



U.S. Department of Transportation

Privacy Impact Assessment

Federal Aviation Administration (FAA)

Remote Identification of Unmanned Aircraft Final Rule (Remote ID Final Rule)

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Executive Summary

The Federal Aviation Administration (FAA) has published the Remote Identification of Unmanned Aircraft final rule (86 FR 4390, January 15, 2021) in accordance with the FAA Reauthorization Act of 2018, Pub. L. 115-254 (2018). The rule adds a new part to title 14 Code of Federal Regulations (14 CFR), part 89, establishing requirements for the remote identification of unmanned aircraft operating in the airspace of the United States. As required by the E-Government Act of 2002, Pub. L. 107-347, and the Consolidated Appropriations Act, 2005, Pub. L. 108-447, the FAA is publishing this Privacy Impact Assessment (PIA) to inform the public of the privacy risks and mitigation strategies associated with this final rule, and with the FAA's collection, use, dissemination, and retention of personally identifiable information (PII) that results from the final rule.

What is a Privacy Impact Assessment?

The Privacy Act of 1974 articulates concepts for how the federal government should treat individuals and their information and imposes duties upon federal agencies regarding the collection, use, dissemination, and maintenance of personally identifiable information (PII). The E-Government Act of 2002, Section 208, establishes the requirement for agencies to conduct Privacy Impact Assessments (PIAs) for electronic information systems and collections. The assessment is a practical method for evaluating privacy in information systems and collections, and documenting assurance that privacy issues have been identified and adequately addressed. The PIA is an analysis of how information is handled to— i) ensure handling conforms to applicable legal, regulatory, and policy requirements regarding privacy; ii) determine the risks and effects of collecting, maintaining and disseminating information in identifiable form in an electronic information system; and iii) examine and evaluate protections and alternative processes for handling information to mitigate potential privacy risks.¹

Conducting a PIA ensures compliance with laws and regulations governing privacy and demonstrates the DOT's commitment to protect the privacy of any personal information we collect, store, retrieve, use and share. It is a comprehensive analysis of how the DOT's electronic information systems and collections handle personally identifiable information (PII).

The goals accomplished in completing a PIA include:

- *Making informed policy and system design or procurement decisions. These decisions must be based on an understanding of privacy risk, and of options available for mitigating that risk;*
- *Accountability for privacy issues;*
- *Analyzing both technical and legal compliance with applicable privacy law and regulations, as well as accepted privacy policy; and*

¹Office of Management and Budget's (OMB) definition of the PIA taken from guidance on implementing the privacy provisions of the E-Government Act of 2002 (see OMB memo of M-03-22 dated September 26, 2003).



- *Providing documentation on the flow of personal information and information requirements within DOT systems.*

Upon reviewing the PIA, you should have a broad understanding of the risks and potential effects associated with the Department activities, processes, and systems described and approaches taken to mitigate any potential privacy risks.

Introduction & Final Rule Overview

Overview: Remote Identification of Unmanned Aircraft Regulation

The FAA's primary mission is to ensure a safe and efficient aerospace system. The Agency does this in several ways, including developing and enforcing data-driven regulations that promote safety in the national airspace (NAS). This rule furthers FAA's mission by establishing requirements for the remote identification of unmanned aircraft operated in the airspace of the United States. Remote identification (commonly known as Remote ID) is the capability of an unmanned aircraft in flight to provide certain identification, location, and performance information that people on the ground and other airspace users can receive. This rule requires remote identification of unmanned aircraft by broadcasting certain message elements, as described more fully below, using radio frequency spectrum. It also requires owners of unmanned aircraft to provide the unmanned aircraft's serial number or the broadcast module's serial number to the FAA during registration. It imposes additional production and design requirements on manufacturers to ensure that broadcast equipment complies with the final rule.

The remote identification of unmanned aircraft is necessary to ensure public safety and the safety and efficiency of the airspace of the United States. Remote identification provides airspace awareness to the FAA, national security agencies, law enforcement entities, and other officials charged with ensuring public safety. The information can be used to distinguish compliant airspace users from those potentially posing a safety or security risk. Remote identification will become increasingly important as the number of unmanned aircraft operations increases in all classes of airspace in the United States. While remote identification capability alone will not enable routine expanded operations, such as operations over people or beyond visual line of sight, it is the next incremental step toward enabling those operations.

Operational Requirements

The Final Rule imposes operational requirements on unmanned aircraft operating in the airspace of the United States, irrespective of whether they are operating for recreational or commercial purposes. There are three ways to comply with the operational requirements for remote identification. The first way to comply is referred to as "standard remote identification" and requires the operator to use an unmanned aircraft that broadcasts identification, location, and performance information for both the unmanned aircraft and the control station.

The second way to comply is for the operator to equip an unmanned aircraft with a "remote identification broadcast module" that broadcasts identification, location, and performance information about the unmanned aircraft, and the unmanned aircraft's takeoff location. Broadcast data available to any person



who has a receiver that can receive the broadcast signals. Other airspace users, authorized Federal Government partners, law enforcement entities, and members of the public may choose to obtain equipment to capture such broadcast signals. At this time, the FAA does not plan to implement technologies or programs to capture the broadcast messages, and the Final Rule contains no provisions requiring the FAA or any other entity to capture or retain the broadcast messages.

