



AVENZA MAPS

Avenza is a free mobile application that uses GeoPDF's to:

- Show a user on a map - on or offline
- Navigate to different features
- Collect points, lines and polygons on the map with pictures and desired attributes
- Record GPS tracks
- Measure distances/areas
- Import or export map features as KML or GPX files, and share them with other users
- And more!

Use this guide to learn how to:

- [Download the App](#)
- [Add a Map](#)
- [Use a Map](#)
- [Set Up Map Layers](#)
- [Rename and Edit Map Layers](#)
- [Add Placemarks](#)
- [Record GPS Tracks](#)
- [Draw and Measure](#)
- [Add Geofences](#)
- [Export Data](#)



AVENZA MAPS

Downloading the App

1. Open Google Play on Android and or the App Store on iOS



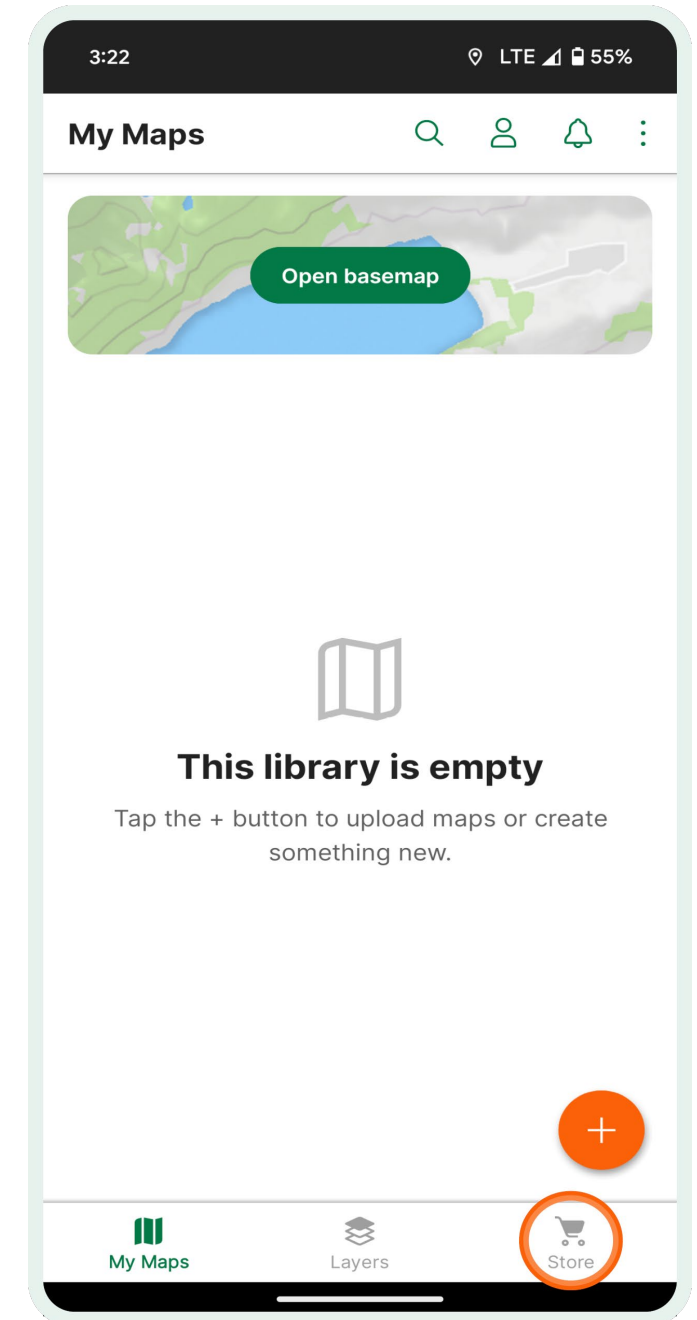
2. Download Avenza Maps for free



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3. When you first install and open Avenza Maps, you will see a series of welcome screens. It may ask you to create a new free Map Store account. After closing the introduction screens, the default screen of the app is “My Maps” on the bottom tab.

4. From there you can add your own GeoPDF to collect data on or you can buy maps from their map store (continued on the next page)



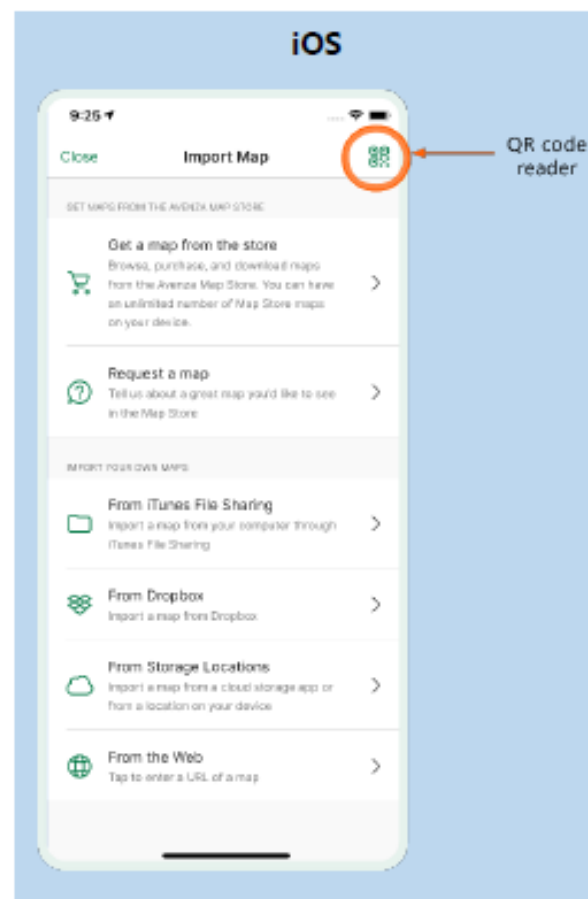
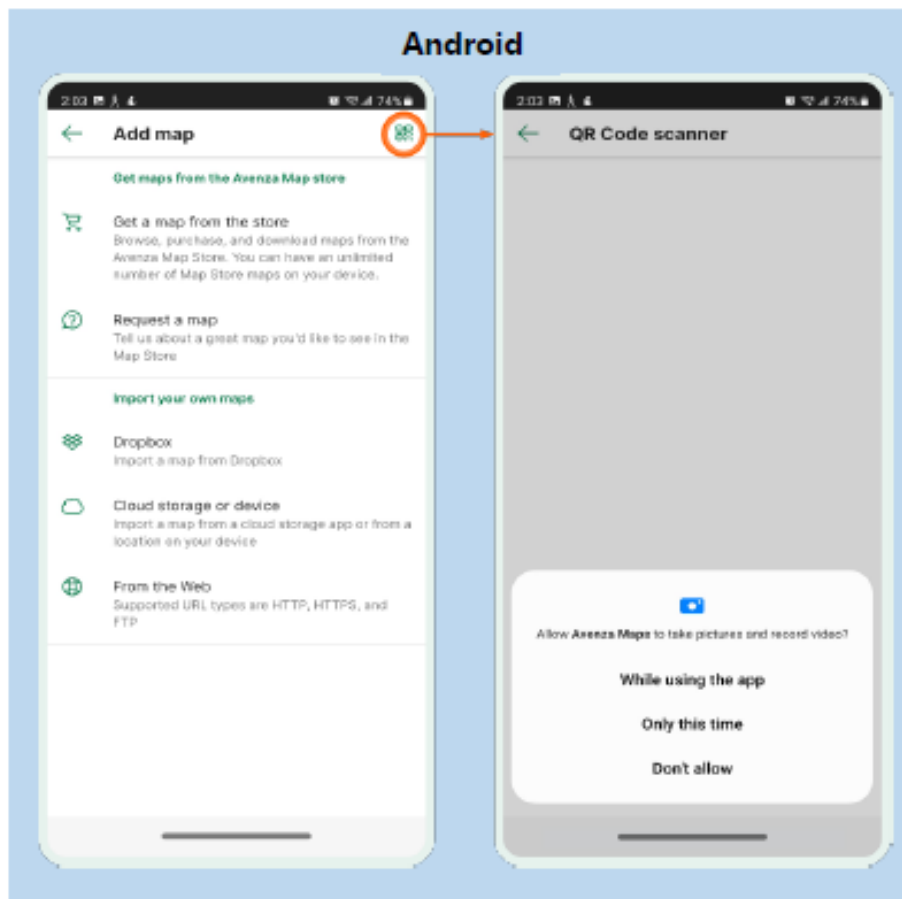


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Adding a Map

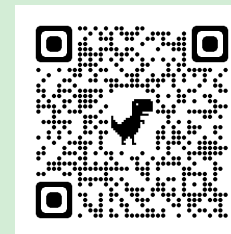
On the My Maps screen, tap  for our Android users, or  for our iOS users.

