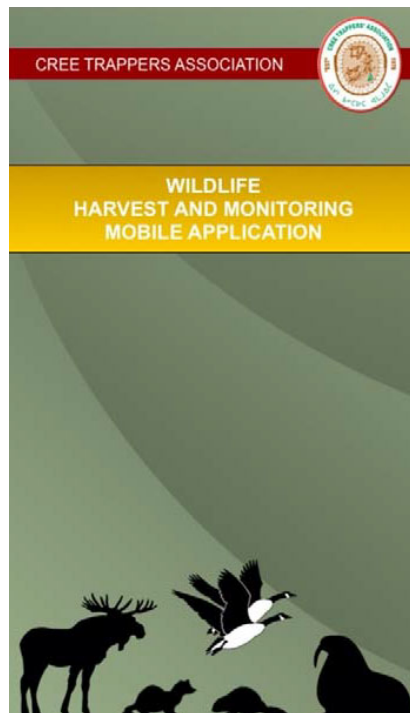


CTA MOBILE AND GPS FIELD DATA COLLECTOR APPS

MANUAL FOR CTA LOCAL ADMINISTRATION OFFICERS



CREE TRAPPERS ASSOCIATION (CTA)



Prepared by: Strata360

AUGUST 2021

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1 INTRODUCTION

The CTA Wildlife and the GPS Field Data Collector mobile apps are designed to help collect information critical to CTA. They focus on key features relevant to the CTA including:

1. The CTA Wildlife mobile application enables reporting of harvest and the collection of wildlife observations and climate change impacts by all trappers and land users in Eeyou Istchee. The accuracy is between 1 and 10 meters when used with mobile phones. This app is available for both iPhone and Android devices.
2. The GPS Field Data Collector application facilitates the collection of data requiring more accuracy such as cabins, camps, trails and trapline boundaries. Accuracy of 1-2 meters is achieved when the app is used with GPS devices (Trimble). This app is available only for Android devices.

To obtain the geographic coordinates of locations, the applications use the built-in GPS hardware in the GPS units (Android) or mobile phones (Android, iOS). The applications automatically record information such as date, time, location coordinates and the person who contributed the information (based on their user profile).

Harvest data is reported by trapline harvested and is not based on the user current location. Therefore, this data can be entered and reported at any time: in the field and/or later from the community. All other information collected by the mobile or GPS applications (Wildlife and Climate Change Observations and all features under the GPS tab) is collected and reported based on the user current location and it must be recorded in the field near the feature being recorded. Recording it later will result in the feature appearing on the map wherever you are currently.

Data collection methods are simple and straightforward. No technical knowledge or experience is required to use the apps. The icon-based user interface allows for more efficient data collection and reduces data input errors.

In the field, all data is recorded and stored on the mobile device at the time of the observation. Once in a Wi-Fi (4G/wireless) range, the user can upload and synchronize the data to the Cree Geoportal.

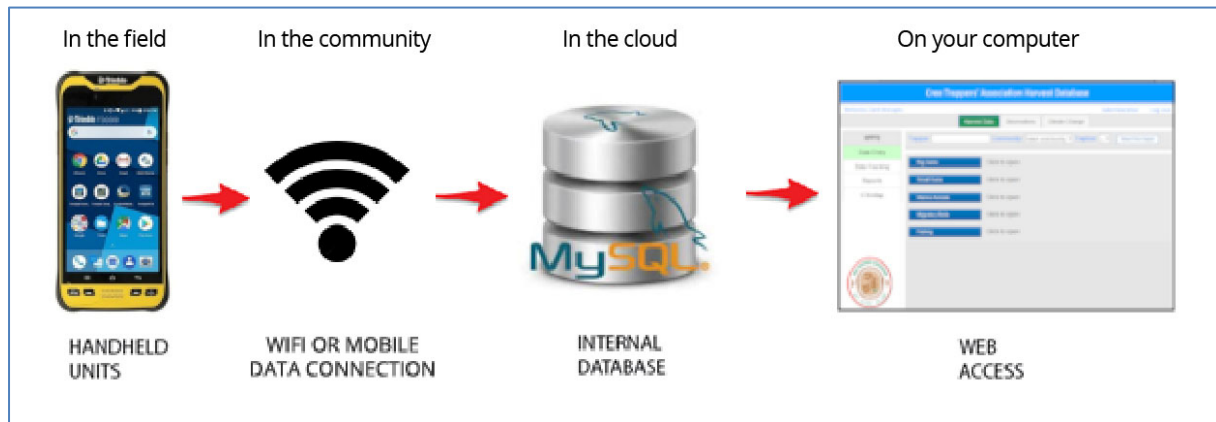
Part 1 of this manual addresses the CTA Wildlife App for mobile phones (iOS, Android). It describes the reporting of harvest, as well as wildlife and climate change observations.

Part 2 of this manual addresses the Field Data Collector App designed for GPS units running on Android. It facilitates the collection of features in the field important to the CTA (cabins, camps, trails, trapline boundaries etc.) and can also be used on mobile phones (Android only), however, with reduced accuracy.

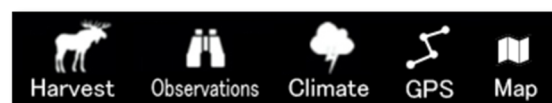
A separate manual addresses the Cree Geoportal Harvest Database and Cabins applications accessible through the Cree Geoportal (<https://www.creegeoportal.ca/>). These applications receive data from mobile devices and allow for data entry as well as review/edit and visualization of information submitted via mobile devices. They are designed for use by the CTA Local Administration Officers.

1.1 WORKFLOW

The following workflow diagram provides an overview of the how the applications combine to collect data in the field and display it online.



Mobile phone menu (above) populates the Harvest Database on Cree Geoportal with wildlife harvest, wildlife observations, and climate change observations.



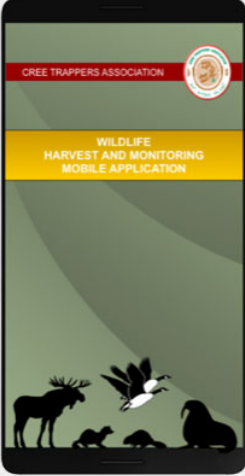
GPS unit menu's GPS tab (above) allows the collection of cabins and trapline information as well. It synchronizes with Cabins and Trapline Registry applications on the Cree Geoportal.

2 PART 1: USING THE CTA MOBILE DATA COLLECTION APP

2.1 DOWNLOADING AND LOGGING IN

2.1.1 Downloading the App for Mobile Phones (Android and iOS)

The easiest way to download the mobile app is to go to the Cree Geoportal (www.creegeoportal.ca) and scan the appropriate QR code with your phone camera.





No need to go to the local CTA office to report your harvest and observations. Use the new **CTA Wildlife Harvest and Monitoring Mobile Application** instead!

Primary benefits:

- Accessible to all hunters / trappers with a mobile phone
- Improved wildlife and climate change information for Eeyou Istchee
- Freeze-up and break-up time reporting improves travel safety
- More accurate and timely record keeping

Download the app from the [Google Play Store](#) or from the [Apple App Store](#) by scanning the QR-Code with your phone's camera.

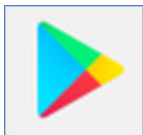


See the CTA information pamphlet [here](#).

Google Play Store

Apple App Store

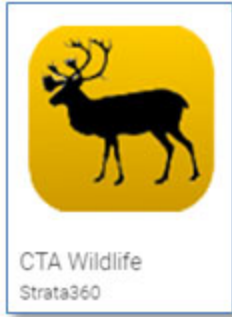
Alternatively, you can go to the Google Play Store (for Android users) or to the Apple App store (for iPhone users) to download the CTA App.



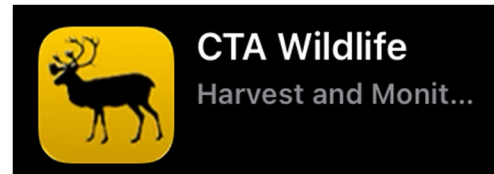
Go to the Google Play store by tapping on the Google Play app icon on your Android phone and search for "CTA Wildlife".



Go to the Apple App Store by tapping on the App store icon on your iPhone and search for "CTA Wildlife". The top result in the Apps section will be the CTA Wildlife app and will appear in the search results with an icon like the image below.



