

Supporting Statement A

Integrated Survey of Unmanned-Aircraft-Systems Operators

1. Explain the circumstances that make the collection of information necessary. Identify any legal or administrative requirements that necessitate the collection.

In Title 49 of the United States Code, the Secretary of Transportation is empowered to collect and disseminate information relative to civil aeronautics, to study the possibilities for development of air commerce and the aeronautical industries, and to make long-range plans for, and formulate policy with respect to, the orderly development and use of the navigable airspace, radar installations and all other aids for air navigation. Moreover, Title 49 sets the promotion of aviation safety as the primary goal of the Federal Aviation Administration. This survey supports the mission of the Department of Transportation (DOT) and the Federal Aviation Administration (FAA) by estimating the activities of Unmanned Aircraft Systems (UAS) in U.S. airspace. The data collected from the survey will enable the forecasting of UAS activities over the next decade and provide guidance for allocating funds for UAS related infrastructure to support the National Airspace System (NAS).

In addition, the FAA Reauthorizations Act of 2018 explicitly charges the FAA with developing a plan to implement an unmanned aircraft systems traffic management (UTM) services. Section 376 of the act states, “the FAA shall develop a plan for the implementation of unmanned aircraft systems traffic management services that expand operations beyond visual line of sight, have full operational capability, and ensure the safety and security of all aircraft.” The development of this congressionally mandated plan requires an estimation of current activity by UAS operators and projecting this behavior into the future as economic, technology, and regulatory condition change. No data currently exists to provide the flight behavior of individuals operating UAS in the United States. Although the FAA has a database of registration information under Part 107 and Section 349, the FAA does not collect nor can it infer from the registrations the flight behavior of the UAS operators. As such, conducting the proposed survey provides novel and necessary data to complete the mission and requirements set out by the U.S. Congress and the Administration.

2. Indicate how, by whom, and for what purpose the information is to be used. Except for a new collection, indicate the actual use the agency has made of the information received from the current collection.

The data collected from this survey has three main purposes. First, the data are used to estimate the density of UAS operations across the United States. The estimate can be used to bolster the safety of the NAS by increasing infrastructure for UAS and law enforcement where it is most needed. Second, the data are used to estimate the economic effects from the expansion of UAS operation. These estimates support the attention given to the industry. Third, the data help to determine public perception of UAS. The information can be used to determine where noise and visual annoyance from UAS or safety is most likely to become a public issue.

The survey design and procedures are expected to support the mission and requirement of the FAA. The survey uses a questionnaire as the instrument of data collection. The target population is all legal operators of small (less than 55lb and greater than 0.55lb) UAS within the United States. The sample frame is the email list from all registrants of UAS operators under Part 107 (commercial) and Section 349 (recreational) under Title 14 of the Code of Federal Regulations. The survey is expected to be conducted annually in the early autumn.

The questionnaire is voluntary and is not required for any benefit available from the FAA. Moreover, there is no financial remuneration or benefit for completing the survey. None of the raw data collected from the survey will be made public. However, statistics, estimates, and projections developed from the data will be made public. Other derivatives of the data will be used by the FAA for purposes of planning investment, determining costs, and estimating needs of the flying public. These derivations may include means, medians, standard deviations, any moment of a distribution, regressions coefficients, results of statistical tests, forecasts from statistical models, or stylized parameters for simulation models based on the aggregate or any subgroup of the information collection. In particular, flight behavior, such as length of average flight, total number of flights in a month, active days of the week, active months of the year, how the registrant checks airspace, etc...; and fleet information, such as the number of aircraft, type of aircraft, category of aircraft weight, ...etc; as well as opinions, such as FAA media preference, are the intended information for publication across all categories. Commercial and public safety UAS operators have additional information regarding industry of operation, intention to seek waivers, types of operations, types of programs, and opinions specific to their industry.

The survey responses are stored with the U.S. County of the registered operator. No personal identifiable information is connected with the survey responses for the storage of these records, and any county with less than three registrants of any category are clustered with similar adjacent counties to blur the identity of the registrant (see statement B).

3. Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological collection techniques or other forms of information technology.

The questionnaire for the survey is administered online via Survey Monkey. The results of the survey are held by Survey Monkey in a secured location until the completion of the survey. After which, the data is transferred to FAA servers and permanently deleted from Survey Monkey services. Raw data is stored for six years on a physical storage device, held in a safe. The aggregated data remains on FAA servers behind a firewall. Portions of the aggregate data are made available to the public.

Data held by Survey Monkey will not have personal identifying information of the respondents. To ensure the responses are from the intended registrant and no

registrants create duplicate responses, a unique identifier is assigned to the responses kept on Survey-Monkey servers. Each survey invitation sent to a registrant has a link with the unique identifier in the link. The link automatically attaches the identifier to all responses given through that link. The unique identifier is a 12 digit number with random components, which prevents an unintended response by a non-registrant. After the survey has closed, the unique identifiers are used to remove duplications or invalid responses and are deleted from the response dataset. The identifiers for all respondents are then transferred to the registry to create a list of non-responding registrants, which are used in the non-response studies.

It is anticipated that the information collected will be disseminated to the public or used to support publicly disseminated information. FAA's office of Aviation Policy and Plans will retain control over the information and safeguard it from improper access, modification, and destruction, consistent with FAA standards for confidentiality, privacy, and electronic information. See response to Question 10 of this statement for more information on privacy. The FAA designed the information collection to yield data that meet all applicable information quality guidelines, and although the information collected is not directly disseminated to the public, aggregate results may be used in scientific, management, technical or general informational publications.

4. Describe efforts to identify duplication. Show specifically why any similar information already available cannot be used or modified for use for the purposes described in Item 2 above.

The use of UAS for commercial, recreational, public safety, and law enforcement purposes is still in its infancy. As such, the behavior of individuals operating UAS has only been partially studied by academics who lacked access to the FAA registries. Moreover, none of the academics have conducted a survey which encompasses all 4 categories of uses with consistence flight behavior and fleet questions.

The Office of Aviation and Planning (APO) at the FAA has also searched the OMB public registry for other agencies and department conducting similar surveys. Our search only found public notices of policy changes for UAS but no surveys. As such, it is unlikely that another agency or department has already or is in the process of obtaining similar information from UAS operators.

5. If the collection of information involves small businesses or other small entities, describe the methods used to minimize burden.

Yes, even though the survey does not directly involve small business, the survey captures the behavior of all individuals who commercially operate UAS, which would constitute a small business or small entities. As such, we have made the survey

available online, it requires less than 8 minutes to complete, it consists mostly of multiple choice entries, and it is voluntary. We also have ensured that businesses with multiple UAS registrations receive only one email request to complete the questionnaire rather than one for each registered asset/aircraft.

6. Describe the consequence to Federal program or policy activities if the collection is not conducted or is conducted less frequently, as well as any technical or legal obstacles to reducing burden.

The development of this dataset has far reaching consequences. As UAS are integrated into the NAS, the air traffic control system must be prepared for this new category of aircraft. Much smaller than typical manned aircraft, UAS are likely to require considerable investment to ensure safety in the NAS and minimize noise and visual annoyances. Where and when UAS are operated and how the operators' behaviors change over time will aid the distribution of funds to developing infrastructure capable of detecting, communicating with, and directing UAS. Moreover, the introduction of UAS into the U.S. economy is likely to have an effect on productivity over time, which affects economic growth and job prospects. Predicting the penetration of UAS into U.S. industries is likely to aid other agencies in predicting economic outcomes. Without this dataset, it is unlikely FAA can create accurate predicts to support these needs.

Gathering the data annually synchronizes the dataset with the frequency of other federal agencies and departments. Reducing the frequency to biennially will likely misalign the dataset with other national and aviation data sources, which would reduce the accuracy of predictions based on the dataset.