Tap the QR Code icon in the top right corner if you have a map with a QR code link or click to add maps from Cloud storage or device or From the Web, etc. If this is the first time you are using the app, you may need to allow the app access to the device camera.



DRP has GeoPDFs for every park:

<http://publicfiles.dep.state.fl.us/DRP/AvenzaGeoPDFMaps/>



On the free version, Avenza will allow you to have three active maps.

However, if you remove a map to make space for another you will not lose the data that was collected on that map. So you can keep more maps on your device in a separate folder, etc. and just swap the active maps in and out of Avenza to use multiple maps in the app.



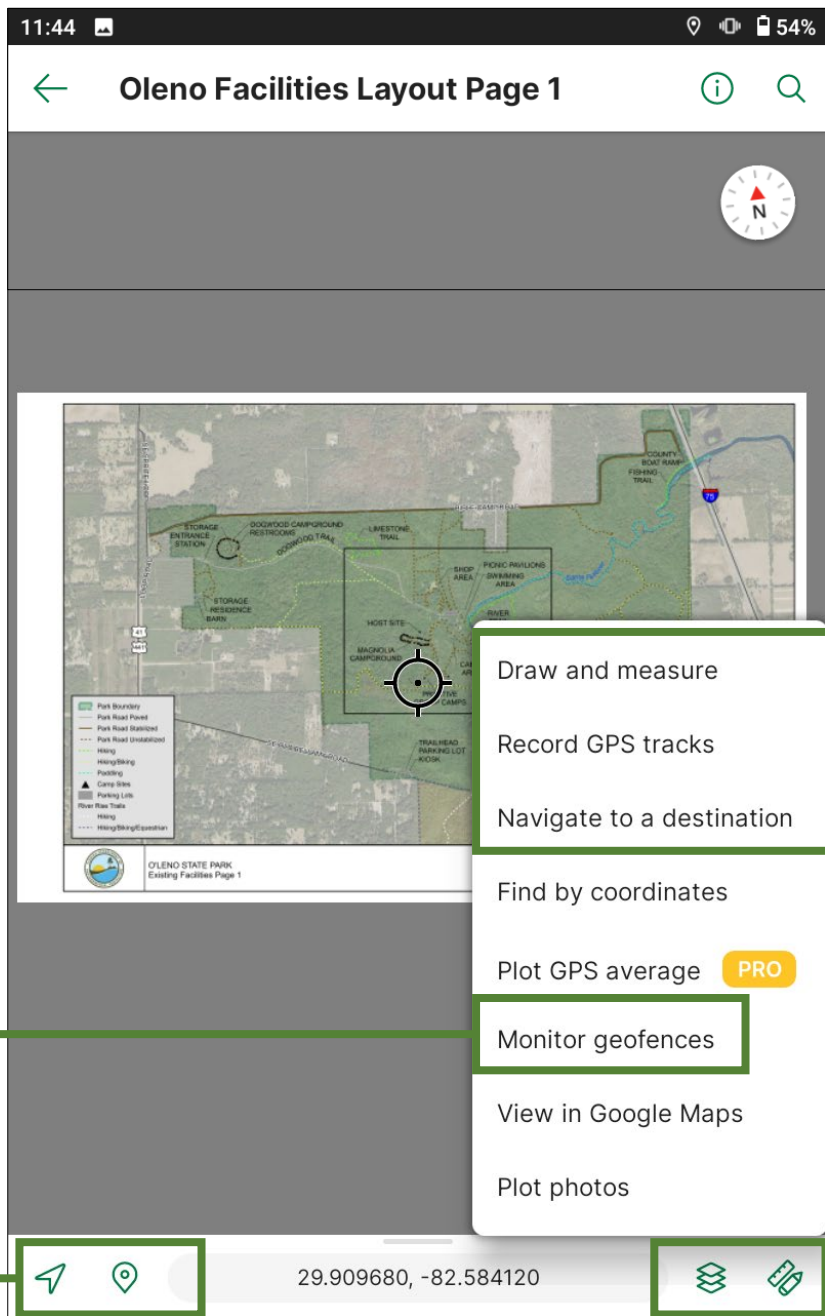
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Using a Map

Click on data points/lines/polygons shown on the map to view the label and click the label to view all the information, photos, etc. for that data.

Set up buffers around areas that will notify you when you enter or exit those areas

Navigate to locations and add placemarks



Double click the map to zoom in and out or use two fingers to rotate the map view and zoom in and out

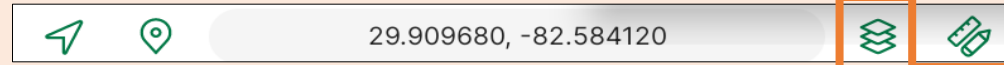
Measure distances, record tracks and navigate whenever you need to

View all your layers linked to the active map or view the menu above to draw, etc.

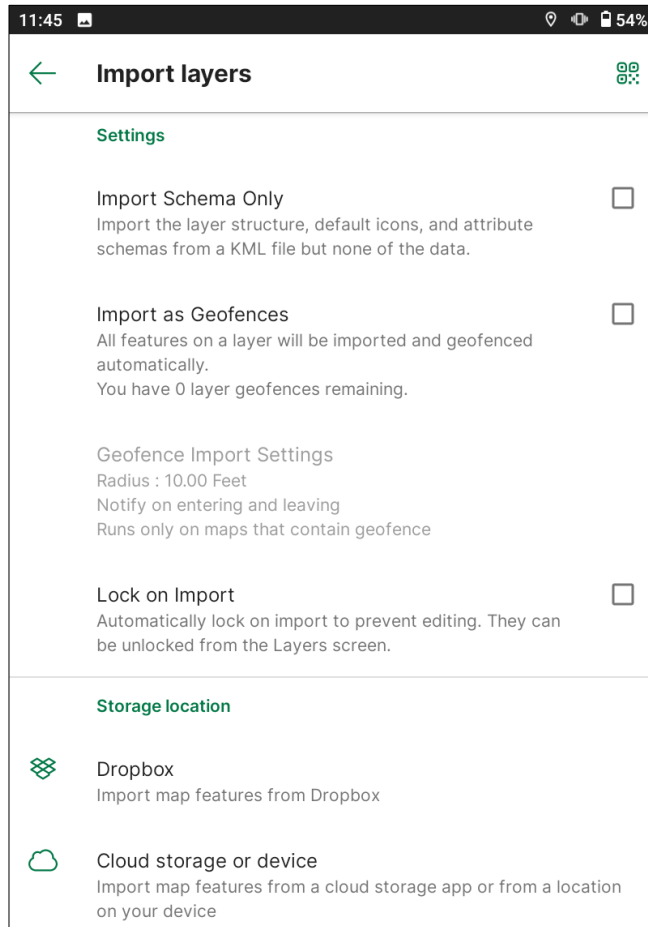


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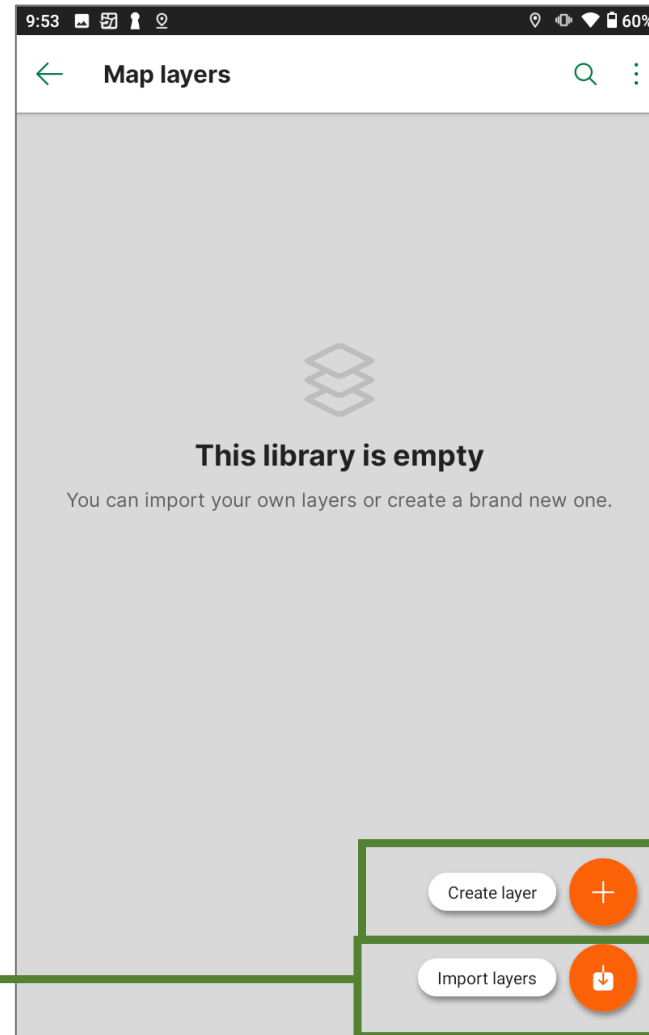
Map Layers



