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JD and Ph.D.













UAS – unmanned aircraft system

UA – unmanned aircraft

NAS – National Airspace System

IPP – Integration Pilot Program

c-UAS – counter UAS

FTC – Federal Trade Commission

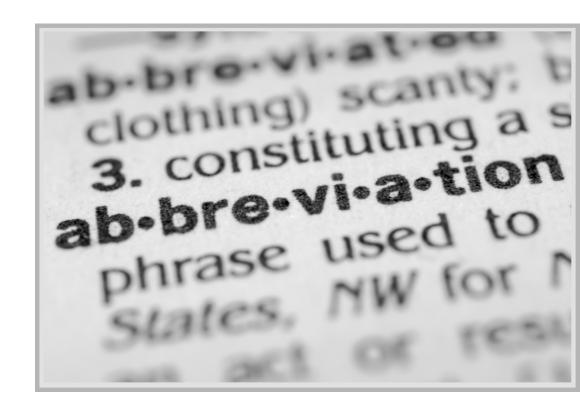
CoE – Center of Excellence

R&D – research and development

VLOS – visual-line-of-sight

BVLOS – beyond-visual-line-of-sight

UTM – UAS traffic management system or service





#### **ACTIVELY TETHERED UAS**

UAS in which the UA component

- (A) weighs 4.4 lbs 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 UA and is unlikely to be separated from the UA; and
- (C) is controlled and retrieved by such ground station through physical manipulation of the tether.

#### **APPROPRIATE COMMITTEES OF CONGRESS**

Committee on Commerce, Science, and Transportation of the Senate

Committee on Transportation and Infrastructure of the House of Representatives





## **ARCTIC**

The US zone of the Chukchi Sea, Beaufort Sea, and Bering Sea north of the Aleutian chain.



# CERTIFICATE OF WAIVER; CERTIFICATE OF AUTHORIZATION

A FAA grant of approval for a specific flight operation

#### U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION CERTIFICATE OF WAIVER OR AUTHORIZATION This certificate is issued for the operations specifically described hereinafter. No person shall conduct any operation pursuant to the authority of this certificate except in accordance with the standard and special provisions contained in this certificate, and such other requirements of the Federal Aviation Regulations not specifically waived by this certificate. OFFRATIONS AUTHORIZED LIST OF WAIVED REGULATIONS BY SECTION AND TITLE STANDARD PROVISIONS 1. A copy of the application made for this certificate shall be attached to and become a part hereof. 2. This certificate shall be presented for inspection upon the request of any authorized representative of the Administrator of the Federal Aviation Administration, or of any State or municipal official charged with the duty of enforcing local laws or regulations. 3. The holder of this certificate shall be responsible for the strict observance of the terms and provisions contained herein. 4. This certificate is nontransferable. Norz.—This certificate constitutes a waiver of those Federal rules or regulations specifically referred to above. It does not constitute a waiver of any State law or local ordinance Special Provisions Nos. inclusive, are set forth on the reverse side hereof. and is subject to cancellation at any time upon notice by the Administrator or his authorized representative.

FAA Form 7711-1 (7-74)

NU & GPO: 1984 - 570-191/10199



## **COUNTER-UAS SYSTEM (c-UAS)**

A system or device capable of lawfully and safely disabling, disrupting, or seizing control of an UA or UAS.

#### **PERMANENT AREAS**

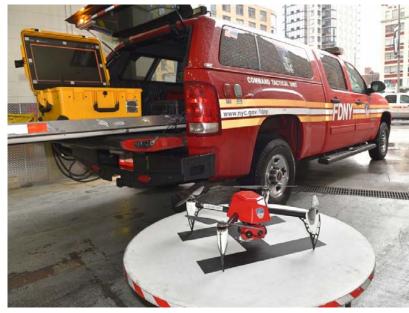
Areas on land or water that provide for launch, recovery, and operation of small UA.



#### **PUBLIC UNMANNED AIRCRAFT SYSTEM**

A UAS that meets the qualifications and conditions required for operation of a public aircraft.





#### **SENSE AND AVOID CAPABILITY**

The capability of an UA to remain a safe distance from and to avoid collisions with other airborne aircraft, structures on the ground, and other objects.



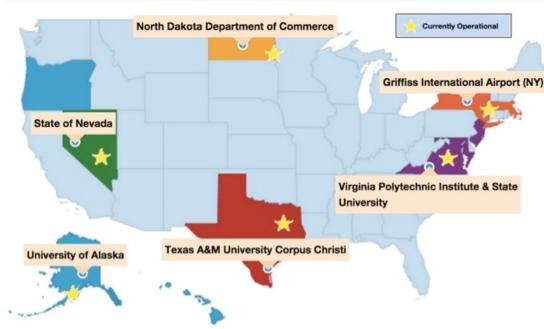
#### **SMALL UNMANNED AIRCRAFT**

A UA weighing less than 55 lbs, including the weight of anything attached to or carried by the aircraft.





### FAA UAS Operational Test Sites (August 2014)



#### **TEST RANGE**

A defined geographic area where R & D are conducted as authorized by the FAA Administrator, 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 FAA as an UAS flight test center before January 1, 2009.

#### **UNMANNED AIRCRAFT**

An aircraft that is operated without the possibility of direct human intervention from within or on the aircraft.



#### **UNMANNED AIRCRAFT SYSTEM**

An UA and associated elements (including communication links and the components that control the UA) that are required for the operator to operate safely and efficiently in the NAS.



#### What's in a Name

Unmanned Aerial System

 (UAS)
 Autopilot
 RC Controller

 Aircraft
 Payload

 (Camera...)
 Ground Station

Preferred terminology of the FAA.

We Make a Difference

(2) Repeal.—Section 332 of the FAA Modernization and Reform Act of 2012 (49 U.S.C. 40101 note) and the item relation to that section in the table of contents under section of that Act are repealed.

TITLE III – Safety Subtitle B – UAS Section 342 – Update of FAA comprehensive plan



Not later than 270 days after enactment of this Act, the Secretary of Transportation (in consultation with representatives of the aviation industry, Federal agencies that employ UAS technology in the NAS, and the UAS industry) shall update the **comprehensive plan** described in 49 USC 44802, to develop a concept of operations for the integration of UA into the NAS.

Secretary shall consider, at a minimum:

- (1) potential use of UTM and other technologies to ensure the safe and lawful operation of UA in the NAS;
- (2) appropriate roles, responsibilities, and authorities of government agencies and the private sector in identifying and reporting unlawful or harmful operations and operators of UA;
- (3) use of models, threat assessments, probabilities, and other methods to distinguish between lawful and unlawful operations of UA; and
- (4) appropriate systems, training, intergovernmental processes, protocols, and procedures to mitigate risks and hazards posed by unlawful or harmful operations of UAS.

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TITLE III – Safety
Subtitle B – UAS
Section 342 – Update of FAA comprehensive plan
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#### PROGRAM ALIGNMENT REPORT

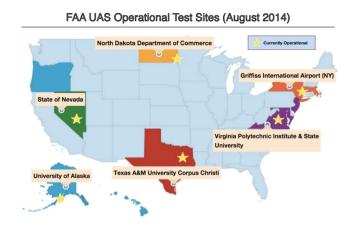
Not later than 90 days after enactment of this Act, the Secretary shall submit to the appropriate committees of Congress, a report that describes a strategy to:

- (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 LAANC;
  - (B) the UAS IPP; and
  - (C) the UTM Pilot Program.



#### Administrator shall:

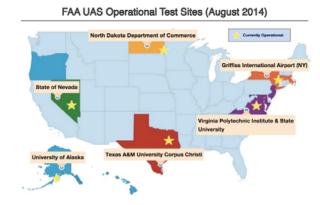
- (1) designate airspace for safely testing the integration of unmanned flight operations in the NAS;
- (2) develop operational standards and air traffic requirements for unmanned flight operations at test ranges;
- (3) coordinate with, and leverage the resources of, NASA and the DoD;
- (4) address both civil and public UAS;
- (5) ensure that the program is coordinated with relevant aspects of the NextGen Air Transportation System;
- (6) provide for verification of the safety of UAS and related navigation procedures as it relates to continued development of standards for integration into the NAS;
- (7) engage test range operators, as necessary and within available resources, in projects for research, development, testing, and evaluation of UAS to facilitate the FAA's development of standards for the safe integration of UA into the NAS, which may include solutions for:



- (A) developing and enforcing geographic and altitude limitations;
- (B) providing for alerts by the manufacturer of an UAS regarding any hazards or limitations on flight, including prohibition on flight as necessary;
- (C) sense and avoid capabilities;
- (D) BVLOS operations, nighttime operations, operations over people, operation of multiple small UAS, and UTM, or other critical research priorities; and
- (E) improving privacy protections through the use of advances in UAS 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 UAS into the NAS;
- (9) streamline to the extent practicable the approval process for test ranges when processing UA 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;
- (11) allow test range operators to receive Federal funding, other than from the FAA, including in-kind contributions, from test range participants in the furtherance of research, development, and testing objectives.



Administrator may waive the requirements of 49 USC 44711, including related regulations, to the extent consistent with aviation safety.

The operator of each test range shall:

- (1) review the operations of UAS 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 R & D operations at the test ranges that contribute to the FAA's safe integration of UAS into the NAS, on a quarterly basis until the program terminates.

Secretary of Transportation may authorize an operator of a test range to administer testing requirements established by the Administrator for UAS operations.



The Administrator may use the other transaction authority under section 106(l)(6) and enter into collaborative R & D agreements, to direct research related to UAS, including at any test range, and in coordination with the CoE for UAS.

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 CoE for UAS and the test ranges.

The program under this section shall terminate on September 30, 2023.

TITLE III – Safety
Subtitle B – UAS
Section 344 – Small UA in the Arctic



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 UA may operate **24 hours per day** for research and commercial purposes.

The plan shall include the development of processes to facilitate the safe operation of small UA BVLOS.

Each permanent area 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.

Secretary may enter into an agreement with relevant national and international communities.

