

49 USC Ch. 448: UNMANNED AIRCRAFT SYSTEMS**From Title 49—TRANSPORTATION**

SUBTITLE VII—AVIATION PROGRAMS

PART A—AIR COMMERCE AND SAFETY

subpart iii—safety

CHAPTER 448—UNMANNED AIRCRAFT SYSTEMS

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¹ *So in original. Does not conform to section catchline.*

§44801. Definitions

In this chapter, the following definitions apply:

- (1) **ACTIVELY TETHERED UNMANNED AIRCRAFT SYSTEM.**—The term "actively tethered unmanned aircraft system" means an unmanned aircraft system in which the unmanned aircraft component—
- (A) weighs 4.4 pounds or less, including payload but not including the tether;
 - (B) is physically attached to a ground station with a taut, appropriately load-rated tether that provides continuous power to the unmanned aircraft and is unlikely to be separated from the unmanned aircraft; and
 - (C) is controlled and retrieved by such ground station through physical manipulation of the tether.
- (2) **APPROPRIATE COMMITTEES OF CONGRESS.**—The term "appropriate committees of Congress" means the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives.
- (3) **ARCTIC.**—The term "Arctic" means the United States zone of the Chukchi Sea, Beaufort Sea, and Bering Sea north of the Aleutian chain.
- (4) **CERTIFICATE OF WAIVER; CERTIFICATE OF AUTHORIZATION.**—The terms "certificate of waiver" and "certificate of authorization" mean a Federal Aviation Administration grant of approval for a specific flight operation.
- (5) **COUNTER-UAS SYSTEM.**—The term "counter-UAS system" means a system or device capable of lawfully and safely disabling, disrupting, or seizing control of an unmanned aircraft or unmanned aircraft system.
- (6) **PERMANENT AREAS.**—The term "permanent areas" means areas on land or water that provide for launch, recovery, and operation of small unmanned aircraft.
- (7) **PUBLIC UNMANNED AIRCRAFT SYSTEM.**—The term "public unmanned aircraft system" means an unmanned aircraft system that meets the qualifications and conditions required for operation of a public aircraft.
- (8) **SENSE AND AVOID CAPABILITY.**—The term "sense and avoid capability" means the capability of an unmanned aircraft to remain a safe distance from and to avoid collisions with other airborne aircraft, structures on the ground, and other objects.
- (9) **SMALL UNMANNED AIRCRAFT.**—The term "small unmanned aircraft" means an unmanned aircraft weighing less than 55 pounds, including the weight of anything attached to or carried by the aircraft.
- (10) **TEST RANGE.**—The term "test range" means a defined geographic area where research and development are conducted as authorized by the Administrator of the Federal Aviation Administration, and includes any of the 6 test

ranges established by the Administrator under section 332(c) of the FAA Modernization and Reform Act of 2012 (49 U.S.C. 40101 note), as in effect on the day before the date of enactment of the FAA Reauthorization Act of 2018, and any public entity authorized by the Federal Aviation Administration as an unmanned aircraft system flight test center before January 1, 2009.

(11) **UNMANNED AIRCRAFT.**—The term "unmanned aircraft" means an aircraft that is operated without the possibility of direct human intervention from within or on the aircraft.

(12) **UNMANNED AIRCRAFT SYSTEM.**—The term "unmanned aircraft system" means an unmanned aircraft and associated elements (including communication links and the components that control the unmanned aircraft) that are required for the operator to operate safely and efficiently in the national airspace system.

(13) **UTM.**—The term "UTM" means an unmanned aircraft system traffic management system or service."

(Added Pub. L. 115–254, div. B, title III, §341(a), Oct. 5, 2018, 132 Stat. 3284.)

REFERENCES IN TEXT

Section 332(c) of the FAA Modernization and Reform Act of 2012 (49 U.S.C. 40101 note), as in effect on the day before the date of enactment of the FAA Reauthorization Act of 2018, referred to in par. (10), means section 332(c) of Pub. L. 112–95, as in effect on the day before the date of enactment of Pub. L. 115–254, which was approved Oct. 5, 2018. Section 332 of Pub. L. 112–95 was set out in a note under section 40101 of this title, prior to repeal by Pub. L. 115–254, div. B, title III, §341(b)(2), Oct. 5, 2018, 132 Stat. 3287. The remainder of the note comprised of subtitle B of title III of Pub. L. 112–95 was transferred and is set out under section 44802 of this title.

UNMANNED AIRCRAFT SYSTEMS PRIVACY POLICY

Pub. L. 115–254, div. B, title III, §357, Oct. 5, 2018, 132 Stat. 3305, provided that: "It is the policy of the United States that the operation of any unmanned aircraft or unmanned aircraft system shall be carried out in a manner that respects and protects personal privacy consistent with the United States Constitution and Federal, State, and local law."

STRATEGY FOR RESPONDING TO PUBLIC SAFETY THREATS AND ENFORCEMENT UTILITY OF UNMANNED AIRCRAFT SYSTEMS

Pub. L. 115–254, div. B, title III, §366, Oct. 5, 2018, 132 Stat. 3310, provided that:

"(a) **IN GENERAL.**—Not later than 1 year after the date of enactment of this Act [Oct. 5, 2018], the Administrator of the Federal Aviation Administration shall develop a comprehensive strategy to provide outreach to State and local governments and provide guidance for local law enforcement agencies and first responders with respect to—

"(1) how to identify and respond to public safety threats posed by unmanned aircraft systems; and

"(2) how to identify and take advantage of opportunities to use unmanned aircraft systems to enhance the effectiveness of local law enforcement agencies and first responders.

"(b) **RESOURCES.**—Not later than 180 days after the date of enactment of this Act, the Administrator shall establish a publicly available Internet website that contains resources for State and local law enforcement agencies and first responders seeking—

"(1) to respond to public safety threats posed by unmanned aircraft systems; and

"(2) to identify and take advantage of opportunities to use unmanned aircraft systems to enhance the effectiveness of local law enforcement agencies and public safety response efforts.

"(c) **UNMANNED AIRCRAFT SYSTEM DEFINED.**—In this section, the term 'unmanned aircraft system' has the meaning given that term in section 44801 of title 49, United States Code, as added by this Act."

FEDERAL TRADE COMMISSION AUTHORITY

Pub. L. 115–254, div. B, title III, §375, Oct. 5, 2018, 132 Stat. 3314, provided that:

"(a) **IN GENERAL.**—A violation of a privacy policy by a person that uses an unmanned aircraft system for compensation or hire, or in the furtherance of a business enterprise, in the national airspace system shall be an unfair and deceptive practice in violation of section 5(a) of the Federal Trade Commission Act (15 U.S.C. 45(a)).

"(b) **DEFINITIONS.**—In this section, the terms 'unmanned aircraft' and 'unmanned aircraft system' have the meanings given those terms in section 44801 of title 49, United States Code."

COMMERCIAL AND GOVERNMENTAL OPERATORS

Pub. L. 115–254, div. B, title III, §379, Oct. 5, 2018, 132 Stat. 3318, provided that:

"(a) **IN GENERAL.**—Not later than 270 days after the date of enactment of this Act [Oct. 5, 2018], the Administrator [of the Federal Aviation Administration] shall, to the extent practicable and consistent with applicable law, make available in a single location on the website of the Department of Transportation:

"(1) Any certificate of waiver or authorization issued by the Administration to Federal, State, tribal or local governments for the operation of unmanned aircraft systems within 30 days of issuance of such certificate of waiver or authorization.

"(2) A spreadsheet of UAS registrations, including the city, state [probably should be "State"], and zip code of each registered drone owner, on its website that is updated once per quarter each calendar year.

"(3) Summary descriptions and general purposes of public unmanned aircraft operations, including the locations where such unmanned aircraft may generally operate.

"(4) Summary descriptions of common civil unmanned aircraft operations.

"(5) The expiration date of any authorization of public or civil unmanned aircraft operations.

"(6) Links to websites of State agencies that enforce any applicable privacy laws.

"(7) For any unmanned aircraft system, except with respect to any operation protected by the First Amendment to the Constitution of the United States, that will collect personally identifiable information about individuals, including the use of facial recognition—

"(A) the circumstance under which the system will be used;

"(B) the specific kinds of personally identifiable information that the system will collect about individuals; and

"(C) how the information referred to in subparagraph (B), and the conclusions drawn from such information, will be used, disclosed, and otherwise handled, including—

"(i) how the collection or retention of such information that is unrelated to the specific use will be minimized;

"(ii) under what circumstances such information might be sold, leased, or otherwise provided to third parties;

"(iii) the period during which such information will be retained;

"(iv) when and how such information, including information no longer relevant to the specified use, will be destroyed; and

"(v) steps that will be used to protect against the unauthorized disclosure of any information or data, such as the use of encryption methods and other security features.

"(8) With respect to public unmanned aircraft systems—

"(A) the locations where the unmanned aircraft system will operate;

"(B) the time during which the unmanned aircraft system will operate;

"(C) the general purpose of the flight; and

"(D) the technical capabilities that the unmanned aircraft system possesses.

"(b) EXCEPTIONS.—The Administrator shall not disclose information pursuant to subsection (a) if the Administrator determines that the release of such information—

"(1) is not applicable;

"(2) is not practicable, including when the information is not available to the Administrator;

"(3) is not in compliance with applicable law;

"(4) would compromise national defense, homeland security or law enforcement activity;

"(5) would be withheld pursuant to an exception of the [sic] section 552 of title 5, United States Code (commonly known as the 'Freedom of Information Act'); or

"(6) is otherwise contrary to the public interest.

"(c) SUNSET.—This section will cease to be effective on the date that is the earlier of—

"(1) the date of publication of a Notice of Proposed Rulemaking or guidance regarding remote identification standards under section 2202 of the FAA Extension, Safety, and Security Act of 2016 (Public Law 114–190; 130 Stat. 615 [629]) [49 U.S.C. 44802 note]; or

"(2) September 30, 2023."

§44802. Integration of civil unmanned aircraft systems into national airspace system

(a) REQUIRED PLANNING FOR INTEGRATION.—

(1) COMPREHENSIVE PLAN.—Not later than November 10, 2012,¹ the Secretary of Transportation, in consultation with representatives of the aviation industry, Federal agencies that employ unmanned aircraft systems technology in the national airspace system, and the unmanned aircraft systems industry, shall develop a comprehensive plan to safely accelerate the integration of civil unmanned aircraft systems into the national airspace system.

(2) CONTENTS OF PLAN.—The plan required under paragraph (1) shall contain, at a minimum, recommendations or projections on—

(A) the rulemaking to be conducted under subsection (b), with specific recommendations on how the rulemaking will—

- (i) define the acceptable standards for operation and certification of civil unmanned aircraft systems;
- (ii) ensure that any civil unmanned aircraft system includes a sense-and-avoid capability; and
- (iii) establish standards and requirements for the operator and pilot of a civil unmanned aircraft system, including standards and requirements for registration and licensing;

- (B) the best methods to enhance the technologies and subsystems necessary to achieve the safe and routine operation of civil unmanned aircraft systems in the national airspace system;
- (C) a phased-in approach to the integration of civil unmanned aircraft systems into the national airspace system;
- (D) a timeline for the phased-in approach described under subparagraph (C);
- (E) creation of a safe airspace designation for cooperative manned and unmanned flight operations in the national airspace system;
- (F) establishment of a process to develop certification, flight standards, and air traffic requirements for civil unmanned aircraft systems at test ranges where such systems are subject to testing;
- (G) the best methods to ensure the safe operation of civil unmanned aircraft systems and public unmanned aircraft systems simultaneously in the national airspace system; and
- (H) incorporation of the plan into the annual NextGen Implementation Plan document (or any successor document) of the Federal Aviation Administration.

(3) **DEADLINE.**—The plan required under paragraph (1) shall provide for the safe integration of civil unmanned aircraft systems into the national airspace system as soon as practicable, but not later than September 30, 2015.¹

(4) **REPORT TO CONGRESS.**—Not later than February 14, 2013,¹ the Secretary shall submit to Congress a copy of the plan required under paragraph (1).

(5) **ROADMAP.**—Not later than February 14, 2013,¹ the Secretary shall approve and make available in print and on the Administration's internet website a 5-year roadmap for the introduction of civil unmanned aircraft systems into the national airspace system, as coordinated by the Unmanned Aircraft Program Office of the Administration. The Secretary shall update, in coordination with the Administrator of the National Aeronautics and Space Administration (NASA) and relevant stakeholders, including those in industry and academia, the roadmap annually. The roadmap shall include, at a minimum—

- (A) cost estimates, planned schedules, and performance benchmarks, including specific tasks, milestones, and timelines, for unmanned aircraft systems integration into the national airspace system, including an identification of

- (i) the role of the unmanned aircraft systems test ranges established under subsection (c) and the Unmanned Aircraft Systems Center of Excellence;
- (ii) performance objectives for unmanned aircraft systems that operate in the national airspace system; and
- (iii) research and development priorities for tools that could assist air traffic controllers as unmanned aircraft systems are integrated into the national airspace system, as appropriate;

(B) a description of how the Administration plans to use research and development, including research and development conducted through NASA's Unmanned Aircraft Systems Traffic Management initiatives, to accommodate, integrate, and provide for the evolution of unmanned aircraft systems in the national airspace system;

(C) an assessment of critical performance abilities necessary to integrate unmanned aircraft systems into the national airspace system, and how these performance abilities can be demonstrated; and

(D) an update on the advancement of technologies needed to integrate unmanned aircraft systems into the national airspace system, including decisionmaking by adaptive systems, such as sense-and-avoid capabilities and cyber physical systems security.

(b) **RULEMAKING.**—Not later than 18 months after the date on which the plan required under subsection (a)(1) is submitted to Congress under subsection (a)(4), the Secretary shall publish in the Federal Register—

- (1) a final rule on small unmanned aircraft systems that will allow for civil operation of such systems in the national airspace system, to the extent the systems do not meet the requirements for expedited operational authorization under section 44807;
- (2) a notice of proposed rulemaking to implement the recommendations of the plan required under subsection (a)(1), with the final rule to be published not later than 16 months after the date of publication of the notice; and
- (3) an update to the Administration's most recent policy statement on unmanned aircraft systems, contained in Docket No. FAA–2006–25714.

(Added Pub. L. 115–254, div. B, title III, §341(a), Oct. 5, 2018, 132 Stat. 3285.)

PRIOR PROVISIONS

Provisions similar to those in this section were contained in section 332(a) and (b) of Pub. L. 112–95, which was set out in a note under section 40101 of this title, prior to repeal by Pub. L. 115–254, div. B, title III, §341(b)(2), Oct. 5, 2018, 132 Stat. 3287. The dates in subsec. (a)(1) and (3) to (5) reflect those enacted by

Pub. L. 112–95, which all precede the date of the enactment of this section by Pub. L. 115–254. The remainder of the note comprised of subtitle B of title III of Pub. L. 112–95 was transferred and is set out below.

UPDATE OF FAA COMPREHENSIVE PLAN

Pub. L. 115–254, div. B, title III, §342, Oct. 5, 2018, 132 Stat. 3287, provided that:

"(a) IN GENERAL.—Not later than 270 days after the date of enactment of this Act [Oct. 5, 2018], the Secretary of Transportation shall update the comprehensive plan described in section 44802 of title 49, United States Code, to develop a concept of operations for the integration of unmanned aircraft into the national airspace system.

