


Exporting Data from Track Kit & Epicollect *Follow the Instructor Steps*

Track Kit GPS Mapping App

Uploading a Track from Your Device to the Track Kit Website

1. Make sure you are logged into your Track Kit account on your device. Log in under Settings (iOS) or Menu (Android).
2. On your smartphone or tablet, from the main map screen, **tap the Tracks icon**  and **select TRACKS. ***ANDROID USERS, tap the Menu icon and select TRACKS**
3. **Tap on “On The Device”** to ensure you are looking at the tracks on your phone/tablet.
4. Locate the track you just collected and wish to upload to the server and **tap the blue cloud icon**. This will upload that track to your account on the Track-Kit.com website.
5. Once your track has been loaded, the blue cloud will turn gray.
6. To ensure your track has been uploaded, **tap “On The Server.”** Your track should be listed.

Exporting Data from the Track Kit Website to Your Computer

1. Open a web browser (Chrome or Firefox) and go to <http://track-kit.net>.
2. Log into your Track Kit account
3. Click on My Tracks. Click on the title of the track you just collected.
4. On the Track Info panel on the left side of the screen, locate **Download Track**. Click on the **KML** link.
5. Specify a location where the track will be saved. Click on **Browse...** to select a drive and folder location (this may be different on a Mac). If you have a USB flash drive, save it there. Otherwise, save the KML to the hard drive of the computer you are using (but don't forget the name of the file and WHERE you saved it!).

Epicollect5 Field Form App

Uploading Field Data from Your Device to the Epicollect Website

Note: this step should have been completed after the water quality field activity on Day 1. If not, follow the steps below.

1. Open the Epicollect5 app on your device, select the water quality project
2. Upload any unsynched data, photos, video and audio files



Exporting Data from the Epicollect Website to Your Computer

1. Open a web browser (Chrome or Firefox) and go to <http://five.epicollect.net>
2. Click on **Find Project** and click on **Search**.
3. Type "**Water Quality Monitoring**" into search box
4. Locate the **NRCA Water Quality Monitoring** project. Click on the **View** button below the NRCA logo.
5. From the Water Quality Monitoring project page, click **View Data**. Data will display in a table.
6. Click on the **Download icon**.
7. Under Mapping, select "**Customized**" from download menu.
8. Select **CSV** as the format. Click **Download**.
9. In download window, save the file to your USB flash drive or computer's hard drive. Don't forget the name of the file and WHERE you saved it!
10. The Epicollect CSV file will be saved as a compressed .zip file. Locate the folder where the file is saved and double click on it. Follow the instructions to unzip the file.

Adding Field Data to Google Maps

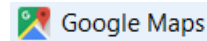
Hands-on Activity

This guided activity will lead you through creating a customized Google Map using the GPS field data collected with the Track Kit and Epicollect5 mobile apps.

Getting Started with Google Maps

Google Places is part of Google Maps. It provides a way for Google users to create, save and share a customized a Google Map. These maps are often referred to as Google MyMaps.

Sign into Google Maps

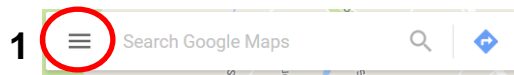


- Open a **new tab** in your browser and go to **Google Maps**.
- If you are not already **signed into** your Google Account, you will see a blue **Sign In** icon in the upper right hand corner. Click it and sign in with your Google password.

Sign in

Google My Places

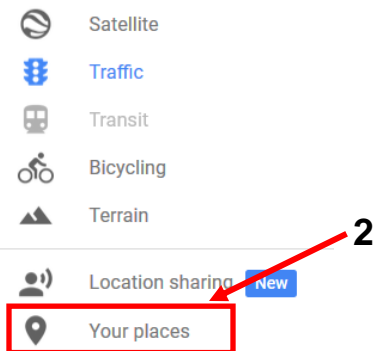
- Google My Places allows you to create and save your own Google maps. To find it in Google Maps, click on the **burger icon** (three horizontal lines) in the search bar in the upper left hand corner of Google Maps.



- In the panel that appears, click on **Your Places**.
- In the **Your places** panel, click on **Maps**. If you have ever created maps in Google My Maps, you will see them listed.



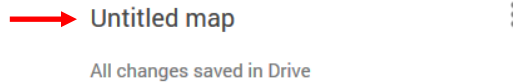
Google Maps



Create a New Map

- At the bottom of the **Maps** tab in the **Your places** panel, click on **Create Map**. Google will switch to the Map Editor and create a new, Untitled map.

- Click on the words, **Untitled map** in the panel on the left side of the map.



- Edit the **map title and description** to reflect the activities you completed in this workshop. See example on right. Click **Save**.

Edit map title and description

Map title
NRCA CTP Field Mapping

Description
This map includes data collected with my smartphone during the CTP workshop.

Save Cancel

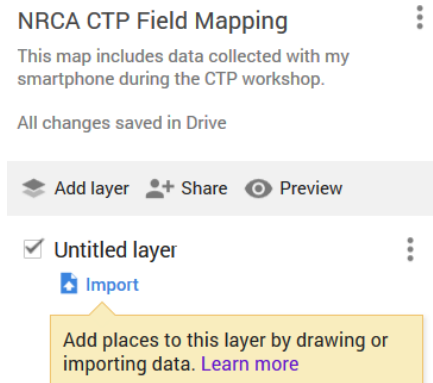
Importing Track Kit Data to Google Maps

Your Track Kit data looks great (better) in Google Maps. Trust us. You'll see. In this step of the exercise, you'll upload the KML file to Google Maps, My Places. From there you can do more edits, or share your map in a variety of ways.

