(1) ensure that the Administration's projects,
- 8 programs, and activities in support of technology re-
- 9 search and development of advanced space tech-
- 10 nologies are fully coordinated and aligned;
- "(2) ensure that the results of the projects, pro-
- grams, and activities under paragraph (1) are
- shared and leveraged within the Administration; and
- 14 "(3) ensure that the organizational responsi-
- bility for research and development activities in sup-
- port of human space exploration not initiated as of
- March 21, 2017, is established on the basis of a
- 18 sound rationale.
- 19 "(g) Annual Report.—The Administrator shall in-
- 20 clude in the Administration's annual budget request for
- 21 each fiscal year the rationale for assigning organizational
- 22 responsibility for, in the year prior to the budget fiscal
- 23 year, each initiated project, program, and mission focused
- 24 on research and development of advanced technologies for
- 25 human space exploration.

1	"Subchapter V—MAXIMIZING
2	<b>EFFICIENCY</b>
3	"Part A-Administration Informa-
4	tion Technology and Cybersecu-
5	rity
6	"§ 71751. Information technology governance
7	"The Administrator shall, in a manner that reflects
8	the unique nature of the Administration's mission and ex-
9	pertise—
10	"(1) ensure the Administration Chief Informa-
11	tion Officer, mission directorates, and centers have
12	appropriate roles in the management, governance,
13	and oversight processes related to information tech-
14	nology operations and investments and information
15	security programs for the protection of Administra-
16	tion systems;
17	"(2) ensure the Administration Chief Informa-
18	tion Officer has the appropriate resources and in-
19	sight to oversee Administration information tech-
20	nology and information security operations and in-
21	vestments;
22	"(3) provide an information technology program
23	management framework to increase the efficiency
24	and effectiveness of information technology invest-

ments, including relying on metrics for identifying
and reducing potential duplication, waste, and cost;

"(4) improve the operational linkage between the Administration Chief Information Officer and each Administration mission directorate, center, and mission support office to ensure both Administration and mission needs are considered in Administrationwide 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 Administration 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 Administration Chief Information Officer should have a seat on any boards or councils described in paragraph (6).

3

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

# 1 "§ 71752. Information technology strategic plan

- 2 "(a) IN GENERAL.—Subject to subsection (b), the
- 3 Administrator shall develop an information technology
- 4 strategic plan to guide Administration information tech-
- 5 nology management and strategic objectives.
- 6 "(b) Requirements.—In developing the strategic
- 7 plan, the Administrator shall ensure that the strategic
- 8 plan addresses—
- 9 "(1) the deadline under section 306(a) of title
- 10 5; and
- 11 "(2) the requirements under section 3506 of
- 12 title 44.
- 13 "(c) Contents.—The strategic plan shall address,
- 14 in a manner that reflects the unique nature of the Admin-
- 15 istration's mission and expertise—
- 16 "(1) near- and long-term goals and objectives
- 17 for leveraging information technology;
- 18 "(2) a plan for how the Administration will
- submit to Congress a list of information technology
- 20 projects, including completion dates and risk levels
- in accordance with guidance from the Office of Man-
- agement and Budget;
- 23 "(3) an implementation overview for an Admin-
- istration-wide approach to information technology
- 25 investments and operations, including reducing bar-
- riers to cross-center collaboration;

- 1 "(4) coordination by the Administration Chief 2 Information Officer with centers and mission direc-3 torates to ensure that information technology poli-4 cies are effectively and efficiently implemented 5 across the Administration;
  - "(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 the Administration 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 Administration information and Administration information systems, including improving security control assessments and role-based security training of employees; and
  - "(7) submission by the Administration to Congress of information regarding high risk projects and cybersecurity risks.
- "(d) Congressional Oversight.—The Administrator shall submit to the appropriate committees of Congress the strategic plan under subsection (a) and any up-

24 dates to the strategic plan.

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

1	"§ 71753. Information security plan for cybersecurity
2	"(a) In General.—Not later than 1 year after
3	March 21, 2017, the Administrator shall implement the
4	information security plan developed under subsection (b)
5	and take such further actions as the Administrator con-
6	siders necessary to improve the information security sys-
7	tem in accordance with this section.
8	"(b) Information Security Plan.—Subject to
9	subsections (c) and (d), the Administrator shall develop
10	an Administration-wide information security plan to en-
11	hance information security for Administration information
12	and information infrastructure.
13	"(c) Requirements.—In developing the plan under
14	subsection (b), the Administrator shall ensure that the
15	plan—
16	"(1) reflects the unique nature of the Adminis-
17	tration's mission and expertise;
18	"(2) is informed by policies, standards, guide-
19	lines, and directives on information security required
20	for Federal agencies;
21	"(3) is consistent with the standards and guide-
22	lines under section 11331 of title 40; and
23	"(4) meets applicable National Institute of
24	Standards and Technology information security
25	standards and guidelines.
26	"(d) Contents.—The plan shall address—