[Google Play Store](#)



[Apple App Store](#)

Press on the CTA Wildlife icon in the search results. On the app page press the install button to download and install the app to your phone.

2.1.2 Activate your account and log-in

The initial launch of the app on your mobile device will require you to sign in by providing the correct email address and Personal Identification Number (PIN). Contact your Local Administration Officer to receive these credentials if you are registered with the CTA and enter them to sign in (left screen below). If you have not been registered press the REGISTER button at the bottom of the sign in screen. This will launch the registration interface (right screen below).

CREE TRAPPERS ASSOCIATION

Email

Your PIN

SIGN IN

To sign on, use your email address and CTA Wildlife Database PIN. If you don't have a PIN yet, please register with the Cree Geoportal Database:

REGISTER

CREE TRAPPERS ASSOCIATION

REGISTER WITH CREE GEOPORTAL

Select your home community and trapline

SELECT COMMUNITY

Your first and last name

Your email address

Your mobile phone number

RETURN SUBMIT

Fill in the fields and press the SUBMIT button to begin the registration process. Shortly after submission you will receive an email to the email address you entered during the registration process with a confirmation link. The email will look like this:

From: <noreply@strata360.com>
Date: Wed, Jun 16, 2021 at 2:39 PM
Subject: Your CTA mobile app registration
To: Test User <oombaca@gmail.com>

Dear Test User,

Thank you for registering your CTA mobile profile.
To complete the registration please confirm your email address by clicking on the following link:
https://www.creegeoportal.ca/applications/CTAWildlife/ctaconfirm.aspx?ctacode=*18173EF2C8FD81E12759A2BAF319BF477E62ECD6

This is an automated notification from the Cree Geoportal. Please do not reply to this email.

In case you do not receive the confirmation email, please make sure to check your spam folder. Shortly after you confirm your email address by clicking the link you will receive your login credentials (PIN) by email like the one below.

From: <noreply@strata360.com>
Date: Wed, Jun 16, 2021 at 2:46 PM
Subject: Your CTA mobile app access
To: Test User <oombaca@gmail.com>

Dear Test User,

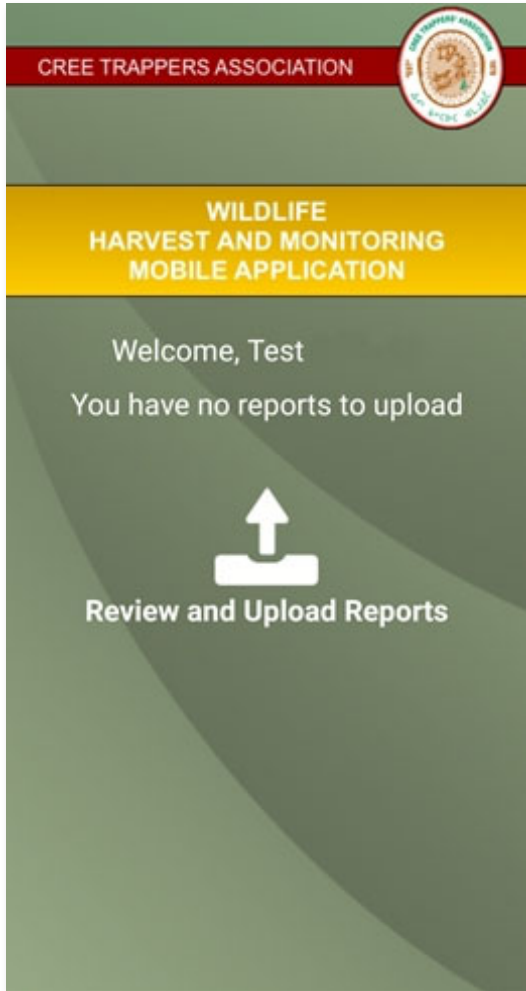
Your CTA mobile profile has been activated.
Please use your email address oombaca@gmail.com and the following PIN: 9214 for the mobile app login.

This is an automated notification from the Cree Geoportal. Please do not reply to this email.

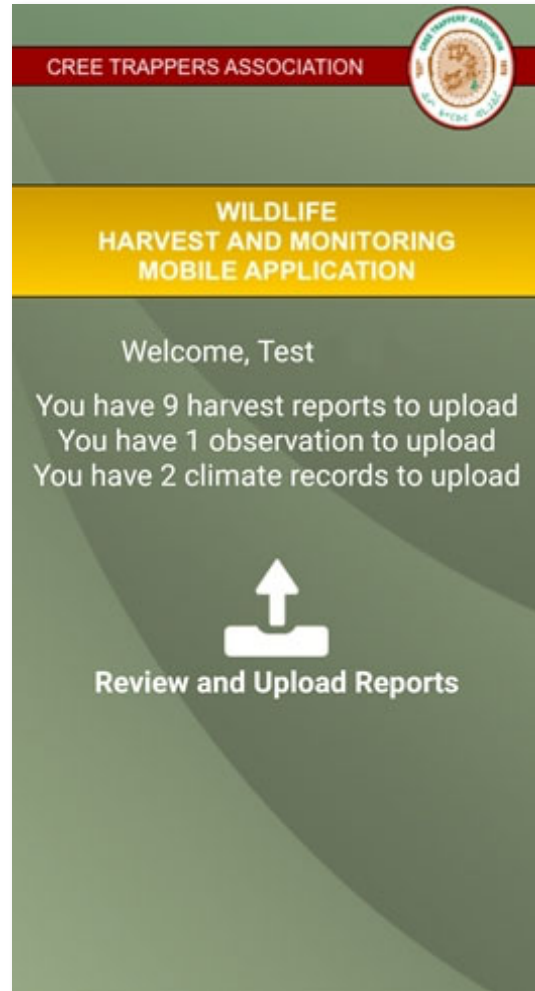
Press the Return button to go back to the sign-in interface and enter your credentials.

2.1.3 The Home Screen

Signing in launches the application Home Screen. This Home screen allows the user to begin a new data entry by selecting an entry type from the menu at the bottom of the screen. The Home screen will also display all stored records and allow the user to review existing entries on the device prior to uploading them to the CTA database on the Geoportal.



Initial view of the home screen



Home screen with data to upload

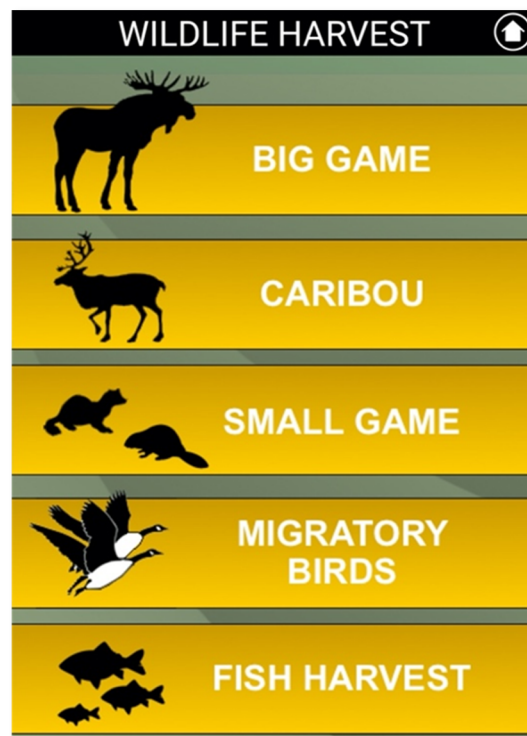
2.2 WILDLIFE HARVEST

Reporting harvest of wildlife is important for effective wildlife management. The “Wildlife Harvest” section of the App supports the collection and reporting of Big Game, Caribou, Small Game, Migratory Birds, and Fish Harvest data. The data entry process is similar for each harvest type.

It is important to note and remember that you should report harvest data only on your behalf with the mobile app, based on your user profile. To enter harvest data on behalf of other community land users, the CTA local administration officer must use the Cree Geoportal Harvest Database Application.

Wildlife harvest is reported on a trapline basis. For coastal communities, it is also important to report harvesting of any species of wildlife in the Eeyou Marine Region (EMR). Each coastal community will have an EMR option on the trapline list. The EMR includes all islands and waters off the coast of Eeyou Istchee.

Harvest data is reported by trapline harvested and is not based on the user current location. Therefore, this data can be entered and reported at any time: in the field and/or later from the community. To begin reporting of harvest, choose the type of harvest you wish to enter by tapping the appropriate section.