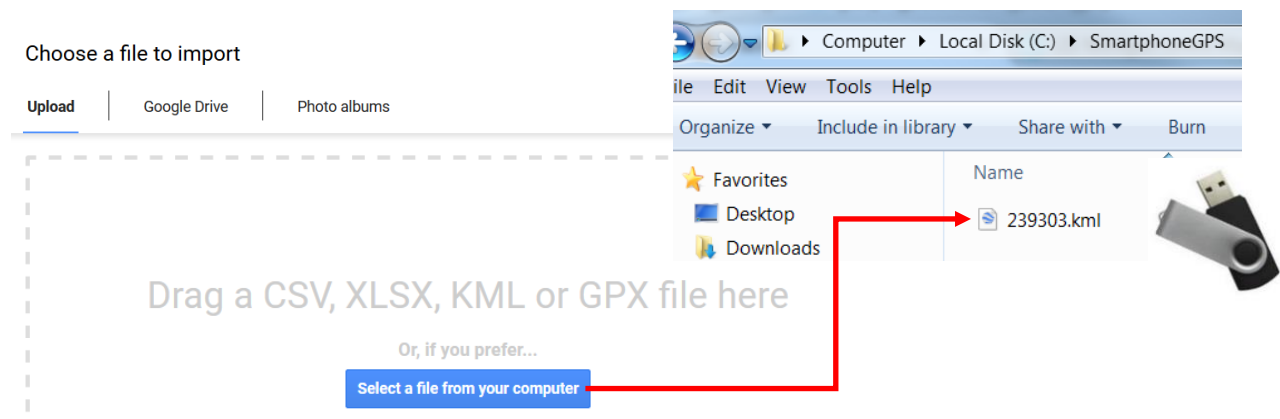
Import Your Track Kit KML

- Below your newly updated Map title and Description you will see Google has created an **"Untitled layer"**. This is where you will import your Track Kit KML file.

- Below the layer name, click on the blue **Import** button.



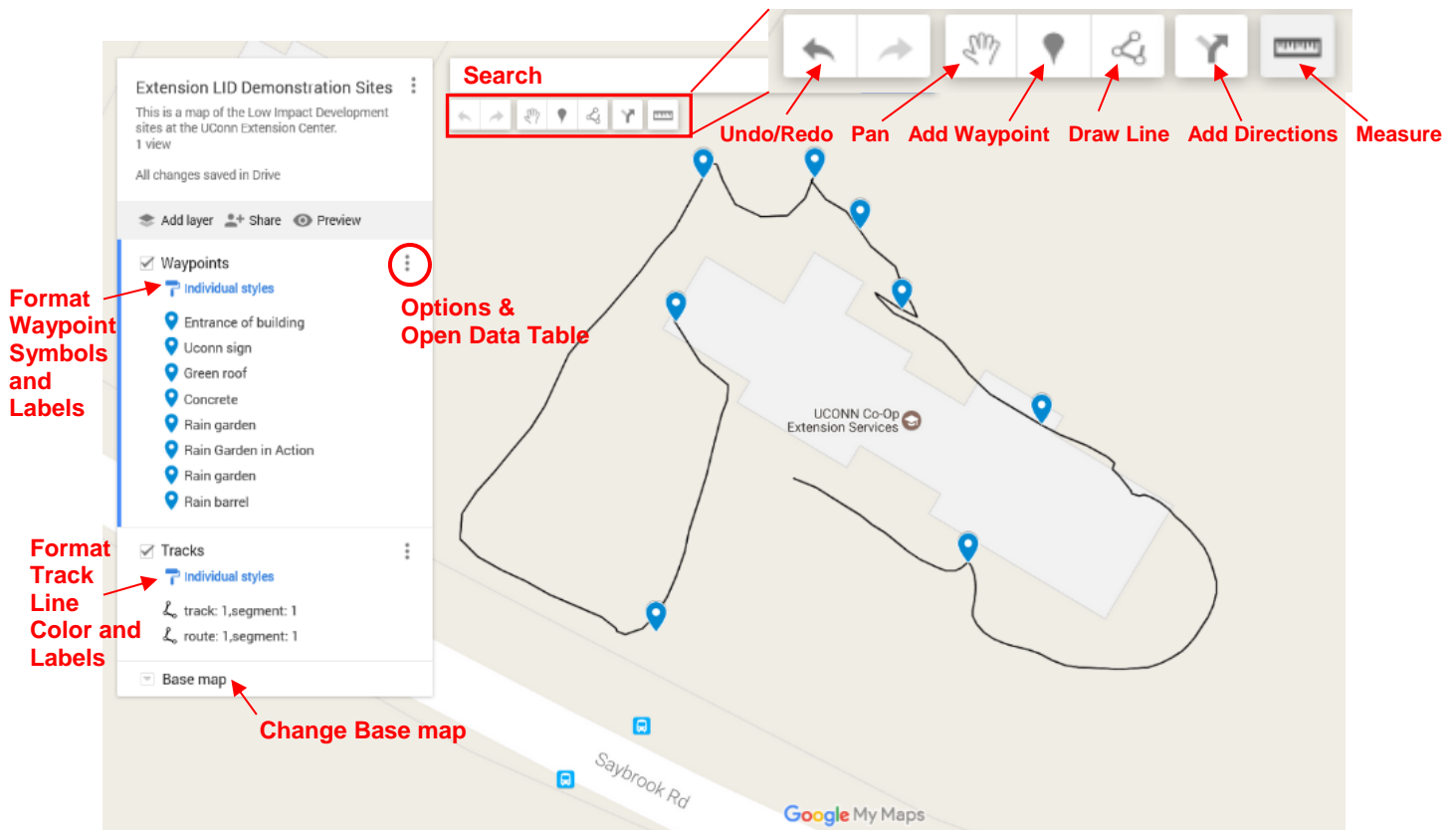
- In the **Choose a file to import** window, be sure **Upload** is selected and click on **"Select a file from your computer"**. This is where you will navigate to and select the KML file you exported from Track Kit and saved to your USB flash drive or computer's hard drive.