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 UA in the designated permanent areas in the Arctic without regard to whether the small UA is used as a public aircraft, a civil aircraft, or a model aircraft.

Secretary may implement an existing process to meet these requirements.



FAA Administrator shall establish a process for:

- (1) accepting risk-based consensus safety standards related to the design, production, and modification of small UAS;
- (2) authorizing the operation of small UAS make and model designed, produced, or modified in accordance with the consensus safety standards;
- (3) authorizing a manufacturer to self-certify a small UAS make or model that complies with consensus safety standards; and
- (4) certifying a manufacturer of small UAS, or an employee of such manufacturer, that has demonstrated compliance with the consensus safety standards and met any other qualifying criteria, as determined by the Administrator, to alternatively satisfy these requirements.



Before accepting consensus safety standards, the FAA Administrator 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 UAS 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 UA and its operator is lost or compromised.
- (5) Detectability and identifiability to pilots, the FAA, 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 for newly designed small UAS.



- (9) Applicability of consensus safety standards to small UAS that are not manufactured commercially.
- (10) Any technology or standard related to small UAS that promotes aviation safety.
- (11) Any category of UAS that should be exempt from the consensus safety standards based on risk factors.
- The process for authorizing the operation of small UAS may allow for operation of any applicable small UAS within the NAS without requiring:
- (1) airworthiness certification requirements under section 44704 of this title; or
- (2) type certification under 14 CFR Part 21.



The Administrator may suspend or revoke the authorizations if the Administrator determines that the manufacturer or the small UAS is no longer in compliance with the standards accepted by the Administrator or with the manufacturer's statement of compliance.

With regard to an authorization, the Administrator may require a manufacturer of small UAS to provide the FAA 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.
- (4) Upon request, a sample aircraft to be inspected by the FAA to ensure compliance with the consensus safety standards accepted by the Administrator.



#### 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;
- (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; and
- (B) the aircraft's recommended maintenance and inspection procedures, which conform to the consensus safety standards;



#### MANUFACTURER'S STATEMENT OF COMPLIANCE FOR SMALL UAS (continued)

- (5) state that the manufacturer will monitor safety-of-flight issues and take action to ensure it meets the consensus safety standards 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 FAA, 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.

It shall be unlawful for any person to knowingly submit a statement of compliance that is fraudulent or intentionally false.



#### 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 UAS 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 FAA.

The Administrator may exempt from the requirements of this section small UAS that are not capable of navigating BVLOS 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.

CoE for UAS shall establish an UAS research facility to study appropriate safety standards for UAS and to validate such standards, as directed by the FAA Administrator, consistent with 49 USC 44805.

TITLE III – Safety Subtitle B – UAS Section 346 – Public UAS



Secretary of Transportation shall issue guidance regarding the operation of a public UAS:

- (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 FAA, to test and operate public UAS; and
- (3) to provide guidance on a public agency's responsibilities when operating an UA without a civil airworthiness certificate issued by the Administration.

TITLE III – Safety Subtitle B – UAS Section 346 – Public UAS



#### AGREEMENTS WITH GOVERNMENT AGENCIES

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 UAS in the NAS. An agreement shall with respect to an application:

- (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;

An agreement shall allow for a one-time approval of similar operations carried out during a fixed period of time; and allow a government public safety agency to operate an UA weighing **4.4 pounds or less** if that UA is operated:

- (i) within or BVLOS of the operator;
- (ii) less than 400 feet AGL;
- (iii) during **daylight** conditions;
- (iv) within Class G airspace; and
- (v) **outside of 5 SM** from any airport, heliport, seaplane base, spaceport, or other location with aviation activities.

TITLE III — Safety Subtitle B — UAS Section 346 — Public UAS



#### PUBLIC ACTIVELY TETHERED UNMANNED AIRCRAFT SYSTEMS

Not later than **180 days** after enactment of this Act, the FAA Administrator shall permit the use of, and may issue guidance regarding, the use of public actively tethered UAS that are:

- operated at less than 150 feet AGL;
- within class G airspace; or
- at or below the ceiling depicted on the FAA's published UAS facility maps for class **B, C, D, or E surface area** airspace;
- not flown directly over **non-participating persons**;
- operated within VLOS of the operator; and
- operated in a manner that does not interfere with and gives way to any other aircraft.

Public actively tethered UAS may be operated without any requirement to obtain a certificate of authorization, certificate of waiver, or other approval by the FAA; without requiring airman certification under section 44703 of this title or any rule or regulation relating to airman certification; and without requiring airworthiness certification under section 44704 of this title or any rule or regulation relating to aircraft certification.

TITLE III – Safety Subtitle B – UAS Section 346 – Public UAS



Public actively tethered UAS operated within this scope shall be exempt from the requirements of section 44805 of this title.

Nothing in this subsection shall be construed to preclude the FAA Administrator from issuing new regulations for public actively tethered UAS in order to ensure the safety of the NAS.

# FEDERAL AGENCY COORDINATION TO ENHANCE THE PUBLIC HEALTH AND SAFETY CAPABILITIES OF PUBLIC UAS

Administrator shall assist Federal civilian Government agencies that operate UAS within civil controlled airspace, in operationally deploying and integrating sense and avoid capabilities, as necessary to operate UAS safely within the NAS.

TITLE III – Safety Subtitle B - UAS Section 346 - Public UAS

(2) PUBLIC UNMANNED AIRCRAFT SYSTEMS. Section 334 of LAS.C. Act of 2012 (49 U.S.C. the FAA Modernization and Reform that section in the table 40101 note) and the item relating to the FAA Modernization and Reform Act of 2012 (49 U.S.C. in the table to that section Stat. 13) are 40101 note) and the item 1(b) of that Act (126 Stat. 13) of contents under section 1(b) of the table to the table to the table table to the table table to the table 40101 note) and the item relating to that section in the 13) are of contents under section 1(b) of that Act (126 Stat. 13) are renealed. repealed.

TITLE III — Safety
Subtitle B — UAS
Section 347 — Special Authority for certain UAS



Notwithstanding any other requirement of this chapter, the Secretary of Transportation shall use a **risk-based approach** to determine if certain UAS may operate safely in the NAS notwithstanding completion of the comprehensive plan and rulemaking required by section 44802 or the guidance required by section 44806.

### ASSESSMENT OF UNMANNED AIRCRAFT SYSTEMS

In making the determination, the Secretary shall determine, at a minimum:

- (1) which types of UAS, 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 BVLOS, or operation during the day or night, do not create a hazard to users of the NAS 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 UAS.

The authority under this section for the Secretary to determine if certain UAS may operate safely in the NAS terminates effective September 30, 2023.

TITLE III – Safety Subtitle B - UAS Section 347 – Special Authority for certain UAS

(2) SPECIAL RULES FOR CERTAIN UNMANNED ARCRAFT SYS-AB.—Section 333 of the FAA Modernization and Reform Act (2) SPECIAL RULES FOR CERTAIN UNMANNED AIRCRAFT SYSTEMS. Section 333 of the FAA Modernization relating to that of 2012 (49 U.S.C. 40101 note) and the item TEMS. Section 333 of the FAA Modernization and Reform that of 2012 (49 the table of contents under section in the 13) are repealed.

Section 58tat. 13) are repealed. TITLE III – Safety
Subtitle B – UAS
Section 348 – Carriage of property
by small UAS for compensation or
hire

Not later than 1 year after enactment of the FAA Reauthorization Act of 2018, the FAA Administrator shall update existing regulations to authorize the carriage of property by operators of small UAS for compensation or hire within the United States.





TITLE III – Safety
Subtitle B – UAS
Section 348 – Carriage of
property by small UAS for
compensation or hire

Any rulemaking 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 UAS and their operation and tailor performance-based requirements to appropriately mitigate risk.
- (3) Consider the unique characteristics of highly automated, small UAS.
- (4) Include requirements for the safe operation of small UAS that, at a minimum, address:
- (A) airworthiness of small UAS;
- (B) qualifications for operators and the type and nature of the operations;
- (C) operating specifications governing the type and nature of the UAS 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 UAS for compensation or hire within the communities to be served.



TITLE III – Safety
Subtitle B – UAS
Section 348 – Carriage of property by
small UAS for compensation or hire



(5) SMALL UAS .—The Secretary may amend 14 CFR Part 298, to update existing regulations to establish economic authority for the carriage of property by small UAS for compensation or hire.

Such authority shall only require:

- (A) registration with the Department of Transportation;
- (B) authorization from the FAA 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 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.



A person may operate a small UA without specific certification or operating authority from the FAA 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 FAA.
- (3) The aircraft is flown within the **VLOS** of the person operating the aircraft or a visual observer collocated 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 ft AGL and complies with all airspace restrictions and prohibitions.
- (7) The operator has passed an **aeronautical knowledge and safety test** 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.

UA operations that do not conform to the above limitations must comply with all statutes and regulations generally applicable to UA and UAS.



### **OPERATIONS AT FIXED SITES**

Persons operating UA 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.

## **UNMANNED AIRCRAFT WEIGHING MORE THAN 55 POUNDS**

A person may operate an UA weighing more than 55 pounds, including the weight of anything attached to or carried by the aircraft, if:

- (A) the UA 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 above.



The Administrator, in consultation with government, stakeholders, and community-based organizations, shall initiate a process to periodically update the operational parameters above as appropriate.

In updating an operational parameter, 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) equipage requirements that facilitate safe, efficient, and secure operations and further integrate all UA into the NAS.



Nothing in this subsection shall be construed as expanding the authority of the Administrator to require a person operating an UA under this section to seek permissive authority of the Administrator, beyond that required above, prior to operation in the NAS.

Nothing in this section shall be construed to limit the authority of the Administrator to pursue an enforcement action against a person operating any UA who endangers the safety of the NAS.

Nothing in this section prohibits the Administrator from promulgating rules generally applicable to UA, including those UA eligible for the exception set forth in this section, relating to:

- (1) updates to the operational parameters for UA in above;
- (2) the registration and marking of UA;
- (3) the standards for remotely identifying owners and operators of UAS and associated UA; and
- (4) other standards consistent with maintaining the safety and security of the NAS.