From your map page, select the **Layers** tab at the bottom to view the layers in that map



Or import layers with existing data



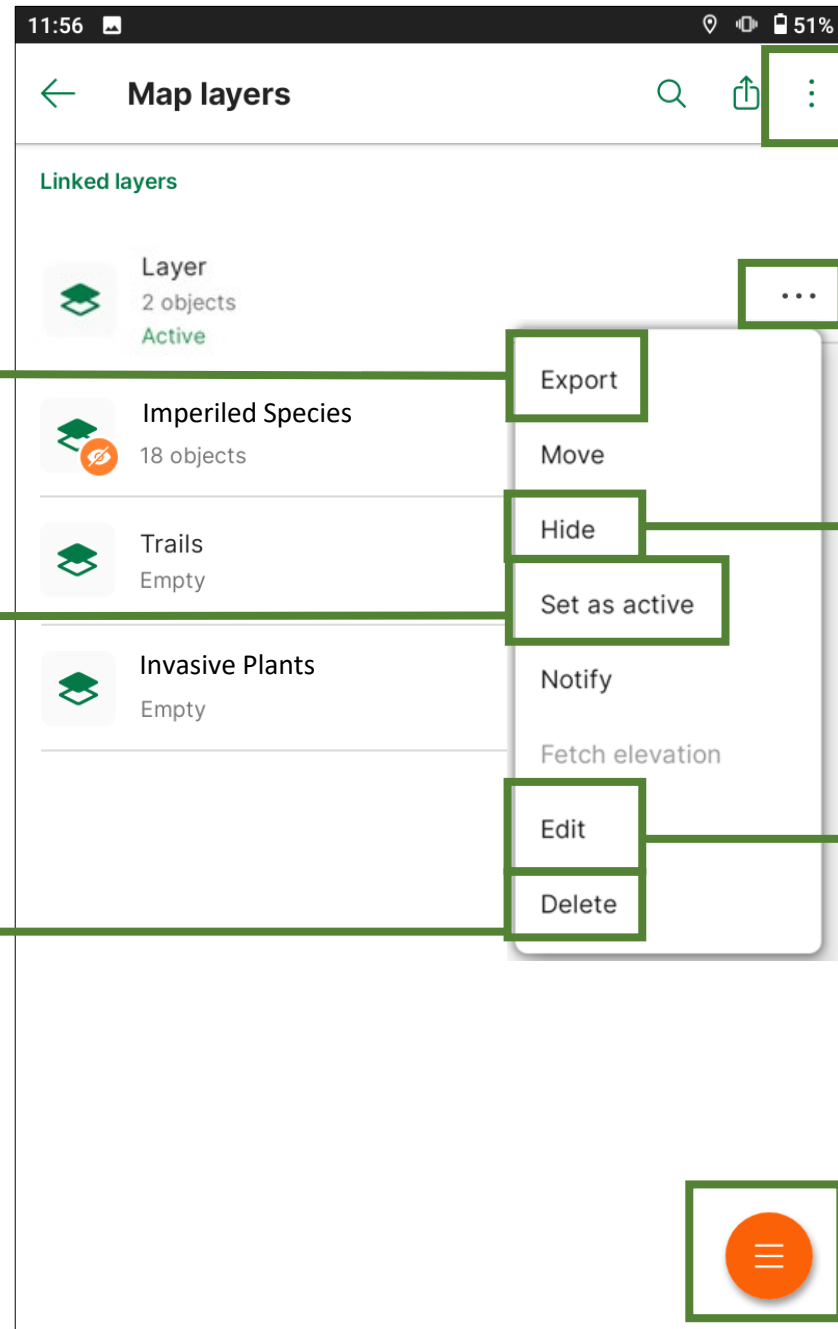
Create different layers for different projects or topics to make data management easier

For example, create an invasive plant layer, imperiled species layer, etc.



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Map Layers



To view all the labels for visible data on your map at once, click the three dots and select **View all callouts**

You can also export a single layer by itself

Set layers as active (shown in green on the active one) if you want to collect data in those layers as opposed to just viewing the data

Delete layers and all the data within them when you no longer need them

Click the three dots to view options for your layer

Hidden layers won't appear on the map and will have the orange eye symbol underneath them in the layers list

Rename the layer and change other properties

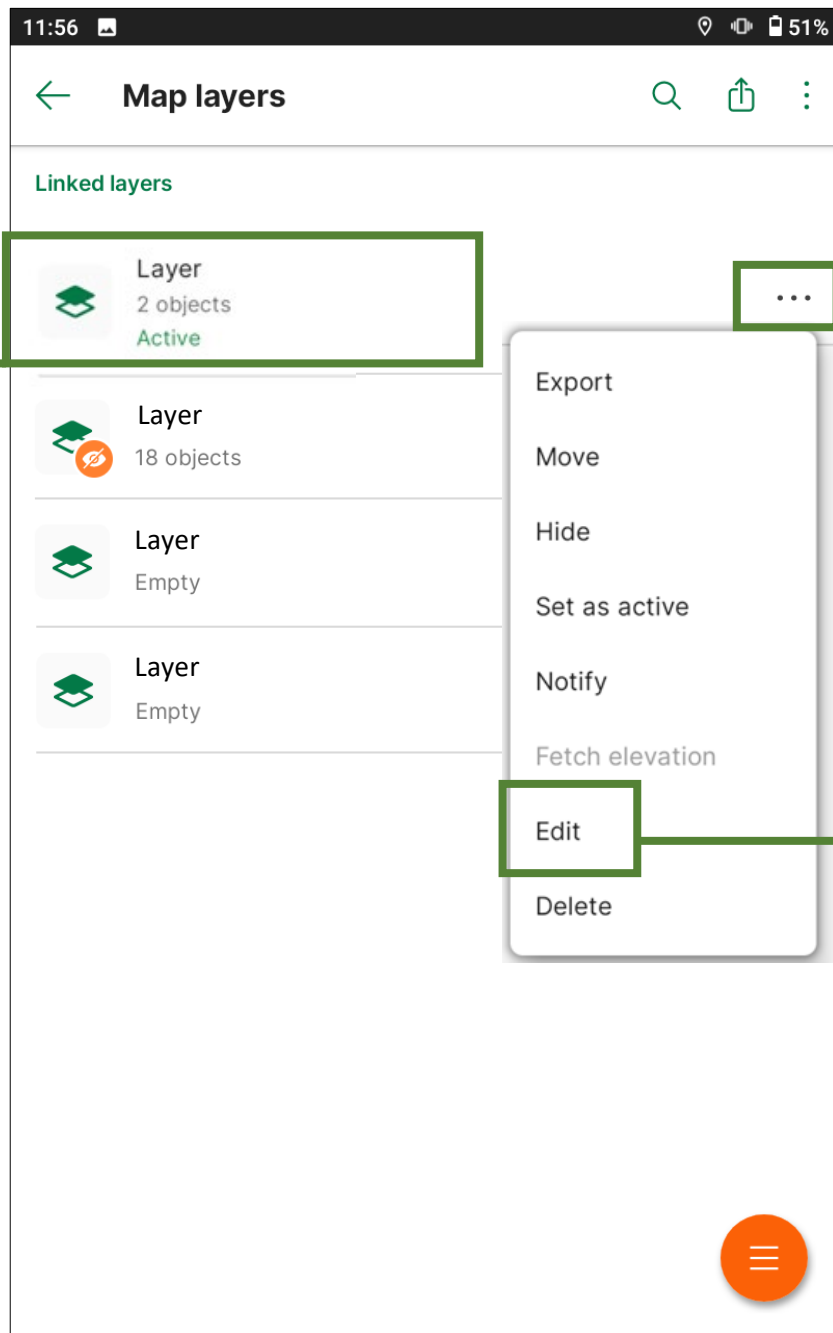
Create and import new layers



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Rename and Edit Map Layers

If you collect data on a blank map without first creating a layer or if you collect data without setting an active layer, a layer will automatically be created called “Layer” and will need to be renamed



Click the three dots to view options for your layer

Rename the layer and change other properties under **Edit**
(continued on the next page)



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Edit Layers

Name your layer and make sure to rename any layers with the default name "Layer" to something more detailed

If you're always collecting the same type of points you can set a default name so you don't have to type it in every time you collect data and use the attributes/pick lists (shown on the next slide) to add more details to the point

9:56

← Edit layer

Settings

Name
Invasive Plants

Lock layer
Lock the layer to prevent changes

Set as active layer
All features are added to the current layer

Layer defaults

Default placemark name
Invasive Plant

Placemark icon

Line style

Default area style

Default settings will be applied to all new features in this layer. You can customize features individually.