The third way to comply, and the only option available for most unmanned aircraft without remote identification capabilities (e.g., an unmanned aircraft manufactured without remote identification equipment or an unmanned aircraft whose remote identification equipment or remote identification broadcast module is not working) is for the operator to fly his or her unmanned aircraft in certain geographic areas called “FAA-recognized identification areas.” These areas are established under the rule specifically to accommodate unmanned aircraft that do not identify remotely. Unmanned aircraft flying in these FAA-recognized identification areas are not required to broadcast identification, location, and performance information about the unmanned aircraft, the control station, or the unmanned aircraft’s takeoff location.

Registration Requirements

A person may operate a standard remote identification unmanned aircraft if its serial number is listed on an FAA-accepted declaration of compliance or the standard remote identification unmanned aircraft is covered by a design approval or production approval issued under part 21. If the unmanned aircraft is operated under 14 CFR part 107, part 91, part 135, or any other operating part of 14 CFR, owners of standard remote identification unmanned aircraft and remote identification broadcast modules are required to provide to the FAA the serial number of each unmanned aircraft registered under 14 CFR part 47 or part 48 or each broadcast module associated with an unmanned aircraft registered under part 47 or part 48. If the unmanned aircraft is operated exclusively for limited recreational operations under 49 U.S.C. 44809, the owner of the small unmanned aircraft must provide the serial number of the aircraft or the serial number of the broadcast module and associate that with the single Certificate of Aircraft Registration.

The serial number provided during registration or re-registration would have to comply with ANSI/CTA 2063-A, a serial number standard. The serial number would be issued by the person responsible for the production of the standard remote identification unmanned aircraft or remote identification broadcast module. If an unmanned aircraft is currently registered, or if the owner holds a Certificate of Aircraft Registration to operate small unmanned aircraft exclusively for limited recreational operations under 49 U.S.C. 44809, its owner would be required to update the registration to include the serial number by the compliance date of the final rule or the first registration renewal after a rule is finalized, whichever is earlier. The serial number is identified as affecting privacy because the number is entered into an FAA database and by doing so creates a correlation with the owner’s PII. The FAA notes that owners registering unmanned aircraft used for operations under 14 CFR part 107 or part 91 have already been providing the serial number of each aircraft, if available. The FAA intends to update the PIA for the registration system prior to any collection of information under the changes to part 47 or part 48.



Design/Production Requirements

Under the Final Rule, standard remote identification unmanned aircraft and remote identification broadcast modules must be designed and produced to meet the requirements of this rule. The FAA recognizes that UAS technology is continually evolving, making it necessary to harmonize new regulatory action with technological advancements. To promote that harmonization, the FAA is implementing performance-based requirements to describe the desired outcomes, goals, and results for remote identification without establishing a specific means or process for regulated entities to follow.

A person designing or producing a standard remote identification unmanned aircraft or broadcast module must show that the unmanned aircraft or broadcast module meets the requirements of an FAA-accepted means of compliance. A means of compliance describes the methods by which the person complies with the performance-based requirements for remote identification.

Under the Final Rule, anyone can create a means of compliance; however, the FAA must accept that means of compliance before it can be used for the design or production of any standard remote identification unmanned aircraft or remote identification broadcast module. The FAA anticipates that the vast majority of those creating means of compliance will be manufacturing companies or entities, and not individual members of the public.

A person seeking acceptance by the FAA of a means of compliance for standard remote identification unmanned aircraft or remote identification broadcast modules is required to submit the means of compliance to the FAA. The FAA reviews the means of compliance to determine if it meets the minimum performance requirements and includes appropriate testing and validation procedures in accordance with the rule. Specifically, the person must submit a detailed description of the means of compliance, a justification for how the means of compliance meets the minimum performance requirements of the rule, and any substantiating material the person wishes the FAA to consider as part of the application. FAA-accepted consensus standards are one way, but not the only way, to show compliance with the performance requirements of this rule. Accordingly, the FAA encourages consensus standards bodies to develop means of compliance and submit them to the FAA for acceptance.

The FAA indicates acceptance of a means of compliance by notifying the submitter of the acceptance of the proposed means of compliance. The FAA also expects to notify the public that it has accepted the means of compliance by including it on a list of accepted means of compliance at <https://www.faa.gov>. The FAA will not disclose commercially valuable information from the means of compliance. The FAA may disclose the non-proprietary broadcast specification and radio frequency spectrum so that sufficient information is available to develop receiving and processing equipment and software for the FAA, law enforcement, and members of the public.

In addition, a person responsible for the production of standard remote identification unmanned aircraft (with limited exceptions) or remote identification broadcast modules is required to:

- Issue each unmanned aircraft or remote identification broadcast module a serial number that complies with the ANSI/CTA-2063-A serial number standard.



- Label the unmanned aircraft or remote identification broadcast module to indicate that it is remote identification compliant.
- Submit a declaration of compliance for acceptance by the FAA, declaring that the standard remote identification unmanned aircraft or remote identification broadcast module complies with the requirements of the rule.

Additional Provisions Implicating PII and/or Privacy

Foreign-Registered Civil Unmanned Aircraft.

The FAA is extending the operational requirements of part 89 to persons operating foreign civil unmanned aircraft in the United States. These persons must comply with the remote identification requirements, which means that these persons must operate foreign civil unmanned aircraft that qualify as standard remote identification unmanned aircraft, unmanned aircraft equipped with remote identification broadcast modules, or unmanned aircraft that have no remote identification equipment but are operated within an FAA-recognized identification area.