"(b) CONSIDERATIONS.—In carrying out the update under subsection (a), the Secretary shall consider, at a minimum—

"(1) the potential use of UTM and other technologies to ensure the safe and lawful operation of unmanned aircraft in the national airspace system;

"(2) the appropriate roles, responsibilities, and authorities of government agencies and the private sector in identifying and reporting unlawful or harmful operations and operators of unmanned aircraft;

"(3) the use of models, threat assessments, probabilities, and other methods to distinguish between lawful and unlawful operations of unmanned aircraft; and

"(4) appropriate systems, training, intergovernmental processes, protocols, and procedures to mitigate risks and hazards posed by unlawful or harmful operations of unmanned aircraft systems.

"(c) CONSULTATION.—The Secretary shall carry out the update under subsection (a) in consultation with representatives of the aviation industry, Federal agencies that employ unmanned aircraft systems technology in the national airspace system, and the unmanned aircraft systems industry.

"(d) PROGRAM ALIGNMENT REPORT.—Not later than 90 days after the date of enactment of this Act [Oct. 5, 2018], the Secretary shall submit to the appropriate committees of Congress [Committee on Commerce, Science, and Transportation of the Senate and Committee on Transportation and Infrastructure of the House of Representatives], a report that describes a strategy to—

"(1) avoid duplication;

"(2) leverage capabilities learned across programs;

"(3) support the safe integration of UAS into the national airspace; and

"(4) systematically and timely implement or execute—

"(A) commercially-operated Low Altitude Authorization and Notification Capability;

"(B) the Unmanned Aircraft System Integration Pilot Program; and

"(C) the Unmanned Traffic Management Pilot Program."

UNMANNED AIRCRAFT SYSTEMS INTEGRATION PILOT PROGRAM

Pub. L. 115–254, div. B, title III, §351, Oct. 5, 2018, 132 Stat. 3301, provided that:

"(a) AUTHORITY.—The Secretary of Transportation may establish a pilot program to enable enhanced drone operations as required in the October 25, 2017 Presidential Memorandum entitled 'Unmanned Aircraft Systems Integration Pilot Program' and described in 82 Federal Register 50301 [set out below].

"(b) APPLICATIONS.—The Secretary shall accept applications from State, local, and Tribal governments, in partnership with unmanned aircraft system operators and other private-sector stakeholders, to test and evaluate the integration of civil and public UAS operations into the low-altitude national airspace system.

"(c) OBJECTIVES.—The purpose of the pilot program is to accelerate existing UAS integration plans by working to solve technical, regulatory, and policy challenges, while enabling advanced UAS operations in select areas subject to ongoing safety oversight and cooperation between the Federal Government and applicable State, local, or Tribal jurisdictions, in order to—

"(1) accelerate the safe integration of UAS into the NAS by testing and validating new concepts of beyond visual line of sight operations in a controlled environment, focusing on detect and avoid technologies, command and control links, navigation, weather, and human factors;

"(2) address ongoing concerns regarding the potential security and safety risks associated with UAS operating in close proximity to human beings and critical infrastructure by ensuring that operators communicate more effectively with Federal, State, local, and Tribal law enforcement to enable law enforcement to determine if a UAS operation poses such a risk;

"(3) promote innovation in and development of the United States unmanned aviation industry, especially in sectors such as agriculture, emergency management, inspection, and transportation safety, in which there are significant public benefits to be gained from the deployment of UAS; and

"(4) identify the most effective models of balancing local and national interests in UAS integration.

"(d) APPLICATION SUBMISSION.—The Secretary shall establish application requirements and require applicants to include the following information:

"(1) Identification of the airspace to be used, including shape files and altitudes.

- "(2) Description of the types of planned operations.
- "(3) Identification of stakeholder partners to test and evaluate planned operations.
- "(4) Identification of available infrastructure to support planned operations.
- "(5) Description of experience with UAS operations and regulations.
- "(6) Description of existing UAS operator and any other stakeholder partnerships and experience.
- "(7) Description of plans to address safety, security, competition, privacy concerns, and community outreach.

"(e) MONITORING AND ENFORCEMENT OF LIMITATIONS.—

"(1) IN GENERAL.—Monitoring and enforcement of any limitations enacted pursuant to this pilot project shall be the responsibility of the jurisdiction.

"(2) SAVINGS PROVISION.—Nothing in paragraph (1) may be construed to prevent the Secretary from enforcing Federal law.

"(3) EXAMPLES OF LIMITATIONS.—Limitations under this section may include—

"(A) prohibiting flight during specified morning and evening rush hours or only permitting flight during specified hours such as daylight hours, sufficient to ensure reasonable airspace access;

"(B) establishing designated take-off and landing zones, limiting operations over moving locations or fixed site public road[s] and parks, sidewalks or private property based on zoning density, or other land use considerations;

"(C) requiring notice to public safety or zoning or land use authorities before operating; and

"(D) prohibiting operations in connection with community or sporting events that do not remain in one place (for example, parades and running events).

"(f) SELECTION CRITERIA.—In making determinations, the Secretary shall evaluate whether applications meet or exceed the following criteria:

"(1) Overall economic, geographic, and climatic diversity of the selected jurisdictions.

"(2) Overall diversity of the proposed models of government involvement.

"(3) Overall diversity of the UAS operations to be conducted.

"(4) The location of critical infrastructure.

"(5) The involvement of commercial entities in the proposal and their ability to advance objectives that may serve the public interest as a result of further integration of UAS into the NAS.

"(6) The involvement of affected communities in, and their support for, participating in the pilot program.

"(7) The commitment of the governments and UAS operators involved in the proposal to comply with requirements related to national defense, homeland security, and public safety and to address competition, privacy, and civil liberties concerns.

"(8) The commitment of the governments and UAS operators involved in the proposal to achieve the following policy objectives:

"(A) Promoting innovation and economic development.

"(B) Enhancing transportation safety.

"(C) Enhancing workplace safety.

"(D) Improving emergency response and search and rescue functions.

"(E) Using radio spectrum efficiently and competitively.

"(g) IMPLEMENTATION.—The Secretary shall use the data collected and experience gained over the course of this pilot program to—

"(1) identify and resolve technical challenges to UAS integration;

"(2) address airspace use to safely and efficiently integrate all aircraft;

"(3) inform operational standards and procedures to improve safety (for example, detect and avoid capabilities, navigation and altitude performance, and command and control link);

"(4) inform FAA standards that reduce the need for waivers (for example, for operations over human beings, night operations, and beyond visual line of sight); and

"(5) address competing interests regarding UAS operational expansion, safety, security, roles and responsibilities of non-Federal Government entities, and privacy issues.

"(h) NOTIFICATION.—Prior to initiating any additional rounds of agreements with State, local, or Tribal governments as part of the pilot program established under subsection (a), the Secretary shall notify the Committee on Transportation and Infrastructure and the Committee on Appropriations of the House of Representatives and the Committee on Commerce, Science, and Transportation and the Committee on Appropriations in the Senate.

"(i) SUNSET.—The pilot program established under subsection (a) shall terminate 3 years after the date on which the memorandum referenced in subsection (a) is signed by the President [Oct. 25, 2017].

"(j) SAVINGS CLAUSE.—Nothing in this section shall affect any proposals, selections, imposition of conditions, operations, or other decisions made—

"(1) under the pilot program developed by the Secretary of Transportation pursuant to the Presidential memorandum titled 'Unmanned Aircraft Systems Integration Pilot Program', as published in the Federal Register on October 30, 2017 (82 Fed. Reg. 50301); and

"(2) prior to the date of enactment of this Act [Oct. 5, 2018].

"(k) DEFINITIONS.—In this section:

"(1) The term 'Lead Applicant' means an eligible State, local or Tribal government that has submitted a timely application.

"(2) The term 'NAS' means the low-altitude national airspace system.

"(3) The term 'UAS' means unmanned aircraft system."

PART 107 TRANSPARENCY AND TECHNOLOGY IMPROVEMENTS

Pub. L. 115–254, div. B, title III, §352, Oct. 5, 2018, 132 Stat. 3304, provided that:

"(a) TRANSPARENCY.—Not later than 30 days after the date of enactment of this Act [Oct. 5, 2018], the Administrator [of the Federal Aviation Administration] shall publish on the FAA [Federal Aviation Administration] website a representative sample of the safety justifications, offered by applicants for small unmanned aircraft system waivers and airspace authorizations, that have been approved by the Administration for each regulation waived or class of airspace authorized, except that any published justification shall not reveal proprietary or commercially sensitive information.

"(b) TECHNOLOGY IMPROVEMENTS.—Not later than 90 days after the date of enactment of this Act, the Administrator shall revise the online waiver and certificates of authorization processes—

"(1) to provide real time confirmation that an application filed online has been received by the Administration; and

"(2) to provide an applicant with an opportunity to review the status of the applicant's application."

EMERGENCY EXEMPTION PROCESS

Pub. L. 115–254, div. B, title III, §353, Oct. 5, 2018, 132 Stat. 3304, provided that:

"(a) SENSE OF CONGRESS.—It is the sense of Congress that the use of unmanned aircraft systems by civil and public operators—

"(1) is an increasingly important tool in response to a catastrophe, disaster, or other emergency;

"(2) helps facilitate emergency response operations, such as firefighting and search and rescue;

and

"(3) helps facilitate post-catastrophic response operations, such as utility and infrastructure restoration efforts and the safe and prompt processing, adjustment, and payment of insurance claims.

"(b) UPDATES.—The Administrator [of the Federal Aviation Administration] shall, as necessary, update and improve the Special Government Interest process described in chapter 7 of Federal Aviation Administration Order JO 7200.23A to ensure that civil and public operators, including local law enforcement agencies and first responders, continue to use unmanned aircraft system operations quickly and efficiently in response to a catastrophe, disaster, or other emergency.

"(c) BEST PRACTICES.—The Administrator shall develop best practices for the use of unmanned aircraft systems by States and localities to respond to a catastrophe, disaster, or other emergency response and recovery operation."

TREATMENT OF UNMANNED AIRCRAFT OPERATING UNDERGROUND

Pub. L. 115–254, div. B, title III, §354, Oct. 5, 2018, 132 Stat. 3305, provided that: "An unmanned aircraft system that is operated underground for mining purposes shall not be subject to regulation or enforcement by the FAA [Federal Aviation Administration] under title 49, United States Code."

PROHIBITION REGARDING WEAPONS

Pub. L. 115–254, div. B, title III, §363, Oct. 5, 2018, 132 Stat. 3308, provided that:

"(a) IN GENERAL.—Unless authorized by the Administrator [of the Federal Aviation Administration], a person may not operate an unmanned aircraft or unmanned aircraft system that is equipped or armed with a dangerous weapon.

"(b) DANGEROUS WEAPON DEFINED.—In this section, the term 'dangerous weapon' has the meaning given that term in section 930(g)(2) of title 18, United States Code.

"(c) PENALTY.—A person who violates this section is liable to the United States Government for a civil penalty of not more than \$25,000 for each violation."

PLAN FOR FULL OPERATIONAL CAPABILITY OF UNMANNED AIRCRAFT SYSTEMS TRAFFIC MANAGEMENT

Pub. L. 115–254, div. B, title III, §376, Oct. 5, 2018, 132 Stat. 3314, provided that:

"(a) IN GENERAL.—In conjunction with completing the requirements of section 2208 of the FAA Extension, Safety, and Security Act of 2016 [Pub. L. 114–190] (49 U.S.C. 40101 note [now 49 U.S.C. 44802 note]), subject to subsection (b) of this section, the Administrator [of the Federal Aviation Administration], in coordination with the Administrator of the National Aeronautics and Space Administration, and in consultation with unmanned aircraft systems industry stakeholders, shall develop a plan to allow for the implementation of unmanned aircraft systems traffic management (UTM) services that expand operations beyond visual line of sight, have full operational capability, and ensure the safety and security of all aircraft.

"(b) COMPLETION OF UTM SYSTEM PILOT PROGRAM.—The Administrator shall ensure that the UTM system pilot program, as established in section 2208 of the FAA Extension, Safety, and Security Act of 2016 [Pub. L. 114–190] (49 U.S.C. 40101 note [now 49 U.S.C. 44802 note]), is conducted to meet the following objectives of a comprehensive UTM system by the conclusion of the pilot program:

"(1) In cooperation with the National Aeronautics and Space Administration and manned and unmanned aircraft industry stakeholders, allow testing of unmanned aircraft operations, of increasing volumes and density, in airspace above test ranges, as such term is defined in section 44801 of title 49, United States Code, as well as other sites determined by the Administrator to be suitable for UTM testing, including those locations selected under the pilot program required in the October 25, 2017, Presidential Memorandum entitled, 'Unmanned Aircraft Systems Integration Pilot Program' and described in 82 Federal Register 50301 [set out below].

"(2) Permit the testing of various remote identification and tracking technologies evaluated by the Unmanned Aircraft Systems Identification and Tracking Aviation Rulemaking Committee.

"(3) Where the particular operational environment permits, permit blanket waiver authority to allow any unmanned aircraft approved by a UTM system pilot program selectee to be operated under conditions currently requiring a case-by-case waiver under part 107, title 14, Code of Federal Regulations, provided that any blanket waiver addresses risks to airborne objects as well as persons and property on the ground.

"(c) IMPLEMENTATION PLAN CONTENTS.—The plan required by subsection (a) shall—

"(1) include the development of safety standards to permit, authorize, or allow the use of UTM services, which may include the demonstration and validation of such services at the test ranges, as defined in section 44801 of title 49, United States Code, or other sites as authorized by the Administrator;

"(2) outline the roles and responsibilities of industry and government in establishing UTM services that allow applicants to conduct commercial and noncommercial operations, recognizing the primary private sector role in the development and implementation of the Low Altitude Authorization and Notification Capability and future expanded UTM services;

"(3) include an assessment of various components required for necessary risk reduction and mitigation in relation to the use of UTM services, including—

"(A) remote identification of both cooperative and non-cooperative unmanned aircraft systems in the national airspace system;

"(B) deconfliction of cooperative unmanned aircraft systems in the national airspace system by such services;

"(C) the manner in which the Federal Aviation Administration will conduct oversight of UTM systems, including interfaces between UTM service providers and air traffic control;

"(D) the need for additional technologies to detect cooperative and non-cooperative aircraft;

"(E) collaboration and coordination with air traffic control, or management services and technologies to ensure the safety oversight of manned and unmanned aircraft, including—

"(i) the Federal Aviation Administration responsibilities to collect and disseminate relevant data to UTM service providers; and

"(ii) data exchange protocols to share UAS operator intent, operational approvals, operational restraints, and other data necessary to ensure safety or security of the National Airspace System;

"(F) the potential for UTM services to manage unmanned aircraft systems carrying either cargo, payload, or passengers, weighing more than 55 pounds, and operating at altitudes higher than 400 feet above ground level; and

"(G) cybersecurity protections, data integrity, and national and homeland security benefits; and

"(4) establish a process for—

"(A) accepting applications for operation of UTM services in the national airspace system;

"(B) setting the standards for independent private sector validation and verification that the standards for UTM services established pursuant to paragraph (1) enabling operations beyond visual line of sight, have been met by applicants; and