Edit layers to set up defaults and styles to make data collection and visualization easier

Lock layers if you don't want to accidentally collect data or edit data on visible layers

Set as active layer if you want to collect data in that layer for your current session

Customize the symbology (especially if you have many data layers on your map)



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Edit Layers

Link the layer to whichever maps you want if you want a single layer to show up in multiple maps or unlink a layer from all maps to remove them from all maps

11:43

55%

←

Edit layer

Line style

Default area style

Default settings will be applied to all new features in this layer. You can customize features individually.

Linked maps

Linked to: OLeno_MYSP_Map

Link to maps

Unlink to all

Attribute schema

New attribute

+ Add

Species

String

Patch Size (ft)

Integer

Treatment Date

String

Create new attributes for data you want to collect
(continued on the next page)

Edit existing attributes



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Editing Layer Attributes

Set the type of field you want it to be:

- String is letters and numbers
- Boolean is yes or no values
- Real is numbers that can have decimals
- Integer is whole numbers

11:40 56%

← Edit attribute

Settings

Attribute name
Species

Attribute type

String
Tap to set type

Pick list

New pick list value
Create a pick list of common attribute values. This is optional

Beach naupaka

Brazilian pepper

Rosary pea

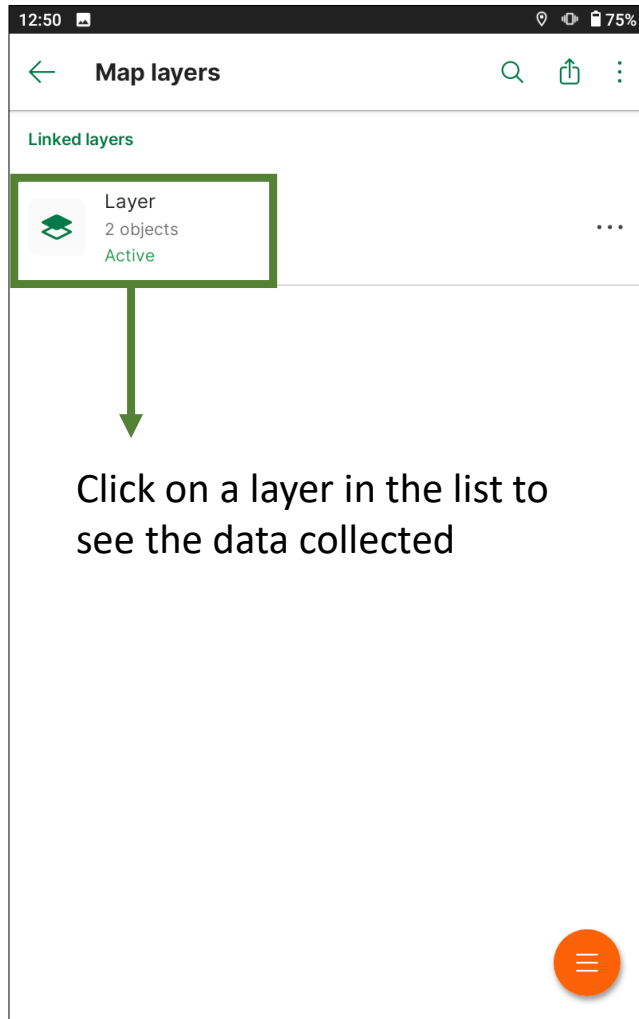
Create values as drop downs for each attribute with commonly used values to save time in the field and reduce typos

For example, add a list of all the most common invasive species in your survey areas so you can select them from a drop down and not have to type them for every point.



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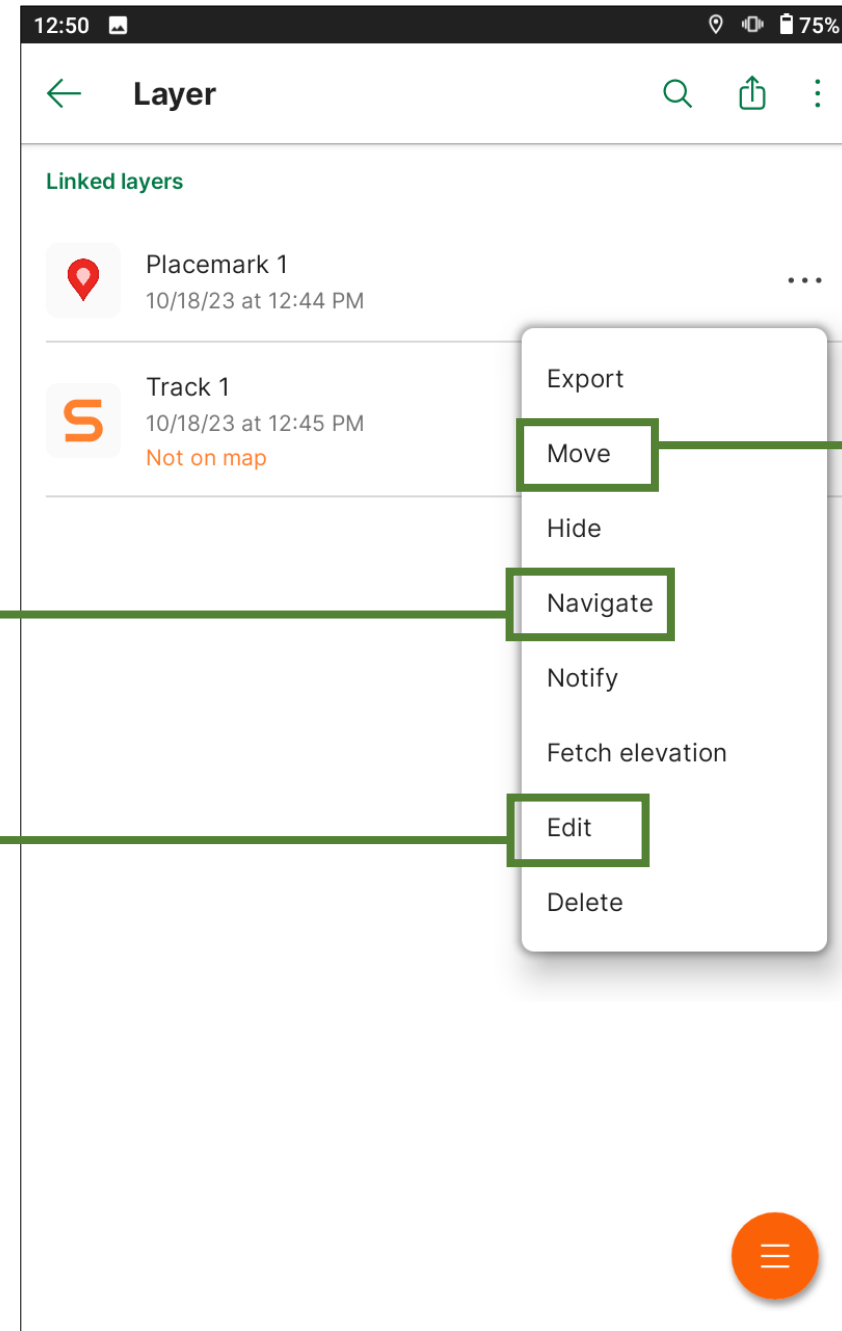
Map Layers



Click on a layer in the list to see the data collected

Navigate to the selected data point/line/polygon

To rename the data and change other properties, click the three dots and go to **Edit**

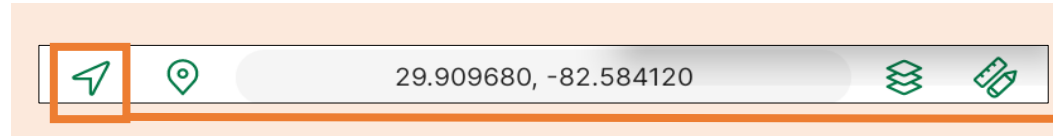


You can move data from one layer to another in your map if you collected data on the wrong layer or if you want to have separate layers for points, track, lines, etc.