- Your Track Kit GPS data will be added to your Google Map in two layers, one containing waypoints, and another containing your track(s). Take a minute to review the graphic below to orient yourself to the Google My Maps interface.

The Google My Maps Interface

The image below points out important features of the Google My Maps interface. We'll take a closer look at some of these in the following steps of the exercise.



Formatting Waypoints in Google My Maps

- Click on the **three dots** in the **Waypoints** layer and select **Rename this layer** in the options that appear. Rename the layer to better reflect the type of data the waypoints represent.

- Click on the **three dots** again. This time select **Open data table**. A table displaying the waypoint information will appear. Notice you can **edit the content** of these fields. Any changes here will also be reflected in the pop-up window that appears when you click on the waypoint symbol on the map.
Caution: don't mess with the wptPhotos field or else your images will not appear in the pop-ups!
- **Close** the table.

Low Impact Development Practi... ✕

Find in table 1-8 of 8 < >

	name	description	wptPhotos
1	Entrance of building	Welcome to the Middlesex County Extension Center!	img239303_1_1.jpg
2	Uconn sign	Out by the road. Who knew UConn was in Haddam?!	img239303_2_1.jpg
3	Green roof	Green roof demonstration site. Looks like it needs a' weeding.	img239303_3_1.jpg
4	Concrete	Previous concrete demonstration site. No puddles here!	img239303_4_1.jpg
5	Rain garden	Lovely little rain garden surrounded by pavement. Filters rain water from the roof.	img239303_5_1.jpg
6	Rain Garden in Action	Rain baby, rain!	img239303_6_1.jpg
7	Rain garden	Another rain garden. This one might need maintenance.	img239303_7_1.jpg
8	Rain barrel	Rain barrel collects water from the roof that can be used to water the plants in the community garden.	img239303_8_1.jpg

- Click on the **Individual styles** link under the layer name. This will allow you to customize the appearance of the waypoint markers on your map. You will also be able to add labels (we'll do that in the next step).
- Click on the arrows under **Group places by** and check out the options.

Group places by

Individual styles

Set labels

No labels

Uniform style (All markers the same)

Sequence of numbers (Markers numbered in a particular order)

Individual styles (All markers unique)

Style by data column: (Marker symbol determined by a data field)

name

description

wptPhotos

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Individual styles

- Entrance of building 🗑️
- Uconn sign
- Green roof
- Concrete
- Rain garden
- Rain Garden in Action
- Rain garden
- Rain barrel

- For now, select **Individual Styles**. Hover your mouse over the name of one of your waypoints. Notice a **paint can icon** appears. Click on it.
- Change the **color** and **icon** of the waypoint.

