

# NAV DRONE WEB USER GUIDE

Version 1.1, October 2021

## Version Record

Version	Date	Description
1.0	2021-06-02	Initial version
1.1	2021-10-26	Combined Prison layer with Class F. Updates to highlight permission request tasks. Takeoff warning when permission request tasks exist. Screenshot updates. New or updated text is indicated in green shading.

# Table of Contents

<b>Preface</b>	<b>5</b>
Intended audience	5
Objective	5
Prerequisites	5
Document structure	5
Reader's comments	6
<b>Chapter 1. Introduction</b>	<b>7</b>
1.1. NAV Drone's applications	7
1.2. NAV Drone's functionalities	7
<b>Chapter 2. Registration and login</b>	<b>8</b>
2.1. User registration	8
2.2. Log in	10
<b>Chapter 3. User and operator profile</b>	<b>13</b>
3.1. Complete your user profile	13
3.1.1. User information	13
3.1.2. Change your password	15
3.1.3. Add user documents	15
3.1.4. Settings	18
3.2. Complete your operator profile	19
<b>Chapter 4. Gear</b>	<b>22</b>
4.1. Add a drone	23
4.2. Edit or delete a drone	24
4.3. Associate a registration number with a drone	26
4.4. Associate documents with a drone	29
<b>Chapter 5. Users</b>	<b>30</b>
5.1. Add a user	30
5.2. Edit or delete a user	31
<b>Chapter 6. Operations</b>	<b>33</b>
6.1. Procedure for creating a new operation	33
6.2. User interface overview	34
6.3. Step 1: Plan an operation	36

6.3.1. Cylindrical flight zone.....	36
6.3.2. Polygonal flight zone.....	41
6.3.3. Flight path.....	42
6.3.4. Import a geometry.....	43
6.3.5. Operation constraints.....	43
6.4. Step 2: Validate an operation.....	48
6.5. Step 3: Save an operation as a <i>Draft</i> .....	49
6.5.1. Edit a draft operation.....	51
6.5.2. Associate documents with a drone operation.....	52
6.6. Step 4: Publish an operation.....	52
6.7. Step 5: Manage tasks and permission requests.....	54
6.7.1. Why do you need permissions?.....	56
6.7.2. Permission requests eligible for auto approval.....	56
6.7.3. Permission requests requiring further coordination.....	61
6.7.4. Permission requests with status <i>Needs action</i> .....	66
6.7.5. Rescinded permission requests.....	67
6.8. Log a flight.....	69
6.9. Archive an operation.....	71
6.10. Operation quick access menu.....	73
6.11. Table functionalities.....	73
6.11.1. Adjust a column width.....	74
6.11.2. Reposition a column.....	74
6.11.3. Hide/display columns.....	75
6.11.4. Sort table entries.....	76
6.11.5. Filter table entries.....	77
6.11.6. Group table entries.....	80
<b>Chapter 7. Flightmap.....</b>	<b>84</b>
7.1. User interface overview.....	84
7.2. Map layers.....	85
7.3. Hide/display map layers.....	86
7.4. Display airspace information.....	87
7.4.1. Location not covered by any geozone.....	87
7.4.2. Location covered by one visible geozone.....	88
7.4.3. Location covered by multiple visible geozones.....	89
7.5. Display operation information.....	90
7.6. Change the display mode.....	91
<b>Chapter 8. Logbook.....</b>	<b>93</b>
<b>Chapter 9. Glossary.....</b>	<b>95</b>



# Preface

## Intended audience

This user guide is intended for all drone operators, pilots and crew members who intend to use the NAV Drone Web application to plan and manage their drone operations.

## Objective

The objective of this user guide is to help the reader understand how to use the functionalities offered by the NAV Drone Web application, to assist drone pilots and operators in the various phases of a drone operation: pre-flight planning, flight execution, and post-flight analysis.

## Prerequisites

Basic familiarity with a web browser platform and a supported web browser are the only prerequisites for understanding the information presented in this guide.

The following web browsers are supported:

- Evergreen i.e. auto-updating browsers such as Microsoft Edge (current version and two versions back), Mozilla Firefox (current version and two versions back with major patches applied), and Google Chrome (current version and two versions back).
- Apple Safari (current version and one version back).
- Opera (current version and two versions back).



Visiting the NAV Drone Web website using Microsoft Internet Explorer is not supported. Please use one of the browsers listed above.

## Document structure

Each chapter describes concepts and procedures to assist you in using the NAV Drone Web application.

- Chapter 1: Introduction
- Chapter 2: Registration and login
- Chapter 3: User and operator profile
- Chapter 4: Gear
- Chapter 5: Users
- Chapter 6: Operations
- Chapter 7: Flightmap

- Chapter 8: Logbook
- Chapter 9: Glossary

## Reader's comments

NAV CANADA welcomes your comments on this user guide. Provide your comments at [navdrone@navcanada.ca](mailto:navdrone@navcanada.ca).

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# Chapter 1. Introduction

## 1.1. NAV Drone's applications

NAV Drone consists of the following applications:

- The NAV Drone Viewer web application: accessible at <https://map.navdrone.ca>.
- The NAV Drone Web application: accessible at <https://portal.navdrone.ca>.
- The NAV Drone Mobile app: available for both Apple iOS and Google Android.

NAV Drone Viewer is a web application which displays Canadian domestic airspace and data relevant to Visual Line of Sight Operations (VLOS).

Together, the NAV Drone Web application and the NAV Drone Mobile app offer a complete and user-friendly solution for recreational and professional drone pilots, drone operators, and drone crew members.

This user guide focuses on how to use the NAV Drone Web application.

## 1.2. NAV Drone's functionalities

The functionalities offered by the NAV Drone Web application can be divided into three categories:

### 1. Pre-flight services:

- Operator and user profile management
- Crew management
- Drone fleet management
- Operation planning and validation
- Obtaining the required permissions, when applicable
- Document management

### 2. In-flight services:

- Flight logging
- Visualizing the flight zones of active drone operations (no real-time drone tracking)

### 3. Post-flight services:


- Logbooks

## Chapter 2. Registration and login

The use of the NAV Drone Web application requires the initial creation of a drone operator account, as described in this section.

### 2.1. User registration

Start your browser, open the NAV Drone Web application (<https://portal.navdrone.ca>) and click on the [ **create an account** ] link.




Log in to your account  
or [create an account](#)

Email

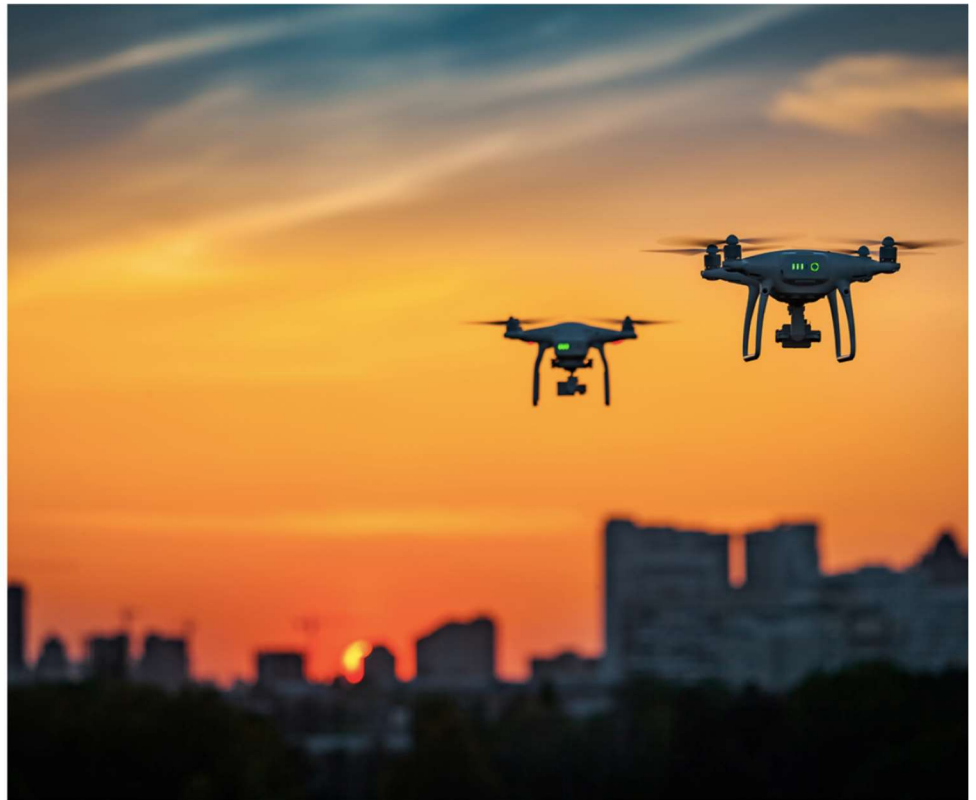
Password


[Forgot Password?](#)

Or sign in with

en 

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[or log in with an existing account](#)

1

First name

John

2

Last name

Doe

3

Email address\*

4

Password

.....

5

Confirm password

.....

6

☐ I have read and agree with the [Terms and Conditions of Use](#)  
☐ I have read and agree with the [NAV CANADA's Privacy Code](#)

\* NAV Drone is a digital first operation that uses email to communicate with its users. To use NAV Drone, users must provide a valid email and must consent to receiving email from NAV CANADA in respect to their NAV Drone account. Please provide an email address that is exclusive to you above. NAV CANADA will use your email for all communications.

### NAV DRONE TERMS AND CONDITIONS OF USE

#### NAV DRONE

#### TERMS AND CONDITIONS OF USE

These Terms and Conditions of Use ("Terms of Use") govern all Uses of the "NAV Drone" platform (including the NAV Drone web applications and NAV Drone mobile applications) (collectively, the "Application"), made available by NAV CANADA, a corporation incorporated under the laws of Canada, 77 Metcalfe Street, Ottawa, Ontario, K1P 5L6 ("NAV CANADA"). The Terms of Use is a legal agreement between the user, including any third party that is provided access to the Application or data or information contained within the Application (collectively, "you" or the "User"), and NAV CANADA. NAV CANADA and the User are hereinafter referred to individually or collectively, as "Party" or "Parties".

BY DOWNLOADING, INSTALLING, COPYING, ACCESSING, OR OTHERWISE USING THE APPLICATION, YOU:

(1) INVARIABLY AGREE TO THESE TERMS OF USE AND THAT YOU INTEND TO BE LEGALLY BOUND BY THEM. IF YOU ARE ACCEPTING THESE TERMS OF USE ON BEHALF OF A COMPANY OR OTHER LEGAL ENTITY, YOU REPRESENT AND WARRANT THAT YOU HAVE FULL AUTHORITY TO BIND SUCH COMPANY OR OTHER LEGAL ENTITY IN WHICH CASE THE TERMS "YOU" OR "USER" WILL INCLUDE SUCH ENTITY, JOINTLY AND SEVERALLY WITH YOU PERSONALLY; AND

(2) CONSENT TO NAV CANADA PROVIDING TO YOU, IN ELECTRONIC FORM ON THIS WEBSITE, THESE TERMS OF USE AND THE NAV CANADA PRIVACY NOTICE.

By accepting you confirm that you have read and agree with the Terms and Conditions of Use.

**Read and scroll all the way down to activate the I AGREE button**

I DO NOT AGREE

I AGREE

.....

Confirm password

.....

☒ I have read and agree with the [Terms and Conditions of Use](#)  
☒ I have read and agree with the [NAV CANADA's Privacy Code](#)

\* NAV Drone is a digital first operation that uses email to communicate with its users. To use NAV Drone, users must provide a valid email and must consent to receiving email from NAV CANADA in respect to their NAV Drone account. Please provide an email address that is exclusive to you above. NAV CANADA will use your email for all communication with regard to your account, including to provide updates on the status of your NAV Drone flight requests and notify you of changes to your account. You may opt out of certain communications at any time by managing your privacy preferences in your NAV Drone user profile.

7

☐ (Optional) I consent to NAV CANADA using my email address to contact me about products and services offered by NAV CANADA and select third parties or for other promotional purposes is accordance with the NAV CANADA's Privacy Code. Email address\*:

8

Register

en

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- 1 Enter your first name.
- 2 Enter your last name.
- 3 Enter your email address. Make sure to use an active email address since this email address will be used to verify your registration. NAV Drone only supports ASCII characters.
- 4 Enter your password.

9

- ⑤ Confirm your password.
- ⑥ Check these two checkboxes after reading and agreeing with the NAV Drone Terms and Conditions of Use and the *NAV CANADA's Privacy Code*. Read the agreements in their entirety and scroll down to activate the [ **I AGREE** ] button at the bottom of each agreement.
- ⑦ Check this checkbox to allow NAV CANADA to contact you.
- ⑧ Finally, click on the [ **Register** ] button to continue.


By clicking on this button, a confirmation email will be sent to the email address provided in the registration form.

Activate your account by clicking on the button in the email or by pasting the link included in the email in your web browser in case the button doesn't work for you. Account activation is required to access the full functionalities of the NAV Drone Web application.

Your NAV Drone account is now active and ready for use.

## 2.2. Log in

Start your browser and open the NAV Drone Web application (<https://portal.navdrone.ca>).



NAV Drone

Log in to your account  
or [create an account](#)


1 Email

2 Password

Forgot Password?

3

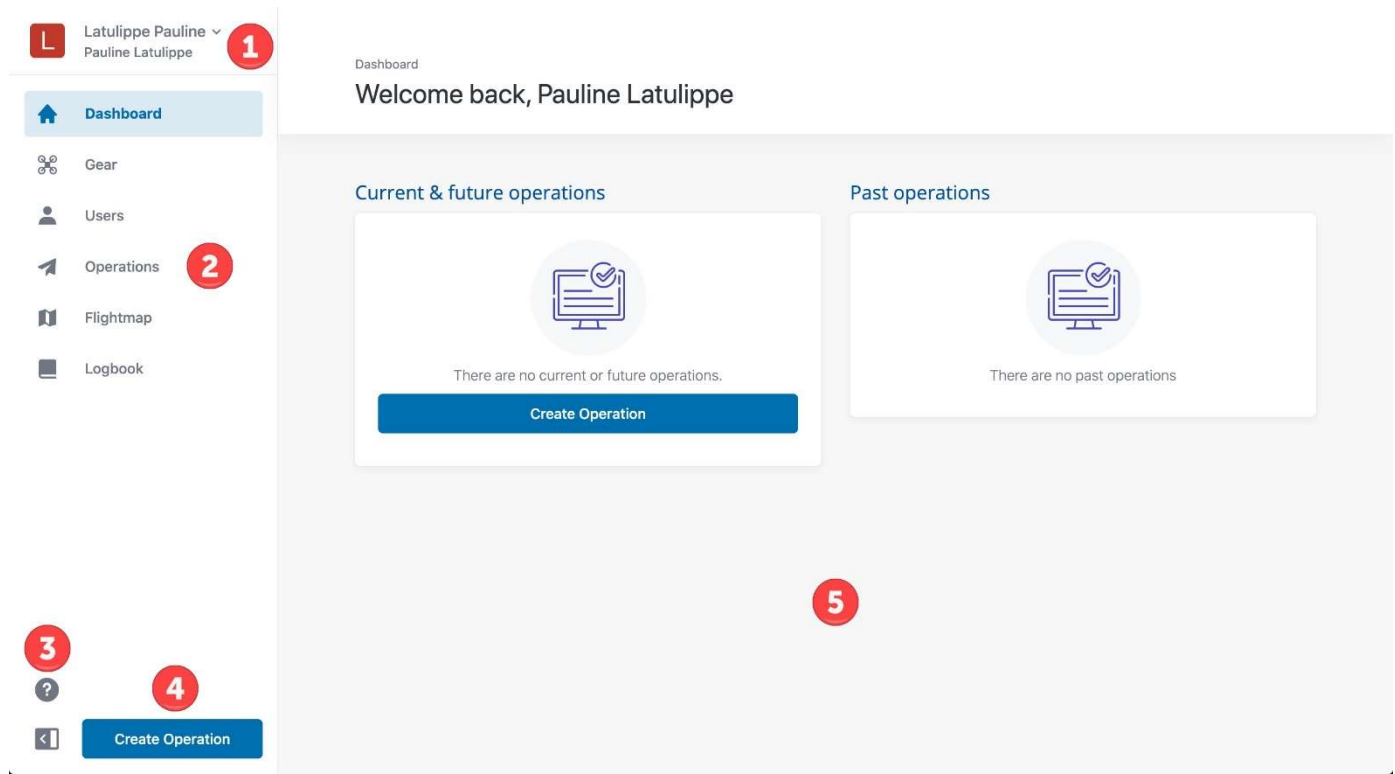
Or sign in with




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- ① Enter the email address used for registration.
- ② Enter your password.
- ③ Click on the [ **Log In** ] button.

If the multi-factor authentication is enabled in your settings, you will be prompted to enter the SMS code sent to your mobile number.

Once logged in, you will be presented with the Dashboard screen of the NAV Drone Web application. This screen displays the following information:



- ① Click on the top left area (the menu button) to activate the operator tools menu.
- ② The left sidebar gives access to the main functionalities offered by the NAV Drone Web application. This sidebar can be hidden by clicking on the highlighted  at the bottom left of the sidebar. Expand the sidebar by clicking on the  icon.
- ③ The  icon allows you to access the NAV Drone Support site, information about the NAV Drone Web application version, the Terms and Conditions of Use, the NAV CANADA's *Privacy Code*, and the Cookie Policy.
- ④ The [ **Create Operation** ] button allows you to create a new drone operation.
- ⑤ The *Dashboard's* main area, initially empty, provides an overview of your current, future, and past drone operations as shown below:

Welcome back, John Doe

### Current & future operations

Operation name	Start
Canmore Demo	05/06/2020 07:32:17
Drone	End
Aerial Technology - RTF Sky Hero Spy 600mm	05/06/2020 07:47:17
Operational execution	Flight status
<span>Published</span>	<span>Landed</span>

Operation name	Start
Canmore demo	07/06/2020 18:30:31
Drone	End
Aerial Technology - RTF Sky Hero Spy 600mm	07/06/2020 19:30:00
Operational execution	Flight status
<span>Published</span>	<span>Landed</span>

Load more

### Past operations

Operation name	Start
Revelstoke demo	06/05/2020 16:11:55
Drone	End
Aerial Technology - RTF Sky Hero Spy 600mm	06/05/2020 16:26:55
Operational execution	Flight status
<span>Published</span>	<span>Landed</span>

Operation name	Start
Golden demo	08/05/2020 12:56:42
Drone	End
Aerial Technology - RTF Sky Hero Spy 600mm	08/05/2020 13:11:42
Operational execution	Flight status
<span>Published</span>	<span>Landed</span>



## Chapter 3. User and operator profile

A distinction is made between the *operator* level (commercial entity) and the *user* level (individual) as the NAV Drone Web application allows one operator to invite multiple users to join their crew (drone pilots, observers, and payload specialists). See section [Users](#) for more details about the invitation mechanism.

In the same way, one user can be associated with multiple drone operators, as is the case for a freelance pilot who is contracted by multiple operators, for example.



Upon creation of a new account, your name will appear twice at the top left of the screen:

*Last name, first name:* as an operator, the default name for your commercial entity.

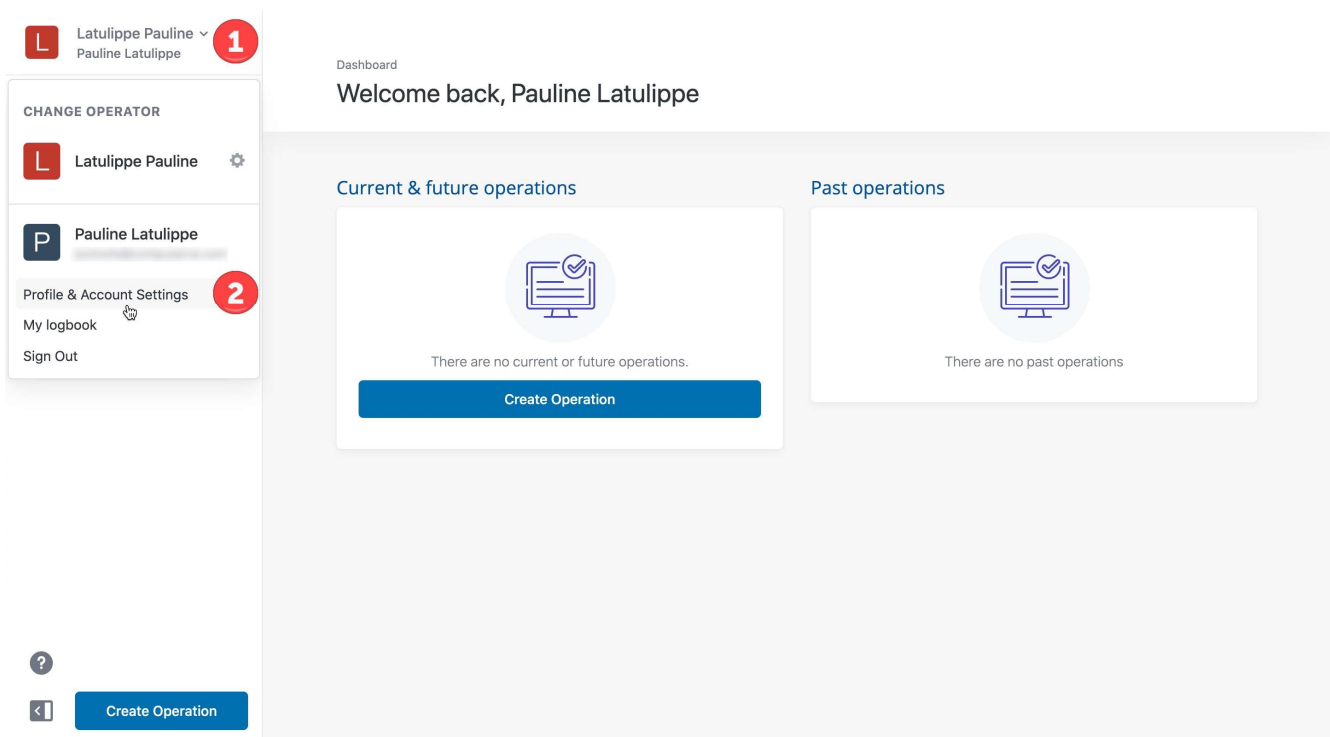
*First name, last name:* your name as a user.

Both can be modified as described in the next section.

### 3.1. Complete your user profile

#### 3.1.1. User information

The *Profile & Account Settings* allow you to complete your profile at the user level.



- 1 Click on the menu button at the top left of the screen to display the menu.
- 2 Click on the *Profile & Account Settings* menu entry.

You will now see the *My account* screen displaying your personal details in the *Personal info* tab:

To modify your personal details, click on the appropriate *Edit* link, make the change, and click on the [ **Save** ] or [ **Cancel** ] button to save or cancel your changes.



Two-way communication capability is required when operating in NAV CANADA control zones. Therefore, make sure to verify your mobile number and to have your phone with you when flying.

When entering your mobile number in *My account*, click on the [ **Send verification code** ] button to send a verification code to your mobile phone. Enter the code received in *My account* and click on the [ **Verify phone number** ] button to confirm your mobile number. Mobile number must use the following format: “+1-555-555-5555”.

Once your mobile number is verified, you can toggle the multi-factor authentication (MFA) switch. Activating MFA will require the user to enter a SMS code at every login.

From the *Personal info* tab, you can also change your password, delete your account, and specify whether you agree to receive optional emails from NAV CANADA.

### 3.1.2. Change your password

Click on the *Change password* link in the *Personal info* tab of *My account*.

The screenshot shows the 'My account' page for Pauline Latulippe. The 'Personal info' tab is active. The 'Security' section is highlighted, showing a three-step process to change the password. Step 1 is 'Current password', step 2 is 'New password', and step 3 is 'Save'. The new password field has a red error message: 'Your password is not strong enough'. There are also links for 'Multi factor authentication' and 'Delete account'.

- ① Enter your current password.
- ② Enter your new password.
- ③ Click on the [ **Save** ] button.

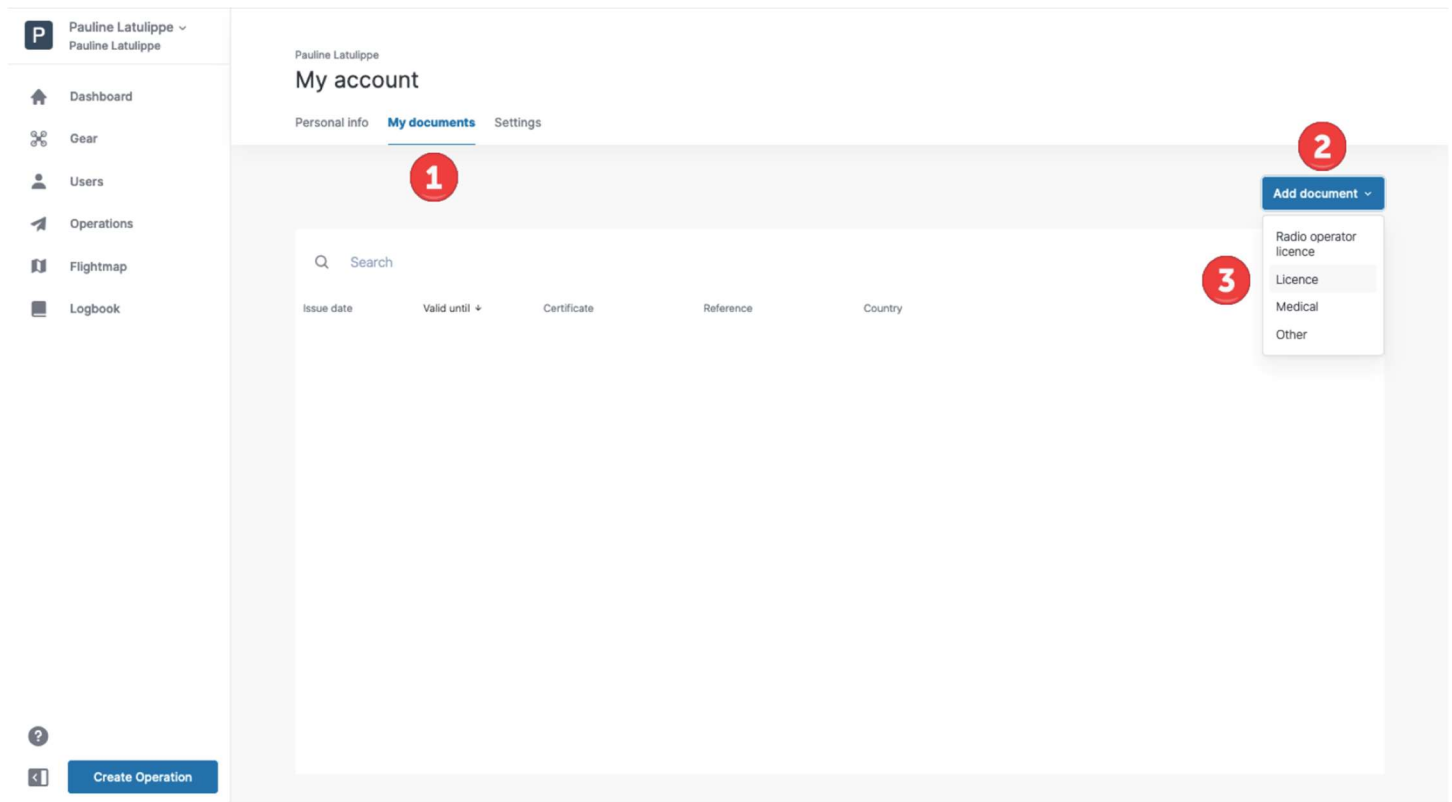
You have now changed your password.



Make sure to choose a strong password as indicated by the password strength indicator.

### 3.1.3. Add user documents

The *My documents* tab in *My account* allows you to add documents and certificates related to your account:



- ① Click on the *My documents* link to activate the tab.
- ② Click on the [ **Add document** ] button.
- ③ Select the type of document from the popup menu.
- ④ Enter the required data.
- ⑤ Click on the [ **Cancel** ] or [ **Save** ] button to finish the operation.

Pauline Latulippe

Pauline Latulippe

Dashboard

Gear

Users

Operations

Flightmap

Logbook

My account

Personal info

My documents

Search

Issue date

Valid until

Create Operation

4

Add pilot licence

Licence information

Country

Canada

Type

Subtype

Advanced

File description

Certificate number or reference

Issued on

File

Upload

Drop file here

Cancel

Save

5

Add document

Filters

17



Optionally, you can upload one or more files such as a PDF document, pictures, or a scan of the original document.



You must enter a valid Certificate number for Advanced operations in the NAV Drone Web application in order to create advanced operations in the system. To add your Certificate number, follow the procedure described above and select *Licence* for the type of documents.

The registered documents are displayed in a table offering generic search, filtering, grouping, sorting and column hiding functionalities. See section [Table functionalities](#) for more information on table functionalities.

### 3.1.4. Settings

The *Settings* tab allows you to set your preference for the following settings:

- Date format
- Coordinates format
- Time format
- Time zone (expressed in Coordinated Universal Time)
- Language (of the user interface)
- Map label language: the option *Inherit from language* in the drop-down list means that the labels displayed on the maps will be in the same language as selected for the parameter *Language* above.
- Default operator: in case your personal account is associated with multiple operators (e.g. if you are a freelance pilot contracted by multiple operators), you can select which operator is displayed by default when opening NAVDrone.
- Units of measurements: you can select between imperial and metric systems.

Pauline Latulippe

Pauline Latulippe

Dashboard

Gear

Users

Operations

Flightmap

Logbook

?

Create Operation

Pauline Latulippe

My account

Personal infoMy documentsSettings

Date & Time	Coordinate format	51°11'24", 004°27'02"	Edit
	Date format	31/12/2021	
	Time format	09:11:59	
	Timezone	(UTC -4:00) America/Toronto	

Language	Language	English	Edit
	Map label language	Use default (English)	

Account	Default operator	Pauline Latulippe	Edit
---------	------------------	-------------------	------

Unit of Measurements	Altitude	ft	Edit
	Distance	ft	
	Dimensions	in	
	Weight	lb	
	Pressure	psi	
	Temperature	°F	
	Velocity	ft/s	

## 3.2. Complete your operator profile

Commercial drone operators intending to offer services as a company can also complete their profile at the operator level.