The FAA must be able to correlate the remote identification message elements broadcast by foreign civil unmanned aircraft operated in the United States against information that helps the FAA and law enforcement identify a person responsible for the foreign civil unmanned aircraft. Where those unmanned aircraft are registered in another country, the FAA may not have access to information regarding who has registered that aircraft. Thus, the FAA is allowing a person to operate foreign-registered civil unmanned aircraft in the United States only if the person submits a notice of identification to the Administrator. The notice would include the following information to allow FAA to associate an unmanned aircraft to a responsible person:

- (1) The name of the operator and, for an operator other than an individual, the name of the authorized representative providing the notice.
- (2) The physical address of the operator operating the unmanned aircraft in the United States and, for an operator other than the operator, the physical address for the authorized representative. If the operator or authorized representative does not receive mail at a physical address, a mailing address must also be provided.
- (3) The telephone number(s) where the operator can be reached while in the United States.
- (4) The email address of the operator or, for an operator other than an individual, the email address of the authorized representative.
- (5) The aircraft manufacturer and model name.
- (6) The serial number of the aircraft or remote identification broadcast module.
- (7) The country of registration of the aircraft.
- (8) The registration number.

Once a person submits a notice of identification, the FAA would issue a confirmation of identification. A person operating a foreign-registered civil unmanned aircraft in the United States would have to maintain the confirmation of identification at the unmanned aircraft's control station and would have to produce it



when requested by the FAA or a law enforcement officer. The holder of a confirmation of identification would have to ensure that the information provided remains accurate and is updated prior to operating a foreign registered civil unmanned aircraft system in the United States.

The information the FAA receives from these notices of identification enables the identification of individuals and would be appropriately stored and maintained in an FAA database; the FAA will publish a PIA or amend an existing PIA to reflect any new or amended system that will collect and maintain this information.

FAA-Recognized Identification Areas.

The final rule allows the operation of unmanned aircraft without remote identification if the UAS is operated exclusively within visual line of sight and within FAA-recognized identification areas. By identifying a defined location where operations of unmanned aircraft without remote identification will be occurring, the FAA-recognized identification area itself becomes the form of identification. The intent is to minimize the regulatory burden for operators of unmanned aircraft without remote identification, while still meeting the intent of the rule. This rule does not preclude standard remote identification unmanned aircraft and unmanned aircraft with remote identification broadcast modules from operating in or transiting the airspace over FAA-recognized identification areas; it simply limits unmanned aircraft without remote identification from operating anywhere else.

The FAA will consider applications for the establishment of FAA-recognized identification areas beginning 18 calendar months following the effective date of the final rule. Those applications may only be submitted by community based organizations (CBOs) recognized by the Administrator, or educational institutions including primary and secondary educational institutions, trade schools, colleges, and universities. These applications include submittal of PII, including the name and contact information of the primary point of contact from the CBO or educational institution for communications with the FAA.

People operating within those FAA-recognized identification areas will be required to meet the conditions and limitations imposed by the CBO or educational institution responsible for those FAA-recognized identification areas. This may include sharing of the operator's PII. The exchange of information between the operator and the CBO or educational institution will be pursuant to the conditions and arrangements between those parties. Any PII related to operators that the CBO or educational institution collects for their own purposes will not be submitted to the FAA from those CBOs or educational institutions. Any PII collected by those institutions from operators will be maintained in accordance with the privacy policies of the respective entity.

Privacy Implications from Broadcasting Remote Identification Information

Remote Identification Information that must be Broadcasted

As explained above, the information broadcasted is limited to the message elements identified in the rule. The message elements differ depending on whether a person is operating a standard remote identification aircraft, or operating an unmanned aircraft with equipped with a broadcast module. The only personally identifying information included in the broadcast message is the serial number. The unmanned aircraft



owner's name, contact information, home address, the unmanned aircraft's registration number, and other information the FAA collects and maintains in the registry is not broadcasted. The serial number is maintained in the FAA registry associated with the unmanned aircraft owner's information. Based solely on the serial number, the FAA can determine who owns the aircraft, but cannot confirm the operator's identity without additional steps such as contacting the owner. Additionally, the rule allows operators to use a Session ID instead of broadcasting the serial number. A Session ID is a one-time-use identification that can add an additional layer of confidentiality to the information being broadcasted.

The rule requires the minimal amount of broadcasted information possible for the agency to achieve its goal of increased safety and security in the airspace of the United States. The only identifying information broadcasted is the serial number or session ID of either the unmanned aircraft or the broadcast module. Specifically, the rule requires only the following information to be broadcasted:

- For standard remote identification unmanned aircraft a unique identifier for the unmanned aircraft (the serial number or a session ID).
- For unmanned aircraft equipped with remote identification broadcast modules, a unique identifier of the unmanned aircraft consisting of the serial number assigned to the remote identification broadcast module by the person responsible for the production of the remote identification broadcast module.
- For standard remote identification unmanned aircraft or unmanned aircraft equipped with remote identification broadcast modules, an indication of the latitude, longitude, geometric altitude, and velocity of the unmanned aircraft.
- For standard remote identification unmanned aircraft, an indication of the latitude, longitude, and geometric altitude of the control station.
- For unmanned aircraft equipped with remote identification broadcast modules, an indication of the latitude, longitude, and geometric altitude of the unmanned aircraft's take off location.
- For standard remote identification unmanned aircraft or unmanned aircraft equipped with remote identification broadcast modules, a Coordinated Universal Time (UTC) time mark.
- For standard remote identification unmanned aircraft, an indication of the emergency status of the unmanned aircraft.