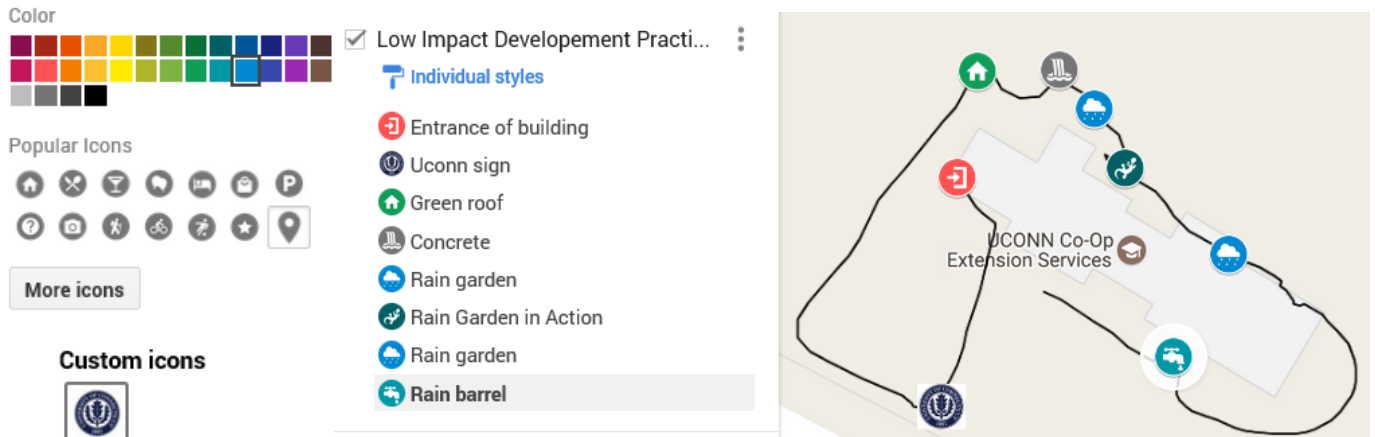
Low Impact Development Practi... ⋮

Individual styles

- Entrance of building 🗑️

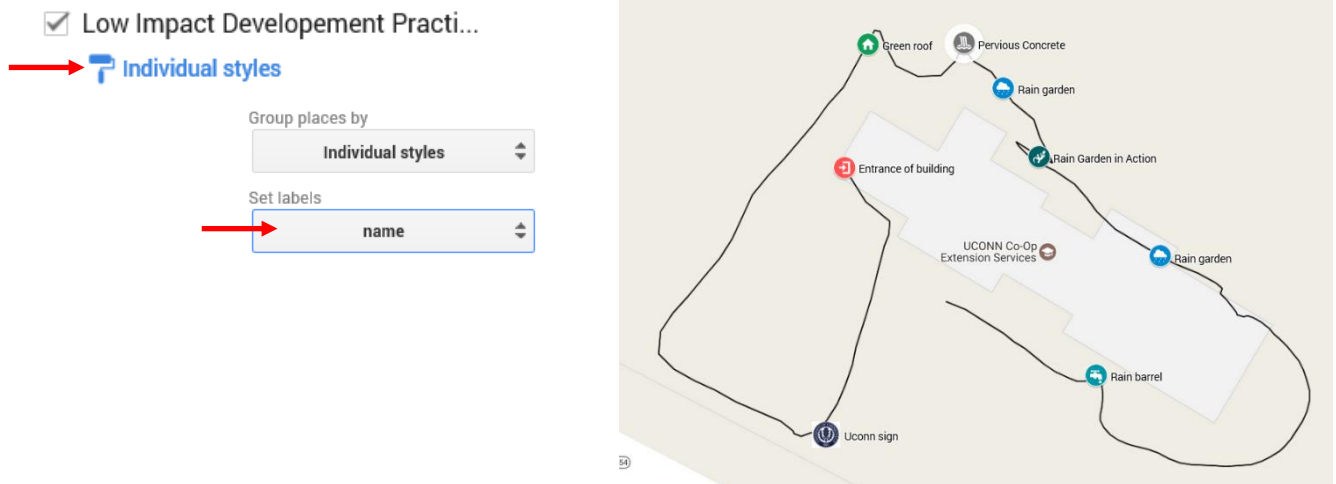
There are many icon options in Google My Maps. You can even upload a custom icon.

- If you have time to spare, repeat this with the other waypoints.



Add Labels to Your Map






- Click on the **Individual styles** paint brush icon under the waypoint layer name again. This time look for **Set labels**. Click on the arrows to specify the field you wish to use to label the features on your map (hint: try name first). That's all there is to it!

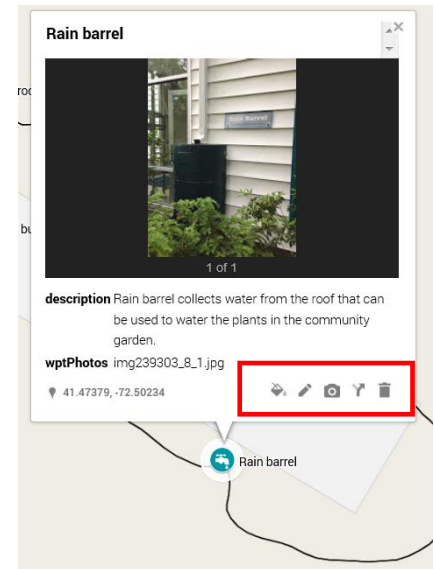


Waypoint Pop-Up Windows

Waypoints can also be edited from the pop-up window itself. Let's take a look.








- Click on any of your waypoints on the map. A pop-up window will open, displaying the information you collected (and edited in either Track Kit or Google Maps), along with the photograph collected in the field. Tools for editing the content of the pop-up are located at the bottom of the pop-up window.

- Click on the **paint can**.  The style tools should look familiar to you.
- Click on the **pencil**.  This allows you to edit the content of the pop-up. **Uncheck the box** next to wptPhotos. This will remove the field from the pop-up display. It's unnecessary and clutters the pop-up.
- Click on the **camera icon**.  Notice you can add additional photos or video clips. Select cancel.
- Click on the **driving direction icon**.  This will add a new layer to your map that will allow your map readers to navigate to the waypoint. After you added it, **remove the Driving direction layer** by clicking on the **three dots** to the right of the layer name and select **Delete this layer**.
- The **garbage can** does what you think it does. Don't do it. 



Bonus Google Map Functions

There are a few additional tools in Google My Maps that we don't spend time on in this workshop. Below is a brief description of these. If you have extra time, try them. If not, do not worry, these are for your reference.