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Add Placemarks



From your map page, select the **Placemarks** tab at the bottom to drop a point where the black circle was on your map

This will be blank to start or the default for that layer will be filled in

11:57 51%

✕ Add placemark ✓

Settings

Name
Invasive Plant 1

Information

Symbol Edit

Photos + Add

Description
Not set Edit

Time
10/13/23 at 11:56 AM

Details

Location Units
29.916632, -82.585159

Elevation ↻
No network

Choose one of your commonly used symbols or go to edit to choose other symbols

Add photos and comments to a point



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Add Placemarks

Placemarks will automatically be added to the active layer in that map, change the active layer to switch where your data will be collected

11:53

52%

×

Add placemark

✓

Description

Not set

Edit

Time

10/13/23 at 11:52 AM

Details

Location

29.914481, -82.587094

Units

Elevation

No network

↺

Attributes

Layer

Invasive Plants

Species

Beach naupaka

Edit

Patch Size (ft)

5

Edit

Treatment Date

11/23/23

Edit

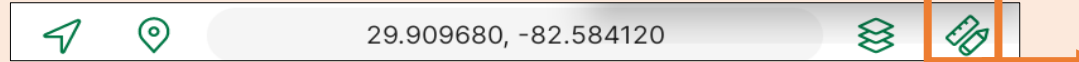
When you've filled out all the information for your point a placemark will be added where the black circle was on your map (click and hold a placemark to drag it to a different place on the map)

Fill out attributes for that layer



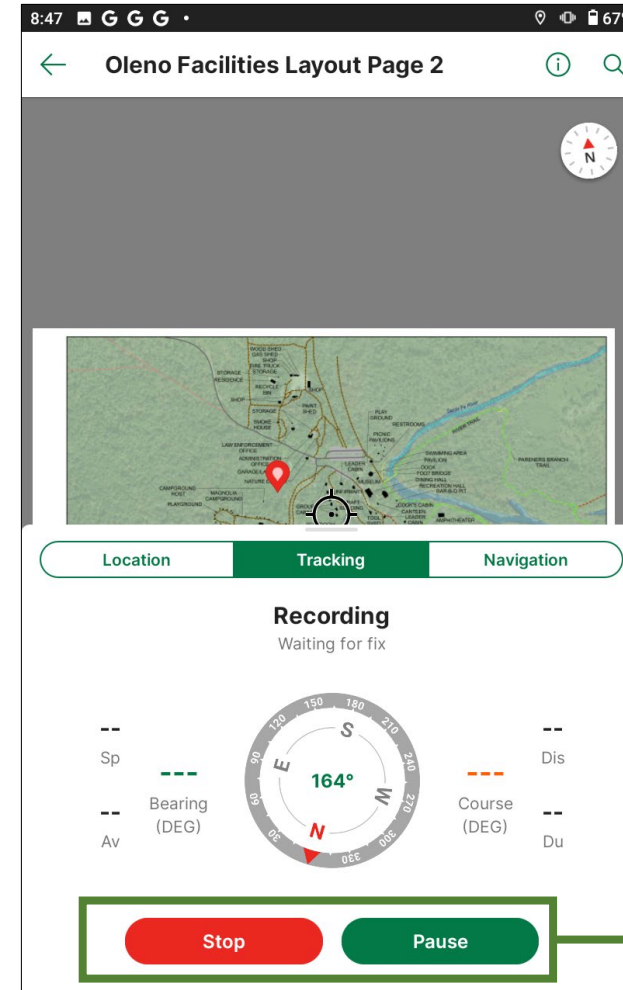
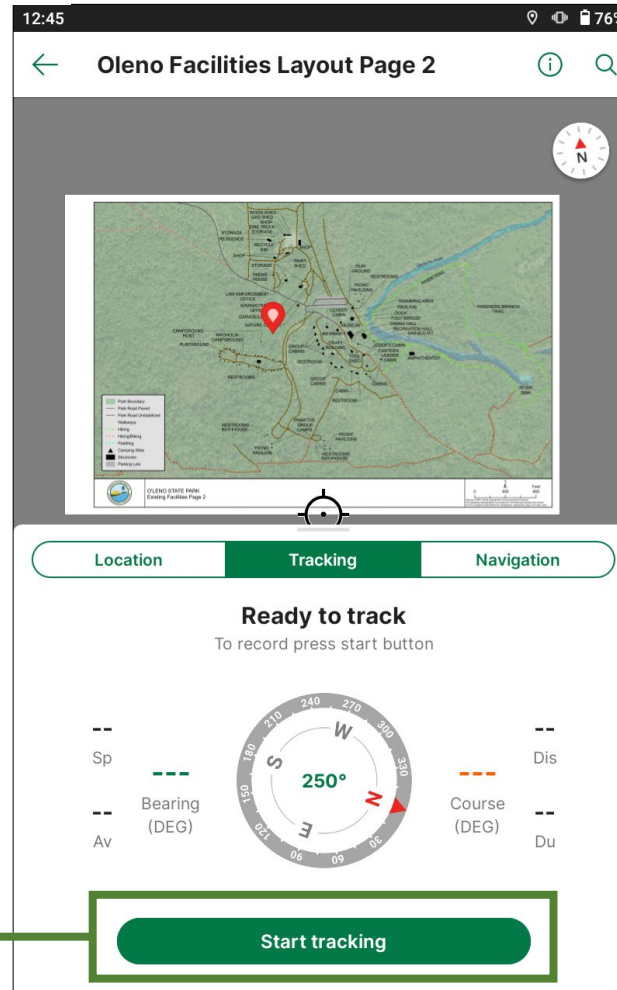
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Record GPS Tracks



To collect tracks, go to
Record GPS Tracks

Click **Start tracking**
to begin collecting
tracks and tracks
will continue
recording, even if
you minimize the
app



Stop tracks to finish
collecting a track.
Pause tracks to
temporarily stop
collecting a line but
then continue
collecting data along
the same line when
tracking is re-started



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Record GPS Tracks

Click a track on the map and go to information or under the layers tab select a track and click edit to view the track details. From there you can also navigate to a track, transfer the track or delete it.

Track

Settings

Name
Track 2

Operations

Convert to area **PRO**

Information

Track style **Edit**

Photos **+ Add**

Description
Not set **Edit**

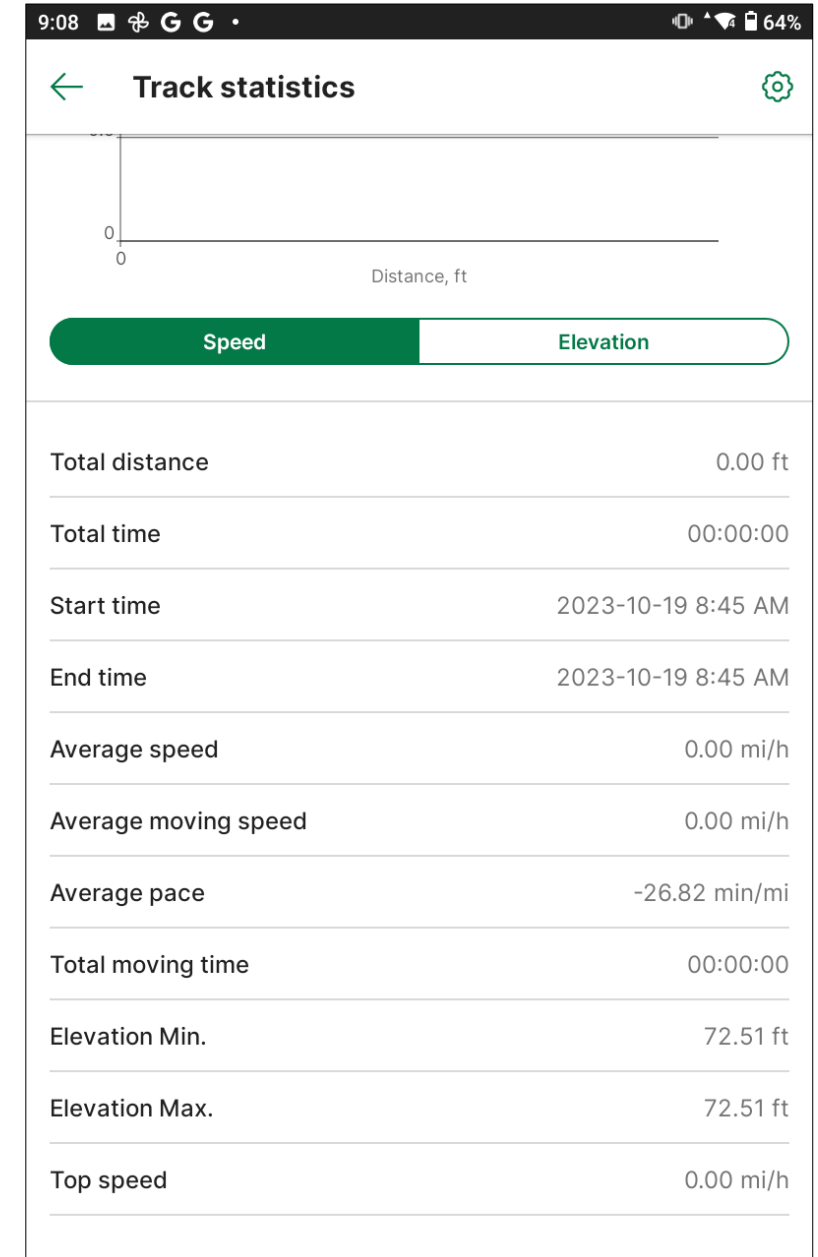
Show graph
Info

Time
10/19/23 at 8:45 AM

Details

Total elevation gain

Click show graph to view the data collected for that track such as distance, start and end time, etc.