1	"(1) an overview of the requirements of the in-
2	formation security system;
3	"(2) an Administration-wide risk management
4	framework for information security;
5	"(3) a description of the information security
6	system management controls and common controls
7	that are necessary to ensure compliance with infor-
8	mation security-related requirements;
9	"(4) an identification and assignment of roles
10	responsibilities, and management commitment for
11	information security at the Administration;
12	"(5) coordination among organizational entities
13	including between each center, facility, mission di-
14	rectorate, and mission support office, and among
15	Administration entities responsible for different as-
16	pects of information security;
17	"(6) the need to protect the information secu-
18	rity of mission-critical systems and activities and
19	high-impact and moderate-impact information sys-
20	tems; and
21	"(7) a schedule of frequent reviews and up-
22	dates, as necessary, of the plan.

1	"Part B—Collaboration Among Mis-
2	sion Directorates and Other
3	Matters
4	"§ 71761. Collaboration among mission directorates
5	"The Administrator shall encourage an interdiscipli-
6	nary approach among all Administration mission direc-
7	torates and divisions, whenever appropriate, for projects
8	or missions—
9	"(1) to improve coordination, and encourage
10	collaboration and early planning on scope;
11	"(2) to determine areas of overlap or alignment;
12	"(3) to find ways to leverage across divisional
13	perspectives to maximize outcomes; and
14	"(4) to be more efficient with resources and
15	funds.
16	"§ 71762. Administration launch capabilities collabo-
17	ration
18	"The Administrator shall pursue a strategy for acqui-
19	sition of crewed transportation services and non-crewed
20	launch services that continues to enhance communication,
21	collaboration, and coordination between the Launch Serv-
22	ices Program and the Commercial Crew Program.
23	"§ 71763. Education and outreach
24	"The Administrator shall continue engagement with
25	the public and education opportunities for students via all

1	the Administration's mission directorates to the maximum
2	extent practicable.
3	"§ 71764. Leveraging commercial satellite servicing
4	capabilities across mission directorates
5	"The Administrator shall—
6	"(1) identify orbital assets in both the Science
7	Mission Directorate and the Human Exploration
8	and Operations Mission Directorate that could ben-
9	efit from satellite servicing-related technologies; and
10	"(2) work across all Administration mission di-
11	rectorates to evaluate opportunities for the private
12	sector to perform such services or advance technical
13	capabilities by leveraging the technologies and tech-
14	niques developed by Administration programs and
15	other industry programs.
16	"§ 71765. Flight opportunities
17	"(a) Development of Payloads.—
18	"(1) In general.—In order to conduct nec-
19	essary research, the Administrator shall continue
20	and, as the Administrator considers appropriate, ex-
21	pand the development of technology payloads for—
22	"(A) scientific research; and
23	"(B) investigating new or improved capa-
24	bilities.

1	"(2) Funds.—For the purpose of carrying out
2	paragraph (1), the Administrator shall make funds
3	available for—
4	"(A) flight testing;
5	"(B) payload development; and
6	"(C) hardware related to subparagraphs
7	(A) and (B).
8	"(b) Reaffirmation of Policy.—Congress reaf-
9	firms that the Administrator should provide flight oppor-
10	tunities for payloads to microgravity environments and
11	suborbital altitudes as authorized by section 40905 of this
12	title.
13	"§ 71766. Space Act Agreements
14	"(a) Funded Space Act Agreements.—To the ex-
14 15	
15	
15	tent appropriate, the Administrator shall seek to maximize the value of contributions provided by other parties under
15 16 17	tent appropriate, the Administrator shall seek to maximize the value of contributions provided by other parties under
15 16 17	tent appropriate, the Administrator shall seek to maximize the value of contributions provided by other parties under a funded Space Act Agreement in order to advance the
15 16 17 18	tent appropriate, the Administrator shall seek to maximize the value of contributions provided by other parties under a funded Space Act Agreement in order to advance the Administration's mission.
15 16 17 18 19	tent appropriate, the Administrator shall seek to maximize the value of contributions provided by other parties under a funded Space Act Agreement in order to advance the Administration's mission.  "(b) Non-exclusivity.—
15 16 17 18 19 20	tent appropriate, the Administrator shall seek to maximize the value of contributions provided by other parties under a funded Space Act Agreement in order to advance the Administration's mission.  "(b) Non-exclusivity.—  "(1) In general.—The Administrator shall, to
15 16 17 18 19 20 21	tent appropriate, the Administrator shall seek to maximize the value of contributions provided by other parties under a funded Space Act Agreement in order to advance the Administration's mission.  "(b) Non-exclusivity.—  "(1) In general.—The Administrator shall, to the greatest extent practicable, issue each Space Act