Add Layer 	Creates a new untitled layer in the side panel. Data can be imported (KML, CSV, GPX, XLSX) as well as georeferenced photos stored on Google Drive or Google Photos. New markers and lines can also be added to this layer using the add marker and draw a line tools outlined below.
Add Marker 	Allows you to add markers to the map. The marker will be added to the "active" layer. The active layer will have a blue bar along the left side of the layer name in the side panel. Click on a layer to make it the active layer. You can also drag markers from one layer to another. Markers can be edited to customize the name, description and content of the pop-up. Photographs and YouTube videos can be embedded in a marker.
Draw a Line 	Allows you to add a line or enclosed shape to the map. Can be a point to point line, or enclosed polygon. The feature will be added to the "active" layer. Custom driving/walking/biking routes can also be created using this tool. They will be displayed in a new layer in the side panel.
Add Directions 	Allows user to generate driving/walking/biking directions using a point to point address search. The result will be displayed in a new layer in the side panel.
Measure 	Allows user to measure distance (ft/miles) and area (acres/sq mi) on the map.
Print Map	Option to print map to jpg or pdf. Click on  next to the map name and select Print map.
Export to KML	Export entire map or select layers to KML or KMZ file. Click on  next to the map name to access.

Saving Your Map

Did you notice you haven't had to click a Save Map button yet? That's because your Google My Map is automatically saved in your Google Drive. Nice!

NRCA CTP Field Mapping

This map includes data collected with my smartphone during the CTP workshop.
1 view

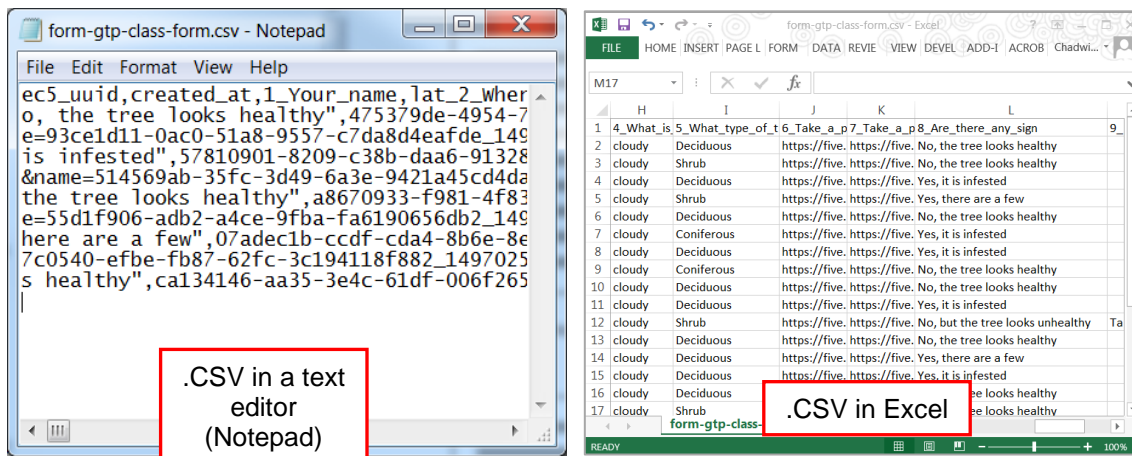
→ All changes saved in Drive

Adding Epicollect Field Form Data to Google Maps

You should have previously downloaded project data from the Epicollect5 website. This step of the activity will show you how to import an Epicollect CSV file into a Google Map.

A Note about Working with Comma Separated Values (.CSV) Data

Comma separated values (.CSV) files allow data to be saved in a table structured format within a text file. The file contains the tabular data separated by commas. Each line of the file is a data record. Each record consists of one or more fields, separated by commas. The CSV file you just downloaded can be opened in a text editor or in as a spreadsheet in Excel. It can also be imported into a number of other programs – including Google Maps!

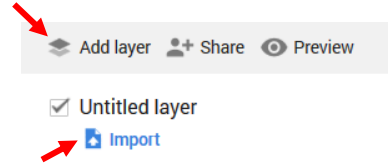


Pro Tip: For this exercise, we will import the .CSV file directly into Google Maps. However, it may be handy to know that the file can be edited in Excel BEFORE you import it into Google Maps. You may want to try this in the future (i.e. when you have more time). That's because editing .CSV tables in Google Maps is somewhat restricted. You'll see this in a minute.

Import Your Epicollect CSV File into Google Maps

Note: if you closed your Google Map, open a tab in your browser and return to Google Maps>My Places and select your NRCA CTP map.

- Click Add layer. A new “untitled layer” will be added to your Google Map.
- Click **Import** under **Untitled layer**.



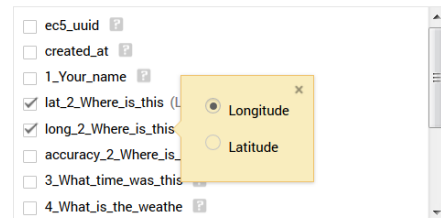
- In the **Choose a file to import** window, click on **“Select a file from your computer”**. Browse to the location where you previously saved and extracted your Epicollect .CSV file. By default, the extracted folder will be the same name as the Epicollect form. The CSV file will be in the folder and titled **form-1_stream-assessment.csv**. **Select the file** and click **Open**.