7. Explain any special circumstances that would cause an information collection to be conducted in a manner:

- ***requiring respondents to report information to the agency more often than quarterly;*** The survey does not require quarterly responses.
- ***requiring respondents to prepare a written response to a collection of information in fewer than 30 days after receipt of it;*** The survey does not require written responses.
- ***requiring respondents to submit more than an original and two copies of any document; requiring respondents to retain records, other than health, medical, government contract, grant-in-aid, or tax records, for more than three years;*** The survey does not require submission of documents.
- ***in connection with a statistical survey, that is not designed to produce valid and reliable results that can be generalized to the universe of study;*** Given the extensive scope of the target population, the survey should generalize to the universe of the study.

- ***requiring the use of a statistical data classification that has not been reviewed and approved by OMB;*** The survey uses standard statistical processes as endorsed by the American Association for Public Opinion Research.

County-level estimates use synthetic responses to populate counties with insufficient responses (less than 30) or the lack of a sample population within a particular county. The process is described in Statement B.

- ***that includes a pledge of confidentiality that is not supported by authority established in statute or regulation, that is not supported by disclosure and data security policies that are consistent with the pledge, or which unnecessarily impedes sharing of data with other agencies for compatible confidential use; or*** The survey's data adhere to the confidentiality pledges as set out by Federal Aviation Administration and the Department of Transportation.
- ***requiring respondents to submit proprietary trade secrets, or other confidential information unless the agency can demonstrate that it has instituted procedures to protect the information's confidentiality to the extent permitted by law.*** The survey does not require respondents to submit trade secrets or confidential information.

8. Provide information on the PRA Federal Register Notice that solicited public comments on the information collection prior to this submission. Summarize the public comments received in response to that notice and describe the actions taken by the agency in response to those comments. Describe the efforts to consult with persons outside the agency to obtain their views on the availability of data, frequency of collection, the clarity of instructions and recordkeeping, disclosure, or reporting format (if any), and on the data elements to be recorded, disclosed, or reported.

The overview of this new ICR was posted for a 60-day notice and comment on May 12th, 2020 with a requirement to submit comments by July 14th, 2020. For reference, the Federal Registry Number is 2020-10139. During the 60-day notice and comment period, we received one public comment and no private comments. In addition, a 30-day notice and comment was submitted on September 10th, 2020 with a requirement to submit comments by October 12th, 2020. For reference, the Federal Registry Number is 2020-20301. During the 30-day notice and comment period, we received four public comments, two of which were applicable to the proposed survey. See responses to all comments below:

Public comments from the 60-Day Notice and Comment period
Submitted: May 8th, 2020
Closed: July 14th, 2020

Commenter: Bill Inman
Location: Bend, OR

Date: May 21, 2020

Comment:

Concerned that the methodology outlined for the survey will not collect any data from users of UAS that do not require registration, such as the DJI Mavic Mini, or user that have not registered because they either don't know they should or choose not to for other reasons. Also, many public safety users may not be operating as Part 107 pilots but instead are flying under a COA, and likely only the chief pilot or other leader may receive the survey but not all the individual pilots. Similarly, many business subcontract drone flights, so how will their data reflect the corporate use separate from the subcontractors who may work for multiple companies.

Response:

The commenter had two major concerns:

A – Survey methodology only samples FAA registered UAS operators. As such, it does not sample groups of operators who are:

1. not required to register, such as individuals operating UAS under 0.55lb,
2. do not know they are required to register,
3. choose not to register,
4. Or operating under a different authority.

B – How does the survey separate the UAS activities of a company verse a contractor hired by the company?

In response to comment A:

The survey uses registered UAS operators for two reasons:

1. The registry ensures a unique respondent from which population weighting can be applied, unlike open, internet surveys where the same respondent could respond to the questionnaire (the instrument) multiple times.
2. The registry provides several means of contacting the prospective respondent. Although the registrants are invited to take the survey via email, the alternative means of contact allow the researches to conduct a non-response bias study at the conclusion of the survey.

