3 - Visualizing Epicollect Data in Tables & Maps
Visualizing Field Form Data on the Web

Field data can be viewed, edited (depending on user permissions) and exported from the Epicollect website. This exercise will showcase methods for interacting with form responses and exporting the data to a .CSV file which can be imported into Google Maps.

Viewing Form Responses on the Epicollect Website

Once you start collecting data in the field using the Epicollect5 mobile app, the data will be stored on the Epicollect website.

Viewing Epicollect Project Data in a Web Browser

1. To begin viewing a project's data, navigate to http://five.epicollect.net in your web browser.

2. On the upper right side of your screen select Find Project.

3. Unfortunately, there is no text search function on the Epicollect website, you have to find the project in the list of projects. To find the Water Quality Monitoring Project, select Science.

4. Locate the “Water Quality Monitoring” project and select View. (Hint look for the NRCA Logo.)

Note: This project is listed as public and unhidden so it can be found in this way. If it was listed as private or hidden it would not appear in the project gallery and you would need the project web address to view the data. The direct url for this project is: https://five.epicollect.net/project/water-quality-monitoring
Viewing Form Responses in Tables and Maps
Epicollect Data Options & Export to Google Maps

5. The Water Quality Monitoring project page will open. To view the data collected using this form, select View Data.

6. A table will open displaying all of the data collected using this project form.

7. You can view the data by scrolling to the right or view an individual record by clicking on the eyeball. Pick one to view.

<table>
<thead>
<tr>
<th>View</th>
<th>Title</th>
<th>Created At</th>
<th>Your Name (or Team Name)</th>
<th>Stream Name</th>
<th>Stream Location</th>
<th>What is the weather like?</th>
</tr>
</thead>
<tbody>
<tr>
<td>![View Icon]</td>
<td>Roberts brook -Ag</td>
<td>29th Jun, 2017</td>
<td>Dave</td>
<td>Roberts brook -Ag</td>
<td>41.812735, -72.240473</td>
<td>cloudy, hot</td>
</tr>
<tr>
<td>![View Icon]</td>
<td>Forest fenton</td>
<td>29th Jun, 2017</td>
<td>Dave</td>
<td>Forest fenton</td>
<td>41.832045, -72.24297</td>
<td>cloudy, hot</td>
</tr>
<tr>
<td>![View Icon]</td>
<td>Urban Eagleville</td>
<td>29th Jun, 2017</td>
<td>Dave</td>
<td>Urban Eagleville</td>
<td>41.809336, -72.261304</td>
<td>cloudy, hot</td>
</tr>
</tbody>
</table>

**Viewing Data on a Map**

8. To view the data geographically, select Map at the top of the screen.

9. All data collection points will then appear on a map.
10. To view individual data points, **click on one of the dots.** A column will open on the left with the data collected at that point.

11. Note: If you collected data points close together, you will see a bigger dot with a number in it. This means there are several data points collected in the same area. **Click on the number dot** to open the individual points and then click on each of the individual dots to view the data collected.

12. To change your basemap, select the **layers button.**

13. Explore the different basemap options and **select one** that suits your fancy.

14. The Epicollect map also allows you to filter your data. This can be useful if you have multiple data points, but only want to see ones with a certain characteristic. To filter your points, select the **filter button.** Note, you may have to close the Entry Details panel if it is open to see the filter icon.
15. Note that you can select different locations or different dates.

16. Under **Distribution** in the filter menu, use the dropdown arrow to **select one of the survey questions** to filter the data by.

17. Note that once you select a question to filter the data by a pie chart will appear and the dots on the map will change based on the answers to the question selected.

18. Note that this map is public so anyone with the project url can view or download (but not edit) the data. To share the data with friends, send them the project website url.

19. The data map in Epicollect may be good enough for your purposes. However in some cases you may want to combine this data with other data or customize how it is displayed. In the next step you will learn how to do this by importing your data into Google Maps. For the next steps, keep you current browser window open.
Viewing Form Responses in Tables and Maps

Epicollect Data Options & Export to Google Maps

Adding Field Form Data to Google Maps
If a project is listed as public on the Epicollect website, anyone can download the data.

Exporting Form Data from Epicollect
1. Click on the Download icon in the upper right corner of the screen.

2. A “Download” panel will expand from the left side of the screen. Be sure the Format is set to CSV and click Download.

3. A download window will appear. Save the file to your USB flash drive or hard drive of your computer. The name of the file will be the form name. The file is a compressed (.zip) comma separated values (.CSV) file. Before we can bring it into Google Maps, you will need to unzip it. Select Save File. Click OK.

