

Getting Started

Drones is a one-stop shop for UAS oversight and management. It is designed with the goal to develop a culture of safety and accountability in the use of UAS by providing a unified portal for:

- Enabling users be kept aware with regulatory compliance obligations, safety guidelines and best practices.
- Documenting UAS activity through flight requests and reporting.
- Tracking UAS operations and safety metrics.

Users may submit either a UAS project request or a single UAS flight request.

Flight Project

A Flight Project comprises of multiple sets of UAS flights over defined period of time (up to 1 year) at a single area of operation. The Flight Project can be reviewed and approved within the system. All flight requests under an approved Flight Project are automatically approved and an email notice is sent to the local UAS Point of Contact.

Example Flight Projects:

- Recurrent flight operations on field stations that do not require scheduling
- Regular flight activity in access-controlled construction sites
- Ad-hoc flights by NRS staff or researchers
- Weekly flights on the user's farm plots
- A three-day workshop on campus where the location has been reserved

A Flight Project may not be edited once it has been approved. A separate Flight Project must be submitted if modifications are required.

Individual Flight Request

An individual Flight Request comprises of one or more UAS flights on a single day. Each Flight Request is reviewed individually, typically to address local issues such as campus safety, scheduling or privacy concerns.

Example Individual Flight Requests:

- Any site that the field manager requires prior approval for scheduling or wildlife considerations
- Athletic or recreational fields that require scheduling
- On-campus public areas without additional mitigation protocols or safety hazard analysis.

Pilot

From the Home Page, if the user selects the Pilot Icon, the user will be presented with a Register screen.

On the register screen, there will be 3 categories:

- Certificate Type
Select the appropriate certificate type as given by the FAA. Students or others not required to have an FAA Certificate may select the "Students/No Certificate" option.
- Certificate #
The Certification number will be the number assigned by the FAA to the pilot. Those waiting for their UAS certificate number may put "pending" and update their profile at a later time. A student does not require a certificate number but must enter "None" in this field.
- Qualifications
The Qualification list provides various options for the user to select. The user should select the options that meet their level of understanding. Standards for qualifications are under development and will be implemented in a future release.

Users may update their own information at any time.

Manage Aircrafts

The Manage Aircrafts page allows the user to add aircraft for use within the system or edit their existing aircraft.

Adding an Aircraft

To add an aircraft, select the + icon to bring up the "Register an Aircraft" page

The Registering an Aircraft page has 5 sections:

- Manufacturer
Manufacturer refers to the company that the drone was produced from. Aircraft built from kits or parts may use the manufacturer of the kit or the campus/department that built the aircraft.
- Model
Model refers to the type or model as named by the manufacturer. Aircraft built from kits or parts may use the model name of the kit or a short description.
- FAA Registration Number
The FAA registration number is the number assigned by the FAA when the aircraft is registered to the FAA Database. Aircraft that are operated exclusively indoors must follow their campus procedures for registration.
- Storage Location
The storage location is the department, lab, or office where the UAS is kept when not in use.
- Is the aircraft campus owned?
Select yes if the aircraft is owned by your campus, select no if the aircraft is a personal UAS.
- Responsible Person
The responsible person is the person designated with handling the aircraft when issues arise. The responsible person may be edited at any time.
- Editing an Aircraft
*To edit an aircraft, select the name of the aircraft to bring up the "Register an Aircraft" page prepopulated with the aircraft's information. **Please note: Only the responsible person for the aircraft may make edits.***

Manage Projects & File Project Flights

Repeated or Recurrent Operation Flight Request and Reports

Create a new project request

To add a project to the management page, select the + icon .

Existing project requests or reports can be found on this page and are searchable by status and can be filtered by date (Project Begin Date and Project End Date).

Project Request Form

The Flight Request Form is broken up into 4 categories:

- A. Aircraft – The Aircraft to be used
- B. Pilot – The person who will be serving as the Pilot in Command
- C. Contact – The person responsible for ensuring the safety of the flight
- D. Project Request

Aircrafts and Pilots that have not been registered in the system can be added in the “Manage Aircrafts” and “Pilot” sections of the website. Please refer to the “Manage Aircrafts” and “Pilot” Sections of this guide to learn more.