In addition, there are several constraints and disadvantages to surveying the four groups outlined in the comment. Operator with UAS less than 0.55lbs (group 1), such as the DJI Mavic Mini, have many technical and factory constraints put on their operations. For example, the DJI Mavic Mini can fly 120 meters high on factory settings. Moreover, the size and weight of UAS under 0.55lbs poses less risk from underestimation than those greater than 0.55lbs.

The group of operators who do not know they should register (group 2) or those who choose not to register (group 3) are technically in violation of the registration regulation. . However, a sample-bias study shall be conducted at the conclusion of the survey, which opens the survey to the public for anonymous responses. These studies will guide updates of the survey upon renewal.

The group of UAS operator who operate under an authority other than Part 107 or Section 349 (group 4) is currently very small. UAS operators working under a Section 44807 exemption or a

Public Aircraft Operator make up less than 1 percent of UAS operating today. Because these groups have more reporting requirement than Part 107 or Section 349, there are other means of obtaining their behavior. Moreover, since this group is inherently different than those operating under Part 107 or Section 349, they are likely to fall under a different information collection, which the FAA will consider as the number of those types of unmanned aircraft operations increases.

In response to B:

Contractors pose a possibility of double counting activities. For example, if Company A contracts half of its UAS activities to Company B, which exclusively works with Company A, but Company A reports all of its UAS activity on the survey, it is possible, if both Company A and Company B respond to the survey, that the survey will double count the activities of Company B.

To avoid this possibility, we have put explicit instructions to separate in-house and contracted operation. Respondents are instructed to only include flight behavior and fleet makeup of in-house operations. These instructions should help reduce the possibility of double counting.

Private comments from the 60-Day Notice and Comment period

Submitted: May 8th, 2020

Closed: July 14th, 2020

None submitted

Public comments from the 30-Day Notice and Comment period

Submitted: September 10th, 2020

Closed: October 12th, 2020

Commenter: Gil Hopson

Location: Pinellas Park, FL

Date: September 18th, 2020

Comment:

What about privacy?

This proposal for a Survey of Unmanned-Aircraft-Systems Operators does not address or even mention the issue of privacy. Will the results of this survey be available to the public? Would someone be able to specifically search for someones name or search by geographical area to find UAS pilots in their zip code?

While the proposed survey is claiming to be voluntary I have a great reluctance to participate in any such survey until this issue is addressed.

Response:

To address the privacy concerns of the commenter:

- This proposal for a Survey of Unmanned-Aircraft-Systems Operators does not address or even mention the issue of privacy.

The survey does not ask questions about personal identifiable information. Several other steps are taken to protect the identity of respondents. This includes:

1. Clustering geographic units (counties) with less than two respondents
geographical units with respondents that have an identifiable fleet characteristics,

2. Permanently deleting any unique identifier at the conclusion of the survey from the responses,
 3. And never storing PII from the registries with the survey responses.
- Will the results of this survey be available to the public?

Results of the survey are aggregated and published in the Aviation Forecast of the following year. Raw or individual level data is not made public. Moreover, any information that could link the individuals' answers to their personal information is deleted at the conclusion of the survey, and any geographical unit with less than three observations is blurred using synthetic observations derived from matching algorithm to other geographical units or clustering geographical units with few registrants. The FAA intends to use U.S. counties as the geographical unit.

- Would someone be able to specifically search for someones name or search by geographical area to find UAS pilots in their zip code?

No. Names are never directly linked to responses. While the survey is open, each registrant in the two UAS registries are given a unique identifier that links the invitation to complete the survey and the responses to ensure a unique response. The responses to the survey and the registries are held by two different departments within the FAA and the unique identifier is the only field that connects the two datasets. Once the survey has closed, the unique identifier is deleted from the responses. As such, after the close of the survey, it is impossible to link the name of an individual with their responses. As for using geographic data to connect individuals to their survey responses, all geographical units with less than 3 responses are blurred using synthetic observations or clustered with other geographical units with few registrants. In the case of this study, the FAA intends to use U.S. counties as the geographic units.