1	"(B) in a manner that ensures all non-gov-
2	ernment parties have equal access to Adminis-
3	tration resources; and
4	"(C) exercising reasonable care not to re-
5	veal unique or proprietary information.
6	"(2) Exclusivity.—If the Administrator de-
7	termines an exclusive arrangement is necessary, the
8	Administrator shall, to the greatest extent prac-
9	ticable, issue the Space Act Agreement—
10	"(A) utilizing a competitive selection proc-
11	ess when exclusive arrangements are necessary;
12	and
13	"(B) pursuant to public announcements
14	when exclusive arrangements are necessary.
15	"(c) Transparency.—The Administrator shall pub-
16	licly disclose on the Administration's website and make
17	available in a searchable format each Space Act Agree-
18	ment, including an estimate of committed Administration
19	resources and the expected benefits to Administration ob-
20	jectives for each agreement, with appropriate redactions
21	for proprietary, sensitive, or classified information, not
22	later than 60 days after such agreement is signed by the
23	parties.
24	"(d) Annual Reports.—

1	"(1) Requirement.—Not later than 90 days
2	after the end of each fiscal year, the Administrator
3	shall submit to the appropriate committees of Con-
4	gress a report on the use of Space Act Agreement
5	authority by the Administration during the previous
6	fiscal year.
7	"(2) Contents.—The report shall include for
8	each Space Act Agreement in effect at the time of
9	the report—
10	"(A) an indication of whether the agree-
11	ment is a reimbursable, non-reimbursable, or
12	funded Space Act Agreement;
13	"(B) a description of—
14	"(i) the subject and terms;
15	"(ii) the parties;
16	"(iii) the responsible—
17	"(I) mission directorate;
18	"(II) center; or
19	"(III) headquarters element;
20	"(iv) the value;
21	"(v) the extent of the cost sharing
22	among Federal Government and non-Fed-
23	eral sources;
24	"(vi) the time period or schedule; and
25	"(vii) all milestones; and

1	"(C) an indication of whether the agree-
2	ment was renewed during the previous fiscal
3	year.
4	"(3) Anticipated agreements.—The report
5	shall include a list of all anticipated reimbursable,
6	non-reimbursable, and funded Space Act Agreements
7	for the upcoming fiscal year.
8	"(4) Cumulative program benefits.—The
9	report shall include, with respect to each Space Act
10	Agreement covered by the report, a summary of—
11	"(A) the technology areas in which re-
12	search projects were conducted under that
13	agreement;
14	"(B) the extent to which the use of that
15	agreement—
16	"(i) has contributed to a broadening
17	of the technology and industrial base avail-
18	able for meeting Administration needs; and
19	"(ii) has fostered within the tech-
20	nology and industrial base new relation-
21	ships and practices that support the
22	United States; and
23	"(C) the total amount of value received by
24	the Federal Government during the fiscal year
25	under that agreement.".

- 1 (2) CHAPTER HEADING TYPEFACE.—The chap2 ter heading of chapter 717 of title 51, United States
  3 Code, as added by paragraph (1), is amended so
  4 that the typeface of that chapter heading conforms
  5 to the typeface of other chapter headings in title 51,
  6 United States Code.
  - (3) Chapter table of contents Type-FACE.—The chapter table of contents of chapter 717 of title 51, United States Code, as added by paragraph (1), is amended so that the typeface of the subchapter headings and the typeface of the subchapter items conform to those appearing in other chapter table of contents of title 51.
    - (4) Subchapter Heading Typeface.—The subchapter headings for subchapters I through V of chapter 717 of title 51, United States Code, as added by paragraph (1), are amended so that the typeface of those subchapter headings conforms to the typeface of subchapter headings in other chapters of title 51, United States Code.

# (aa) Committee Name Change.—

(1) Section 20117(1) of title 51, United States Code, is amended by striking "Committee on Science and Technology" and inserting "Committee on Science, Space, and Technology".

1	(2) Section 311 of the National Aeronautics
2	and Space Administration Authorization Act of 2000
3	(Public Law 106–391, 51 U.S.C. 20143 note) is
4	amended—
5	(A) in subsection (a), by striking "Com-
6	mittee on Science" and inserting "Committee
7	on Science, Space, and Technology"; and
8	(B) in subsection (b), by striking "Com-
9	mittees on Science and Appropriations" and in-
10	serting "Committee on Science, Space, and
11	Technology and the Committee on Appropria-
12	tions".
13	(3) Section 30303(b) of title 51, United States
14	Code, is amended by striking "Committee on Science
15	and Technology" and inserting "Committee on
16	Science, Space, and Technology".
17	(4) Section 30305(c) (matter before paragraph
18	(1)) of title 51, United States Code, is amended by
19	striking "Committee on Science and Technology"
20	and inserting "Committee on Science, Space, and
21	Technology".
22	(5) Section 203(b) of the America COMPETES
23	Reauthorization Act of 2010 (Public Law 111–358,
24	51 U.S.C. note prec. 30501) is amended by striking
25	"Committee on Science and Technology" and insert-