### AERONAUTICAL KNOWLEDGE AND SAFETY TEST

Not later than 180 days after the date of enactment of this section, the Administrator, in consultation with manufacturers of UAS, 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.

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 FAA regulations and requirements pertaining to the operation of an UAS in the NAS.



#### COMMUNITY-BASED ORGANIZATION DEFINED

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 NAS 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 UA that have the advanced flight capabilities enabling active, sustained, and controlled navigation of the aircraft BVLOS 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.

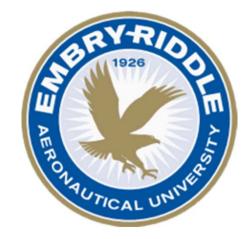
In collaboration with aeromodelling stakeholders, the Administrator shall publish an AC within 180 days of the date of enactment of this section that identifies the criteria and process required for recognition of community-based organizations.

TITLE III – Safety
Subtitle B – UAS
Section 240

Section 349 – Exception for limited recreational operations of UA

(2) Repeal.—Section 336 of the FAA Modernization and Reform Act of 2012 (49 U.S.C. 40101 note) and the item relation to that section in the table of contents under section of that Act are repealed.

TITLE III — Safety
Subtitle B — UAS
Section 350 — Use of UAS at
institutions of higher education

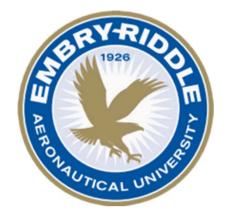


For the purposes of 49 USC 44809, as added by this Act, a "recreational purpose" shall include an UAS operated by an institution of higher education for educational or research purposes.

In updating an operational parameter for UAS operated by an institution of higher education for educational or research purposes, the Administrator shall consider:

- (1) use of small UAS 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 UAS 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.

TITLE III – Safety
Subtitle B – UAS
Section 350 – Use of UAS at
institutions of higher education



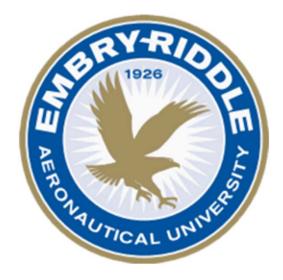
Not later than 270 days after the enactment of this Act, the FAA Administrator may establish regulations, procedures, and standards, as necessary, to facilitate the safe operation of UAS operated by institutions of higher education for educational or research purposes.

**INSTITUTION OF HIGHER EDUCATION**: has meaning given by section 101(a) of the Higher Education Act of 1965 (20 U.S.C. 1001(a)).

**EDUCATIONAL OR RESEARCH PURPOSES**: with respect to the operation of an UAS by an institution of higher education, includes:

- (A) instruction of students at the institution;
- (B) academic or research related uses of UAS 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.

TITLE III – Safety
Subtitle B – UAS
Section 350 – Use of UAS at
institutions of higher education



Nothing in this section shall be construed to limit the authority of the Administrator to pursue an enforcement action against a person operating any UA who endangers the safety of the NAS.

Nothing in this section prohibits the Administrator from promulgating any rules or standards consistent with maintaining the safety and security of the NAS.

TITLE III – Safety Subtitle B – UAS Section 351 – UAS IPP



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.

TITLE III – Safety
Subtitle B – UAS
Section 352 – Part 107 transparency
and technology improvements



Not later than 30 days after enactment of this Act, the Administrator shall publish on the FAA website a **representative sample** of the safety justifications, offered by applicants for small **UAS 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.

Not later than 90 days after 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.

TITLE III – Safety
Subtitle B – UAS
Section 353 – Emergency exemption
process



It is the sense of Congress that the use of UAS by civil and public operators:

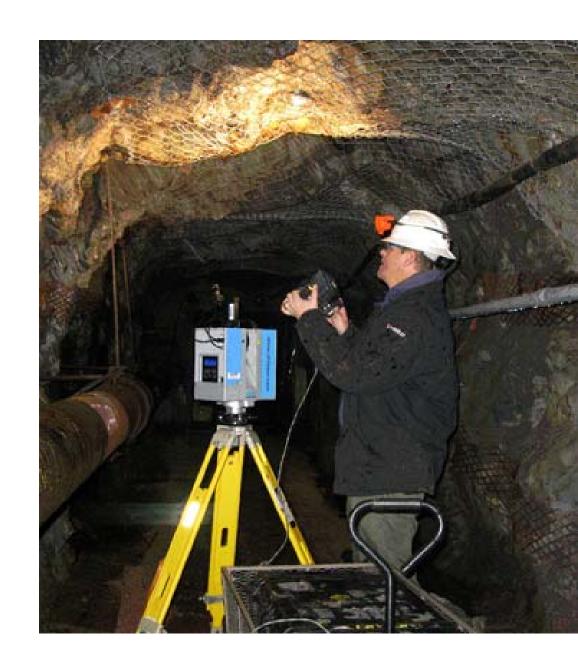
- (1) is an increasingly important tool in response to a catastrophe, disaster, or other emergency;
- (2) helps facilitate emergency response operations, such as firefighting and search and rescue; and
- (3) helps facilitate **post-catastrophic response operations**, such as utility and infrastructure restoration efforts and the safe and prompt processing, adjustment, and payment of insurance claims.

The Administrator shall, as necessary, update and improve the Special Government Interest process described in chapter 7 of FAA 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.

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.

TITLE III – Safety
Subtitle B – UAS
Section 354 – Treatment of UA
operating underground

An UAS that is operated underground for mining purposes shall not be subject to regulation or enforcement by the FAA under title 49, United States Code.



TITLE III – Safety
Subtitle B – UAS
Section 355 – Public UAS
operations by Tribal
governments



## PUBLIC UAS OPERATIONS BY TRIBAL GOVERNMENTS

49 USC 40102(a)(41) is amended by adding at the end the following:

(F) An UA that is owned and operated by, or exclusively leased for at least 90 continuous days by, an **Indian Tribal government**, as defined in section 102 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C. 5122), except as provided in section 40125(b).

TITLE III – Safety
Subtitle B – UAS
Section 356 – Authorization of
appropriations for KNOW BEFORE
YOU FLY Campaign



There are authorized to be appropriated to the FAA Administrator \$1,000,000 for each of fiscal years 2019 through 2023, out of funds made available under section 106(k), for the Know Before You Fly educational campaign or similar public informational efforts intended to broaden UAS safety awareness.

www.knowbeforeyoufly.org

TITLE III – Safety Subtitle B – UAS Section 357 – UAS Privacy Policy

It is the policy of the United States that the operation of any UA or UAS 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.



TITLE III – Safety Subtitle B – UAS Section 358 – UAS privacy review

Comptroller General of the United States, in consideration of relevant efforts led by the National Telecommunications and Information Administration, shall carry out a review of the privacy issues and concerns associated with the operation of UAS in the NAS.



TITLE III – Safety Subtitle B – UAS Section 358 – UAS privacy review



In carrying out the review, the Comptroller General shall:

- (1) consult with the **Department of Transportation** and the **National Telecommunications and Information Administration** of the **Department of Commerce** on its ongoing efforts responsive to the Presidential memorandum titled "Promoting Economic Competitiveness While Safeguarding Privacy, Civil Rights, and Civil Liberties in Domestic Use of Unmanned Aircraft Systems" and dated February 15, 2015;
- (2) examine and identify the existing Federal, State, or relevant local laws that address an individual's personal privacy;
- (3) identify specific issues and concerns that may limit the availability of civil or criminal legal remedies regarding inappropriate operation of UAS in the NAS;
- (4) identify any deficiencies in Federal, State, or local privacy protections; and
- (5) provide recommendations to address any limitations and deficiencies identified in paragraphs(3) and (4).

Not later than 180 days after the date of enactment of this Act, the Secretary shall submit to the appropriate committees of Congress a report on the results of the review.

# TITLE III – Safety Subtitle B – UAS Section 359 – Study of fire department (FD) and emergency service agency (ESA) use of UAS



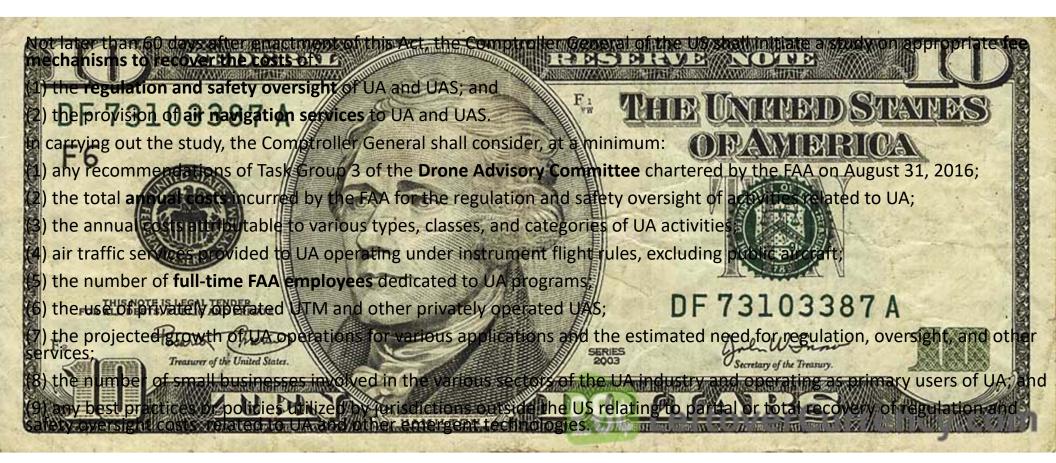
The Administrator shall conduct a study on the use of UAS by FD and ESA to include analysis of:

- (A) how FD and ESA currently use UAS;
- (B) obstacles to greater use of UAS by FD and ESA;
- (C) the best way to provide outreach to support greater use of UAS by FD and ESA;
- (D) laws or regulations that present barriers to career, combination, and volunteer FD's ability to use UAS;
- (E) training and certifications required for the use of UAS by FD and ESA;
- (F) airspace limitations and concerns in the use of UAS by FD and ESA;
- (G) roles of UAS in the provision of fire and emergency services;
- (H) technological challenges to greater adoption of UAS by FD and ESA; and
- (I) other issues determined appropriate by the Administrator.