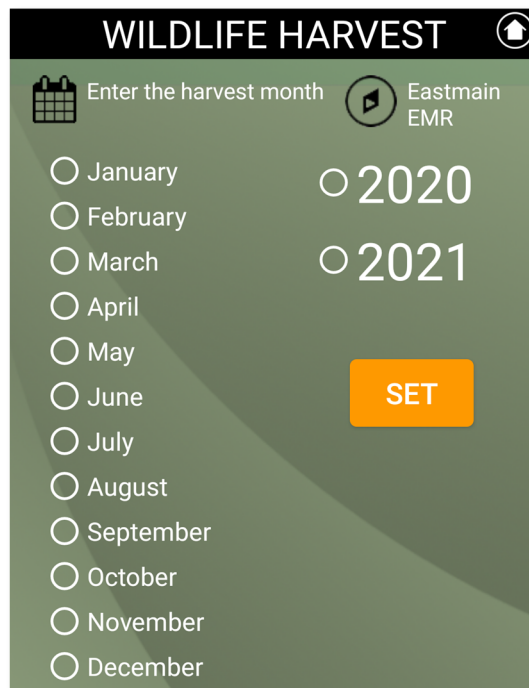
2.2.1 Big Game Harvest

In this section we will demonstrate entering of Big Game data. Like every other section, the Big Game section opens with species selection. Each type of Wildlife Harvest entry follows a similar process.

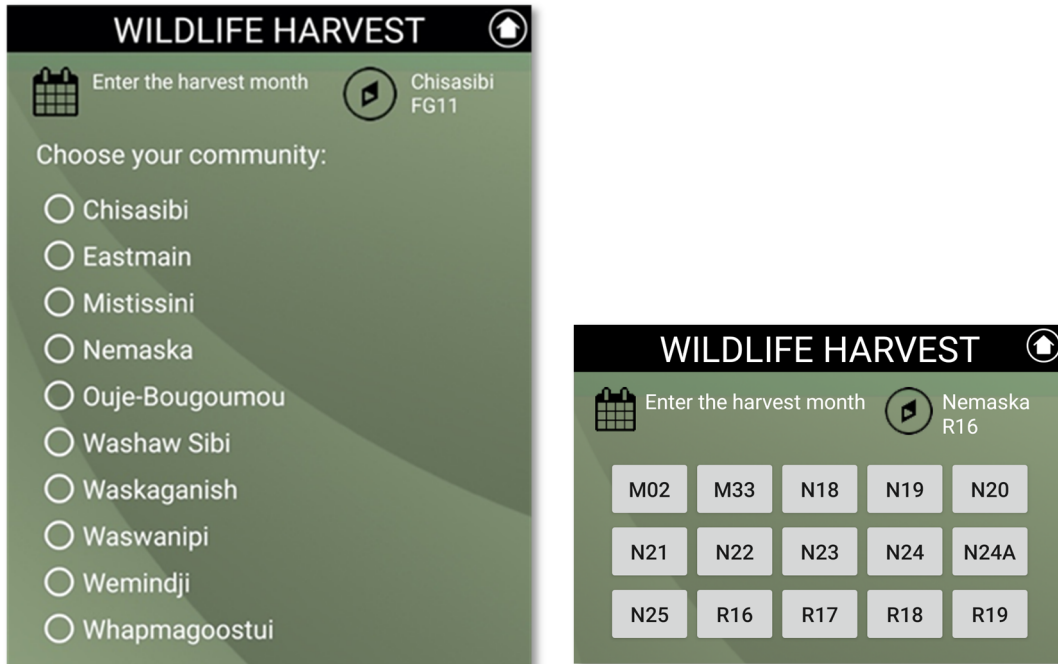
Step 1: Select your species and tap (multiple times) on each species to add to the count. Hit RESET to clear the count. You must enter the harvest MONTH, YEAR and TRAPLINE before you can SAVE your entry.



Step 2: Tap the calendar icon to set the time period (month) of your harvest. Choose the month, then the year. Tap SET.



Step 3: Tap the compass icon to select the location of your entry.



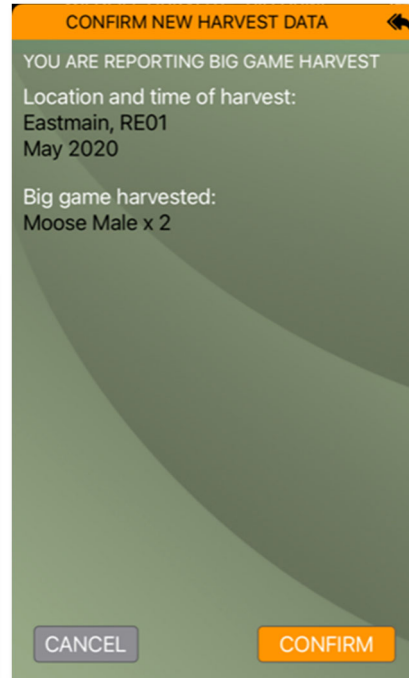
The default location is based on your user profile. To edit your default location, select the community in whose territory you made the harvest. This will open the appropriate trapline selection screen for that community.

Tap the trapline in which you made the harvest. This returns the user to the species selection page. Review your numbers harvested and press SAVE.

Step 4: Confirm your entry; the App opens a confirmation page listing the number of each species harvested, the trapline, and the month.



Android confirmation screen



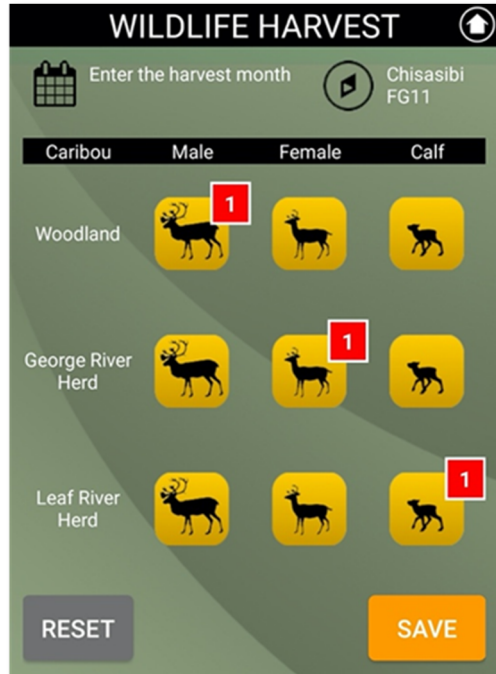
iPhone confirmation screen

Select CONFIRM to save the entry on the device or CANCEL to go back and make changes to your entry using the steps described above.

2.2.2 Caribou Harvest

The process for entering Caribou Harvest data is similar to the one used for Big Game Harvest Entry. However, here it is important that you report harvest by the subspecies/ herd.

Step 1: Tap on each species to add to the count. Hit RESET to clear the count. You must enter the harvest MONTH, YEAR and TRAPLINE before you can SAVE your entry.



Repeat steps 2, 3 and 4 as described above in the Big Game Harvest Entry section (2.2.1).

2.2.3 Small Game Harvest

The process for entering Small Game Harvest data is similar to the one used for Big Game Harvest Entry and Caribou Harvest Entry.