1	ing "Committee on Science, Space, and Tech-
2	nology".
3	(6) Section 30501(a) of title 51, United States
4	Code, is amended by striking "Committee on Science
5	and Technology" and inserting "Committee on
6	Science, Space, and Technology".
7	(7) Section 30502 of title 51, United States
8	Code, is amended—
9	(A) in subsection (a), by striking "Com-
10	mittee on Science and Technology" and insert-
11	ing "Committee on Science, Space, and Tech-
12	nology"; and
13	(B) in subsection (d) (matter before para-
14	graph (1)), by striking "Committee on Science
15	and Technology" and inserting "Committee on
16	Science, Space, and Technology".
17	(8) Section 30503(c) (matter before paragraph
18	(1)) of title 51, United States Code, is amended by
19	striking "Committee on Science and Technology"
20	and inserting "Committee on Science, Space, and
21	Technology".
22	(9) Section 102 of the National Aeronautics
23	and Space Administration Authorization Act of 2005
24	(Public Law 109–155, 51 U.S.C. note prec. 49901
25	(formerly 40901)) is amended by striking "Com-

1	mittee on Science" and inserting "Committee on
2	Science, Space, and Technology" in the following
3	provisions:
4	(A) Subsection $(a)(2)(A)$ .
5	(B) Subsection $(a)(2)(B)$ .
6	(C) Subsection (b) (matter before para-
7	graph (1)).
8	(D) Subsection $(c)(3)$ .
9	(E) Subsection (d).
10	(F) Subsection (e)(2) (matter before sub-
11	paragraph (A)).
12	(10) Section 49906(b) (matter before para-
13	graph (1)) of title 51, United States Code (as redes-
14	ignated by subsection (n)(3)), is amended by strik-
15	ing "Committee on Science and Technology" and in-
16	serting "Committee on Science, Space, and Tech-
17	nology".
18	(11) Section 50134(b)(1) (matter before sub-
19	paragraph (A)) of title 51, United States Code, is
20	amended by striking "Committee on Science and
21	Technology" and inserting "Committee on Science,
22	Space, and Technology".
23	(12) Section 50505(a) of title 51, United States
24	Code, is amended by striking "Committee on Science

- and Technology" and inserting "Committee on
  Science, Space, and Technology".
- 3 (13) Section 50703 of title 51, United States
  4 Code, is amended by striking "Committee on Science
  5 and Technology" and inserting "Committee on
  6 Science, Space, and Technology".
- (14) Section 621(b) (matter before paragraph (1)) of the National Aeronautics and Space Administration Authorization Act of 2008 (Public Law 110–422, 51 U.S.C. 50903 note) is amended by striking "Committee on Science and Technology" and inserting "Committee on Science, Space, and Technology".
  - (15) Section 50906(a) of title 51, United States
    Code, is amended by striking "Committee on
    Science" and inserting "Committee on Science,
    Space, and Technology".
- 18 (16) Section 50914(d)(1) of title 51, United 19 States Code, is amended by striking "Committee on 20 Science" and inserting "Committee on Science, 21 Space, and Technology".
  - (17) Section 60505(b) of title 51, United States Code, is amended by striking "Committee on Science and Technology" and inserting "Committee on Science, Space, and Technology".

14

15

16

17

22

23

24

25

1	(18) Section 502 of the National Aeronautics
2	and Space Administration Authorization Act of 2005
3	(Public Law 109–155, 51 U.S.C. 70501 note) is
4	amended—
5	(A) in subsection (b) (matter before para-
6	graph (1)), by striking "Committee on Science"
7	and inserting "Committee on Science, Space,
8	and Technology'; and
9	(B) in subsection (c), by striking "Com-
10	mittee on Science" and inserting "Committee
11	on Science, Space, and Technology".
12	(19) Section 313(c) of the National Aeronautics
13	and Space Administration Authorization Act of 2000
14	(Public Law 106–391, 51 U.S.C. 70506 note) is
15	amended by striking "Committee on Science" and
16	inserting "Committee on Science, Space, and Tech-
17	nology".
18	(20) Section 203(b) of the National Aeronautics
19	and Space Administration Authorization Act of 2000
20	(Public Law 106–391, 51 U.S.C. 70901 note) is
21	amended by striking "Committee on Science" and
22	inserting "Committee on Science, Space, and Tech-
23	nology".
24	(21) Section 205(b) (matter before paragraph
25	(1)) of the National Aeronautics and Space Adminis-

- tration Authorization Act of 2000 (Public Law 106– 391, 51 U.S.C. 70901 note) is amended by striking
- 3 "Committee on Science" and inserting "Committee
- 4 on Science, Space, and Technology".