- While the proposed survey is claiming to be voluntary I have a great reluctance to participate in any such survey until this issue is addressed.

The FAA understands your concerns. The survey is truly voluntary, and any information that could link answers to individuals is removed or blurred at the conclusion of the survey.

Commenter: David Hook

Location: Windcrest, TX

Date: September 24th, 2020

Comment:

My thanks to the FAA for the opportunity to review the questions for this survey.

As it is currently written, Question 4 creates a self-incriminating situation. Since both recreational Remote-Control pilots (Part 91) and non-recreational remote pilots (Part 107) are required by regulation to check the airspace prior to flight, I suggest changing the question stem wording to be: Prior to flight, how do you check the airspace? Further, I suggest removing No as a response. However, change the last response from Yes, other to Other and keep the text box.

Volunteering as an FAA Safety Team Representative, I look forward to the results of the survey.

Response:

We have changed question 4 to reflect Mr. Hook's comment. Question 4 now reads as the following:

4. How do you check the airspace before flying?

- o A visual scan of the sky
- o With B4UFLY
- o On the FAA website
- o With a community organization
- o Other

Commenter: Tj Anonymous

Location: None Given

Date: September 30th, 2020

Comment:

TJ

Response:

This comment must be a submission error.

Commenter: Rocio Garcia

Location: Yuma, AZ

Date: October 1st, 2020

Comment:

Who may concern Someone is claiming unemployment money and Resource and benefits and taxes of myself and children. I made police report ready. But mean while my bills keep going up no payments are made. This person who is claiming my Benefits is using the money to travel or buying cars under my name Rocio Garcia if you need any information from me I appreciate to seeing you every detail of myself. To make knowing that its me not the other person who is claiming ++++++*unemployment money. 549-55-2475. Villa Serena Apartments 2351 South 37th Avenue 2A Yuma AZ, 85364. Thank You please call me if you need anything 928)238-9753

Response:

Although the FAA sympathizes with Mr. Garcia's situation, the comment submitted has no relevance to the proposed survey.

Private comments from the 30-Day Notice and Comment period

All private comments during the 30-day Notice and Comment period are sent directly to OMB

9. Explain any decisions to provide payments or gifts to respondents, other than remuneration of contractors or grantees.

Respondents do not receive payments or gifts for completing the questionnaire.

10. Describe any assurance of confidentiality provided to respondents and the basis for assurance in statute, regulation, or agency policy.

Several steps are implemented to ensure the privacy of the survey-data collected. First, no PII is connected to a respondent's responses in the dataset and none of the question asked require responses with PII. Second, all unique identifiers are removed from the data once the data is obtained, duplications are removed, and post-survey studies complete. Third, the raw data is stored on a hard drive which is placed in a locked safe in the charge of APO's records officer at the FAA. The raw data is held for six years and then deleted. Aggregated data is held permanently and made publically available.

11. Provide additional justification for any questions of a sensitive nature, such as sexual behavior and attitudes, religious beliefs, and other matters that are commonly considered private.

The survey does not contain questions of a sensitive nature that would be commonly considered private.

12. Provide estimates of the hour burden of the collection of information. The statement should:

- **Indicate the number of respondents, frequency of response, annual hour burden, and an explanation of how the burden was estimated. Unless directed to do so, agencies should not conduct special surveys to obtain information on which to base hour burden estimates. Consultation with a sample (fewer than 10) of potential respondents is desirable. If the hour burden on respondents is expected to vary widely because of differences in activity, size, or complexity, show the range of estimated hour burden, and explain the reasons for the variance. Generally, estimates should not include burden hours for customary and usual business practices. * If this request for approval covers more than one form, provide separate hour burden estimates for each form and aggregate the hour burdens.**
- **Provide estimates of annualized cost to respondents for the hour burdens for collections of information, identifying and using appropriate wage rate categories. The cost of contracting out or paying outside parties for information collection activities should not be included here. Instead, this cost should be included under item 13.**

The survey design has several elements that contribute the burden. The primary instrument, which is the Survey Monkey questionnaire, is expected to have the highest burden while secondary instruments used for follow-up studies contribute less. The secondary instruments include questionnaire to improve the main questionnaire, a questionnaire to estimates non-response bias, and an open-to-the-public questionnaire to estimate sampling bias.