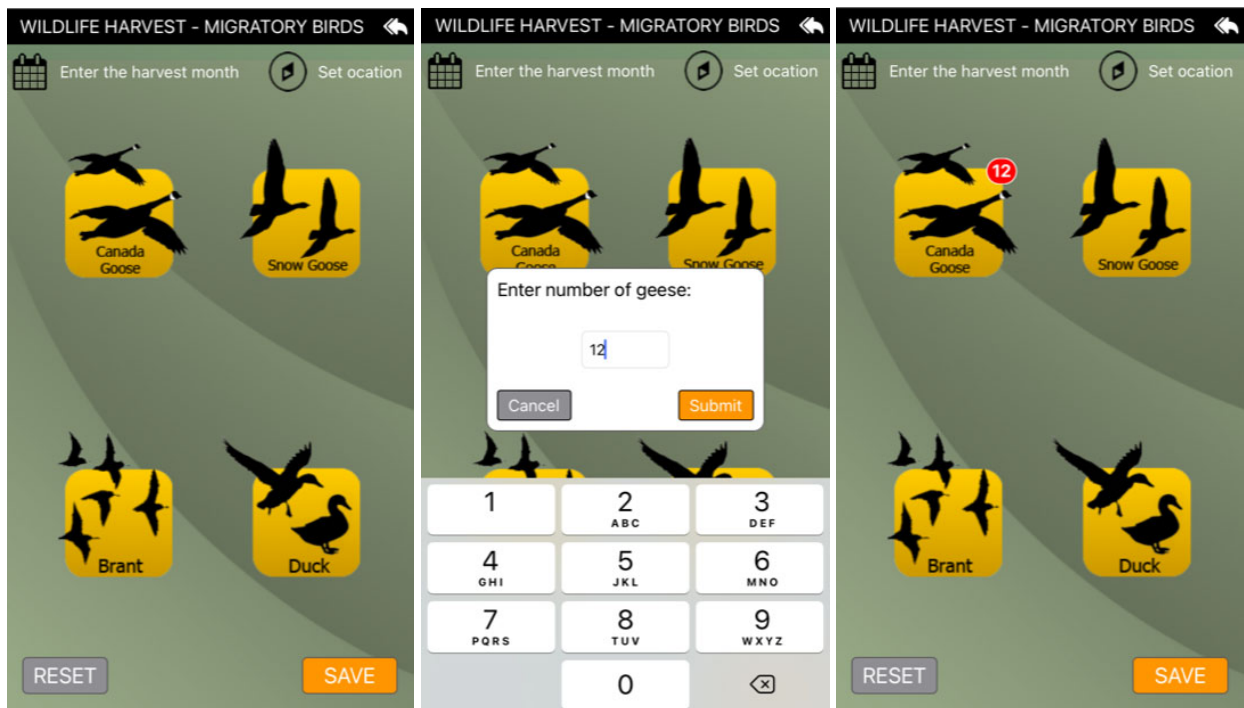
Step 1: Select your species and tap (multiple times) on each species to add to the count. Hit RESET to clear the count. You must enter the harvest MONTH, YEAR and TRAPLINE before you can SAVE your entry.

Repeat steps 2, 3 and 4 as described above in the Big Game Harvest Entry section (2.2.1).

2.2.4 Migratory Birds Harvest

Step 1: Select your species and tap on the species icon. Tap on each species to select it.

A pop-up window will appear. Enter the number birds harvested for each selected species and click SUBMIT. Hit RESET to clear the count.



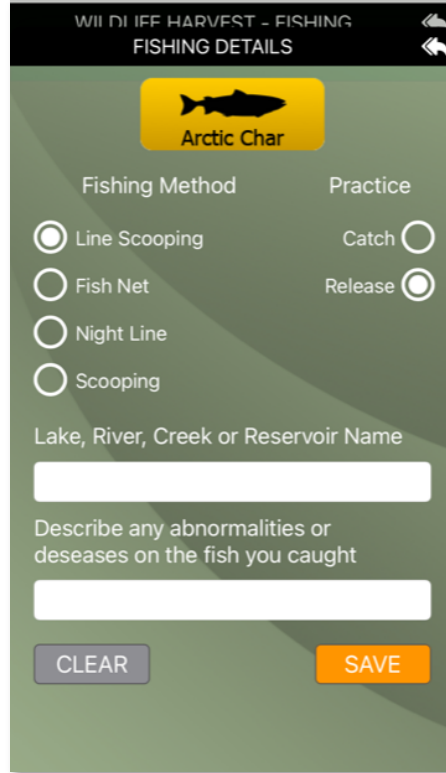
You must now enter the harvest MONTH, YEAR and TRAPLINE before you can SAVE your entry.

Repeat steps 2, 3 and 4 as described above in the Big Game Harvest Entry section (2.2.1).

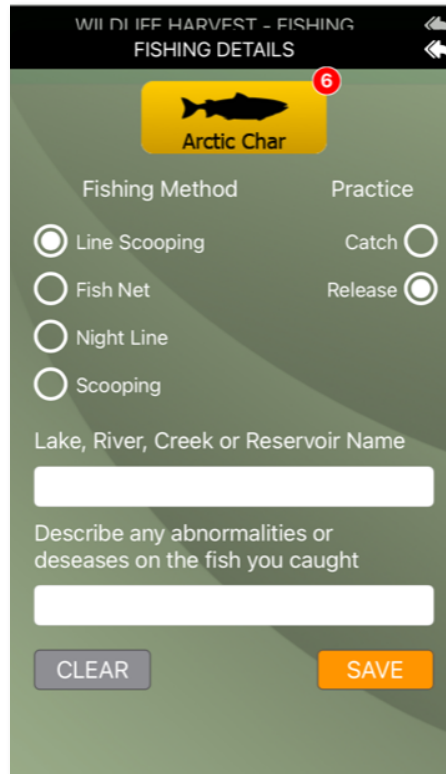
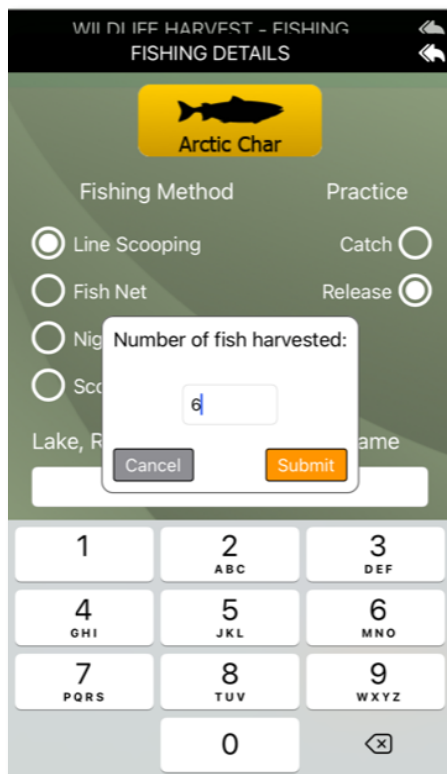
2.2.5 Fish Harvest

Step 1: Select your fish species and tap on the species icon to select it. Tap on each species to select it. A pop-up window will appear.

Enter additional information about the Fishing method and Practice (radio buttons) first, then type the name of the place (lake, river, creek etc.) of harvest and any additional comments you may have. Do not use special characters when entering additional comments, only letters and numbers.



Click on the fish icon on top of the screen and enter the number of fish harvested in the pop-up window. When done, click SUBMIT.



Hit CANCEL to clear the count. You can change your count by tapping on the fish icon again and re-entering the number of fish harvested.

Before you can SAVE your entry, you must enter fishing attributes and the harvest MONTH, YEAR and TRAPLINE.

Repeat steps 2, 3 and 4 as described above in the Big Game Harvest Entry section (2.2.1).

Repeat for each species.

2.3 WILDLIFE OBSERVATIONS

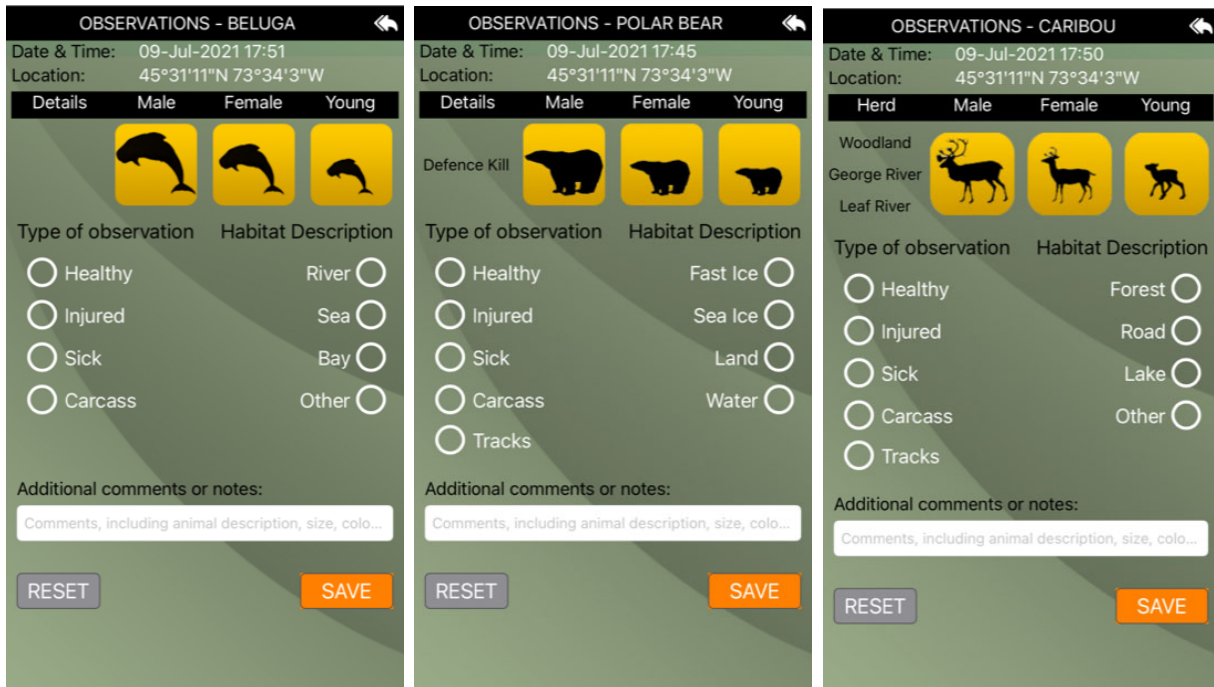
Wildlife observation reporting is important for monitoring of species of special concern and species specific to the Eeyou Marine Region. In this section of the mobile application, you can report important information on animals observed and not necessarily harvested.