#### 5 SEC. 4. TECHNICAL AMENDMENTS.

- 6 (a) TITLE 5, UNITED STATES CODE.—Section 914
- 7 of the Ronald W. Reagan National Defense Authorization
- 8 Act for Fiscal Year 2005 (Public Law 108–375, 5 U.S.C.
- 9 552 note) is amended—
- 10 (1) in subsection (b)(1)(B), by striking "the
- 11 Land Remote Sensing Policy Act of 1992 (15 U.S.C.
- 12 5601 et seq.);" and inserting "chapter 601 of title
- 13 51, United States Code;"; and
- 14 (2) in subsection (e), by striking "section 3 of
- the Land Remote Sensing Policy Act of 1992 (15
- 16 U.S.C. 5602)." and inserting "section 60101 of title
- 17 51, United States Code.".
- 18 (b) TITLE 28, UNITED STATES CODE.—
- 19 (1) The chapter table of contents of chapter
- 20 123 of title 28, United States Code, is amended in
- the item for section 1932 (relating to revocation of
- earned release credit) by striking "1932" and insert-
- 23 ing "1933".

1	(2) Section 1932 of title 28, United States
2	Code (relating to revocation of earned release cred-
3	it), is redesignated as section 1933 of that title.
4	(c) Title 31, United States Code.—Section 1(4)
5	of Public Law 107–74 (31 U.S.C. 1113 note), is amended
6	by striking "Section 206 of the National Aeronautics and
7	Space Act of 1958 (42 U.S.C. 2476)." and inserting "Sec-
8	tion 20116 of title 51, United States Code.".
9	(d) TITLE 36, UNITED STATES CODE.—The title
10	table of contents of title 36, United States Code, is amend-
11	ed—
12	(1) in the item for chapter 23, by striking
13	"Council" and inserting "Museum"; and
14	(2) in the item for chapter 307, by striking
15	"For" and inserting "for".
16	(e) TITLE 42, UNITED STATES CODE.—
17	(1) Section 602(b)(1) of the National Aero-
18	nautics and Space Administration Authorization Act
19	of 2010 (42 U.S.C. 18362(b)(1)) is amended by
20	striking "section 302 of this Act." and inserting
21	"section 71521 of title 51, United States Code.".
22	(2) Section 603 of the National Aeronautics
23	and Space Administration Authorization Act of 2010
24	(42 U.S.C. 18363) is amended—

1	(A) in subsection (a), by striking "(42
2	U.S.C. 17761(a))," and inserting "(Public Law
3	110–422, 51 U.S.C. 70501 note),"; and
4	(B) in subsection (b), by striking "(42
5	U.S.C. 17761(a))." and inserting "(Public Law
6	110–422, 51 U.S.C. 70501 note).".
7	(f) TITLE 51, UNITED STATES CODE.—
8	(1) Section 10802 of the National Aeronautics
9	and Space Administration Authorization Act of 2022
10	(Public Law 117–167, 51 U.S.C. 10101 note) is
11	amended—
12	(A) in paragraph (11), by striking "section
13	303 of the National Aeronautics and Space Ad-
14	ministration Authorization Act of 2010 (42
15	U.S.C. 18323)." and inserting "section 71522
16	of title 51, United States Code."; and
17	(B) in paragraph (14), by striking "section
18	302 of the National Aeronautics and Space Ad-
19	ministration Act of 2010 (42 U.S.C. 18322)."
20	and inserting "section 71521 of title 51, United
21	States Code.".
22	(2) Section 2 of the National Aeronautics and
23	Space Administration Transition Authorization Act
24	of 2017 (Public Law 115–10, 51 U.S.C. 10101
25	note) is amended—

1	(A) in paragraph (8), by striking "section
2	504(a) of the National Aeronautics and Space
3	Administration Authorization Act of 2010 (42
4	U.S.C. 18354(a))." and inserting "section
5	70911(a) of title 51, United States Code.";
6	(B) in paragraph (10), by striking "section
7	303 of the National Aeronautics and Space Ad-
8	ministration Authorization Act of 2010 (42
9	U.S.C. 18323)." and inserting "section 71522
10	of title 51, United States Code."; and
11	(C) in paragraph (11), by striking "section
12	3 of the National Aeronautics and Space Ad-
13	ministration Authorization Act of 2010 (42
14	U.S.C. 18302)." and inserting "section 71501
15	of title 51, United States Code.".
16	(3) Section 10812 of the National Aeronautics
17	and Space Administration Authorization Act of 2022
18	(Public Law 117–167, 51 U.S.C. 20301 note) is
19	amended—
20	(A) in subsection (e)(1), by striking "sec-
21	tion 302(c)(2) of the National Aeronautics and
22	Space Administration Authorization Act of
23	2010 (42 U.S.C. 18322(c)(2))," and inserting
24	"section 71521(c)(2) of title 51, United States
25	Code,"; and