Doe John

John Doe

1

CHANGE OPERATOR

Doe John

John Doe

2

Profile & Account Settings

My logbook

Sign Out

Dashboard

Welcome back, John Doe

Current & future operations

Operation name	Start
Canmore demo	07/06/2020 18:30:31
Drone	End
Aerial Technology - RTF Sky Hero Spy 600mm	07/06/2020 19:30:00
Operational execution	Flight status
Published	Landed

Operation name	Start
Canmore Demo	05/06/2020 07:32:17
Drone	End
Aerial Technology - RTF Sky Hero Spy 600mm	05/06/2020 07:47:17
Operational execution	Flight status
Published	Landed

Load more

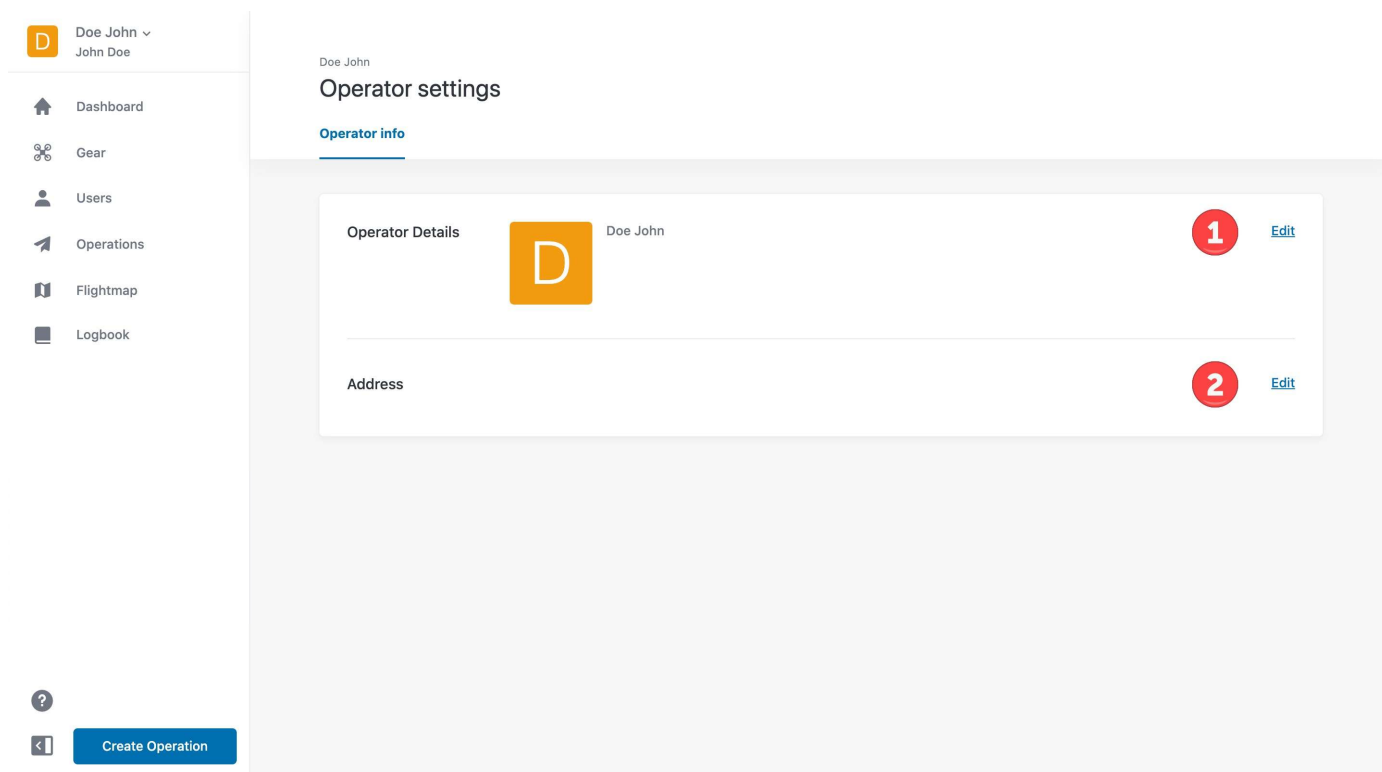
Past operations

Operation name	Start
Revelstoke demo	06/05/2020 16:11:55
Drone	End
Aerial Technology - RTF Sky Hero Spy 600mm	06/05/2020 16:26:55
Operational execution	Flight status
Published	Landed

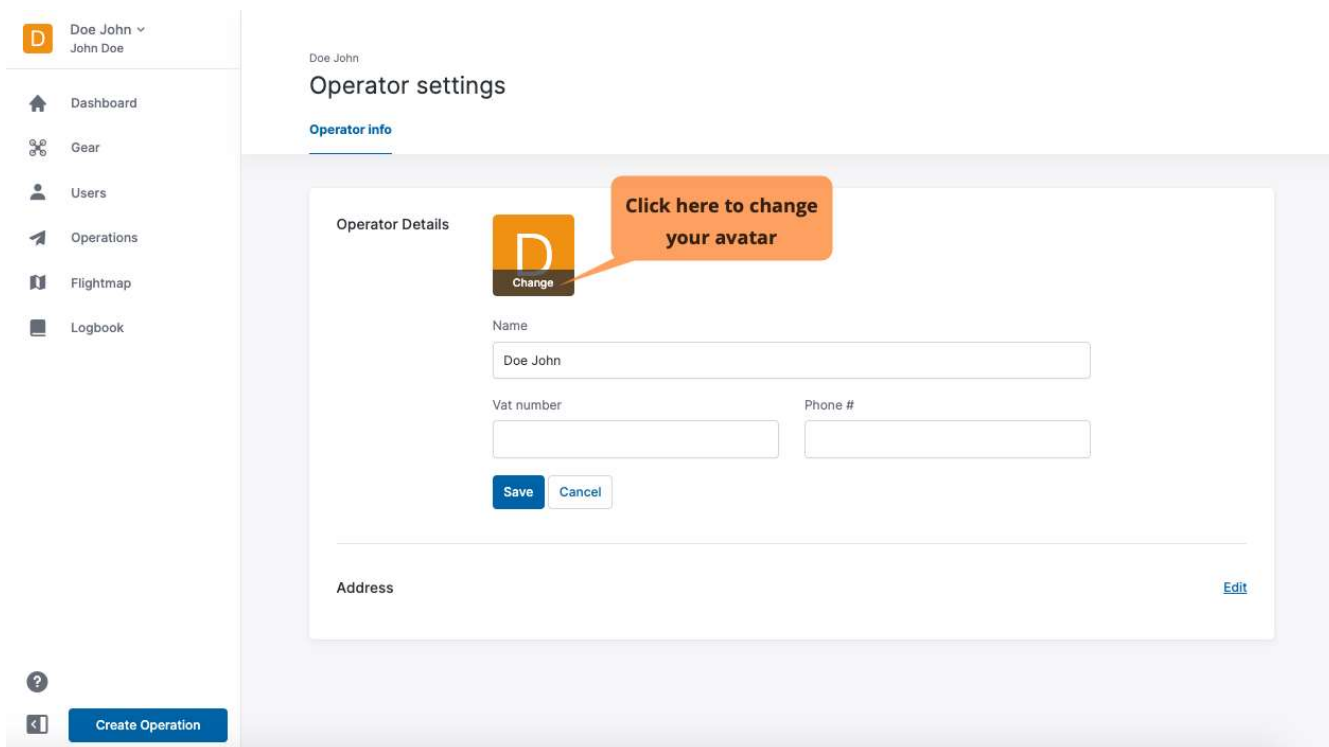
Operation name	Start
Golden demo	08/05/2020 12:56:42
Drone	End
Aerial Technology - RTF Sky Hero Spy 600mm	08/05/2020 13:11:42
Operational execution	Flight status
Published	Landed

19

- 1 Click on the menu button at the top left of the screen.
- 2 Click on the icon to the right of your current company name (*last name, first name* by default) in the menu to display the *Operator settings*.



- 1 Click on the top *Edit* link to enter your drone operator details.



Vat number : Field not in use.



- ② Click on the bottom *Edit* link to enter your drone operator address information.

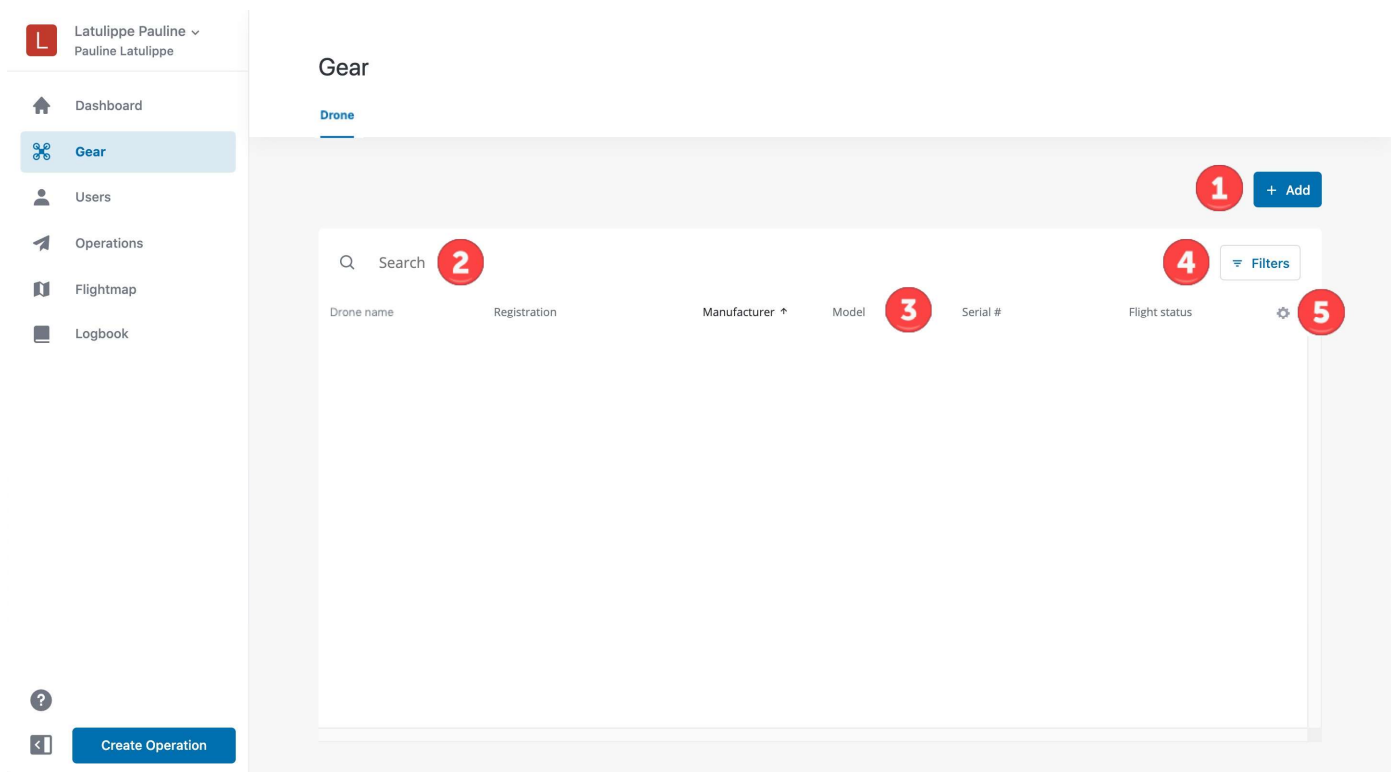
The screenshot displays the 'Operator settings' interface for a user named 'Doe John'. The left sidebar contains a navigation menu with the following items: Dashboard, Gear, Users, Operations, Flightmap, and Logbook. The main content area is titled 'Operator settings' and has the 'Operator info' tab selected. Below the tab, there is a section titled 'Operator Details' for 'Doe John'. This section contains a form with the following fields: Address line 1, Address line 2, Address line 3, City, Postal code, Province, and Country (which is set to 'Canada'). There are 'Save' and 'Cancel' buttons at the bottom of the form. A 'Create Operation' button is located at the bottom left of the sidebar.

## Chapter 4. Gear

The NAV Drone Web application makes it easy to keep track of your drones, including their administrative and technical details. The NAV Drone Mobile app provides similar drone information management functionalities.

Providing the administrative and technical details of your drones is required in order to display drone-related information in the NAV Drone logbooks and for the drone operation validation process.

Click on *Gear* in the left sidebar to access the module that allows you to manage your drone fleet. The (initially empty) *Drone* tab consists of the following elements:



- ① The [ **+ Add** ] button allows you to add a new drone to the list. See section [Add a drone](#) for more details.
- ② The search field can be used to search for information in the table. Click on the field and enter your search string. The search is performed as you type.
- ③ The column headers represent the drone data being displayed. The headers also support the generic table functionalities as explained in section [Table functionalities](#).
- ④ The [ **Filters** ] button allows you to filter the information in the table.
- ⑤ The ⚙ icon allows you to configure which columns to display/hide.

## 4.1. Add a drone

To add a new drone, click on the [ **+ Add** ] button and follow the steps below in the *New drone* screen that appears:

The screenshot shows the 'New drone' screen in the Lockheed Martin - Indago system. The screen is titled 'Lockheed Martin - Indago' and has a navigation bar with 'Drone details', 'Registrations', and 'Documents'. The main form is divided into several sections:

- Registration number**: A dropdown menu.
- Serial #**: A text input field containing 'LM-I-29473'.
- Drone name**: A text input field containing 'EyeInTheSky-1'.
- Manufacturer**: A dropdown menu set to 'Lockheed Martin'.
- Model**: A dropdown menu set to 'Indago'.
- Technical specifications**:
  - Type**: A dropdown menu set to 'Rotary wing'.
  - Subtype**: A dropdown menu set to 'Quadcopter'.
  - Weight**: A text input field containing '4.85'.
  - Width**: A text input field.
- Flight specifications**:
  - Endurance**: A text input field containing '45' and a unit selector set to 'minutes'.
  - Payload capacity**: A text input field containing '0.44' and a unit selector set to 'lb'.
  - Maximum take-off weight**: A text input field containing '5.29' and a unit selector set to 'lb'.
  - Maximum operating altitude**: A text input field.
- Control specifications**:
  - Control operating range**: A text input field containing '6561.68' and a unit selector set to 'ft'.
  - Radio frequency**: A text input field and a unit selector set to 'GHz'.
  - Control system mode**: A dropdown menu set to 'Remote Control + Phone/Tablet'.

At the bottom left, there is a 'Create Operation' button. At the top right, there are 'Cancel' and 'Save' buttons. A red circle with the number 7 is next to the 'Save' button. A red circle with the number 5 is next to the 'Add image' button. A red circle with the number 6 is next to the 'Payload capacity' field.

- 1 Enter the drone *Manufacturer* or select one from the drop-down list.
- 2 Enter the drone *Model* or select one from the drop-down list.
- 3 Enter the drone *Serial number*.
- 4 Enter a *Drone name*. This field is mandatory as long as no *Registration number* is available for this drone.
- 5 Add a picture of your drone by clicking on the [ **Change** ] button or use one of the pictures provided for drones selected from the drop-down list.
- 6 Check and complete as many other fields as possible to provide the drone's technical, flight, and control specifications. If you selected a drone manufacturer and model from the list, certain fields might be pre-filled.
- 7 Finally, click on the [ **Save** ] button at the top right of the screen to add your drone.



A registration number must be added for drones weighting 250 grams or more and for *Advanced* operations in airspace controlled by NAV CANADA. See section [Associate a registration number with a drone](#) for more information.

Make sure you enter accurate data in the technical, flight, and control specifications as this information will be used during the drone operation validation process.

Once saved, the drone appears in the table:

The screenshot shows a web application interface for managing drones. On the left is a sidebar with navigation links: Dashboard, Gear (selected), Users, Operations, Flightmap, and Logbook. The main content area is titled 'Gear' and has a sub-tab 'Drone'. At the top right of the main area is a '+ Add' button. Below this is a search bar and a 'Filters' button. A table displays the following data:

Drone name	Registration	Manufacturer	Model	Serial #	Flight status	
EyeInTheSky-1		Lockheed Martin	Indago	LM-I-29473	Landed	

At the bottom left of the sidebar is a 'Create Operation' button.

## 4.2. Edit or delete a drone

Hovering the pointer over a drone entry in the table will display an **[ Edit ]** button. Click on this button to edit the drone characteristics.

Alternatively, the drone characteristics can also be edited by clicking on the drone entry in the table and then on the **[ Edit ]** button at the top right of the screen.

A third option is to click on the menu icon ( ) on the right side of the drone entry in the table and to select the menu item *Edit*. The menu also allows you to *View* the drone characteristics or to *Delete* the selected drone.

Pauline Latulippe

Dashboard

**Gear**

Users

Operations

Flightmap

Logbook

### Gear

Drone

+ Add

Search

Filters

Drone name	Registration	Manufacturer	Model	Serial #	Flight status	
EyeInTheSky-2		DJI	Flame Wheel F550		Landed	
EyeInTheSky-1		Lockheed Martin	Indago	LM-I-29473	Landed	<a href="#">Edit</a>

View

Edit

Delete

This icon opens a menu that allows you to View, Edit, or Delete a drone

Create Operation



Deleting a drone will cancel all operations that the drone is part of. Be sure before performing this action.

Latulippe Pauline

Dashboard

**Gear**

Users

Operations

Flightmap

Logbook

### Gear

Drone

+ Add

Search

Filters

Call sign

EyeInTheSky-

LM-I-29473

Landed

Delete drone

The drone EyeInTheSky-1 is being used in **0 active or future operations**. Deleting this drone will **cancel all operations** that it is part of.

The drone will not be available anymore.  
Do you want to proceed?

☒ Yes, I understand the consequences.

Cancel Delete

Check this box to activate the **Delete** button

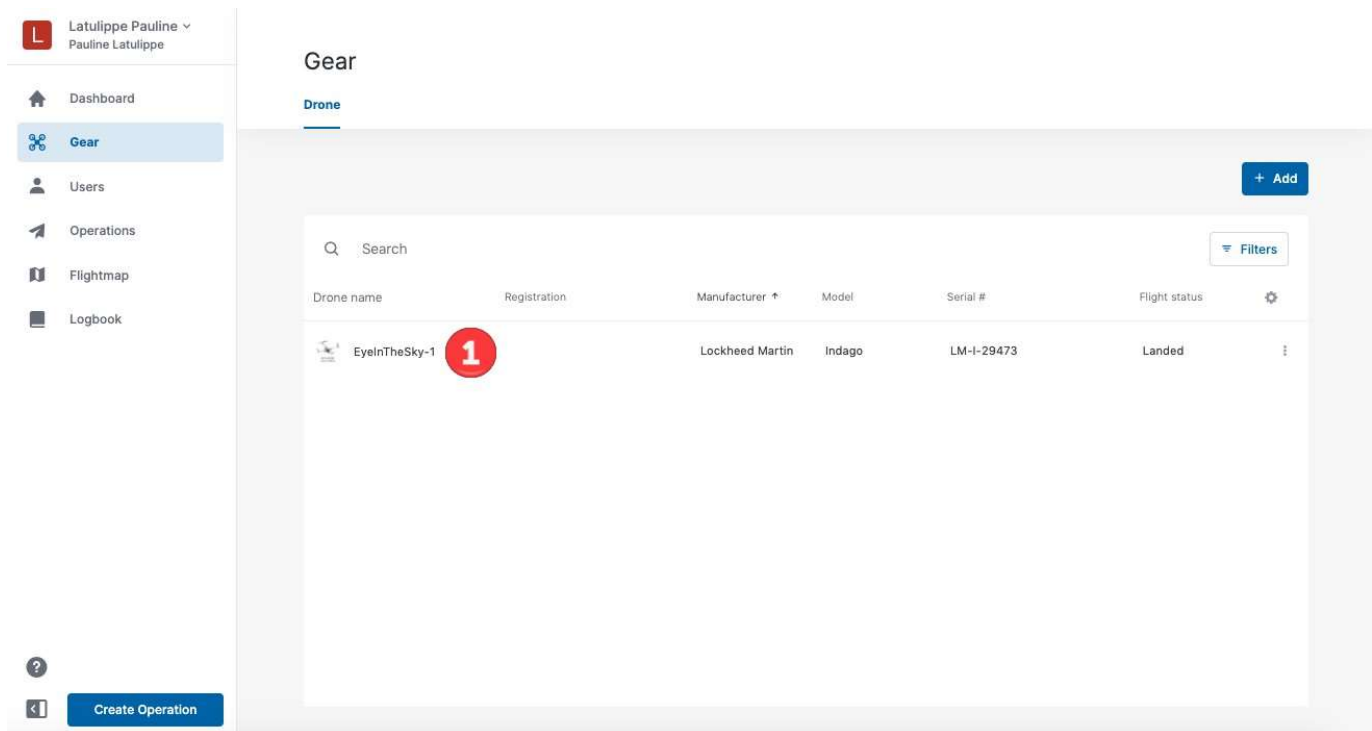
Create Operation

### 4.3. Associate a registration number with a drone

A registration number must be added for drones weighting 250 grams or more and for *Advanced* operations in airspace controlled by NAV CANADA.

To associate a Canada *registration number* with a drone, proceed as follows:

- 1 Click on the drone entry in the table.
- 2 Click on the *Registrations* tab.
- 3 Click on the **[ + Add ]** button.
- 4 In the dialog box, select the Country (Canada is selected by default) and fill in the *Registration number*.
- 5 Click on the **[ Add ]** button. The new *Registration number* is added in the table.
- 6 Click on *Drone details* to open the drone's characteristics.
- 7 Click on the **[ add registration ]** link on the right of the screen. A dialog box opens.
- 8 Check the retrieved information and click on the **[ Ok ]** button to associate the *Registration number* with that drone.



The screenshot shows a web application interface for drone management. On the left is a sidebar with navigation links: Dashboard, Gear (selected), Users, Operations, Flightmap, and Logbook. The main content area is titled 'Gear' and has a 'Drone' sub-tab. A '+ Add' button is in the top right. Below is a table with columns: Drone name, Registration, Manufacturer, Model, Serial #, and Flight status. The first row shows a drone named 'EyeInTheSky-1' with manufacturer 'Lockheed Martin', model 'Indago', serial 'LM-I-29473', and status 'Landed'. A red circle with the number '1' is overlaid on the first row. A search bar and a 'Filters' button are at the top of the table.

Drone name	Registration	Manufacturer	Model	Serial #	Flight status
EyeInTheSky-1		Lockheed Martin	Indago	LM-I-29473	Landed

L

Latulippe Pauline

Pauline Latulippe

Dashboard

Gear

Users

Operations

Flightmap

Logbook

?

Create Operation

← Lockheed Martin - Indago

Drone detailsRegistrationsDocuments

2

3 + Add

Registration	Requested on	Assigned on	Country	Status	
--------------	--------------	-------------	---------	--------	--

L

Latulippe Pauline

Pauline Latulippe

Dashboard

Gear

Users

Operations

Flightmap

Logbook

?

Create Operation

← Lockheed Martin - Indago


Drone detailsRegistrationsDocuments

+ Add


Registration

Status

Add Registration

Countries marked with  are officially supported.

Country

Canada

Registration

C-2006

4

CancelAdd

5

L

Latulippe Pauline

Pauline Latulippe

Dashboard

Gear

Users

Operations

Flightmap

Logbook

?

Create Operation

←

Lockheed Martin - Indago

Drone detailsRegistrationsDocuments

6

+ Add

Registration	Requested on	Assigned on	Country	Status	
C-2006		25/08/2020	Canada	Approved	

L

Latulippe Pauline

Pauline Latulippe

Dashboard

Gear

Users

Operations

Flightmap

Logbook

?

Create Operation

←

Lockheed Martin - Indago

Drone detailsRegistrationsDocuments

Edit

Identification

7

add registration

8

Cancel

Ok

Countries marked with are officially supported.

Country

Canada

Registration

C-2006

Technical specifications

Type

Subtype

Weight2.2 kg

Width-

Height-

Maximum take-off mass2.4 kg

Maximum operating altitude152 m

Control specifications

Control operating range2000 m

Radio frequency-

Control system modeRemote Control + Phone/Tablet

EyeInTheSky-1

Lockheed Martin

Indago

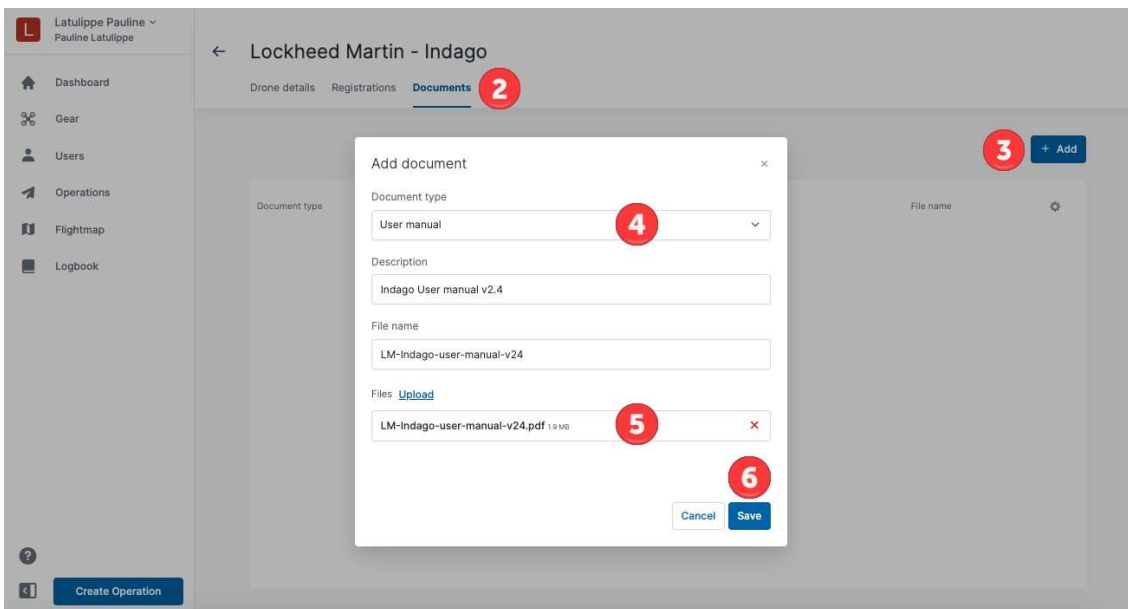
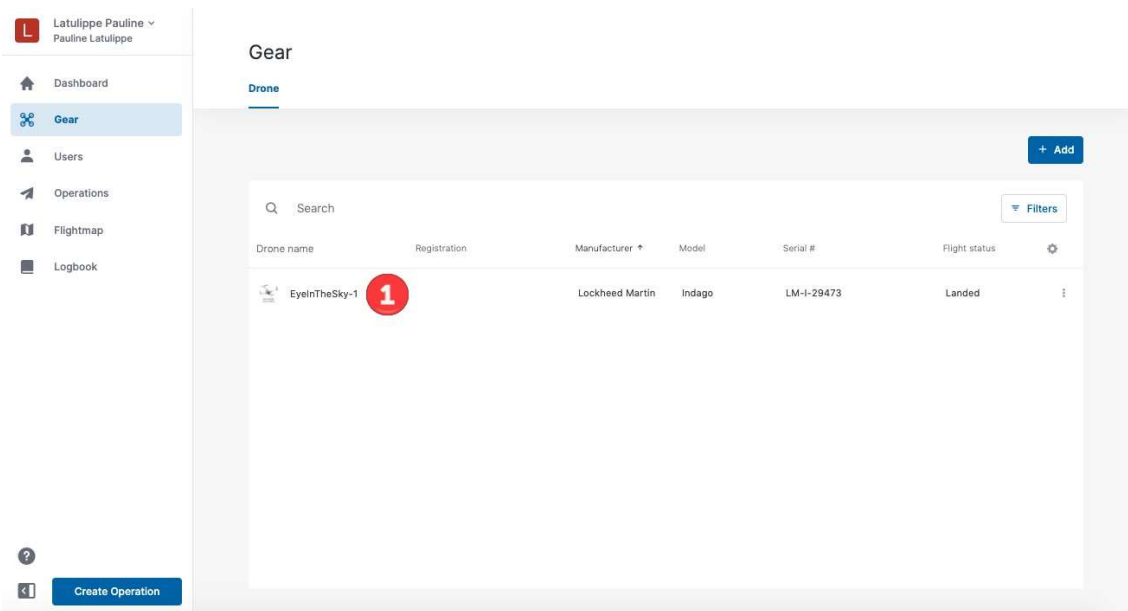
LM-I-29473



## 4.4. Associate documents with a drone

To associate a document with a drone, proceed as follows:

- 1 Click on the drone entry in the table.
- 2 Click on the *Documents* tab.
- 3 Click on the **[ + Add ]** button.
- 4 In the dialog box, fill in the *Document type*, *Description* and *File name*.
- 5 Optionally, you can upload one or more files such as a PDF document, pictures, or a scan of the original document.
- 6 Click on the **[ Save ]** button to add the document to be associated with the selected drone.



## Chapter 5. Users

The NAV Drone Web application allows an operator to invite multiple users to join their crew, such as drone pilots, observers, and payload specialists. Crew members are associated with the drone operator via an email-based invitation.

Click on *Users* in the left sidebar to access the module that allows you to manage your crew of users.



The drone operator can plan drone operations to be executed by one of their crew members.

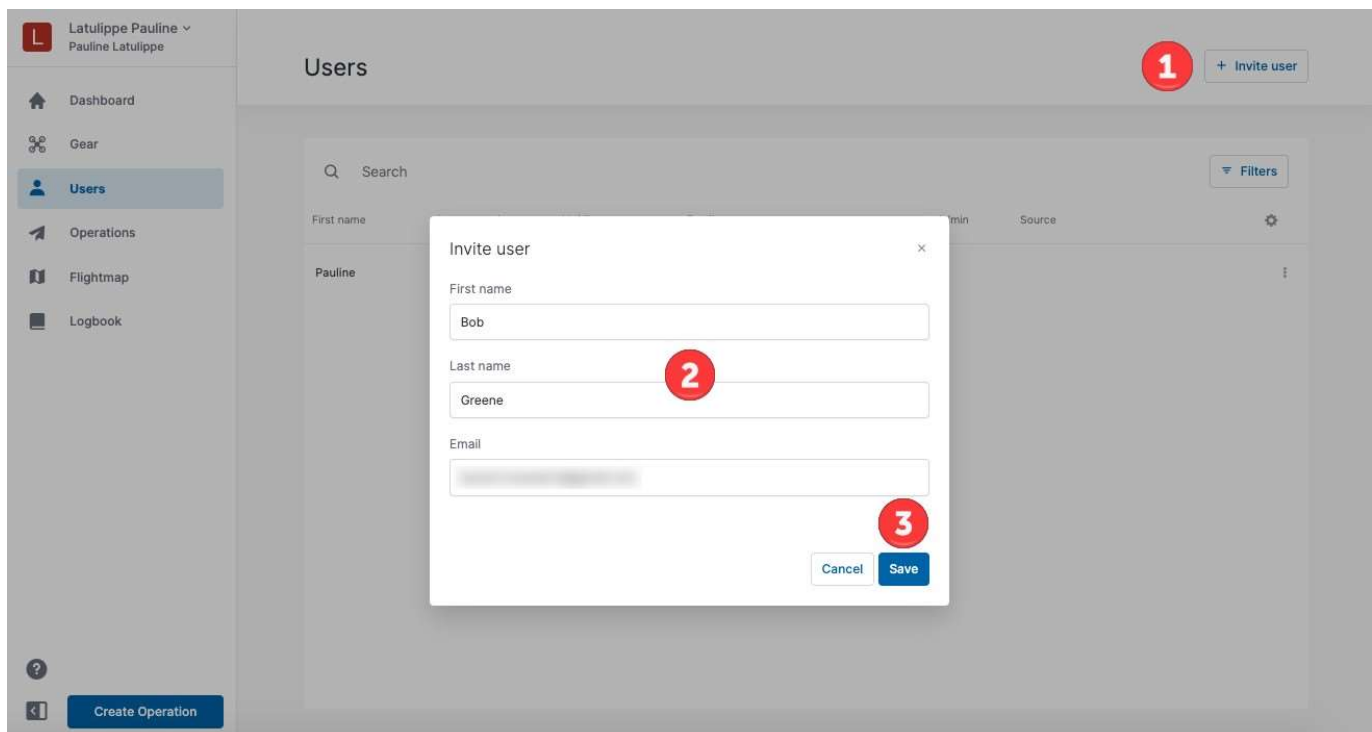
In the NAV Drone Mobile app, the drone pilot can select an operation assigned to them by the drone operator and execute the planned operation.

A user (crew member) can be associated with multiple drone operators. As described in [Settings](#), the user can select in their user profile which drone operator to perform a drone operation for.

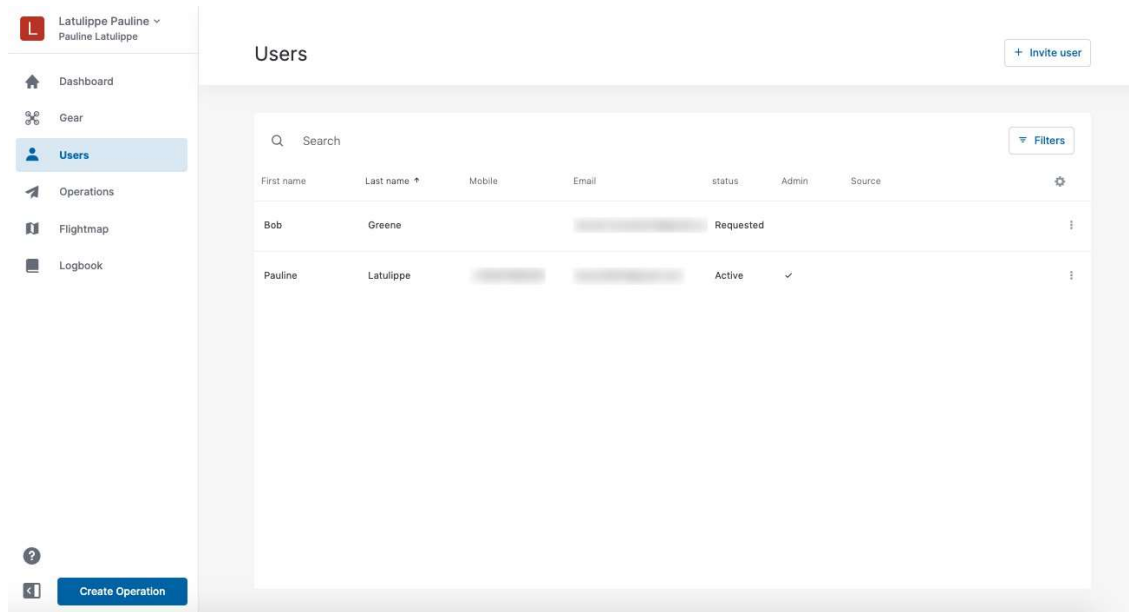
### 5.1. Add a user

To invite another user to join your crew in NAV Drone:


- 1 Click on the [ **+ Invite user** ] button.
- 2 In the dialog box, fill the *First name*, *Last name* and *Email* address.
- 3 Click on the [ **Save** ] button to send the invitation.



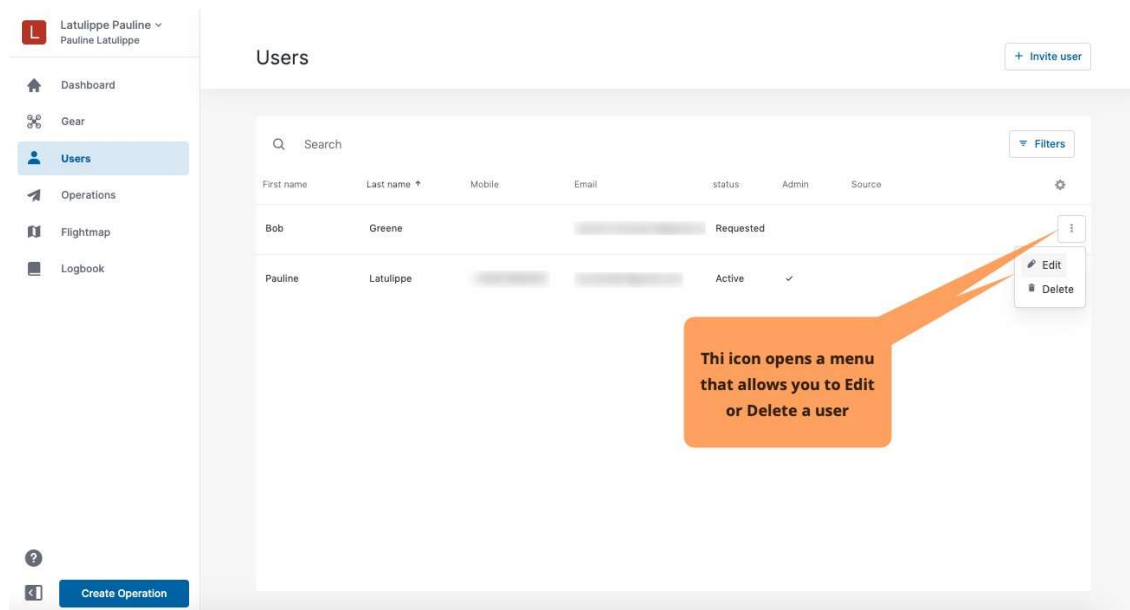
The user will receive an email from NAV Drone inviting them to join your crew. The newly added user will be listed in the user table with the status *Requested*. Accepting the invitation will redirect them to create and activate a NAV Drone account, while an existing user will be redirected to his or her active account.



