



U.S. Department of Transportation  
**Federal Aviation Administration**

# **Unmanned Aircraft System (UAS) Monthly Flight Reports**

*User Guide*

## Record of Updates

Date	Updated By	Update
1/29/21	Kim Merchant	Added instructions for new Part 107 waiver fields
3/12/21	Kim Merchant	Removed references to empty leg flights
3/1/22	Kim Merchant	Identified optional fields (ground population density on all forms and month/year on detailed forms)
9/5/23	Kim Merchant	Removed references to multiple forms and references to specific partnership programs. Added descriptions of five mission types added as sub-categories of public safety. Updated definition of unmanned aircraft accident per the 2022 NTSB amendment.
10/22/24	Joseph Culpepper	Updating guide to reflect the updated Monthly Flight Report form.

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## Introduction to the Unmanned Aircraft System (UAS) Monthly Flight Report

The UAS Monthly Flight Report is the means for the UAS Integration Office and other Federal Aviation Administration (FAA) offices with the responsibility of safely integrating UAS into the National Airspace System (NAS) to gather pertinent operational flight data. This data, when aggregated and correlated to accident/incident/ occurrence/anomaly data, will assist with expanding safety case approvals, setting performance standards, and informing future rulemaking.

**Complete and submit the UAS Monthly Flight Report by the tenth day of each month for the previous month's flights.**

### Tour of the Report Workbook

There are two versions of the UAS Monthly Flight Report:

1. UAS Exemption Monthly Flight Report. This version will be used by operators operating under a 44807 exemption.
2. UAS Monthly Flight Report. This version will be used by all non-44807 operators.

The UAS Monthly Flight Report and UAS Exemption Monthly Flight Report are Excel workbooks with multiple tabs:

- **Cover:** This tab contains the public burden statement.
- **Aircraft** (*UAS Monthly Flight Report only*): Use this tab to provide information about the unmanned aircraft (UA) used under each of the operator's approvals (authorizations, certifications, exemptions, waivers, etc.) during the reporting period.
- **Flights:** Complete the form on this tab to provide a summary report of flights.
  - o For the UAS Exemption Monthly Flight Report, the flights are aggregated and summarized based on the certificate of waiver, exemption, or authorization number(s).
  - o For the UAS Monthly Flight Report, the flights are aggregated and summarized based on the UA registration number.
- **Land Now:** Use this tab to provide details of "Land Now" events. "Land Now" refers to the capability of the UA to perform an immediate landing to exit the airspace on command or automatically.
- **Encounters:** Complete the form on this tab to provide data about each identified encounter where a UA operated less than 6,000 feet horizontal distance and less than 500 feet vertical distance of a manned aircraft.
- **Communications** (*UAS Exemption Monthly Flight Report only*): For each occurrence related to loss of communication for more than 6 seconds reported on the "Flights" tab, list the duration of each occurrence and the outcome of the event.
- **Corrective Actions:** Use this tab to provide updates on corrective actions to previously reported interventions, incidents, or accidents.

The following sections provide detailed guidance for completing the report segments on each tab of the monthly flight report forms.

### UAS Monthly Flight Report

#### Aircraft

On this tab, provide information about the unmanned aircraft (UA) used under each of the operator's approvals (authorizations, certifications, exemptions, waivers, etc.) during the reporting period.

1. Authorization, Certification, Exemption, or Waiver Number. Enter the identifying number of the authorizing document under which the UA was used. Only list one document number per row, unless the listed authorizing documents must be used together, e.g., a

- waiver and an airspace authorization. Note: Certificate holders (e.g., Part 135 or Part 137 operators) do not need to include their certification numbers (e.g., air carrier certificate number or agricultural aircraft operator certificate).
2. UA Registration Number. Provide the FAA registration number of the aircraft that was flown under the authorizing document number listed in the previous column.
  3. UA Serial Number. Provide the serial number of the aircraft.
  4. UA Maximum Takeoff Weight. State, in pounds, the maximum weight that the UA can support upon takeoff.
  5. Maximum Airspeed. State the maximum speed, in miles per hour, that the UA can maintain.
  6. Maximum Flight Time. State, in minutes, the maximum time that the UA can fly on one fuel load.

## Flights

Use the form on this tab to provide a summary report of flights.