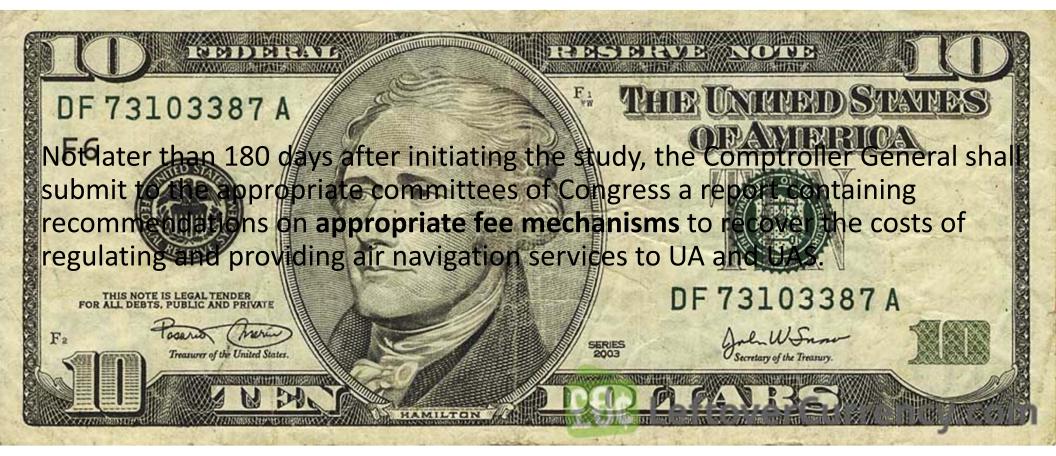
Administrator shall consult with national fire and emergency service organizations.

Not later than 180 days after enactment of this Act, the Administrator shall submit to the appropriate committees of Congress a report on the study Administrator's findings, conclusions, and recommendations.

TITLE III – Safety
Subtitle B – UAS
Section 360 – Study on financing of UA services



TITLE III — Safety
Subtitle B — UAS
Section 360 — Study on financing of UA services



TITLE III – Safety
Subtitle B – UAS
Section 361 – Report on UAS and chemical aerial application

Not later than 1 year after enactment of this Act, the Administrator shall submit to the appropriate committees of Congress a report evaluating which aviation safety requirements under 14 CFR part 137, should apply to UAS operations engaged in aerial spraying of chemicals for agricultural purposes.



TITLE III – Safety
Subtitle B – UAS
Section 362 – Sense of Congress
regarding UA safety



## Sense of Congress that:

- (1) the unauthorized operation of UA near airports presents a serious hazard to aviation safety;
- (2) a collision between an UA and a conventional aircraft in flight could jeopardize the safety of persons aboard the aircraft and on the ground;
- (3) Federal aviation regulations, including 14 CFR Parts 91.126 through 91.131, prohibit unauthorized operation of an aircraft in controlled airspace near an airport;
- (4) Federal aviation regulations, including 14 CFR Part 91.13, prohibit the operation of an aircraft in a careless or reckless manner so as to endanger the life or property of another;
- (5) the Administrator should pursue all available civil and administrative remedies available to the Administrator, including referrals to other government agencies for criminal investigations, with respect to persons who operate UA in an unauthorized manner;

TITLE III – Safety
Subtitle B – UAS
Section 362 – Sense of Congress
regarding UA safety



- (6) the Administrator should:
- (A) place particular priority in continuing measures, including partnering with nongovernmental organizations and State and local agencies, to educate the public about the dangers to public safety of operating UA over areas that have temporary flight restrictions in place, for purposes such as wildfires, without appropriate authorization; and
- (B) partner with State and local agencies to effectively enforce relevant laws so that UA do not interfere with the efforts of emergency responders;
- (7) the Administrator should place particular priority on continuing measures, including partnerships with nongovernmental organizations, to educate the public about the dangers to the public safety of operating UA near airports without the appropriate approvals or authorizations; and
- (8) manufacturers and retail sellers of small UAS should take steps to educate consumers about the safe and lawful operation of such systems.

TITLE III – Safety
Subtitle B – UAS
Section 363 – Prohibition
regarding weapons



Unless authorized by the Administrator, a person may not operate an UA or UAS that is equipped or armed with a dangerous weapon.

In this section, the term "dangerous weapon" has the meaning given that term in 18 USC 930(g)(2) - a weapon, device, instrument, material, or substance, animate or inanimate, that is used for, or is readily capable of, causing death or serious bodily injury, except that such term does not include a pocket knife with a blade of less than 2½ inches in length.

A person who violates this section is liable to the US Government for a civil penalty of not more than \$25,000 for each violation.

TITLE III – Safety
Subtitle B – UAS
Section 364 – US c-UAS system review of interagency coordination processes



Not later than 60 days after enactment of this Act, the Administrator, in consultation with government agencies currently authorized to operate Counter-Unmanned Aircraft System (C-UAS) systems within the US (including the territories and possessions of the US), shall initiate a review of the following:

- (1) The process the Administration is using for interagency coordination of C-UAS activity pursuant to a relevant Federal statute authorizing such activity within the US (including the territories and possessions of the US).
- (2) The standards the Administration is utilizing for operation of a C-UAS systems pursuant to a relevant Federal statute authorizing such activity within the United States (including the territories and possessions of the US), including whether the following criteria are being taken into consideration in the development of the standards:

# TITLE III – Safety Subtitle B – UAS Section 364 – US c-UAS system review of interagency coordination processes



- (A) Safety of the national airspace.
- (B) Protecting individuals and property on the ground.
- (C) Non-interference with avionics of manned aircraft, and UA, operating legally in the national airspace.
- (D) Non-interference with air traffic control systems.
- (E) Adequate coordination procedures and protocols with the FAA during the operation of C-UAS systems.
- (F) Adequate training for personnel operating C-UAS systems.
- (G) Assessment of the efficiency and effectiveness of the coordination and review processes to ensure national airspace safety while minimizing bureaucracy.
- (H) Best practices for the consistent operation of CUAS systems to the maximum extent practicable.
- (I) Current airspace authorization information shared by automated approval processes for airspace authorizations, such as the LAANC.
- (J) Such other matters the Administrator considers necessary for the safe and lawful operation of C-UAS systems.
- (3) Similar interagency coordination processes already used for other matters that may be used as a model for improving the interagency coordination for the usage of C-UAS systems.

TITLE III — Safety
Subtitle B — UAS
Section 364 — US c-UAS system review
of interagency coordination processes



Not later than 180 days after the date upon which the review is initiated, the Administrator shall submit to the Committee on Transportation and Infrastructure of the House of Representatives, the Committee on Armed Services of the House of Representatives, and the Committee on Commerce, Science, and Transportation in the Senate, and the Committee on Armed Services of the Senate, a report on the Administration's activities related to C-UAS systems, including:

- (1) any coordination with Federal agencies and States, subdivisions and States, political authorities of at least 2 States that operate C-UAS systems;
- (2) an assessment of the standards being utilized for the operation of a counter-UAS systems within the US (including the territories and possessions of the US);
- (3) an assessment of the efficiency and effectiveness of the interagency coordination and review processes to ensure national airspace safety while minimizing bureaucracy; and
- (4) a review of any additional authorities needed by the FAA to effectively oversee the management of C-UAS systems within the US (including the territories and possessions of the US).

TITLE III – Safety
Subtitle B – UAS
Section 365 – Cooperation related to certain c-UAS technology



In matters relating to the use of systems in the NAS intended to mitigate threats posed by errant or hostile UAS 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 DoD in acquiring and operating such systems consistent with the safe and efficient operation of the NAS.

TITLE III – Safety
Subtitle B – UAS
Section 366 – Strategy for responding to public safety threats and enforcement utility of UAS



Not later than 1 year after enactment of this Act, the FAA Administrator 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 UAS; and
- (2) how to identify and take advantage of opportunities to use UAS to enhance the effectiveness of local law enforcement agencies and first responders.

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 UAS; and
- (2) to identify and take advantage of opportunities to use UAS to enhance the effectiveness of local law enforcement agencies and public safety response efforts.

In this section, the term "unmanned aircraft system" has the meaning given in 49 USC 44801, as added by this Act.

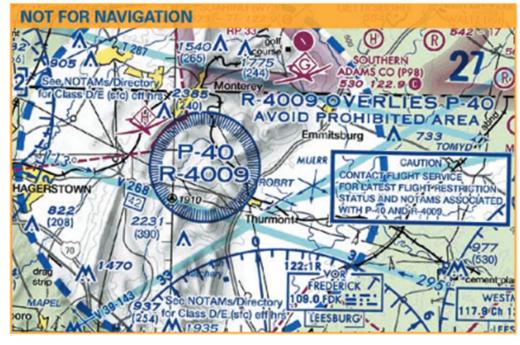
TITLE III – Safety
Subtitle B – UAS
Section 367 – Incorporation of FAA
occupations relating to UA into veterans
employment programs of the
administration



Not later than 180 days after enactment of this Act, the FAA Administrator, in consultation with the **Secretary of Veterans Affairs**, the Secretary of Defense, and the Secretary of Labor, shall determine whether occupations of the Administration relating to UAS technology and regulations can be incorporated into the **Veterans' Employment Program** of the Administration, particularly in the interaction between such program and the New Sights Work Experience Program and the Vet-Link Cooperative Education Program.

TITLE III – Safety
Subtitle B – UAS
Section 368 – Public UAS access to special use airspace

Not later than 180 days after enactment of this Act, the Secretary of Transportation shall issue guidance for the expedited and timely access to special use airspace for public UAS in order to assist Federal, State, local, or tribal law enforcement organizations in conducting law enforcement, emergency response, or for other activities.



This is Prohibited Area P-40 as depicted on the sectional chart.