Before Google Maps can add the layer to the map, it will need to know which fields in the spreadsheet contain the geographic coordinates of your form data, as well as what field will be used as the pop-up title. We'll specify that next.

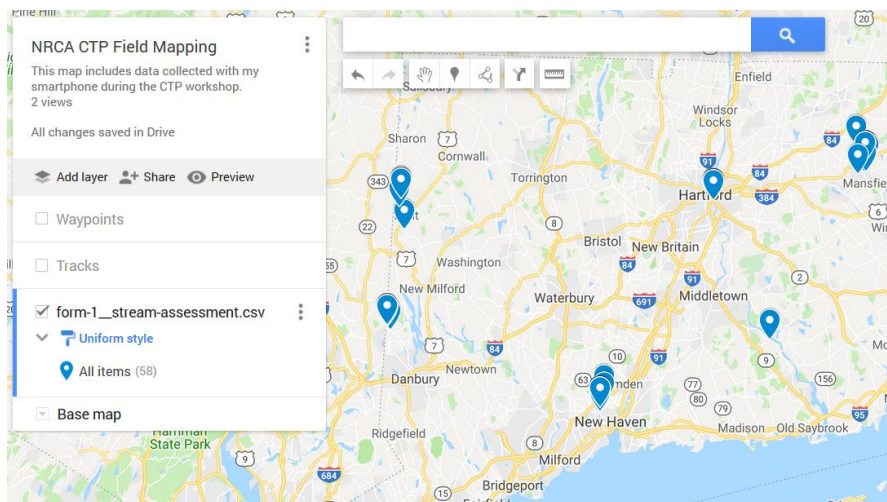
- In the **“Choose columns to position your placemarks”**, check the box next to **“lat_Location”** and click the radio button next to **Latitude**.
- Next, check the box below it, **“long_Location”** and click the radio button next to **Longitude**.
- Click **Continue**.

Choose columns to position your placemarks

Select the columns from your file that tell us where to put placemarks on the map, such as addresses or latitude-longitude pairs. All columns will be imported.



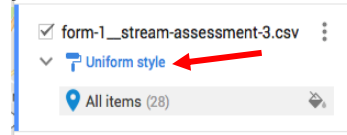
- In the **“Choose a column to title your markers”** (title for the placemarks), select the radio button next to **“stream_name”**. This will give a simple title to each of your placemarks based on the stream name.
- Click **Finish**. Once the import is complete, you should see the locations of the form entries on the map.



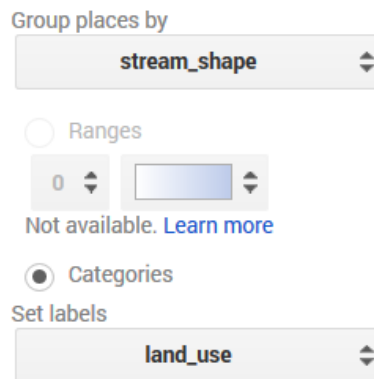
Customizing Your Google Map

Your form data will be added to your map using a uniform style. We can customize how the data appears. Let's take a look.

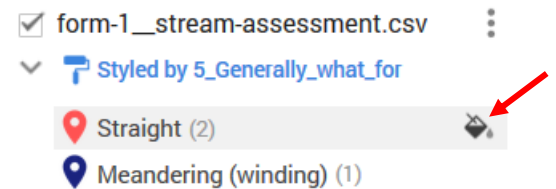
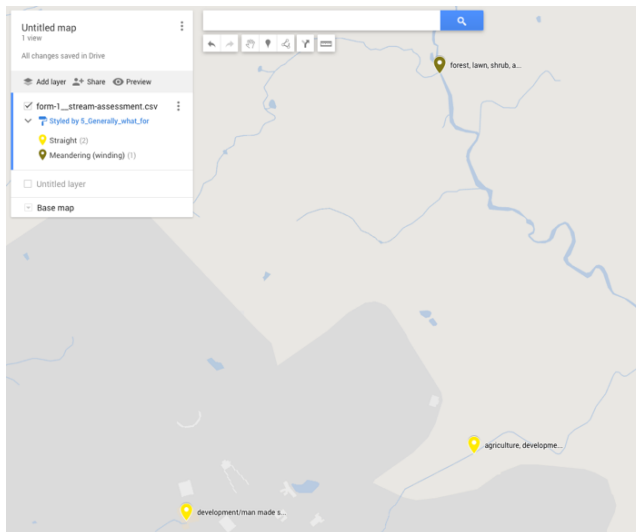
- Click on **Uniform Style** under the **layer name**.



- Change the **Group places by** to “**stream_shape**” and change **Set labels** to “**land_use**”. **Close** style window by clicking the **x** in the upper left. This will color our points based on the type of stream shape and switch the labels of each point to their surrounding land use type.