1. Report Month/Year. Enter the month and year in which the flights were conducted. The cell is formatted to save the information in this format: Mon-YY.
2. UA Registration Number. Provide the FAA registration number of the aircraft that was flown.
3. Total Number of Flights. Enter the total number of flights flown during the month by the UA identified in the previous column.
4. Total Number of Flight Hours. Enter the total number of hours flown during the month by the UA.
5. Number of Flights Transporting HAZMAT (Hazardous Materials). Enter the number of flights in the month that the UA carried HAZMAT.
6. Number of "Land Now" events: Enter the number of "Land Now" events executed. Provide details on the "Land Now" tab.
7. Number of flights that had interventions, incidents, or accidents. Enter the number of flights in the month that the UA had interventions, incidents, or accidents. Provide details separately in the appropriate report. *Note:* Do not include anomalies in this count. Provide information about anomalies either in the Aviation Safety Reporting System (ASRS) (<https://asrs.arc.nasa.gov>) or in the UAS Flight Anomaly Report.
8. Used automated data service provider (ADSP)? Provide confirmation (No/Yes) whether an ADSP was used to support UA operations.
9. Name of ADSP. If the answer in the previous column was Yes, provide the name of the ADSP used. If the answer in the previous column was No, leave this field blank.
10. Number of encounters identified where a UA operated less than 6000' horizontally and less than 500' vertically of a manned aircraft. Enter the number of encounters within the specified distance that the UA experienced. Provide details on the "Encounters" tab.

## Land Now

Use the form on the Land Now tab to provide details of "Land Now" events reported on the Flights tab. Provide information on each Land Now event individually (one row per event).

1. Was the "Land Now" event performed automatically or manually? Select "automatically" if the UA performed the action automatically. Select "manually" if the UA performed the action on command.
2. Causal factor(s) of "Land Now" event. Describe the root causes that led to the "Land Now" event.
3. Corrective action(s) taken in response to "Land Now" event. Describe the corrective actions taken to decrease the likelihood of a similar "Land Now" event happening again.

## Encounters

Use the form on this tab to provide data about each identified encounter where a UA operated less than 6,000 feet horizontal distance and less than 500 feet vertical distance of a manned aircraft.

1. Cooperative or Non-Cooperative Sensor or Visual Observer? Identify whether the track was identified by a cooperative sensor, non-cooperative sensor, or visual observer.
2. Encounter Type. Identify whether the encounter was with a crewed aircraft, another drone, another known object ("Other"), or an unknown object ("Unknown").
3. Closest Horizontal Value, Closest Vertical Value, and Closest Slant Range Value. Provide the closest distance, in feet, reached between your UA and the other aircraft/object during the encounter. Either provide the horizontal and vertical distances or the slant range.
4. Number of avoidance maneuvers performed automatically using onboard DAA systems. Enter the number of avoidance maneuvers performed automatically using onboard DAA systems during the encounter.
5. Number of collision avoidance maneuvers performed manually. Enter the number of collision avoidance maneuvers performed manually during the encounter.

## Corrective Actions

Use the form on this tab to provide updates on corrective actions to previously reported interventions, incidents, or accidents.

1. Date of Intervention, Incident, or Accident. Provide the date of the intervention, incident, or accident for which you are providing updated information. Use the DD/MM/YYYY format.
2. Corrective Action Update. Describe corrective actions taken to address the intervention, incident, or accident and any other related preventive safety measures implemented.

## Exemption Monthly Flight Report

### Flights

Use the form on this tab to provide a summary report of flights.

1. Report Month/Year. Enter the month and year in which the flights were conducted. The cell is formatted to save the information in this format: Mon-YY.
2. Certificate of Waiver, Exemption, or Authorization Number. Enter the identifying number of the authorizing document under which the flights occurred. Only list one document number per row, unless the listed authorizing documents must be used together, e.g., a waiver and an airspace authorization. Note: Certificate holders (e.g., Part 135 or Part 137 operators) do not need to include their certification numbers (e.g., air carrier certificate number or agricultural aircraft operator certificate).
3. Total Number of Flights. Enter the total number of flights flown during the month by the specific certificate of waiver, exemption, or authorization number identified in the previous column.
4. Total Number of Flight Hours. Enter the total number of hours flown during the month under the authorizing document.
5. Number of Flights Transporting HAZMAT (Hazardous Materials). Enter the number of flights in the month that the UAs carried HAZMAT under the authorizing document.
6. Number of flights delayed or cancelled (automatically or manually) due to other aircraft in vicinity of planned departure, enroute, delivery, or landing areas. Enter the total number of flights delayed or cancelled during the month due to other aircraft in the vicinity.
7. Number of occurrences when the UA and any AE (associated elements) were unable to communicate with each other for more than 6 seconds. Enter the total number of occurrences during the month under the authorizing document. Provide details on the "Communications" tab.