TITLE III – Safety
Subtitle B – UAS
Section 369 – Applications for designation

Section 2209 of the FAA Extension, Safety, and Security Act of 2016 (Public Law 114–190; 130 Stat. 615) is amended:

- (1) in subsection (b)(1)(C)(i), by striking "and distribution facilities and equipment" and inserting "distribution facilities and equipment, and railroad facilities"; and
- (2) by adding at the end the following:
- (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.

TITLE III – Safety
Subtitle B – UAS
Section 370 – Sense of Congress
on additional rulemaking authority



### Sense of Congress that:

- (1) BVLOS, nighttime operations, and operations over people of UAS have tremendous potential:
- (A) to enhance both commercial and academic use;
- (B) to spur economic growth and development through innovative applications of this emerging technology; and
- (C) to improve emergency response efforts as it relates to assessing damage to critical infrastructure such as roads, bridges, and utilities, including water and power, ultimately speeding response time;
- (2) advancements in miniaturization of safety technologies, including for aircraft weighing under 4.4 pounds, have increased economic opportunities for using UAS while reducing kinetic energy and risk compared to unmanned aircraft that may weigh 4.4 pounds or more, but less than 55 pounds;
- (3) advancements in unmanned technology will have the capacity to ultimately improve manned aircraft safety; and
- (4) integrating UAS safely into the national airspace, including BVLOS, nighttime operations on a routine basis, and operations over people should remain a top priority for the FAA as it pursues additional rulemakings under the amendments made by this section.

TITLE III – Safety
Subtitle B – UAS
Section 371 – Assessment of
aircraft registration for small UA



Not later than 180 days after enactment of this Act, the Secretary of Transportation shall enter into an agreement with the National Academy of Public Administration, to estimate and assess compliance with and the **effectiveness of the registration** of small UAS by the FAA pursuant to the interim final rule issued on December 16, 2015, titled "Registration and Marking Requirements for Small Unmanned Aircraft" (80 Fed. Reg. 78593).

TITLE III – Safety
Subtitle B – UAS
Section 371 – Assessment of
aircraft registration for small UA



Upon receiving the assessment, the Secretary shall, to the extent practicable, develop metrics to measure compliance with the interim final rule described in subsection (a), and any subsequent final rule, including metrics with respect to:

- (1) the levels of compliance with the interim final rule and any subsequent final rule;
- (2) the number of enforcement actions taken by the Administration for violations of or noncompliance with the interim final rule and any subsequent final rule, together with a description of the actions; and
- (3) the effect of the interim final rule and any subsequent final rule on compliance with any fees associated with the use of small UAS.

Not later than 1 year after enactment of this Act, the Secretary shall submit to the to the appropriate committees of Congress a report containing:

- (1) the results of the assessment;
- (2) the metrics required and how the Secretary will track these metrics; and
- (3) recommendations to Congress for improvements to the registration process for small UA, if necessary.

TITLE III – Safety Subtitle B – UAS Section 372 – Enforcement



The FAA Administrator shall establish a pilot program to utilize available remote detection or identification technologies for safety oversight, including **enforcement actions** against operators of UAS that are not in compliance with applicable Federal aviation laws, including regulations.

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 UA in violation of applicable Federal laws and regulations.

TITLE III – Safety Subtitle B – UAS Section 372 – Enforcement



Not later than 1 year after enactment of the FAA Reauthorization Act of 2018, and annually thereafter through the duration of the pilot program, the Administrator shall submit to the appropriate committees of Congress a report on the following:

- (1) The number of unauthorized UA 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 FAA or other Federal agencies for unauthorized operation of UA detected through the program, together with a description of such cases.
- (3) Recommendations for safety and operational standards for UA detection and mitigation systems.
- (4) Recommendations for any legislative or regulatory changes related to mitigation or detection or identification of UAS.

The pilot program shall terminate on September 30, 2023.

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.

## TITLE III — Safety Subtitle B — UAS Section 373 — Federal and local authorities



Not later than 180 days after enactment of this Act, the US Comptroller General shall:

- (1) conduct a study on the relative roles of the Federal Government, State, local and Tribal governments in the regulation and oversight of low-altitude operations of UAS in the NAS; and
- (2) submit to the appropriate committees of Congress a report on the study, including the Comptroller General's findings and conclusions.

The study shall review the following:

- (1) The current state of the law with respect to Federal authority over low-altitude operations of UAS in the NAS.
- (2) The current state of the law with respect to State, local, and Tribal authority over low-altitude operations of UAS in the NAS.
- (3) Potential gaps between authorities under paragraphs (1) and (2).
- (4) The degree of regulatory consistency required among the Federal Government, State governments, local governments, and Tribal governments for the safe and financially viable growth and development of the UA industry.
- (5) The interests of Federal, State, local, and Tribal governments affected by low-altitude operations of UAS and the authorities of those governments to protect such interests.
- (6) The infrastructure requirements necessary for monitoring the low-altitude operations of small UA and enforcing applicable laws.

TITLE III – Safety Subtitle B – UAS Section 374 – Spectrum



Not later than 270 days after enactment of this Act, and after consultation with relevant stakeholders, the **FAA Administrator**, the **National Telecommunications and Information Administration**, and the **Federal Communications Commission**, shall submit to the Committee on Commerce, Science, and Transportation of the Senate, the Committee on Transportation and Infrastructure of the House of Representatives, and the Committee on Energy and Commerce of the House of Representatives a report:

- (1) on whether UAS operations should be permitted, but not required, to operate on spectrum that was recommended for allocation for AM(R)S and control links for UAS by the World Radio Conferences in 2007 (L-band, 960-1164 MHz) and 2012 (C-band, 5030-5091 MHz), on an unlicensed, shared, or exclusive basis, for operations within the UTM system or outside of such a system;
- (2) that addresses any technological, statutory, regulatory, and operational barriers to the use of such spectrum; and
- (3) that, if it is determined that some spectrum frequencies are not suitable for BVLOS operations by UAS, includes recommendations of other spectrum frequencies that may be appropriate for such operations.

The report required does not prohibit or delay use of any licensed spectrum to satisfy control links, tracking, diagnostics, payload communications, collision avoidance, and other functions for UAS operations.

TITLE III – Safety Subtitle B – UAS Section 375 – FTC authority



A violation of a privacy policy by a person that uses an UAS for compensation or hire, or in the furtherance of a business enterprise, in the NAS 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)).

In this section, the terms "unmanned aircraft" and "unmanned aircraft system" have the meanings given those terms in 49 USC 44801.



In conjunction with completing the requirements of section 2208 of the FAA Extension, Safety, and Security Act of 2016 (49 U.S.C. 40101 note), the FAA Administrator, in coordination with the NASA Administrator, and in consultation with UAS industry stakeholders, shall develop a plan to allow for the implementation of unmanned aircraft systems traffic management (UTM) services that expand operations BVLOS, have full operational capability, and ensure the safety and security of all aircraft.



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 (49 U.S.C. 40101 note), is conducted to meet the following objectives of a comprehensive UTM system by the conclusion of the pilot program:

- (1) In cooperation with NASA and manned and UA industry stakeholders, allow testing of UA operations, of increasing volumes and density, in airspace above test ranges, per 49 USC 44801, 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.
- (2) Permit the testing of various remote identification and tracking technologies evaluated by the UAS Identification and Tracking Aviation Rulemaking Committee.
- (3) Where the particular operational environment permits, permit blanket waiver authority to allow any UA approved by a UTM system pilot program selectee to be operated under conditions currently requiring a case-by-case waiver under 14 CFR part 107, provided that any blanket waiver addresses risks to airborne objects as well as persons and property on the ground.



### The plan 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, per 49 USC 44801, 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 LAANC 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 noncooperative UAS in the NAS;
- (B) deconfliction of cooperative UAS in the NAS by such services;
- (C) the manner in which the FAA 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 FAA 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 NAS;
- (F) the potential for UTM services to manage UAS 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 NAS;
- (B) setting the standards for independent private sector validation and verification that the standards for UTM services enabling operations BVLOS, 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.



In developing the safety standards, the Administrator:

- (1) shall require that UTM services help ensure the safety of UA and other aircraft operations that occur primarily or exclusively in airspace 400 feet AGL and below, including operations conducted under a waiver issued pursuant to 14 CFR part 107 subpart D;
- (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 NAS;
- (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.



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.

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 UA pose low risk, as determined by the Administrator.

In carrying out this section, the Administrator shall consult with other Federal agencies, as appropriate.



Sense of Congress that, in developing the safety standards for UTM services, the FAA shall consider ongoing R & D efforts on UTM services conducted by:

- (1) NASA 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 (49 U.S.C. 40101 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.

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 (49 U.S.C. 40101 note), the Administrator shall:

- (1) complete the plan;
- (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 FAA.

TITLE III – Safety
Subtitle B – UAS
Section 377 – Early implementation of certain UTM services



Not later than 120 days after enactment of this Act, the Administrator shall, upon request of a UTM service provider, determine if certain UTM services may operate safely in the NAS before completion of the implementation plan required by section 376.

In making the determination 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 NAS and address any identified risks to manned or UA and persons and property on the ground.

If the Administrator determines that certain UTM services may operate safely in the NAS, the Administrator shall establish requirements for their safe operation in the NAS.

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 UA poses low risk, including but not limited to croplands and areas other than congested areas.

In carrying out this section, the Administrator shall consult with other Federal agencies, as appropriate.

Nothing in this Act 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, including approvals under the LAANC.

TITLE III — Safety
Subtitle B — UAS
Section 378 — Sense of Congress



### Sense of Congress that:

- (1) each person that uses an UAS for compensation or hire, or in the furtherance of a business enterprise, except those operated for purposes protected by the First Amendment of the Constitution, should have a **written privacy policy** consistent with section 357 that is appropriate to the nature and scope of the activities regarding the collection, use, retention, dissemination, and deletion of any data collected during the operation of an UAS;
- (2) each privacy policy described in paragraph (1) should be periodically reviewed and updated as necessary; and
- (3) each privacy policy described in paragraph (1) should be publicly available.