- "(C) notifying the applicant, not later than 120 days after the Administrator receives a complete application, with a written approval, disapproval, or request to modify the application.
- "(d) SAFETY STANDARDS.—In developing the safety standards in subsection (c)(1), the Administrator—
- "(1) shall require that UTM services help ensure the safety of unmanned aircraft and other aircraft operations that occur primarily or exclusively in airspace 400 feet above ground level and below, including operations conducted under a waiver issued pursuant to subpart D of part 107 of title 14, Code of Federal Regulations;
- "(2) shall consider, as appropriate—
- "(A) protection of persons and property on the ground;
- "(B) remote identification and tracking of aircraft;
- "(C) collision avoidance with respect to obstacles and non-cooperative aircraft;
- "(D) deconfliction of cooperative aircraft and integration of other relevant airspace considerations;
- "(E) right of way rules, inclusive of UAS operations;
- "(F) safe and reliable coordination between air traffic control and other systems operated in the national airspace system;
- "(G) detection of non-cooperative aircraft;
- "(H) geographic and local factors including but not limited to terrain, buildings and structures;
- "(I) aircraft equipage; and
- "(J) qualifications, if any, necessary to operate UTM services; and
- "(3) may establish temporary flight restrictions or other means available such as a certificate of waiver or authorization (COA) for demonstration and validation of UTM services.
- "(e) REVOCATION.—The Administrator may revoke the permission, authorization, or approval for the operation of UTM services if the Administrator determines that the services or its operator are no longer in compliance with applicable safety standards.
- "(f) LOW-RISK AREAS.—The Administrator shall establish expedited procedures for approval of UTM services operated in—
- "(1) airspace away from congested areas; or
- "(2) other airspace above areas in which operations of unmanned aircraft pose low risk, as determined by the Administrator.
- "(g) CONSULTATION.—In carrying out this section, the Administrator shall consult with other Federal agencies, as appropriate.
- "(h) SENSE OF CONGRESS.—It is the sense of Congress that, in developing the safety standards for UTM services, the Federal Aviation Administration shall consider ongoing research and development efforts on UTM services conducted by—
- "(1) the National Aeronautics and Space Administration in partnership with industry stakeholders;
- "(2) the UTM System pilot program required by section 2208 of the FAA Extension, Safety, and Security Act of 2016 [Pub. L. 114–190] (49 U.S.C. 40101 note [now 49 U.S.C. 44802 note]); and
- "(3) the participants in the pilot program required in the October 25, 2017, Presidential Memorandum entitled, 'Unmanned Aircraft Systems Integration Pilot Program' and described in 82 Federal Register 50301.
- "(i) DEADLINE.—Not later than 1 year after the date of conclusion of the UTM pilot program established in section 2208 of the FAA Extension, Safety, and Security Act of 2016 [Pub. L. 114–190] (49 U.S.C. 40101 note [now 49 U.S.C. 44802 note]), the Administrator shall—
- "(1) complete the plan required by subsection (a);
- "(2) submit the plan to—
- "(A) the Committee on Commerce, Science, and Transportation of the Senate; and
- "(B) the Committee on Science, Space, and Technology and the Committee on Transportation and Infrastructure of the House of Representatives; and
- "(3) publish the plan on a publicly accessible Internet website of the Federal Aviation Administration."

EARLY IMPLEMENTATION OF CERTAIN UTM SERVICES

Pub. L. 115–254, div. B, title III, §377, Oct. 5, 2018, 132 Stat. 3317, provided that:

"(a) IN GENERAL.—Not later than 120 days after the date of the enactment of this Act [Oct. 5, 2018], the Administrator [of the Federal Aviation Administration] shall, upon request of a UTM service provider, determine if certain UTM services may operate safely in the national airspace system before completion of the implementation plan required by section 376 [set out above].

"(b) ASSESSMENT OF UTM SERVICES.—In making the determination under subsection (a), the Administrator shall assess, at a minimum, whether the proposed UTM services, as a result of their operational capabilities, reliability, intended use, areas of operation, and the characteristics of the aircraft involved,

will maintain the safety and efficiency of the national airspace system and address any identified risks to manned or unmanned aircraft and persons and property on the ground.

"(c) REQUIREMENTS FOR SAFE OPERATION.—If the Administrator determines that certain UTM services may operate safely in the national airspace system, the Administrator shall establish requirements for their safe operation in the national airspace system.

"(d) EXPEDITED PROCEDURES.—The Administrator shall provide expedited procedures for making the assessment and determinations under this section where the UTM services will be provided primarily or exclusively in airspace above areas in which the operation of unmanned aircraft poses low risk, including but not limited to croplands and areas other than congested areas.

"(e) CONSULTATION.—In carrying out this section, the Administrator shall consult with other Federal agencies, as appropriate.

"(f) PREEXISTING UTM SERVICES APPROVALS.—Nothing in this Act [see Tables for classification] shall affect or delay approvals, waivers, or exemptions granted by the Administrator for UTM services already in existence or approved by the Administrator prior to the date of enactment of this Act [Oct. 5, 2018], including approvals under the Low Altitude Authorization and Notification Capability."

TRANSITION LANGUAGE

Pub. L. 115–254, div. B, title III, §380, Oct. 5, 2018, 132 Stat. 3319, provided that:

"(a) REGULATIONS.—Notwithstanding the repeals under sections 341, 348 [probably should be "346"], 347, and 383 of this Act [repealing the provisions listed in subsec. (b)(1) to (4) below], all orders, determinations, rules, regulations, permits, grants, and contracts, which have been issued under any law described under subsection (b) of this section before the effective date of this Act [probably means Oct. 5, 2018, the date of enactment of Pub. L. 115–254] shall continue in effect until modified or revoked by the Secretary of Transportation, acting through the Administrator of the Federal Aviation Administration, as applicable, by a court of competent jurisdiction, or by operation of law other than this Act [see Tables for classification].

"(b) LAWS DESCRIBED.—The laws described under this subsection are as follows:

"(1) Section 332 of the FAA Modernization and Reform Act of 2012 [Pub. L. 112–95] (49 U.S.C. 40101 note).

"(2) Section 333 of the FAA Modernization and Reform Act of 2012 (49 U.S.C. 40101 note).

"(3) Section 334 of the FAA Modernization and Reform Act of 2012 (49 U.S.C. 40101 note).

"(4) Section 2206 of the FAA Extension, Safety, and Security Act of 2016 (Public Law 114–190; 130 Stat. 615).

"(c) EFFECT ON PENDING PROCEEDINGS.—This Act shall not affect administrative or judicial proceedings pending on the effective date of this Act."

UNMANNED AIRCRAFT SYSTEMS RESEARCH AND DEVELOPMENT ROADMAP

Pub. L. 115–254, div. B, title VII, §721, Oct. 5, 2018, 132 Stat. 3411, provided that: "The Secretary [of Transportation] shall submit the unmanned aircraft systems roadmap to Congress on an annual basis as required under section 48802(a) [probably should be "44802(a)"] of title 49, United States Code, as added by this Act."

COLLABORATION BETWEEN FEDERAL AVIATION ADMINISTRATION AND DEPARTMENT OF DEFENSE ON UNMANNED AIRCRAFT SYSTEMS

Pub. L. 115–91, div. A, title X, §1092, Dec. 12, 2017, 131 Stat. 1610, provided that:

"(a) COLLABORATION.—

"(1) IN GENERAL.—The Administrator of the Federal Aviation Administration and the Secretary of Defense may collaborate on sense-and-avoid capabilities for unmanned aircraft systems.

"(2) ELEMENTS.—The collaboration described in paragraph (1) may include, as appropriate, the following:

"(A) Sharing information on safely integrating unmanned aircraft systems and manned aircraft in the national airspace system.

"(B) The development of civil standards, policies, and procedures for the Federal Aviation Administration for integrating unmanned aircraft systems in the national airspace system by leveraging the historical and current testing, training, and operational experiences of the Department of Defense, particularly the Air Force, of unmanned flight operations[.]

"(C) Informing stakeholders about—

"(i) the development of airborne and ground-based sense-and-avoid capabilities for unmanned aircraft systems; and

"(ii) research and development on unmanned aircraft systems, especially with respect to matters involving human factors, information assurance, and security.

"(b) PARTICIPATION BY FAA IN DOD ACTIVITIES.—

"(1) IN GENERAL.—The Administrator of the Federal Aviation Administration may participate, and provide assistance to the Secretary of Defense for activities during the test and evaluation efforts of the Department of Defense, including the Air Force, relating to airborne and ground-based sense-and-avoid capabilities for unmanned aircraft systems.

"(2) PARTICIPATION THROUGH TEST SITES.—Participation under paragraph (1) may include provision of assistance through Department of Defense unmanned aircraft systems test sites or a Federal Aviation Administration test range.

"(c) DEFINITIONS.—In this section, the terms 'unmanned aircraft system' and 'test range' have the meaning given such terms in section 331 of the FAA Modernization and Reform Act of 2012 (Public Law 112–95; 49 U.S.C. 40101 note [now 49 U.S.C. 44802 note]).

"(d) RESTORATION OF RULES FOR REGISTRATION AND MARKING OF UNMANNED AIRCRAFT.—The rules adopted by the Administrator of the Federal Aviation Administration in the matter of registration and marking requirements for small unmanned aircraft (FAA-2015-7396; published on December 16, 2015) that were vacated by the United States Court of Appeals for the District of Columbia Circuit in *Taylor v. Huerta* (No. 15-1495; decided on May 19, 2017) shall be restored to effect on the date of enactment of this Act [Dec. 12, 2017]."

UAS SAFETY

Pub. L. 114–190, title II, subtitle B, July 15, 2016, 130 Stat. 628, as amended by Pub. L. 115–254, div. B, title III, §§346(b)(3), 369, 383(b)(2), Oct. 5, 2018, 132 Stat. 3295, 3311, 3322, provided that:

"SEC. 2201. DEFINITIONS.

"(a) DEFINITIONS APPLIED.—In this subtitle, the terms 'unmanned aircraft', 'unmanned aircraft system', and 'small unmanned aircraft' have the meanings given those terms in section 331 of the FAA Modernization and Reform Act of 2012 [Pub. L. 112–95] (49 U.S.C. 40101 note [now 49 U.S.C. 44802 note]), as amended by this Act.

"(b) FAA MODERNIZATION AND REFORM ACT.—[Amended section 331 of Pub. L. 112–95, set out in a note below.]

"SEC. 2202. IDENTIFICATION STANDARDS.

"(a) IN GENERAL.—The Administrator of the Federal Aviation Administration, in consultation with the Secretary of Transportation, the President of RTCA, Inc., and the Director of the National Institute of Standards and Technology, shall convene industry stakeholders to facilitate the development of consensus standards for remotely identifying operators and owners of unmanned aircraft systems and associated unmanned aircraft.

"(b) CONSIDERATIONS.—As part of any standards developed under subsection (a), the Administrator shall ensure the consideration of—

"(1) requirements for remote identification of unmanned aircraft systems;

"(2) appropriate requirements for different classifications of unmanned aircraft systems operations, including public and civil; and

"(3) the feasibility of the development and operation of a publicly accessible online database of unmanned aircraft and the operators thereof, and any criteria for exclusion from the database.

"(c) DEADLINE.—Not later than 1 year after the date of enactment of this Act [July 15, 2016], the Administrator shall submit to the appropriate committees of Congress [Committee on Commerce, Science, and Transportation of the Senate and Committee on Transportation and Infrastructure of the House of Representatives] a report on any standards developed under subsection (a).

"(d) GUIDANCE.—Not later than 1 year after the date on which the Administrator submits the report under subsection (c), the Administrator shall issue regulations or guidance, as appropriate, based on any standards developed under subsection (a).

"SEC. 2203. SAFETY STATEMENTS.

"(a) REQUIRED INFORMATION.—Beginning on the date that is 1 year after the date of publication of the guidance under subsection (b)(1), a manufacturer of a small unmanned aircraft shall make available to the owner at the time of delivery of the small unmanned aircraft the safety statement described in subsection (b)(2).

"(b) SAFETY STATEMENT.—

"(1) IN GENERAL.—Not later than 1 year after the date of enactment of this Act [July 15, 2016], the Administrator of the Federal Aviation Administration shall issue guidance for implementing this section.

"(2) REQUIREMENTS.—A safety statement required under subsection (a) shall include—

"(A) information about, and sources of, laws and regulations applicable to small unmanned aircraft;

"(B) recommendations for using small unmanned aircraft in a manner that promotes the safety of persons and property;

"(C) the date that the safety statement was created or last modified; and

"(D) language approved by the Administrator regarding the following:

"(i) A person may operate the small unmanned aircraft as a model aircraft (as defined in [former] section 336 of the FAA Modernization and Reform Act of 2012 [Pub. L. 112–95] ([former] 49 U.S.C. 40101 note)) or otherwise in accordance with Federal Aviation Administration authorization or regulation, including requirements for the completion of any applicable airman test.

"(ii) The definition of a model aircraft under [former] section 336 of the FAA Modernization and Reform Act of 2012 ([former] 49 U.S.C. 40101 note).

"(iii) The requirements regarding the operation of a model aircraft under [former] section 336 of the FAA Modernization and Reform Act of 2012 ([former] 49 U.S.C. 40101 note).

"(iv) The Administrator may pursue enforcement action against a person operating model aircraft who endangers the safety of the national airspace system.

"(c) CIVIL PENALTY.—A person who violates subsection (a) shall be liable for each violation to the United States Government for a civil penalty described in section 46301(a) of title 49, United States Code.

"SEC. 2204. FACILITATING INTERAGENCY COOPERATION FOR UNMANNED AIRCRAFT AUTHORIZATION IN SUPPORT OF FIREFIGHTING OPERATIONS AND UTILITY RESTORATION.

"(a) FIREFIGHTING OPERATIONS.—The Administrator of the Federal Aviation Administration shall enter into agreements with the Secretary of the Interior and the Secretary of Agriculture, as necessary, to continue the expeditious authorization of safe unmanned aircraft system operations in support of firefighting operations consistent with the requirements of section 44806 of title 49, United States Code.

"(b) UTILITY RESTORATION.—The Administrator shall enter into agreements with the Secretary of Energy and with such other agencies or parties, including the Federal Emergency Management Agency, as are necessary to facilitate the expeditious authorization of safe unmanned aircraft system operations in support of service restoration efforts of utilities.

"(c) DEFINITION OF UTILITY.—In this section, the term 'utility' shall at a minimum include the definition in section 3(4) of the Public Utility Regulatory Policies Act of 1978 (16 U.S.C. 2602(4)).

"SEC. 2205. INTERFERENCE WITH WILDFIRE SUPPRESSION, LAW ENFORCEMENT, OR EMERGENCY RESPONSE EFFORT BY OPERATION OF UNMANNED AIRCRAFT.

"(a) IN GENERAL.—[Enacted section 46320 of this title.]

"(b) FAA TO IMPOSE CIVIL PENALTY.—[Amended section 46301 of this title.]

"(c) CLERICAL AMENDMENT.—[Amended analysis of chapter 463 of this title.]

"[SEC. 2206. REPEALED. PUB. L. 115–254, DIV. B, TITLE III, §383(B)(2), OCT. 5, 2018, 132 STAT. 3322.]

"SEC. 2207. EMERGENCY EXEMPTION PROCESS.

"(a) IN GENERAL.—Not later than 90 days after the date of enactment of this Act [July 15, 2016], the Administrator of the Federal Aviation Administration shall publish guidance for applications for, and procedures for the processing of, on an emergency basis, exemptions or certificates of authorization or waiver for the use of unmanned aircraft systems by civil or public operators in response to a catastrophe, disaster, or other emergency to facilitate emergency response operations, such as firefighting, search and rescue, and utility and infrastructure restoration efforts. In processing such applications, the Administrator shall give priority to applications for public unmanned aircraft systems engaged in emergency response activities.

"(b) REQUIREMENTS.—In providing guidance under subsection (a), the Administrator shall—

"(1) make explicit any safety requirements that must be met for the consideration of applications that include requests for beyond visual line of sight or nighttime operations, or the suspension of otherwise applicable operating restrictions, consistent with public interest and safety; and

"(2) explicitly state the procedures for coordinating with an incident commander, if any, to ensure operations granted under procedures developed under subsection (a) do not interfere with other emergency response efforts.