8. Number of occurrences when there was a system communications latency for more than 6 seconds. Enter the total number of occurrences during the month under the authorizing document. Provide details on the "Communications" tab.
9. Number of occurrences when the PIC (pilot in command) was unable to positively control any UA in flight for more than 6 seconds. Enter the total number of occurrences during the month under the authorizing document. Provide details on the "Communications" tab.
10. Number of "Land Now" events: Enter the number of "Land Now" events executed. Provide details on the "Land Now" tab.
11. Number of flights that had interventions, incidents, or accidents. Enter the number of flights in the month that UAs operating under the authorizing document had interventions, incidents, or accidents. Provide details separately in the appropriate report. *Note:* Do not include anomalies in this count. Provide information about anomalies either in the Aviation Safety Reporting System (ASRS) (<https://asrs.arc.nasa.gov>) or in the UAS Flight Anomaly Report.
12. Number of rejected loads. (Package deliveries only.) Enter the number of rejected loads.
11. Used automated data service provider (ADSP)? Provide confirmation (No/Yes) whether an ADSP was used to support UA operations.
12. Name of ADSP. If the answer in the previous column was Yes, provide the name of the ADSP used. If the answer in the previous column was No, leave this field blank.
13. Number of encounters identified where a UA operated less than 6000' horizontally and less than 500' vertically of a manned aircraft. Enter the number of encounters within the specified distance that the UAs experienced while operating under the authorizing document. Provide details on the "Encounters" tab.

### Land Now

Use the form on the Land Now tab to provide details of "Land Now" events reported on the Flights tab. Provide information on each Land Now event individually (one row per event).

1. Was the "Land Now" event performed automatically or manually? Select "automatically" if the UA performed the action automatically. Select "manually" if the UA performed the action on command.
2. Causal factor(s) of "Land Now" event. Describe the root causes that led to the "Land Now" event.
3. Corrective action(s) taken in response to "Land Now" event. Describe the corrective actions taken to decrease the likelihood of a similar "Land Now" event happening again.

### Encounters

Use the form on this tab to provide data about each identified encounter where a UA operated less than 6,000 feet horizontal distance and less than 500 feet vertical distance of a manned aircraft.

1. Cooperative or Non-Cooperative Sensor or Visual Observer? Identify whether the track was identified by a cooperative sensor, non-cooperative sensor, or visual observer.
2. Encounter Type. Identify whether the encounter was with a crewed aircraft, another drone, another known object ("Other"), or an unknown object ("Unknown").
3. Closest Horizontal Value, Closest Vertical Value, and Closest Slant Range Value. Provide the closest distance, in feet, reached between your UA and the other aircraft/object during the encounter. Either provide the horizontal and vertical distances or the slant range.
4. Number of avoidance maneuvers performed automatically using onboard DAA systems. Enter the number of avoidance maneuvers performed automatically using onboard DAA systems during the encounter.
5. Number of collision avoidance maneuvers performed manually. Enter the number of collision avoidance maneuvers performed manually during the encounter.

## **Communications**

Use the form on this tab to provide data for each occurrence related to loss of communication for more than 6 seconds reported on the "Flights" tab.

1. Type of communication loss. Specify whether the communication loss event was that the UA and AE were unable to communicate, there was a system communication latency, or the PIC was unable to control the UA.
2. Duration of each occurrence. Enter the number of seconds the communication loss event lasted.
3. Outcome of event. Describe the outcome of the loss of communication event (e.g., the link was restored, a "Land Now" was performed, the UA returned to base, etc.).

## **Corrective Actions**

Use the form on this tab to provide updates on corrective actions to previously reported interventions, incidents, or accidents.

1. Date of Intervention, Incident, or Accident. Provide the date of the intervention, incident, or accident for which you are providing updated information. Use the DD/MM/YYYY format.
2. Corrective Action Update. Describe corrective actions taken to address the intervention, incident, or accident and any other related preventive safety measures implemented.