Privacy Implications from broadcasting message elements

The broadcasted information includes both the geolocation information of the unmanned aircraft, as well as the geolocation information of the control station or take-off location, depending on whether the operator uses standard remote identification or a broadcast module. Any individual or entity with the appropriate equipment can receive the broadcasted information. The receiving individual would not be able to determine the operator's identity based solely on the broadcasted information. However, the receiving individual could potentially determine the location of the operator of a particular unmanned aircraft using the broadcasted information. Several comments in response to the NPRM voiced concerns over this possibility.



The FAA recognizes the concern that the broadcasted information could, in theory, increase potential for harassment of unmanned aircraft operators. However, the FAA has determined that the broadcasted information is the minimum amount of information necessary to ensure accurate remote identification of unmanned aircraft; and, in turn, the remote identification of unmanned aircraft is necessary to ensure public safety, and safety and national security of the airspace of the United States. The control station location enables the remote identification message to create a direct link between an unmanned aircraft and its operator, promoting the accountability inherent in manned aviation. The broadcasted information is the minimum information needed to address the current challenges faced by the FAA, law enforcement entities, and national security agencies responsible for the safety and security of United States airspace. As the number of unmanned aircraft operations increase, so does the risk of unmanned aircraft being operated in close proximity to manned aircraft, or people and property on the ground, or in airspace unsuitable for these operations. Remote identification provides a means to identify these aircraft and locate the person who controls them, among other necessary functions.

The FAA does not have authority to regulate third parties who may violate the privacy interests of unmanned aircraft operators. However, operators who face privacy violations, harassment, or other types of targeting have remedies available from the appropriate state, local, or federal law enforcement agency. It is unlawful to interfere with a person operating an aircraft, which includes persons operating unmanned aircraft. Additionally, there may be applicable laws pertaining to harassment, assault, trespassing, or reckless endangerment. Conversely, the FAA expects that the increased accountability resulting from the broadcasted information will reduce privacy interference and potential criminal activity *caused by* unmanned aircraft operators.

Members of the Public Correlation of Broadcast Data and Registry Data

The FAA will collect serial numbers in connection with registration or re-registration of unmanned aircraft, and the serial numbers will be maintained in the FAA Aircraft Registry with other registry information associated with the unmanned aircraft and its owner. To the extent an aircraft owner is an individual, rather than a business or other entity, registry information about the aircraft owner (including the serial number) is covered under the Privacy Act, and maintained in accordance with the System of Records Notice (SORN) DOT/FAA 801, Aircraft Registration Records, 81 Fed. Reg. 54187 (Aug. 15, 2016). Any

The serial number is not generally available to the public. Therefore, members of the public will be unable to correlate a broadcasted serial number with identifying information of the individual who owns the unmanned aircraft through the public facing registry. Additionally, members of the public will not generally receive registry information about individuals who register unmanned aircraft under 14 CFR part 48 in response to a FOIA request for information related to a particular serial number. Specifically, the FAA will not routinely disclose identifying information of individuals who register under 14 CFR part 48 to the public unless a member of the public provides the unmanned aircraft registration number, which is not one of the data elements that the unmanned aircraft will broadcast. Members of the public cannot generally receive a part 48 registrant's name or address if their request to the FAA identifies only the serial



number, rather than the registration number.² If the unmanned aircraft operator chooses to use a session ID instead of a serial number, the session ID is not maintained in the registry or any other FAA system.

If individuals register their unmanned aircraft under part 47 instead of part 48, members of the public are still unable to obtain registry information (for example, name and home address of the owner) through the public facing registry. However, members of the public who file FOIA requests for part 47 registry information associated with a specified serial number will likely receive the name of the unmanned aircraft registrant, and the address unless the registrant has requested that it not be publicly released, as well as information about the unmanned aircraft maintained in the Registry. Additionally, if an unmanned aircraft registered either under part 47 or part 48 is registered to a company or other entity rather than to an individual member of the public, a FOIA requester is likely to obtain the identifying information of a company by requesting information associated with a serial number.

FAA and Law Enforcement Use of Remote Identification and Correlated Information

The Remote Identification of Unmanned Aircraft final rule does not contemplate the FAA's routine collection or retention of broadcast information. At this time, the FAA does not have plans to collect or retain the broadcast information. As noted above, any individual with the appropriate equipment can receive the broadcast message elements if they are in within range to receive them. If the FAA determines in the future that there is a need to receive and/or retain the message elements, it will ensure that the appropriate privacy notices, including a Privacy Impact Assessment, are available to the public.

Any correlation for law enforcement purposes of other information held by the FAA that would identify any individual member of the public beyond the public remote identification message elements will be strictly limited to authorized FAA and other government and law enforcement personnel who are operating in their official capacities pursuant to all legal limitations and authorized use of the information. This correlation may occur with data such as unmanned aircraft registration information held by the FAA, authorizations to operate UAS under 14 CFR part 107 and 49 U.S.C. 44809, and any waivers from the operating requirements of 14 CFR part 107. All personnel, whether FAA or other government or law enforcement, allowed to access the data will need to be authorized and will access the information only through approved, secured channels when necessary to perform proper actions authorized by law in accordance with all due process and other legal and constitutional requirements. This is similar to how certain information for manned aircraft is conveyed to other government and law enforcement personnel who are operating in their official capacities pursuant to all legal limitations and authorized use of the information.