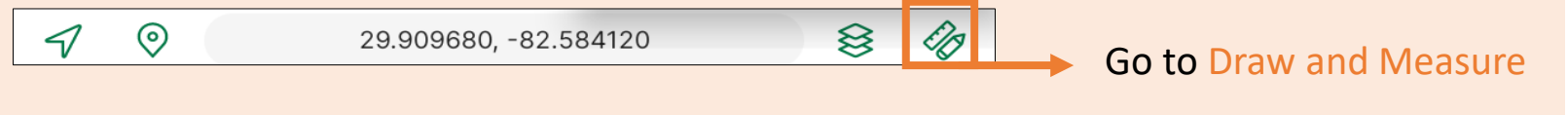




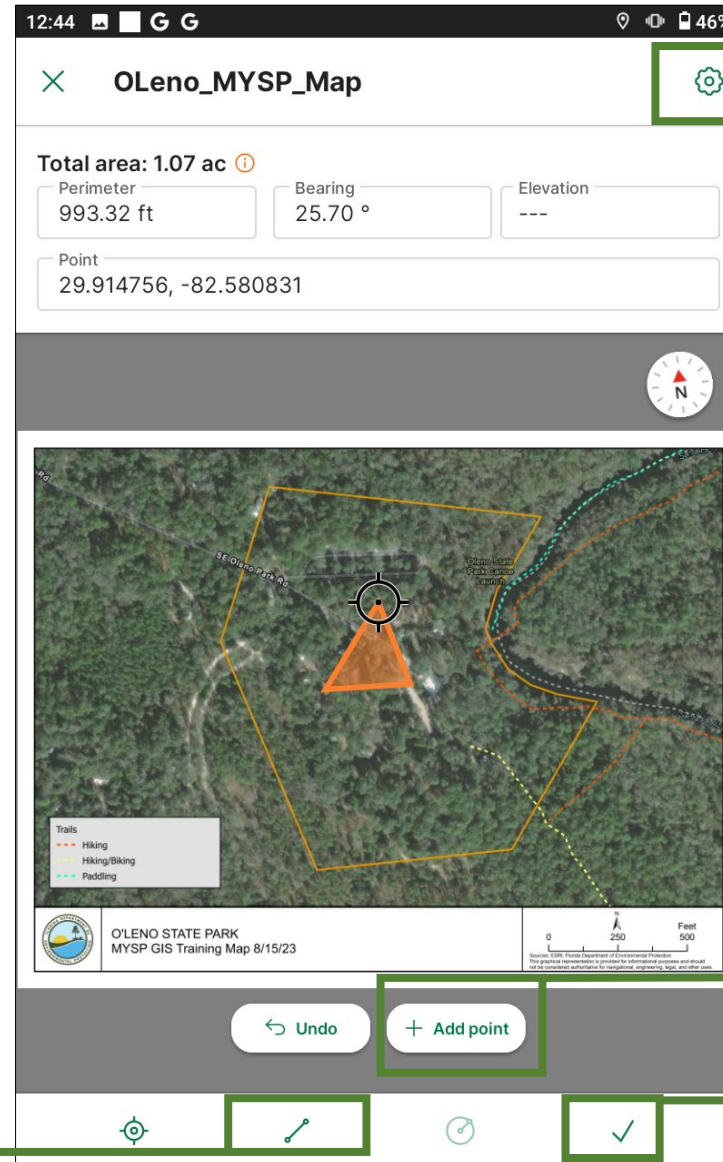
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Draw and Measure

When in **Draw and Measure**, click the line/polygon to change what you're drawing and to change the perimeter/area measurement at the top



Go to **Draw and Measure**



Change units of measurements and drawing styles in Settings

Click **Add point** to continue drawing your shape

Click the check mark if you want to keep the shape or exit out in the top left if you just needed a quick measurement

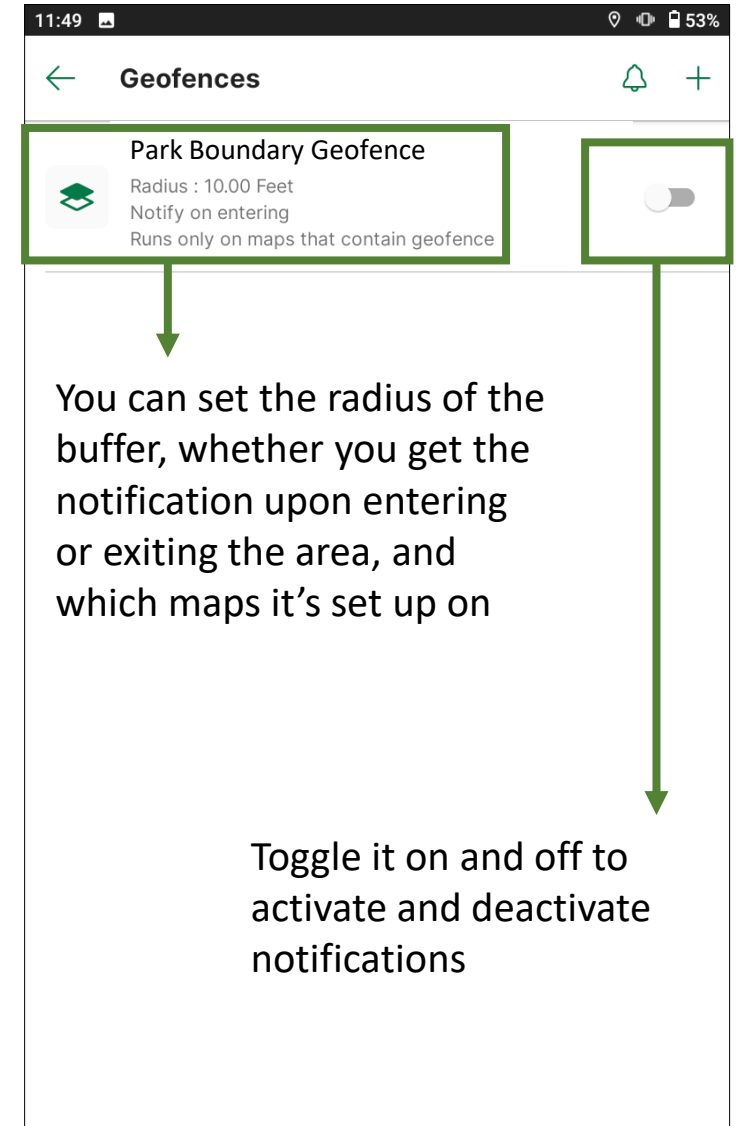
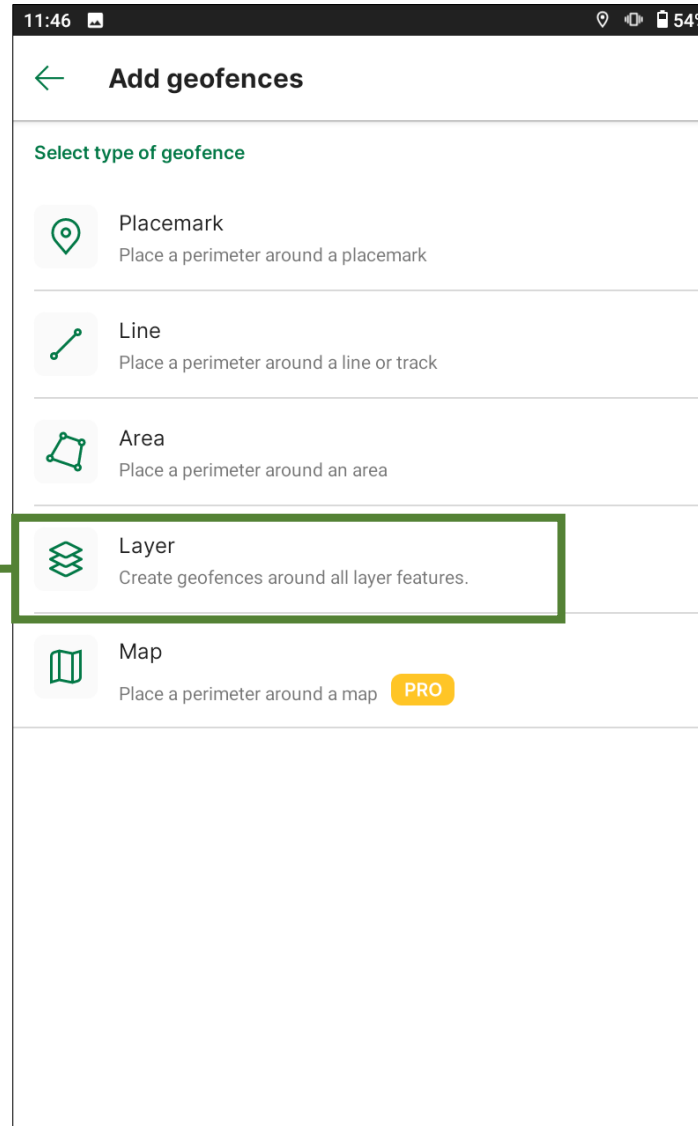


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Adding Geofences

You can create a buffer around placemarks, lines, areas or even an existing layer in Avenza that will notify you once you enter or exit that area in the field.