Main Questionnaire:

The main questionnaire is expected to impose a maximum burden of 159,000 hours on the public. The survey design samples all 1.88 million Section 349 (recreational) and Part 107 (commercial) registrants on average with the main questionnaire. The questionnaire for recreational registrants requires an expected four minutes to complete. The more extensive questionnaire for commercial registrants requires eight minutes to complete. These times were generated by Survey Monkey’s design tool, confirmed through internal testing, and doubled to ensure the vast majority of times fall within this metric. Since the survey design samples recreational registrants on average twice as much as commercial registrants, the weighted average per response is a burden of 5.1 minutes per instrument. The weighted average per response multiplied by the total number of requests to complete the questionnaire in both registries and rounding up to the nearest hundred hours produces the estimate for the maximum total burden.

However, the actual burden is likely to be less. Since the response rate is expected to be about 8% for commercial operator and 6% for recreational operators, the burden is more likely to be 10,881 hours. Adjusting the total sampled by the response rates yields almost 122,889 responses. Scaling the responses by the weight-average time and rounding it up to the nearest hundred hours produces the likely burden estimates, as shown below. Note that since the response rate of commercial operators is higher than that of recreational operators, the weighted-average time required to complete the questionnaire increase from 5.1 minutes to 5.3 minutes.

	Recreational (Households)	Commercial (Private Sector)	Public Safety (Government)	Total
Sample	1,376,051	502,127	1,945	1,880,123
Response Rate	6%	8%	8%	6.5%
Responses	82,563	40,170	155	122,889
Burden / Instrument (min)	4	8	8	5.3 Average
Total Burden (hr)	5,504	5,356	21	10,881

As the Part 107 (commercial) and Section 349 (recreational) registries grow over the next 3 years, the total number of individuals sampled are expected to increase. As of the end of 2019, the combined registries have 1.6 million registrants. When the first survey is conducted in 2020, 1.7 million registrants are expected to be sampled. These numbers are expected to continue growing to 1.9 million and 2.0 million registrants in 2021 and 2022, respectively. As such, the average number of registrants sent requests to complete the survey is 1.88 million registrants on average.

However, when response rates are incorporated into the response count, the actual responses fall to 79, 83, and 85 thousand for the recreational registry in 2020, 2021, and 2022, respectively. Similarly, the actual responses for the commercial registry are 33, 41, and 47 thousand in 2020, 2021, and 2022, respectively. As such, the average responses from recreational registrants is 82,563 and 40,325 for commercial registrants, for a total of 122,889 responses.

Note that projections of the total number of commercial registrants are higher than the number of recreational registrants. Since commercial registrants have been required to register each of their assets (aircraft), the number of registrations is larger than the number of recreational registrants. This should change as rule requiring recreational operators to register each asset/aircraft.

	Year	Registrants	Sample	Responses
Recreational (Section 349 Registry)	2020	1,324,437	1,324,437	79,466
	2021	1,383,326	1,383,326	82,999
	2022	1,420,389	1,420,389	85,223
	Average	1,376,050	1,376,050	82,563
Commercial & Public Safety (Part 107 Registry)	2020	409,525	409,525	32,762
	2021	511,782	511,782	40,942
	2022	590,909	590,909	47,272
	Average	504,072	504,072	40,325
Total		1,880,123	1,880,123	122,889

The majority of the registrants which the survey intends to sample are recreational UAS operators. Since these individuals are hobbyist, they are completing the survey on their own time. However, Part 107 (commercial) operators are likely completing the questionnaire during business hours. As such, the cost, which includes wage, fringe benefits, and overhead, for the recreational registrants is \$32 and for the commercial registrants is \$56.¹ Combining these wages with the expected responses per registry and the expected time required to complete the survey instrument, we obtain the following:

¹ FAA Report Economic Values For FAA Investment And Regulatory Decisions, A Guide, Revised Oct. 3, 2007, Adjusted for inflation

$$82,563 \text{ resp} \times 4/60 \text{ hr/resp} \times \$32 \text{ \$/hr} + 40,326 \times 8/60 \times \$56 = \$477,234$$

Summary (Annual numbers)	Reporting	Recordkeeping	Disclosure
# of Respondents	122,889	0	0
# of Responses per respondent	1	0	0
Time per Response	4-8 min 5.3 average	0	0
Total # of responses	122,889	0	0
Total burden (hours)	10,881	0	0

Post Survey Study to Improve Questionnaire:

In order to improve the main questionnaire upon renewal, the survey design includes a post-survey request for respondents to comment on the questions. The request to complete this questionnaire is integrated into the Thank You email send at the close of the survey.

Using the expected number of responses to the main questionnaire and the portion of respondents who left a final comment in the pilot surveys (13%), the total respondents should be almost 16,000. This questionnaire is free form, requiring considerably more time than the main questionnaire, around 21 minutes on average.

	Recreational (Households)	Commercial (Private Sector)	Public Safety (Government)	Total
Sample	82,563	40,170	155	122,888
Response Rate	13%	13%	13%	13%
Responses	10,733	5,222	20	15,975
Burden / Instrument (min)	16	32	32	21.25 Average
Total Burden (hr)	2,862	2,785	11	5,658

Summary (Annual numbers)	Reporting	Recordkeeping	Disclosure
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# of Respondents	15,975	0	0
# of Responses per respondent	1	0	0
Time per Response	21.25 min average	0	0
Total # of responses	15,975	0	0
Total burden (hours)	5,658	0	0

Post Survey Study on Non-Response Error:

The non-response study has a questionnaire, which contains the main questionnaire plus additional questions about contact preferences. The design of this study is a stratified, random sample with U.S. counties and type of owner (recreational, commercial, and public safety) as the strata. These request are sent to individuals who did not respond to the main questionnaire while the survey period is open. For the purposes of the burden calculation, we assume a 100 percent response rate. As such, we expected almost 65,000 responses for this study.

	Recreational (Households)	Commercial (Private Sector)	Public Safety (Government)	Total
Sample	31,410	31,410	1,790	64,610
Response Rate	100%	100%	100%	100%
Responses	31,410	31,410	1,790	64,610
Burden / Instrument (min)	6	10	10	5.1 Average
Total Burden (hr)	3,141	5,235	298	8,674

Summary (Annual numbers)	Reporting	Recordkeeping	Disclosure
# of Respondents	64,610	0	0
# of Responses per respondent	1	0	0
Time per Response	6-10 min 5.1	0	0

	average		
Total # of responses	64,610	0	0
Total burden (hours)	8,674	0	0

Post Survey Study on Sampling Error:

The sample error study is conducted by opening the main questionnaire to the public with two additional questions. The invitation to participate is distributed through social media. This questionnaire remains open until 100,000 responses are collected. We assume the distribution of self-identified recreational, commercial, and public-safety operators match the main survey design, and thus, the responses per questionnaire have an average time of 5.3 minus on average.

Summary (Annual numbers)	Reporting	Recordkeeping	Disclosure
# of Respondents	100,000	0	0
# of Responses per respondent	1	0	0
Time per Response	4-8 min 5.3 average	0	0
Total # of responses	100,000	0	0
Total burden (hours)	8,833	0	0

Total:

	Respondents	Average Time per Response	Total Responses	Burden
Main Questionnaire	122,889	5.3 min	122,889	10,881
Comments on Questionnaire	15,975	21.3	15,975	5,658

Post-Survey Non-Response Error Study	64,610	5.1	64,610	8,674
Post-Survey Sampling Error Study	100,000	5.3 min	100,000	8,833
Total	303,473	N/A	303,474	34,046