In addition to aiding the FAA in its civil enforcement of FAA regulations, the FAA anticipates that law enforcement and national security agencies will use remote identification information for criminal

² Members of the public who file FOIA requests for part 48 registrants' identifying information generally will not receive the information. The FAA has determined that part 48 registrants have a privacy interest in their identifying information, and therefore will routinely withhold it under FOIA Exemption 6. *See* 5 U.S.C. § 552(b)(6). However, under rare circumstances where a FOIA requester identifies a public interest in the information that outweighs the individual's privacy interest, FOIA may require the FAA to release the information.



enforcement, public safety, and security purposes. The FAA envisions matching remote identification data with certain registration data, when necessary and authorized, for accredited and verified law enforcement and Federal security agencies. The information could be used to identify, locate, or contact the person manipulating the flight controls of the UAS during an incident response (for example, in a situation where law enforcement becomes aware of an unmanned aircraft operating in an area and the unmanned aircraft appears to be operating in an improper manner). This information will help with preliminary threat discrimination. This is no different than the FAA cooperating with verified law enforcement and Federal security agencies with information regarding manned aircraft. Such use is consistent with the purpose for which the FAA collects and maintains aircraft registration information; as described in SORN DOT/FAA 801, the FAA maintains this information in part to “support a safe and economically strong civil aviation system,” to “aid law enforcement and accident investigations,” to “support FAA safety programs and agency management,” and to “aid in compliance with FAA standards including but not limited to agency enforcement actions.”

For example, when correlated with registration information, remote identification of UAS enables law enforcement officers to determine some information about who the unmanned aircraft owner is before engaging with the person manipulating the flight controls of the UAS. In addition, the broadcast location information can assist law enforcement in locating the unmanned aircraft operator. Once the operator is located, a law enforcement officer can speak with the person manipulating the flight controls of the UAS to gain potential insight into his or her intentions and allow the officer to either educate the person manipulating the flight controls of the UAS or begin an investigation. Although remote identification of UAS may not deter all nefarious actors, the rule allows the swift interdiction of persons manipulating the flight controls of the UAS in such a way that creates a safety or security risk to the NAS and can help law enforcement and security partners focus their efforts on truly nefarious actors. This information will also aid in any subsequent criminal or civil enforcement action. Any use of this information by law enforcement is bound by all constitutional requirements.

Fair Information Practice Principles (FIPPs) Analysis

The DOT PIA template is based on the Fair Information Practice Principles (FIPPs). The FIPPs, rooted in the tenets of the Privacy Act, are mirrored in the laws of many U.S. states, as well as many foreign nations and international organizations. The FIPPs provide a framework that will support DOT efforts to appropriately identify and mitigate privacy risk. The FIPPs-based analysis conducted by DOT is predicated on the privacy control families articulated in the Federal Enterprise Architecture Security and Privacy Profile (FEA-SPP) v3,³ sponsored by the National Institute of Standards and Technology (NIST), the Office of Management and Budget (OMB), and the Federal Chief Information Officers Council and the

³ <http://www.cio.gov/documents/FEA-Security-Privacy-Profile-v3-09-30-2010.pdf>



*Privacy Controls articulated in Appendix J of the NIST Special Publication 800-53, Security and Privacy Controls for Federal Information Systems and Organizations.*⁴

Transparency

Sections 522a(e)(3) and (e)(4) of the Privacy Act and Section 208 of the E-Government Act require public notice of an organization's information practices and the privacy impact of government programs and activities. Accordingly, DOT is open and transparent about policies, procedures, and technologies that directly affect individuals and/or their personally identifiable information (PII). Additionally, the Department should not maintain any system of records the existence of which is not known to the public.

This PIA fully describes the privacy risks contemplated by the Remote Identification of Unmanned Aircraft final rule, including the nature and type of PII to be collected and used by the FAA, and addresses other privacy risks created by the rule, and the steps that the FAA has taken to mitigate those privacy risks. Additionally, the rulemaking process allowed for a notice and comment period, and comments raising privacy concerns were addressed in the Final Rule. The FAA will communicate with the general public on the rule's requirements and implementation using a variety of platforms, including news media, social media, and other elements.

As explained above, the rule will require aircraft owners to provide the serial number of the unmanned aircraft or broadcast module upon registration. The FAA retrieves records in the aircraft registry by name or other personally identifiable information, and protects these records in accordance with the Privacy Act and [SORN DOT/FAA 801, Aircraft Registration Records, 81 Fed. Reg. 54187 \(Aug. 15, 2016\)](#). The DOT has also published a PIA for the FAA Aircraft Registry, which is available at <https://www.transportation.gov/privacy>.

The Remote ID rule makes it mandatory for most unmanned aircraft operators, whether commercial or recreational operators, to broadcast message elements over radio frequencies that include the unmanned aircraft's serial number or session ID, as well as operational and location information. Broadcast data is publicly available to any person or entity who has a receiver that can receive the broadcast signals; however, at this time the FAA does not intend to collect or maintain the broadcast data. The rule does not require the FAA or any other entity to collect and maintain the broadcast data.

Other portions of the rule will require the FAA to develop systems that will collect and maintain information, including PII. The FAA is developing a system to facilitate submission of declarations of compliance to the FAA for unmanned aircraft producers to comply with the production and design requirements of the rule. The FAA expects to develop a system to allow for submission of applications for establishment of FAA-recognized identification areas submitted by community based organizations recognized by the Administrator and educational institutions including primary and secondary educational institutions, trade schools, colleges, and universities. The FAA intends to collect only the name and business contact information of the point of contact from entities submitting declarations of compliance or applications for recognition as community based organizations. In addition, the FAA does not intend to

⁴ http://csrc.nist.gov/publications/drafts/800-53-Appendix-J/IPDraft_800-53-privacy-appendix-J.pdf



retrieve these records by the point of contact's name or business contact information. Accordingly, the Privacy Act does not apply to these applications or declarations of compliance. The FAA will maintain account profile records associated with these systems in accordance with SORN DOT/ALL 13, Internet/Intranet Activity and Access Records, (May 7, 2002 67 FR 30758).