## 5.2. Edit or delete a user

To edit the role of a user, click on the menu icon (  ) on the right side of the user entry in the table and select the menu item *Edit*. The menu also allows you to *Delete* the selected user.

In *Edit*, you can switch the role of active users between *Admin* and *User*. Unlike normal users, an *Admin* can invite other users to join the operator's crew.



P

Pauline Latulippe

Pauline Latulippe

Dashboard

Gear

Users

Operations

Flightmap

Logbook

?

Create Operation

Users

+ Invite user

Search

Filters

First name	Last name	Mobile number	Email	status	Admin	Source
Pat	Jane			Pending		
Pauline	Latulippe			Active	✓	
Pauline	Latulippe			Active		

Resend invitation

Edit

Resend invitation

Delete

This icon opens a menu that allows you to Edit or Delete a user

L

Latulippe Pauline

Pauline Latulippe

Dashboard

Gear

Users

Operations

Flightmap

Logbook

?

Create Operation

Users

+ Invite user

Search

Filters

First name	Last name	Mobile	Email	status	Admin	Source
Bob						
Pauline						

Update roles

Admin

Admin

User

CANCEL

UPDATE

## Chapter 6. Operations

The NAV Drone Web application supports the planning of drone operations.

Clicking on *Operations* in the left sidebar will bring up the table, listing all planned operations as shown below.

**Operations**

Search Filters

Name	Drone	Pilot	Start time	End time	Duration	Validation	Status	
Toaster	EyeInTheSky-1 - Lockheed Martin Indago	Pauline Latulippe	03/05/2021 10:53:03	03/05/2021 11:53:03	1:00:00	Allowed	Cancelled	
Operation completed	EyeInTheSky-1 - Lockheed Martin Indago	Pauline Latulippe	15/08/2021 14:00:00	15/08/2021 16:00:00	2:00:00	Allowed	Draft	
Assiniboine	EyeInTheSky-1 - Lockheed Martin Indago	Pauline Latulippe	12/05/2021 10:35:38	12/05/2021 11:35:38	1:00:00	Allowed	Draft	
Westerner Park	EyeInTheSky-1 - Lockheed Martin Indago	Pauline Latulippe	02/05/2021 14:30:00	02/05/2021 15:30:00	1:00:00	Action required	Published	
University Golf competition	EyeInTheSky-1 - Lockheed Martin Indago	Pauline Latulippe	08/05/2021 08:00:00	08/05/2021 18:00:00	10:00:00	Warning	Published	
University Golf competition	EyeInTheSky-1 - Lockheed Martin Indago	Pauline Latulippe	08/05/2021 08:00:00	08/05/2021 18:00:00	10:00:00	Warning	Published	
Clarenceville	EyeInTheSky-1 - Lockheed Martin Indago	Pauline Latulippe	03/05/2021 08:55:30	03/05/2021 09:55:30	1:00:00	Allowed	Published	
Request	EyeInTheSky-1 - Lockheed Martin Indago	Pauline Latulippe	26/05/2021 15:14:59	26/05/2021 16:00:00	0:45:00	Action required	Published	
Clarenceville	EyeInTheSky-1 - Lockheed Martin Indago	Pauline Latulippe	30/04/2021 17:00:30	30/04/2021 18:00:30	1:00:00	Allowed	Published	

Create Operation

### 6.1. Procedure for creating a new operation

Creating a new operation consists of five main steps:

1. Planning an operation, including the creation of a flight zone and the definition of the operation parameters.
2. Validating the operation against applicable rules and regulations.
3. Saving the operation as *Draft*.
4. Publishing the operation.
5. Managing the operation's tasks, to receive the permissions required to conduct the operation, when applicable.

Each of these steps is detailed in the sections below, after a short description of the user interface.

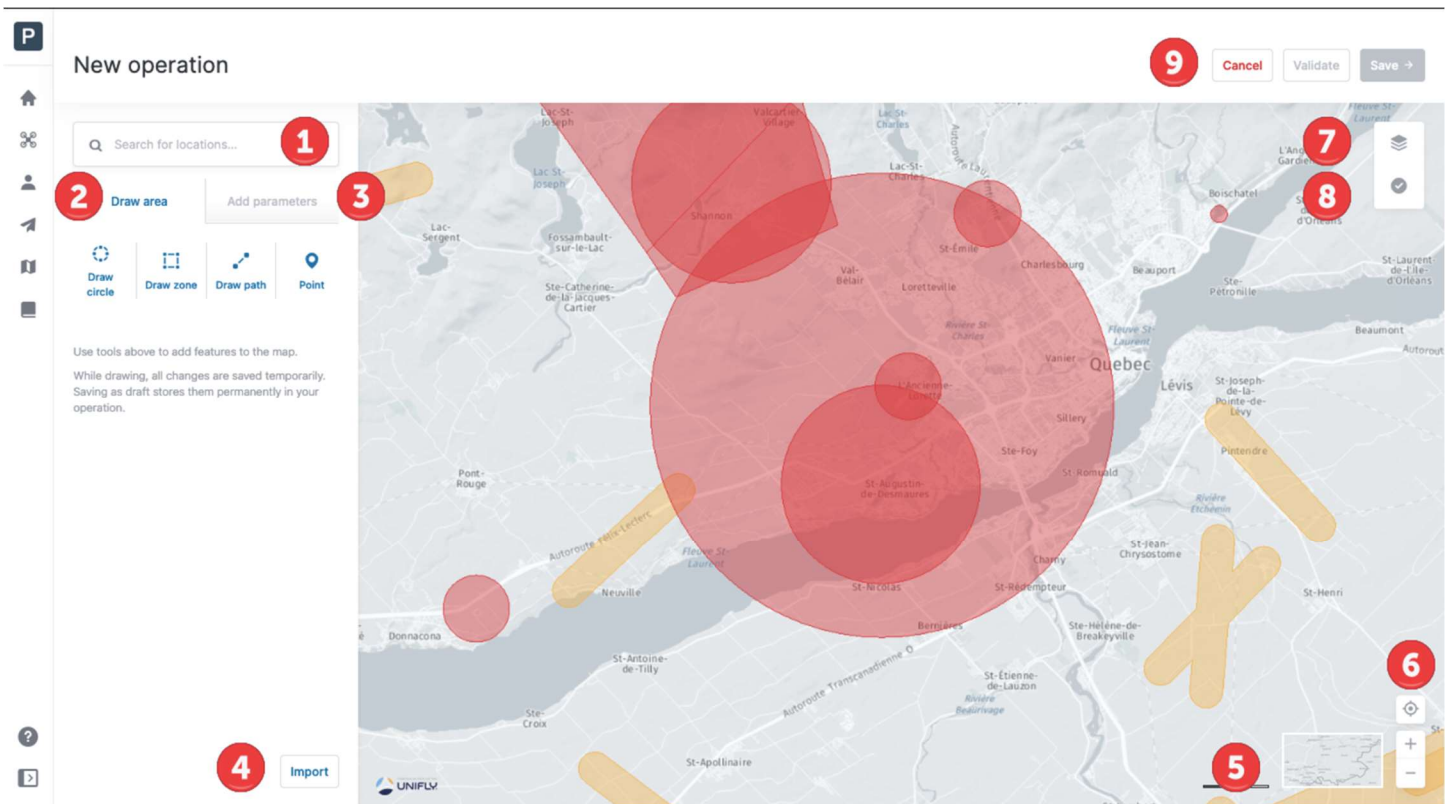
## 6.2. User interface overview

An operation can be planned by clicking on the [ **Create Operation** ] button in the expanded left sidebar or by clicking on the [ **+ Add** ] button at the top right of the screen.

The screenshot shows the 'Operations' management interface. On the left is a sidebar with navigation options: Dashboard, Gear, Users, Operations (selected), Flightmap, and Logbook. The main area displays a table of operations. An orange callout box points to the 'Create Operation' button in the sidebar and the '+ Add' button in the top right of the table, with the text: 'Click on either of these two buttons to create a new drone operation'.

Name	Drone	Pilot	Start time	End time	Duration	Validation	Status	
Toaster	EyelnTheSky-1 - Lockheed Martin Indago	Pauline Latulippe	03/05/2021 10:53:03	03/05/2021 11:53:03	1:00:00	Allowed	Cancelled	
Operation constraints	EyelnTheSky-1 - Lockheed Martin Indago	Pauline Latulippe	15/08/2021 14:00:00	15/08/2021 16:00:00	2:00:00	Allowed	Draft	
Assiniboine	EyelnTheSky-1 - Lockheed Martin Indago	Pauline Latulippe	12/05/2021 10:35:38	12/05/2021 11:35:38	1:00:00	Allowed	Draft	
Westerner Park	EyelnTheSky-1 - Lockheed Martin Indago	Pauline Latulippe	02/05/2021 14:30:00	02/05/2021 15:30:00	1:00:00	Action required	Published	
University Golf competition	EyelnTheSky-1 - Lockheed Martin Indago	Pauline Latulippe	08/05/2021 08:00:00	08/05/2021 18:00:00	10:00:00	Warning	Published	
University Golf competition	EyelnTheSky-1 - Lockheed Martin Indago	Pauline Latulippe	08/05/2021 08:00:00	08/05/2021 18:00:00	10:00:00	Warning	Published	
Clarenville	EyelnTheSky-1 - Lockheed Martin Indago	Pauline Latulippe	03/05/2021 08:55:30	03/05/2021 09:55:30	1:00:00	Allowed	Published	
Request	EyelnTheSky-1 - Lockheed Martin Indago	Pauline Latulippe	26/05/2021 15:14:59	26/05/2021 16:00:00	0:45:00	Action required	Published	
Clarenville	EyelnTheSky-1 - Lockheed Martin Indago	Pauline Latulippe	30/04/2021 17:00:30	30/04/2021 18:00:30	1:00:00	Allowed	Published	

Clicking on either of these two buttons will open the *New operation* screen where you can define the new drone operation as shown below.



The *New operation* screen includes the following user interface elements:

- ① The **[ Search ]** field, to search for locations. Click on the field, start typing an address or latitude/longitude coordinates. Selecting one of the search results will reposition and zoom the map, and put a blue marker on the location.
- ② The *Draw area* tab, to draw the operation flight zone on the map. Cylindrical (*Draw circle*), polygonal (*Draw Zone*) and path-like (*Draw Path*) operation flight zones are supported. In addition, *Point* allows you to mark the intended takeoff, landing and emergency landing locations on the map.
- ③ The *Add parameters* tab, to define the essential drone operation parameters used for validating the drone operation.
- ④ The **[ Import ]** button, to import a file describing the operation flight zone. See section [Import a geometry](#) for more details.
- ⑤ The **[ Display Mode ]** button allows you to select the map's display mode. See section [Change the display mode](#) for more details.
- ⑥ The "move to current location" ( ) and zoom ( and ) buttons allow you to navigate the map. You can also move the map by dragging it with the left mouse button and zoom the map in or out using the mouse scroll wheel or by double clicking on a location on the map (left mouse button = zoom in, right mouse button = zoom out).
- ⑦ The button allows you to configure which layers should be visible on the map. See section [Hide/display map layers](#) for more details.
- ⑧ The button allows you to validate the operation against the applicable rules and regulations. See next section for more details.
- ⑨ The three buttons at the top right corner of the screen:

- The [ **Cancel** ] button, to cancel the creation of the operation.
- The [ **Validate** ] button, to validate the drone operation against the applicable rules and regulations. See next section for more details.
- The [ **Save** ] button, to save the operation as a draft until it is published. See section [Step 4: Publish an operation](#) for more details.



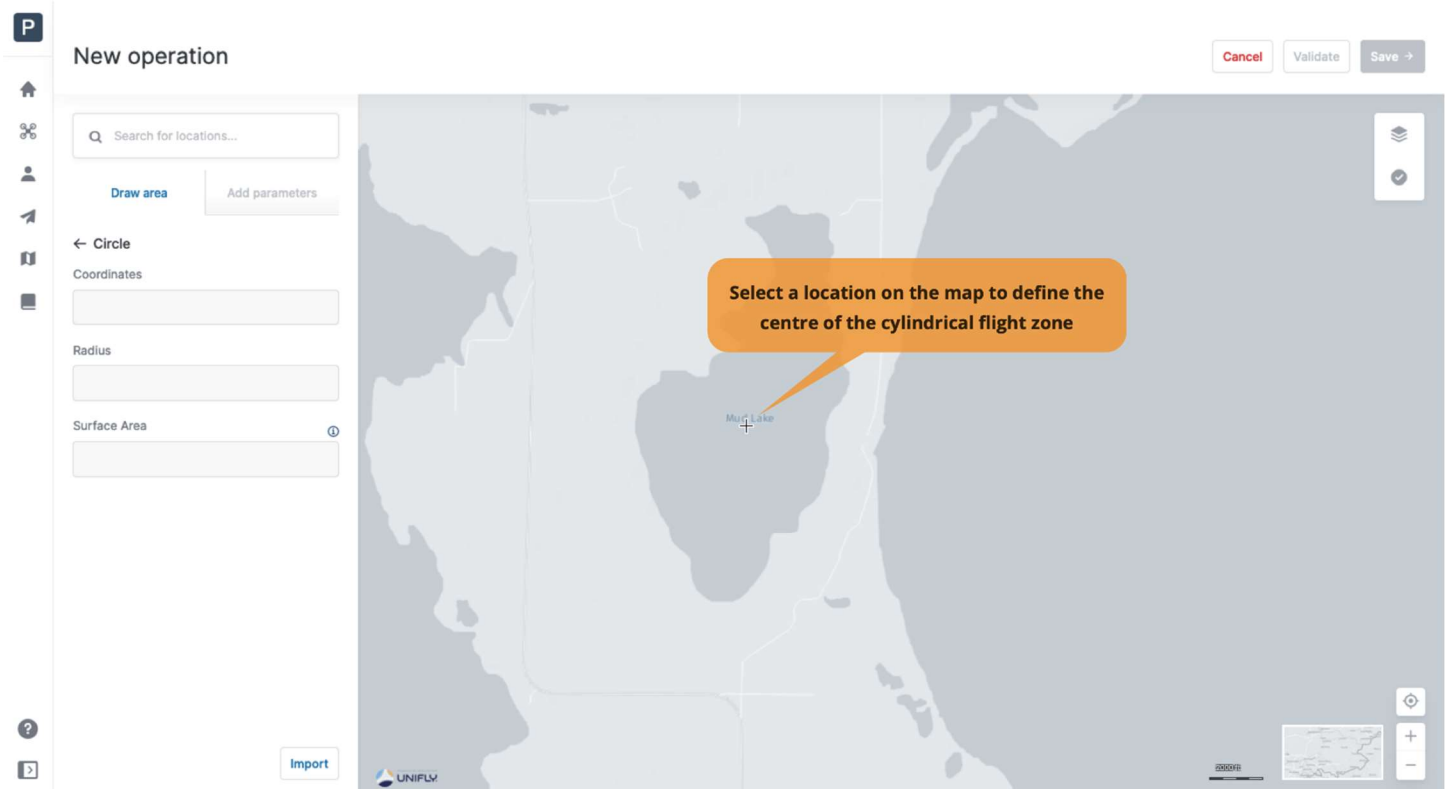
More details about the map layers and how to display airspace information are provided in section [Flightmap](#).

## 6.3. Step 1: Plan an operation

### 6.3.1. Cylindrical flight zone

To plan an operation with a cylindrical flight zone:

1. Select a location by either using the search button or by moving the map and using the map controls.
2. In the *Draw area* tab, click on the [ **Draw circle** ] button. The standard mouse pointer (☞) will change to a crosshair pointer (+).
3. On the map, select a location for the centre of the cylindrical flight zone. By clicking on that location, a circle is drawn on the map. The cylindrical flight zone is represented by that circle and the operation's maximum height, which will be defined later.



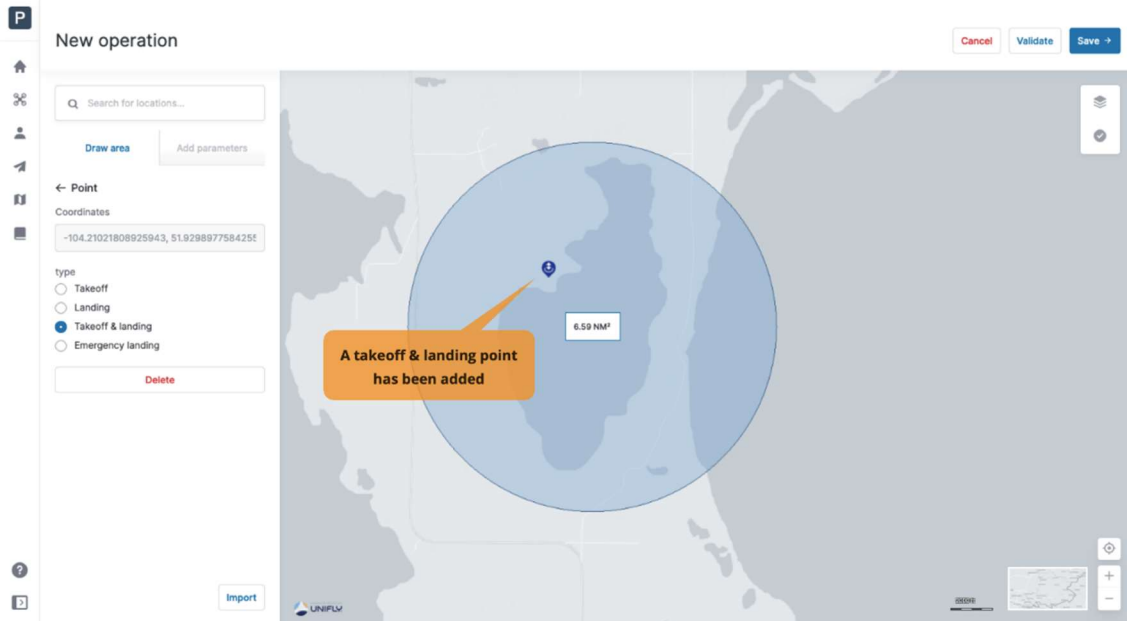


4. To modify the flightzone:

- Move the flight zone by dragging and dropping the circle.
- Drag and drop the circle handle to resize the flight zone.



5. Optionally, *Points* can be defined for the operation. Click on the [ ← **Circle** ] button to go back and then click on the [ **Point** ] button. In the *Draw area*, select the type of point to add (Takeoff, Landing, Takeoff & landing, Emergency landing) and click on the desired location on the map. Multiple points can be defined for an operation.



6. Click on the *Add parameters* tab and complete the following fields:

- *Operation name*
- *Certification Level*: Basic or Advanced
- *Activity*: select a type of activity from the list
- *Operation type*: VLOS, VLOS with observers or Beyond VLOS

- **Start time:** enter the planned start date and time
- **End time:** enter the planned end date and time
- **Height AGL [m] or Height AGL [ft]:** enter the maximum flight height either in meter or feet (feet is the aviation standard in Canada). The height expressed in the other unit will be calculated.
- **Drone:** select a drone from the list. The list of drones is retrieved from the crew members previously defined in *Gear*.
- **Drone pilot:** select a pilot from the list. The list of pilots is retrieved from the crew members previously defined in *Users*.
- **Drone pilot mobile number:** the pilot's mobile number will be retrieved from the user's details but can be modified if needed.
- **Description:** optionally, add a short description of your operation.

**New operation**

Cancel Validate Save →

Search for locations...

Draw area Add parameters

Operation name

Shores mapping

Certification Level  
Advanced

Activity  
Mapping/Land Surveying

Operation type  
VLOS

Start time  
01/06/2021 14:00:00 UTC-4  
Part of the flight zone for your operations is located in a different time zone. (UTC -6:00)

End time  
01/06/2021 16:00:00 UTC-4  
Part of the flight zone for your operations is located in a different time zone. (UTC -6:00)

Height AGL  
ft

6.59 NM<sup>2</sup>

UNIFLY

Scroll down in the *Add parameters* area to complete all the fields

**New operation**

Search for locations...

Draw area [Add parameters](#)

Part of the flight zone for your operations is located in a different time zone. (UTC -6:00)

End time  
01/06/2021 16:00:00 UTC-4

Part of the flight zone for your operations is located in a different time zone. (UTC -6:00)

Height AGL  
50 ft

Drone  
Lockheed Martin - Indago (EyeInTheSky) X

Drone pilot  
Pauline Latulippe

Drone pilot mobile number  
Verified number

Description  
Erosion survey #07

6.59 NM²

UNIFLY

Cancel Validate Save

Make sure to select a drone with a valid registration number. See section [Associate a registration number with a drone](#).

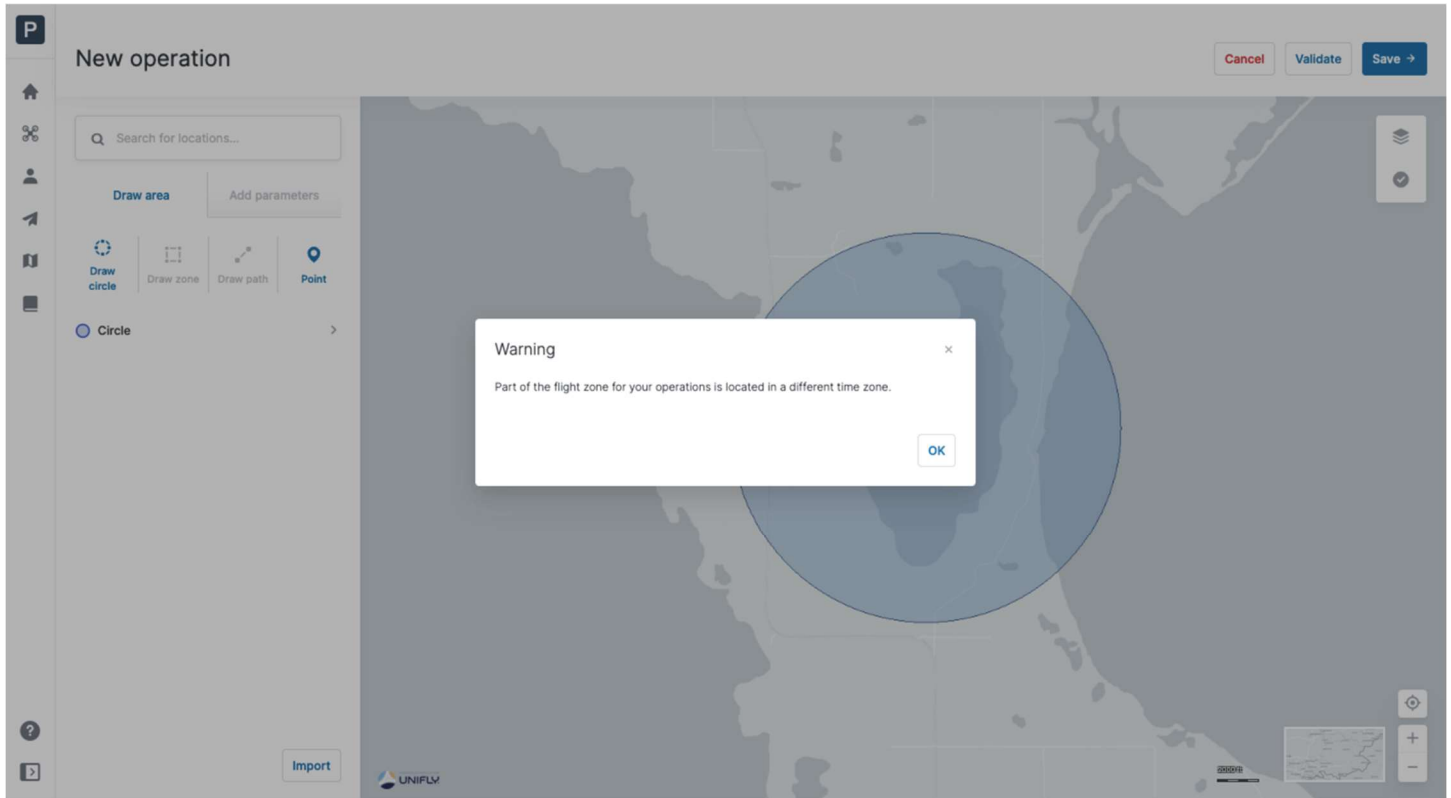


Two-way communication capability is required when operating in NAV CANADA control zones. Therefore, make sure to select a pilot with a verified mobile phone number in order to publish the operation (see section [User information](#) for more details). Also, make sure to have your phone with you when flying.

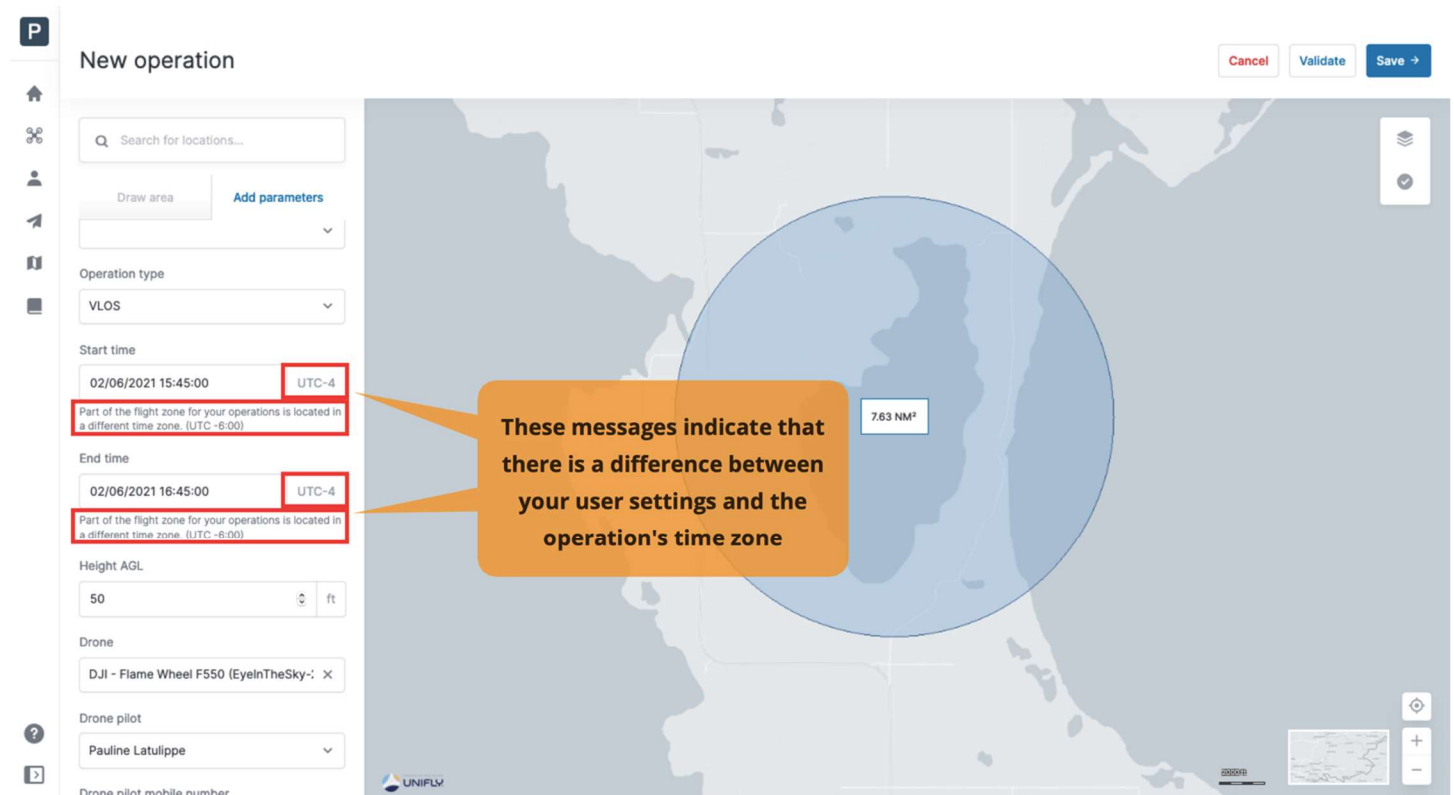
Advanced operations require a pilot with a certificate for advanced operations. See section [Add user documents](#).

## Note about time zones

When drawing an operation in a different time zone than the one defined in your user settings, a dialog box with a warning will appear.



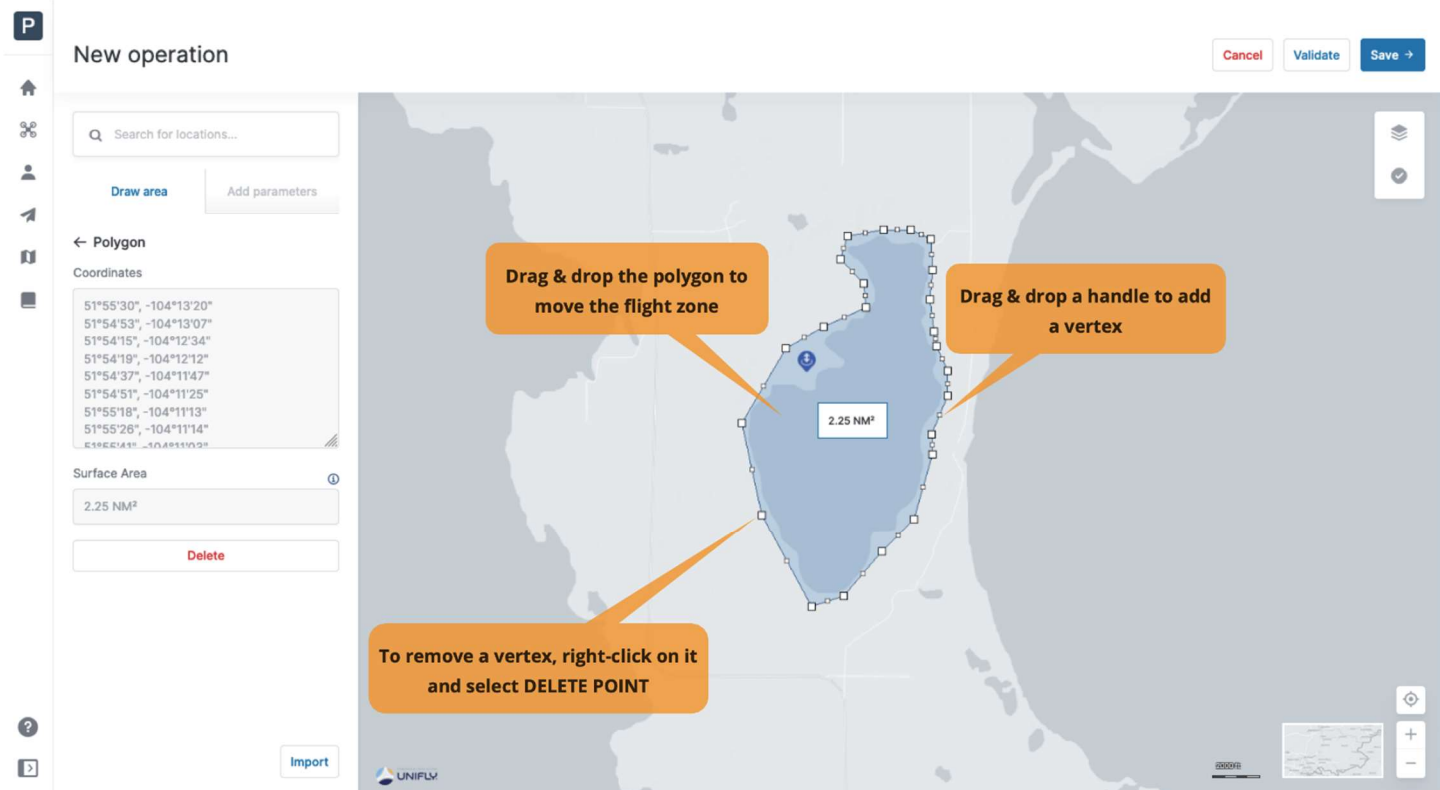
In the operation parameters, a message also indicates that there is a difference between your user settings and the operation's time zone (expressed in Coordinated Universal Time):



## 6.3.2. Polygonal flight zone

To plan an operation with a polygonal flight zone:

1. Select a location by either using the search button or by moving the map and using the map controls.
2. In the *Draw area* tab, click on the [ **Draw Zone** ] button. The standard mouse pointer (↔) will change to a crosshair pointer (+).
3. On the map, select a location for the first polygon vertex (the corner point between two edges). Click once to create a new corner point, double click to close the polygon.
4. To modify the flightzone:
  - Move the flight zone by dragging and dropping the polygon.
  - Drag and drop any vertex to move it.
  - Add new vertices by dragging and dropping a shape handle (the smaller point in the middle of an edge).
  - Delete a vertex by right-clicking on it and selecting [ **DELETE POINT** ] in the dialog box.
5. Optionally, takeoff, landing, takeoff & landing, and emergency landing *Points* can be defined for the operation, as described in section [Cylindrical flight zone](#).
6. Click on the *Add parameters* tab and complete the fields, as described in section [Cylindrical flight zone](#).