1	(B) in subsection (f), by striking "section
2	302(c)(3) of the National Aeronautics and
3	Space Administration Authorization Act of
4	2010 (42 U.S.C. 18322(c)(3))," and inserting
5	"section 71521(c)(3) of title 51, United States
6	Code,".
7	(4) Section 421 of the National Aeronautics
8	and Space Administration Transition Authorization
9	Act of 2017 (Public Law 115–10, 51 U.S.C. 20301
10	note) is amended—
11	(A) in subsection (e)—
12	(i) in paragraph (1), by striking "sec-
13	tion 303(b)(3) of the National Aeronautics
14	and Space Administration Authorization
15	Act of 2010 (42 U.S.C. 18323(b)(3))."
16	and inserting "section 71522(b)(3) of title
17	51, United States Code.";
18	(ii) in paragraph (2)(A), by striking
19	"section 303(b)(3) of that Act (42 U.S.C.
20	18323(b)(3));" and inserting "section
21	71522(b)(3) of title 51, United States
22	Code;"; and
23	(iii) in subparagraphs (C) and (D) of
24	paragraph (2), by striking "section
25	303(b)(3) of that Act (42 U.S.C.

1	18323(b)(3))" and inserting "section
2	71522(b)(3) of title 51, United States
3	Code,"; and
4	(B) in subsection (h)(1), by striking "sec-
5	tion 302(e) of the National Aeronautics and
6	Space Administration Authorization Act of
7	2010 (42 U.S.C. 18322(c))." and inserting
8	"section 71521(c) of title 51, United States
9	Code.".
10	(5) Section 20302(c) of title 51, United States
11	Code, is amended—
12	(A) in paragraph (1), by striking "section
13	303 of the National Aeronautics and Space Ad-
14	ministration Authorization Act of 2010 (42
15	U.S.C. 18323)." and inserting "section 71522
16	of this title."; and
17	(B) in paragraph (2)—
18	(i) by striking "means has the mean-
19	ing" and inserting "has the meaning"; and
20	(ii) by striking "section 3 of the Na-
21	tional Aeronautics and Space Administra-
22	tion Authorization Act of 2010 (42 U.S.C.
23	18302)." and inserting "section 71501 of
24	this title.".

1	(6) Section 10811 of the National Aeronautics
2	and Space Administration Authorization Act of 2022
3	(Public Law 117–167, 51 U.S.C. 20302 note) is
4	amended—
5	(A) in subsection (a)(2)(A), by striking
6	"section 432 of the National Aeronautics and
7	Space Administration Transition Authorization
8	Act of 2017 (Public Law 115–10; 51 U.S.C.
9	20302 note);" and inserting "section 71721 of
10	title 51, United States Code;"; and
11	(B) in subsection (b)(2)(C)(ii), by striking
12	"section 432 of the National Aeronautics and
13	Space Administration Transition Authorization
14	Act of 2017 (Public Law 115–10; 51 U.S.C.
15	20302 note);" and inserting "section 71721 of
16	title 51, United States Code;".
17	(7) Section 837(a)(4) of the National Aero-
18	nautics and Space Administration Transition Au-
19	thorization Act of 2017 (Public Law 115–10, 51
20	U.S.C. 31502 note) is amended by striking "section
21	432 of this Act," and inserting "section 71721 of
22	title 51, United States Code,".
23	(8) Section 202 of the National Space Grant
24	College and Fellowship Act (Public Law 100–147,
25	title II, 51 U.S.C. 40301 note) is amended—

1	(A) by striking "The Congress finds" and
2	inserting "(a) Congress finds"; and
3	(B) by adding at the end the following:
4	"(b) The definitions in section 40302 of title 51,
5	United States Code, apply in this section.".
6	(9) Section 50111(c)(2) of title 51, United
7	States Code, is amended—
8	(A) in subparagraph (E), by striking "sec-
9	tion 301(b)(2) of the National Aeronautics and
10	Space Administration Transition Authorization
11	Act of 2017;" and inserting "section 70912(2)
12	of this title;";
13	(B) in subparagraph (G), by striking "sec-
14	tion 432 of the National Aeronautics and Space
15	Administration Transition Authorization Act of
16	2017;" and inserting "section 71721 of this
17	title;"; and
18	(C) in subparagraph (J) (matter before
19	clause (i)), by striking "section 503 of the Na-
20	tional Aeronautics and Space Administration
21	Authorization Act of 2010 (42 U.S.C. 18353),"
22	and inserting "section 70910 of this title,".
23	(10) Section 302(c)(1) of the National Aero-
24	nautics and Space Administration Transition Au-
25	thorization Act of 2017 (Public Law 115–10, 51