"(c) REVIEW.—In processing applications on an emergency basis for exemptions or certificates of authorization or waiver for unmanned aircraft systems operations in response to a catastrophe, disaster, or other emergency, the Administrator shall act on such applications as expeditiously as practicable and without requiring public notice and comment.

"SEC. 2208. UNMANNED AIRCRAFT SYSTEMS TRAFFIC MANAGEMENT.

"(a) RESEARCH PLAN FOR UTM DEVELOPMENT AND DEPLOYMENT.—

"(1) IN GENERAL.—The Administrator of the Federal Aviation Administration (in this section referred to as the 'Administrator'), in coordination with the Administrator of the National Aeronautics and Space Administration, shall continue development of a research plan for unmanned aircraft systems traffic management (in this section referred to as 'UTM') development and deployment.

"(2) REQUIREMENTS.—In developing the research plan, the Administrator shall—

"(A) identify research outcomes sought; and

"(B) ensure the plan is consistent with existing regulatory and operational frameworks, and considers potential future regulatory and operational frameworks, for unmanned aircraft systems in the national airspace system.

"(3) ASSESSMENT.—The research plan shall include an assessment of the interoperability of a UTM system with existing and potential future air traffic management systems and processes.

"(4) DEADLINES.—The Administrator shall—

"(A) initiate development of the research plan not later than 60 days after the date of enactment of this Act [July 15, 2016]; and

"(B) not later than 180 days after the date of enactment of this Act—

"(i) complete the research plan;

"(ii) submit the research plan to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology and the Committee on Transportation and Infrastructure of the House of Representatives; and

"(iii) publish the research plan on the Internet Web site of the Federal Aviation Administration.

"(b) PILOT PROGRAM.—

"(1) IN GENERAL.—Not later than 90 days after the date of submission of the research plan under subsection (a)(4)(B), the Administrator, in coordination with the Administrator of the National Aeronautics and Space Administration, the Drone Advisory Committee, the research advisory committee established by section 44508(a) of title 49, United States Code, and representatives of the unmanned aircraft industry, shall establish a UTM system pilot program.

"(2) SUNSET.—Not later than 2 years after the date of establishment of the pilot program, the Administrator shall conclude the pilot program.

"(c) UPDATES.—Not later than 180 days after the date of establishment of the pilot program, and every 180 days thereafter until the date of conclusion of the pilot program, the Administrator shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology and the Committee on Transportation and Infrastructure of the House of Representatives an update on the status and progress of the pilot program.

"SEC. 2209. APPLICATIONS FOR DESIGNATION.

"(a) APPLICATIONS FOR DESIGNATION.—Not later than 180 days after the date of enactment of this Act [July 15, 2016], the Secretary of Transportation shall establish a process to allow applicants to petition the Administrator of the Federal Aviation Administration to prohibit or restrict the operation of an unmanned aircraft in close proximity to a fixed site facility.

"(b) REVIEW PROCESS.—

"(1) APPLICATION PROCEDURES.—

"(A) IN GENERAL.—The Administrator shall establish the procedures for the application for designation under subsection (a).

"(B) REQUIREMENTS.—The procedures shall allow operators or proprietors of fixed site facilities to apply for designation individually or collectively.

"(C) CONSIDERATIONS.—Only the following may be considered fixed site facilities:

"(i) Critical infrastructure, such as energy production, transmission, distribution facilities and equipment, and railroad facilities.

"(ii) Oil refineries and chemical facilities.

"(iii) Amusement parks.

"(iv) Other locations that warrant such restrictions.

"(2) DETERMINATION.—

"(A) IN GENERAL.—The Secretary shall provide for a determination under the review process established under subsection (a) not later than 90 days after the date of application, unless the applicant is provided with written notice describing the reason for the delay.

"(B) AFFIRMATIVE DESIGNATIONS.—An affirmative designation shall outline—

"(i) the boundaries for unmanned aircraft operation near the fixed site facility; and

"(ii) such other limitations that the Administrator determines may be appropriate.

"(C) CONSIDERATIONS.—In making a determination whether to grant or deny an application for a designation, the Administrator may consider—

- "(i) aviation safety;
- "(ii) protection of persons and property on the ground;
- "(iii) national security; or
- "(iv) homeland security.

"(D) OPPORTUNITY FOR RESUBMISSION.—If an application is denied, and the applicant can reasonably address the reason for the denial, the Administrator may allow the applicant to reapply for designation.

"(c) PUBLIC INFORMATION.—Designations under subsection (a) shall be published by the Federal Aviation Administration on a publicly accessible website.

"(d) SAVINGS CLAUSE.—Nothing in this section may be construed as prohibiting the Administrator from authorizing operation of an aircraft, including an unmanned aircraft system, over, under, or within a specified distance from that fixed site facility designated under subsection (b).

"(e) DEADLINES.—

"(1) Not later than March 31, 2019, the Administrator shall publish a notice of proposed rulemaking to carry out the requirements of this section.

"(2) Not later than 12 months after publishing the notice of proposed rulemaking under paragraph (1), the Administrator shall issue a final rule.

"SEC. 2210. OPERATIONS ASSOCIATED WITH CRITICAL INFRASTRUCTURE.

"(a) IN GENERAL.—Any application process established under [former] section 333 of the FAA Modernization and Reform Act of 2012 [Pub. L. 112–95] ([former] 49 U.S.C. 40101 note) shall allow for a person to apply to the Administrator of the Federal Aviation Administration to operate an unmanned aircraft system, for purposes of conducting an activity described in subsection (b)—

- "(1) beyond the visual line of sight of the individual operating the unmanned aircraft system; and
- "(2) during the day or at night.

"(b) ACTIVITIES DESCRIBED.—The activities described in this subsection are—

"(1) activities for which manned aircraft may be used to comply with Federal, State, or local laws, including—

"(A) activities to ensure compliance with Federal or State regulatory, permit, or other requirements, including to conduct surveys associated with applications for permits for new pipeline or pipeline systems construction or maintenance or rehabilitation of existing pipelines or pipeline systems; and

"(B) activities relating to ensuring compliance with—

"(i) parts 192 and 195 of title 49, Code of Federal Regulations; and

"(ii) the requirements of any Federal, State, or local governmental or regulatory body, or industry best practice, pertaining to the construction, ownership, operation, maintenance, repair, or replacement of covered facilities;

"(2) activities to inspect, repair, construct, maintain, or protect covered facilities, including for the purpose of responding to a pipeline, pipeline system, or electric energy infrastructure incident; and

"(3) activities in response to or in preparation for a natural disaster, manmade disaster, severe weather event, or other incident beyond the control of the applicant that may cause material damage to a covered facility.

"(c) DEFINITIONS.—In this section, the following definitions apply:

"(1) COVERED FACILITY.—The term 'covered facility' means—

"(A) a pipeline or pipeline system;

"(B) an electric energy generation, transmission, or distribution facility (including a renewable electric energy facility);

"(C) an oil or gas production, refining, or processing facility; or

"(D) any other critical infrastructure facility.

"(2) CRITICAL INFRASTRUCTURE.—The term 'critical infrastructure' has the meaning given that term in section 2339D of title 18, United States Code.

"(d) DEADLINES.—

"(1) CERTIFICATION TO CONGRESS.—Not later than 90 days after the date of enactment of this Act [July 15, 2016], the Administrator shall submit to the appropriate committees of Congress [Committee on Commerce, Science, and Transportation of the Senate and Committee on Transportation and Infrastructure of the House of Representatives] a certification that a process has been established to facilitate applications for unmanned aircraft systems operations described in this section.

"(2) FAILURE TO MEET CERTIFICATION DEADLINE.—If the Administrator cannot provide a certification under paragraph (1), the Administrator, not later than 180 days after the deadline specified in paragraph (1), shall update the process under [former] section 333 of the FAA Modernization and

Reform Act of 2012 [Pub. L. 112–95] ([former] 49 U.S.C. 40101 note) to facilitate applications for unmanned aircraft systems operations described in this section.

"(e) EXEMPTIONS.—In addition to the operations described in this section, the Administrator may authorize, exempt, or otherwise allow other unmanned aircraft systems operations under [former] section 333 of the FAA Modernization and Reform Act of 2012 ([former] 49 U.S.C. 40101 note) that are conducted beyond the visual line of sight of the individual operating the unmanned aircraft system or during the day or at night.

"SEC. 2211. UNMANNED AIRCRAFT SYSTEMS RESEARCH AND DEVELOPMENT ROADMAP.

[Amended section 332 of Pub. L. 112–95, formerly set out in a note below.]

"SEC. 2212. UNMANNED AIRCRAFT SYSTEMS-MANNED AIRCRAFT COLLISION RESEARCH.

"(a) RESEARCH.—The Administrator of the Federal Aviation Administration (in this section referred to as the 'Administrator'), in continuation of ongoing work, shall coordinate with the Administrator of the National Aeronautics and Space Administration to develop a program to conduct comprehensive testing or modeling of unmanned aircraft systems colliding with various sized aircraft in various operational settings, as considered appropriate by the Administrator, including—

"(1) collisions between unmanned aircraft systems of various sizes, traveling at various speeds, and jet aircraft of various sizes, traveling at various speeds;

"(2) collisions between unmanned aircraft systems of various sizes, traveling at various speeds, and propeller-driven aircraft of various sizes, traveling at various speeds;

"(3) collisions between unmanned aircraft systems of various sizes, traveling at various speeds, and rotorcraft of various sizes, traveling at various speeds; and

"(4) collisions between unmanned aircraft systems and various parts of the aforementioned aircraft, including—

"(A) windshields;

"(B) noses;

"(C) engines;

"(D) radomes;

"(E) propellers; and

"(F) wings.

"(b) REPORT.—Not later than 1 year after the date of enactment of this Act [July 15, 2016], the Administrator shall transmit to the Committee on Science, Space, and Technology and the Committee on Transportation and Infrastructure of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a report summarizing the costs and results of research under this section.

"SEC. 2213. PROBABILISTIC METRICS RESEARCH AND DEVELOPMENT STUDY.

"(a) STUDY.—Not later than 30 days after the date of enactment of this Act [July 15, 2016], the Administrator of the Federal Aviation Administration shall enter into an arrangement with the National Academies to study the potential use of probabilistic assessments of risks by the Administration to streamline the integration of unmanned aircraft systems into the national airspace system, including any research and development necessary.

"(b) COMPLETION DATE.—Not later than 1 year after the date of enactment of this Act, the Administrator shall provide the results of the study to the Committee on Science, Space, and Technology and the Committee on Transportation and Infrastructure of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate."

UNMANNED AIRCRAFT JOINT TRAINING AND USAGE PLAN

Pub. L. 113–66, *div. A, title X, §1075(a), Dec. 26, 2013*, 127 Stat. 870, provided that:

"(1) METHODS.—The Secretary of Defense, the Secretary of Homeland Security, and the Administrator of the Federal Aviation Administration shall jointly develop and implement plans and procedures to review the potential of joint testing and evaluation of unmanned aircraft equipment and systems with other appropriate departments and agencies of the Federal Government that may serve the dual purpose of providing capabilities to the Department of Defense to meet the future requirements of combatant commanders and domestically to strengthen international border security.

"(2) REPORT.—Not later than 270 days after the date of the enactment of this Act [Dec. 26, 2013], the Secretary of Defense, the Secretary of Homeland Security, and the Administrator of the Federal Aviation Administration shall jointly submit to Congress a report on the status of the development of the plans and procedures required under paragraph (1), including a cost-benefit analysis of the shared expenses between the Department of Defense and other appropriate departments and agencies of the Federal Government to support such plans."

INTERAGENCY COLLABORATION

Pub. L. 112–239, div. A, title X, §1052(b), (c), Jan. 2, 2013, 126 Stat. 1935, 1936, provided that:

"(b) INTERAGENCY COLLABORATION.—

"(1) IN GENERAL.—The Secretary of Defense shall collaborate with the Administrator of the Federal Aviation Administration and the Administrator of the National Aeronautics and Space Administration to conduct research and seek solutions to challenges associated with the safe integration of unmanned aircraft systems into the National Airspace System in accordance with subtitle B of title III of the FAA Modernization and Reform Act of 2012 (Public Law 112–95; 126 Stat. 72) [49 U.S.C. 44802 note].

"(2) ACTIVITIES IN SUPPORT OF PLAN ON ACCESS TO NATIONAL AIRSPACE FOR UNMANNED AIRCRAFT SYSTEMS.—Collaboration under paragraph (1) may include research and development of scientific and technical issues, equipment, and technology in support of the plan to safely accelerate the integration of unmanned aircraft systems as required by subtitle B of title III of the FAA Modernization and Reform Act of 2012.

"(3) NONDUPLICATIVE EFFORTS.—If the Secretary of Defense determines it is in the interest of the Department of Defense, the Secretary may use existing aerospace-related laboratories, personnel, equipment, research radars, and ground facilities of the Department of Defense to avoid duplication of efforts in carrying out collaboration under paragraph (1).

"(4) REPORTS.—

"(A) REQUIREMENT.—The Secretary of Defense, on behalf of the UAS Executive Committee, shall annually submit to the congressional defense committees, the Committee on Transportation and Infrastructure, and the Committee on Science, Space, and Technology of the House of Representatives, and the Committee on Commerce, Science, and Transportation of the Senate a report on the progress of research activity of the Department of Defense, including—

"(i) progress in accomplishing the goals of the unmanned aircraft systems research, development, and demonstration as related to the Department of Defense Final Report to Congress on Access to National Airspace for Unmanned Aircraft Systems of October 2010, and any ongoing and collaborative research and development programs with the Federal Aviation Administration and the National Aeronautics and Space Administration;

"(ii) estimates of long-term funding needs and details of funds expended and allocated in the budget requests of the President that support integration into the National Airspace; and

"(iii) progress in sharing with the Federal Aviation Administration safety operational and performance data as it relates to unmanned aircraft system operation and the impact on the National Airspace System.

"(B) TERMINATION.—The requirement to submit a report under subparagraph (A) shall terminate on the date that is 5 years after the date of the enactment of this Act [Jan. 2, 2013].

"(c) UAS EXECUTIVE COMMITTEE DEFINED.—In this section, the term 'UAS Executive Committee' means the National Aeronautics and Space and [sic] Administration and the Department of Defense–Federal Aviation Administration executive committee described in section 1036(b) of the Duncan Hunter National Defense Authorization Act for Fiscal Year 2009 [Pub. L. 110–417; 122 Stat. 4597] and established by the Secretary of Defense and the Administrator of the Federal Aviation Administration."

UNMANNED AIRCRAFT SYSTEMS

Pub. L. 112–95, title III, subtitle B, Feb. 14, 2012, 126 Stat. 72, as amended by Pub. L. 114–190, title I, §1102(i), title II, §§2201(b), 2211, July 15, 2016, 130 Stat. 618, 628, 636; Pub. L. 115–254, div. B, title III, §§341(b)(2), 346(b)(2), 347(b)(2), 349(b)(2), Oct. 5, 2018, 132 Stat. 3287, 3295, 3296, 3300, provided that:

"SEC. 331. DEFINITIONS.

"In this subtitle, the following definitions apply:

"(1) ARCTIC.—The term 'Arctic' means the United States zone of the Chukchi Sea, Beaufort Sea, and Bering Sea north of the Aleutian chain.

"(2) CERTIFICATE OF WAIVER; CERTIFICATE OF AUTHORIZATION.—The terms 'certificate of waiver' and 'certificate of authorization' mean a Federal Aviation Administration grant of approval for a specific flight operation.