### 6.3.3. Flight path

To plan an operation with a flight path:

1. Select a location by either using the search button or by moving the map and using the map controls.
2. In the *Draw area* tab, click on the **[Draw Path]** button. The standard mouse pointer (☞) will change to a crosshair pointer (+).
3. On the map, select a location for the starting point. Click once to create a new segment, double click to select the location of the end point.
4. To modify the flightzone:
  - Move the flight zone by dragging and dropping the flight path.
  - Drag and drop any point to move it.
  - Add new segments by dragging and dropping a shape handle (the smaller point in the middle of a segment).
  - Delete a point by right-clicking on it and selecting **[DELETE POINT]** in the dialog box.
5. Optionally, takeoff, landing, takeoff & landing, and emergency landing *Points* can be defined for the operation, as described in section [Cylindrical flight zone](#).
6. Click on the *Add parameters* tab and complete the fields, as described in section [Cylindrical flight zone](#).



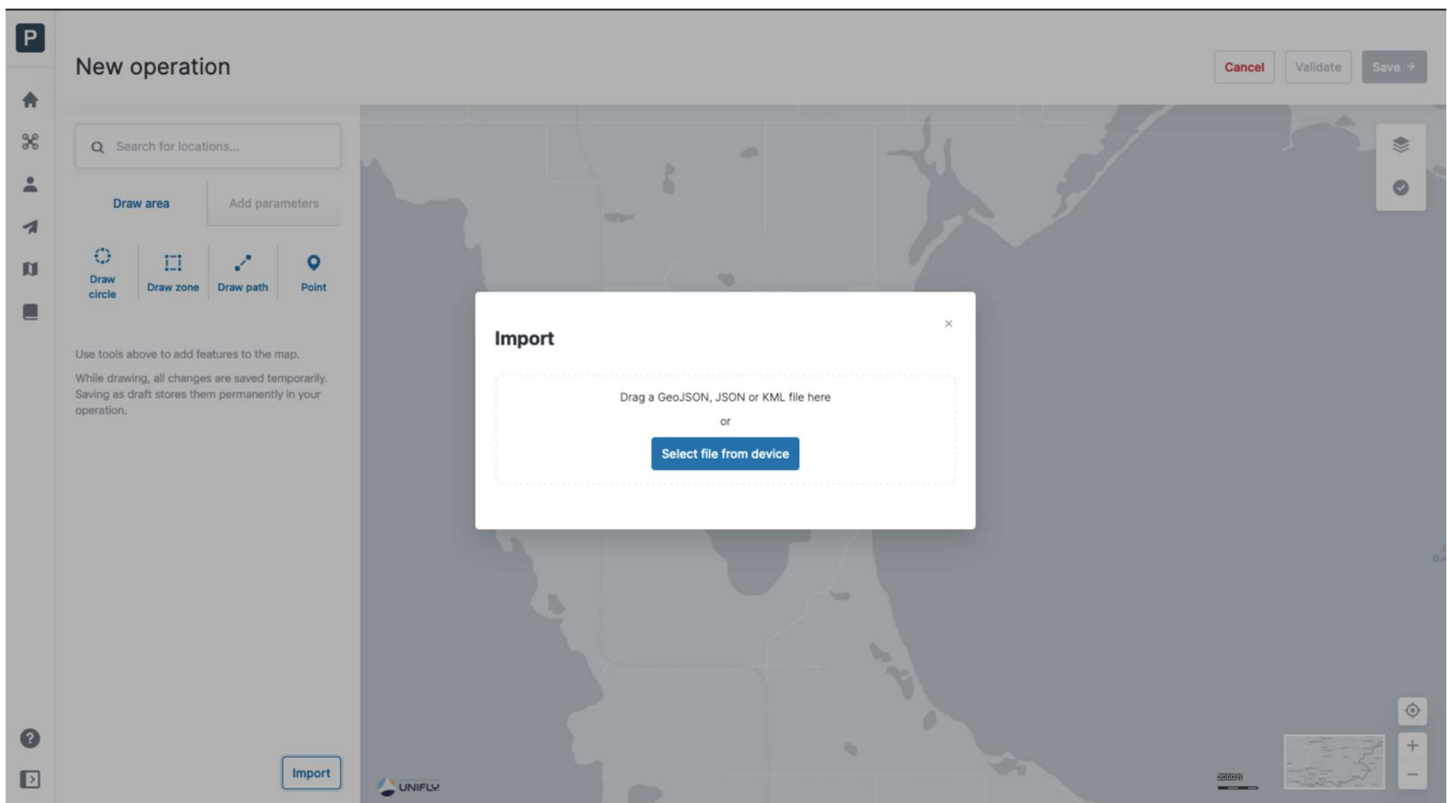
## 6.3.4. Import a geometry

To import an operation geometry:

1. In the *Draw area* tab, click on the **[ Import ]** button.
2. Drag and drop a file to the dialog box, or select a file from your device.



The following file formats are supported for importing an operation geometry:  
GeoJSON, JSON or KML.



## 6.3.5 Operation constraints

### 6.3.5.1 Size constraints

The maximum area of a flight zone is limited. Depending on the shape of the operation, the constraints are:

- Polygon: 10 sq.NM
- Circle: 12.5 sq.NM (2 NM radius)
- Path: 0.054 sq.NM (10 NM length by 32 feet width)

These values are subject to change by NAV CANADA.

P

Home

Tools

Profile

Map

Layers

Help

Settings

New operation

Saskatoon, SK, Canada

Draw area

Add parameters

Draw circle

Draw zone

Draw path

Point

Circle

Import

Cancel

Validate

Save →

Validation

Not Allowed

1 negative

The operational area drawn for the operation exceeds the maximum allowed surface of 12.5NM² (2NM radius).

5 disclaimers

4 positives

NAV Drone will prevent you from publishing an operation that exceeds the maximum area.

P

Home

Tools

Profile

Map

Layers

Help

Settings

Draft

← Operation constraints

Cancel operation

Publish operation

Operation Details

Tasks

Flights

Documents

Not Allowed

Legislation

Airspace

Weather

Something went wrong

Cannot publish this operation, some parameters do not comply with the required input.

The operational area drawn for the operation exceeds the maximum allowed surface of 12.5NM² (2NM radius).

OK

Operation Area

Operation Parameters

Operation type

VLOS

Drone

Lockheed Martin - Indago

Start time

03/05/2021 14:00:00

Certification Level

Basic

Pilot

Latulippe Pauline

End time

03/05/2021 16:00:00



### 6.3.5.2 Time constraints

An operation can only be planned up to 60 days in advance, and its maximum duration is limited to 24 hours.

These values are subject to change by NAV CANADA.

## Edit operation

[Cancel](#) [Validate](#) [Save →](#)

Search for locations...

Draw area [Add parameters](#)

Operation name

Operation constraints

Certification Level  
Basic

Activity

Operation type  
VLOS

Start time  
15/08/2021 14:00:00 UTC-4  
An operation can be planned a maximum of 60 day(s) in advance  
Part of the flight zone for your operations is located in a different time zone. (UTC -6:00)

End time  
15/08/2021 16:00:00 UTC-4  
Part of the flight zone for your operations is located in a different time zone. (UTC -6:00)

UNIFLY

P

Home

Tools

Users

Map

Layers

Settings

Edit operation

Cancel

Validate

Save →

Q Search for locations...

Draw area

Add parameters

Operation name

Operation constraints

Certification Level

Basic

Activity

Operation type

VLOS

Start time

03/05/2021 14:00:00

UTC-4

End time

05/05/2021 16:00:00

UTC-4

Operation duration cannot exceed 24:00H

Part of the flight zone for your operations is located in a different time zone. (UTC -6:00)

Height AGL

NAV Drone will prevent you from publishing an operation that exceeds either of the time constraints.

P

Home

Tools

Users

Map

Layers

Settings

Draft

← Operation constraints

Cancel operation

Publish operation

Operation Details

Tasks

Flights

Documents

Operation Area

Operation Parameters

Operation type

VLOS

Drone

Lockheed Martin - Indago

Start time

15/08/2021 14:00:00

Certification Level

Basic

Pilot

Latulippe Pauline

End time

15/08/2021 16:00:00

Allowed

Legislation

Airspace

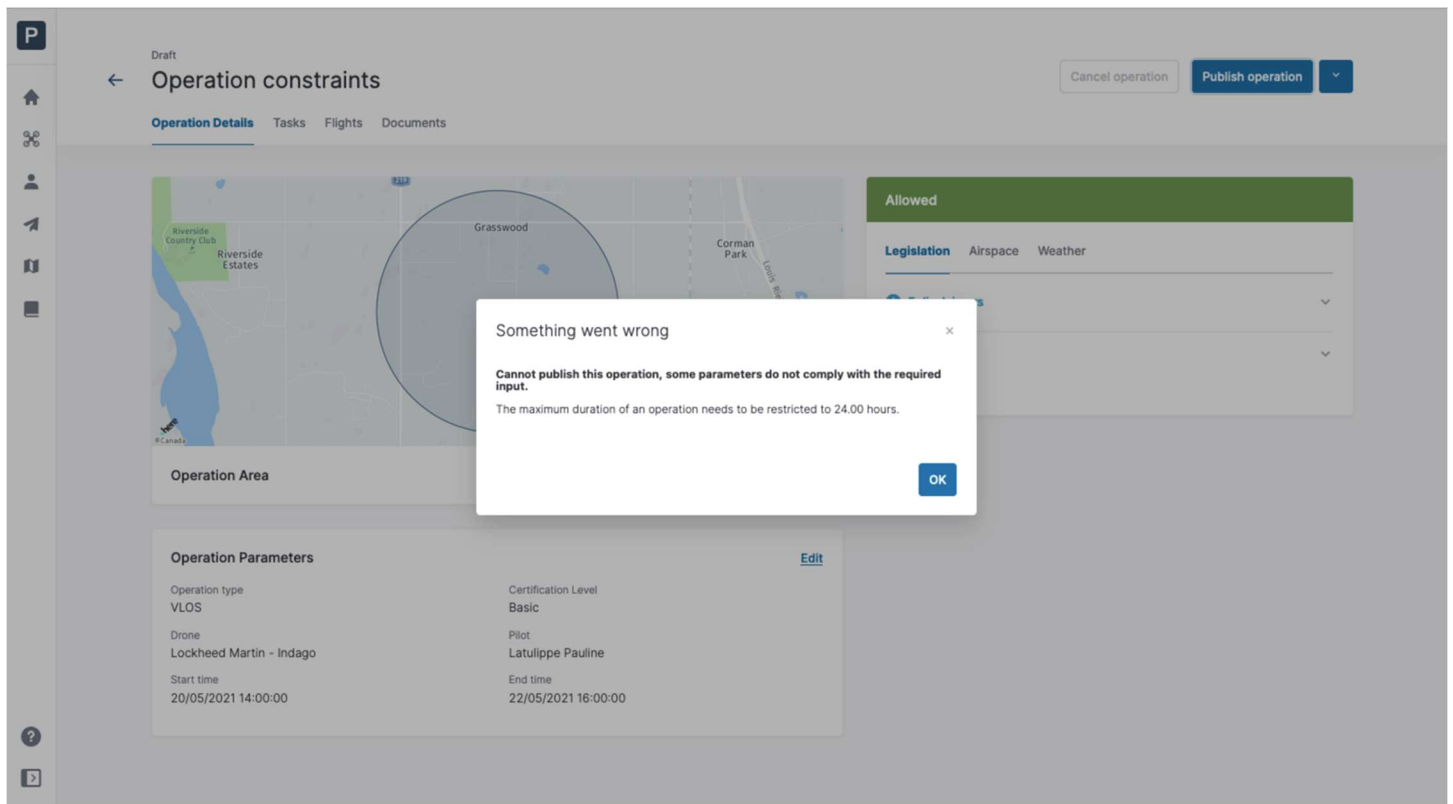
Weather

Something went wrong

Cannot publish this operation, some parameters do not comply with the required input.

Operation can only be planned max 60 days in advance.

OK



## 6.4. Step 2: Validate an operation

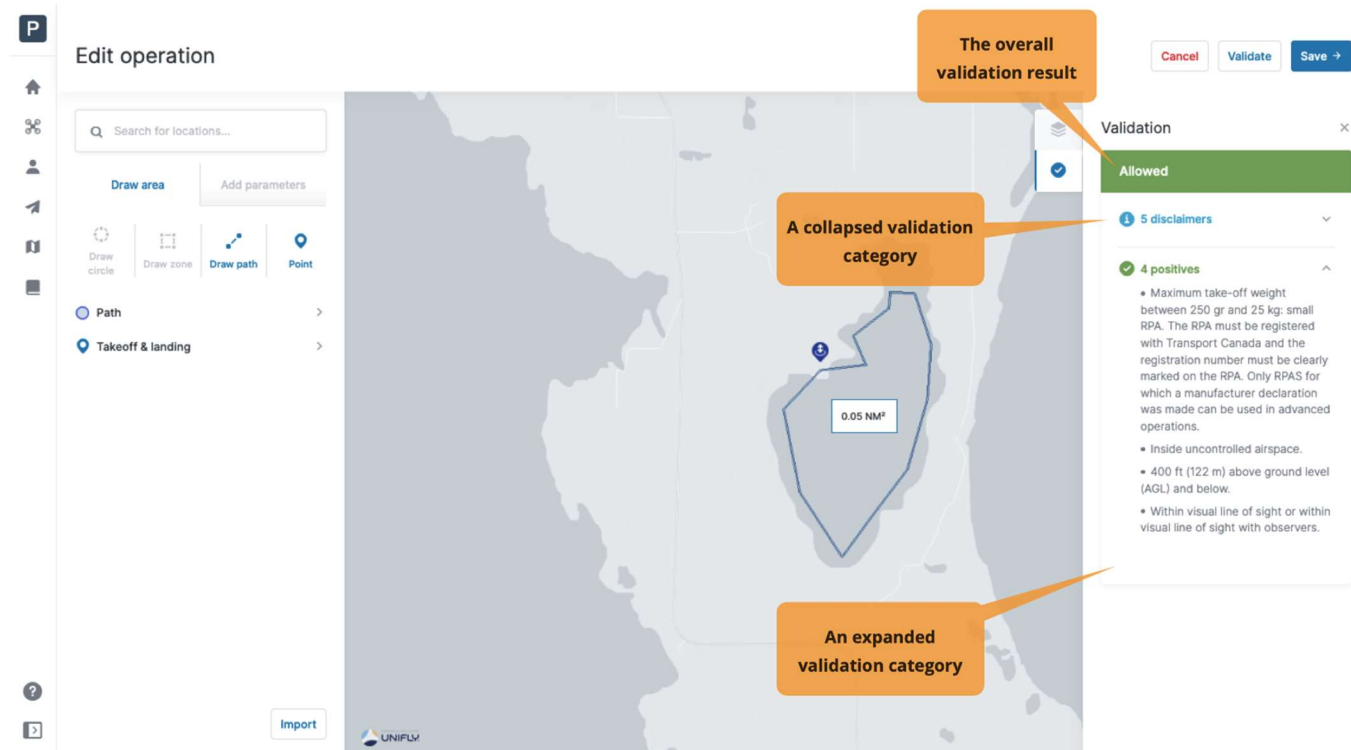
Once the operation flight zone is drawn and the operation parameters have been entered, you can validate the operation by clicking on the [ **Validate** ] button at the top right of the screen or by clicking on the ✓ button at the top right of the map.

The validation consists in verifying that the operation, as defined by its flight zone and parameters, complies with applicable rules and regulations.

The validation results are displayed in a sidebar at the righthand side of the screen. The validation details are grouped in categories that you can expand (▼ icon) or collapse (▲ icon) to display or hide the validation details.

The validation results are provided in two forms:

1. The overall validation result: indicates whether the operation is allowed (green colour code), comes with warnings or actions required (orange colour code), or is not allowed (red colour code).
2. The result categories: each category provides detailed information about the rules that the operation is or is not complying with, as well as possible warnings, actions required, and disclaimers that the pilot should keep in mind when conducting the operation.



Make sure to check all validation information provided by scrolling through the full list and reading all validation details.

If necessary, adapt the operation flight zone and/or parameters until you get the desired validation result before proceeding.

## 6.5. Step 3: Save an operation as a *Draft*

Any time during the planning of an operation, you can use the [ **Cancel** ] button at the top right of the screen to cancel the creation of the operation, or the [ **Save →** ] button to save the operation as a *Draft*.

The screenshot shows the 'Edit operation' interface. On the left is a sidebar with navigation icons. The main area contains a map of a coastal region with a blue polygon representing a flight zone, labeled '0.05 NM²'. To the right of the map is a 'Validation' panel with a green 'Allowed' header, '5 disclaimers', and '4 positives'. At the top right of the map area are three buttons: 'Cancel', 'Validate', and 'Save →'. Two orange callout boxes point to these buttons: one to 'Cancel' with the text 'Click here to cancel the creation of the operation' and another to 'Save →' with the text 'Click here to save the operation as Draft'.

**Edit operation**

Search for locations...

Draw area [Add parameters](#)

Operation name  
Shores mapping

Certification Level  
Advanced

Activity

Operation type  
VLOS

Start time  
01/06/2021 14:00:00 UTC-4  
Part of the flight zone for your operations is located in a different time zone. (UTC -6:00)

End time  
01/06/2021 16:00:00 UTC-4  
Part of the flight zone for your operations is located in a different time zone. (UTC -6:00)

Height AGL  
50 ft

**Validation**

**Allowed**

5 disclaimers

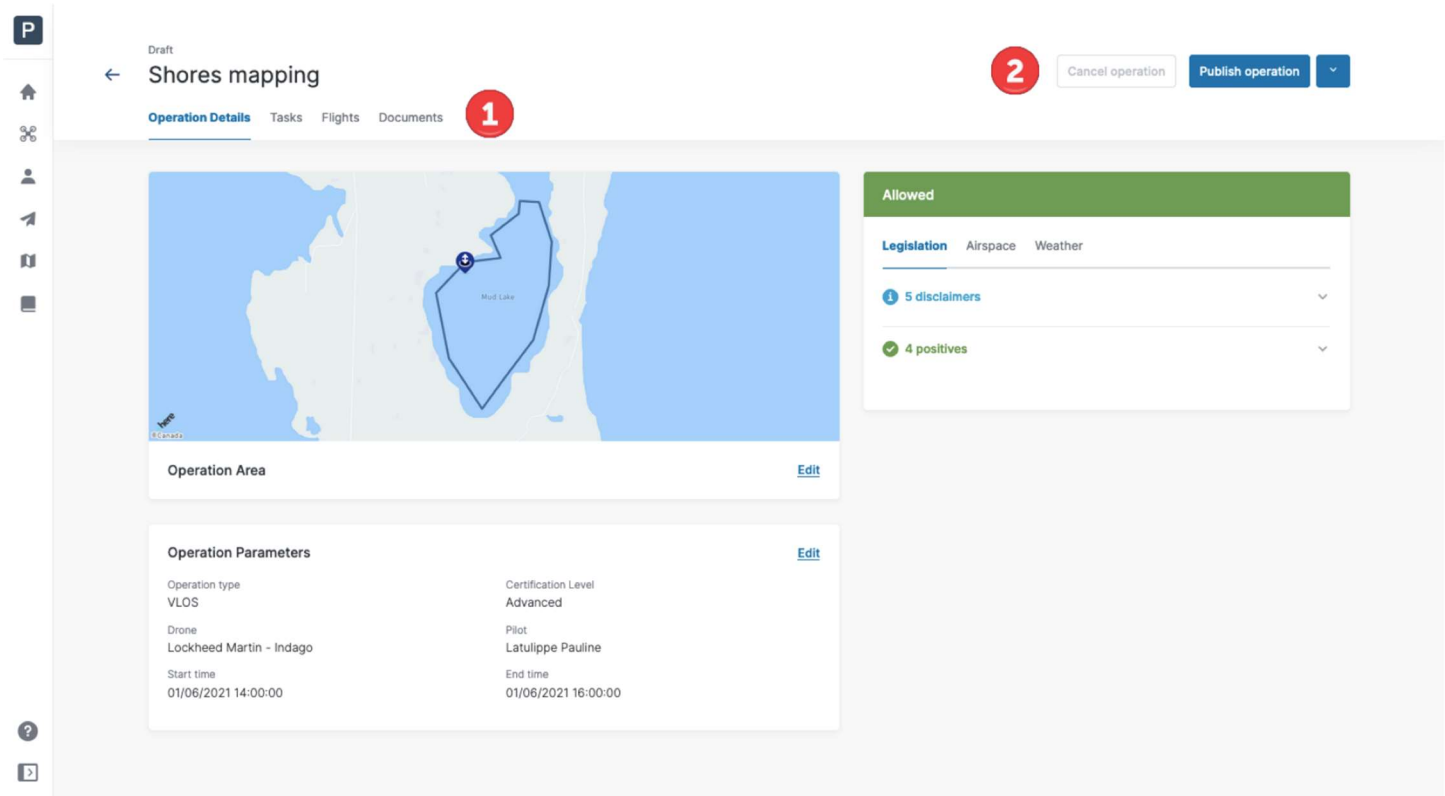
4 positives

- Maximum take-off weight between 250 gr and 25 kg: small RPA. The RPA must be registered with Transport Canada and the registration number must be clearly marked on the RPA. Only RPAS for which a manufacturer declaration was made can be used in advanced operations.
- Inside uncontrolled airspace.
- 400 ft (122 m) above ground level (AGL) and below.
- Within visual line of sight or within visual line of sight with observers.

Click here to cancel the creation of the operation

Click here to save the operation as Draft

After clicking on the [ **Save →** ] button, the operation screen will be displayed, providing access to the following information:



① Tabs at the top left of the screen:

- The *Operation Details* tab: provides an overview of the operation's characteristics including the flight zone and parameters as previously entered. See section [Edit a draft operation](#) for more details.
- The *Tasks* tab: provides information about tasks that need to be completed to perform the operation. An example of a task is a permission request. See section [Step 5: Manage tasks and permission requests](#) for more details.
- The *Flights* tab: provides an overview of the drone flights conducted for this drone operation. See section [Log a flight](#) for more details.
- The *Documents* tab: to add and manage the documents associated with the operation. See section [Associate documents with a drone operation](#) for more details.

② Three buttons at the top right of the screen:

- The [ **Cancel operation** ] button: to delete a published operation. This button is only active after the operation has been published and is inactive for draft operations.
- The [ **Publish operation** ] button: to move the operation out of the draft status. Where applicable, publishing an operation also triggers operation-related tasks such as sending permission requests to NAVCANADA.
- The ▼ button: provides additional functionalities such as the possibility to *Edit*, *Copy*, or *Delete* the operation draft, as well as the creation of a *Flight report*.

### 6.5.1. Edit a draft operation

The *Operation Details* tab provides a complete overview of the operation's characteristics, including the flight zone and the operation parameters. This tab can be accessed when saving a new operation as a draft, or by clicking on an existing operation in the operations table.

Two *Edit* links allow you to edit the flight zone and the operation parameters. Clicking on either of these links will bring you back to the operation planning screen as described in section [Step 1: Plan an operation](#).

This tab provides three additional tabs under the overall validation result, on the right of the screen:

- *Legislation*: shows the result categories and the detailed information about the rules that the operation is or is not complying with, as well as possible warnings and disclaimers that the pilot should keep in mind when conducting the operation.
- *Airspace*: shows the geozones that the operation flight zone is intersecting.
- *Weather*: shows the weather forecast for the operation's location and planned date and time.



Weather forecast information is only available for operations planned up to 7 days in advance.

The screenshot shows the 'Shores mapping' interface with the following components and callouts:

- Overall operation validation result:** A green bar at the top right indicating the operation is 'Allowed'.
- Click here to check the airspace zones that the operation is intersecting:** A callout pointing to the 'Airspace' tab.
- Click here for the detailed validation results:** A callout pointing to the 'Weather' tab.
- Click here to check the weather at the operation's location and planned date & time:** A callout pointing to the weather forecast details.
- Click here to edit the operation flight zone and parameters:** A callout pointing to the 'Edit' link next to the 'Operation Area'.

**Operation Parameters:**

Operation type	Certification Level
VLOS	Advanced

**Drone:** Lockheed Martin - Indago

**Pilot:** Latulippe Pauline

**Start time:** 03/05/2021 14:00:00

**End time:** 03/05/2021 16:00:00

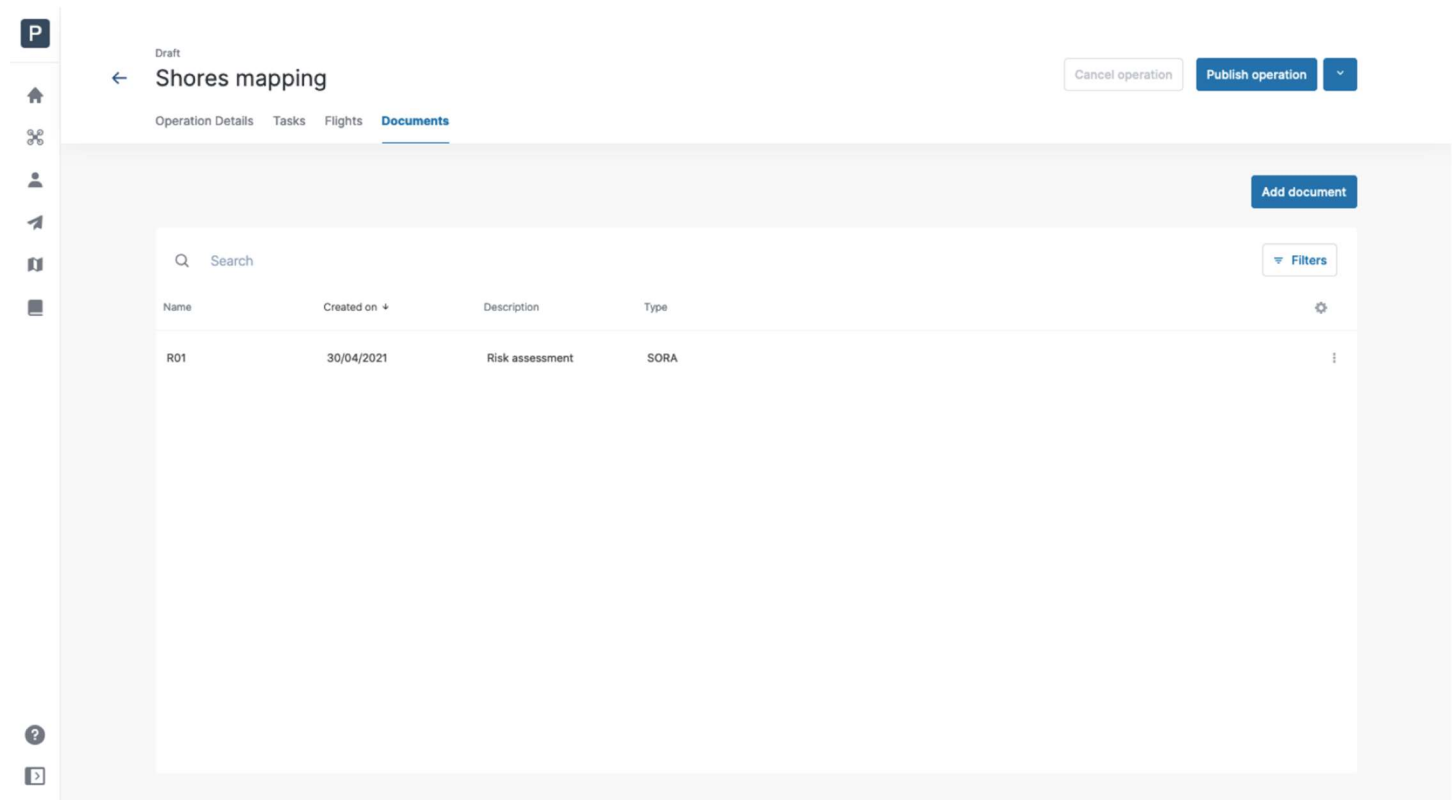
**Weather Forecast:**

15h	16h	17h	18h	19h	0h	3h	15h
40.64 °F	42.08 °F	43.16 °F	44.64 °F	46.08 °F	47.52 °F	48.96 °F	50.40 °F
Temperature							
40.64 °F							
Sunset							
22:23:00							
Wind speed							
15.42 ft/s							
Precipitation chance							
4 %							
Kp Index							
4							
Pressure							
N/A							
Visibility							
94881.89 ft							

## 6.5.2. Associate documents with a drone operation

The *Documents* tab lists all documents related to the operation. You can upload as many documents as needed, including Specific Operations Risk Assessment (SORA) documents.

The procedure to upload documents is similar to the procedure described in section [Associate documents with a drone](#).



## 6.6. Step 4: Publish an operation

Once an operation has been defined and validated (see above steps 1 to 3), it must be published. Publishing an operation is required, for example, to submit tasks such as permission required.

When an operation is in *Draft*, the **[ Publish operation ]** button is displayed at the top right. The operation status is also indicated above the operation's name:



**Draft**

← Shores mapping

Operation Details Tasks Flights Documents

**The current operation status is Draft**

**Click here to publish the operation**

Cancel operation Publish operation

**Allowed**

Legislation Airspace Weather

5 disclaimers

4 positives

Operation Area [Edit](#)

**Operation Parameters** [Edit](#)

Operation type	Certification Level
VLOS	Advanced
Drone	Pilot
Lockheed Martin - Indago	Latulippe Pauline
Start time	End time
01/06/2021 14:00:00	01/06/2021 16:00:00

Once an operation is published, its status will change to *Published*. The **[Cancel operation]** button becomes active, the **[Publish operation]** button is replaced by the **[Take off]** button and a notification will pop up at the bottom right of the screen to notify that the operation has been published:

**Published**

← Shores mapping

Operation Details Tasks Flights Documents

**The new operation status is Published**

**Click here to cancel a published operation**

**Click here to indicate a flight take off**

Cancel operation Take off

**Allowed**

Legislation Airspace Weather

5 disclaimers

4 positives

Operation Area [View](#)

**Operation Parameters** [View](#)

Operation type	Certification Level
VLOS	Advanced
Drone	Pilot
Lockheed Martin - Indago	Latulippe Pauline
Start time	End time
03/05/2021 14:00:00	03/05/2021 16:00:00

Operation: Shores mapping  
Indago Lockheed Martin  
Operation validated

Operation: Shores mapping  
Indago Lockheed Martin  
Operation published



You will not be able to edit a drone operation after its publication. Do not publish an operation before you have finished editing it.

## 6.7. Step 5: Manage tasks and permission requests

As shown on the example below, the validation results indicate whether actions are required for the operation. Additionally, a red notification icon is displayed to the left of the Tasks tab to indicate there are actions required. The notification icon contains a number which corresponds with the number of actions outstanding. The *Tasks* tab allows the user to process the actions required.

The screenshot displays the 'Yorkton Lake' operation management interface. At the top, there's a 'Draft' status and a navigation bar with 'Operation Details', 'Tasks', 'Flights', and 'Documents'. The 'Tasks' tab is highlighted, and a red notification icon with the number '1' is visible to its left. An orange callout bubble points to the 'Tasks' tab with the text: 'Click here to open the Tasks tab'. Below the navigation bar, there's a map showing the operation area. An orange callout bubble points to the map with the text: 'The validation results indicate that an action is required to be processed in the Tasks tab'. To the right of the map, there's a sidebar with a red header 'Action required'. Under the 'Legislation' tab, it shows '1 action required' with a red exclamation mark icon. The text below states: 'Your requested operation is inside controlled airspace at or below the lowest altitude threshold of the NAV CANADA grid; therefore, an automatic authorization will be issued when submitting a permission request. Check the tasks tab for more information.' Below this, there are two expandable sections: '6 disclaimers' and '2 positives'. At the bottom, there's a table of 'Operation Parameters' with columns for 'Operation type', 'Certification Level', 'Activity', 'Drone', 'Pilot', 'Start time', and 'End time'. The table contains the following data:

Operation type	Certification Level	Activity	Drone	Pilot	Start time	End time
VLOS	Advanced	Photo/Videography	Lockheed Martin - Indago	Latulippe Pauline	03/05/2021 16:15:30	03/05/2021 17:15:30

The *Tasks* tab lists the *permission requests* related to the operation and displayed in the following categories based on their status:

- Action Required: permission requests that need to be processed.
- Submitted: permission requests that have been submitted to NAV CANADA.
- Resolved: permission requests that have been resolved.

**P**

Draft

← Yorkton Lake

Operation Details **Tasks** Flights Documents

Cancel operation Publish operation

**Action Required**

Draft  
Permission Request - CZWG SENTRY

**Submitted**

**Resolved**

The three categories below sort the tasks by status

The category Action Required contains one task



The validation results will indicate when you must obtain a permission to conduct the drone operation.

A red notification icon will also appear to the left of the Task tab when there are unresolved actions applicable to your operation.