The Wildlife Observations section registers the date/time and the exact location by (GPS) coordinates. Observations should be reported from the field on the site of observations (and uploaded later once in Wi-Fi or cellular range).



Tap on the species to enter observation information.

The following images illustrate screens for Beluga, Polar Bear and Caribou observations.



Tap on the icons to add to the count of animals seen (not harvested). Add additional attributes and any comments (attributes may vary by species).

In the comments field, you can enter your observations about animal health and/or any abnormal behavior, animal description, size, color, behavior, etc. Do not use special characters when entering additional comments, only letters and numbers.

Tap RESET to clear your entry or SAVE to advance to the Confirmation screen.



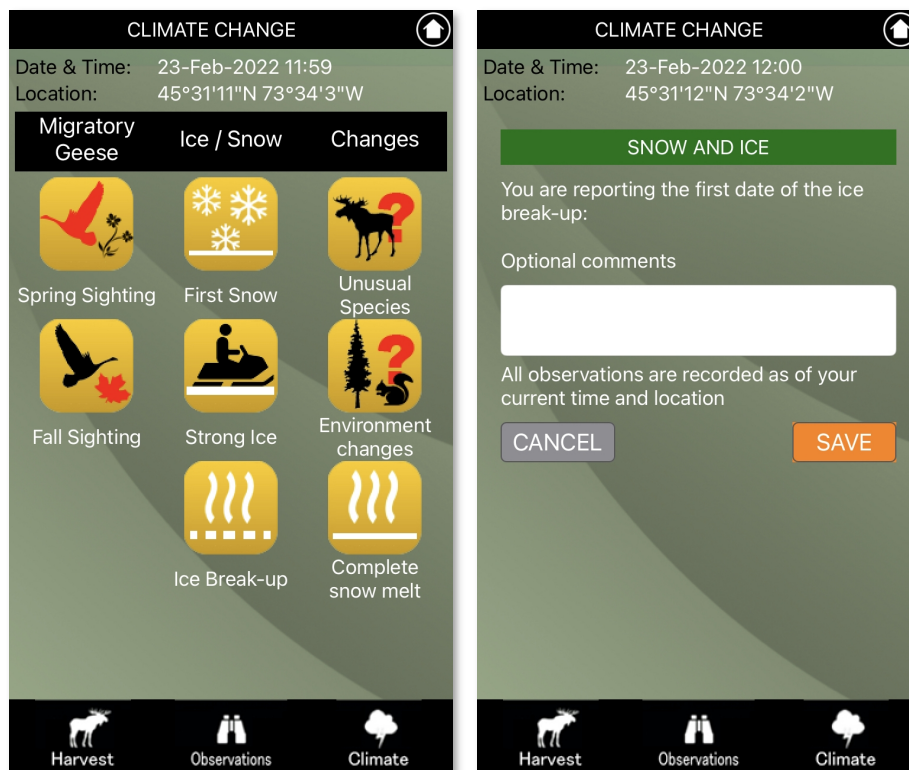
Select CANCEL to go back and change your entry or CONFIRM to save it on your device.

2.4 CLIMATE CHANGE OBSERVATIONS

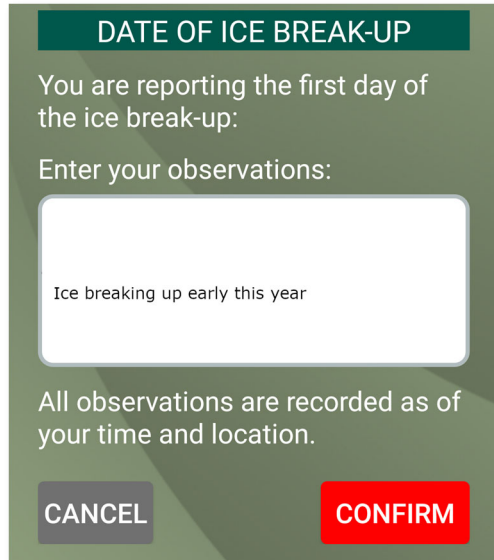
The Climate Change Observations section also registers the user date, time, and location. Observations should be reported from the field on the site of the observations (and uploaded later once in Wi-Fi or cellular range). You can report your observations on:

- Migratory Geese – date of first and last migratory geese observed in the springtime and first and last migratory geese observed in the fall.
- Ice and Snow – includes information on first snow on the ground, freezing of lakes, snow melting and ice breakup dates in the spring and when the first date ice is strong enough for snowmobile
- Unusual Species – species new or unusual to your territory
- Environmental changes – any difference regarding environment, vegetation or animals on traplines

Tap an icon to add an observation and describe it. Do not use any special characters when entering additional comments, only letters and numbers.



The location and time are registered automatically. Enter your observations in the text box. Press CANCEL to go back and change your observation type selection or press SAVE.



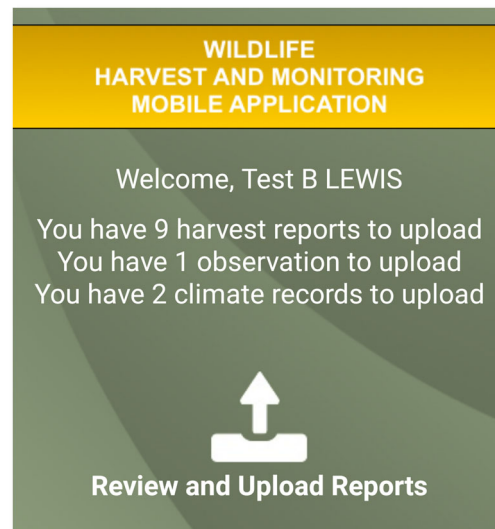
The orange SAVE button changes to a red CONFIRM button. Tap CONFIRM to save your entry to the device.