4. On your computer, view/navigate to the folder where you saved the .zip file. Right click on it and unzip to in the same location. Mac people…just double click!

⚠️ Note: Your extract tool may look different than this! Mac people…just double click!
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 EpiCollect .CSV into Google Maps

6. Sign into your Google account, if necessary.
7. Click on the Menu icon in the Search bar and select Your Places.

8. In the Your places panel, click on MAPS. You should see your saved map(s) listed below. Let’s create a new one.

9. Click CREATE MAP at the bottom of the Your places panel. Google My Maps will open a blank, untitled map.

CREATE MAP
10. Under Untitled layer, click Import.

11. In the Choose a file to import window, click on “Select a file from your computer” and browse to the location where you saved your Epicollect .CSV file.

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.

12. In the “Choose columns to position your placemarks”, check the box next to “lat_2_Stream_Location” and click the radio button next to Latitude.

13. Next, check the box below it, “long_2_Stream_Location” and click the radio button next to Longitude.

14. Click Continue.

15. In the “Choose a column to title your markers” (title for the placemarks), select the radio button next to “2_Stream_Name”.

16. 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 symbolize the points based on the data collected in the form. Let’s take a look.

17. Click on Individual styles under the layer name.

18. Change the Group places by to “5_Generally_What_For” and change Set labels to “9_What_land_uses_sur”. Close style window by clicking the x in the upper left.

19. 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**

20. **Click on a marker** on the map. The pop-up window will open. Notice the field names and values come directly from the EpiCollect table.

⚠️ Unfortunately, there is currently no way to edit the names of the fields in Google Maps. If the field names bother you, you can edit them in Excel **before** you import the .CSV file into Google Maps.

21. Notice there is a **link to the photographs** 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.

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**Roberts brook - Ag**

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ec5_uuid</td>
<td>e785434d-ad0e-d70e-b888-9f6f22f46f</td>
</tr>
<tr>
<td>created_at</td>
<td>2017-06-29T18:54:53.125Z</td>
</tr>
<tr>
<td>1_Name_or_Team</td>
<td>Dave</td>
</tr>
<tr>
<td>int_3_Stream_Location</td>
<td>41.812735</td>
</tr>
<tr>
<td>long_3_Stream_Location</td>
<td>-72.240473</td>
</tr>
<tr>
<td>accuracy_3_Stream_Loc</td>
<td>10</td>
</tr>
<tr>
<td>4_What_is_the_weather</td>
<td>cloudy hot</td>
</tr>
<tr>
<td>5_Generally_what_for</td>
<td>Straight</td>
</tr>
<tr>
<td>6_Take_a_photo_of_th</td>
<td><img src="https://five.epicollect.net/api/media/w?monitoring?type=photo&amp;format=entry_original&amp;name=4d-ad0e-d70e-b888-9f6f22fa6883_1498762327.jpg" alt="Link to photo" /></td>
</tr>
<tr>
<td>7_How_does_stream_lo</td>
<td>No value</td>
</tr>
<tr>
<td>8_Describe_other_res</td>
<td>No value</td>
</tr>
<tr>
<td>9_What_land Uses_sur</td>
<td>agriculture, development/man made structures (pipes, bridges, structures)</td>
</tr>
<tr>
<td>10_Take_photos_of_th</td>
<td>1</td>
</tr>
<tr>
<td>12_What_evidence_of</td>
<td>erosion, trash</td>
</tr>
<tr>
<td>13_Provide_photos_of</td>
<td>1</td>
</tr>
<tr>
<td>15_Please_indicate_a</td>
<td>No value</td>
</tr>
<tr>
<td>16_Please_specify_ot</td>
<td>No value</td>
</tr>
</tbody>
</table>
22. Return to your map. Click on the marker again, if necessary, to view the pop-up window. Click on the pencil icon to edit the contents of the pop-up.

23. With your mouse, select the entire text string in the “Take a photo of th” field. Pro tip: double-click on the text in the box to select all.

24. With the text string selected, right-click and copy it.

25. Click on the camera icon at the bottom of the pop-up.

26. 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.

27. 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 “6_Take a photo of th”. This will hide the photo URL in the pop-up.

28. Click Save to save the changes you made to the pop-up.

29. If you’re feeling adventurous, repeat the process with the photo URL in the “Take a photo of a” field. Be sure to click the Save button at the bottom of the pop-up each time you make a change.

30. If you’re feeling REALLY adventurous (and you have time to spare), go ahead and add photos to the pop-ups for other markers.
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:

31. Update the layer name
32. Give your map a title and description
33. Add other layers
34. Change the marker style
35. Format the pop-ups further
   o 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).

Have fun. Go forth and make beautiful maps!