**S**

Published

← Yorkton Lake

Operation Details **Tasks** Flights Documents

Cancel operation Take off

**Action Required**

Initiated CYQV102221A01  
Permission Request - CZEG SENTRY

Submit Cancel View Details

**Resolved**

Notification icon indicating there are unresolved actions

### 6.7.1. Why do you need permissions?

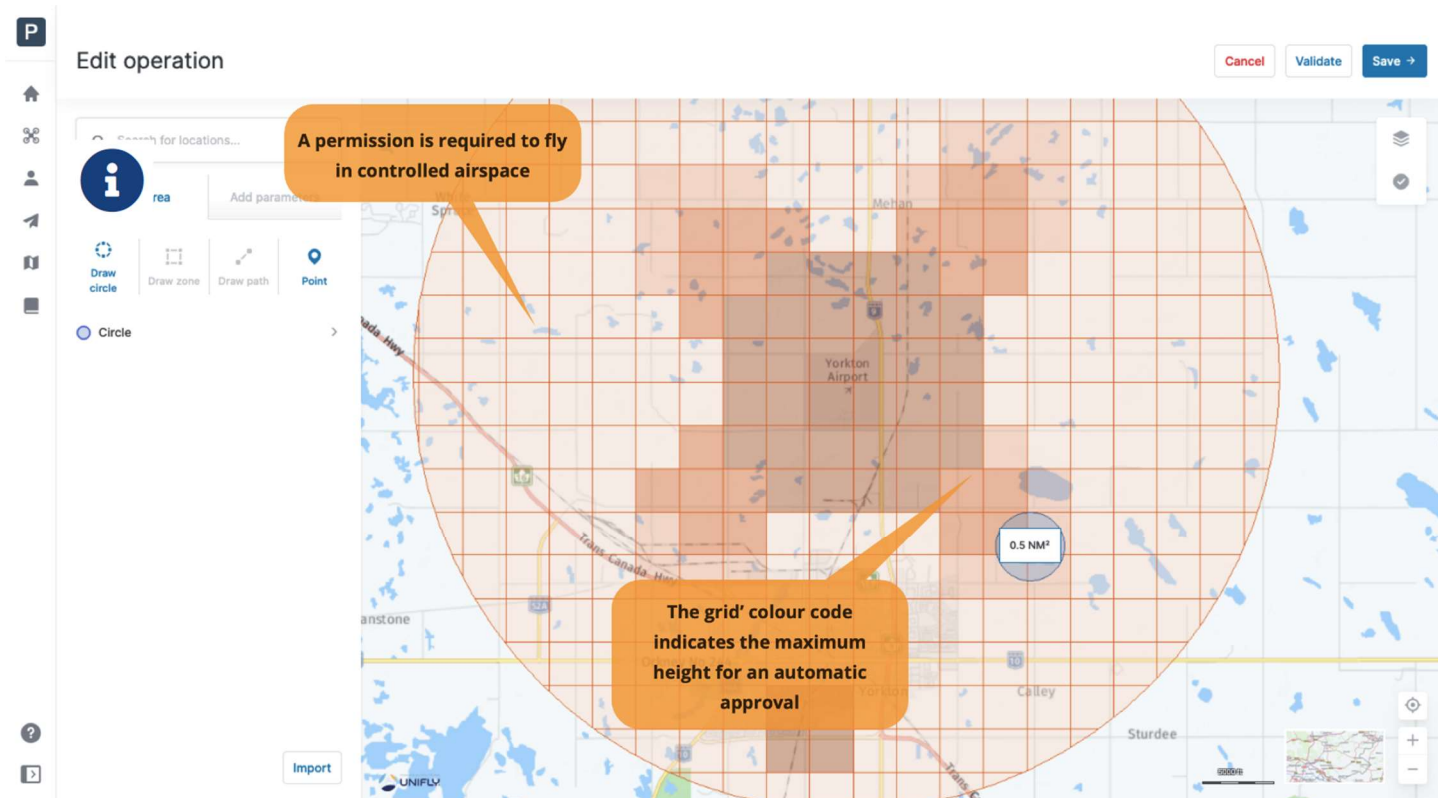
As defined in the *Canadian Aviation Regulations* Part IX, permissions are required to conduct *Advanced* operations in airspace controlled by NAV CANADA.

Permission requests are evaluated either automatically or manually:

- *Auto Approval*: permission requests that are automatically approved in NAV Drone.
- *Further coordination required*: permission requests that require a review by NAV CANADA before they can be approved or rejected.

Whether a permission request is characterised as *Auto Approval* or *Further coordination required* depends on the height and location of the operation's flight zone.

When creating a flight zone for an *Advanced* operation, airspace controlled by NAV CANADA is identified on the map by a grid with a colour assigned to each cell. That colour code indicates the maximum height at which an operation's permission request can be automatically approved in NAV Drone. Above that maximum height, permission requests will require further review by NAV CANADA when submitted.



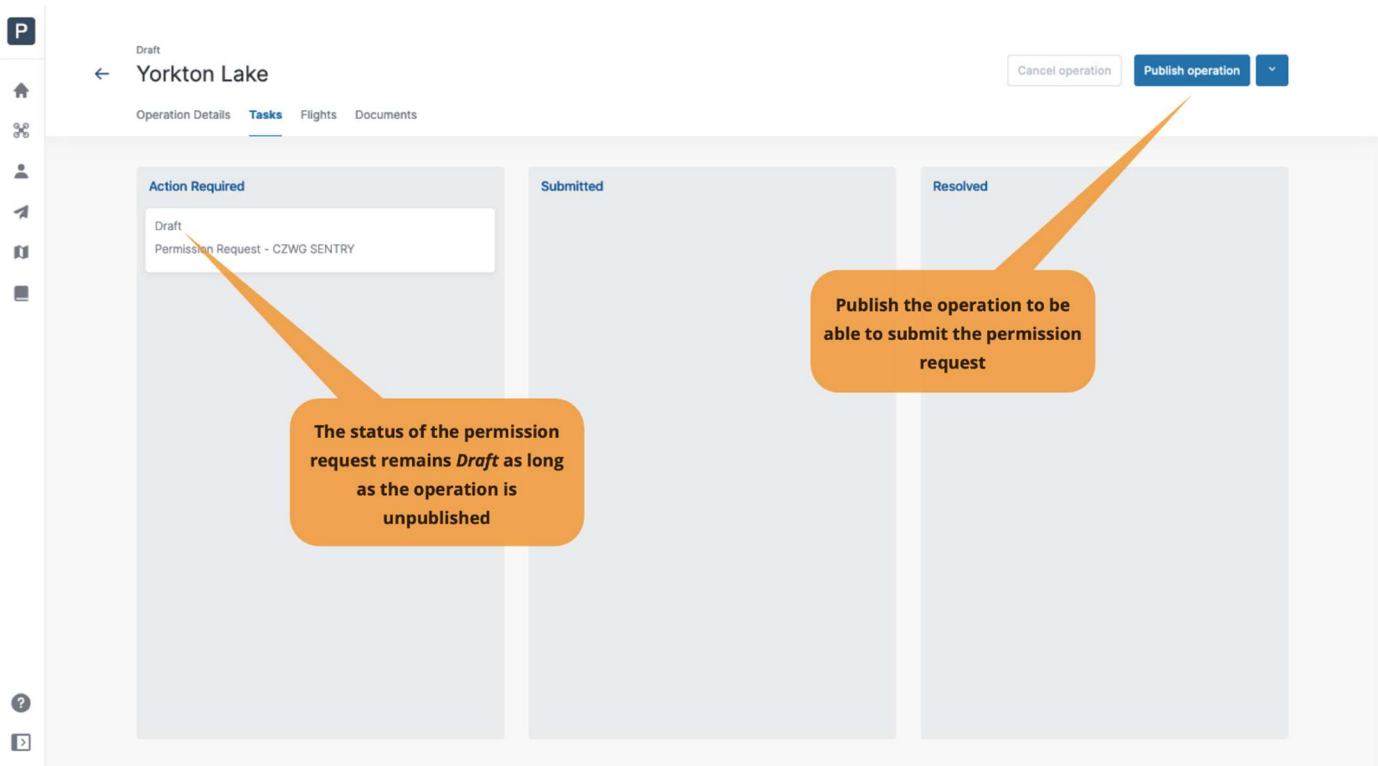
The sections below present the workflow to submit and track the status of a permission request.

If the operation flight zone overlaps multiple NAV CANADA control zones, NAV Drone will generate a separate task (permission request) for each affected control zone in the Action Required category. Each task will need to be submitted and assessed independently.

### 6.7.2. Permission requests eligible for auto approval

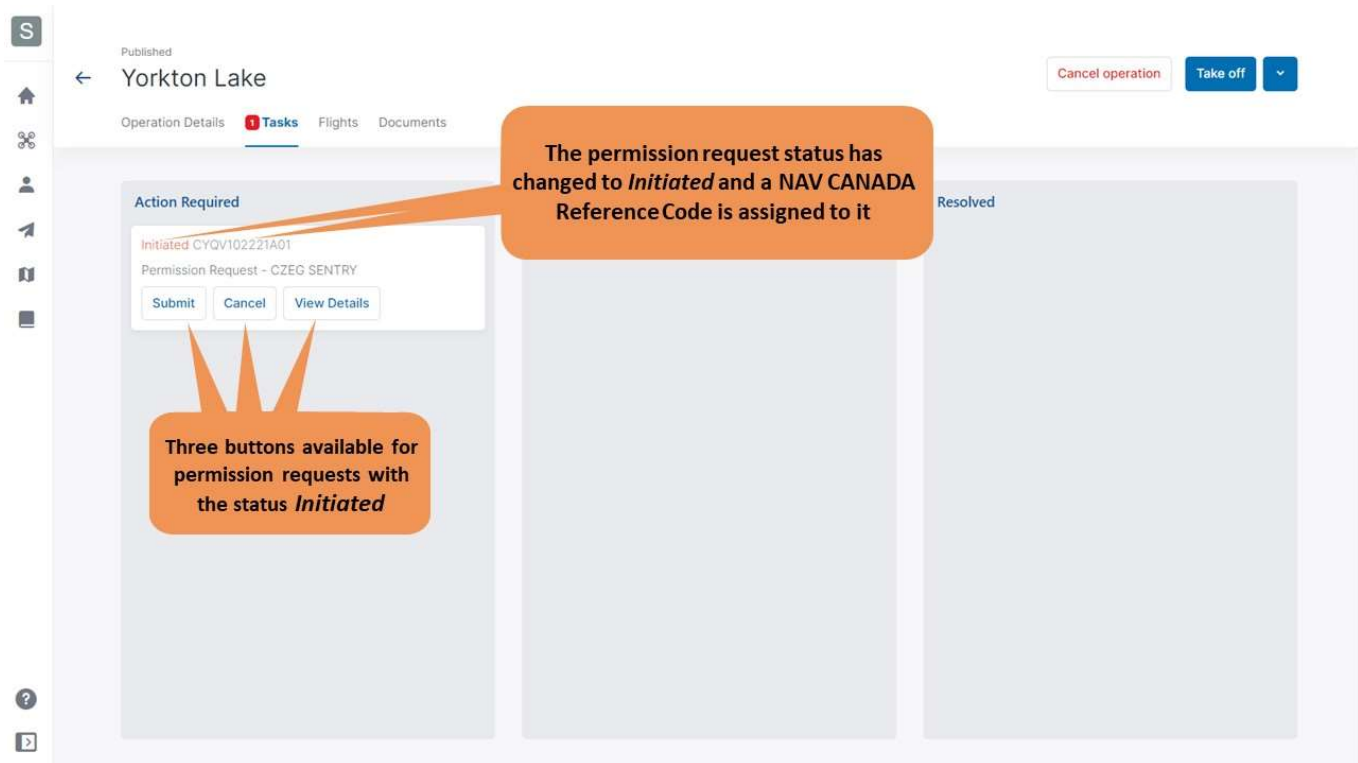
In airspace controlled by NAV CANADA, when the height of an *Advanced* operation is at or below the maximum height of the affected grid cells on the map, the permission request may be automatically approved in NAV Drone once submitted.

As indicated below, a permission request associated with a *Draft* operation will also have the status *Draft*.



To submit a permission request, make sure that the operation has been *Published*. See section [Step 4: Publish an operation](#).

When the operation is published, the status of the permission request changes to *Initiated* and a *NAV CANADA Reference Code* is assigned to the permission request by NAV Drone.



Three buttons are available for permission requests with the status *Initiated*:

- *Submit*: clicking on that button will display a dialog box to provide additional information, as shown below.
- *Cancel*: clicking on that button will cancel the permission request.
- *View Details*: clicking on that button will provide additional information about the permission request, such as the relevant authority and the *Activity* (history of events associated with this permission request).

Permission

At maximum operation altitude/distance, what is the process and time required to terminate the flight in event of emergency?

Land immediately

Minutes:

1

Description of pre-programmed RPAS behavior procedures and flight profiles to be followed in the event of a lost C2 link:

Land immediately

Minutes:

1

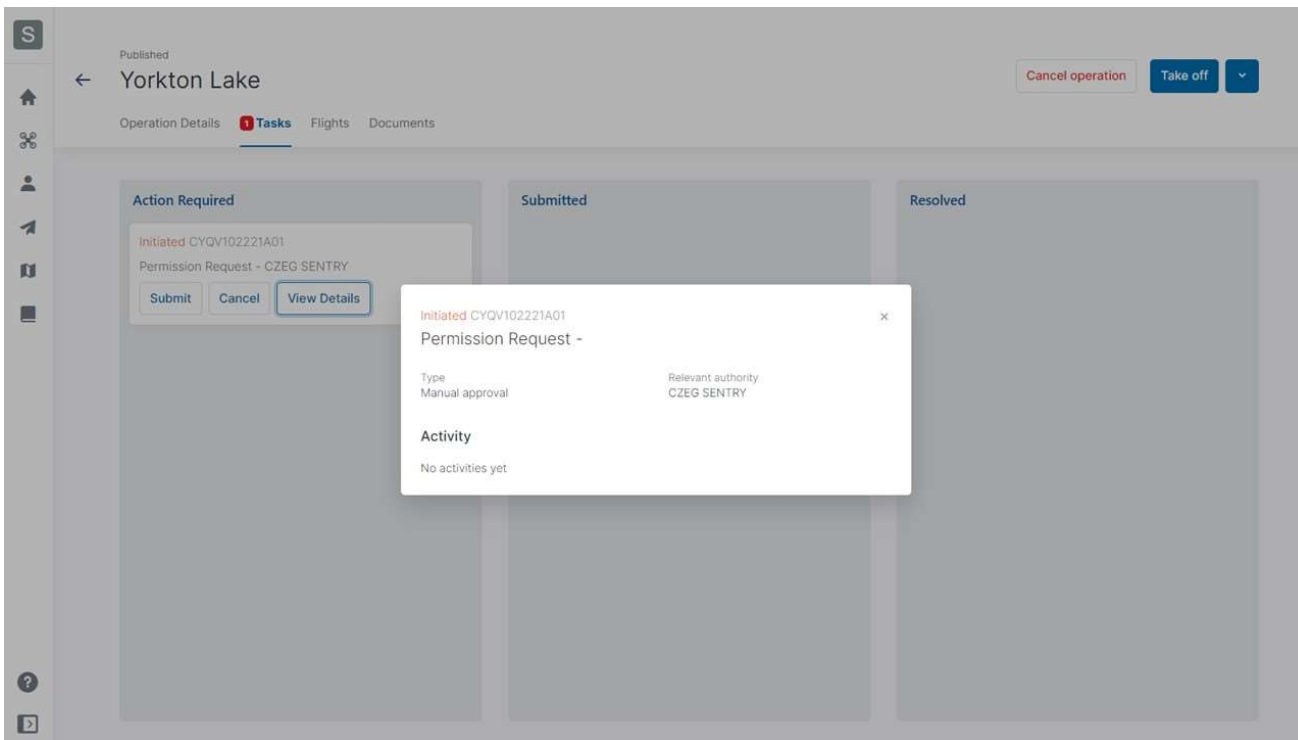
If the operation requires an SFOC, include the number in this field:

Additional remarks, or in case of a re-submit of a previous authorization request, please add the Reference Code of the previous request

File Upload

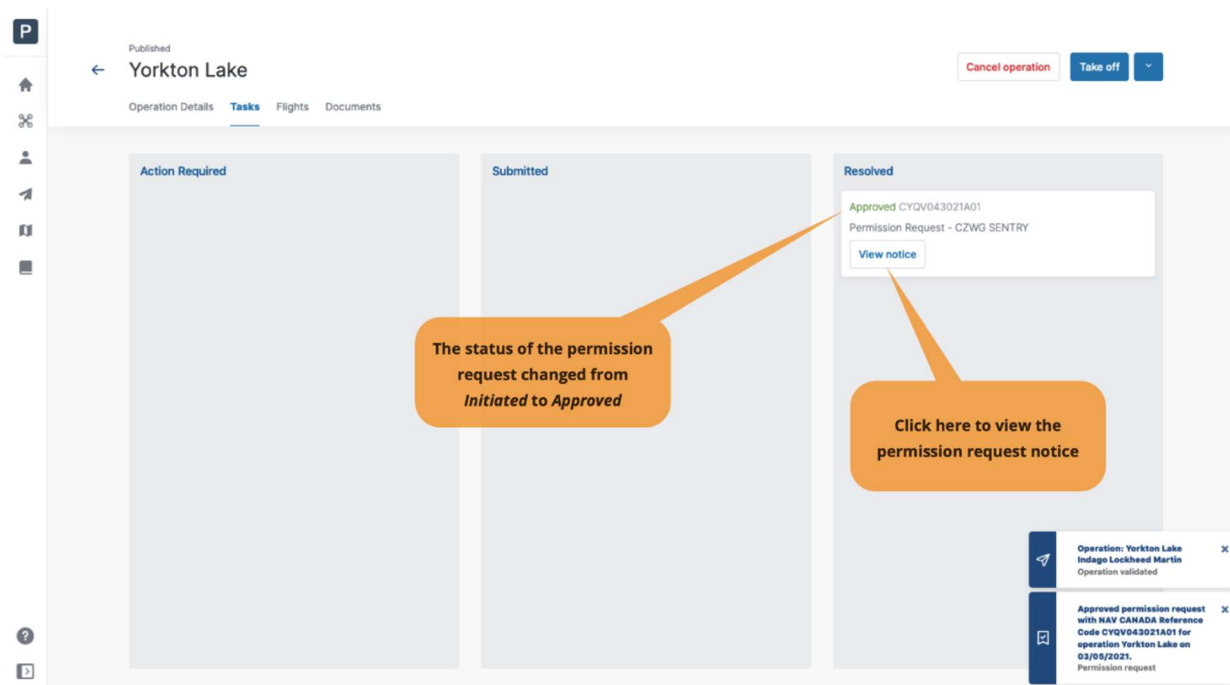
Drop file here

Cancel OK



When a submitted permission request is eligible for auto approval, NAV Drone automatically approves the permission request and changes its status to *Approved*.

The approved permission request appears in the *Resolved* category and an email is sent to the user's email address.



The [ **View notice** ] button provides access to the permission request notice, which contains all information related to the permission request. This notice can be downloaded as a PDF as proof that the operation is allowed.



Published

← Yorkton Lake

Operation Details Tasks Flights Documents

Action Required

Resolved

Approved CYQV043021A01  
Permission Request - CZWG SENTRY

View notice

Click here to view the permission request details

Click here to download the permission request notice as PDF

Approved CYQV043021A01  
Permission Request -

View Details

Authorization text

**YOUR RPAS FLIGHT REQUEST FOR ACCESS TO CONTROLLED AIRSPACE IS AUTHORIZED**

- CYQV043021A01 RPAS Flight Request for access to controlled airspace is authorized within the stated operational parameters, including flight area, altitude and time constraints.
- Pauline Latulippe is responsible for the safety of the operation and for compliance with the Canadian Aviation Regulations (CAR). This does not constitute a waiver of any applicable laws.
- This authorization is subject to cancellation at any time upon notice by NAV CANADA.
- Altitude limits are absolute values above ground level which shall not be added to the height of any structure.
- RPAS pilots are responsible to check the airspace they are operating in and familiarize themselves with all pertinent NOTAMS (<https://plan.navcanada.ca/wxrecall/>).
- Always ensure communication capability during the operation.
- Pilot in command must abort the flight in the event of an unpredicted obstacle or an emergency.
- Ensure that any transponder is turned off.
- In the event of a flyaway, immediately contact Regina FSS and provide the following information:
  - Last observed position and altitude
  - Direction of flight and remaining battery life

Download as PDF

Published

← Yorkton Lake

Operation Details Tasks Flights Documents

Action Required

Resolved

Approved CYQV043021A01  
Permission Request - CZWG SENTRY

View notice

Click here to come back to the permission request notice

Approved CYQV043021A01  
Permission Request -

View notice

Type  
Auto approval

Relevant authority  
CZWG SENTRY

At maximum mission altitude/distance, what is the process and time required to terminate the flight in event of emergency?  
Land immediately

Minutes:  
1

Description of pre-programmed RPAS behavior procedures and flight profiles to be followed in the event of a lost C2 link:  
Land immediately

Minutes:  
1

If the operation requires an SFOC, include the number in this field:

Activity

30/04/2021 16:23:29

CZWG SENTRY  
Permission has been auto approved. Operation upper limit is below overlapping grid cells

16:23:29



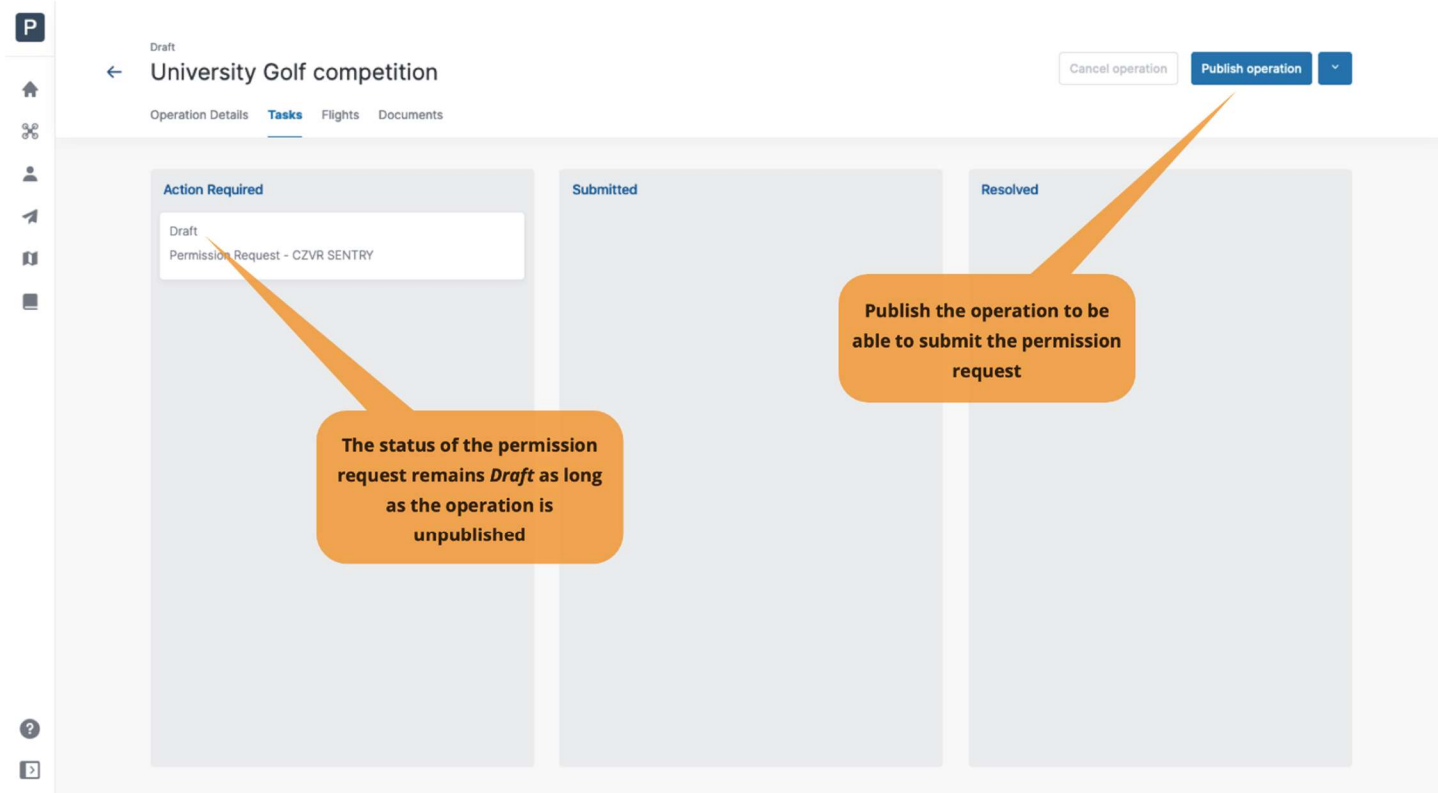
NAV CANADA reserves the right to rescind, at any time, a permission request that was approved. In that case, the operation is no longer allowed. See section [Rescinded permission requests](#) for more details.



### 6.7.3. Permission requests requiring further coordination

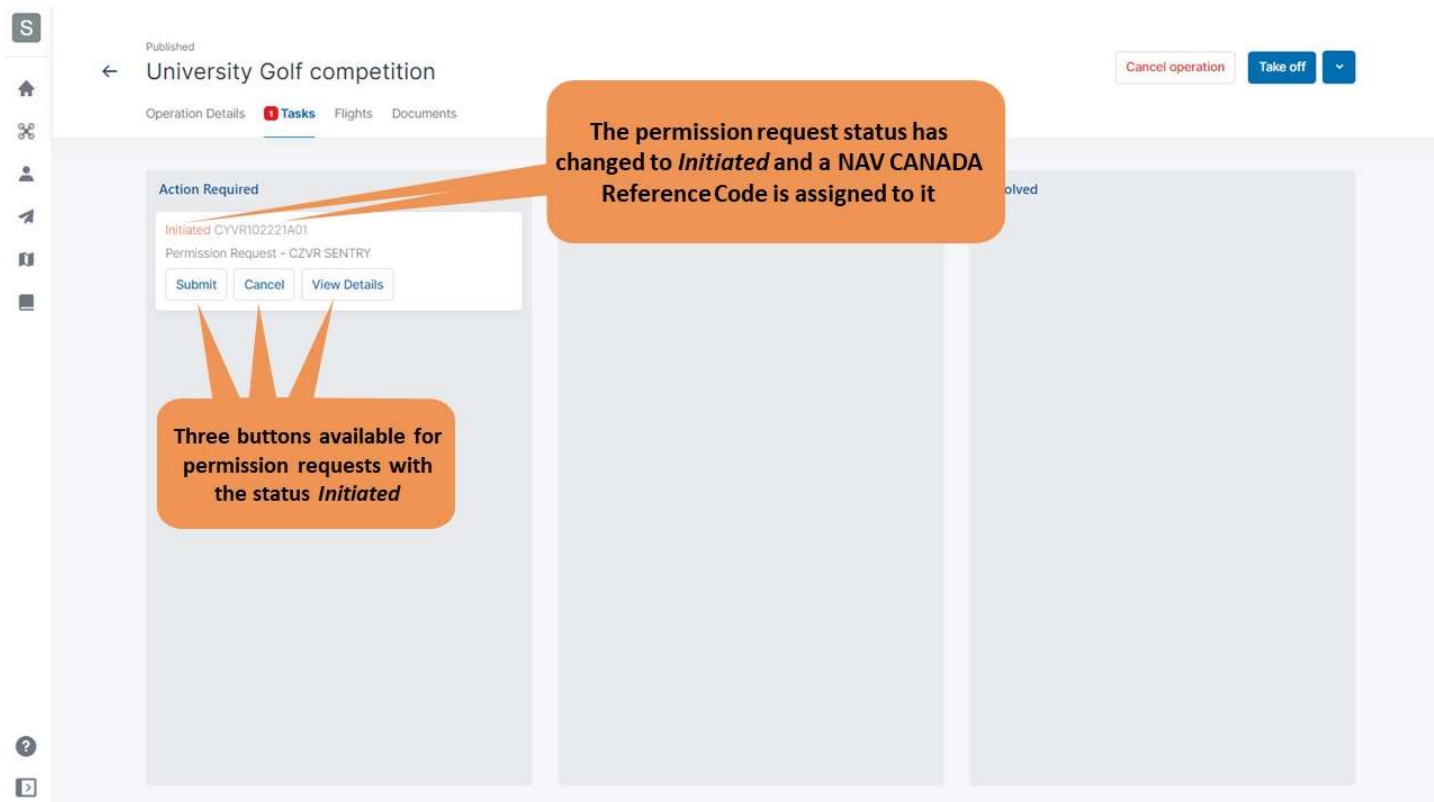
In airspace controlled by NAV CANADA, when the operation's height is above the maximum height of the grid cells on the map, the permission request will require a review by NAV CANADA once submitted.

A permission request associated with a *Draft* operation will have the status *Draft*, as indicated below.



To submit a permission request, make sure that the operation has been *Published*. See section [Step 4: Publish an operation](#).

When the operation is published, the status of the permission request changes to *Initiated* and a *NAV CANADA Reference Code* is assigned to the permission request by NAV Drone.



Three buttons are available for permission requests with the status *Initiated*:

- **Submit:** clicking on that button will display a dialog box providing additional information, as shown below.
- **Cancel:** clicking on that button will cancel the permission request.
- **View Details:** clicking on that button will provide additional information about the permission request, such as the relevant authority and the *Activity* (history of events associated with this permission request).

Published

← University Golf competition

Operation Details **Tasks** Flights Documents

**Action Required**

Initiated CYVR102221A01

Permission Request - CZVR SENTRY

Submit Cancel View Details

**Permission**

At maximum operation altitude/distance, what is the process and time required to terminate the flight in event of emergency?

Land immediately

Minutes:

1

Description of pre-programmed RPAS behavior procedures and flight profiles to be followed in the event of a lost C2 link:

Land immediately

Minutes:

1

If the operation requires an SFOC, include the number in this field:

NA

Additional remarks, or in case of a re-submit of a previous authorization request, please add the Reference Code of the previous request

File Upload

Drop file here

Cancel OK

Cancel operation Take off

Resolved

When a submitted permission request requires further coordination, NAV Drone sends the permission request to NAV CANADA and changes its status to *Sent*, moving the permission request to the *Submitted* category. The user still has the option to cancel the permission request or to view the permission request details.

Published

← University Golf competition

Operation Details **Tasks** Flights Documents

**Action Required**

**Submitted**

Sent CYVR043021A01

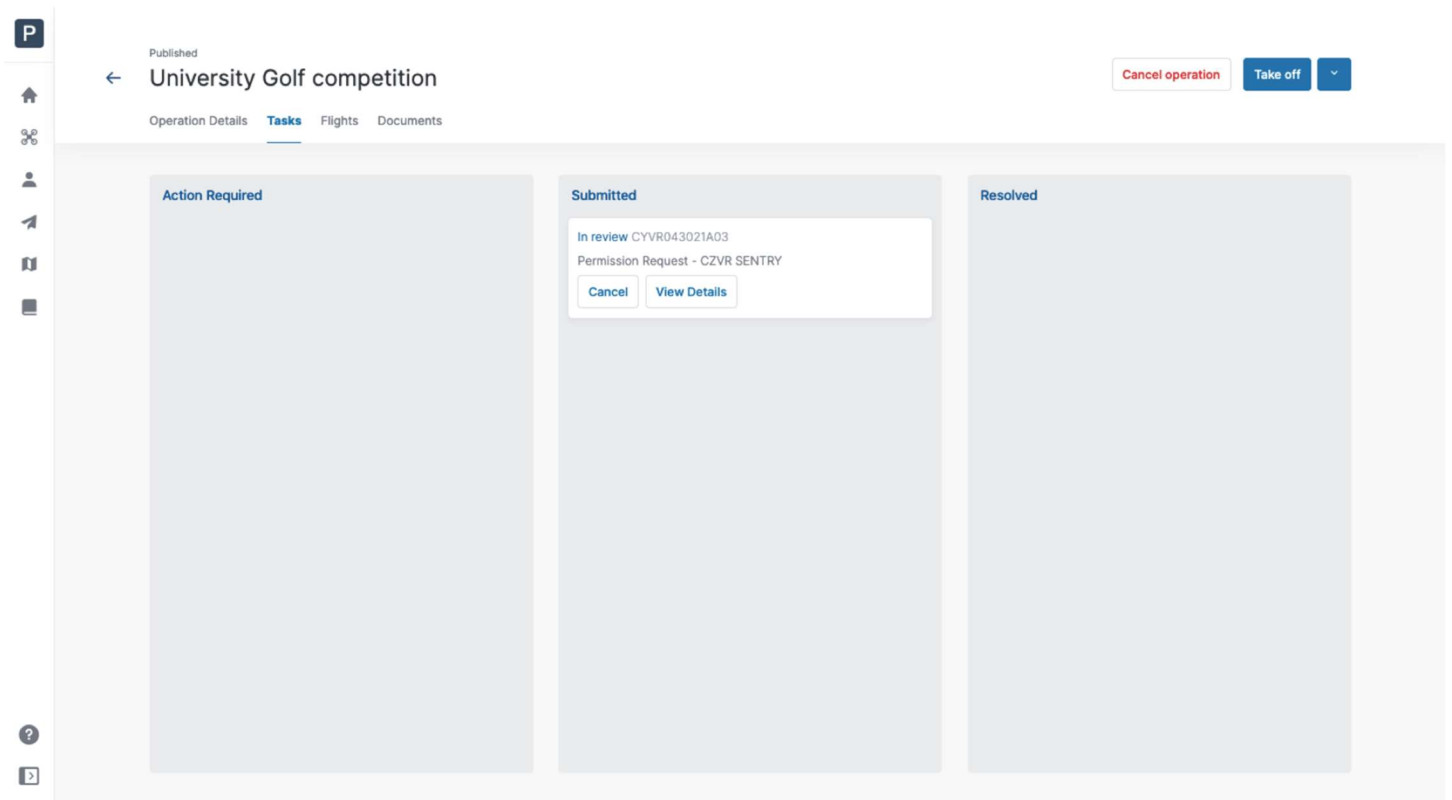
Permission Request - CZVR SENTRY

Cancel View Details

**Resolved**

Cancel operation Take off

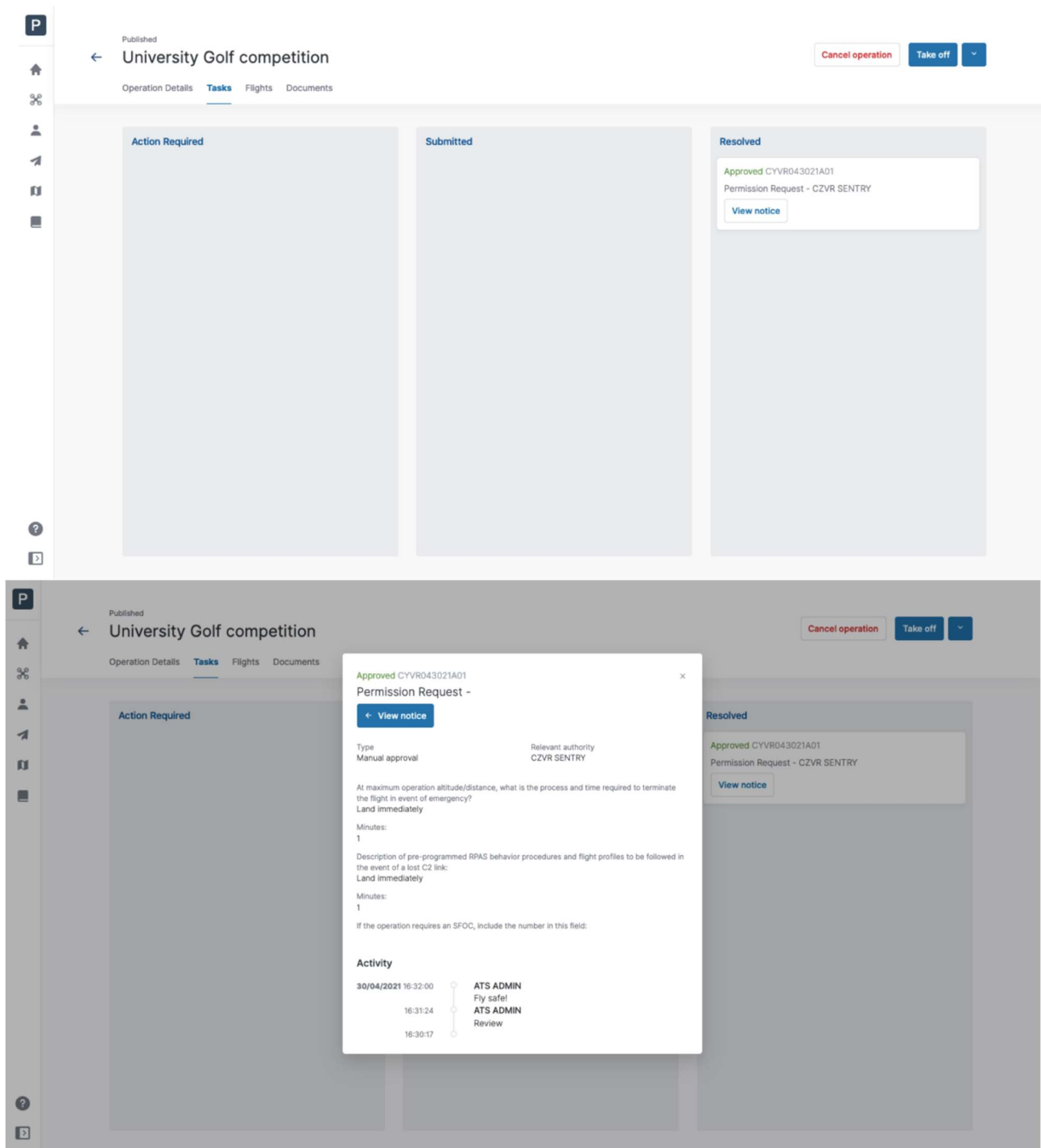
A permission request with a *Sent* status means that the permission request has been successfully submitted to NAV CANADA. When NAV CANADA starts the review, the company will change the status of the permission request to *In review* to notify the user.