Summary (Annual numbers)	Reporting	Recordkeeping	Disclosure
# of Respondents	303,473	0	0
# of Responses per respondent	1	0	0
Time per Response	See Above	0	0
Total # of responses	303,473	0	0
Total burden (hours)	34,046	0	0

Given these burden numbers, the total estimated opportunity cost to the public for this ICR can be calculated using the same labor estimates as in the main questionnaire. Thus, the cost, which includes wage, fringe benefits, and overhead, for the recreational registrants is \$32 and for the commercial registrants is \$56.² Combining these wages with the expected responses per registry and the expected time required to complete the survey instrument, we obtain the following:

$$20,340\text{hr} \times \$32/\text{hr} + 13,706\text{hr} \times \$56/\text{hr} = \$1,418,416$$

13. Provide an estimate for the total annual cost burden to respondents or record keepers resulting from the collection of information.

Other than the 4 to 8 minute burden to complete the survey, the respondent will have no additional capital, start-up, or maintenance cost associated with completing the survey questionnaire.

14. Provide estimates of annualized costs to the Federal government. Also, provide a description of the method used to estimate cost, which should include

² FAA Report Economic Values For FAA Investment And Regulatory Decisions, A Guide, Revised Oct. 3, 2007, Adjusted for inflation

quantification of hours, operational expenses (such as equipment, overhead, printing, and support staff), and any other expense that would not have been incurred without this collection of information.

Since the survey utilizes Survey Monkey, the only direct cost is the subscription to the online survey platform. However, the FAA has an organization-wide subscription to Survey Monkey. As such, the marginal cost of utilizing Survey Monkey is negligible.

The analysis of survey results is roughly expected to consume 200 hours of an economist's or senior analyst's time, which translates to roughly \$15,200 in wages, fringe benefits, and overhead. In addition, 100 hours of a junior analyst, which translates to roughly \$4,800 in wages, fringe benefits, and overhead. Plus, administrative and support staff requires an additional \$6,420 of wages.

The survey also requires secured storage and other material for holds and parsing raw responses, which is expected to cost \$5,000. Travel required for working with UAS related organizations, presenting finding to stakeholders, and follow-up studies is expected to cost \$7,725. In addition, funds for follow-up non-response studies are expected to be roughly \$10,000 in postage, paper, analysts' time for conduction phone follow-ups, and other services.

In total, the survey is expected to cost \$49,245.

The estimated costs to the Federal Government are as follows:

Item	Amount
Direct Labor	
Senior Analyst:	\$15,200
Junior Analyst:	\$4,800
Administrator:	\$4,130
Support Staff:	\$2,390
Total Direct Labor:	\$26,520
Other Direct Costs	
Materials/Supplies:	\$5,000
Travel and Related Costs:	\$7,725
Follow-up studies:	\$10,000
Other Direct Cost Total:	\$22,725
Total Cost:	\$49,245

15. Explain the reasons for any program changes or adjustments.

This is a new collection.

16. For collections of information whose results will be published, outline plans for tabulation and publication. Address any complex analytical techniques that will be used. Provide the time schedule for the entire project, including beginning and ending dates of the collection of information, completion of report, publication dates, and other actions.

Pre-survey campaign	Nov	2020
First email invitation	Nov	2020
Remind email campaign	Nov	2020
Social media reminder campaign	Nov	2020
Close survey	Dec	2020
Survey data processing and analyses	Jan	2021
First Draft of survey final report	Feb	2021
Publication in Aviation Forecast 2021-2041	Mar	2021

The results of the survey will be published in the Aviation Forecast each year. The Aviation Forecast is a yearly publication from the FAA and contains a 40-year forecast of national manned and unmanned aviation along with supporting data, such as the General Aviation and Part 135 Survey. The Aviation Forecast is released in March.

17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons why display would be inappropriate.

FAA is not seeking to suppress the expiration date for the OMB approval.

18. Explain each exception to the topics of the certification statement identified in "Certification for Paperwork Reduction Act Submissions."

FAA is not seeking exceptions.