- 1 U.S.C. 50111 note) is amended by striking "(42
- 2 U.S.C. 18301 et seq.);" and inserting "(Public Law
- 3 111–267, 124 Stat. 2805);".
- 4 (11) Section 303(b)(2) of the National Aero-
- 5 nautics and Space Administration Transition Au-
- 6 thorization Act of 2017 (Public Law 115–10, 51
- 7 U.S.C. 50111 note) is amended by striking "section
- 8 432 of this Act." and inserting "section 71721 of
- 9 title 51, United States Code.".
- 10 (12) Section 501 of the National Aeronautics
- and Space Administration Authorization Act, Fiscal
- 12 Year 1993 (Public Law 102–588, 51 U.S.C. 50501
- note) is amended by striking "The Congress finds
- that—" and inserting the following:
- 15 "(a) Definitions.—The definitions in section 50501
- 16 of title 51, United States Code, apply in this section.
- "(b) In General.—Congress finds that—".
- 18 (13) Section 70104 of title 51, United States
- 19 Code, is amended by striking "section 302 of the
- National Aeronautics and Space Administration Au-
- 21 thorization Act of 2010 (42 U.S.C. 18322)." and in-
- serting "section 71521 of this title.".
- 23 (14) Section 70501(a)(2) of title 51, United
- States Code, is amended by striking "section 421(f)
- of the National Aeronautics and Space Administra-

1	tion Transition Authorization Act of 2017" and in-
2	serting "section 71711(c) of this title".
3	(15) Section 70504(a) of title 51, United States
4	Code, is amended—
5	(A) in paragraph (1), by striking "section
6	202(b)(5) of the National Aeronautics and
7	Space Administration Authorization Act of
8	2010 (42 U.S.C. 18312(b)(5));" and inserting
9	"section 71512(b)(5) of this title;"; and
10	(B) in paragraph (2), by striking "section
11	432 of the National Aeronautics and Space Ad-
12	ministration Transition Authorization Act of
13	2017." and inserting "section 71721 of this
14	title.".
15	SEC. 5. TRANSITIONAL AND SAVINGS PROVISIONS.
16	(a) Definitions.—In this section:
17	(1) RESTATED PROVISION.—The term "restated
18	provision" means a provision of title 51, United
19	States Code, that is enacted by section 3.
20	(2) Source Provision.—The term "source
21	provision" means a provision of law that is replaced
22	by a restated provision.
23	(b) CUTOFF DATE.—The restated provisions replace
24	certain provisions of law enacted on or before April 10
25	2025. If a law enacted after that date amends or repeals

- 1 a source provision, that law is deemed to amend or repeal,
- 2 as the case may be, the corresponding restated provision.
- 3 If a law enacted after that date is otherwise inconsistent
- 4 with a restated provision or a provision of this Act, that
- 5 law supersedes the restated provision or provision of this
- 6 Act to the extent of the inconsistency.
- 7 (c) Original Date of Enactment Unchanged.—
- 8 A restated provision is deemed to have been enacted on
- 9 the date of enactment of the corresponding source provi-
- 10 sion.
- 11 (d) References to Restated Provisions.—A
- 12 reference to a restated provision is deemed to refer to the
- 13 corresponding source provision.
- 14 (e) References to Source Provisions.—A ref-
- 15 erence to a source provision, including a reference in a
- 16 regulation, order, or other law, is deemed to refer to the
- 17 corresponding restated provision.
- 18 (f) REGULATIONS, ORDERS, AND OTHER ADMINIS-
- 19 TRATIVE ACTIONS.—A regulation, order, or other admin-
- 20 istrative action in effect under a source provision con-
- 21 tinues in effect under the corresponding restated provi-
- 22 sion.
- 23 (g) Actions Taken and Offenses Committed.—
- 24 An action taken or an offense committed under a source

- 1 provision is deemed to have been taken or committed
- 2 under the corresponding restated provision.

### 3 SEC. 6. REPEALS.

- 4 (a) In General.—The provisions of law listed in
- 5 subsection (b) are repealed, except with respect to rights
- 6 and duties that matured, penalties that were incurred, or
- 7 proceedings that were begun before the date of enactment
- 8 of this Act.
- 9 (b) Schedule of Laws Repealed.—The repealed
- 10 provisions referred to in subsection (a) are listed in the

### 11 table below.

Schedule of Laws Repealed

Act	Section	United States Code Former Classification
National Aeronautics and Space Administration Authorization Act, Fiscal Year 1989 (Public Law 100–685)	104	31 U.S.C. 1105 note
National Aeronautics and Space Administration Authorization Act, Fiscal Year 1993 (Public Law 102–588)	210	51 U.S.C. 30103 note
National Aeronautics and Space Administration Authorization Act of 2010 (Public Law 111–267)	201	42 U.S.C. 18311
	202	42 U.S.C. 18312
	301(b)	42 U.S.C. 18321(b)
	302	42 U.S.C. 18322
	303	42 U.S.C. 18323
	304	42 U.S.C. 18324
	305	42 U.S.C. 18325
	308	42 U.S.C. 18326
	401	42 U.S.C. 18341
	403	42 U.S.C. 18342
	501	42 U.S.C. 18351
	502	42 U.S.C. 18352
	503(a)	42 U.S.C. 18353(a)
	503(d)	42 U.S.C. 18353(d)
	503(e)	42 U.S.C. 18353(e)
	503(f)	42 U.S.C. 18353(f)
	504	42 U.S.C. 18354
	702	42 U.S.C. 18371
	703	42 U.S.C. 18372
	704	42 U.S.C. 18373
	706	42 U.S.C. 18374
	801	42 U.S.C. 18381
	802(b) through (e)	42 U.S.C. 18382(b) through (e)
	804	42 U.S.C. 18383
	805	42 U.S.C. 18384
	806(b), (e)	42 U.S.C. 18385(b), (c)
	807	42 U.S.C. 18386
	808	42 U.S.C. 18387