The result of the review will be one of the following three options:

- *Approved*: after review, NAV CANADA determined that the operation is **allowed**.
- *Rejected*: after review, NAV CANADA determined that the operation is **not allowed**.
- *Needs action*: after review, NAV CANADA determined that an action by the operator is required before a decision can be made.

When a permission request has been *Approved*, it is moved to the *Resolved* category and an email is sent to the user's email address. The [ **View notice** ] button provides access to the permission request notice, which contains all information related to the permission request and can be downloaded as a PDF as proof that the operation is allowed.



When a permission request has been *Rejected*, it is moved to the *Resolved* category.

When a permission request *Needs action*, it is moved to the *Action required* category.

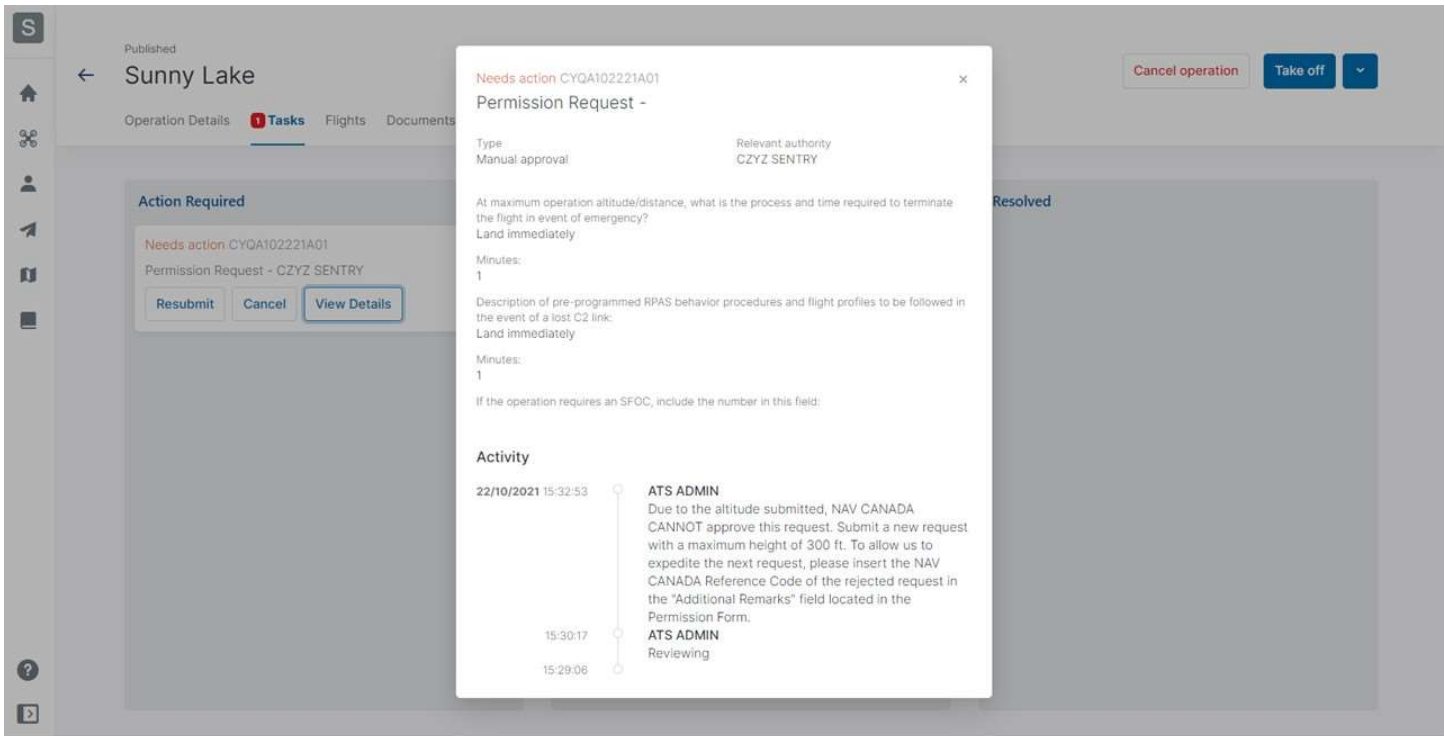
In both cases, users will receive an email from NAV CANADA explaining why their request was rejected or needs action. This information can also be viewed on the permission request details screen under *Activity*.



NAV CANADA reserves the right to rescind, at any time, a permission request that was approved. In that case, the operation is no longer allowed. See section [Rescinded permission requests](#) for more details.

## 6.7.4. Permission requests with status *Needs action*

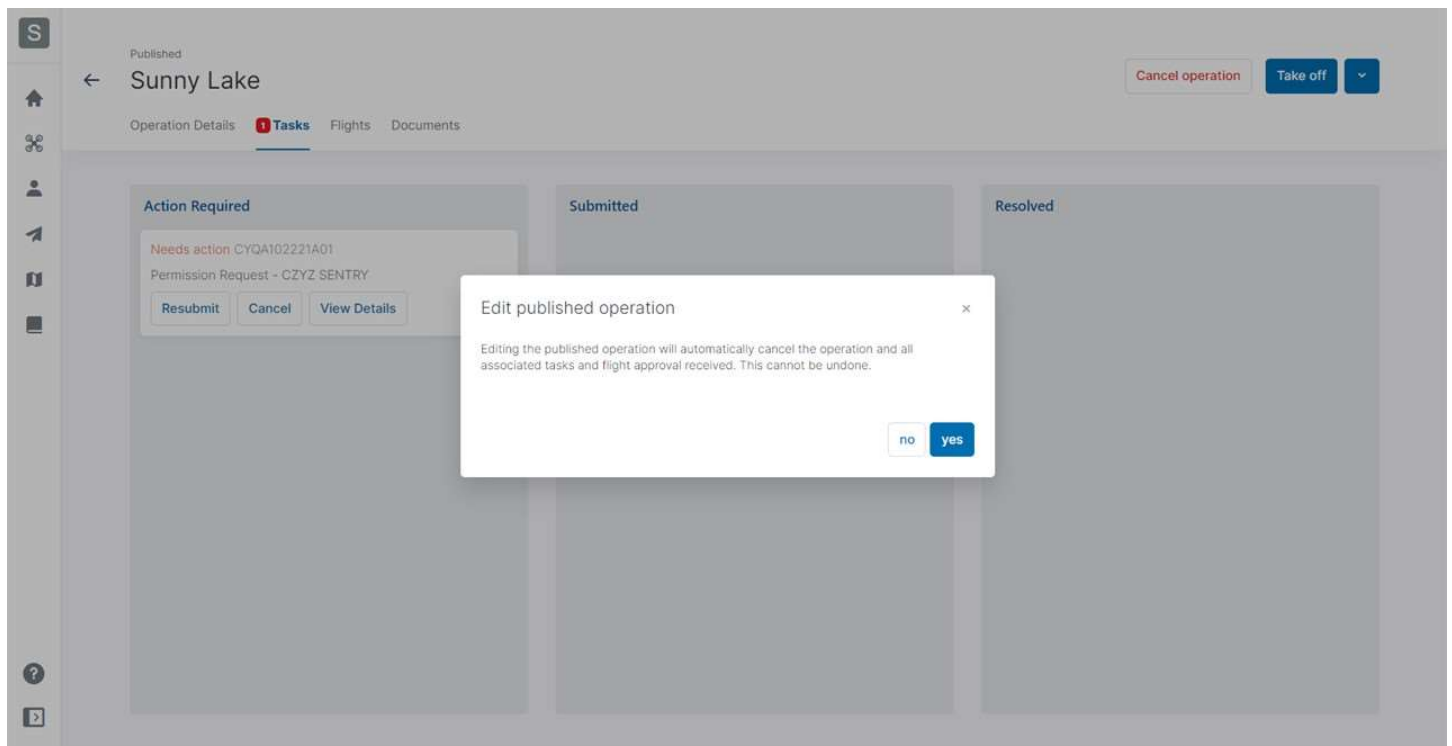
When a permission request reviewed by NAV CANADA and its status changes to *Needs action*, changes to the operation might be required depending on the reason provided by NAV CANADA.



When NAV CANADA requires change to the flight zone and/or the operation parameters, editing the published permission request will cancel the previous request and all associated tasks, generating a new permission request. Provide the *NAV CANADA Reference Code* of the previous (cancelled) request for quicker evaluation.

Follow the procedure below when changes to the operation are required:

1. Click on the ▼ button at the top right of the screen and select *Edit*.
2. When prompted with the warning message as shown below, click on the **[ yes ]** button to proceed.
3. Make the required changes to the operation.
4. Save the operation as *Draft*.
5. Publish the operation.



A new permission request has been created for the operation. The remainder of the procedure is identical as described in section [Permission requests requiring further coordination](#).



NAV CANADA reserves the right to rescind at any time an approved permission request. In that case, the operation is no longer allowed. See section [Rescinded permission requests](#) for more details.

### 6.7.5. Rescinded permission requests

If a permission request is rescinded, NAV CANADA will provide the reason for the status change.

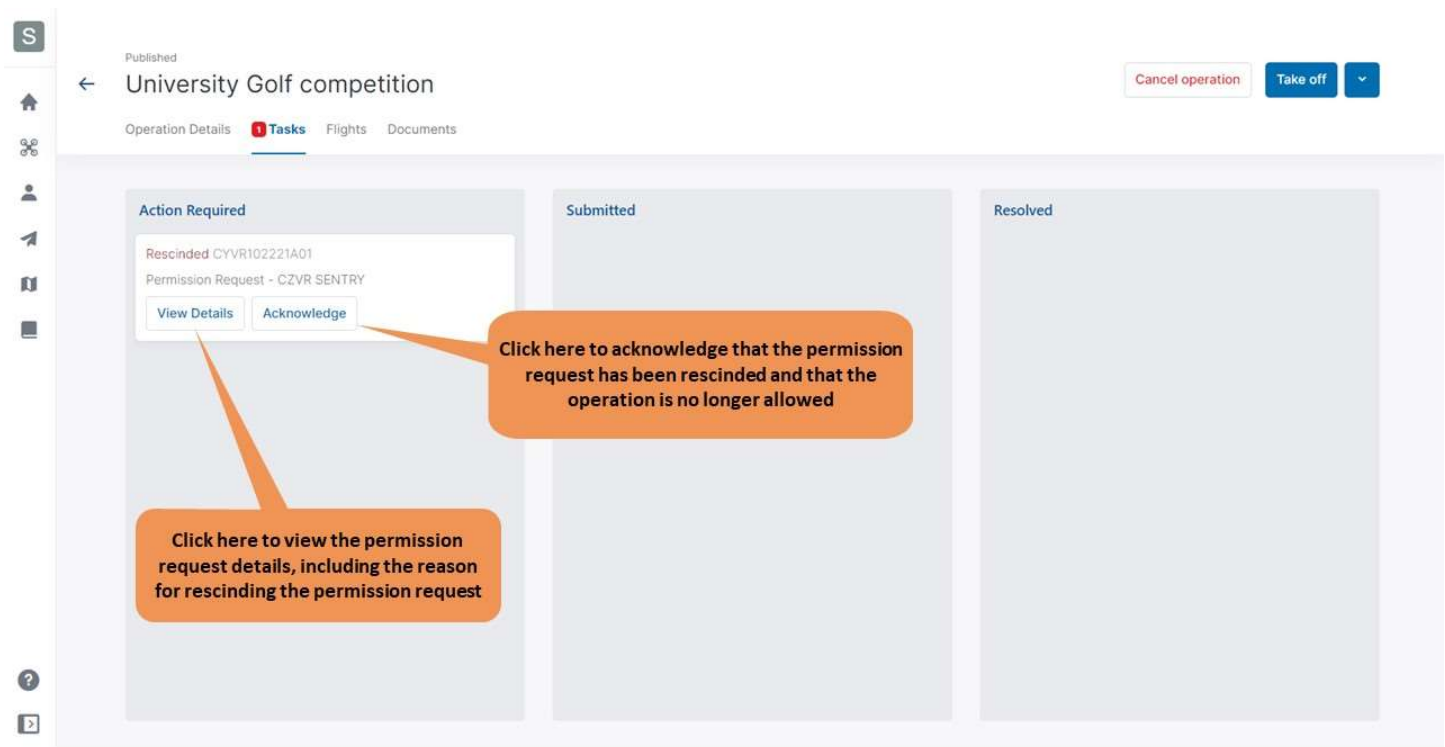
There are three methods a rescinded permission request will be communicated to the user:

- If the user is logged in to the system at the time the permission request is rescinded, a notification will be displayed at the bottom right of the screen.
- An email is sent to the user's email address.
- The operation's validation status indicates that an action is required to acknowledge that the permission request has been rescinded. This task is also displayed in the operation's *Tasks* tab in the category *Action required*.



It is not common for a permission request to be rescinded by NAV CANADA.

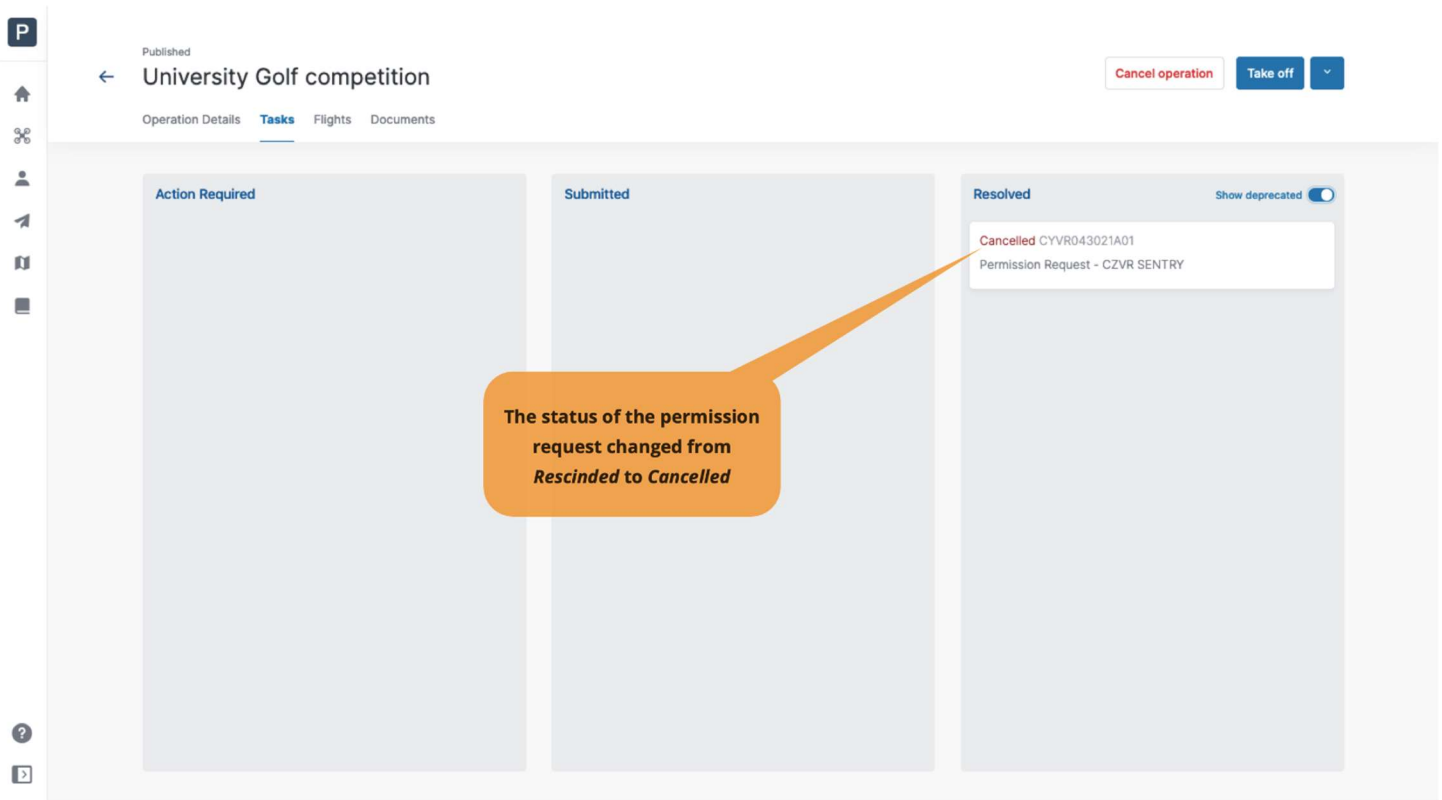
When it occurs, it is mandatory to acknowledge that the permission request has been rescinded to confirm that the operator understands that the operation is no longer allowed.



Clicking on the [ **View Details** ] button opens a dialog box that displays more information about the permission request. Information as to why the permission status has been changed can be viewed under *Activity*.

Clicking on the [ **Acknowledge** ] button changes the status of the permission request from *Rescinded* to *Cancelled* and moves it to the task category *Resolved*.





## 6.8. Log a flight

When selecting a published operation from the operations table, a **[ Take off ]** button is available at the top right of the screen. To log a flight in NAV Drone as the operation is being conducted in the field:

1. Click on the **[ Take off ]** button to indicate that a flight has just started (the drone is taking off). The **[ Take off ]** button is replaced by the **[ Land ]** button.
2. Click on the **[ Land ]** button to indicate that the flight has finished (the drone is landing). The **[ Land ]** button reverts back to the **[ Take off ]** button.

A flight is considered as one takeoff and landing sequence. Therefore, an operation can consist of multiple flights.

Flights can also be logged under your account using the NAV Drone Mobile app.



If the operation has unresolved actions, a warning message will be displayed to the user to confirm if they wish to continue with their takeoff. Unresolved actions mean you have not completed the permission request process and DO NOT have permission from NAV CANADA to fly in one or more control zones. Please complete any unresolved actions prior to takeoff.

Logging a flight in NAV Drone records the flight's start time, end time, and time flown, and associates this information with the drone and the pilot selected for this operation.

The operation's *Flights* tab provides a table that lists all flights logged in NAV Drone for that operation.

P

←

Published

Clareville

Cancel operation

Take off

Operation Details

Tasks

Flights

Documents

Q

Search

Filters

Drone	Takeoff ↑	Duration	Status	Pilot
EyeInTheSky-1 - Lockheed Martin Indago	30/04/2021 17:02:45	0:02:14	Landed	Pauline Latulippe
EyeInTheSky-1 - Lockheed Martin Indago	30/04/2021 17:05:41	0:03:36	Landed	Pauline Latulippe

Click here to log a flight for that operation

All flights logged for that operation are listed in the operation's flights table



Logging your flights in NAV Drone allows you to view your flight history from your logbook as described in section [Logbook](#).

S

←

Published

Clareville

Cancel operation

Take off

Operation Details

Tasks

Flights

Documents

Action Required

Initiated CYQW102421A01

Permission Request - CZUL SENTRY

Submit

Cancel

View Details

Submitted

Resolved

Take off warning

You have not submitted your Permission Request(s) for this operation or your request(s) are not approved. You DO NOT have permission to fly in one or more control zones. Proceed with Take off?

no

yes

Warning message displayed if the operation has unresolved actions.

## 6.9. Archive an operation

To archive an operation, select *Archive operation* action in the operation quick access menu (see section [Operation quick access menu](#)).

The screenshot shows a web application interface with a sidebar on the left containing navigation links: Dashboard, Gear, Users, Operations (selected), Flightmap, and Logbook. The main content area is titled 'Operations' and features a table with the following data:

Name	Drone	Pilot	Start time	End time	Duration	Validation	Status	Flight status
PDF Report	MENACE - D.	Patrick Jadin	01/12/2020 09:00:35	01/12/2020 10:00:35	1:00:00	Allowed	Published	Landed
Email 01	MENACE - D.	Patrick Jadin	29/11/2020 08:05:37	29/11/2020 09:05:37	1:00:00	Allowed	Published	Landed
Double same height	MENACE - D.	Patrick Jadin	28/11/2020 14:05:29	28/11/2020 15:05:29	1:00:00	Allowed	Published	Landed
Double	MENACE - D.	Patrick Jadin	28/11/2020 13:50:30	28/11/2020 14:50:30	1:00:00	Allowed	Published	Landed
Triple POC	MENACE - D.	Patrick Jadin	28/11/2020 11:35:17	28/11/2020 12:35:17	1:00:00	Allowed	Published	Landed
Double TRT	MENACE - D.	Patrick Jadin	22/11/2020 13:35:58	22/11/2020 14:35:58	1:00:00	Allowed	Published	Landed
Email 02	MENACE - D.	Patrick Jadin	22/11/2020 09:15:00	22/11/2020 09:40:00	0:25:00	Allowed	Published	Landed
MACAZA under	MENACE - D.	Patrick Jadin	21/11/2020 16:40:22	21/11/2020 17:40:22	1:00:00	Not Allowed	Published	Landed
MACAZA Above	MENACE - D.	Patrick Jadin	21/11/2020 10:25:02	21/11/2020 11:25:02	1:00:00	Not Allowed	Published	Landed
Perf Android Trial 04	MENACE - D.	Patrick Jadin	20/11/2020 10:12:46	20/11/2020 10:42:46	0:30:00	Allowed	Published	Landed

A context menu is open over the 'MACAZA under' row, displaying the following actions: View Details, Flight report, Publish operation, Edit, Copy, Cancel operation, Archive operation (highlighted), and Delete operation.

The operation will be removed from the operations table.

To retrieve the archived operations, select *Archived?* filter (see [Filter table entries](#) in the Table functionalities section) with checkbox yes selected. The operations table will be filtered by archived operations.

Patrick Jadin

Dashboard

Gear

Users

Operations

Flightmap

Logbook

Create Operation

Operations

Search

Filters

Archived?: yes

yes

no

Name

Drone

Pilot

Start time

End time

Duration

Validation

Status

Flight status

Triple POC

MENACE - D.

Patrick Jadin

28/11/2020 11:35:17

28/11/2020 12:35:17

1:00:00

Allowed

Published

Landed

Icon update

MENACE - D.

Patrick Jadin

05/11/2020 18:14:29

05/11/2020 18:42:29

0:28:00

Allowed

Draft

Landed

By selecting *Unarchive operation* in the operation quick access menu, the operation will appear in the operations table.

Patrick Jadin

Dashboard

Gear

Users

Operations

Flightmap

Logbook

Create Operation

Operations

Search

Filters

Archived?: yes

Name

Drone

Pilot

Start time

End time

Duration

Validation

Status

Flight status

Triple POC

MENACE - D.

Patrick Jadin

28/11/2020 11:35:17

28/11/2020 12:35:17

1:00:00

Allowed

Published

Landed

Icon update

MENACE - D.

Patrick Jadin

05/11/2020 18:14:29

05/11/2020 18:42:29

0:28:00

Allowed

Draft

View Details

Flight report

Publish operation

Edit


Copy

Cancel operation

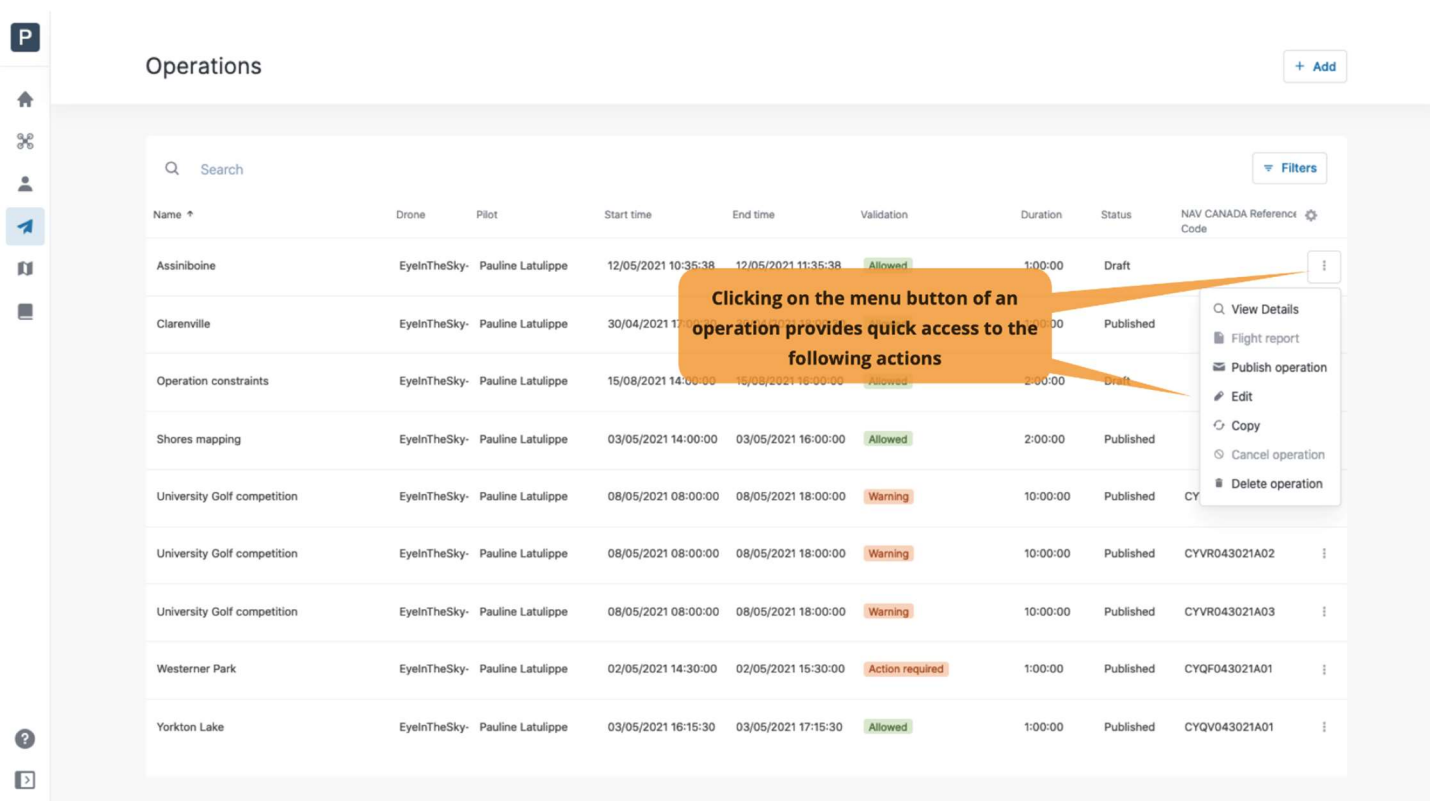
Unarchive operation

Delete operation

## 6.10. Operation quick access menu

In the operations table, the menu icon (  ) on the right side of each operation provides a quick access to the following actions:

- *View Details*: opens the operation details.
- *Flight report*: downloads a flight report for the selected operation.
- *Publish operation*: publishes a draft operation. If an operation is already *published*, this button is disabled.
- *Edit*: allows to edit the operation flight zone and parameters.
- *Copy*: creates a copy of the selected operation.
- *Cancel operation*: cancels the operation. Only *published* operations can be cancelled. Cancellation is required before deleting a *published* operation.
- *Archive operation*: The operation is archived and no longer displayed in the operations table. It can be recovered using the filter.
- *Delete operation*: deletes a draft or a cancelled operation.



The screenshot displays the 'Operations' table in the NAV Drone Web application. The table has columns for Name, Drone, Pilot, Start time, End time, Validation, Duration, Status, and NAV CANADA Reference Code. A callout box points to the menu icon (three dots) on the right side of a row, indicating that clicking on it provides quick access to the following actions: View Details, Flight report, Publish operation, Edit, Copy, Cancel operation, and Delete operation.

Name *	Drone	Pilot	Start time	End time	Validation	Duration	Status	NAV CANADA Reference Code
Assiniboine	EyeInTheSky-	Pauline Latulippe	12/05/2021 10:35:38	12/05/2021 11:35:38	Allowed	1:00:00	Draft	
Clarendville	EyeInTheSky-	Pauline Latulippe	30/04/2021 17:00:00	30/04/2021 18:00:00	Allowed	1:00:00	Published	
Operation constraints	EyeInTheSky-	Pauline Latulippe	15/08/2021 14:00:00	15/08/2021 16:00:00	Allowed	2:00:00	Draft	
Shores mapping	EyeInTheSky-	Pauline Latulippe	03/05/2021 14:00:00	03/05/2021 16:00:00	Allowed	2:00:00	Published	
University Golf competition	EyeInTheSky-	Pauline Latulippe	08/05/2021 08:00:00	08/05/2021 18:00:00	Warning	10:00:00	Published	CYVR043021A02
University Golf competition	EyeInTheSky-	Pauline Latulippe	08/05/2021 08:00:00	08/05/2021 18:00:00	Warning	10:00:00	Published	CYVR043021A03
University Golf competition	EyeInTheSky-	Pauline Latulippe	08/05/2021 08:00:00	08/05/2021 18:00:00	Warning	10:00:00	Published	CYVR043021A01
Westerner Park	EyeInTheSky-	Pauline Latulippe	02/05/2021 14:30:00	02/05/2021 15:30:00	Action required	1:00:00	Published	CYQF043021A01
Yorkton Lake	EyeInTheSky-	Pauline Latulippe	03/05/2021 16:15:30	03/05/2021 17:15:30	Allowed	1:00:00	Published	CYQV043021A01

## 6.11. Table functionalities

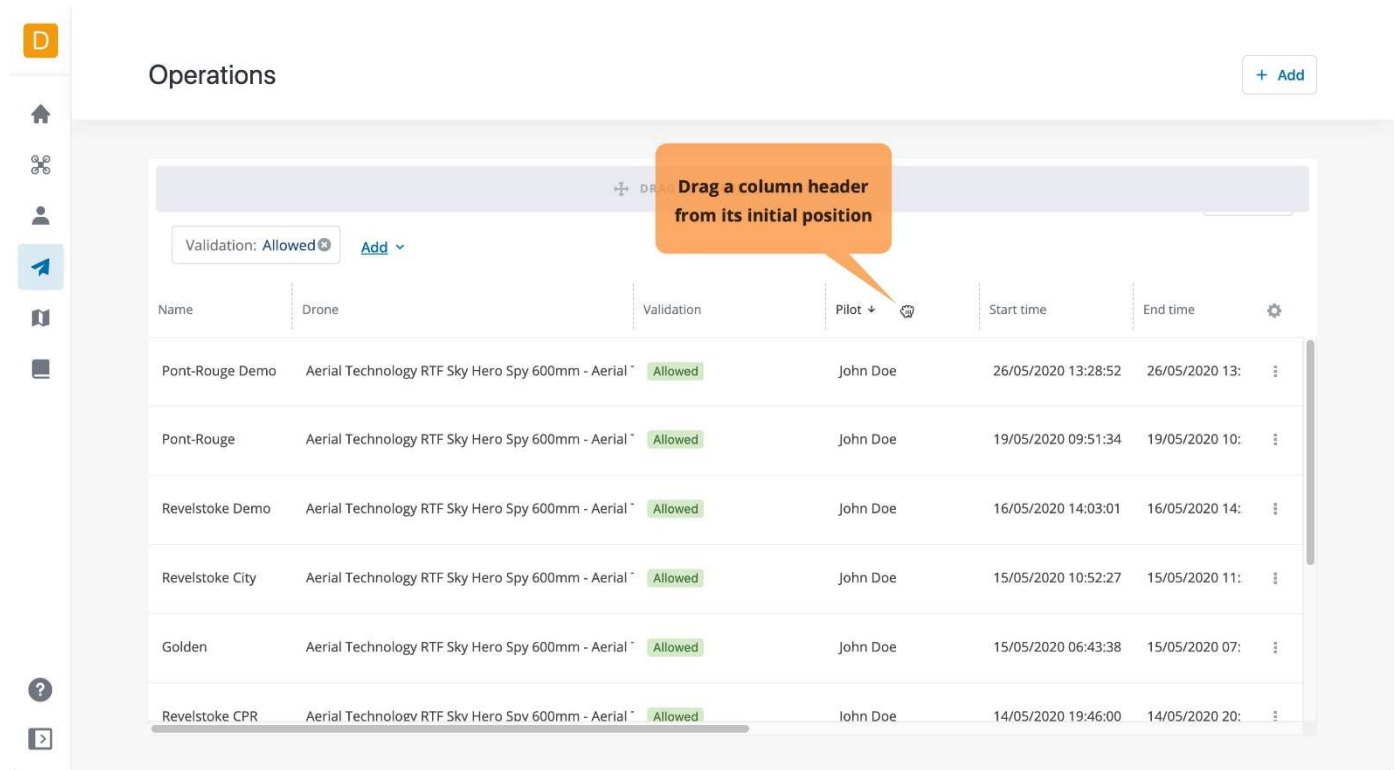
Initially empty upon the creation of a new account, the operations table will contain all your operation entries. This section presents functionalities available in the NAV Drone Web application to help you find and organize your operations as needed.

