



[4910-13]

## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### Unmanned Aircraft Systems Integration Pilot Program – Announcement of Establishment of Program and Request for Applications

**AGENCY:** Federal Aviation Administration (FAA), Department of Transportation (DOT).

**ACTION:** Notice of the Establishment of the Unmanned Aircraft Systems (UAS) Integration Pilot Program and Request for Applications.

**SUMMARY:** Through the FAA, the DOT announces a new pilot program that encourages State, local, and tribal governments, in partnership with UAS operators and other private sector stakeholders, to conduct advanced operations safely and with public support in affected communities. State, local, and tribal governments, and any partnered stakeholders, with guidance from the FAA, will propose and define these operational concepts and determine how to manage them at the local level under the safety oversight role of the FAA. All organizations interested in applying or participating must follow the procedures set forth in the agency's Screening Information Request (SIR), which is described later in this document.

**DATES:** Interested State, local, or tribal governments must declare an intent to participate in the Program no later than November 28, 2017.

**ADDRESSES:** Interested governments may request FAA/UAS Program Portal (Portal) access via email to [9-AWA-UASIPP@faa.gov](mailto:9-AWA-UASIPP@faa.gov) as detailed in the SIR (SIR DTFAWA-18-R-00001) available at <http://faaco.faa.gov>.

**FOR FURTHER INFORMATION, CONTACT:** For general Program questions, Mr. Earl Lawrence, Director, Unmanned Aircraft Systems Integration Office, 490 L'Enfant Plaza SW, Suite 7225, Washington, DC 20024, telephone (844) 359-6982, email 9-AWA-

UASIPP@faa.gov; or, for solicitation questions, Mr. Gavin Byrne, Manager, AAQ-220, Automation Contracts Branch, Federal Aviation Administration, 800 Independence Avenue SW, Washington, D.C. 20591, telephone (844) 359-6982, email 9-AWA-UASIPP@faa.gov.

## **SUPPLEMENTARY INFORMATION:**

### **I. Background**

#### Purpose and Objectives

The DOT announces a new pilot program that will accelerate existing UAS integration plans by working to solve technical, regulatory, and policy challenges, while enabling advanced UAS operations in select areas subject to ongoing safety oversight and cooperation between the Federal government and applicable State, local, or tribal jurisdictions. In a memorandum dated October 25, 2017, the President declared that it is the policy of the United States to promote the safe operation of UAS and enable the development of UAS technologies and their use in agriculture, commerce, emergency management, human transportation, and other sectors.<sup>1</sup> The President directed the Secretary to establish a pilot program under which State, local, and tribal governments can submit proposals to the Secretary to test and evaluate the integration of civil and public UAS operations into the low-altitude NAS. The Program announced in this document implements this national policy under the FAA's general authority to develop plans and policy for the use of the navigable airspace. 49 U.S.C. 40103(b).

Consistent with the Presidential Memorandum, the DOT has established four objectives for the Program: 1) to accelerate the safe integration of UAS into the NAS by testing and validating new concepts of beyond visual line of sight operations in a controlled environment, focusing on detect and avoid technologies, command and control links, navigation, weather and

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<sup>1</sup> A link to the Presidential Memorandum can be found on the FAA's website [www.faa.gov/uas](http://www.faa.gov/uas).

human factors; 2) to address ongoing concerns regarding the potential security and safety risks associated with UAS operating in close proximity to human beings and critical infrastructure by ensuring that operators communicate more effectively with Federal, State, local, and tribal law enforcement to enable law enforcement to determine if a UAS operation poses such a risk; 3) to promote innovation in and development of the United States unmanned aviation industry, especially in sectors such as agriculture, emergency management, inspection services, and transportation safety, in which there are significant public benefits to be gained from the deployment of UAS; and 4) to identify the most effective models of balancing local and national interests in UAS integration.

We are looking for visionary participants to demonstrate effective ways to meet these Program objectives, which will help the DOT to achieve the broader national policy objective of full UAS integration and United States leadership in unmanned aviation and automated technology. Never losing sight that safety is our highest priority, we expect this program to provide valuable data to assist us in enabling the UAS industry to thrive and safely share the airspace.