As FAA develops these systems or updates existing systems to facilitate aspects of the rule requiring collection of personally identifiable information from members of the public, it will post Privacy Impact Assessments on the DOT website for any that create privacy risk for members of the public.

Individual Participation and Redress

DOT should provide a reasonable opportunity and capability for individuals to make informed decisions about the collection, use, and disclosure of their PII. As required by the Privacy Act, individuals should be active participants in the decision-making process regarding the collection and use of their PII, and should be provided reasonable access to their PII and the opportunity to have it corrected, amended, or deleted, as appropriate.

The Remote ID rule makes it mandatory for most unmanned aircraft operators, whether commercial or recreational operators, to broadcast message elements over radio frequencies. The FAA does not routinely collect broadcasted information. The FAA has established technical requirements for unmanned aircraft and broadcast modules to comply with the Final Rule, and these technical requirements ensure that broadcasted data is accurate. The FAA expects that members of the public will review information related to unmanned aircraft and broadcast modules and make informed decisions on their purchases based on information provided by industry.

Several comments to the proposed rule expressed concerns related to increased harassment and the potential for privacy violations by third parties who locate the unmanned aircraft operator using the broadcast data. The FAA does not have authority to regulate third parties who may violate the privacy interests of unmanned aircraft operators. However, operators who face privacy violations, harassment, or other types of targeting have remedies available from the appropriate state, local, or federal law enforcement agency.

The FAA will ensure that systems it develops or modifies to collect and maintain PII in connection with this rulemaking will provide individuals with appropriate opportunities for individual participation and redress. These measures will be fully explained in any new or updated Privacy Impact Assessment in association with new or updated systems that collect and maintain PII from members of the public. FAA will ensure that individuals have the right to (a) obtain confirmation of whether FAA has PII related to them; (b) access the PII related to them in a reasonable time, cost, and manner and in a form that is readily intelligible to them; (c) receive an explanation from the FAA if a request is made under (a) or (b) is denied and the ability to challenge such denial; and (d) challenge the accuracy of PII relating to them and, if the challenge is successful, have the data erased, rectified, completed, or amended.



Purpose Specification

DOT should (i) identify the legal bases that authorize a particular PII collection, activity, or technology that impacts privacy; and (ii) specify the purpose(s) for which it collects, uses, maintains, or disseminates PII.

The final rule is promulgated under the statutory authorities discussed in Appendix A, which set the legal bases for the remote identification requirements that involve collection, use, dissemination, or retention of personally identifiable information and that may impact privacy.

The regulatory authorities for the FAA's collection and maintenance of PII in connection with the activities implemented under the final rule include:

- 14 CFR 48.110 – Application for Registration. Establishes the information that must be submitted by each applicant for a Certificate of Aircraft Registration.
- 14 CFR 89.130 – Confirmation of Identification. Any person who wishes to operate a foreign registered civil unmanned aircraft in the United States must provide, prior to the operation, certain information about the operator and the standard remote identification unmanned aircraft or remote identification broadcast module in a notice of identification.
- 14 CFR 89.210 – Requests for establishment of an FAA-recognized identification area. A community based organization or educational institution requesting establishment of a flying site as an FAA-recognized identification area would need to provide contact information for a representative for communications with the FAA.
- 14 CFR 89.405 – Means of Compliance. Any person who seeks FAA acceptance of a means of compliance will be required to submit information in support of the request for FAA acceptance. Applicants may submit means of compliance in conjunction with their declarations of compliance, to request contemporaneous FAA acceptance of them.
- 14 CFR 89.530 – Submission of a declaration of Compliance for FAA acceptance. Any person responsible for the production of standard remote identification unmanned aircraft or remote identification broadcast module who seeks to declare an unmanned aircraft or broadcast module as remote identification compliant must submit a declaration of compliance to the FAA in a form and manner acceptable to the FAA Administrator.

The final rule establishes the following purposes for collecting and using PII:

Message Elements

Unmanned aircraft operators will broadcast the message elements including the serial number of the unmanned aircraft or session ID to be receivable by wireless devices. National security agencies and law enforcement entities, which currently impede the further integration of UAS. The FAA will use the serial number in the broadcast message to identify the registered owner of the aircraft when an authorized national security or law enforcement agency presents the serial number to the FAA.



Registry Information

Those registering an unmanned aircraft must provide the serial number of the unmanned aircraft or the broadcast module at the time of registration. The serial number requirement enables the FAA to correlate the data broadcast by the unmanned aircraft with the registration data in the Aircraft Registry to associate an unmanned aircraft with its registered owner. The requirement also allows the FAA to connect an aircraft to its owner while operating in the airspace of the United States and facilitates the identification of non-registered unmanned aircraft operating in the airspace of the United States, which may warrant additional oversight or action by the FAA, national security agencies, or law enforcement agencies. Owners of unmanned aircraft without remote identification (who would operate in the FAA-Recognized Identification Areas) are not required to provide a serial number during registration.

Declarations of Compliance and Means of Compliance

The FAA collects PII on the declaration of compliance to identify the name and contact information of the person who applies for FAA acceptance of the declaration of compliance, the unmanned aircraft or broadcast module information as well as the means of compliance for fulfilling the performance-based requirements of the rule. The FAA also uses this information to contact applicants regarding their submissions. Analogously, the FAA collects PII for applicants submitting a means of compliance to identify the name of the applicant and for the purposes of contacting the applicant.