### 6.11.1. Adjust a column width

To adjust a column width, move your mouse cursor into the column header area and place it on the border between two columns. Drag the border delimiter left or right to adjust the column width accordingly.

### 6.11.2. Reposition a column

To change the order of the columns, drag a column header from its initial position and drop it at the preferred column position.



The screenshot shows a web application interface for 'Operations'. On the left is a sidebar with icons for home, search, user, and other functions. The main area displays a table with the following columns: Name, Drone, Validation, Pilot, Start time, and End time. The 'Pilot' column header has a small downward arrow icon. An orange callout bubble with the text 'Drag a column header from its initial position' points to the 'Pilot' header. Above the table, there is a filter bar for 'Validation: Allowed' and an 'Add' button. The table contains six rows of data, each representing an operation with details like location, drone type, status, pilot, and timestamps.

Name	Drone	Validation	Pilot	Start time	End time
Pont-Rouge Demo	Aerial Technology RTF Sky Hero Spy 600mm - Aerial	Allowed	John Doe	26/05/2020 13:28:52	26/05/2020 13:
Pont-Rouge	Aerial Technology RTF Sky Hero Spy 600mm - Aerial	Allowed	John Doe	19/05/2020 09:51:34	19/05/2020 10:
Revelstoke Demo	Aerial Technology RTF Sky Hero Spy 600mm - Aerial	Allowed	John Doe	16/05/2020 14:03:01	16/05/2020 14:
Revelstoke City	Aerial Technology RTF Sky Hero Spy 600mm - Aerial	Allowed	John Doe	15/05/2020 10:52:27	15/05/2020 11:
Golden	Aerial Technology RTF Sky Hero Spy 600mm - Aerial	Allowed	John Doe	15/05/2020 06:43:38	15/05/2020 07:
Revelstoke CPR	Aerial Technology RTF Sky Hero Spy 600mm - Aerial	Allowed	John Doe	14/05/2020 19:46:00	14/05/2020 20:

And drop the column header at the preferred column position

Validation: Allowed [Add](#)

DRAG COLUMNS HERE TO GROUP

Name	Pilot		Drone	Validation	Start time	End time	
Pont-Rouge Demo	John Doe		Aerial Technology RTF Sky Hero Spy 600mm - Aerial	Allowed	26/05/2020 13:28:52	26/05/2020 13:	
Pont-Rouge	John Doe		Aerial Technology RTF Sky Hero Spy 600mm - Aerial	Allowed	19/05/2020 09:51:34	19/05/2020 10:	
Revelstoke Demo	John Doe		Aerial Technology RTF Sky Hero Spy 600mm - Aerial	Allowed	16/05/2020 14:03:01	16/05/2020 14:	
Revelstoke City	John Doe		Aerial Technology RTF Sky Hero Spy 600mm - Aerial	Allowed	15/05/2020 10:52:27	15/05/2020 11:	
Golden	John Doe		Aerial Technology RTF Sky Hero Spy 600mm - Aerial	Allowed	15/05/2020 06:43:38	15/05/2020 07:	
Revelstoke CPR	John Doe		Aerial Technology RTF Sky Hero Spy 600mm - Aerial	Allowed	14/05/2020 19:46:00	14/05/2020 20:	

### 6.11.3. Hide/display columns

The icon allows you to configure which columns to display/hide:

1. Click on the icon on the right side of the column header line to show the list of columns.
2. Check the columns that should be displayed and uncheck the columns that should be hidden. If required, scroll down to see all available columns.
3. Click on the icon again to hide the list of columns.

P

Home

Tools

Users

Operations

Reports

Settings

Help

Operations

Search

Filters

+ Add

Name	Drone	Pilot	Start time	End time	Duration	Status	NAV CANADA Reference Code	Flight status	
Westerner Park	EyeInTheSky-	Pauline Latulippe	02/05/2021 14:30:00	02/05/2021 15:30:00	1:00:00	Action required	Published	CYQF043021A01	
Shores mapping	EyeInTheSky-	Pauline Latulippe	03/05/2021 14:00:00	03/05/2021 16:00:00	2:00:00	Allowed	Published		
Yorkton Lake	EyeInTheSky-	Pauline Latulippe	03/05/2021 16:15:30	03/05/2021 17:15:30	1:00:00	Allowed	Published	CYQV043021A01	
University Golf comp	EyeInTheSky-	Pauline Latulippe	08/05/2021 08:00:00	08/05/2021 18:00:00	10:00:00	Action required	Published	CYVR043021A01	
Assiniboine	EyeInTheSky-	Pauline Latulippe	12/05/2021 10:35:38	12/05/2021 11:35:38	1:00:00	Allowed	Draft		

Filters

☒ Name  
☒ Drone  
☒ Pilot  
☒ Start time  
☒ End time  
☒ Duration  
☒ Validation  
☒ Status  
☒ Flight status  
☒ NAV CANADA Reference Code  
☒ Tasks  
☒ Notification status  
☒ Archived?  
☐ Archived on

Check the box to display a column  
Uncheck the box to hide a column

Click on this icon to show or hide the list of columns

#### 6.11.4. Sort table entries

Sorting will display table entries in ascending or descending order. To sort the table entries, click on a column header.

A vertical arrow pointing *upwards* is displayed next to the column header to indicate that the table entries are sorted in *ascending* order on that attribute.

A vertical arrow pointing *downwards* is displayed next to the column header to indicate that the table entries are sorted in *descending* order on that attribute.



P

Home

Tools

Users

Operations

Reports

Settings

Help

Logout

Operations

Click on a column header to sort the table entries in ascending/descending order

Search

Filters

Name ↑

Drone

Pilot

Start time

End time

Duration

Validation

Status

NAV CANADA Reference Code

Flight status

⚙️

Assiniboine	EyeInTheSky-	Pauline Latulippe	12/05/2021 10:35:38	12/05/2021 11:35:38	1:00:00	Allowed	Draft		Landed	⋮
Shores mapping	EyeInTheSky-	Pauline Latulippe	03/05/2021 14:00:00	03/05/2021 16:00:00	2:00:00	Allowed	Published		Landed	⋮
University Golf comp	EyeInTheSky-	Pauline Latulippe	08/05/2021 08:00:00	08/05/2021 18:00:00	10:00:00	Action required	Published	CYVR043021A01	Landed	⋮
Westerner Park	EyeInTheSky-	Pauline Latulippe	02/05/2021 14:30:00	02/05/2021 15:30:00	1:00:00	Action required	Published	CYQF043021A01	Landed	⋮
Yorkton Lake	EyeInTheSky-	Pauline Latulippe	03/05/2021 16:15:30	03/05/2021 17:15:30	1:00:00	Allowed	Published	CYQV043021A01	Landed	⋮

### 6.11.5. Filter table entries

Filtering ensures that only table entries corresponding to the defined filter are displayed. To define a new filter:

- 1 Click on the [ **Filters** ] button.
- 2 An [ **Add** ] button will appear above the first column's header. Click on the button to display the list of available fields.
- 3 Select from the list the field you want to use as filter.
- 4 Click on the filter button and start typing the filter string. Filtering occurs as you type.

P

Home

Tools

Users

Operations

Reports

Settings

Operations

+ Add

Search

1 Filters

2 Add

3

Name

Drone

Pilot

Start time

End time

Duration

Validation

Status

NAV CANADA Reference Code

Flight status

Tasks

Notification status

Archived?

Archived on

Name	Drone	Pilot	Start time	End time	Duration	Validation	Status	NAV CANADA Reference Code	Flight status	
A	EyeInTheSky-	Pauline Latulippe	12/05/2021 10:35:38	12/05/2021 11:35:38	1:00:00	Allowed	Draft		Landed	
S	EyeInTheSky-	Pauline Latulippe	03/05/2021 14:00:00	03/05/2021 16:00:00	2:00:00	Allowed	Published		Landed	
U	EyeInTheSky-	Pauline Latulippe	08/05/2021 08:00:00	08/05/2021 18:00:00	10:00:00	Action required	Published	CYVR043021A01	Landed	
W	EyeInTheSky-	Pauline Latulippe	02/05/2021 14:30:00	02/05/2021 15:30:00	1:00:00	Action required	Published	CYQF043021A01	Landed	
Y	EyeInTheSky-	Pauline Latulippe	03/05/2021 16:15:30	03/05/2021 17:15:30	1:00:00	Allowed	Published	CYQV043021A01	Landed	

P

Home

Tools

Users

Operations

Reports

Settings

Operations

+ Add

Search

1 Filters

4

Click and start typing the filter

Name: Y

Add

Name	Drone	Pilot	Start time	End time	Duration	Validation	Status	NAV CANADA Reference Code	Flight status	
University Golf comp	EyeInTheSky-	Pauline Latulippe	08/05/2021 08:00:00	08/05/2021 18:00:00	10:00:00	Action required	Published	CYVR043021A01	Landed	
Yorkton Lake	EyeInTheSky-	Pauline Latulippe	03/05/2021 16:15:30	03/05/2021 17:15:30	1:00:00	Allowed	Published	CYQV043021A01	Landed	

If needed, additional filters can be added. The number on the **[ Filters ]** button indicates how many filters are active. Multiple filters are applied following a Boolean **AND** function, as shown below.

**Operations** + Add

Search

Name: Y ⊙ Add

Click here to add an additional filter

- Drone
- Pilot
- Start time
- End time
- Duration
- Validation
- Status
- Flight status
- NAV CANADA Reference Code
- Tasks
- Notification status
- Archived?
- Archived on

Name ↑	Drone	Pilot	End time	Duration	Validation	Status	NAV CANADA Reference Code	Flight status	
University Golf comp	EyeInTheSky-	Pauline	21 08:00:00	08/05/2021 18:00:00	10:00:00	Action required	Published	CYVR043021A01	Landed
Yorkton Lake	EyeInTheSky-	Pauline	21 16:15:30	03/05/2021 17:15:30	1:00:00	Allowed	Published	CYQV043021A01	Landed

1 Filters

**Operations** + Add

Search

Name: Y ⊙ Validation Add

Select from the list the value(s) on which you would like to filter

- ☒ Allowed
- ☐ Error
- ☐ Warning
- ☐ Informational
- ☐ Not Allowed
- ☐ Disclaimer
- ☐ Action required

This number indicates how many filters are currently active

Name ↑	Drone	Pilot	End time	Duration	Validation	Status	NAV CANADA Reference Code	Flight status	
University Golf comp	EyeInTheSky-	Pauline	2021 08:00:00	08/05/2021 18:00:00	10:00:00	Action required	Published	CYVR043021A01	Landed
Yorkton Lake	EyeInTheSky-	Pauline	2021 16:15:30	03/05/2021 17:15:30	1:00:00	Allowed	Published	CYQV043021A01	Landed

2 Filters

Remove a filter by clicking on the ✕ icon on the right side of the filter.

The screenshot shows the 'Operations' page with a table of flight data. A filter bar at the top contains a search field, a filter for 'Name: Y', and a filter for 'Validation: Allowed'. A callout bubble points to the minus icon next to the 'Validation: Allowed' filter, with the text: 'Remove a filter by clicking on this icon'.

Name ↑	Drone	Pilot	Start time	End time	Duration	Validation	Status	NAV CANADA Reference Code	Flight status	
Yorkton Lake	EyeInTheSky-	Pauline Latulippe	03/05/2021 16:15:30	03/05/2021 17:15:30	1:00:00	Allowed	Published	CYQV043021A01	Landed	

## 6.11.6. Group table entries

### Simple grouping

Grouping displays table entries in groups, based on their attributes or fields. To group table entries:

- ① Drag the column header of the selected field. A grey horizontal bar with the text *DRAG COLUMNS HERE TO GROUP* will appear above the column headers.
- ② Drop the selected column header in this new bar.

P

Home

Tools

Users

Operations

Reports

Settings

Operations

+ Add

2

DRAG COLUMNS HERE TO GROUP

1

Name

Drone

Pilot

Start time

End time

Validation

Duration

Status

CANADA Reference

Assiniboine	EyeInTheSky-	Pauline Latulippe	12/05/2021 10:35:38	12/05/2021 11:35:38	Allowed	1:00:00	Draft	
Operation constraints	EyeInTheSky-	Pauline Latulippe	15/08/2021 14:00:00	15/08/2021 16:00:00	Allowed	2:00:00	Draft	
Clareville	EyeInTheSky-	Pauline Latulippe	30/04/2021 17:00:30	30/04/2021 18:00:30	Allowed	1:00:00	Published	
Shores mapping	EyeInTheSky-	Pauline Latulippe	03/05/2021 14:00:00	03/05/2021 16:00:00	Allowed	2:00:00	Published	
University Golf competition	EyeInTheSky-	Pauline Latulippe	08/05/2021 08:00:00	08/05/2021 18:00:00	Warning	10:00:00	Published	CYVR043021A01
University Golf competition	EyeInTheSky-	Pauline Latulippe	08/05/2021 08:00:00	08/05/2021 18:00:00	Warning	10:00:00	Published	CYVR043021A02
University Golf competition	EyeInTheSky-	Pauline Latulippe	08/05/2021 08:00:00	08/05/2021 18:00:00	Warning	10:00:00	Published	CYVR043021A03
Westerner Park	EyeInTheSky-	Pauline Latulippe	02/05/2021 14:30:00	02/05/2021 15:30:00	Action required	1:00:00	Published	CYQF043021A01
Yorkton Lake	EyeInTheSky-	Pauline Latulippe	03/05/2021 16:15:30	03/05/2021 17:15:30	Allowed	1:00:00	Published	CYQV043021A01

Drag and drop a column header (field) in the grey bar to group table entries



Not all fields support grouping.

The groups for the selected field will be created based on the table entries. In the example below, *Status* is the field used to group.

Each status therefore constitutes a group that contains all operations with that status. The number on the right side of a group indicates the number of tables entries contained in this group.

In the example below, grouping on the *Status* field results in one single group (one status) containing one entry (one operation for that status).

Expand or collapse the table entries contained in a group by using the **+** and **-** icons on the left side of the group.

P

Home

Tools

Users

Reports

Settings

Operations

+ Add

Status x

DRAG COLUMNS HERE TO GROUP

Search

Filters

Name \*

Drone

Pilot

Duration

Validation

NAV CANADA Reference Code

Flight status

Tasks

Status: Draft (1)

Assiniboine

EyeInTheSky

Pauline Latulippe

12/05/2021 10:35:38

12/05/2021 11:35:38

1:00:00

Allowed

Landed

Status: Published (4)

Shores mappir

EyeInTheSky

Pauline Latulippe

08/05/2021 16:00:00

08/05/2021 18:00:00

2:00:00

Allowed

Landed

University Golf

EyeInTheSky

Pauline Latulippe

08/05/2021 08:00:00

08/05/2021 18:00:00

10:00:00

Action required

CYVR043021A01

Landed

Westerner Parl

EyeInTheSky

Pauline Latulippe

02/05/2021 14:30:00

02/05/2021 15:30:00

1:00:00

Action required

CYQF043021A01

Landed

1

Yorkton Lake

EyeInTheSky

Pauline Latulippe

03/05/2021 16:15:30

03/05/2021 17:15:30

1:00:00

Allowed

CYQV043021A01

Landed

1

The groups for the selected field are automatically created based on the table entries

This number indicates how many table entries are contained in this group

Disable grouping by clicking on the **x** icon on the right side of the group in the grey bar above the column headers.

## Nested grouping

Nested groups are groups with multiple levels, or groups within groups. Nested groups can be created by selecting multiple fields.

To create a second level of grouping, drag the column header of another field and drop it in the *DRAG COLUMNS HERE TO GROUP* bar above the column headers.

In the example below, *Validation* is the second field used to group, after grouping by *Status*. As a result, subgroups are created under each group, in this case two validation subgroups are created under the existing status group.

**Operations** + Add

Status x Validation x

Search

Add

Filters

Name \* Drone Pilot Start time End time Duration NAV CANADA Reference Code Flight status Tasks

— Status: Draft (1)

+ Validation: Allowed (1)

— Status: Published (4)

— Validation: Action required (2)

University Golf competition EyeInTheSky- Pauline Latulippe 08/05/2021 08:00:00 08/05/2021 18:00:00 10:00:00 CYVR043021A01 Landed

Westerner Park EyeInTheSky- Pauline Latulippe 02/05/2021 14:30:00 02/05/2021 15:30:00 1:00:00 CYQF043021A01 Landed 1

+ Validation: Allowed (2)

Action required (operator)

The subgroups for the second field are automatically created based on the table entries, and nested under the main groups

This number indicates how many table entries are contained in this subgroup

The sequence matters in nested grouping. In other words, if we consider the fields used in the example above, selecting first the *Validation* field and then the *Status* field will lead to different results, as shown below where validation defines the main groups and status the subgroups.

**Operations** + Add

Validation x Status x

DRAG COLUMNS HERE TO GROUP

Search

Filters

Name \* Drone Pilot Start time End time Duration NAV CANADA Reference Code Flight status Tasks

+ Validation: Action required (1)

— Validation: Allowed (5)

— Status: Draft (2)

Assiniboine EyeInTheSky- Pauline Latulippe 12/05/2021 10:35:38 12/05/2021 11:35:38 1:00:00 Landed

Operation constraints EyeInTheSky- Pauline Latulippe 15/08/2021 14:00:00 15/08/2021 16:00:00 2:00:00 Landed

+ Status: Published (3)

+ Validation: Warning (3)

For this sequence of fields, Validation defines the main groups and Status defines the subgroups

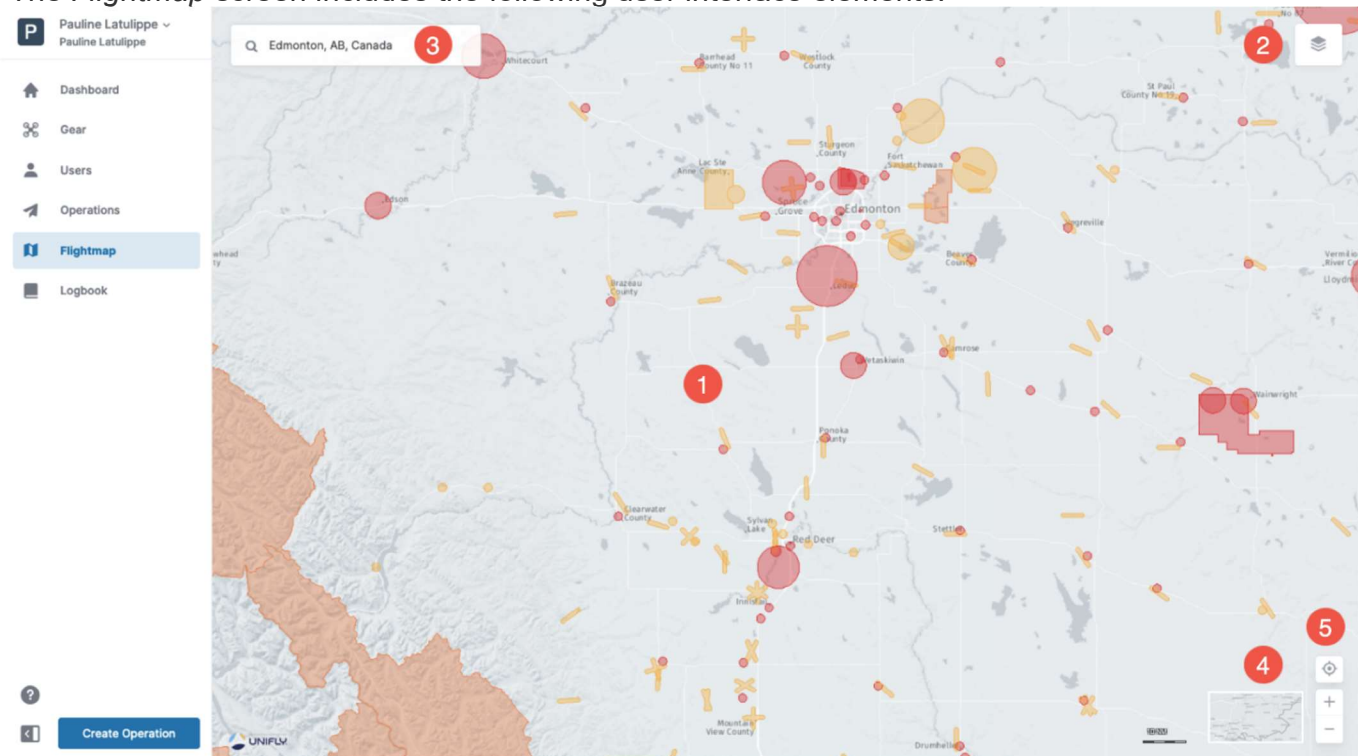
## Chapter 7. Flightmap





The NAV Drone Web application allows the user to visualize airspace information as well as the flight zones of your drone operations in *Flightmap*.

Click on *Flightmap* in the left sidebar to access this module.

### 7.1. User interface overview

The *Flightmap* screen includes the following user interface elements:



- ① The *Map window* is the main frame and displays information about the Canadian domestic airspace and data relevant to VLOS operations. See section [Display airspace information](#) for more details.
- ② The  button allows you to configure which layers should be visible on the map. See section [Hide/display map layers](#) for more details.
- ③ The **[ Search ]** field is used to search for locations. Click on the field, start typing an address or latitude/longitude coordinates. Selecting one of the search results will reposition and zoom the map, and put a blue marker on that location.
- ④ The **[ Display Mode ]** button allows you to select the map's display mode. See section [Change the display mode](#) for more details.
- ⑤ The "move to current location" (  ) and zoom (  and  ) buttons allow you to navigate the map. You can also move the map by dragging it with the left mouse button and zoom the map in or out using the mouse scroll wheel or by double clicking on a location on the map (left mouse button = zoom in, right mouse button = zoom out).



## 7.2. Map layers

The map presented in NAV Drone Web is created by displaying a number of map layers on top of the base map (background map). The base map is always displayed, but the map layers can be hidden or displayed.

The following information is visible as a layer on the map for *Basic* operations:

Map Layer	Colour
Current operations	Blue
Controlled airspace	Red
Delegated airspace	Red
Class F airspace	Red (Restricted or danger) & yellow (Other)
Airports	Red (Certified or military) & yellow (Registered)
Parks	Orange
Additional NOTAMs	Red
Temporary no drone zones	Red

The following information is visible as a layer on the map for *Advanced* operations:

Map Layer	Colour
Current operations	Blue
Controlled airspace	Orange
Delegated airspace	Red
Class F airspace	Orange (Restricted or danger) & yellow (Other)
Airports	Orange (Certified or military) & yellow (Registered)
Grids	Shades of orange, depending on the maximum height of the grid cell
Parks	Orange
Additional NOTAMs	Red
Temporary no drone zones	Red



Areas filled with red are **prohibited**. Areas filled with yellow require additional **caution** due to other air traffic. Areas filled with orange require **permission** from NAV CANADA, Parks Canada, the Department of National Defence, an airport operator, Penitentiary Authorities, or any other specified user agency.





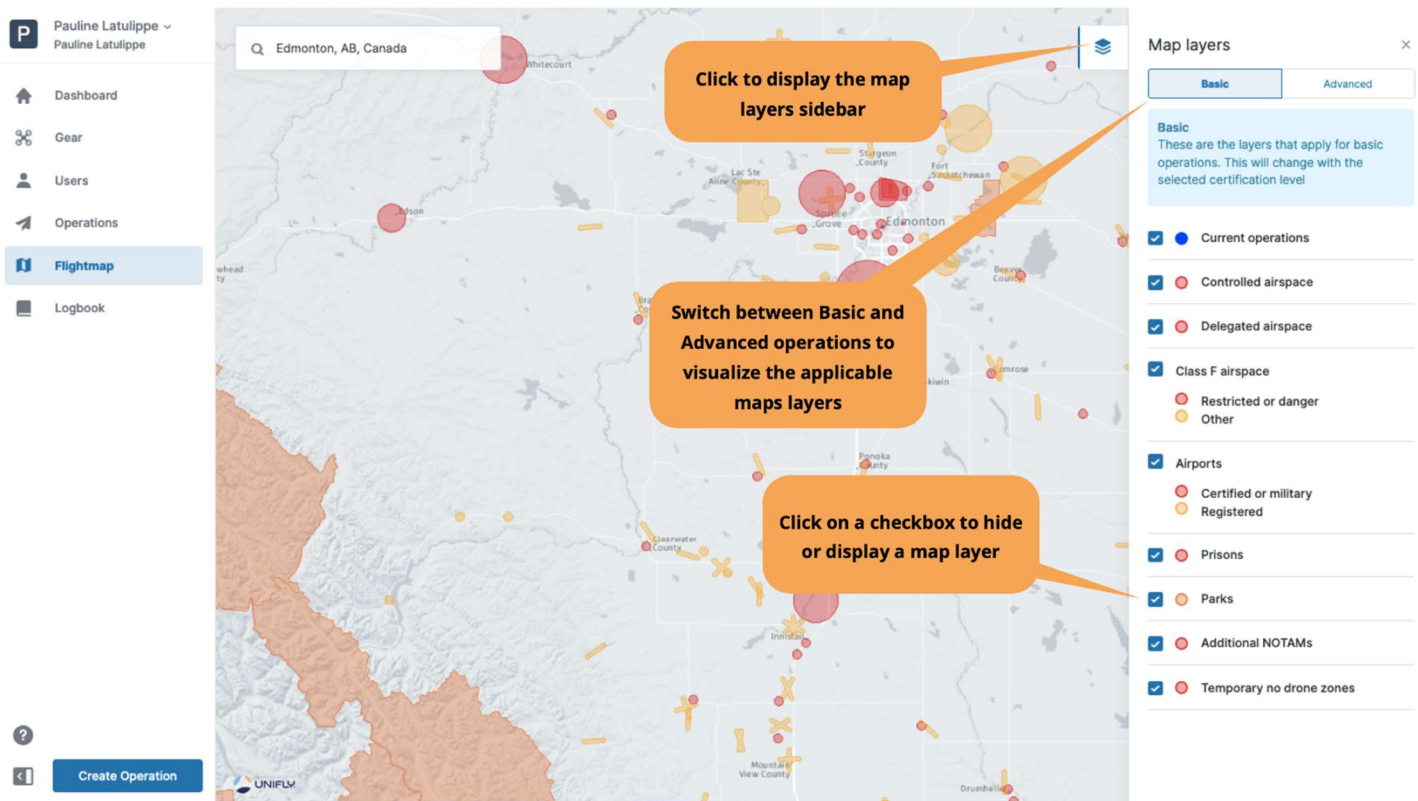
The *Current operations* map layer is only available in *Flightmap*. It is not available when creating a new operation.

### 7.3. Hide/display map layers

The list of layers can be accessed by clicking on the  button at the top right of the *Map window*. The user can hide or display each map layer in the list.

Hiding/displaying a map layer can be done as follows:

1. Expand the *Map layers* sidebar by clicking on the  button at the top right of the *Map window*.
2. Select the type of operations (*Basic* or *Advanced*) for which you want to visualize the applicable airspace information.
3. Select the map layer(s) to display by activating the corresponding checkbox in front of the layer's name.
4. Close the *Map layers* sidebar by clicking again on the  button.



The screenshot shows the Flightmap interface with the Map layers sidebar open. The sidebar has two tabs: 'Basic' and 'Advanced'. Under the 'Basic' tab, there is a list of map layers with checkboxes. The layers are: Current operations, Controlled airspace, Delegated airspace, Class F airspace, Airports, Prisons, Parks, Additional NOTAMS, and Temporary no drone zones. The 'Current operations' layer is checked. The map shows various geographical features and flight paths. Three orange callout boxes provide instructions: 'Click to display the map layers sidebar' points to the layers icon, 'Switch between Basic and Advanced operations to visualize the applicable maps layers' points to the Basic/Advanced tabs, and 'Click on a checkbox to hide or display a map layer' points to a checkbox in the list.



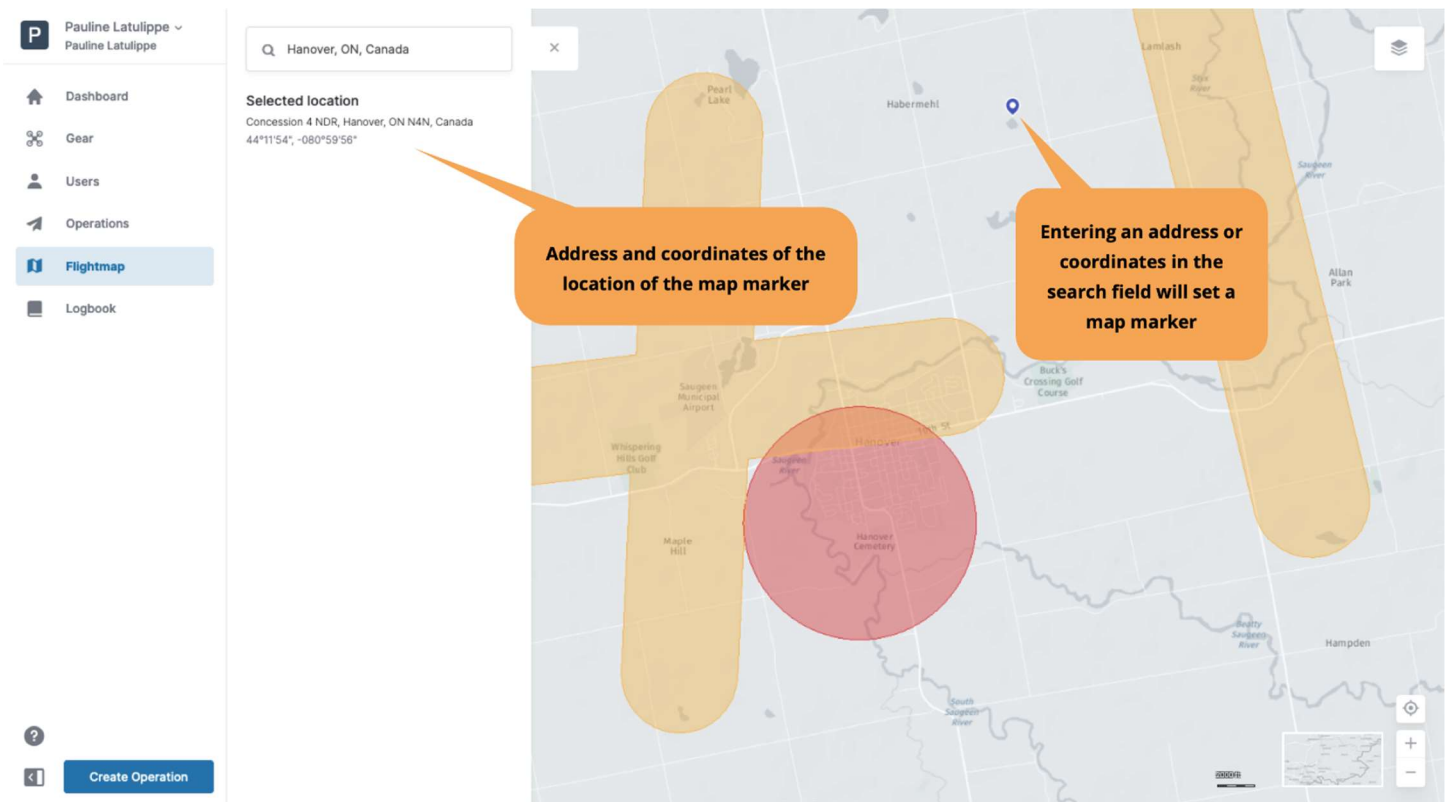
Information will only be displayed for the selected type of operations (*Basic* or *Advanced*) and for the geozones associated with displayed map layers.