## Appendix A: Definitions and Acronyms

Term	Definition	Source
Anomaly [UAS]	An event (e.g., equipment malfunction or loss of a safety-critical communication or navigation link) that does not meet the reporting criteria of an accident, incident, or occurrence but adversely affects the operation of any public or civil unmanned aircraft system between the time that the system is activated with the purpose of flight and the time that the system is deactivated at the conclusion of its flight, in which (1) a mitigation strategy is executed (via application of technology and/or procedures); or (2) the aircraft exceeds its operational boundaries.	IPP Data Team 8/12/20
Automated data service	A distributed service provided by an entity other than the drone operator or the FAA. The two types of third-party service providers envisioned for UAS Traffic Management (UTM) are UAS Service Suppliers (USS) and Supplemental Data Service Providers (SDSP). These service providers could include companies, state/local/tribal government entities, or other organizations.	<a href="#">FAA UTM Implementation Plan Version 1.8</a> (reference third-party service)
Collision avoidance maneuver	A maneuver or series of maneuvers accomplished to avoid an aircraft during a single encounter.	44807 exemptions
Dangerous goods	See Hazardous material.	
Detect and Avoid (DAA)	A system/technology that enables the UA to avoid other aircraft or obstacles.	UAS FY19 Implementation Plan
Flight (unmanned aircraft)	Flight begins at the time the aircraft is ready to move with the purpose of flight and continues until such time it comes to rest at the end of the flight and the primary propulsion system is shut down.	Annex 13 to the Convention on International Civil Aviation
Flight time	Pilot time that commences when an aircraft moves under its own power for the purpose of flight and ends when the aircraft comes to rest after landing	14 CFR 1.1
Ground control station	The means used by the pilot to monitor the status of the UA and control the UA during flight.	44807 exemptions
Hazardous material	A substance or material that the Secretary of Transportation has determined is capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and has designated as hazardous under section 5103 of Federal hazardous materials transportation law (49 U.S.C. 5103).	49 CFR 171.8

Term	Definition	Source
Incident	An occurrence, other than an accident, associated with the operation of an aircraft, which affects or could affect the safety of operations. Examples of serious incidents from <a href="#">NTSB Advisory to Operators of Civil Unmanned Aircraft Systems in the United States</a> : True "fly-away", inability of required flight crewmember to perform normal duties as result of injury or illness, inflight fire, aircraft collision in flight, >\$25K damage to objects other than the aircraft, aircraft is overdue and is believed to have been involved in an accident.	49 CFR 830.2
Intervention	An unplanned event with a potential impact on pilot workload beyond normal operating procedures, to include Pilot in Command (PIC)-initiated: airborne holds for other than air traffic; return to base; mission abort because of abnormal flight/system behavior; or use of an emergency procedure.	44807 exemptions
Land now	Refers to the capability of the UA to perform an immediate landing to exit the airspace on command or automatically.	44807 exemptions
Occurrence	An abnormal event, other than an accident or incident. Examples include: low speed aborts or air turnbacks.	FAA Order 8900.1
Pilot in Command (PIC)	The person who (1) has final authority and responsibility for the operation and safety of the flight; (2) has been designated as pilot in command before or during the flight; and (3) holds the appropriate category, class, and type rating, if appropriate, for the conduct of the flight.	14 CFR 1.1
Remote Pilot in Command (RPIC)	Person who is directly responsible for and is the final authority as to the operation of the UAS; has been designated as remote pilot in command before or during the flight of a UAS; and holds the appropriate CAA certificate for the conduct of the flight.	ASTM F3266-18
Required personnel	Operator personnel who directly participate in the flight operation.	44807 exemptions
Unmanned Aircraft (UA)	An aircraft operated without the possibility of direct human intervention from within or on the aircraft.	JO 7200.23A
Unmanned Aircraft accident	An occurrence associated with the operation of any public or civil unmanned aircraft system that takes place between the time that the system is activated with the purpose of flight and the time that the system is deactivated at the conclusion of its mission, in which: (1) Any person suffers death or serious injury; or (2) The aircraft holds an airworthiness certificate and sustains substantial damage.	49 CFR 830.2

Term	Definition	Source
Unmanned Aircraft System (UAS)	An unmanned aircraft and associated elements (including communication links and the components that control the unmanned aircraft) that are required for the pilot in command to operate safely and efficiently in the national airspace system.	JO 7200.23A

<b>Acronym</b>	<b>Term</b>
ADSP	Automated Data Service Provider
AE	Associated Elements
ASRS	Aviation Safety Reporting System
DAA	Detect and Avoid
FAA	Federal Aviation Administration
HAZMAT	Hazardous Material
NAS	National Airspace System
PIC	Pilot in Command
RPIC	Remote Pilot In Command
SDSP	Supplemental Data Service Provider
UA	Unmanned Aircraft
UAS	Unmanned Aircraft System
USS	UAS Service Supplier
UTM	UAS Traffic Management