"(3) PERMANENT AREAS.—The term 'permanent areas' means areas on land or water that provide for launch, recovery, and operation of small unmanned aircraft.

"(4) PUBLIC UNMANNED AIRCRAFT SYSTEM.—The term 'public unmanned aircraft system' means an unmanned aircraft system that meets the qualifications and conditions required for operation of a public aircraft (as defined in section 40102 of title 49, United States Code).

"(5) SENSE AND AVOID CAPABILITY.—The term 'sense and avoid capability' means the capability of an unmanned aircraft to remain a safe distance from and to avoid collisions with other airborne aircraft.

"(6) **SMALL UNMANNED AIRCRAFT.**—The term 'small unmanned aircraft' means an unmanned aircraft weighing less than 55 pounds, including everything that is on board or otherwise attached to the aircraft.

"(7) **TEST RANGE.**—

"(A) **IN GENERAL.**—The term 'test range' means a defined geographic area where research and development are conducted as authorized by the Administrator of the Federal Aviation Administration.

"(B) **INCLUSIONS.**—The term 'test range' includes any of the 6 test ranges established by the Administrator of the Federal Aviation Administration under section 332(c), as in effect on the day before the date of enactment of this subparagraph [July 15, 2016], and any public entity authorized by the Federal Aviation Administration as an unmanned aircraft system flight test center before January 1, 2009.

"(8) **UNMANNED AIRCRAFT.**—The term 'unmanned aircraft' means an aircraft that is operated without the possibility of direct human intervention from within or on the aircraft.

"(9) **UNMANNED AIRCRAFT SYSTEM.**—The term 'unmanned aircraft system' means an unmanned aircraft and associated elements (including communication links and the components that control the unmanned aircraft) that are required for the pilot in command to operate safely and efficiently in the national airspace system.

"[SEC. 332. REPEALED. PUB. L. 115–254, DIV. B, TITLE III, §341(B)(2), OCT. 5, 2018, 132 STAT. 3287.]

"[SEC. 333. REPEALED. PUB. L. 115–254, DIV. B, TITLE III, §347(B)(2), OCT. 5, 2018, 132 STAT. 3296.]

"[SEC. 334. REPEALED. PUB. L. 115–254, DIV. B, TITLE III, §346(B)(2), OCT. 5, 2018, 132 STAT. 3295.]

"SEC. 335. **SAFETY STUDIES.**

"The Administrator of the Federal Aviation Administration shall carry out all safety studies necessary to support the integration of unmanned aircraft systems into the national airspace system.

"[SEC. 336. REPEALED. PUB. L. 115–254, DIV. B, TITLE III, §349(B)(2), OCT. 5, 2018, 132 STAT. 3300.]"

UNMANNED AERIAL SYSTEMS AND NATIONAL AIRSPACE

Pub. L. 112–81, **div. A, title X, §1097, Dec. 31, 2011**, 125 Stat. 1608, provided that:

"(a) **ESTABLISHMENT.**—Not later than 180 days after the date of the enactment of this Act [Dec. 31, 2011], the Administrator of the Federal Aviation Administration shall establish a program to integrate unmanned aircraft systems into the national airspace system at six test ranges.

"(b) **PROGRAM REQUIREMENTS.**—In establishing the program under subsection (a), the Administrator shall

—

"(1) safely designate nonexclusionary airspace for integrated manned and unmanned flight operations in the national airspace system;

"(2) develop certification standards and air traffic requirements for unmanned flight operations at test ranges;

"(3) coordinate with and leverage the resources of the Department of Defense and the National Aeronautics and Space Administration;

"(4) address both civil and public unmanned aircraft systems;

"(5) ensure that the program is coordinated with the Next Generation Air Transportation System; and

"(6) provide for verification of the safety of unmanned aircraft systems and related navigation procedures before integration into the national airspace system.

"(c) **LOCATIONS.**—In determining the location of a test range for the program under subsection (a), the Administrator shall—

"(1) take into consideration geographic and climatic diversity;

"(2) take into consideration the location of ground infrastructure and research needs; and

"(3) consult with the Department of Defense and the National Aeronautics and Space Administration.

"(d) **TEST RANGE OPERATION.**—A project at a test range shall be operational not later than 180 days after the date on which the project is established.

"(e) **REPORT.**—Not later than 90 days after the date of completing each of the pilot projects, the Administrator shall submit to the appropriate congressional committees a report setting forth the Administrator's findings and conclusions concerning the projects that includes a description and assessment of the progress being made in establishing special use airspace to fill the immediate need of the Department of Defense to develop detection techniques for small unmanned aircraft systems and to validate sensor integration and operation of unmanned aircraft systems.

"(f) DURATION.—The program under subsection (a) shall terminate on the date that is five years after the date of the enactment of this Act [Dec. 31, 2011].

"(g) DEFINITION.—In this section:

"(1) The term 'appropriate congressional committees' means—

"(A) the Committee on Armed Services, the Committee on Transportation and Infrastructure, and the Committee on Science, Space, and Technology of the House of Representatives; and

"(B) the Committee on Armed Services and the Committee on Commerce, Science, and Transportation of the Senate.

"(2) The term 'test range' means a defined geographic area where research and development are conducted."

PROMOTING ECONOMIC COMPETITIVENESS WHILE SAFEGUARDING PRIVACY, CIVIL RIGHTS, AND CIVIL LIBERTIES IN DOMESTIC USE OF UNMANNED AIRCRAFT SYSTEMS

Memorandum of President of the United States, Feb. 15, 2015, 80 F.R. 9355, provided:

Memorandum for the Heads of Executive Departments and Agencies

Unmanned Aircraft Systems (UAS) technology continues to improve rapidly, and increasingly UAS are able to perform a variety of missions with greater operational flexibility and at a lower cost than comparable manned aircraft. A wide spectrum of domestic users—including industry, private citizens, and Federal, State, local, tribal, and territorial governments—are using or expect to use these systems, which may play a transformative role in fields as diverse as urban infrastructure management, farming, public safety, coastal security, military training, search and rescue, and disaster response.

The Congress recognized the potential wide-ranging benefits of UAS operations within the United States in the FAA Modernization and Reform Act of 2012 (Public Law 112–95), which requires a plan to safely integrate civil UAS into the National Airspace System (NAS) by September 30, 2015. As compared to manned aircraft, UAS may provide lower-cost operation and augment existing capabilities while reducing risks to human life. Estimates suggest the positive economic impact to U.S. industry of the integration of UAS into the NAS could be substantial and likely will grow for the foreseeable future.

As UAS are integrated into the NAS, the Federal Government will take steps to ensure that the integration takes into account not only our economic competitiveness and public safety, but also the privacy, civil rights, and civil liberties concerns these systems may raise.

By the authority vested in me as President by the Constitution and the laws of the United States of America, and in order to establish transparent principles that govern the Federal Government's use of UAS in the NAS, and to promote the responsible use of this technology in the private and commercial sectors, it is hereby ordered as follows:

SECTION 1. UAS Policies and Procedures for Federal Government Use. The Federal Government currently operates UAS in the United States for several purposes, including to manage Federal lands, monitor wildfires, conduct scientific research, monitor our borders, support law enforcement, and effectively train our military. As with information collected by the Federal Government using any technology, where UAS is the platform for collection, information must be collected, used, retained, and disseminated consistent with the Constitution, Federal law, and other applicable regulations and policies. Agencies must, for example, comply with the Privacy Act of 1974 (5 U.S.C. 552a) (the "Privacy Act"), which, among other things, restricts the collection and dissemination of individuals' information that is maintained in systems of records, including personally identifiable information (PII), and permits individuals to seek access to and amendment of records.

(a) *Privacy Protections.* Particularly in light of the diverse potential uses of UAS in the NAS, expected advancements in UAS technologies, and the anticipated increase in UAS use in the future, the Federal Government shall take steps to ensure that privacy protections and policies relative to UAS continue to keep pace with these developments. Accordingly, agencies shall, prior to deployment of new UAS technology and at least every 3 years, examine their existing UAS policies and procedures relating to the collection, use, retention, and dissemination of information obtained by UAS, to ensure that privacy, civil rights, and civil liberties are protected. Agencies shall update their policies and procedures, or issue new policies and procedures, as necessary. In addition to requiring compliance with the Privacy Act in applicable circumstances, agencies that collect information through UAS in the NAS shall ensure that their policies and procedures with respect to such information incorporate the following requirements:

(i) *Collection and Use.* Agencies shall only collect information using UAS, or use UAS-collected information, to the extent that such collection or use is consistent with and relevant to an authorized purpose.

(ii) *Retention.* Information collected using UAS that may contain PII shall not be retained for more than 180 days unless retention of the information is determined to be necessary to an authorized mission of

the retaining agency, is maintained in a system of records covered by the Privacy Act, or is required to be retained for a longer period by any other applicable law or regulation.

(iii) *Dissemination*. UAS-collected information that is not maintained in a system of records covered by the Privacy Act shall not be disseminated outside of the agency unless dissemination is required by law, or fulfills an authorized purpose and complies with agency requirements.

(b) *Civil Rights and Civil Liberties Protections*. To protect civil rights and civil liberties, agencies shall:

(i) ensure that policies are in place to prohibit the collection, use, retention, or dissemination of data in any manner that would violate the First Amendment or in any manner that would discriminate against persons based upon their ethnicity, race, gender, national origin, religion, sexual orientation, or gender identity, in violation of law;

(ii) ensure that UAS activities are performed in a manner consistent with the Constitution and applicable laws, Executive Orders, and other Presidential directives; and

(iii) ensure that adequate procedures are in place to receive, investigate, and address, as appropriate, privacy, civil rights, and civil liberties complaints.

(c) *Accountability*. To provide for effective oversight, agencies shall:

(i) ensure that oversight procedures for agencies' UAS use, including audits or assessments, comply with existing agency policies and regulations;

(ii) verify the existence of rules of conduct and training for Federal Government personnel and contractors who work on UAS programs, and procedures for reporting suspected cases of misuse or abuse of UAS technologies;

(iii) establish policies and procedures, or confirm that policies and procedures are in place, that provide meaningful oversight of individuals who have access to sensitive information (including any PII) collected using UAS;

(iv) ensure that any data-sharing agreements or policies, data use policies, and record management policies applicable to UAS conform to applicable laws, regulations, and policies;

(v) establish policies and procedures, or confirm that policies and procedures are in place, to authorize the use of UAS in response to a request for UAS assistance in support of Federal, State, local, tribal, or territorial government operations; and

(vi) require that State, local, tribal, and territorial government recipients of Federal grant funding for the purchase or use of UAS for their own operations have in place policies and procedures to safeguard individuals' privacy, civil rights, and civil liberties prior to expending such funds.

(d) *Transparency*. To promote transparency about their UAS activities within the NAS, agencies that use UAS shall, while not revealing information that could reasonably be expected to compromise law enforcement or national security:

(i) provide notice to the public regarding where the agency's UAS are authorized to operate in the NAS;

(ii) keep the public informed about the agency's UAS program as well as changes that would significantly affect privacy, civil rights, or civil liberties; and

(iii) make available to the public, on an annual basis, a general summary of the agency's UAS operations during the previous fiscal year, to include a brief description of types or categories of missions flown, and the number of times the agency provided assistance to other agencies, or to State, local, tribal, or territorial governments.

(e) *Reports*. Within 180 days of the date of this memorandum, agencies shall provide the President with a status report on the implementation of this section. Within 1 year of the date of this memorandum, agencies shall publish information on how to access their publicly available policies and procedures implementing this section.

SEC. 2. Multi-stakeholder Engagement Process. In addition to the Federal uses of UAS described in section 1 of this memorandum, the combination of greater operational flexibility, lower capital requirements, and lower operating costs could allow UAS to be a transformative technology in the commercial and private sectors for fields as diverse as urban infrastructure management, farming, and disaster response. Although these opportunities will enhance American economic competitiveness, our Nation must be mindful of the potential implications for privacy, civil rights, and civil liberties. The Federal Government is committed to promoting the responsible use of this technology in a way that does not diminish rights and freedoms.

(a) There is hereby established a multi-stakeholder engagement process to develop and communicate best practices for privacy, accountability, and transparency issues regarding commercial and private UAS use in the NAS. The process will include stakeholders from the private sector.

(b) Within 90 days of the date of this memorandum, the Department of Commerce, through the National Telecommunications and Information Administration, and in consultation with other interested agencies, will initiate this multi-stakeholder engagement process to develop a framework regarding privacy, accountability, and transparency for commercial and private UAS use. For this process, commercial and private use includes the use of UAS for commercial purposes as civil aircraft, even if the

use would qualify a UAS as a public aircraft under 49 U.S.C. 40102(a)(41) and 40125. The process shall not focus on law enforcement or other noncommercial governmental use.

SEC. 3. *Definitions.* As used in this memorandum:

(a) "Agencies" means executive departments and agencies of the Federal Government that conduct UAS operations in the NAS.

(b) "Federal Government use" means operations in which agencies operate UAS in the NAS. Federal Government use includes agency UAS operations on behalf of another agency or on behalf of a State, local, tribal, or territorial government, or when a nongovernmental entity operates UAS on behalf of an agency.

(c) "National Airspace System" means the common network of U.S. airspace; air navigation facilities, equipment, and services; airports or landing areas; aeronautical charts, information, and services; related rules, regulations, and procedures; technical information; and manpower and material. Included in this definition are system components shared jointly by the Departments of Defense, Transportation, and Homeland Security.

(d) "Unmanned Aircraft System" means an unmanned aircraft (an aircraft that is operated without direct human intervention from within or on the aircraft) and associated elements (including communication links and components that control the unmanned aircraft) that are required for the pilot or system operator in command to operate safely and efficiently in the NAS.

(e) "Personally identifiable information" refers to information that can be used to distinguish or trace an individual's identity, either alone or when combined with other personal or identifying information that is linked or linkable to a specific individual, as set forth in Office of Management and Budget Memorandum M-07-16 (May 22, 2007) and Office of Management and Budget Memorandum M-10-23 (June 25, 2010).

SEC. 4. *General Provisions.* (a) This memorandum complements and is not intended to supersede existing laws and policies for UAS operations in the NAS, including the National Strategy for Aviation Security and its supporting plans, the FAA Modernization and Reform Act of 2012, the Federal Aviation Administration's (FAA's) Integration of Civil UAS in the NAS Roadmap, and the FAA's UAS Comprehensive Plan.

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

(c) Nothing in this memorandum shall be construed to impair or otherwise affect:

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

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

(d) Independent agencies are strongly encouraged to comply with this memorandum.

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

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

BARACK OBAMA.

UNMANNED AIRCRAFT SYSTEMS INTEGRATION PILOT PROGRAM

Memorandum of President of the United States, Oct. 25, 2017, 82 F.R. 50301, provided:

Memorandum for the Secretary of Transportation

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

SECTION 1. *Policy.* It shall be the policy of the United States to promote the safe operation of unmanned aircraft systems (UAS) and enable the development of UAS technologies for use in agriculture, commerce, emergency management, human transportation, and other sectors. Compared to manned aircraft, UAS provide novel, low-cost capabilities for both public and private applications. UAS present opportunities to enhance the safety of the American public, increase the efficiency and productivity of American industry, and create tens of thousands of new American jobs.

The private sector has rapidly advanced UAS capabilities to address the needs of recreational, commercial, and public users. To promote continued technological innovation and to ensure the global leadership of the United States in this emerging industry, the regulatory framework for UAS operations must be sufficiently flexible to keep pace with the advancement of UAS technology, while balancing the vital Federal roles in protecting privacy and civil liberties; mitigating risks to national security and homeland security; and protecting the safety of the American public, critical infrastructure, and the Nation's airspace. Well-coordinated integration of UAS into the national airspace system (NAS) alongside

manned aircraft will increase the safety of the NAS and enable the authorization of more complex UAS operations.