TITLE III – Safety
Subtitle B – UAS
Section 379 – Commercial and governmental operators



Not later than 270 days after enactment of this Act, the Administrator 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 UAS within 30 days of issuance of such certificate of waiver or authorization.
- (2) A **spreadsheet** of UAS registrations, including the city, 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 UA operations, including the locations where such UA may generally operate.
- (4) Summary descriptions of common civil UAS.
- (5) The expiration date of any authorization of public or civil UA operations.
- (6) Links to websites of State agencies that enforce any applicable privacy laws.

# TITLE III – Safety Subtitle B – UAS Section 379 – Commercial and governmental operators



- (7) For any UAS, 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 UAS:
- (A) the locations where the UAS will operate;
- (B) the time during which the UAS will operate;
- (C) the general purpose of the flight; and
- (D) the technical capabilities that the UAS possesses.

## TITLE III – Safety Subtitle B – UAS Section 379 – Commercial and governmental operators



The Administrator shall not disclose information 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 5 USC 552 (commonly known as the "Freedom of Information Act"); or
- (6) is otherwise contrary to the public interest.

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); or
- (2) September 30, 2023.

TITLE III — Safety Subtitle B — UAS Section 380 — Transition language

Notwithstanding the **repeals** under sections 341, 348, 347, and 383 of this Act, **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 shall continue in effect** until modified or revoked by the Secretary of Transportation, acting through the Administrator of the FAA, as applicable, by a court of competent jurisdiction, or by operation of law other than this Act.

The laws described under this subsection are as follows:

Section 332 of the FAA Modernization and Reform Act of 2012 (49 U.S.C. 40101 note).

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

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

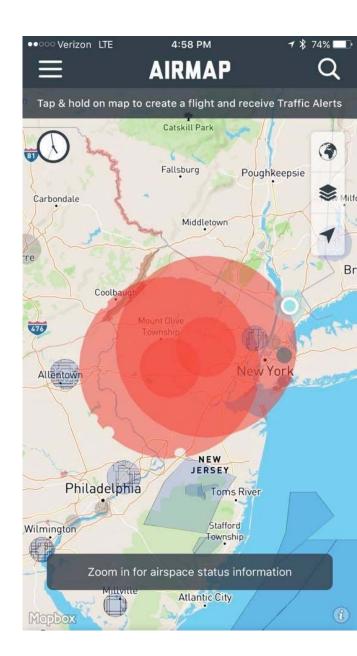
Section 2206 of the FAA Extension, Safety, and Security Act of 2016 (Public Law 114–190; 130 Stat. 615).

This Act shall not affect administrative or judicial proceedings pending on the effective date of this Act.

TITLE III – Safety
Subtitle B – UAS
Section 381 – UAS in restricted buildings or grounds

18 USC 1752 is amended by adding after subsection (a)(4) the following:

(5) **knowingly and willfully operates** an UAS with the intent to knowingly and willfully direct or otherwise cause such unmanned aircraft system to enter or operate within or above a restricted building or grounds;



TITLE III – Safety
Subtitle B – UAS
Section 382 – Prohibition



18 USC Chapter 2 is amended by adding at the end the following:

§ 40A. Operation of unauthorized **UA over wildfires** 

- (a) IN GENERAL.—Except as provided in subsection (b), an individual who operates an unmanned aircraft and knowingly or recklessly interferes with a wildfire suppression, or law enforcement or emergency response efforts related to a wildfire suppression, shall be **fined** under this title, **imprisoned for not more than 2 years, or both**.
- (b) EXCEPTIONS .—This section does not apply to the operation of an unmanned aircraft conducted by a unit or agency of the United States Government or of a State, tribal, or local government (including any individual conducting such operation pursuant to a contract or other agreement entered into with the unit or agency) for the purpose of protecting the public safety and welfare, including firefighting, law enforcement, or emergency response.
- (c) DEFINITIONS .—In this section, the following definitions apply:
- (1) UNMANNED AIRCRAFT .—The term 'unmanned aircraft' has the meaning given the term in section 44801 of title 49, United States Code.
- (2) WILDFIRE .—The term 'wildfire' has the meaning given that term in section 2 of the Emergency Wildfire Suppression Act (42 U.S.C. 1856m).
- (3) WILDFIRE SUPPRESSION .—The term 'wildfire suppression' means an effort to contain, extinguish, or suppress a wildfire.

TITLE III – Safety
Subtitle B – UAS
Section 383 – Airport safety and airspace
hazard mitigation and enforcement



49 USC Chapter 448 as amended by this Act, is further amended by inserting at the end the following:

§ 44810. Airport safety and airspace hazard mitigation and enforcement

(a) COORDINATION.—The FAA Administrator 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 UAS 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.

TITLE III – Safety
Subtitle B – UAS
Section 383 – Airport safety and airspace
hazard mitigation and enforcement



### (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 UAS.
- (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.

TITLE III – Safety
Subtitle B – UAS
Section 383 – Airport safety and airspace hazard mitigation and enforcement



- (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 of the House of Representatives and the Committee on the Judiciary of the Senate, on the implementation of this section.

TITLE III – Safety
Subtitle B – UAS
Section 383 – Airport safety and airspace
hazard mitigation and enforcement



- (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), 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 (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.

### TITLE III – Safety Subtitle B – UAS Section 384 – Unsafe operation of UA

18 USC Chapter 2 is amended by inserting after section 39A the following:

§ 39B. Unsafe operation of UA

- (a) OFFENSE .—Any person who operates an UA and:
- (1) Knowingly interferes with, or disrupts the operation of, an aircraft carrying 1 or more occupants operating in the special aircraft jurisdiction of the United States, in a manner that poses an imminent safety hazard to such occupants, shall be punished as provided in subsection (c).
- (2) Recklessly interferes with, or disrupts the operation of, an aircraft carrying 1 or more occupants operating in the special aircraft jurisdiction of the United States, in a manner that poses an imminent safety hazard to such occupants, shall be punished as provided in subsection (c).
- (b) OPERATION OF UNMANNED AIRCRAFT IN CLOSE PROXIMITY TO AIRPORTS .—
- (1) IN GENERAL .—Any person who, without authorization, knowingly operates an unmanned aircraft within a runway exclusion zone shall be punished as provided in subsection (c).
- (2) RUNWAY EXCLUSION ZONE DEFINED .—In this subsection, the term 'runway exclusion zone' means a rectangular area—
- (A) centered on the centerline of an active runway of an airport immediately around which the airspace is designated as class B, class C, or class D airspace at the surface under part 71 of title 14, Code of Federal Regulations; and
- (B) the length of which extends parallel to the runway's centerline to points that are **1 statute mile** from each end of the runway and the width of which is **1/2 statute mile**.

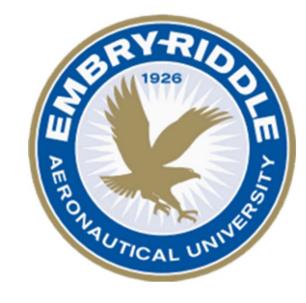


TITLE III – Safety Subtitle B – UAS Section 384 – Unsafe operation of UA



- (c) PENALTY.—
- (1) IN GENERAL.—Except as provided in paragraph (2), the punishment for an offense under subsections (a) or (b) shall be a fine under this title, imprisonment for not more than 1 year, or both.
- (2) SERIOUS BODILY INJURY OR DEATH .—Any person who:
- (A) Causes serious bodily injury or death during the commission of an offense under subsection (a)(2) shall be fined under this title, imprisoned for a term of up to 10 years, or both.
- (B) Causes, or attempts or conspires to cause, serious bodily injury or death during the commission of an offense under subsections (a)(1) and (b) shall be fined under this title, imprisoned for any term of years or for life, or both.

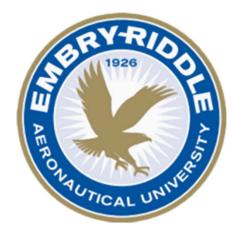
TITLE VI – Aviation Workforce
Subtitle D – UAS Workforce
Section 631 – Community and technical college
CoE in small UAS technology training



Not later than 180 days after enactment of this Act, the Secretary of Transportation, in consultation with the Secretary of Education and the Secretary of Labor, shall establish a process to designate consortia of public, **2-year institutions of higher education** as Community and Technical College CoE in Small UAS Technology Training (in this section referred to as the "Centers of Excellence").

A CoE shall have the capacity to train students for career opportunities in industry and government service related to the use of small UAS.

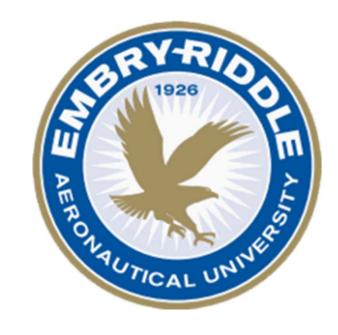
# TITLE VI – Aviation Workforce Subtitle D – UAS Workforce Section 631 – Community and technical college CoE in small UAS technology training



In order to be designated as a CoE, a consortium shall be able to address education and training requirements associated with various types of small UAS, components, and related equipment, including with respect to:

- (1) multirotor and fixed-wing small UA;
- (2) flight systems, radio controllers, components, and characteristics of such aircraft;
- (3) routine maintenance, uses and applications, privacy concerns, safety, and insurance for such aircraft;
- (4) hands-on flight practice using small UAS and computer simulator training;
- (5) use of small UAS in various industry applications and local, State, and Federal government programs and services, including in agriculture, law enforcement, monitoring oil and gas pipelines, natural disaster response and recovery, fire and emergency services, and other emerging areas;
- (6) Federal policies concerning small UA;
- (7) dual credit programs to deliver small UA training opportunities to secondary school students; or
- (8) training with respect to sensors and the processing, analyzing, and visualizing of data collected by small UA.

TITLE VI – Aviation Workforce
Subtitle D – UAS Workforce
Section 631 – Community and technical
college CoE in small UAS technology training



Each CoE shall seek to collaborate with institutions participating in the Alliance for System Safety of UAS through Research Excellence of the FAA and with the test ranges defined under 49 USC 44801, as added by this Act.

In this section, the term "institution of higher education" has the meaning given the term in section 101 of the Higher Education Act of 1965 (20 U.S.C. 1001).