Specifically, the Program will forge deep working relationships between the private sector and State, local, and tribal governments to conduct a variety of advanced operational testing under controlled criteria managed at a local level with FAA oversight. Applicants are expected to demonstrate advances in technological capabilities or operational concepts and means of communication with the public and law enforcement agencies. By ensuring safety through appropriate mitigations, the FAA intends to evaluate and approve advanced operations beyond those currently permitted today. The FAA will use the data provided by the Program to advance the overall state of the industry, including the development of enabling regulations that

will increase other types of routine drone operations, such as: 1) beyond line-of-sight flights – *e.g.*, for pipeline inspections in remote areas and search and rescue operations; 2) operations over human beings – such as newsgathering or public safety; and 3) package delivery, including the delivery of consumer goods and medical supplies. The operational experience gained through these partnerships will be used to enable the FAA to more quickly authorize operations that currently require special permission and will inform future policy development to help expand this burgeoning industry. The Program has a number of short- and long-term benefits for the participants, the DOT, and the public. Activities under the Program will:

- accelerate the use and standardization of low-altitude UAS operations;
- provide immediate opportunities to accelerate commercial-use concepts of operations such as: commerce, photography, emergency management, agricultural support, infrastructure inspections, package delivery, and others;
- identify and help resolve operational barriers to expanded UAS operations; and
- foster community participation to provoke meaningful dialogue on balancing local and national interests in UAS integration.

The DOT will use the data collected and experience gained over the course of this Program to:

- identify and resolve technical challenges to UAS integration;
- address airspace use to safely and efficiently integrate all aircraft;
- inform operational standards and procedures to improve safety (*e.g.*, detect and avoid capabilities, navigation and altitude performance, and command and control link);

- inform FAA standards that reduce the need for waivers (*e.g.*, for operations over human beings, night operations, and beyond visual line of sight (BVLOS)); and
- address competing interests regarding UAS operational expansion, safety, security, roles and responsibilities of non-federal government entities, and privacy issues.

### Program Overview

Any State, local, or tribal jurisdiction (as the Lead Applicant) is eligible to apply to participate in the Program. The jurisdiction may partner with one or more private sector stakeholders or other government agencies (such as law enforcement) to assist in carrying out its obligations under this Program. The success of the Program will depend on the mutually beneficial partnerships between UAS operators, including private sector operators, and the local jurisdictions where the projects will take place. Any project partnerships must be established prior to the Lead Applicant's completing its application.

The first step will be for interested State, local, or tribal governments to submit a notice of intent to participate. Private sector stakeholders that are interested in participating, as well as jurisdictions that have not identified a program partner, may submit a request to be added to an Interested Parties list which the FAA will publish on its website at [faaco.faa.gov](http://faaco.faa.gov). Interested parties can use this list to help identify suitable partners. All jurisdictions that submit a notice of intent will receive an invitation to apply, but no jurisdiction may submit an application for participation without first submitting a notice of intent.

The DOT will evaluate all applications received in accordance with the SIR and select a minimum of five for participation. Once an application is selected, the Lead Applicant will enter

into a Memorandum of Agreement (MOA) with the FAA. The MOA will establish the responsibilities of the parties, describe the concept of operations to be undertaken, establish any data sharing requirements, and assure that no Federal funds are available for Program participation. The MOAs will expire at the end of the Program unless the FAA terminates or extends them.

Examples of possible Program proposals:

- An agricultural State and several of its municipalities desiring to explore with stakeholders how UAS could be used to assist farmers in reducing costs (*e.g.*, checking crops for insects or disease, counting spring calves, or checking fences for damage without having to walk or drive along them – cost reductions would be identified in advance and measured).
- A State partnering with a UAS operator seeking to take advantage of the public benefits of, and the cost savings associated with, utilizing UAS for bridge inspections.
- A city working with a UAS operator to tap the novel capabilities of UAS to support critical government activities in emergency management planning and response, and also limiting UAS operations within designated altitudes within airspace over the jurisdiction and specifying maximum speed of flight over specified areas.
- To facilitate development and innovation of commercial UAS within the community, a city partnering with stakeholders to establish a dedicated drone-port or an asset in drone technology research designed to attract business.