Aircrafts

Aircrafts that are already registered in the system will be searchable in the aircraft section. The user must enter the aircraft’s FAA registration number or aircraft nickname. If the registration number is entered incorrectly, the system will inform the user that the number is not registered.

Pilot(s)

Pilots that have also been registered into the system will be searchable in the Pilot section. The user must enter the pilot’s last name first. Multiple pilots may be added to a project request.

Point of Contact

Under the Contact Section, the user is set as the default point of contact for the operation. The point of contact is the person who will be ensuring the safety of the operation. This may or may not be the same person as the pilot, and does not have to be registered as a pilot in the system.

Both the Pilot and the Point of Contact will receive emails regarding the status of the Flight Request and will be able to view any documents or communication.

Project Request

The “Project Request” category will prompt the user for information regarding the specifics of the proposed project. The Information subcategories will be:

- Project Nickname
- Project Purpose

Clicking on the dropdown menu under Project Purpose will reveal various categories of flights, such as environmental research, filming, and so on. Select the category closest to the intent of the flight.

- UAS Regulations
This field will auto-populate with the likely applicable UAS regulation (107 or model aircraft), but the user has an opportunity to adjust or select ‘Other’ for international or Public Agency COA.
- Project Start Date
- Project End Date

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- Expected Field time (minutes)
Expected Field time refers to how long the operation will last from arriving to location to the leave time.
- Frequency of occurrence
- Expected range of time
- Latitude & Longitude
Latitude and longitude can be entered manually or by utilizing the map shown underneath the Latitude & Longitude text. By scrolling to location of the operation on the map, the user can then place a pin on the position. The pin will update the Latitude and Longitude text fields.
- Filters
Selecting the filters icon will open a menu allowing users to select either standard or satellite view, different controlled airspaces, types of airports, and etc.
- Max Distance (ft)
The max distance will be the farthest distance from the ground control station position that the UAS will travel. This may also be considered your total operating area.
- Max Altitude (ft)
The maximum altitude will be the maximum height during the flight that the UAS will reach.
- Are you flying over people? Y/N
The User will be prompted to select either yes or no regarding this question.
- Are you flying near buildings? Y/N
The user will be prompted to select either yes or no regarding this question. Flying near the proximity of a building may pose a risk for the operation and those not part of the operation.
- Comments
The comment section will be used to give a brief description of the flight, or comment on the general operation. Additional documents, such as flight path diagrams or safety mitigation plans can be added after the draft has been saved.

Saving the Project Request

By selecting save, the user will be prompted to a Project Request Draft page with all the previous entered information.

At the bottom of the page, the user will be presented two options. Edit Request, and Submit Request. If all the information is correct and appropriate documents have been attached, the user can select "Submit Request."

If there are issues with entered information, the user may go back to the previous screen and fix any issues by selecting "Edit Request."

The user may delete the draft by selecting "Delete Request." This will delete all entered information and attachments from the system.

The Flight Management page will inform the user if their project is still pending, is approved, or denied. Users will also receive an email regarding the approval or denial of project requests.

All flight requests under an approved flight project are automatically approved and an email notice is sent to the local UAS Point of Contact. To add a flight(s) to an approved project request, please refer to the "Manage Flights & File Non-project Flights" sections of this guide to learn more.

Manage Flights & File Non-Flight Flights

Single Operation Flight Request and Reports

Create a new Flight request

To add a Flight to the management page, select the + icon .

Existing Flight requests or reports can be found on this page and are searchable by status and can be filtered by date (Flight Begin Date and Flight End Date).

Flight Request Form

The Flight Request Form is broken up into 4 categories:

- A. Aircraft – The Aircraft to be used
- B. Pilot – The person who will be serving as the Pilot in Command
- C. Contact – The person responsible for ensuring the safety of the flight
- D. Flight Request

Aircrafts and Pilots that have not been registered in the system can be added in the “Manage Aircrafts” and “Pilot” sections of the website. Please refer to the “Manage Aircrafts” and “Pilot” Sections of this guide to learn more.