The Federal Aviation Administration (FAA) has taken steps to integrate UAS into the NAS at specific test sites and has issued operational requirements for small UAS operations in the NAS. Further integration will require continued private-sector cooperation and the involvement of State, local, and tribal governments in Federal efforts to develop and enforce regulations on UAS operations in their jurisdictions. Input from State, local, tribal, and private-sector stakeholders will be necessary to craft an optimal strategy for the national management of UAS operations. A coordinated effort between the private sector and among these governments will provide certainty and stability to UAS owners and operators, maximize the benefits of UAS technologies for the public, and mitigate risks to public safety and security.

SEC. 2. UAS Integration Pilot Program. (a) Within 90 days of the date of this memorandum, the Secretary of Transportation (Secretary), in consultation with the Administrator of the FAA (Administrator), shall establish a UAS Integration Pilot Program (Program) to test the further integration of UAS into the NAS in a select number of State, local, and tribal jurisdictions.

(b) The objectives of the Program shall be to:

(i) test and evaluate various models of State, local, and tribal government involvement in the development and enforcement of Federal regulations for UAS operations;

(ii) encourage UAS owners and operators to develop and safely test new and innovative UAS concepts of operations; and

(iii) inform the development of future Federal guidelines and regulatory decisions on UAS operations nationwide.

SEC. 3. Implementation. (a) To implement the Program, the Secretary or the Administrator, as appropriate, shall:

(i) solicit proposals from State, local, and tribal governments to test within their jurisdictions the integration of civil and public UAS operations into the NAS below 200 feet above ground level, or up to 400 feet above ground level if the Secretary determines that such an adjustment would be appropriate;

(ii) select proposals by State, local, and tribal governments for participation in the Program according to the criteria listed in subsection (b) of this section;

(iii) enter into agreements with the selected governments to establish the terms of their involvement in UAS operations within their jurisdictions, including their support for Federal enforcement responsibilities; describe the proposed UAS operations to be conducted; and identify the entities that will conduct such operations, including, if applicable, the governments themselves; and

(iv) as necessary, use existing authorities to grant exceptions, exemptions, authorizations, and waivers from FAA regulations to the entities identified in the agreements described in subsection (iii) of this section [sic], including through the issuance of waivers under 14 CFR Part 107 and Certificates of Waiver or Authorization under [former] section 333 of the FAA Modernization and Reform Act of 2012 (FMRA) (Public Law 112–95) [see note above].

(b) In selecting proposals for participation in the Program under subsection (a) of this section, the Secretary shall consider:

(i) overall economic, geographic, and climatic diversity of the selected jurisdictions;

(ii) overall diversity of the proposed models of government involvement;

(iii) overall diversity of the UAS operations to be conducted;

(iv) the location of critical infrastructure;

(v) the involvement of commercial entities in the proposal, and their ability to advance objectives that may serve the public interest as a result of further integration of UAS into the NAS;

(vi) the involvement of affected communities in, and their support for, participating in the Program;

(vii) the commitment of the governments and UAS operators involved in the proposal to comply with requirements related to national defense, homeland security, and public safety, and to address competition, privacy, and civil liberties concerns; and

(viii) the commitment of the governments and UAS operators involved in the proposal to achieve the following policy objectives:

(A) promoting innovation and economic development;

(B) enhancing transportation safety;

(C) enhancing workplace safety;

(D) improving emergency response and search and rescue functions; and

(E) using radio spectrum efficiently and competitively.

(c) Within 180 days of the establishment of the Program, the Secretary shall enter into agreements with State, local, or tribal governments to participate in the Program, with the goal of entering into at least 5 such agreements by that time.

(d) In carrying out subsection (c) of this section, the Secretary shall select State, local, or tribal governments that plan to begin integration of UAS into the NAS in their jurisdictions within 90 days after the date on which the agreement is established.

(e) The Secretary shall consider new proposals for participation in the Program up to 1 year before the Program is scheduled to terminate.

(f) The Secretary shall apply best practices from existing FAA test sites, waivers granted under 14 CFR part 107, exemptions granted under [former] section 333 of the FMRA, the FAA Focus Area Pathfinder Program, and any other relevant programs in order to expedite the consideration of exceptions, exemptions, authorizations, and waivers from FAA regulations to be granted under the Program, as described in subsection (a)(iv) of this section.

(g) The Secretary shall address any non-compliance with the terms of exceptions, exemptions, authorizations, waivers granted, or agreements made with UAS users or participating jurisdictions in a timely and appropriate manner, including by revoking or modifying the relevant terms.

SEC. 4. Coordination. (a) The Administrator, in coordination with the Administrator of the National Aeronautics and Space Administration, shall apply relevant information collected during the Program and preliminary findings to inform the development of the UAS Traffic Management System under section 2208 of the FAA Extension, Safety, and Security Act of 2016 (Public Law 114–190) [set out in a note above].

(b) The Secretary, in coordination with the Secretaries of Defense and Homeland Security and the Attorney General, shall take necessary and appropriate steps to:

(i) mitigate risks to public safety and homeland and national security when selecting proposals and implementing the Program; and

(ii) monitor compliance with relevant laws and regulations to ensure that Program activities do not interfere with national defense, homeland security, or law enforcement operations and missions.

(c) The heads of executive departments and agencies with relevant law enforcement responsibilities (Federal law enforcement agencies), including the Attorney General and the Secretary of Homeland Security, shall develop and implement best practices to enforce the laws and regulations governing UAS operations conducted under the Program.

(d) In carrying out the responsibilities set forth in subsection (c) of this section, the heads of Federal law enforcement agencies shall coordinate with the Secretaries of Defense and Transportation, as well as with the relevant State, local, or tribal law enforcement agencies.

(e) In implementing the Program, the Secretary shall coordinate with the Secretaries of Defense and Homeland Security and the Attorney General to test counter-UAS capabilities, as well as platform and system-wide cybersecurity, to the extent appropriate and consistent with law.

SEC. 5. Evaluation and Termination of UAS Integration Pilot Program. (a) The Program shall terminate 3 years from the date of this memorandum, unless extended by the Secretary.

(b) Before and after the termination of the Program, the Secretary shall use the information and experience yielded by the Program to inform the development of regulations, initiatives, and plans to enable safer and more complex UAS operations, and shall, as appropriate, share information with the Secretaries of Defense and Homeland Security, the Attorney General, and the heads of other executive departments and agencies.

(c) After the date of this memorandum and until the Program is terminated, the Secretary, in consultation with the Secretaries of Defense and Homeland Security and the Attorney General, shall submit an annual report to the President setting forth the Secretary's interim findings and conclusions concerning the Program. Not later than 90 days after the Program is terminated, the Secretary shall submit a final report to the President setting forth the Secretary's findings and conclusions concerning the Program.

SEC. 6. Definitions. As used in this memorandum, the next stated terms, in singular and plural, are defined as follows:

(a) The term "unmanned aircraft system" has the meaning given that term in section 331 of the FMRA [Pub. L. 112–95, set out in a note above].

(b) The term "public unmanned aircraft system" has the meaning given that term in section 331 of the FMRA.

(c) The term "civil unmanned aircraft system" means an unmanned aircraft system that meets the qualifications and conditions required for operation of a civil aircraft, as defined in 49 U.S.C. 40102.

SEC. 7. General Provisions. (a) Nothing in this memorandum shall be construed to impair or otherwise affect:

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

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

(iii) the conduct of public aircraft operations, as defined in 49 U.S.C. 40102(a)(41) and 40125, by executive departments and agencies, consistent with applicable Federal law.

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

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

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

DONALD J. TRUMP.

¹ See Prior Provisions note below.

§44803. Unmanned aircraft test ranges

(a) IN GENERAL.—The Administrator of the Federal Aviation Administration shall carry out and update, as appropriate, a program for the use of the test ranges to facilitate the safe integration of unmanned aircraft systems into the national airspace system.

(b) PROGRAM REQUIREMENTS.—In carrying out the program under subsection (a), the Administrator shall—

(1) designate airspace for safely testing the integration of unmanned flight operations in the national airspace system;

(2) develop operational standards and air traffic requirements for unmanned flight operations at test ranges;

(3) coordinate with, and leverage the resources of, the National Aeronautics and Space Administration and the Department of Defense;

(4) address both civil and public unmanned aircraft systems;

(5) ensure that the program is coordinated with relevant aspects of the Next Generation Air Transportation System;

(6) provide for verification of the safety of unmanned aircraft systems and related navigation procedures as it relates to continued development of standards for integration into the national airspace system;

(7) engage test range operators, as necessary and within available resources, in projects for research, development, testing, and evaluation of unmanned aircraft systems to facilitate the Federal Aviation Administration's development of standards for the safe integration of unmanned aircraft into the national airspace system, which may include solutions for—

(A) developing and enforcing geographic and altitude limitations;

(B) providing for alerts by the manufacturer of an unmanned aircraft system regarding any hazards or limitations on flight, including prohibition on flight as necessary;

(C) sense and avoid capabilities;

(D) beyond-visual-line-of-sight operations, nighttime operations, operations over people, operation of multiple small unmanned aircraft systems, and unmanned aircraft systems traffic management, or other critical research priorities; and

(E) improving privacy protections through the use of advances in unmanned aircraft systems technology;

(8) coordinate periodically with all test range operators to ensure test range operators know which data should be collected, what procedures should be followed, and what research would advance efforts to safely integrate unmanned aircraft systems into the national airspace system;

(9) streamline to the extent practicable the approval process for test ranges when processing unmanned aircraft certificates of waiver or authorization for operations at the test sites;

(10) require each test range operator to protect proprietary technology, sensitive data, or sensitive research of any civil or private entity when using that test range without the need to obtain an experimental or special airworthiness certificate; ¹

(11) allow test range operators to receive Federal funding, other than from the Federal Aviation Administration, including in-kind contributions, from test range participants in the furtherance of research, development, and testing objectives.

(c) WAIVERS.—In carrying out this section the Administrator may waive the requirements of section 44711 of title 49, United States Code, including related regulations, to the extent consistent with aviation safety.

(d) REVIEW OF OPERATIONS BY TEST RANGE OPERATORS.—The operator of each test range under subsection (a) shall—

(1) review the operations of unmanned aircraft systems conducted at the test range, including—

(A) ongoing or completed research; and

(B) data regarding operations by private and public operators; and

(2) submit to the Administrator, in such form and manner as specified by the Administrator, the results of the review, including recommendations to further enable private research and development operations at the test ranges that contribute to the Federal Aviation Administration's safe integration of unmanned aircraft systems into the national airspace system, on a quarterly basis until the program terminates.

(e) TESTING.—The Secretary of Transportation may authorize an operator of a test range described in subsection (a) to administer testing requirements established by the Administrator for unmanned aircraft systems operations.

(f) COLLABORATIVE RESEARCH AND DEVELOPMENT AGREEMENTS.—The Administrator may use the other transaction authority under section 106(l)(6) and enter into collaborative research and development agreements, to direct research related to unmanned aircraft systems, including at any test range under subsection (a), and in coordination with the Center of Excellence for Unmanned Aircraft Systems.

(g) USE OF CENTER OF EXCELLENCE FOR UNMANNED AIRCRAFT SYSTEMS.—The Administrator, in carrying out research necessary to implement the consensus safety standards requirements in section 44805 shall, to the maximum extent practicable, leverage the research and testing capacity and capabilities of the Center of Excellence for Unmanned Aircraft Systems and the test ranges.

(h) TERMINATION.—The program under this section shall terminate on September 30, 2023.

(Added Pub. L. 115–254, div. B, title III, §343(a), Oct. 5, 2018, 132 Stat. 3288.)

¹ *So in original. Probably should be followed by "and".*

§44804. Small unmanned aircraft in the Arctic

(a) IN GENERAL.—The Secretary of Transportation shall develop a plan and initiate a process to work with relevant Federal agencies and national and international communities to designate permanent areas in the Arctic where small unmanned aircraft may operate 24 hours per day for research and commercial purposes.

(b) PLAN CONTENTS.—The plan under subsection (a) shall include the development of processes to facilitate the safe operation of small unmanned aircraft beyond the visual line of sight.

(c) REQUIREMENTS.—Each permanent area designated under subsection (a) shall enable over-water flights from the surface to at least 2,000 feet in altitude, with ingress and egress routes from selected coastal launch sites.

(d) AGREEMENTS.—To implement the plan under subsection (a), the Secretary may enter into an agreement with relevant national and international communities.

(e) AIRCRAFT APPROVAL.—

(1) IN GENERAL.—Subject to paragraph (2), not later than 1 year after the entry into force of an agreement necessary to effectuate the purposes of this section, the Secretary shall work with relevant national and international communities to establish and implement a process for approving the use of a small unmanned aircraft in the designated permanent areas in the Arctic without regard to whether the small unmanned aircraft is used as a public aircraft, a civil aircraft, or a model aircraft.

(2) EXISTING PROCESS.—The Secretary may implement an existing process to meet the requirements under paragraph (1).

(Added Pub. L. 115–254, div. B, title III, §344(a), Oct. 5, 2018, 132 Stat. 3290.)

PRIOR PROVISIONS

Provisions similar to those in this section were contained in section 332(d) of Pub. L. 112–95, which was set out in a note under section 40101 of this title, prior to repeal by Pub. L. 115–254, div. B, title III, §341(b)(2), Oct. 5, 2018, 132 Stat. 3287. The remainder of the note comprised of subtitle B of title III of Pub. L. 112–95 was transferred and is set out under section 44802 of this title.

§44805. Small Unmanned ¹ aircraft safety standards

(a) FAA PROCESS FOR ACCEPTANCE AND AUTHORIZATION.—The Administrator of the Federal Aviation Administration shall establish a process for—

(1) accepting risk-based consensus safety standards related to the design, production, and modification of small unmanned aircraft systems;

(2) authorizing the operation of small ² unmanned aircraft system make and model designed, produced, or modified in accordance with the consensus safety standards accepted under paragraph (1);

(3) authorizing a manufacturer to self-certify a small unmanned aircraft system make or model that complies with consensus safety standards accepted under paragraph (1); and

(4) certifying a manufacturer of small unmanned aircraft systems, or an employee of such manufacturer, that has demonstrated compliance with the consensus safety standards accepted under paragraph (1) and met any other qualifying criteria, as determined by the Administrator, to alternatively satisfy the requirements of paragraph (1).

(b) **CONSIDERATIONS.**—Before accepting consensus safety standards under subsection (a), the Administrator of the Federal Aviation Administration shall consider the following:

- (1) Technologies or standards related to geographic limitations, altitude limitations, and sense and avoid capabilities.
- (2) Using performance-based requirements.
- (3) Assessing varying levels of risk posed by different small unmanned aircraft systems and their operation and tailoring performance-based requirements to appropriately mitigate risk.
- (4) Predetermined action to maintain safety in the event that a communications link between a small unmanned aircraft and its operator is lost or compromised.
- (5) Detectability and identifiability to pilots, the Federal Aviation Administration, and air traffic controllers, as appropriate.
- (6) Means to prevent tampering with or modification of any system, limitation, or other safety mechanism or standard under this section or any other provision of law, including a means to identify any tampering or modification that has been made.
- (7) Consensus identification standards under section 2202 of the FAA Extension, Safety, and Security Act of 2016 (Public Law 114–190; 130 Stat. 615).
- (8) To the extent not considered previously by the consensus body that crafted consensus safety standards, cost-benefit and risk analyses of consensus safety standards that may be accepted pursuant to subsection (a) for newly designed small unmanned aircraft systems.
- (9) Applicability of consensus safety standards to small unmanned aircraft systems that are not manufactured commercially.
- (10) Any technology or standard related to small unmanned aircraft systems that promotes aviation safety.
- (11) Any category of unmanned aircraft systems that should be exempt from the consensus safety standards based on risk factors.