## §1001. General definition of institution of higher education

## (a) Institution of higher education

For purposes of this chapter, other than subchapter IV, the term "institution of higher education" means an educational institution in any State that—

- admits as regular students only persons having a certificate of graduation from a school providing secondary education, or the recognized equivalent of such a certificate, or persons who meet the requirements of section 1091(d) of this title;
- (2) is legally authorized within such State to provide a program of education beyond secondary education;
- (3) provides an educational program for which the institution awards a bachelor's degree or provides not less than a 2-year program that is acceptable for full credit toward such a degree, or awards a degree that is acceptable for admission to a graduate or professional degree program, subject to review and approval by the Secretary;
  - (4) is a public or other nonprofit institution; and
- (5) is accredited by a nationally recognized accrediting agency or association, or if not so accredited, is an institution that has been granted preaccreditation status by such an agency or association that has been recognized by the Secretary for the granting of preaccreditation status, and the Secretary has determined that there is satisfactory assurance that the institution will meet the accreditation standards of such an agency or association within a reasonable time.

## (b) Additional institutions included

For purposes of this chapter, other than subchapter IV, the term "institution of higher education" also includes—

- any school that provides not less than a 1-year program of training to prepare students for gainful employment in a recognized occupation and that meets the provision of paragraphs (1), (2), (4), and (5) of subsection (a) of this section; and
- (2) a public or nonprofit private educational institution in any State that, in lieu of the requirement in subsection (a)(1), admits as regular students individuals—
  - (A) who are beyond the age of compulsory school attendance in the State in which the institution is located; or
    - (B) who will be dually or concurrently enrolled in the institution and a secondary school.

TITLE VI – Aviation Workforce Subtitle D – UAS Workforce Section 632 – Collegiate training initiative program for UAS



Not later than 180 days after enactment of this Act, the FAA Administrator shall establish a **collegiate training initiative program** relating to UAS by making new agreements or continuing existing agreements with institutions of higher education (as defined in section 101 of the Higher Education Act of 1965 (20 U.S.C. 1001)) under which the institutions prepare students for careers involving UAS. The Administrator may establish standards for the entry of such institutions into the program and for their continued participation in the program.

In this section, the term "unmanned aircraft system" has the meaning given that term by 49 USC 44801, as added by this Act.

TITLE VII – Flight R & D Act Subtitle C – UAS Section 721 – UAS R & D Roadmap

The Secretary shall submit the **UAS roadmap** to Congress on an annual basis as required under 49 USC 48802(a), as added by this Act.





Title II Subtitle A of the Homeland Security Act of 2002 (6 U.S.C. 121 et seq.) is amended by adding at the end the following:

SEC. 210G. PROTECTION OF CERTAIN FACILITIES AND ASSETS FROM UNMANNED AIRCRAFT.

- (a) AUTHORITY.—Notwithstanding section 46502 of title 49, United States Code, or sections 32, 1030, 1367 and chapters 119 and 206 of title 18, United States Code, the Secretary and the Attorney General may, for their respective Departments, take, and may authorize personnel with assigned duties that include the **security or protection of people, facilities, or assets**, to take such actions as are described in subsection (b)(1) that are necessary to mitigate a credible threat (as defined by the Secretary or the Attorney General, in consultation with the Secretary of Transportation) that an UAS or UA poses to the safety or security of a covered facility or asset.
- (b) ACTIONS DESCRIBED.—
- (1) IN GENERAL .—The actions authorized in subsection (a) are the following:
- (A) During the operation of the UAS, **detect**, **identify**, **monitor**, **and track** the UAS or UA, without prior consent, including by means of intercept or other access of a wire communication, an oral communication, or an electronic communication used to control the UAS or UA.



- (B) Warn the operator of the UAS or UA, including by passive or active, and direct or indirect physical, electronic, radio, and electromagnetic means.
- (C) Disrupt control of the UAS or UA, without prior consent, including by disabling the UAS or UA by intercepting, interfering, or causing interference with wire, oral, electronic, or radio communications used to control the UAS or UA.
- (D) Seize or exercise control of the UAS or UA.
- (E) Seize or otherwise confiscate the UAS or UA.
- (F) Use reasonable force, if necessary, to disable, damage, or destroy the UAS or UA.



- (2) REQUIRED COORDINATION.—The Secretary and the Attorney General shall develop for their respective Departments the actions described in paragraph (1) in coordination with the Secretary of Transportation.
- (3) RESEARCH, TESTING, TRAINING, AND EVALUATION.—The Secretary and the Attorney General shall conduct research, testing, training on, and evaluation of any equipment, including any electronic equipment, to determine its capability and utility prior to the use of any such technology for any action described in subsection (b)(1).
- (4) COORDINATION.—The Secretary and the Attorney General shall coordinate with the Administrator of the Federal Aviation Administration when any action authorized by this section might affect aviation safety, civilian aviation and aerospace operations, aircraft airworthiness, or the use of the airspace.



- (c) FORFEITURE .—Any UAS or UA described in subsection (a) that is seized by the Secretary or the Attorney General is subject to forfeiture to the United States.
- (d) REGULATIONS AND GUIDANCE .—
- (1) IN GENERAL .—The Secretary, the Attorney General, and the Secretary of Transportation may prescribe regulations and shall issue guidance in the respective areas of each Secretary or the Attorney General to carry out this section.
- (2) COORDINATION .—
- (A) COORDINATION WITH DEPARTMENT OF TRANSPORTATION .— The Secretary and the Attorney General shall coordinate the development of their respective guidance under paragraph (1) with the Secretary of Transportation.
- (B) EFFECT ON AVIATION SAFETY .—The Secretary and the Attorney General shall respectively coordinate with the Secretary of Transportation and the Administrator of the Federal Aviation Administration before issuing any guidance, or otherwise implementing this section, if such guidance or implementation might affect aviation safety, civilian aviation and aerospace operations, aircraft airworthiness, or the use of airspace.



- (e) PRIVACY PROTECTION .—The regulations or guidance issued to carry out actions authorized under subsection (b) by each Secretary or the Attorney General, as the case may be, shall ensure that—
- (1) the interception or acquisition of, or access to, or maintenance or use of, communications to or from an UAS under this section is conducted in a manner consistent with the First and Fourth Amendments to the Constitution of the United States and applicable provisions of Federal law;
- (2) communications to or from an UAS are intercepted or acquired only to the extent necessary to support an action described in subsection (b)(1);
- (3) records of such communications are maintained only for as long as necessary, and in no event for more than 180 days, unless the Secretary of Homeland Security or the Attorney General determine that maintenance of such records is necessary to investigate or prosecute a violation of law, directly support an ongoing security operation, is required under Federal law, or for the purpose of any litigation;



- (4) such communications are not disclosed outside the Department of Homeland Security or the Department of Justice unless the disclosure—
- (A) is necessary to investigate or prosecute a violation of law;
- (B) would support the Department of Defense, a Federal law enforcement agency, or the enforcement activities of a regulatory agency of the Federal Government in connection with a criminal or civil investigation of, or any regulatory, statutory, or other enforcement action relating to an action described in subsection (b)(1);
- (C) is between the Department of Homeland Security and the Department of Justice in the course of a security or protection operation of either agency or a joint operation of such agencies; or
- (D) is otherwise required by law; and
- (5) to the extent necessary, the Department of Homeland Security and the Department of Justice are authorized to share threat information, which shall not include communications referred to in subsection (b), with State, local, territorial, or tribal law enforcement agencies in the course of a security or protection operation.



- (f) BUDGET .—The Secretary and the Attorney General shall submit to Congress, as a part of the homeland security or justice budget materials for each fiscal year after fiscal year 2019, a consolidated funding display that identifies the funding source for the actions described in subsection (b)(1) within the Department of Homeland Security or the Department of Justice. The funding display shall be in unclassified form, but may contain a classified annex.
- (g) SEMIANNUAL BRIEFINGS AND NOTIFICATIONS .—
- (1) IN GENERAL .—On a semiannual basis during the period beginning 6 months after the date of enactment of this section and ending on the date specified in subsection (i), the Secretary and the Attorney General shall, respectively, provide a briefing to the appropriate congressional committees on the activities carried out pursuant to this section.
- (2) REQUIREMENT.—Each briefing required under paragraph (1) shall be conducted jointly with the Secretary of Transportation.



- (3) CONTENT.—Each briefing required under paragraph (1) shall include—
- (A) policies, programs, and procedures to mitigate or eliminate impacts of such activities to the NAS;
- (B) a description of instances in which actions described in subsection (b)(1) have been taken, including all such instances that may have resulted in harm, damage, or loss to a person or to private property;
- (C) a description of the guidance, policies, or procedures established to address privacy, civil rights, and civil liberties issues implicated by the actions allowed under this section, as well as any changes or subsequent efforts that would significantly affect privacy, civil rights or civil liberties;
- (D) a description of options considered and steps taken to mitigate any identified impacts to the NAS related to the use of any system or technology, including the minimization of the use of any technology that disrupts the transmission of radio or electronic signals, for carrying out the actions described in subsection (b)(1);
- (E) a description of instances in which communications intercepted or acquired during the course of operations of an unmanned aircraft system were held for more than 180 days or shared outside of the Department of Justice or the Department of Homeland Security;
- (F) how the Secretary, the Attorney General, and the Secretary of Transportation have informed the public as to the possible use of authorities under this section;
- (G) how the Secretary, the Attorney General, and the Secretary of Transportation have engaged with Federal, State, and local law enforcement agencies to implement and use such authorities.



- (4) UNCLASSIFIED FORM .—Each briefing required under paragraph (1) shall be in unclassified form, but may be accompanied by an additional classified briefing.
- (5) NOTIFICATION .—Within 30 days of deploying any new technology to carry out the actions described in subsection (b)(1), the Secretary and the Attorney General shall, respectively, submit a notification to the appropriate congressional committees. Such notification shall include a description of options considered to mitigate any identified impacts to the NAS related to the use of any system or technology, including the minimization of the use of any technology that disrupts the transmission of radio or electronic signals, for carrying out the actions described in subsection (b)(1).