## 7.4. Display airspace information

Information about airspace geozones is displayed by selecting a location on the map in the *Map window*. Selecting a geozone will also highlight the geozone on the map. Three scenarios are possible, as described below.

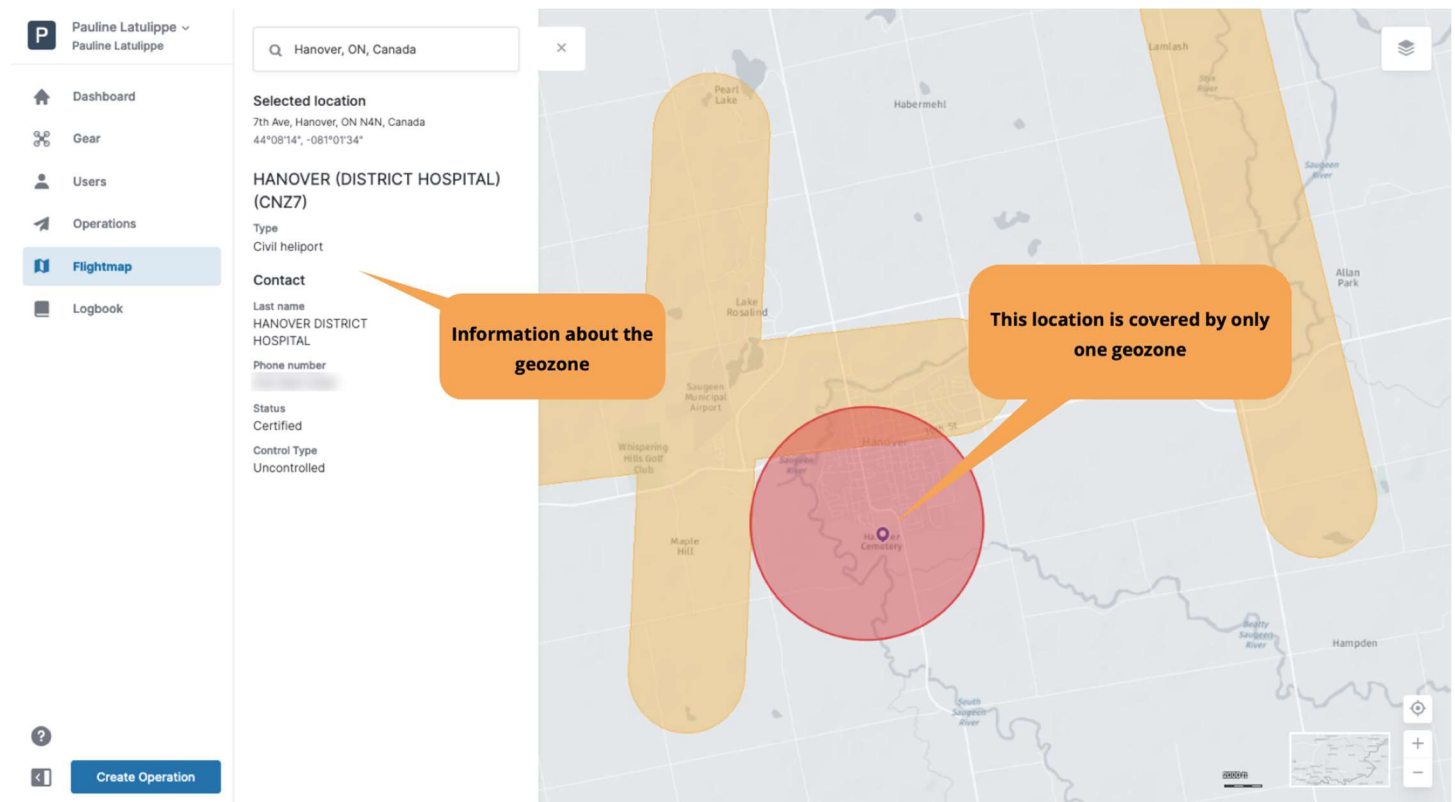
### 7.4.1. Location not covered by any geozone

If the selected location is not covered by any geozone, a blue map marker (📍) is displayed at the selected location and information regarding that location (coordinates and, when available, address information) is displayed at the top left of the screen:



## 7.4.2. Location covered by one visible geozone

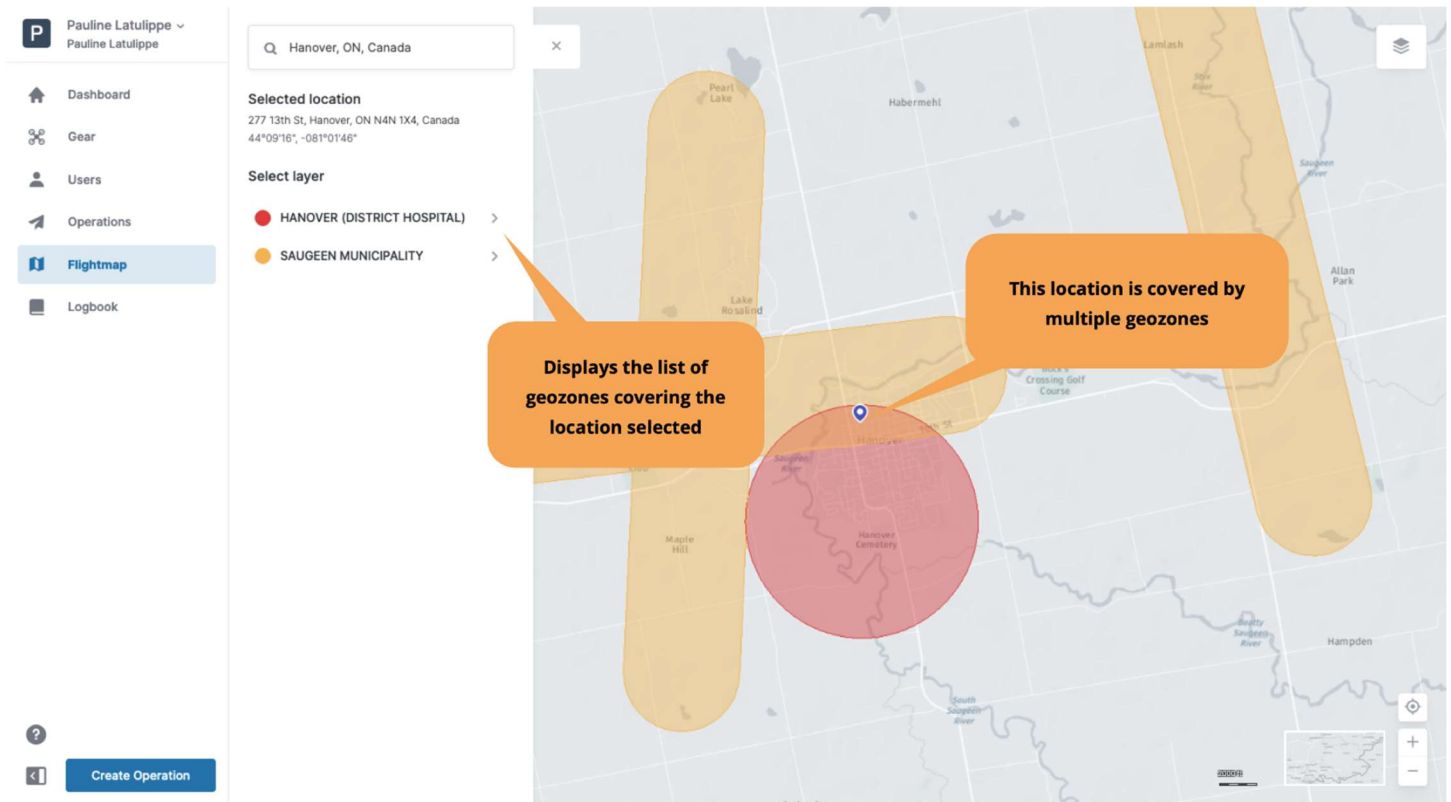
If the selected location is covered by only one visible geozone, detailed information associated with that geozone is displayed in a sidebar on the left of the *Map window*:



This information sidebar can be closed by clicking on the ✕ icon at the top right of the sidebar.

### 7.4.3. Location covered by multiple visible geozones

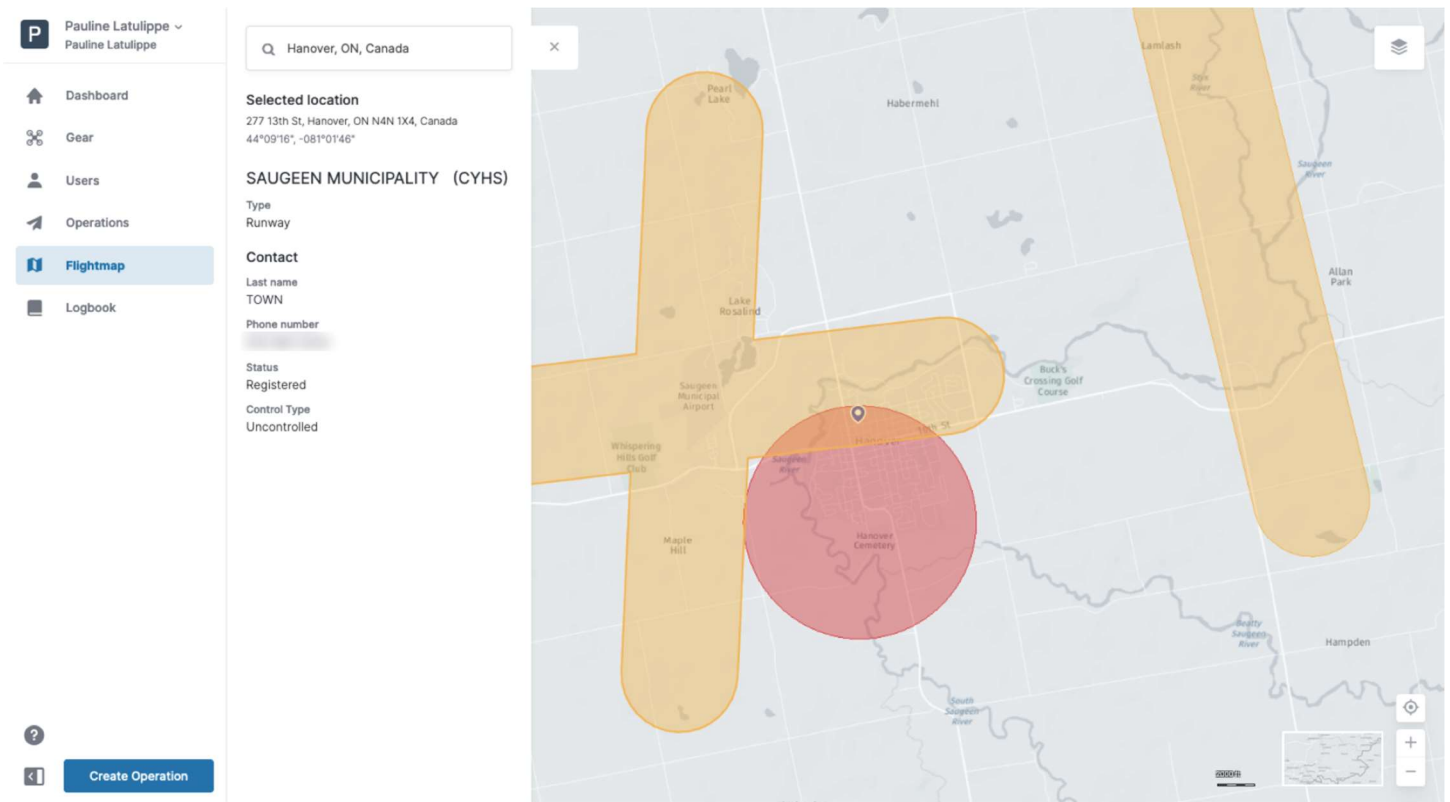
If the selected location is covered by multiple visible geozones, a list of the geozones covering that location is displayed in the sidebar on the left of the *Map window*:



In the example above, the location selected is covered by the geozone *HANOVER (DISTRICT HOSPITAL)* and the geozone *SAUGEEN MUNICIPALITY*.

Selecting one of the geozones in the list by clicking on its name (in this case, *SAUGEEN MUNICIPALITY*) displays the information for the selected geozone in that same sidebar.

This sidebar can be closed by clicking on the ✕ icon at the top right of the sidebar.



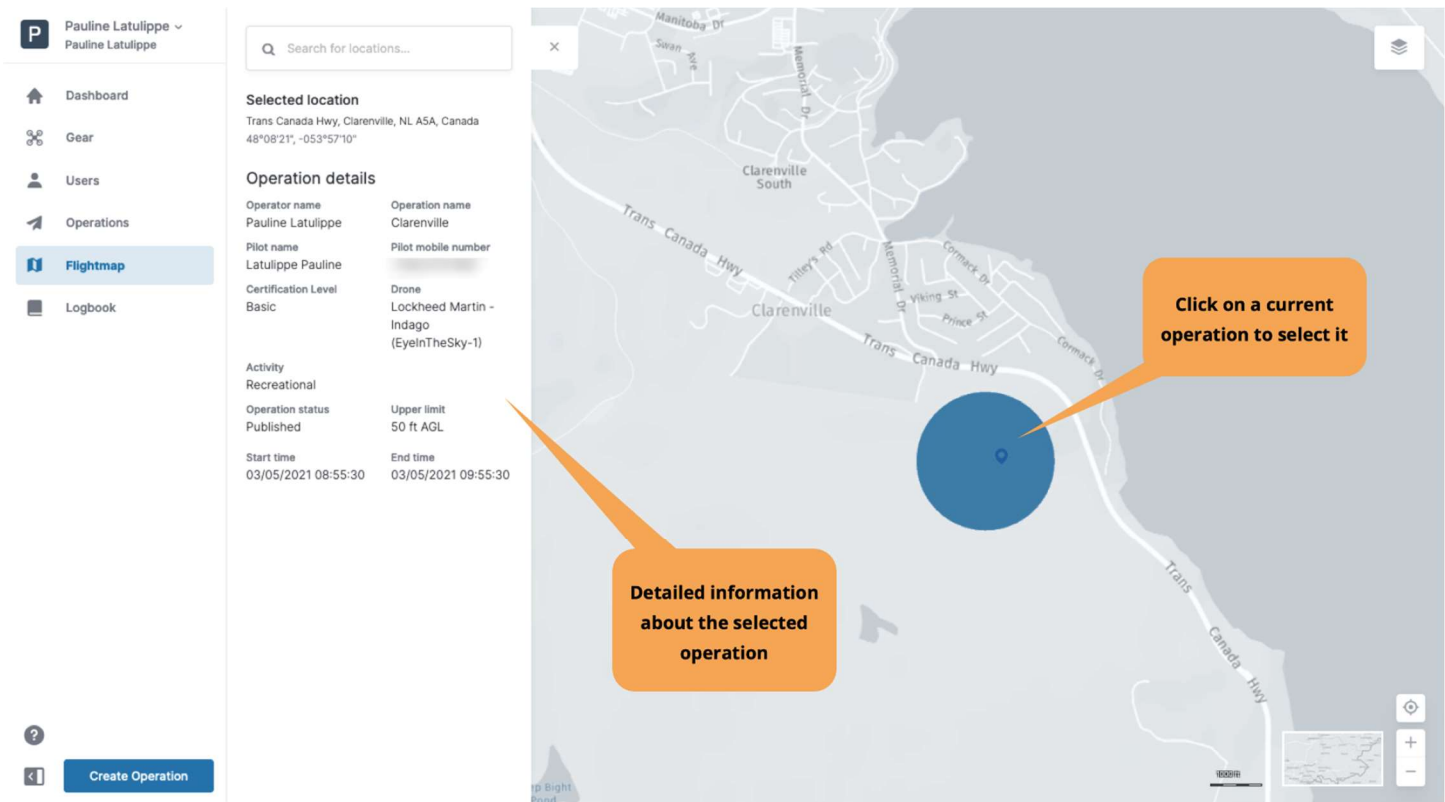
## 7.5. Display operation information

Information about your operation is displayed by selecting the flight zone of the operation on the map in the *Map window*.

Selecting a flight zone will also highlight the flight zone on the map and provide the following information in the sidebar on the left of the *Map window*:

- Operator name
- Operation name
- Pilot's contact details
- Certification level
- Drone manufacturer, model, and registration number
- Activity
- Operation status
- Upper limit
- Start/end date and time

This sidebar can be closed by clicking on the **✕** icon at the top right of the sidebar.



## 7.6. Change the display mode

The base map of the *Map window* can be displayed in different modes:

- Night with labels
- Night no labels
- Day with labels
- Day no labels
- Satellite with labels
- Satellite no labels
- Coloured with labels
- Coloured no labels

Changing the display mode can be done as follows:

1. Click on the **[ Display Mode ]** button to display the available display mode selection buttons.
2. Select the display mode you want to activate. When hovering the pointer over a button, the name of the mode will be displayed.
3. Click on the **[ Display Mode ]** button again to hide the display mode buttons.







## Chapter 8. Logbook

All flights logged in NAV Drone under your account as described in section [Log a flight](#) are also visible in the *Logbook*.

Click on *Logbook* in the left sidebar to access the logbook module. The logbook helps you keep track of all flights conducted under your account and provides statistics regarding the total flight time for the pilots and drones.

The logbook interface consists of two tabs:

- *Users*: a table showing all flights grouped by *Pilot*. The number indicated on the right side of each pilot's name is the total flight time logged for that pilot.
- *Drones*: a table showing all flights grouped by *Drone*. The number indicated on the right side of each drone's name is the total flight time logged for that drone.

Therefore, both tabs present the same information (all flights logged) but grouped based on a different field. See section [Simple grouping](#) for more details about this table functionality.

The screenshot displays the NAV Drone Logbook interface. On the left is a sidebar with navigation links: Dashboard, Gear, Users, Operations, Flightmap, and Logbook (which is highlighted). The top of the sidebar shows the user's name, Pauline Latulippe. The main content area is titled 'Logbook' and has two tabs: 'Users' (selected) and 'Drones'. An orange callout bubble points to the 'Users' tab with the text: 'In the Users tab, all logged flights are grouped by Pilot'. Below the tabs is a table of flight logs. The table has columns: Name, Take off, Landing, Duration, Drones, and Registration number. The first row is grouped under the header 'Pilot: Pauline Latulippe (0:05:50)'. It contains two entries for 'Clarenville' with take-off times of 17:05:41 and 17:02:45, landing times of 17:09:17 and 17:05:00, and durations of 0:03:36 and 0:02:14. Both flights were conducted with a 'Lockheed Martin - Indago' drone. A search bar and a 'Filters' button are located at the top right of the table area. At the bottom left of the sidebar, there is a 'Create Operation' button.

Name	Take off	Landing	Duration	Drones	Registration number
Pilot: Pauline Latulippe (0:05:50)					
Clarenville	30/04/2021 17:05:41	30/04/2021 17:09:17	0:03:36	Lockheed Martin - Indago	
Clarenville	30/04/2021 17:02:45	30/04/2021 17:05:00	0:02:14	Lockheed Martin - Indago	

Pauline Latulippe

Pauline Latulippe

Dashboard

Gear

Users

Operations

Flightmap

Logbook

?

Create Operation

Logbook

UsersDrones

QSearch

Filters

PilotNameTake offLandingDuration

Drones: Lockheed Martin - Indago (0:05:50)

Pauline LatulippeClarenville30/04/2021 17:05:4130/04/2021 17:09:170:03:36

Pauline LatulippeClarenville30/04/2021 17:02:4530/04/2021 17:05:000:02:14

In the *Drone* tab, all logged flights are grouped by *Drone*

By clicking on any logbook entry, a dialog box is displayed which provides additional information about the operation, the drone, and the selected flight.

Pauline Latulippe

Pauline Latulippe

Dashboard

Gear

Users

Operations

Flightmap

Logbook

?

Create Operation

Logbook

UsersDrones

QSearch

Filters

PilotName

Drones: Lockheed Martin - Indago (0:05:50)

Pauline LatulippeClarenville30/04/2021 17:05:4130/04/2021 17:09:170:03:36

Pauline LatulippeClarenville30/04/2021 17:02:4530/04/2021 17:05:000:02:14

Logbook details

Operation details

Operation name

Clarenville

Pilot

Pauline Latulippe

Max flight height

50 ft AGL

Radius

1322.2 ft

Operation type

Basic

Activity

-

Flight Type

VLOS

Drone details

Manufacturer

Lockheed Martin

Model

Indago

Registration number

Flight details

Take-off

30/04/2021 17:05:41

Landing

30/04/2021 17:09:17

Rating

Close

94

## Chapter 9. Glossary

<b><i>TITLE</i></b>	<b><i>ABBREVIATION</i></b>	<b><i>DESCRIPTION</i></b>
Above Ground Level	AGL	The altitude expressed in feet measured above ground level.
Above Sea Level	ASL	The altitude expressed in feet measured above sea level.
Activity	-	Type of operation.
Aerodrome	AD	Any area of land, water (including the frozen surface thereof) or other supporting surface used, designed, prepared, equipped, or set apart for use, either in whole or in part, for the arrival, departure, movement, or servicing of aircraft. This includes any buildings, installations, and equipment situated thereon or associated therewith.
Aerodrome routine meteorological report	METAR	A METAR describes the actual weather conditions at a specified location and at a specified time as observed from the ground.
Air Navigation Service Provider	ANSP	Organization which is responsible for the provision of air navigation services in domestic or international airspace.
Air Traffic Control	ATC	A service provided to aircraft in controlled airspace.
Air Traffic Controller	ATC	A person holding a valid license to control air traffic.
Air Traffic Management	ATM	A management concept aimed at ensuring full utilization of ATC systems, according to the possibilities offered by future air navigation systems, as they evolve, from both a national and an international perspective.
Air Traffic Service	ATS	A service that includes ATC service, flight services and alerting services
Air Traffic Services Specialist	-	The ATS Specialist is a member of the NAV CANADA personnel who manages access to controlled airspace.

Airspace	-	The portion of the atmosphere controlled by a country above its territory, including its territorial waters or, more generally, any specific three-dimensional portion of the atmosphere.
Altitude	ALT	The height of an object or point in reference to sea level or ground level.
Approval	-	Authorization granted to an operator to manoeuvre in controlled airspace under conditions specified by an ATS unit based on the information provided in the permission request
Area Control Centre	ACC	An ATC unit that provides ATC service to aircraft operating within a flight information region (FIR)
Area of Responsibility (Glossary for Pilots and Air Traffic Services personnel - TP11958E)	AOR	A geographical area within which alerting service is provided by an ATS unit designated as the responsible unit.
Area of Responsibility (NAV Drone)	AOR	The group of control zones for which an ATS unit is responsible for coordinating the assessment of RPAS permission requests.
Base map	-	A base map is a background layer with geographic information. A base map usually provides location references for features that do not change often such as boundaries, rivers, lakes, roads, and highways.
Beyond Visual Line of Sight	BVLOS	Flight performed beyond the pilot's/observer's line of sight.
Canada Air Pilot	CAP	A document in which the Minister may establish standard procedures for air operations at specific aerodromes. Contains descriptions of approaches, SID, STAR and airport layout and procedures.

Canadian Aviation Regulations	CARs	The rules enacted under the Aeronautics Act, that govern civil aviation in Canada. Replacing the Air Regulations and the Air Navigation Orders, the CARs and their associated standards came into force on October 10, 1996, after a comprehensive consultation process between Transport Canada and the aviation community. This co-operative and partnership approach to rule-making continues within the Canadian Aviation Regulation Advisory Council (CARAC), which discusses proposed amendments to the CARs and their associated standards.
Canadian Water Aerodrome Supplement	CWAS	A joint civil/military publication concerning water aerodromes that is intended to be used to supplement enroute charts and the Canada Air Pilot (CAP).
Certificate	-	In a professional context: a designation earned by a person to assure qualification to perform a job or task. Example: a drone pilot certificate. In a digital context: in cryptography, a public key certificate, also known as a digital certificate or identity certificate, is an electronic document used to prove the ownership of a public key.
Certification Level	-	Two categories (Basic and Advanced) of drone operations as defined under the Canadian Aviation Regulations Part IX. Each category has a different set of rules drone pilots must follow.
Checkbox	-	Graphical control element that allows the user to make a binary choice, i.e. a choice between one of two mutually exclusive options. For example, the user may have to answer 'yes' (checked) or 'no' (not checked) on a simple yes/no question.
Circuit – Aerodrome traffic circuit	-	The specified path to be flown by aircraft operating in the vicinity of an aerodrome

Civil Aviation Authority	CAA	A government statutory authority in each country that maintains an aircraft register and oversees the approval and regulation of civil aviation.
Command and Control	C2	The data link between the remotely piloted aircraft and the remote pilot station for the purpose of managing flight.
Control tower	TWR	A unit established to provide ATC service to aerodrome traffic. Also called "Tower".
Control Zone	CZ	A controlled airspace of defined dimensions extending upwards from the surface of the earth up to and including 3000 ft AAE unless otherwise specified
Coordinated Universal Time	UTC	The time system used in aviation operations and given to the nearest minute, except when the pilot requests a time check. Time checks are given to the nearest 15 s. The day begins at 0000 and ends at 2359. Synonymous with Zulu time.
Dialog Box	-	Graphical control element in the form of a small window that communicates information to the user and prompts them for a response.
Disclaimer	-	Terms and conditions that apply to a user's access and use of the NAV Drone applications.
Drone	-	An unmanned aircraft guided by remote control or onboard computers. Synonymous of RPA (Remotely Piloted Aircraft), UAV (Unmanned Aerial Vehicle), and UAS (Unmanned Aerial System).
Drone Name	-	Nickname that a pilot can associate with a drone.
Drone Operator	-	The drone operator means any legal or natural person who operates or intends to operate one or more drones.

Drone Pilot	-	A drone pilot is the person designated by a drone operator who is in command of the drone and in charge of the safe conduct of the flight. Depending on a number of factors, including the drone type and the drone operation, a drone pilot may be required to have one or more active certifications to be allowed to execute the drone flight.
Emergency		A situation that places an aircraft or other vehicle, or some person on board or within sight, in a state that requires immediate action.
Explore without account	-	Possibility in the NAV Drone mobile app to try out the mobile app without registering and logging in. Therefore, not all functionalities are available.
Flight	-	A flight is considered as one takeoff and landing sequence. Therefore, an operation can consist of multiple flights.
Flight Information Centre	FIC	A centralized ATS unit that provides services pertinent to pre-flight and the enroute phase of flight
Flight Information Region	FIR	An airspace of defined dimensions extending upwards from the surface of the earth within which flight information service (FIS) and alerting service are provided.
Flight Service Station	FSS	An ATS unit that provides services pertinent to the arrival and departure phases of flight at uncontrolled aerodromes and for transit through a mandatory frequency (MF) area
Flight Service Specialist	FSS	A certified employee assigned duties and responsibilities at an FSS or FIC
Fly-away		An interruption or loss of the command and control link (C2 Link) where the pilot is unable to affect control of the aircraft and the aircraft is no longer following its preprogrammed procedures, all of which results in the RPA operating in an unpredictable or unplanned manner
Geozone	-	Any airspace that may have restrictions, may require permission, or may require awareness of manned aviation.

Ground Control Station	GCS	A ground control station refers to the complete set of ground-based hardware systems used to control a drone. Synonymous with Remote Pilot Station (RPS).
Height	-	In aviation: the vertical distance of an object measured from a stated reference such as the ground (above ground level = AGL). Reported in feet.
International Civil Aviation Organization	ICAO	A specialized agency of the United Nations, the objective of which is to develop the principles and techniques of international air navigation and to foster planning and development of international civil air transport.
JavaScript Object Notation	JSON	A common data format used for asynchronous browser–server communication.
Keyhole Markup Language	KML	Keyhole Markup Language (KML) is an XML notation for expressing geographic annotation and visualization within Internet-based, two-dimensional maps and three-dimensional Earth browsers. KML was developed for use with Google Earth, which was originally named Keyhole Earth Viewer. KML became an international standard of the Open Geospatial Consortium <a href="https://www.ogc.org/standards/kml">https://www.ogc.org/standards/kml</a> in 2008. As for any XML standard, the message grammar can be checked to see if it is correctly formatted so the system using it will be able to read and process the data.
Logbook	-	For pilots and operators, the logbook keeps track of all flights conducted under a user account and provides statistics regarding the total flight time for the pilots and drones.
Lost C2 Link	-	The loss of command and control link (C2 Link) contact with the RPA such that the pilot can no longer manage the aircraft's flight. A lost C2 Link does not necessarily result in a fly-away situation, as the RPA will be programmed to follow a predictable flight path until the link is reacquired or the flight is terminated. Lost C2 link procedures are programmed by the manufacturer, and on some models, may be modified/programmed by the RPAS operator.



Map Layers	-	Airspace zone categories displayed on top of the background map (base map).
Maximum Take-Off Weight	MTOW	Maximum take-off weight (MTOW) of an aircraft is a value defined by the aircraft manufacturer. It is the maximum mass at which the aircraft is certified for takeoff due to structural or other limits. MTOW is usually specified in units of kilograms or pounds. The mass is a fixed value and does not vary with changes in temperature, altitude, or runway available.
Multicopter	MC	A rotorcraft with more than two rotors. An advantage of multicopter aircraft is the simpler rotor mechanics required for flight control.
Nautical Mile	NM	The international nautical mile is defined as exactly 1852 metres (about 1.15 miles). The derived unit of speed is the knot, one nautical mile per hour.
No Drone Zone (NAV Drone)	NDZ	Specific to NAV Drone, a No Drone Zone is an airspace in which drone traffic is restricted or forbidden. No Drone Zones are temporary.
Notice to airmen	NOTAM	A notice distributed by means of telecommunication containing information concerning the establishment, condition or change in any aeronautical facility, service, procedure or hazard, the timely knowledge of which is essential to personnel concerned with flight operations.
Operation (NAV Drone)	-	An operation is created by a pilot or by an operator and represented by a flight zone and associated parameters such as the operation type, the start/end date and time, the designated pilot, the drone planned to be flown, etc.

Operator	-	A distinction is made between the operator level (commercial entity) and the user level (individual). One operator can invite multiple users to join their crew (drone pilots, observers, and payload specialists). In the same way, one user can be associated with multiple drone operators, as is the case for a freelance pilot who is contracted by multiple operators, for example.
Permission Request	-	For Advanced operations in airspace controlled by NAV CANADA, the operator must submit a permission request to NAV CANADA. Permission requests are evaluated either automatically or manually, depending on the height and location of the operation's flight zone. The possible statuses for a permission request are: Draft, Initiated, Sent, In Review, Needs Action, Approved, Rejected, Rescinded, and Cancelled.
Pilot in Command	PIC	See "Drone Pilot".
Registration Number	-	A registration number assigned to a drone by Transport Canada
Remote Control	RC	The use of control signals transmitted by radio to remotely control a device.
Remote Pilot	RP	See "Drone Pilot".
Remotely Piloted Aircraft	RPA	See "Drone".
RPAS Traffic Management	RTM	An international aviation concept that brings an automated ATM- like system to very low-level airspace which will be occupied primarily by unmanned aircraft (commonly referred to as drones).
Shape handle	-	Graphic control element in the form of a small square, used for editing a shape by dragging the handle.
Tasks	-	For a drone operator, the Tasks tab list all tasks related to an operation, in three categories representing three different task statuses: Action Required, Submitted and Resolved. In the context of NAV Drone, tasks are associated with a permission request.

Tooltip	-	Common graphical user interface element displayed as an informational text box when hovering over an item. It is used in conjunction with a cursor, usually a pointer.
Transport Canada	TC	The federal authority responsible for regulating civil aviation
Transport Canada Aeronautical Information Manual	TC AIM	A primary Transport Canada publication of aeronautical information intended to serve as a pre-flight reference source for pilots and that contains information essential to aircraft operations in Canadian Domestic Airspace (CDA). It consolidates information of a lasting nature into a single document. Topics covered are general flight information, communications, meteorology, rules of the air and ATC procedures, entry and departure requirements for international flights, search and rescue, aeronautical charts and publications, licensing and registration, health, and airmanship
UAS Traffic Management	UTM	Equivalent to RPAS Traffic Management (RTM)
Uncontrolled aerodrome	-	An aerodrome at which a control tower has not been established. This designation also applies during the non-operational period when an established control tower is on reduced hours (part-time)
User agency	-	The agency, organization, or military command responsible for the activity for which Class F airspace has been provided. The user agency shall be identified for Class F restricted areas, military operations areas, and danger areas and, where possible, should be identified for Class F advisory areas.
Validation	-	An operation validation consists in verifying that the operation complies with applicable rules and regulations.

Vertex	-	In geometry, a vertex is a point where two or more curves, lines, or edges meet. As a consequence, the point where two lines meet to form an angle and the corners of polygons are vertices.
Very Low Level	VLL	Very Low-Level airspace (VLL) is usually understood to be the volume of air below 500ft above (non-built-up) ground level.
Visual Flight Rules	VFR	The rules that govern the procedures for conducting flight under visual conditions. The abbreviation is used by pilots and controllers to indicate a type of flight plan or weather conditions.
Visual Line-of-Sight	VLOS	Unaided visual contact at all times with a remotely piloted aircraft that is sufficient to be able to maintain control of the aircraft, know its location, and be able to scan the airspace in which it is operating in order to perform the detect and avoid functions in respect of other aircraft or objects.
Visual Meteorological Conditions	VMC	Meteorological conditions, expressed in terms of visibility and distance from cloud, equal to or greater than the minima specified in CAR 602.