For example, if you wanted to be notified if you were getting closed to the park boundary while treating invasives without having to watch the map the whole time you can set up a geofence to notify you when you're getting close.



You can set the radius of the buffer, whether you get the notification upon entering or exiting the area, and which maps it's set up on

Toggle it on and off to activate and deactivate notifications

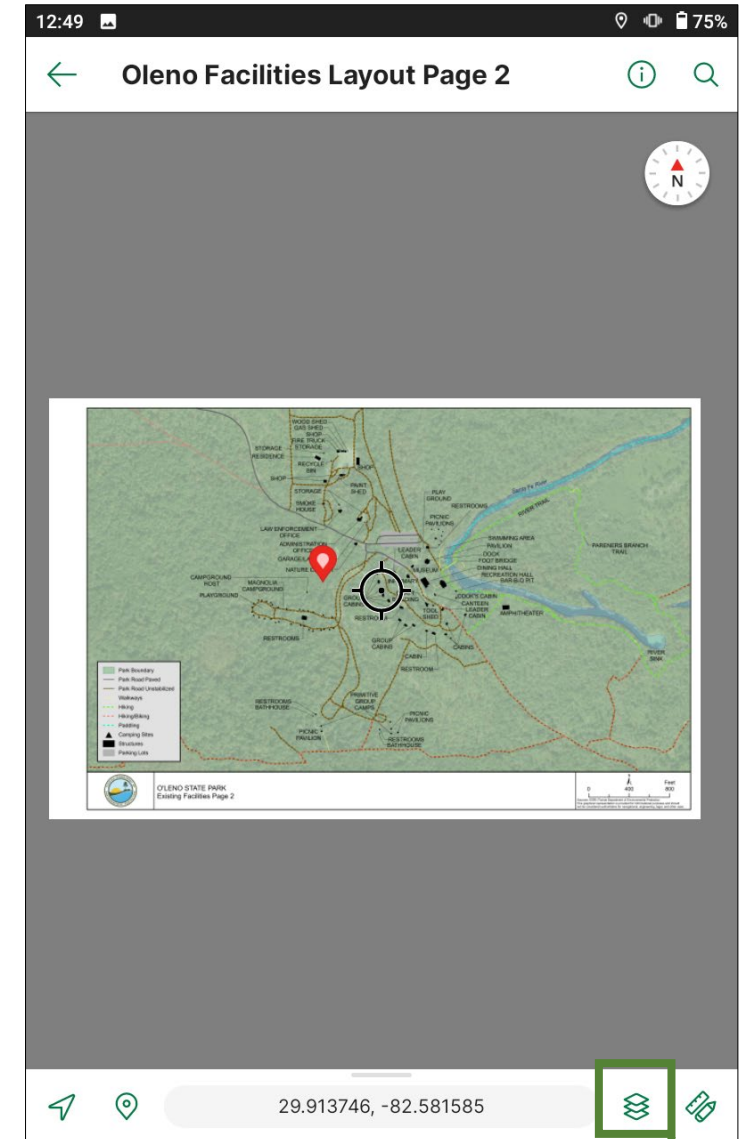
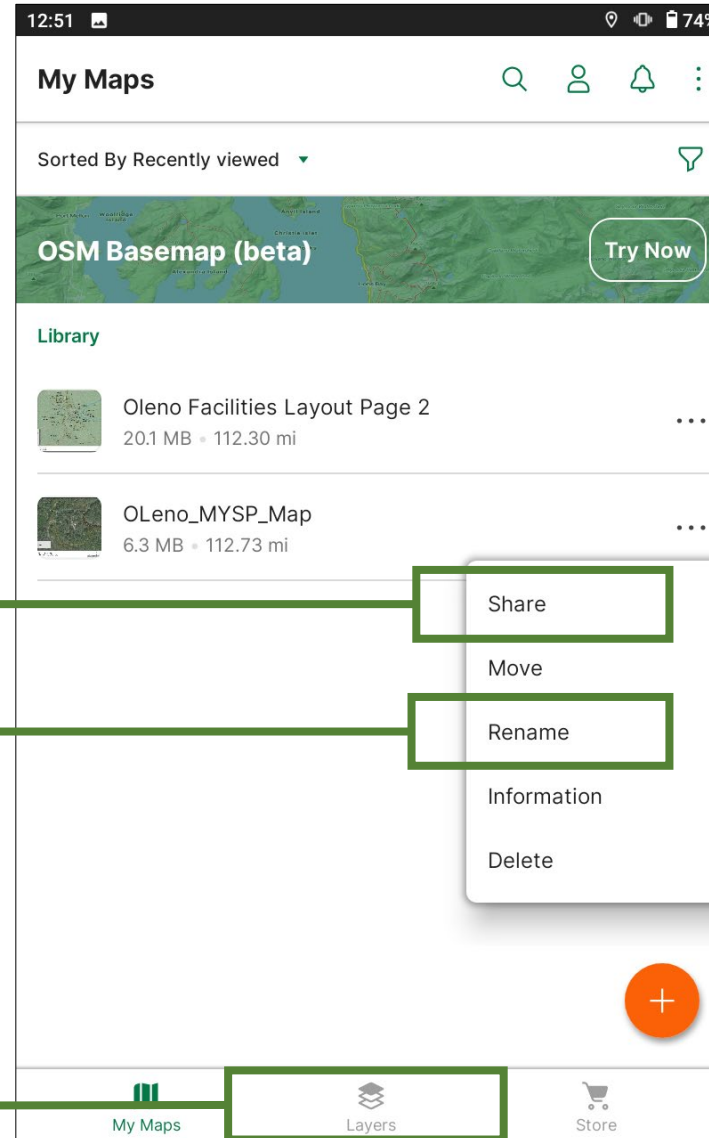


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Exporting Data

You can share a map with all the layers linked to that map from the **My Maps** page but the data will be named with the map name so make sure to rename the map to something that makes sense for the data you're sharing

You can also view all the layers on your device in the layers tab and export select layers from there



Or from a selected map page, you can select the **Layers** tab to view and export select layers in that map (continued on next page)