- (h) RULE OF CONSTRUCTION .—Nothing in this section may be construed to—
- (1) vest in the Secretary or the Attorney General any authority of the Secretary of Transportation or the FAA Administrator;
- (2) vest in the Secretary of Transportation or the FAA Administrator any authority of the Secretary or the Attorney General;
- (3) vest in the Secretary of Homeland Security any authority of the Attorney General;
- (4) vest in the Attorney General any authority of the Secretary of Homeland Security; or
- (5) provide a new basis of liability for any State, local, territorial, or tribal law enforcement officers who participate in the protection of a mass gathering identified by the Secretary or Attorney General under subsection (k)(3)(C)(iii)(II), act within the scope of their authority, and do not exercise the authority granted to the Secretary and Attorney General by this section.



- (i) TERMINATION .—The authority to carry out this section with respect to a covered facility or asset specified in subsection (k)(3) shall terminate on the date that is 4 years after the date of enactment of this section.
- (j) SCOPE OF AUTHORITY.—Nothing in this section shall be construed to provide the Secretary or the Attorney General with additional authorities beyond those described in subsections (a) and (k)(3)(C)(iii).
- (k) DEFINITIONS .—In this section:
- (1) The term 'appropriate congressional committees' means—
- (A) the Committee on Homeland Security and Governmental Affairs, the Committee on Commerce, Science, and Transportation, and the Committee on the Judiciary of the Senate; and
- (B) the Committee on Homeland Security, the Committee on Transportation and Infrastructure, the Committee on Energy and Commerce, and the Committee on the Judiciary of the House of Representatives.
- (2) The term 'budget', with respect to a fiscal year, means the budget for that fiscal year that is submitted to Congress by the President under section 1105(a) of title 31.



- (3) The term 'covered facility or asset' means any facility or asset that—
- (A) is identified as high-risk and a potential target for unlawful UA activity by the Secretary or the Attorney General, in coordination with the Secretary of Transportation with respect to potentially impacted airspace, through a risk-based assessment for purposes of this section (except that in the case of the missions described in subparagraph (C)(i)(II) and (C)(iii)(I), such missions shall be presumed to be for the protection of a facility or asset that is assessed to be high-risk and a potential target for unlawful UA activity);
- (B) is located in the US (including the territories and possessions, territorial seas or navigable waters of the US); and
- (C) directly relates to one or more—
- (i) missions authorized to be performed by the Department of Homeland Security, consistent with governing statutes, regulations, and orders issued by the Secretary, pertaining to—



- (I) security or protection functions of the U.S. Customs and Border Protection, including securing or protecting facilities, aircraft, and vessels, whether moored or underway;
- (II) United States Secret Service protection operations pursuant to sections 3056(a) and 3056A(a) of title 18, United States Code, and the Presidential Protection Assistance Act of 1976 (18 U.S.C. 3056 note); or
- (III) protection of facilities pursuant to section 1315(a) of title 40, United States Code;
- (ii) missions authorized to be performed by the Department of Justice, consistent with governing statutes, regulations, and orders issued by the Attorney General, pertaining to—
- (I) personal protection operations by—
- (aa) the Federal Bureau of Investigation as specified in section 533 of title 28, United States Code; and
- (bb) the United States Marshals Service of Federal jurists, court officers, witnesses, and other threatened persons in the interests of justice, as specified in section 566(e)(1)(A) of title 28, United States Code;
- (II) protection of penal, detention, and correctional facilities and operations conducted by the Federal Bureau of Prisons; or
- (III) protection of the buildings and grounds leased, owned, or operated by or for the Department of Justice, and the provision of security for Federal courts, as specified in section 566(a) of title 28, United States Code;



- (iii) missions authorized to be performed by the Department of Homeland Security or the Department of Justice, acting together or separately, consistent with governing statutes, regulations, and orders issued by the Secretary or the Attorney General, respectively, pertaining to—
- (I) protection of a National Special Security Event and Special Event Assessment Rating event;
- (II) the provision of support to State, local, territorial, or tribal law enforcement, upon request of the chief executive officer of the State or territory, to ensure protection of people and property at mass gatherings, that is limited to a specified timeframe and location, within available resources, and without delegating any authority under this section to State, local, territorial, or tribal law enforcement; or
- (III) protection of an active Federal law enforcement investigation, emergency response, or security function, that is limited to a specified timeframe and location; and
- (iv) missions authorized to be performed by the United States Coast Guard, including those described in clause (iii) as directed by the Secretary, and as further set forth in section 104 of title 14, United States Code, and consistent with governing statutes, regulations, and orders issued by the Secretary of the Department in which the Coast Guard is operating.



- (4) The terms 'electronic communication', 'intercept', 'oral communication', and 'wire communication' have the meaning given those terms in section 2510 of title 18, United States Code.
- (5) The term 'homeland security or justice budget materials', with respect to a fiscal year, means the materials submitted to Congress by the Secretary and the Attorney General in support of the budget for that fiscal year.
- (6) For purposes of subsection (a), the term 'personnel' means officers and employees of the Department of Homeland Security or the Department of Justice.
- (7) The terms 'unmanned aircraft' and 'unmanned aircraft system' have the meanings given those terms in section 44801, of title 49, United States Code.
- (8) For purposes of this section, the term 'risk-based assessment' includes an evaluation of threat information specific to a covered facility or asset and, with respect to potential impacts on the safety and efficiency of the national airspace system and the needs of law enforcement and national security at each covered facility or asset identified by the Secretary or the Attorney General, respectively, of each of the following factors:



- (A) Potential impacts to safety, efficiency, and use of the NAS, including potential effects on manned aircraft and UAS, aviation safety, airport operations, infrastructure, and air navigation services related to the use of any system or technology for carrying out the actions described in subsection (b)(1).
- (B) Options for mitigating any identified impacts to the NAS related to the use of any system or technology, including minimizing when possible the use of any technology which disrupts the transmission of radio or electronic signals, for carrying out the actions described in subsection (b)(1).
- (C) Potential consequences of the impacts of any actions taken under subsection (b)(1) to the NAS and infrastructure if not mitigated.
- (D) The ability to provide reasonable advance notice to aircraft operators consistent with the safety of the NAS and the needs of law enforcement and national security.



- (E) The setting and character of any covered facility or asset, including whether it is located in a populated area or near other structures, whether the facility is open to the public, whether the facility is also used for nongovernmental functions, and any potential for interference with wireless communications or for injury or damage to persons or property.
- (F) The setting, character, timeframe, and national airspace system impacts of National Special Security Event and Special Event Assessment Rating events.
- (G) Potential consequences to national security, public safety, or law enforcement if threats posed by UAS are not mitigated or defeated.



- (I) DEPARTMENT OF HOMELAND SECURITY ASSESSMENT .—
- (1) REPORT .—Not later than 1 year after the date of the enactment of this section, the Secretary shall conduct, in coordination with the Attorney General and the Secretary of Transportation, an assessment to the appropriate congressional committees, including—
- (A) an evaluation of the threat from UAS to US critical infrastructure (as defined in this Act) and to domestic large hub airports (as defined in 49 USC 40102);
- (B) an evaluation of current Federal and State, local, territorial, or tribal law enforcement authorities to counter the threat identified in subparagraph (A), and recommendations, if any, for potential changes to existing authorities to allow State, local, territorial, and tribal law enforcement to assist Federal law enforcement to counter the threat where appropriate;



- (C) an evaluation of the knowledge of, efficiency of, and effectiveness of current procedures and resources available to owners of critical infrastructure and domestic large hub airports when they believe a threat from UAS is present and what additional actions, if any, the Department of Homeland Security or the Department of Transportation could implement under existing authorities to assist these entities to counter the threat identified in subparagraph (A);
- (D) an assessment of what, if any, additional authorities are needed by each Department and law enforcement to counter the threat identified in subparagraph (A); and
- (E) an assessment of what, if any, additional research and development the Department needs to counter the threat identified in subparagraph (A).
- (2) UNCLASSIFIED FORM .—The report required under paragraph (1) shall be submitted in unclassified form, but may contain a classified annex.

TITLE VIII — Aviation Revenue Provisions
Division H — Preventing Emerging
Threats
Section 1603 — Protecting against UA



14 USC Chapter 5, is amended by inserting after section 103 the following:

§ 104. Protecting against UA

For the purposes of section 210G(k)(3)(C)(iv) of the Homeland Security Act of 2002, the missions authorized to be performed by the United States Coast Guard shall be those related to—

- (1) functions of the U.S. Coast Guard relating to security or protection of facilities and assets assessed to be high-risk and a potential target for unlawful unmanned aircraft activity, including the security and protection of—
- (A) a facility, including a facility that is under the administrative control of the Commandant; and

TITLE VIII – Aviation Revenue Provisions
Division H – Preventing Emerging Threats
Section 1603 – Protecting against UA



- (B) a vessel (whether moored or underway) or an aircraft, including a vessel or aircraft—
- (i) that is operated by the Coast Guard, or that the Coast Guard is assisting or escorting; and
- (ii) that is directly involved in a mission of the Coast Guard pertaining to—
- (I) assisting or escorting a vessel of the Department of Defense;
- (II) assisting or escorting a vessel of national security significance, a high interest vessel, a high capacity passenger vessel, or a high value unit, as those terms are defined by the Secretary;
- (III) section 91(a) of this title;
- (IV) assistance in protecting the President or the Vice President (or other officer next in order of succession to the Office of the President) pursuant to the Presidential Protection Assistance Act of 1976 (18 U.S.C. 3056 note);
- (V) protection of a National Special Security Event and Special Event Assessment Rating events;

TITLE VIII – Aviation Revenue Provisions
Division H – Preventing Emerging Threats
Section 1603 – Protecting against UA



(VI) air defense of the US, including air sovereignty, ground-based air defense, and the National Capital Region integrated air defense system; or (VII) a search and rescue operation; and

(2) missions directed by the Secretary pursuant to 210G(k)(3)(C)(iii) of the Homeland Security Act of 2002.