Notice of Identification for Foreign registered aircraft

Where those unmanned aircraft are registered in another country, the FAA may not have access to information regarding who has registered that aircraft. Therefore, the FAA collects PII on the Notice of Identification that allows the FAA to be able to correlate the remote identification message elements broadcast by foreign registered civil unmanned aircraft operated in the United States against information that helps FAA and law enforcement identify a person responsible for the foreign registered civil unmanned aircraft.

FAA-Recognized Identification Areas

The FAA collects PII, including the name and contact information for the representative of the community based organizations or educational institutions applying for the FAA-recognized identification area, to ensure that there is the primary point of contact for communications with the community based organization or educational institution.

Data Minimization & Retention

DOT should collect, use, and retain only PII that is relevant and necessary for the specified purpose for which it was originally collected. DOT should retain PII for only as long as necessary to fulfill the specified purpose(s) and in accordance with a National Archives and Records Administration (NARA)-approved record disposition schedule.

The FAA has mitigated privacy risks associated with remote identification of unmanned aircraft by requiring broadcasting of the minimum amount of information necessary to achieve the public safety and



national security goals of the regulation. The FAA has ensured that except for the serial number, none of the broadcasted information identifies either the unmanned aircraft or the individual who operates or owns the unmanned aircraft. The serial number also does not identify the unmanned aircraft operator or owner unless the number is correlated with other information that the FAA maintains. Members of the public generally do not have the capability of correlating this data, and therefore are unable to identify the owner or operator of the unmanned aircraft either by the broadcast message elements alone, or by attempts to correlate broadcast data with other FAA information for unmanned aircraft registered under Part 48. Additionally, unmanned aircraft operators have the choice to broadcast a one-time use Session ID in place of broadcasting the serial number, adding an additional layer of confidentiality.

The collection and retention associated with the aircraft registration is addressed in a separate PIA⁵; however, the additional requirement to collect the serial number is the minimum amount of information required to achieve the purpose of linking the broadcasted serial number to the individual who registered the unmanned aircraft. The FAA will collect and store similar information from persons who operate foreign-registered civil unmanned aircraft in the United States to support the identification of those aircraft when operating in the airspace of the United States.

Additionally, the FAA will collect the minimum amount of information necessary to link a declaration of compliance to the applicant who submitted it and the unmanned aircraft or broadcast module to which it applies. The FAA will likewise collect the minimum amount of information from applicants submitting a means of compliance to ensure continued compliance with the performance based requirements of the rule. For both declarations of compliance and means of compliance, the FAA collects only the name and contact information of a point of contact for the unmanned aircraft producer; the remaining information collected relates to the unmanned aircraft or broadcast module, and associated technical requirements. With respect to FAA-recognized identification areas, the FAA collects only the name and contact information from the community based organization or educational institution point of contact applying for the establishment of the FAA-recognized identification area.

The FAA will retain and dispose of information it collects in connection with requirements in this rule in accordance with an applicable records retention schedule as required by NARA and the Federal Records Act. Until a records schedule is approved these records, including those with PII, will be considered permanent records and will not be destroyed by the FAA.

Use Limitation

The DOT shall limit the scope of its PII use to ensure that the DOT does not use PII in any manner that is not specified in notices, incompatible with the specified purposes for which the information was collected, or for any purpose not otherwise permitted by law.

A primary purpose of the Final Rule and the requirement for unmanned aircraft operators to broadcast message elements during operations is to ensure public safety, safety of the airspace of the United States,

⁵ The FAA Aircraft Registration System PIA is published on the DOT website, available at <https://www.transportation.gov/privacy>.



and to ensure that law enforcement entities and national security agencies can properly identify criminal and national security threats. Overall, the FAA has limited its use of the broadcast messages by determining that it will not routinely receive and maintain the broadcast messages.

If the FAA does receive broadcast data (for example, if a law enforcement agency or member of the public provide information to the FAA in connection with a compliant), the FAA will use the information for the purposes outlined in the final rule: to ensure public safety, safety in the national airspace, and to ensure that law enforcement entities and national security agencies can properly identify criminal threats and obtain the necessary information to conduct investigations. The FAA will use this information for oversight and safety investigations, and potentially to take compliance or enforcement actions against operators who have violated FAA regulations. The FAA will also correlate message elements received from law enforcement and national security agencies with registry information, and provide the correlated information to these agencies if relevant to a law enforcement investigation or necessary for national security. The FAA will ensure any disclosure of correlated information related to unmanned aircraft owners maintained in the FAA Aircraft Registry complies with the Privacy Act.

Data Quality and Integrity

In accordance with Section 552a(e)(2) of the Privacy Act of 1974, DOT should ensure that any PII collected and maintained by the organization is accurate, relevant, timely, and complete for the purpose for which it is to be used, as specified in DOT's public notice(s).

For both standard remote identification unmanned aircraft and remote identification broadcast modules, the rules specifies certain minimum performance requirements related to message element accuracy. These accuracies relate to the unmanned aircraft position and altitude measurements, the control station position and altitude measurements, and the unmanned aircraft take-off location and altitude measurements. Anyone who develops a means of compliance with the technical requirements of the rule must submit the means of compliance to the FAA for approval; any manufacturer that produces an unmanned aircraft or broadcast module in compliance with an accepted means of compliance must submit to the FAA a declaration of compliance that these technical requirements have been met.