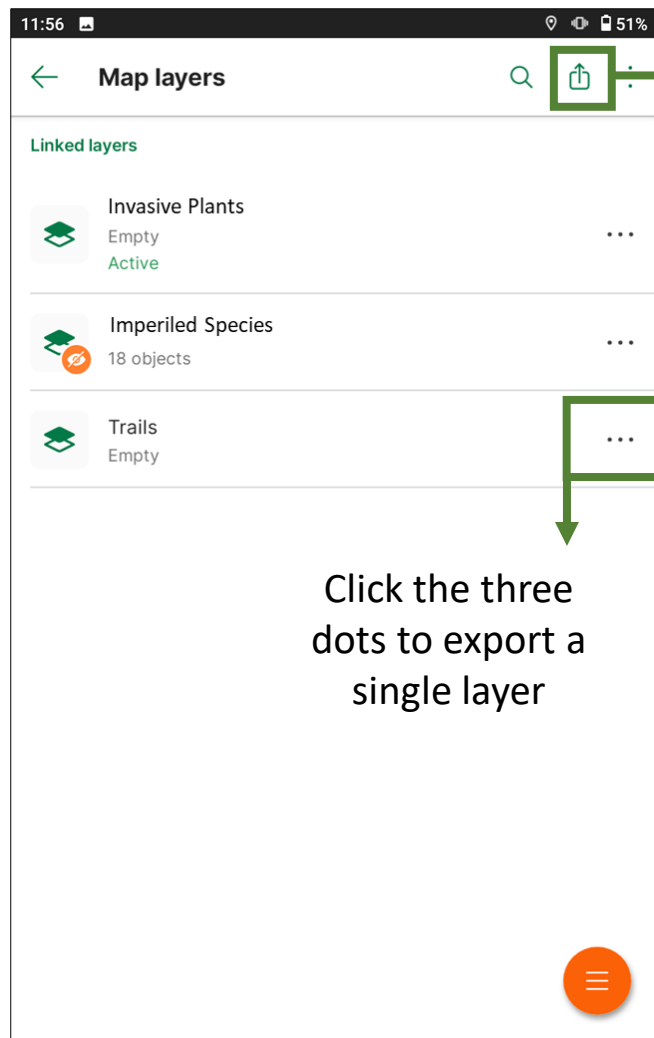


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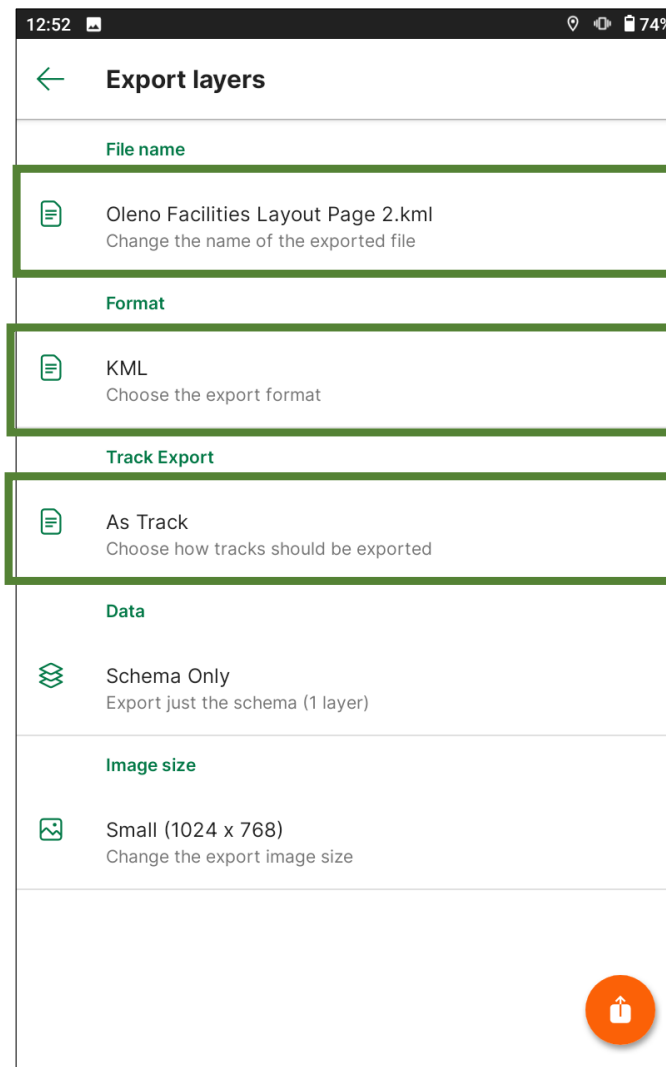
Exporting Data



From your map page, select the **Layers** tab at the bottom to export select layers



Click the three dots to export a single layer

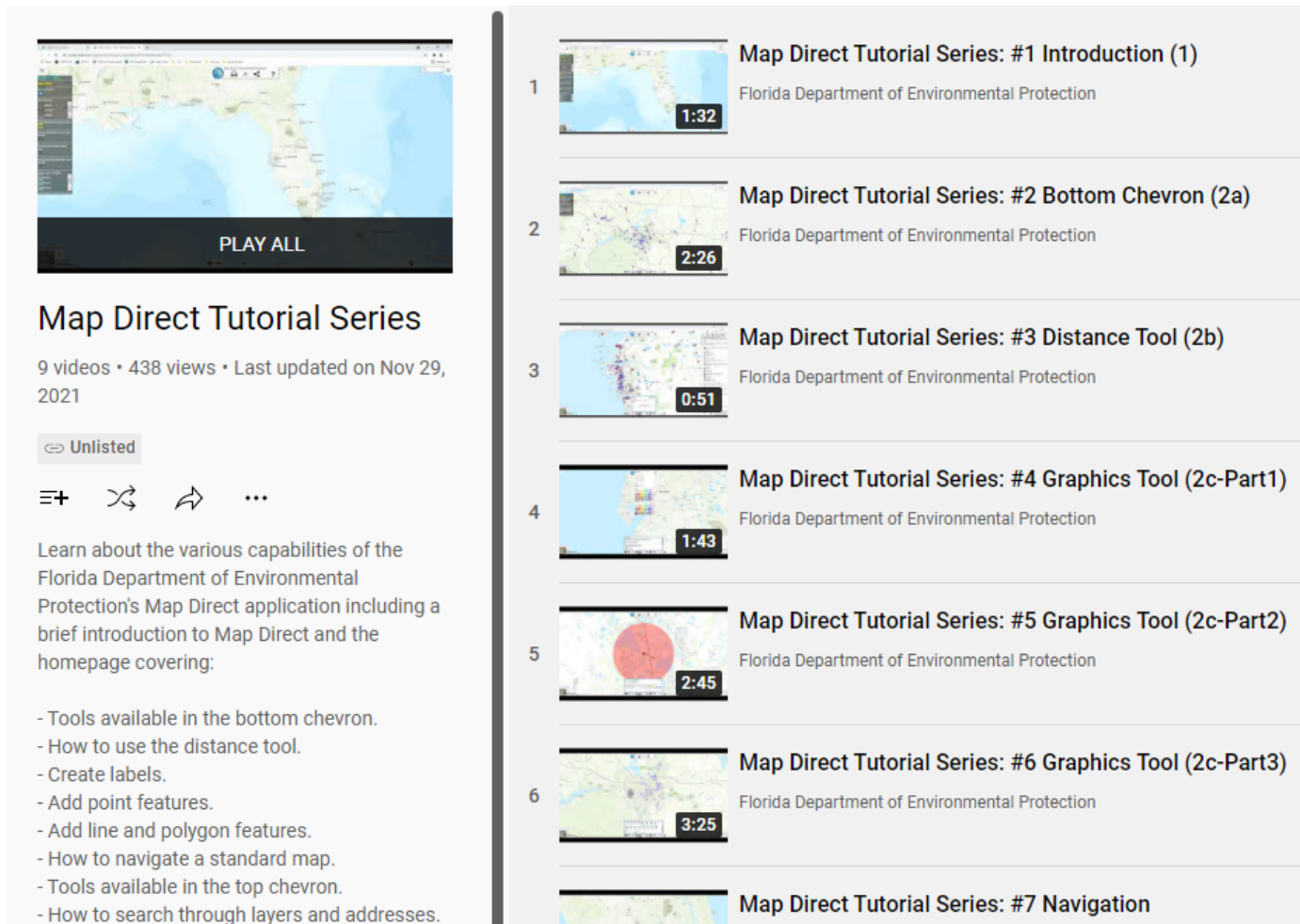


The data will be named with the map name so make sure to rename the map to something that makes sense for the data you're sharing

Change the format to suit your needs

Tracks can be exported as tracks or lines – lines contain less data and are smaller files but tracks have data including time, etc. and will be a larger file

Once you've collected data in Avenza, if you want to create a quick map, Google Earth and Map Direct are easy ways to do that!



Map Direct Tutorial Series

9 videos • 438 views • Last updated on Nov 29, 2021

Unlisted

Learn about the various capabilities of the Florida Department of Environmental Protection's Map Direct application including a brief introduction to Map Direct and the homepage covering:

- Tools available in the bottom chevron.
- How to use the distance tool.
- Create labels.
- Add point features.
- Add line and polygon features.
- How to navigate a standard map.
- Tools available in the top chevron.
- How to search through layers and addresses.

- Map Direct Tutorial Series: #1 Introduction (1)**
Florida Department of Environmental Protection
1:32
- Map Direct Tutorial Series: #2 Bottom Chevron (2a)**
Florida Department of Environmental Protection
2:26
- Map Direct Tutorial Series: #3 Distance Tool (2b)**
Florida Department of Environmental Protection
0:51
- Map Direct Tutorial Series: #4 Graphics Tool (2c-Part1)**
Florida Department of Environmental Protection
1:43
- Map Direct Tutorial Series: #5 Graphics Tool (2c-Part2)**
Florida Department of Environmental Protection
2:45
- Map Direct Tutorial Series: #6 Graphics Tool (2c-Part3)**
Florida Department of Environmental Protection
3:25
- Map Direct Tutorial Series: #7 Navigation**

Map Direct



<https://ca.dep.state.fl.us/mapdirect/>

- A web application created by DEP to create quick and simple maps
- You can start with a blank map and add all your necessary data to it, or you can start with some of the pre-made maps in the gallery with pre-loaded data to save some time
 1. [Invasives and Fire themed](#)
 2. [Infrastructure and Points of Interest themed](#)
- We have a nine-part [Tutorial Video Series](#) with quick videos on how to use Map Direct
- Topics include:
 - The Top and Bottom Chevrons
 - Calculating Distances
 - The Graphics Tool
 - Navigation
 - Searching