137 Schedule of Laws Repealed—Continued

Aet	Section	United States Code Former Classification
	902	42 U.S.C. 18401
	903	42 U.S.C. 18402
	904	42 U.S.C. 18403
	906	42 U.S.C. 18404
	907	42 U.S.C. 18405
	1202(b)	42 U.S.C. 18441(b)
	1203(b)	42 U.S.C. 18442(b)
	1206	42 U.S.C. 18444
	1207	42 U.S.C. 18445
America COMPETES Reauthoriza-	202(b)	51 U.S.C. note prec. 40901
tion Act of 2010 (Public Law 111–358)		
	203(e)	51 U.S.C. note prec. 30501
	204(b)	51 U.S.C. 20303 note
National Defense Authorization Act	913(a), (b)	51 U.S.C. 30701 note
for Fiscal Year 2013 (Public Law		
112-239)		
Science Appropriations Act, 2013	(1st, 2d provisos under heading	51 U.S.C. 20145 note
(Public Law 113–6, div. B, title	"CONSTRUCTION AND ENVIRON-	
III)	MENTAL COMPLIANCE AND RES-	
***/	TORATION", at 127 Stat. 263)	
Inspiring the Next Space Pioneers,	3	51 U.S.C. note prec. 40901
Innovators, Researchers, and Ex-	"	91 0.5.0. note prec. 40301
plorers (INSPIRE) Women Act		
(Public Law 115–7)	2010)	
National Aeronautics and Space Ad-	301(b)	51 U.S.C. 50111 note
ministration Transition Authoriza-		
tion Act of 2017 (Public Law		
115–10)		
	301(e)	42 U.S.C. 18351, 51 U.S.C. 5011
		note
	302(d)	42 U.S.C. 18311, 51 U.S.C. 5011
		note
	302(e)	51 U.S.C. 50111 note
	302(f)	42 U.S.C. 18341, 51 U.S.C. 5011
		note
	302(g)	51 U.S.C. 50111 note
	302(h)(2)	51 U.S.C. 50111 note
	421(b)(2)	51 U.S.C. 20301 note
	421(d)	51 U.S.C. 20301 note
	421(f)	51 U.S.C. 20301 note
	421(g)	51 U.S.C. 20301 note
	432(b)	51 U.S.C. 20302 note
	501(b)	51 U.S.C. 20301 note
	502(b)	51 U.S.C. 20301 note
	508	51 U.S.C. 20301 note
	509	51 U.S.C. 20301 note
	517	51 U.S.C. 20113 note
	701(e)	51 U.S.C. 20301 note
	701(d)	51 U.S.C. 20301 note
	701(d) 702(a)	51 U.S.C. 20301 note
	702(a) 702(b)	51 U.S.C. 20301 note
	702(b) 702(c)	51 U.S.C. 20301 note
		51 U.S.C. 20301 note 51 U.S.C. 20301 note
	702(d) 702(e)	51 U.S.C. 20301 note 51 U.S.C. 20301 note
	702(e) 702(f)(1)	l .
	702(f)(1) 702(h)	51 U.S.C. 20301 note
	702(h)	51 U.S.C. 20301 note
	811(a)	51 U.S.C. 20111 note
	812	51 U.S.C. 20111 note
	813(b)	51 U.S.C. 20111 note
	821	51 U.S.C. 20111 note
	822(e)	51 U.S.C. 50131 note
	824(b)(1)	51 U.S.C. note prec. 40901
	825(c)	51 U.S.C. 50131 note
	826	51 U.S.C. 70102 note
	837(b)	51 U.S.C. 31502 note
	837(c)	51 U.S.C. 31502 note
	837(d)	51 U.S.C. 31502 note
	837(e)	51 U.S.C. 31502 note

138 Schedule of Laws Repealed—Continued

Act	Section	United States Code Former Classification
Women in Aerospace Education Act (Public Law 115–303) William M. (Mac) Thornberry Na- tional Defense Authorization Act for Fiscal Year 2021 (Public Law 116–283)	841(e) 841(d) 841(e) 3	51 U.S.C. 20113 note 51 U.S.C. 20113 note 51 U.S.C. 20113 note 51 U.S.C. note prec. 40901 51 U.S.C. note prec. 40901

 $\bigcirc$