In addition to the technical requirements to ensure accuracy of broadcast message data, the FAA will ensure that appropriate measures are in place to ensure accuracy of data collected and maintained by the FAA in any system developed or amended to collect or maintain PII in connection with this rule. The FAA will ensure that the PIA associated with any new or updated system fully describes the agency's efforts to ensure that information collected about members of the public is timely, relevant, accurate and complete.

Security

The DOT shall implement administrative, technical, and physical measures to protect PII collected or maintained by the Department against loss, unauthorized access, or disclosure, as required by the Privacy



Act, and to ensure that organizational planning and responses to privacy incidents comply with OMB policies and guidance.

As described in the sections above, broadcast message data is broadcasted over radio frequencies and available to any member of the public with the appropriate equipment to receive the messages. The messages are not encrypted. The FAA has determined that public availability of broadcast message elements is critical to meeting the objectives of the rule. The FAA has determined that the broadcasted information is the minimum amount of information necessary to ensure accurate remote identification of unmanned aircraft; and, in turn, the remote identification of unmanned aircraft is necessary to ensure public safety, and the safety and national security of the airspace of the United States.

Several of the FAA's PII-protective security safeguards apply to all of the UAS-related PII systems contemplated in this analysis. The FAA will ensure that any systems developed or updated to collect PII comply with the FAA's security standards and practices. Most notable among these are the safeguards incorporating standards and practices required for federal information systems under the Federal Information Security Management Act (FISMA), and are detailed in Federal Information Processing Standards (FIPS) Publication 200, Minimum Security Requirements for Federal Information and Information Systems, dated March 2006, and National Institute of Standards and Technology (NIST) Special Publication (SP) 800-53, Revision 4, Security and Privacy Controls for Federal Information Systems and Organizations, dated April 2013. FAA systems protect PII with reasonable security safeguards against loss, unauthorized access, destruction, usage, modification, or disclosure. Role-based security is defined within all applications. Roles are assigned based on job title and need. Users receive the least privileges necessary to perform their job duties. Each FAA system discussed in this PIA must be certified and accredited before being placed into operation and authorized to collect, access, use, retain, and/or dispose of PII. The security posture of all systems is reviewed on a regular basis.

Accountability and Auditing

The DOT shall implement effective governance controls, monitoring controls, risk management, and assessment controls to demonstrate that the DOT is complying with all applicable privacy protection requirements and minimizing the privacy risk to individuals.

The FAA's Office of the Chief Information Officer, Office of Information Systems Security, Privacy Division is responsible for governance and administration of FAA Order 1370.121, FAA Information Security and Privacy Program Policy. FAA Order 1370.121 implements the various privacy requirements based on the Privacy Act of 1974 (the Privacy Act), the E-Government Act of 2002 (Public Law 107-347), the FISMA, DOT privacy regulations and policy, Office of Management and Budget (OMB) mandates, and other applicable procedures and guidance.

In addition to these practices, additional policies and procedures will be consistently applied, especially as they relate to protection, retention, and destruction of records. Federal and contract employees are given clear guidance regarding their duties as they relate to collecting, using, processing, and securing privacy



data. Guidance is provided in the form of mandatory annual security and privacy awareness training, as well as FAA Privacy Rules of Behavior.

The FAA periodically conducts privacy compliance reviews of all FAA systems that retain and/or process PII with the requirements of the OMB Circular A-130.

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DOT Privacy Office - Approved - 011521



Appendix A: General Authorities of the FAA

The FAA's authority to issue rules on aviation safety is found in Title 49 of the United States Code (49 U.S.C.). Subtitle I, section 106 describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

Pursuant to 49 U.S.C. 40103(b)(1) and (2), the FAA is directed to issue regulations: (1) to ensure the safety of aircraft and the efficient use of airspace; and (2) to govern the flight of aircraft for purposes of navigating, protecting and identifying aircraft, and protecting individuals and property on the ground. In addition, 49 U.S.C. 44701(a)(5) charges the FAA with promoting safe flight of civil aircraft by prescribing regulations the FAA finds necessary for safety in air commerce and national security.

Section 2202 of Pub. L. 114-190 requires the Administrator to convene industry stakeholders to facilitate the development of consensus standards for remotely identifying operators and owners of UAS and associated unmanned aircraft and to issue regulations or guidance based on any standards developed.

The Administrator is granted the authority under 49 U.S.C. 44805 to establish a process for, among other things, accepting risk-based consensus safety standards related to the design and production of small UAS. Under 49 U.S.C. 44805(b)(7), one of the considerations the Administrator must take into account prior to accepting such standards is any consensus identification standard regarding remote identification of unmanned aircraft developed pursuant to section 2202 of Pub. L. 114-190.

Additionally, section 44809(f) of 49 U.S.C. provides that the Administrator is not prohibited from promulgating rules generally applicable to unmanned aircraft, including those unmanned aircraft eligible for the exception for limited recreational operations of unmanned aircraft. Among other things, this authority extends to rules relating to the registration and marking of unmanned aircraft and the standards for remotely identifying owners and operators of UAS and associated unmanned aircraft.

The FAA has authority to regulate registration of aircraft under 49 U.S.C. 44101–44106 and 44110–44113 which require aircraft to be registered as a condition of operation and establish the requirements for registration and registration processes.

Finally, under 49 U.S.C. 106(f), the Administrator is authorized to promulgate regulations and rules and under 49 U.S.C. 40101(d), FAA is authorized to consider in the public interest, among other things, the enhancement of safety and security as the highest priorities in air commerce, the regulation of civil and military operations in the interest of safety and efficiency, and assistance to law enforcement agencies in the enforcement of laws related to regulation of controlled substances, to the extent consistent with aviation safety.