2.5 DATA UPLOAD / SYNCHRONIZATION (ONLINE)

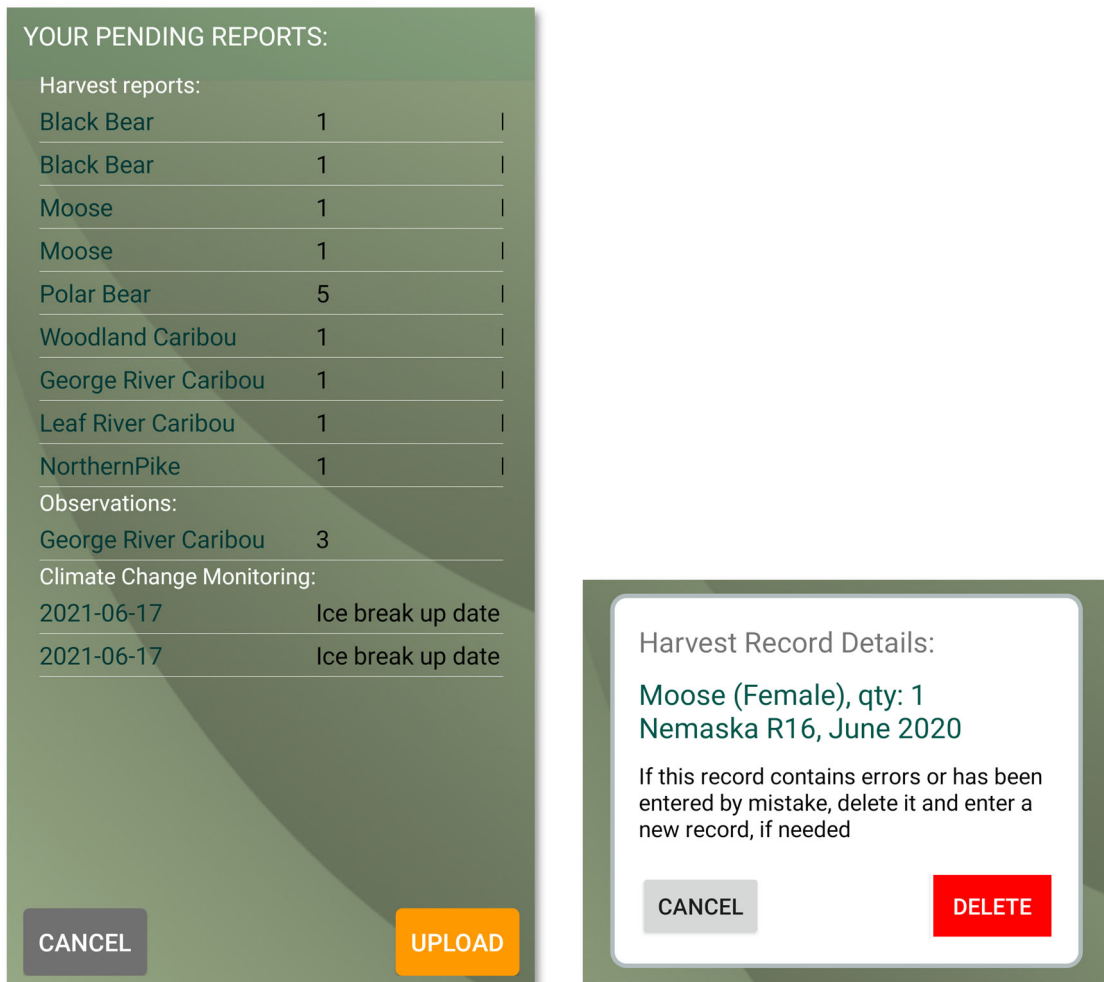
Note: This part of the process requires an internet (or cellular data) connection.

When an internet (or cellular data) connection is established, data collected offline can be uploaded / synchronized with the CTA Cree Geoportal applications. Data should be synchronized frequently to protect against any loss due to device malfunction or damage and to make the data available to other users as soon as possible.

To review, delete, or upload collected data, press the white arrow in a circle icon on the top right of the screen of every tab. This will open a summary of all the data collected by the user which has not yet been uploaded.



Press "Review and Uploads Reports" or the associated icon to access a detailed list of your Pending Reports. The screen above also greets the user upon launching the application.



Pressing on the name or date of a record in the left column will open its details. The details include the date and the location, as well as any other information entered by the user.

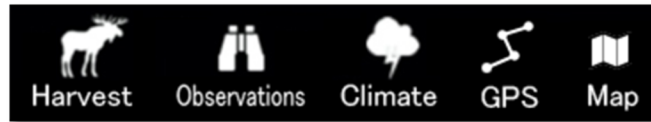
CANCEL returns the user to the list of Pending Reports. Records containing errors can be deleted by pressing the DELETE button on the bottom right.

Tap UPLOAD to upload the data from the device to the CTA database. The uploaded data can then be viewed and edited in the CTA section of the Cree Geoportal (<https://www.creegeoportal.ca/>).

3 PART 2: USING THE GPS DATA COLLECTION APP

3.1 INTRODUCTION TO THE GPS APPLICATION

The CTA Wildlife mobile app has expanded functionality that can best be used on the GPS units. Two additional sections are available at the bottom of the screen: **GPS Tab** and **Map Tab**.



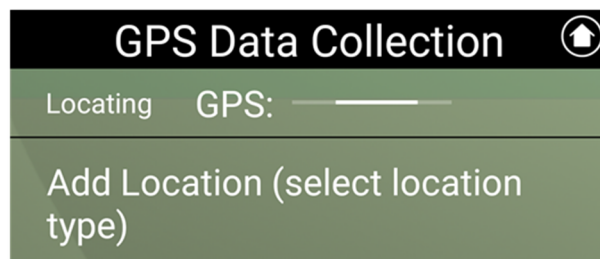
The GPS Data Collection Application facilitates the more accurate collection of features important to the CTA (cabins, camps, trails, trapline boundaries etc.) with an accuracy 1-2 meters. The application will automatically record information such as date, time, and the location coordinates.

All information collected by the GPS app is reported based on the user current location and it must be recorded in the field near the feature being mapped. In the field, all data is recorded and stored on the mobile device at the time of the observation. Once in a Wi-Fi or cellular range, the user can upload and synchronize the data to the Cree Geoportal.

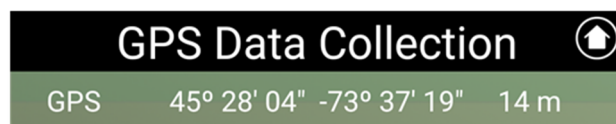
The GPS Field Data Collector app also enables offline access to maps (satellite images) of the Cree traplines through the MAP tab.

3.2 GENERAL CONSIDERATIONS

Hold the GPS unit in a place that has fewest obstructions. When searching for a GPS connection, the unit displays the words "Locating GPS" at the top of the GPS tab.



Wait for the GPS unit to establish a connection. Once connected, the application displays your longitude and latitude.



General steps that apply for collecting feature locations with the GPS unit:

1. Make sure the GPS signal is good for more precision

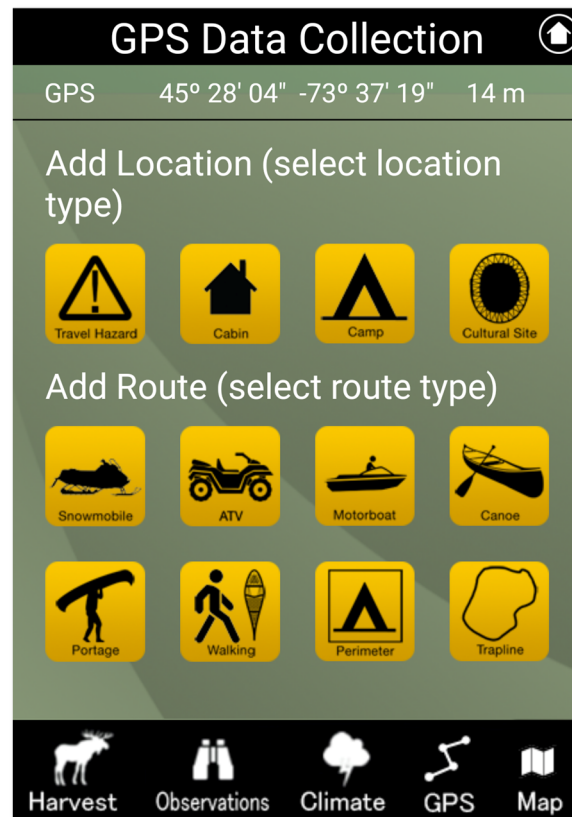
2. Make sure you are standing on top or as close as possible to the object being mapped
3. Register feature location
4. Take a photo
5. Fill-in attributes/description
6. Click SAVE when done

To map a coverage area (required for Camp areas for example) select the PERIMETER feature icon, then start walking. Always walk/map a polygon in a clockwise or counterclockwise direction and avoid walking in a zigzag line or crossing over the desired area.