(e) ³ **NONAPPLICABILITY OF OTHER LAWS.**—The process for authorizing the operation of small unmanned aircraft systems under subsection (a) may allow for operation of any applicable small unmanned aircraft systems within the national airspace system without requiring—

- (1) airworthiness certification requirements under section 44704 of this title; or
- (2) type certification under part 21 of title 14, Code of Federal Regulations.

(f) **REVOCATION.**—The Administrator may suspend or revoke the authorizations in subsection (a) if the Administrator determines that the manufacturer or the small unmanned aircraft system is no longer in compliance with the standards accepted by the Administrator under subsection (a)(1) or with the manufacturer's statement of compliance under subsection (h).

(g) **REQUIREMENTS.**—With regard to an authorization under the processes in subsection (a), the Administrator may require a manufacturer of small unmanned aircraft systems to provide the Federal Aviation Administration with the following:

- (1) The aircraft system's operating instructions.
- (2) The aircraft system's recommended maintenance and inspection procedures.
- (3) The manufacturer's statement of compliance described in subsection (h).
- (4) Upon request, a sample aircraft to be inspected by the Federal Aviation Administration to ensure compliance with the consensus safety standards accepted by the Administrator under subsection (a).

(h) **MANUFACTURER'S STATEMENT OF COMPLIANCE FOR SMALL UAS.**—A manufacturer's statement of compliance shall—

- (1) identify the aircraft make, model, range of serial numbers, and any applicable consensus safety standards used and accepted by the Administrator;
- (2) state that the aircraft make and model meets the provisions of the consensus safety standards identified in paragraph (1);
- (3) state that the aircraft make and model conforms to the manufacturer's design data and is manufactured in a way that ensures consistency across units in the production process in order to meet the applicable consensus safety standards accepted by the Administrator;
- (4) state that the manufacturer will make available to the Administrator, operators, or customers—
 - (A) the aircraft's operating instructions, which conform to the consensus safety standards identified in paragraph (1); and
 - (B) the aircraft's recommended maintenance and inspection procedures, which conform to the consensus safety standards identified in paragraph (1);

(5) state that the manufacturer will monitor safety-of-flight issues and take action to ensure it meets the consensus safety standards identified in paragraph (1) and report these issues and subsequent actions to the Administrator;

(6) state that at the request of the Administrator, the manufacturer will provide reasonable access for the Administrator to its facilities for the purposes of overseeing compliance with this section; and

(7) state that the manufacturer, in accordance with the consensus safety standards accepted by the Federal Aviation Administration, has—

- (A) ground and flight tested random samples of the aircraft;
- (B) found the sample aircraft performance acceptable; and
- (C) determined that the make and model of aircraft is suitable for safe operation.

(i) PROHIBITIONS.—

(1) FALSE STATEMENTS OF COMPLIANCE.—It shall be unlawful for any person to knowingly submit a statement of compliance described in subsection (h) that is fraudulent or intentionally false.

(2) INTRODUCTION INTO INTERSTATE COMMERCE.—Unless the Administrator determines operation of an unmanned aircraft system may be conducted without an airworthiness certificate or permission, authorization, or approval under subsection (a), it shall be unlawful for any person to knowingly introduce or deliver for introduction into interstate commerce any small unmanned aircraft system that is manufactured after the date that the Administrator accepts consensus safety standards under this section unless—

- (A) the make and model has been authorized for operation under subsection (a); or
- (B) the aircraft has alternatively received design and production approval issued by the Federal Aviation Administration.

(j) EXCLUSIONS.—The Administrator may exempt from the requirements of this section small unmanned aircraft systems that are not capable of navigating beyond the visual line of sight of the operator through advanced flight systems and technology, if the Administrator determines that such an exemption does not pose a risk to the safety of the national airspace system.

(Added Pub. L. 115–254, div. B, title III, §345(a), Oct. 5, 2018, 132 Stat. 3291.)

REFERENCES IN TEXT

Section 2202 of the FAA Extension, Safety, and Security Act of 2016, referred to in subsec. (b)(7), is section 2202 of Pub. L. 114–190, which is set out in a note under section 44802 of this title.

UNMANNED AIRCRAFT SYSTEMS RESEARCH FACILITY

Pub. L. 115–254, div. B, title III, §345(b), Oct. 5, 2018, 132 Stat. 3293, provided that: "The Center of Excellence for Unmanned Aircraft Systems shall establish an unmanned aircraft systems research facility to study appropriate safety standards for unmanned aircraft systems and to validate such standards, as directed by the Administrator of the Federal Aviation Administration, consistent with section 44805 of title 49, United States Code, as added by this section."

¹ So in original. Probably should not be capitalized.

² So in original. Probably should be preceded by "a".

³ So in original. There are no subsecs. (c) and (d).

§44806. Public unmanned aircraft systems

(a) GUIDANCE.—The Secretary of Transportation shall issue guidance regarding the operation of a public unmanned aircraft system—

- (1) to streamline and expedite the process for the issuance of a certificate of authorization or a certificate of waiver;
- (2) to facilitate the capability of public agencies to develop and use test ranges, subject to operating restrictions required by the Federal Aviation Administration, to test and operate public unmanned aircraft systems; and
- (3) to provide guidance on a public agency's responsibilities when operating an unmanned aircraft without a civil airworthiness certificate issued by the Administration.

(b) AGREEMENTS WITH GOVERNMENT AGENCIES.—

(1) IN GENERAL.—The Secretary shall enter into an agreement with each appropriate public agency to simplify the process for issuing a certificate of waiver or a certificate of authorization with respect to an application for authorization to operate a public unmanned aircraft system in the national airspace system.

(2) CONTENTS.—An agreement under paragraph (1) shall—

- (A) with respect to an application described in paragraph (1)—
 - (i) provide for an expedited review of the application;
 - (ii) require a decision by the Administrator on approval or disapproval not later than 60 business days after the date of submission of the application; and

(iii) allow for an expedited appeal if the application is disapproved;

(B) allow for a one-time approval of similar operations carried out during a fixed period of time; and

(C) allow a government public safety agency to operate an unmanned aircraft weighing 4.4 pounds or less if that unmanned aircraft is operated—

(i) within or beyond the visual line of sight of the operator;

(ii) less than 400 feet above the ground;

(iii) during daylight conditions;

(iv) within Class G airspace; and

(v) outside of 5 statute miles from any airport, heliport, seaplane base, spaceport, or other location with aviation activities.

(c) PUBLIC ACTIVELY TETHERED UNMANNED AIRCRAFT SYSTEMS.—

(1) IN GENERAL.—Not later than 180 days after the date of enactment of this Act, the Administrator of the Federal Aviation Administration shall permit the use of, and may issue guidance regarding, the use of public actively tethered unmanned aircraft systems that are—

(A) operated at an altitude of less than 150 feet above ground level;

(B) operated—

(i) within class G airspace; or

(ii) at or below the ceiling depicted on the Federal Aviation Administration's published UAS facility maps for class B, C, D, or E surface area airspace;

(C) not flown directly over non-participating persons;

(D) operated within visual line of sight of the operator; and

(E) operated in a manner that does not interfere with and gives way to any other aircraft.

(2) REQUIREMENTS.—Public actively tethered unmanned aircraft systems may be operated—

(A) without any requirement to obtain a certificate of authorization, certificate of waiver, or other approval by the Federal Aviation Administration;

(B) without requiring airman certification under section 44703 of this title or any rule or regulation relating to airman certification; and

(C) without requiring airworthiness certification under section 44704 of this title or any rule or regulation relating to aircraft certification.

(3) SAFETY STANDARDS.—Public actively tethered unmanned aircraft systems operated within the scope of the guidance issued pursuant to paragraph (1) shall be exempt from the requirements of section 44805 of this title.

(4) SAVINGS PROVISION.—Nothing in this subsection shall be construed to preclude the Administrator of the Federal Aviation Administration from issuing new regulations for public actively tethered unmanned aircraft systems in order to ensure the safety of the national airspace system.

(d) FEDERAL AGENCY COORDINATION TO ENHANCE THE PUBLIC HEALTH AND SAFETY CAPABILITIES OF PUBLIC UNMANNED AIRCRAFT SYSTEMS.—The Administrator shall assist Federal civilian Government agencies that operate unmanned aircraft systems within civil-controlled airspace, in operationally deploying and integrating sense and avoid capabilities, as necessary to operate unmanned aircraft systems safely within the national airspace system.

(Added Pub. L. 115–254, div. B, title III, §346(a), Oct. 5, 2018, 132 Stat. 3294.)

REFERENCES IN TEXT

The date of enactment of this Act, referred to in subsec. (c)(1), is the date of enactment of Pub. L. 115–254, which was approved Oct. 5, 2018.

PRIOR PROVISIONS

Provisions similar to those in subsecs. (a) and (b) of this section were contained in section 334(a) and (c) of Pub. L. 112–95, which was set out in a note under section 40101 of this title, prior to repeal by Pub. L. 115–254, div. B, title III, §346(b)(2), Oct. 5, 2018, 132 Stat. 3295. The remainder of the note comprised of subtitle B of title III of Pub. L. 112–95 was transferred and is set out under section 44802 of this title.

PUBLIC UAS ACCESS TO SPECIAL USE AIRSPACE

Pub. L. 115–254, div. B, title III, §368, Oct. 5, 2018, 132 Stat. 3310, provided that: "Not later than 180 days after the date of enactment of this Act [Oct. 5, 2018], the Secretary of Transportation shall issue guidance for the expedited and timely access to special use airspace for public unmanned aircraft systems in order to assist Federal, State, local, or tribal law enforcement organizations in conducting law enforcement, emergency response, or for other activities."

§44807. Special authority for certain unmanned aircraft systems

(a) **IN GENERAL.**—Notwithstanding any other requirement of this chapter, the Secretary of Transportation shall use a risk-based approach to determine if certain unmanned aircraft systems may operate safely in the national airspace system notwithstanding completion of the comprehensive plan and rulemaking required by section 44802 or the guidance required by section 44806.

(b) **ASSESSMENT OF UNMANNED AIRCRAFT SYSTEMS.**—In making the determination under subsection (a), the Secretary shall determine, at a minimum—

(1) which types of unmanned aircraft systems, if any, as a result of their size, weight, speed, operational capability, proximity to airports and populated areas, operation over people, and operation within or beyond the visual line of sight, or operation during the day or night, do not create a hazard to users of the national airspace system or the public; and

(2) whether a certificate under section 44703 or section 44704 of this title, or a certificate of waiver or certificate of authorization, is required for the operation of unmanned aircraft systems identified under paragraph (1) of this subsection.

(c) **REQUIREMENTS FOR SAFE OPERATION.**—If the Secretary determines under this section that certain unmanned aircraft systems may operate safely in the national airspace system, the Secretary shall establish requirements for the safe operation of such aircraft systems in the national airspace system, including operation related to research, development, and testing of proprietary systems.

(d) **SUNSET.**—The authority under this section for the Secretary to determine if certain unmanned aircraft systems may operate safely in the national airspace system terminates effective September 30, 2023.

(Added Pub. L. 115–254, div. B, title III, §347(a), Oct. 5, 2018, 132 Stat. 3296.)

PRIOR PROVISIONS

Provisions similar to those in this section were contained in section 333 of Pub. L. 112–95, which was set out in a note under section 40101 of this title, prior to repeal by Pub. L. 115–254, div. B, title III, §347(b)(2), Oct. 5, 2018, 132 Stat. 3296. The remainder of the note comprised of subtitle B of title III of Pub. L. 112–95 was transferred and is set out under section 44802 of this title.

§44808. Carriage of property by small unmanned aircraft systems for compensation or hire

(a) **IN GENERAL.**—Not later than 1 year after the date of enactment of the FAA Reauthorization Act of 2018, the Administrator of the Federal Aviation Administration shall update existing regulations to authorize the carriage of property by operators of small unmanned aircraft systems for compensation or hire within the United States.

(b) **CONTENTS.**—Any rulemaking conducted under subsection (a) shall provide for the following:

(1) Use performance-based requirements.

(2) Consider varying levels of risk to other aircraft and to persons and property on the ground posed by different unmanned aircraft systems and their operation and tailor performance-based requirements to appropriately mitigate risk.

(3) Consider the unique characteristics of highly automated, small unmanned aircraft systems.

(4) Include requirements for the safe operation of small unmanned aircraft systems that, at a minimum, address—

(A) airworthiness of small unmanned aircraft systems;

(B) qualifications for operators and the type and nature of the operations;

(C) operating specifications governing the type and nature of the unmanned aircraft system air carrier operations; and

(D) the views of State, local, and tribal officials related to potential impacts of the carriage of property by operators of small unmanned aircraft systems for compensation or hire within the communities to be served.

(5) **SMALL UAS.**—The Secretary may amend part 298 of title 14, Code of Federal Regulations, to update existing regulations to establish economic authority for the carriage of property by small unmanned aircraft systems for compensation or hire. Such authority shall only require—

(A) registration with the Department of Transportation;

(B) authorization from the Federal Aviation Administration to conduct operations; and

(C) compliance with chapters 401, 411, and 417.

(6) **AVAILABILITY OF CURRENT CERTIFICATION PROCESSES.**—Pending completion of the rulemaking required in subsection (a) of this section, a person may seek an air carrier operating certificate and certificate of public convenience and necessity, or an exemption from such certificate, using existing processes.

(Added Pub. L. 115–254, div. B, title III, §348(a), Oct. 5, 2018, 132 Stat. 3297.)

REFERENCES IN TEXT

The date of enactment of the FAA Reauthorization Act of 2018, referred to in subsec. (a), is the date of enactment of Pub. L. 115–254, which was approved Oct. 5, 2018.

§44809. Exception for limited recreational operations of unmanned aircraft

(a) IN GENERAL.—Except as provided in subsection (e), and notwithstanding chapter 447 of title 49, United States Code, a person may operate a small unmanned aircraft without specific certification or operating authority from the Federal Aviation Administration if the operation adheres to all of the following limitations:

(1) The aircraft is flown strictly for recreational purposes.

(2) The aircraft is operated in accordance with or within the programming of a community-based organization's set of safety guidelines that are developed in coordination with the Federal Aviation Administration.

(3) The aircraft is flown within the visual line of sight of the person operating the aircraft or a visual observer co-located and in direct communication with the operator.

(4) The aircraft is operated in a manner that does not interfere with and gives way to any manned aircraft.

(5) In Class B, Class C, or Class D airspace or within the lateral boundaries of the surface area of Class E airspace designated for an airport, the operator obtains prior authorization from the Administrator or designee before operating and complies with all airspace restrictions and prohibitions.

(6) In Class G airspace, the aircraft is flown from the surface to not more than 400 feet above ground level and complies with all airspace restrictions and prohibitions.

(7) The operator has passed an aeronautical knowledge and safety test described in subsection (g) and maintains proof of test passage to be made available to the Administrator or law enforcement upon request.

(8) The aircraft is registered and marked in accordance with chapter 441 of this title and proof of registration is made available to the Administrator or a designee of the Administrator or law enforcement upon request.

(b) OTHER OPERATIONS.—Unmanned aircraft operations that do not conform to the limitations in subsection (a) must comply with all statutes and regulations generally applicable to unmanned aircraft and unmanned aircraft systems.