- A county or multi-county industrial development authority wishing to position itself as a national destination for the development of a drone-operator workforce to support the emerging drone industry in the United States.
- A municipality interested in utilizing UAS for local emergency management, disaster response, or law enforcement operations.
- A city or county working with a UAS manufacturer and or a hard goods retailer to develop and test operational concepts for the delivery of goods via UAS to businesses and homes under various scenarios and conditions.

These examples are just a sampling of possible opportunities under this Program. The fundamental purpose of this Program is to provide an opportunity for stakeholders to identify and propose a broad spectrum of innovative and beneficial concepts of operations, and models of local management, for UAS operations subject to FAA oversight. Accordingly, we look to Lead Applicants to submit applications showing us how their innovative technological and operational use cases can push the boundaries of what is possible today.

### **How to Apply**

*Notice of Intent.* Any State, local, or tribal government seeking to participate in the Program must submit a notice of intent November 28, 2017, to apply. Eligible jurisdictions include State, local, or tribal transit agencies, port authorities, metropolitan planning organizations (MPOs), police departments, other political subdivisions of State or local governments, and multi-State or multi-jurisdictional groups applying through a single point of contact. The DOT encourages prospective applicants to work closely with all relevant State and local law enforcement agencies that would serve in the identified project areas and consider including them as project partners.

Prospective applicants may submit a notice of intent before establishing a project partnership. The DOT encourages jurisdictions to submit a notice of intent even if they are unsure of their commitment to participate because there are no penalties for this submission. Jurisdictions and private sector stakeholders also may submit a request to be added to an Interested Parties list. The FAA will publish this list on its website at [faaco.faa.gov](http://faaco.faa.gov) to facilitate the formation of partnerships between jurisdictions and private sector stakeholders. To provide the widest opportunity for participation in this Program, the DOT encourages jurisdictions and private sector stakeholders to submit a notice of interest as early as possible even if the entity is uncertain of its desire to participate.

Prospective applicants must submit a notice of intent by November 28, 2017, to be considered in this round of applications. The DOT has established a short deadline for notices of intent in view of the short timeframes in the Presidential Memorandum to begin integration of UAS under this Program. Instructions for this submission, which is a formatted email, are included in the SIR (SIR DTFAWA-18-R-00001) available at <http://faaco.faa.gov>. The DOT will not consider an application in this round unless the Lead Applicant has submitted a notice of intent within the applicable timeframe; however, the DOT will offer an opportunity for jurisdictions to submit notices of intent in a subsequent round as resources allow.

The DOT will invite each eligible applicant that submitted a notice of intent to submit an application to participate through the FAA/UAS Program Portal (with a username and password). Any project partnerships must be formalized and documented before an application is finalized and submitted to the FAA.



*Application Submission.* As detailed in the SIR, the FAA/UAS Program Portal will be open for submissions through January 4, 2018. An application would include, for example, the following information:

1. identification of the airspace to be used, including shape files and altitudes;
2. description of the types of planned operations;
3. identification of stakeholder partners to test and evaluate planned operations;
4. identification of available infrastructure to support planned operations;
5. description of experience with UAS operations and regulations;
6. description of existing UAS operator and any other stakeholder partnerships and experience;
7. description of plans to address safety, security, competition, privacy concerns and community outreach.

The applicant may request reasonable time, place and manner limitations<sup>2</sup> on low-altitude UAS operations within its jurisdiction to facilitate the proposed development and testing of new and innovative UAS concepts of operations in addition to other selection criteria. The FAA will require jurisdictions to ensure that any time, place and manner limitations, including those adopted through means such as legislation or regulation, include self-implementing provisions that automatically terminate those restrictions upon the termination of the MOA. Monitoring and

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<sup>2</sup> Examples of reasonable time limitations may include prohibiting flight during specified morning and evening rush hours or only permitting flight during specified hours such as daylight hours, sufficient to ensure reasonable airspace access. Reasonable place limitations may include designated take-off and landing zones, limiting operations over moving locations or fixed site public road and parks, sidewalks or private property based on zoning density, or other land use considerations. Reasonable manner limitations may include requiring notice to public safety or zoning/land use authorities prior to operating, limiting UAS operations within designated altitudes within airspace over the jurisdiction; specifying maximum speed of flight over specified areas; prohibiting operations in connection with community or sporting events that do not remain in one place (e.g., parades, running events); or mandating equipage.

enforcement of any limitations enacted pursuant to this pilot project would be the responsibility of the jurisdiction, but the FAA retains the authority to enforce Federal law.