3.3 GPS TAB - ADDING FEATURES

The GPS section provides the user with two options:

1. Add location (point)
2. Add route (line) (start/pause/stop recording)



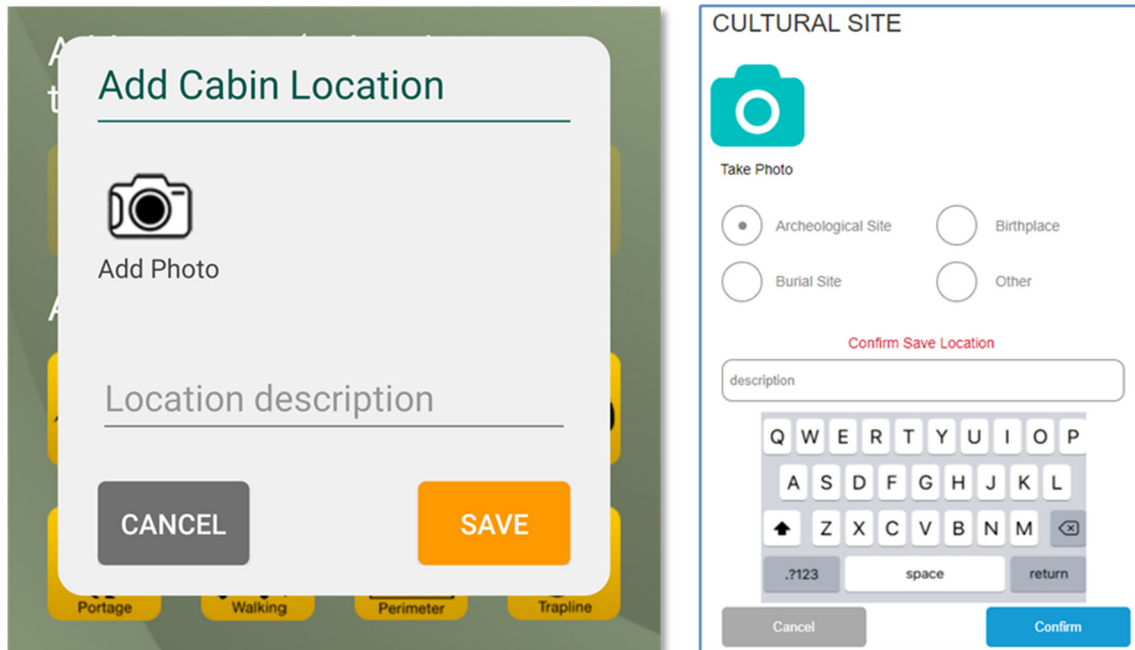
As part of registering the location or route attributes, the users also can add a picture.

3.3.1 Add Location

The “Add Location” buttons will map point features and collect associated attributes, including photos. The following features are included:

1. Cabin
2. Camp (one point for camp location and one polygon for occupied land collected separately as part of “Add Route” feature using the Perimeter button)
3. Travel hazard (open water / thin ice)
4. Cultural site (submenu / description field)
 - Archaeological site,
 - Birthplace,
 - Burial site, and
 - Other

Pressing the “Add Location” icon will activate the attribute entry form pop-up:



The attributes form contains the option to attach photos to specific data points / locations. To add a photo to the data record, click the camera icon.

3.3.2 Add Route

Add Route will be used to map the following types of line and polygon features:

1. Snowmobile
2. ATV

3. Motorboat
4. Canoe
5. Portage
6. Walking
7. Camp perimeter (polygon)
8. Trapline boundary

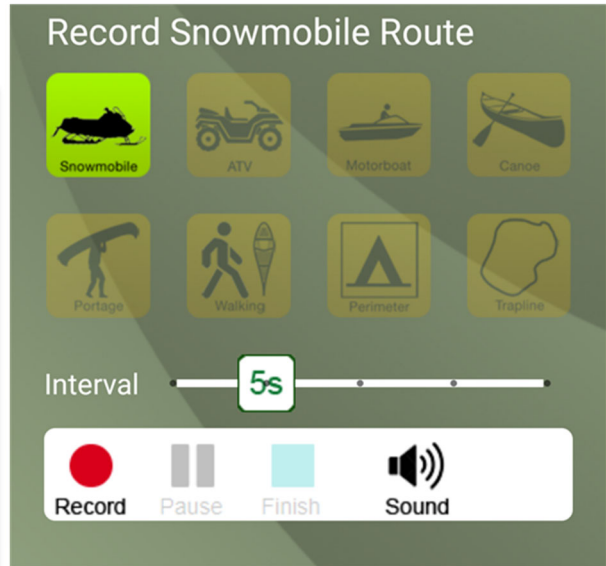
The user will choose the line feature to be mapped. The icon will highlight on the screen.



There are two modes to map routes:

1. Manual mode
2. Automatic mode

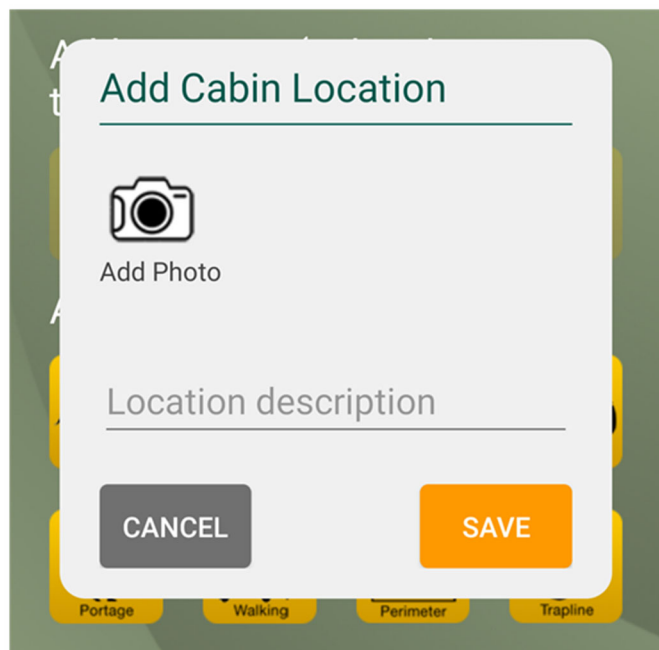
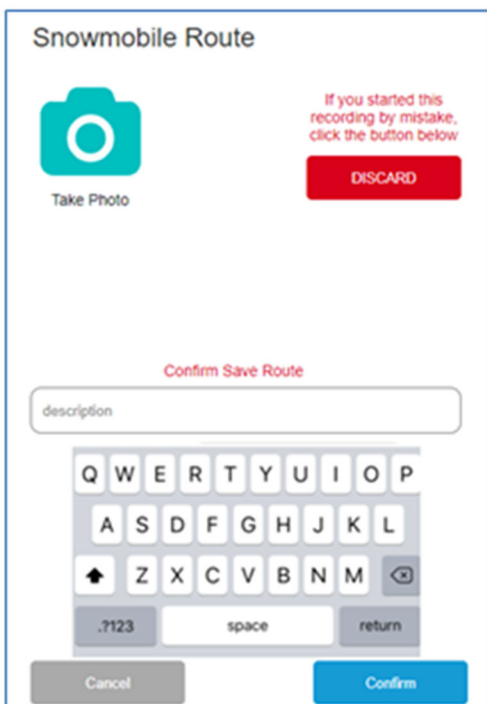
In the manual mode, the user determines the point locations to record positions along the route (while walking, driving or canoeing) by pressing the "Record Point" button. The number of registered points is shown on the interface.



In automatic mode, the user pre-selects the time interval and positions are recorded automatically. Default time intervals will be associated to each route type (for example: five seconds for snowmobile, one minute for walking) and the user may modify them by using the slider.

Available options in automatic mode: 1) Record, 2) Pause, 3) Finish

After the user presses the “Finish” button, the attribute window pops-up prompting to add more information and/or a photo.