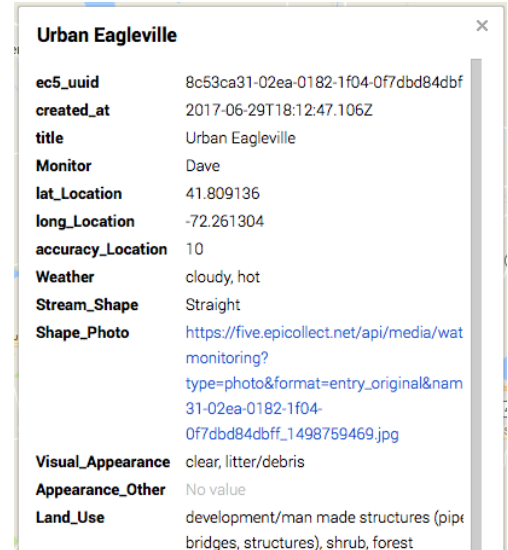


- If you'd like to change the color of any of the classes, hover over the waypoint class name and click on the **paint can icon** that appears to select different colors/icons.

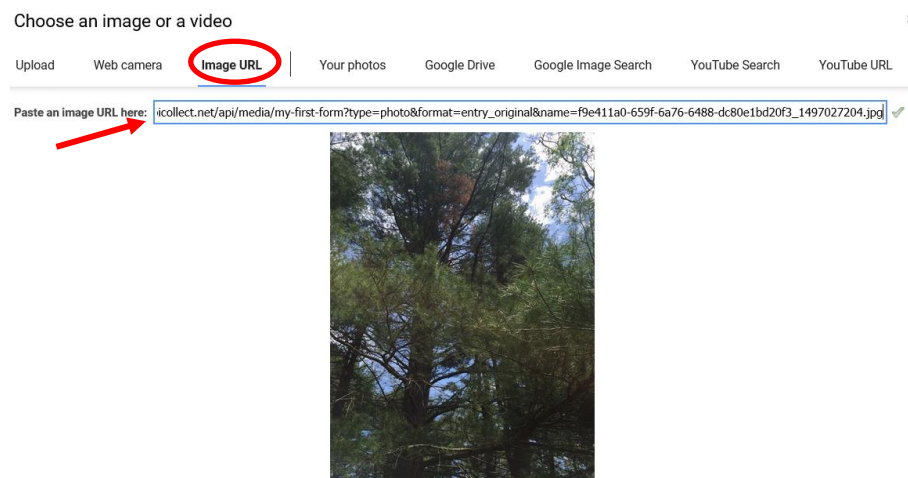
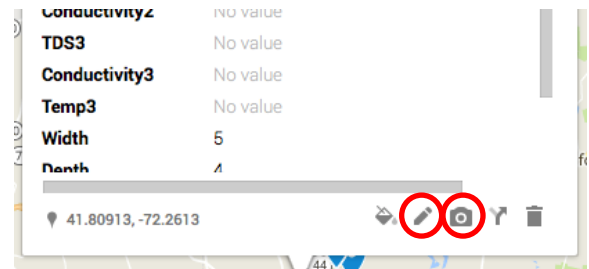


Format the Pop-up Window

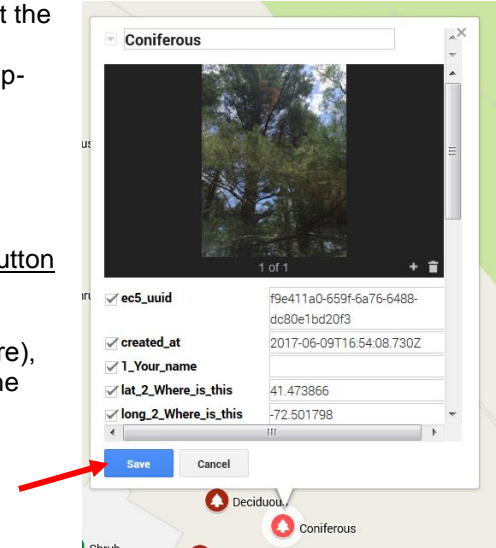
- **Click on a marker** on the map. The pop-up window will open. Notice the field names and values come directly from the EpiCollect5 table.
- Notice there is a web **link to the photographs** you took in the pop-up. Try clicking on one. You should see the photo open in a new tab of your browser. This is helpful, but maybe not entirely ideal. Let's add those photos directly into the pop-up window instead.



- Return to your map. **Click on the point again**, if necessary, to view the pop-up window. **Click on the pencil icon** to edit the contents of the pop-up.
- With your mouse, **select the entire text string** in the “**Shape_Photo**” field. Pro tip: double-click on the text in the box to select all.
- With the text string selected, **right-click** and **copy** it.
- Click on the **camera icon** at the bottom of the pop-up.
- In the “**Choose an image or a video**” window that appears, click on **Image URL** at the top of the window. Right-click and **paste** in the image URL. The photo should appear. Click **Select**.



- Once the window closes, you should see the image embedded at the top of the pop-up window. If you like **uncheck the box next to “Shape_Photo”**. This will hide the ugly photo URL text in the pop-up.
- Click **Save** to save the changes you made to the pop-up.
- If you're feeling adventurous, **repeat the process** with the photo URL in the **“Land_Use_Photo”** field. Be sure to click the **Save** button at the bottom of the pop-up each time you make a change.
- If you're feeling REALLY adventurous (and you have time to spare), go ahead and add photos to the pop-ups for other points using the process you just learned.