The DOT may select among complete applications on a rolling basis and may exclude from consideration any incomplete applications. Once a proposal is selected, within five days, the Lead Applicant must be prepared to enter into a MOA with the FAA governing the terms of its participation in the Program. After the first five applicants have entered into MOAs, the DOT will continue to evaluate proposals as resources permit.

## **II. Selection Criteria**

In making determinations, the DOT will evaluate whether applications meet or exceed the following criteria contained in the Presidential Memorandum:

1. overall economic, geographic, and climatic diversity of the selected jurisdictions;
2. overall diversity of the proposed models of government involvement;
3. overall diversity of the UAS operations to be conducted;
4. the location of critical infrastructure;
5. the involvement of commercial entities in the proposal and their ability to advance objectives that may serve the public interest as a result of further integration of UAS into the NAS;
6. the involvement of affected communities in, and their support for, participating in the Program;
7. the commitment of the governments and UAS operators involved in the proposal to comply with requirements related to national defense, homeland security, and public safety and to address competition, privacy and civil liberties concerns; and
8. the commitment of the governments and UAS operators involved in the proposal to achieve the following policy objectives:
  - a. promoting innovation and economic development;
  - b. enhancing transportation safety;
  - c. enhancing workplace safety;
  - d. improving emergency response and search and rescue functions; and

- e. using radio spectrum efficiently and competitively.

Lead Applicants are encouraged to identify which of the above criteria and agency objectives they meet and how.

### **III. Memorandum of Agreement**

Once selected, a Lead Applicant would become a Lead Participant. Lead Participants would be required to enter into a Memorandum of Agreement (MOA) pursuant to the FAA's authority under 49 U.S.C. 106(l)(6). The MOA would establish the terms of participation in the Program and would identify the respective rights and responsibilities of both the FAA and the Lead Participant. A sample MOA can be found at [faaco.faa.gov](http://faaco.faa.gov). The FAA expects to negotiate MOAs tailored to the specifics of each Lead Participant's proposal.

The Lead Participant will establish a process to meaningfully and effectively notify the local community about and garner its support for the proposed operations and any related limitations on UAS operations within the local airspace. The Lead Participant will, at a minimum, place this information on a publicly accessible website, which will be referenced on the FAA website at [www.faa.gov](http://www.faa.gov).

Lead Participants will engage in periodic exchanges with the FAA relating to the purposes of the project, including discussing and sharing the results of and experiences with the expanded UAS capability. Lead Participants will adhere to privacy policies specified in the MOA. Each Lead Participant will bear its own costs; no Federal Government funds will be provided through the MOA.

Upon signing, the MOA will not include the transfer of any authority for airspace management or access. However, a purpose of the Program is to explore concepts for shared

Federal/State/local management of the NAS. Any approval of airspace use will be handled in accordance with existing procedures.

The Lead Participant will share data with the FAA resulting from its development and testing of the concepts of operations consistent with the terms of the MOA. Such data will enable the FAA to study the effects of UAS integration into the NAS. In the case where the Lead Participant has established a time, place, or manner limitation on low-altitude UAS operations, data collected would support the FAA's efforts to assess the relative effectiveness of various technologies and operational aspects of the safe integration of UAS into the NAS, as well as the economic benefits provided by the UAS operations.

The FAA will provide a means for the Lead Participant and stakeholder partners to submit confidential or proprietary data concerning their operations. However, any operational data and general experience obtained through the partnerships will be available to the public.

The FAA may terminate the MOA for any reason. The Lead Participant may terminate the MOA, subject to meaningful and effective notice to the affected community or population.

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Daniel K. Elwell  
Deputy Administrator  
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