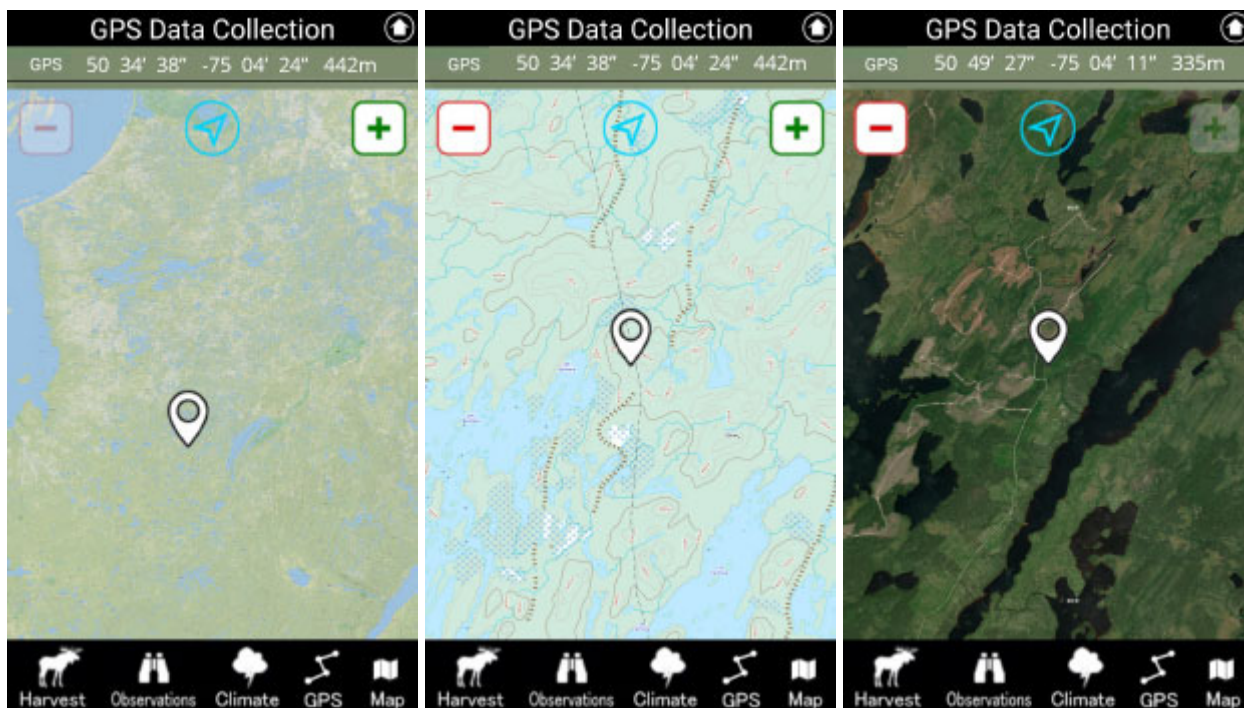


While recording a route, the user can record individual positions (point locations) simultaneously. For example, the user can map a cabin location while recording a snowmobile route. This does not require pausing the route recording.

3.4 MAP TAB

The MAP tab displays a background base map of the surrounding area in three different resolutions. It uses GPS functionality to display the current location of the user/unit. There are three sets of base maps:

1. Low resolution maps (smaller scale) are downloaded with the application and are locally stored in the GPS unit (see below, left image)
2. Medium resolution topographic maps (scale 1:150,000) are stored on the SD card. The SD card must be inserted into the GPS unit (Trimble) to have access to higher resolution / larger scale maps (see below, center image)
3. High resolution satellite images (scale 1:50,000) are also stored on the SD card. The user must insert the SD card into the GPS unit (Trimble) to have access to high-resolution satellite images (see below, right image)

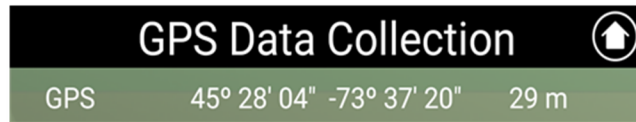


All sets of maps are available for use when working online or offline.

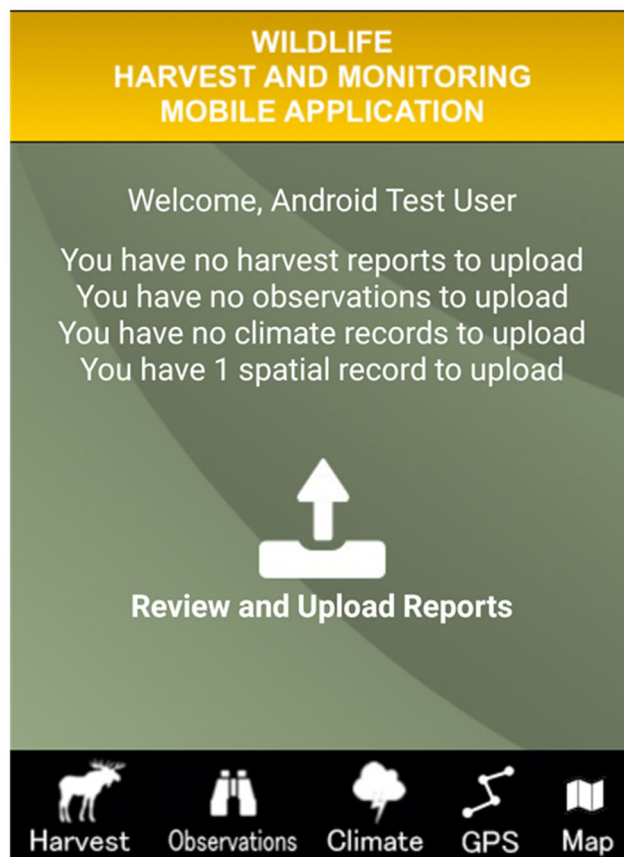
3.5 DATA UPLOAD / SYNCHRONIZATION (ONLINE)

Note: This part of the process requires an internet connection.

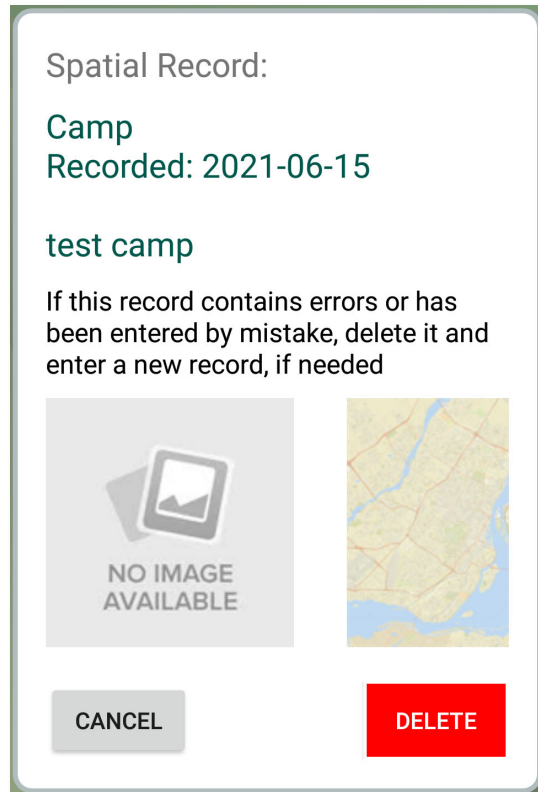
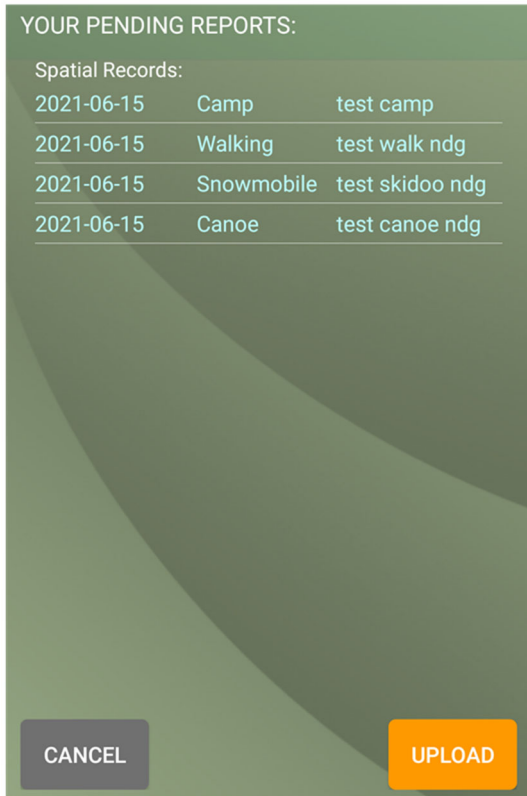
When an internet connection is established, data collected offline can be uploaded and synchronized with the Geoportal application. To review, delete, or upload collected data, press the white arrow in a circle icon on the top right of the screen of every tab.



This will open a screen a summary of all the data collected by the user which has not been uploaded.



Press "Review and Upload Reports" or the associated icon to access a detailed list of your data. The screen above also greets the user upon launching the application.



Pressing on the date of a record will open its details. These will include a photo, if one was attached, and the date the location was recorded as well as other information entered by the user.

Records containing errors can be deleted by pressing the “DELETE” button on the bottom right. Locations and routes stored in the unit can be previewed on the map by pressing the map image. Cancel returns the user to the list of spatial records.

The uploaded data can then be accessed and viewed in the CTA section of the Cree Geoportal (<https://www.creegeoportal.ca/>) under the Cabins Map.