Clean Up Your Map

Now that you're a pro at editing and customizing a Google Map, use your new skills to clean up your map. Some suggestions:

- Update the layer name
- Add other layers. Hint: you can add TO a layer (ie: add more waypoints) using the edit tool or import more data by using the Add layer button.
- Change the marker style
- Format the pop-ups further
 - Note that you can uncheck the box next to the name of a field in the pop-up. This will hide it so that it will not show. It may be helpful to do this for some of the fields that are not necessary to display in the pop-up. Don't hide the photo link fields until AFTER you are done embedding photographs (or else you will not have access to the URL).

Sharing Your Google Map

Now that you have collected GPS data and created a beautiful custom map, let's learn how to share it with the world.

- Click on the **Share link** in the side panel. It's the one with the + sign growing out of a human head.

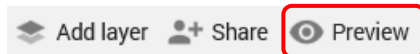


- A **Share settings** window will open. Notice it provides a link that you can use to share your map with others. This can be copied and pasted into an email, or linked to on a website. You can also share the link directly from this window via Gmail, Google+, Facebook or Twitter. Don't share anything just yet, we have a few more settings to get to.

- Access to your map will be set to “Private” by default – only you will have access and you will not be able to share it using a link. You can change this setting under the “**Who has access**” section of the **Sharing settings** window. You can share your map with specific people, anyone with a link, or with the Public (anyone). Those who you share it with do not need to have a Google sign-in to access it. For now, set the link sharing to “**On – Public on the Web**”. Be sure the “**access**” is specified to “**can view**” not “can edit”. We don’t intend to collaborate on this map (but you COULD if you wanted to).

- Back in the **Sharing settings** window, notice that you can invite people to view and/or edit the map via email. You also have the opportunity to “prevent editors from changing access and adding new contributors”. That may be a handy check box in the future. You can click on the Learn more link to learn more about file sharing.
- Click **Done** to close the Sharing settings window.





Next, let’s preview what your shared map will look like. Click on the **Preview link** in the side panel. It’s the one with the eyeball.



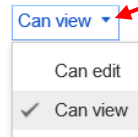
- Your map will open in a new browser tab in “view-only” mode. This is what your map readers will experience when you share your map with them. Take a minute to **click around**.

Notice that all of the properties of your map will be retained – the base map and zoom scale that you set will carry-over, as well as the status of the layers in your side panel. If they were “turned on” (checked) in your My Map, they will be visible on your shared map. If they were unchecked, they will appear in the layer list, but will not appear on the map until the user checks the box.

Link sharing

-  **On - Public on the web**
Anyone on the Internet can find and access. No sign-in required.
-  **On - Anyone with the link** 
Anyone who has the link can access. No sign-in required.
-  **Off - Specific people**
Shared with specific people.

Access: Anyone (no sign-in required)



Save

Cancel

Sharing settings

Link to share

<https://drive.google.com/open?id=1cCmsfj10vrgzOAJscyYeYU3Q&usp=sharing>

Share link via:



Who has access

-  Public on the web - Anyone on the Internet can find and view [Change...](#)
-  Cary Chadwick (you)
carychadwick@gmail.com Is owner

Invite people:

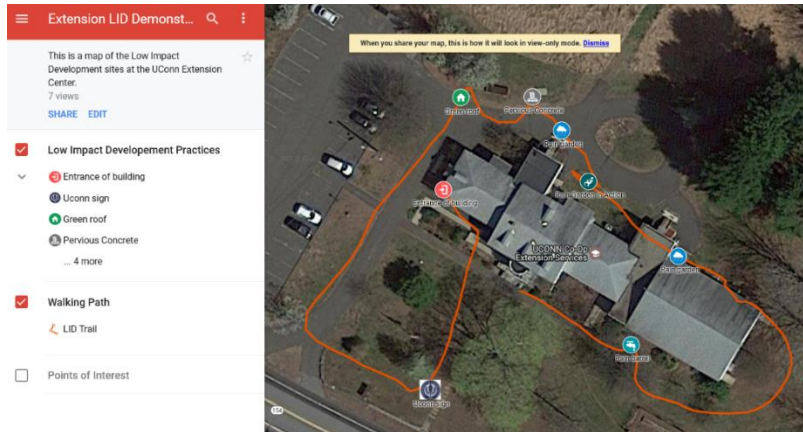
Enter names or email addresses...



Owner settings [Learn more](#)

Prevent editors from changing access and adding new people

Done



- If you wish to change anything about the map, you can click on the **EDIT** link to return to the Google My Maps editor.
- If you are satisfied and ready to share your map, click on the **SHARE** link. Click Share via email. An email message will be composed and will include a link to your map. Send it to someone (or yourself). Alternatively, if you use social media, you can try sharing your new map using any of the social media links provided.
- Click on the **SHARE** link again. This time select, **Embed on my site**. A window will open providing HTML source code that can be copied/pasted into the source code for your webpage. This will embed the map directly on your site. Cool.

If you want to see what this looks like, visit

<http://s.uconn.edu/gmembed>



An Embedded Google My Map



Congratulations! You have completed this exercise. If you finished before everyone else, go back and poke around some more. If you want to read more about Google My Maps, visit the My Maps Help.
<https://support.google.com/mymaps>