(c) OPERATIONS AT FIXED SITES.—

(1) OPERATING PROCEDURE REQUIRED.—Persons operating unmanned aircraft under subsection (a) from a fixed site within Class B, Class C, or Class D airspace or within the lateral boundaries of the surface area of Class E airspace designated for an airport, or a community-based organization conducting a sanctioned event within such airspace, shall make the location of the fixed site known to the Administrator and shall establish a mutually agreed upon operating procedure with the air traffic control facility.

(2) UNMANNED AIRCRAFT WEIGHING MORE THAN 55 POUNDS.—A person may operate an unmanned aircraft weighing more than 55 pounds, including the weight of anything attached to or carried by the aircraft, under subsection (a) if—

(A) the unmanned aircraft complies with standards and limitations developed by a community-based organization and approved by the Administrator; and

(B) the aircraft is operated from a fixed site as described in paragraph (1).

(d) UPDATES.—

(1) IN GENERAL.—The Administrator, in consultation with government, stakeholders, and community-based organizations, shall initiate a process to periodically update the operational parameters under subsection (a), as appropriate.

(2) CONSIDERATIONS.—In updating an operational parameter under paragraph (1), the Administrator shall consider

(A) appropriate operational limitations to mitigate risks to aviation safety and national security, including risk to the uninvolved public and critical infrastructure;

(B) operations outside the membership, guidelines, and programming of a community-based organization;

(C) physical characteristics, technical standards, and classes of aircraft operating under this section;

(D) trends in use, enforcement, or incidents involving unmanned aircraft systems;

(E) ensuring, to the greatest extent practicable, that updates to the operational parameters correspond to, and leverage, advances in technology; and

(F) equipment requirements that facilitate safe, efficient, and secure operations and further integrate all unmanned aircraft into the national airspace system.

(3) SAVINGS CLAUSE.—Nothing in this subsection shall be construed as expanding the authority of the Administrator to require a person operating an unmanned aircraft under this section to seek permissive authority of the Administrator, beyond that required in subsection (a) of this section, prior to operation in the national airspace system.

(e) **STATUTORY CONSTRUCTION.**—Nothing in this section shall be construed to limit the authority of the Administrator to pursue an enforcement action against a person operating any unmanned aircraft who endangers the safety of the national airspace system.

(f) **EXCEPTIONS.**—Nothing in this section prohibits the Administrator from promulgating rules generally applicable to unmanned aircraft, including those unmanned aircraft eligible for the exception set forth in this section, relating to—

- (1) updates to the operational parameters for unmanned aircraft in subsection (a);
- (2) the registration and marking of unmanned aircraft;
- (3) the standards for remotely identifying owners and operators of unmanned aircraft systems and associated unmanned aircraft; and
- (4) other standards consistent with maintaining the safety and security of the national airspace system.

(g) **AERONAUTICAL KNOWLEDGE AND SAFETY TEST.**—

(1) **IN GENERAL.**—Not later than 180 days after the date of enactment of this section, the Administrator, in consultation with manufacturers of unmanned aircraft systems, other industry stakeholders, and community-based organizations, shall develop an aeronautical knowledge and safety test, which can then be administered electronically by the Administrator, a community-based organization, or a person designated by the Administrator.

(2) **REQUIREMENTS.**—The Administrator shall ensure the aeronautical knowledge and safety test is designed to adequately demonstrate an operator's—

- (A) understanding of aeronautical safety knowledge; and
- (B) knowledge of Federal Aviation Administration regulations and requirements pertaining to the operation of an unmanned aircraft system in the national airspace system.

(h) **COMMUNITY-BASED ORGANIZATION DEFINED.**—In this section, the term "community-based organization" means a membership-based association entity that—

- (1) is described in section 501(c)(3) of the Internal Revenue Code of 1986;
- (2) is exempt from tax under section 501(a) of the Internal Revenue Code of 1986;
- (3) the mission of which is demonstrably the furtherance of model aviation;
- (4) provides a comprehensive set of safety guidelines for all aspects of model aviation addressing the assembly and operation of model aircraft and that emphasize safe aeromodelling operations within the national airspace system and the protection and safety of individuals and property on the ground, and may provide a comprehensive set of safety rules and programming for the operation of unmanned aircraft that have the advanced flight capabilities enabling active, sustained, and controlled navigation of the aircraft beyond visual line of sight of the operator;
- (5) provides programming and support for any local charter organizations, affiliates, or clubs; and
- (6) provides assistance and support in the development and operation of locally designated model aircraft flying sites.

(i) **RECOGNITION OF COMMUNITY-BASED ORGANIZATIONS.**—In collaboration with aeromodelling stakeholders, the Administrator shall publish an advisory circular within 180 days of the date of enactment of this section that identifies the criteria and process required for recognition of community-based organizations.

(Added Pub. L. 115–254, div. B, title III, §349(a), Oct. 5, 2018, 132 Stat. 3298.)

REFERENCES IN TEXT

The date of enactment of this section, referred to in subsecs. (g)(1) and (i), is the date of enactment of Pub. L. 115–254, which was approved Oct. 5, 2018.

Section 501 of the Internal Revenue Code of 1986, referred to in subsec. (h)(1), (2), is classified to section 501 of Title 26, Internal Revenue Code.

PRIOR PROVISIONS

Provisions similar to those in subsecs. (a) and (e) of this section were contained in section 336(a) and (b) of Pub. L. 112–95, which was set out in a note under section 40101 of this title, prior to repeal by Pub. L. 115–254, div. B, title III, §349(b)(2), Oct. 5, 2018, 132 Stat. 3300. The remainder of the note comprised of subtitle B of title III of Pub. L. 112–95 was transferred and is set out under section 44802 of this title.

USE OF UNMANNED AIRCRAFT SYSTEMS AT INSTITUTIONS OF HIGHER EDUCATION

Pub. L. 115–254, div. B, title III, §350, Oct. 5, 2018, 132 Stat. 3300, provided that:

"(a) **EDUCATIONAL AND RESEARCH PURPOSES.**—For the purposes of section 44809 of title 49, United States Code, as added by this Act, a 'recreational purpose' as distinguished in subsection (a)(1) of such section shall include an unmanned aircraft system operated by an institution of higher education for educational or research purposes.

"(b) **UPDATES.**—In updating an operational parameter under subsection (d)(1) of such section for unmanned aircraft systems operated by an institution of higher education for educational or research purposes, the Administrator shall consider—

"(1) use of small unmanned aircraft systems and operations at an accredited institution of higher education, for educational or research purposes, as a component of the institution's curricula or research;

"(2) the development of streamlined, risk-based operational approval for unmanned aircraft systems operated by institutions of higher education; and

"(3) the airspace and aircraft operators that may be affected by such operations at the institution of higher education.

"(c) DEADLINE FOR ESTABLISHMENT OF PROCEDURES AND STANDARDS.—Not later than 270 days after the date of enactment of this Act [Oct. 5, 2018], the Administrator of the Federal Aviation Administration may establish regulations, procedures, and standards, as necessary, to facilitate the safe operation of unmanned aircraft systems operated by institutions of higher education for educational or research purposes.

"(d) DEFINITIONS.—In this section:

"(1) INSTITUTION OF HIGHER EDUCATION.—The term 'institution of higher education' has the meaning given to that term by section 101(a) of the Higher Education Act of 1965 (20 U.S.C. 1001(a)).

"(2) EDUCATIONAL OR RESEARCH PURPOSES.—The term 'education or research purposes', with respect to the operation of an unmanned aircraft system by an institution of higher education, includes—

"(A) instruction of students at the institution;

"(B) academic or research related uses of unmanned aircraft systems that have been approved by the institution, including Federal research;

"(C) activities undertaken by the institution as part of research projects, including research projects sponsored by the Federal Government; and

"(D) other academic activities approved by the institution.

"(e) STATUTORY CONSTRUCTION.—

"(1) ENFORCEMENT.—Nothing in this section shall be construed to limit the authority of the Administrator to pursue an enforcement action against a person operating any unmanned aircraft who endangers the safety of the national airspace system.

"(2) REGULATIONS AND STANDARDS.—Nothing in this section prohibits the Administrator from promulgating any rules or standards consistent with maintaining the safety and security of the national airspace system."

§44810. Airport safety and airspace hazard mitigation and enforcement

(a) COORDINATION.—The Administrator of the Federal Aviation Administration shall work with the Secretary of Defense, the Secretary of Homeland Security, and the heads of other relevant Federal departments and agencies for the purpose of ensuring that technologies or systems that are developed, tested, or deployed by Federal departments and agencies to detect and mitigate potential risks posed by errant or hostile unmanned aircraft system operations do not adversely impact or interfere with safe airport operations, navigation, air traffic services, or the safe and efficient operation of the national airspace system.

(b) PLAN.—

(1) IN GENERAL.—The Administrator shall develop a plan for the certification, permitting, authorizing, or allowing of the deployment of technologies or systems for the detection and mitigation of unmanned aircraft systems.

(2) CONTENTS.—The plan shall provide for the development of policies, procedures, or protocols that will allow appropriate officials of the Federal Aviation Administration to utilize such technologies or systems to take steps to detect and mitigate potential airspace safety risks posed by unmanned aircraft system operations.

(3) AVIATION RULEMAKING COMMITTEE.—The Administrator shall charter an aviation rulemaking committee to make recommendations for such a plan and any standards that the Administrator determines may need to be developed with respect to such technologies or systems. The Federal Advisory Committee Act (5 U.S.C. App.) shall not apply to an aviation rulemaking committee chartered under this paragraph.

(4) NON-DELEGATION.—The plan shall not delegate any authority granted to the Administrator under this section to other Federal, State, local, territorial, or tribal agencies, or an airport sponsor, as defined in section 47102 of title 49, United States Code.

(c) AIRSPACE HAZARD MITIGATION PROGRAM.—In order to test and evaluate technologies or systems that detect and mitigate potential aviation safety risks posed by unmanned aircraft, the Administrator shall deploy such technologies or systems at 5 airports, including 1 airport that ranks in the top 10 of the FAA's most recent Passenger Boarding Data.

(d) AUTHORITY.—Under the testing and evaluation in subsection (c), the Administrator shall use unmanned aircraft detection and mitigation systems to detect and mitigate the unauthorized operation of an unmanned aircraft that poses a risk to aviation safety.

(e) AIP FUNDING ELIGIBILITY.—Upon the certification, permitting, authorizing, or allowing of such technologies and systems that have been successfully tested under this section, an airport sponsor may apply for a grant under subchapter I of chapter 471 to purchase an unmanned aircraft detection and mitigation system. For purposes of this

subsection, purchasing an unmanned aircraft detection and mitigation system shall be considered airport development (as defined in section 47102).

(f) BRIEFING.—The Administrator shall annually brief the appropriate committees of Congress, including the Committee on Judiciary ¹ of the House of Representatives and the Committee on the Judiciary of the Senate, on the implementation of this section.

(g) APPLICABILITY OF OTHER LAWS.—Section 46502 of this title, section 32 of title 18, United States Code (commonly known as the Aircraft Sabotage Act), section 1031 of title 18, United States Code (commonly known as the Computer Fraud and Abuse Act of 1986),² sections 2510–2522 of title 18, United States Code (commonly known as the Wiretap Act), and sections 3121–3127 of title 18, United States Code (commonly known as the Pen/Trap Statute), shall not apply to activities authorized by the Administrator pursuant to subsection ³(c) and (d).

(h) SUNSET.—This section ceases to be effective September 30, 2023.

(i) NON-DELEGATION.—The Administrator shall not delegate any authority granted to the Administrator under this section to other Federal, State, local, territorial, or tribal agencies, or an airport sponsor, as defined in section 47102 of title 49, United States Code. The Administrator may partner with other Federal agencies under this section, subject to any restrictions contained in such agencies' authority to operate counter unmanned aircraft systems.

(Added Pub. L. 115–254, div. B, title III, §383(a), Oct. 5, 2018, 132 Stat. 3321.)

REFERENCES IN TEXT

The Aircraft Sabotage Act, referred to in subsec. (g), is part B (§§2011–2015) of chapter XX of title II of Pub. L. 98–473, Oct. 12, 1984, 98 Stat. 2187. Section 2013(b) of the Act generally amended section 32 of Title 18, Crimes and Criminal Procedure. For complete classification of this Act to the Code, see Short Title of 1984 Amendment note set out under section 31 of Title 18 and Tables.

The Federal Advisory Committee Act, referred to in subsec. (b)(3), is Pub. L. 92–463, Oct. 6, 1972, 86 Stat. 770, which is set out in the Appendix to Title 5, Government Organization and Employees.

The Computer Fraud and Abuse Act of 1986, referred to in subsec. (g), is Pub. L. 99–474, §1, Oct. 16, 1986, 100 Stat. 1213, which amended section 1030 of Title 18, Crimes and Criminal Procedure. Section 1031 of Title 18 was enacted by Pub. L. 100–700, known as the Major Fraud Act of 1988.

COOPERATION RELATED TO CERTAIN COUNTER-UAS TECHNOLOGY

Pub. L. 115–254, div. B, title III, §365, Oct. 5, 2018, 132 Stat. 3310, provided that: "In matters relating to the use of systems in the national airspace system intended to mitigate threats posed by errant or hostile unmanned aircraft system operations, the Secretary of Transportation shall consult with the Secretary of Defense to streamline deployment of such systems by drawing upon the expertise and experience of the Department of Defense in acquiring and operating such systems consistent with the safe and efficient operation of the national airspace system."

ENFORCEMENT

Pub. L. 115–254, div. B, title III, §372, Oct. 5, 2018, 132 Stat. 3312, provided that:

"(a) UAS SAFETY ENFORCEMENT.—The Administrator of the Federal Aviation Administration shall establish a pilot program to utilize available remote detection or identification technologies for safety oversight, including enforcement actions against operators of unmanned aircraft systems that are not in compliance with applicable Federal aviation laws, including regulations.

"(b) REPORTING.—As part of the pilot program, the Administrator shall establish and publicize a mechanism for the public and Federal, State, and local law enforcement to report suspected operation of unmanned aircraft in violation of applicable Federal laws and regulations.

"(c) REPORT TO CONGRESS.—Not later than 1 year after the date of enactment of the FAA Reauthorization Act of 2018 [Oct. 5, 2018], and annually thereafter through the duration of the pilot program established in subsection (a), the Administrator shall submit to the appropriate committees of Congress [Committee on Commerce, Science, and Transportation of the Senate and Committee on Transportation and Infrastructure of the House of Representatives] a report on the following:

"(1) The number of unauthorized unmanned aircraft operations detected in restricted airspace, including in and around airports, together with a description of such operations.

"(2) The number of enforcement cases brought by the Federal Aviation Administration or other Federal agencies for unauthorized operation of unmanned aircraft detected through the program, together with a description of such cases.

"(3) Recommendations for safety and operational standards for unmanned aircraft detection and mitigation systems.

"(4) Recommendations for any legislative or regulatory changes related to mitigation or detection or identification of unmanned aircraft systems.

"(d) SUNSET.—The pilot program established in subsection (a) shall terminate on September 30, 2023.

"(e) CIVIL PENALTIES.—[Amended section 46301 of this title.]

"(f) RULE OF CONSTRUCTION.—Nothing in this section shall be construed to limit the authority of the Administrator to pursue an enforcement action for a violation of this subtitle or any other applicable provision of aviation safety law or regulation using remote detection or identification or other technology following the sunset of the pilot program."

¹ So in original. Probably should be preceded by "the".

² See References in Text note below.

³ So in original. Probably should be "subsections".