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Aircrafts that are already registered into the system will be searchable in the aircraft section. The user must enter the aircraft’s FAA registration number or aircraft nickname. If the registration number is entered incorrectly, the system will inform the user that the number is not registered.

Pilot(s)

Pilots that have also been registered into the system will be searchable in the Pilot section. The user must enter the pilot’s last name first. Multiple pilots may be added to a Flight request.

Point of Contact

Under the Contact Section, the user is set as the default point of contact for the operation. The point of contact is the person who will be ensuring the safety of the operation. This may or may not be the same person as the pilot, and does not have to be registered as a pilot in the system.

Both the Pilot and the Point of Contact will receive emails regarding the status of the Flight Request and will be able to view any documents or communication.

Flight Request

The “Flight Request” category will prompt the user for information regarding the specifics of the proposed Flight. The Information subcategories will be:

- Flight Nickname
- Flight Purpose

Clicking on the dropdown menu under Flight Purpose will reveal various categories of flights, such as environmental research, filming, and so on. Select the category closest to the intent of the flight.

- UAS Regulations
This field will auto-populate with the likely applicable UAS regulation (107 or model aircraft), but the user has an opportunity to adjust or select ‘Other’ for international or Public Agency COA.
- Flight Date
- Flight Time
Flight Time refers to the time at which the operation will begin.

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- Expected Field time (minutes)
Expected Field time refers to how long the operation will last from arriving to location to the leave time.
- Number of Flights
Number of flights refers to the expected number of flights that will occur during the field time.
- Latitude & Longitude
Latitude and longitude can be entered manually or by utilizing the map shown underneath the Latitude & Longitude text. By scrolling to location of the operation on the map, the user can then place a pin on the position. The pin will update the Latitude and Longitude text fields.
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Selecting the filters icon will open a menu allowing users to select either standard or satellite view, different controlled airspaces, types of airports, and etc.
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The maximum altitude will be the maximum height during the flight that the UAS will reach.
- Are you flying over people? Y/N
The User will be prompted to select either yes or no regarding this question.
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If there are issues with entered information, the user may go back to the previous screen and fix any issues by selecting "Edit Request."

The user may delete the draft by selecting "Delete Request." This will delete all entered information and attachments from the system.

The Flight Management page will inform the user if their flight is still pending, is approved, or denied. Users will also receive an email regarding the approval or denial of flight requests.

Flight Reporting

After submitting a flight request, if the request is approved, the user can report the flight for documentation purposes. On a flight information for an approved request, the user will see a “Create Report” icon at the bottom of the summary.

After selecting the Create Report icon, a similar page to the flight request form will appear.

All information from the flight request will be automatically entered into the created report. Information regarding the date, time and location may be edited to reflect any changes due to weather or ground hazards.

The new features for the user to enter are:

- Duration (minutes) per flight
Input the flight duration in minutes per flight. Click on the ‘+’ sign to add additional flights to the report.
- Takeoff and Landing Damages
Report any damages that occurred to the UAS upon takeoff and landing, including failed takeoffs or landings. If no damages occurred, write N/A into the text box to acknowledge that the aircraft suffered no physical damage.
- Equipment Malfunctions
Equipment malfunction lists various issues that may cause the drone to malfunction. If the issue is not listed, select “other.” A dialog will pop up for the user to enter specifics about the malfunction. Multiple may be selected.
- Lost Link Events
Lost link events refer to the events that cause loss of connection between the UAS and various other controls and systems. . If the issue is not listed, select “other.” A dialog will pop up for the user to enter specifics about the malfunction. Multiple may be selected.
- Accidents/Mishaps
Accidents and Mishaps will allow the user to enter any information regarding any incidents that may have occurred in the field. Damages to persons, property, and equipment will be recorded here. If the issue is not listed, select “other.” A dialog will pop up for the user to enter specifics about the malfunction. Multiple may be selected.

When completed with the report, the user may select save.

After selecting Save, the user will be prompted to a draft page similar to the flight request page. From the page, the user can review entered information, and either select the “Edit Report” option or “Submit Report” option. When the user feels that they have accurately completed the report, they should select “Submit Report.” Their summary page will update “Request Approved to “Report submitted.”