Last Updated: October 2017

EXERCISE 1

Setting up a Collect Earth Online project as an administrator

Introduction

In this exercise, you will learn how to create an account on Collect Earth Online (CEO), set up and manage a project as the project administrator, and export the data.

Objectives

- Create a Collect Earth Online account
- Set up and manage a project on Collect Earth Online
- Export project data and convert to a Fusion Table

Prerequisites

- **You have an email account**
- **You have a Google account**
- **You are using Google Chrome**
- **You have an internet connection (preferably wired)**

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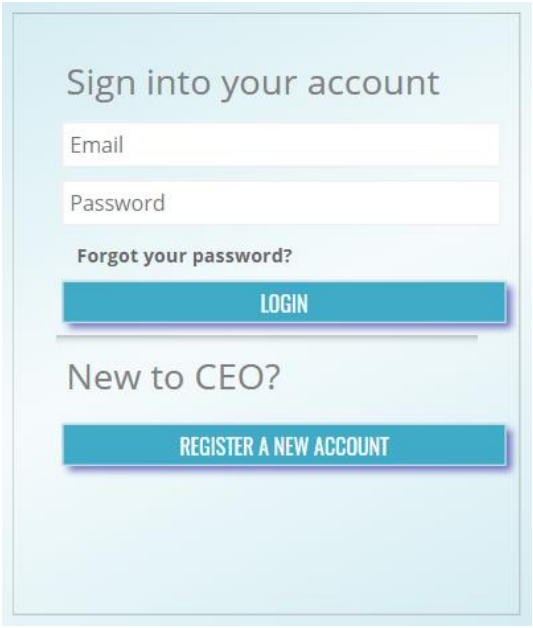
Part 1: Setting up an admin account

A. Navigate to the Collect Earth Online (CEO) webpage

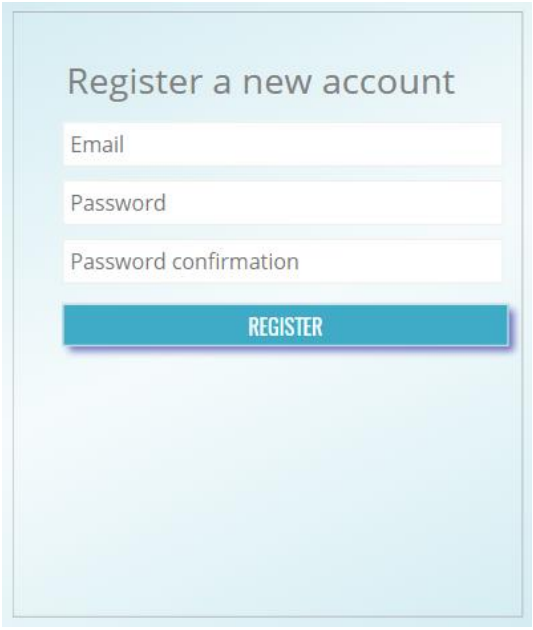
1. Open Google Chrome and navigate to the following webpage: http://ceo.sig-gis.com/home. This is the home page for Collect Earth Online.

Note: As of October 2017, Collect Earth Online is still in active development. As such, the layout and appearance of the website may have changed since the creation of this exercise.

2. Click the **Login/Register** button in the upper-right corner of the page. Click **Register a new account**.



3. Click on the **Register a new account** button. Enter your email address and choose a password. Consider recording this email and password for later use, because the functionality to reset a password in CEO does not yet exist.

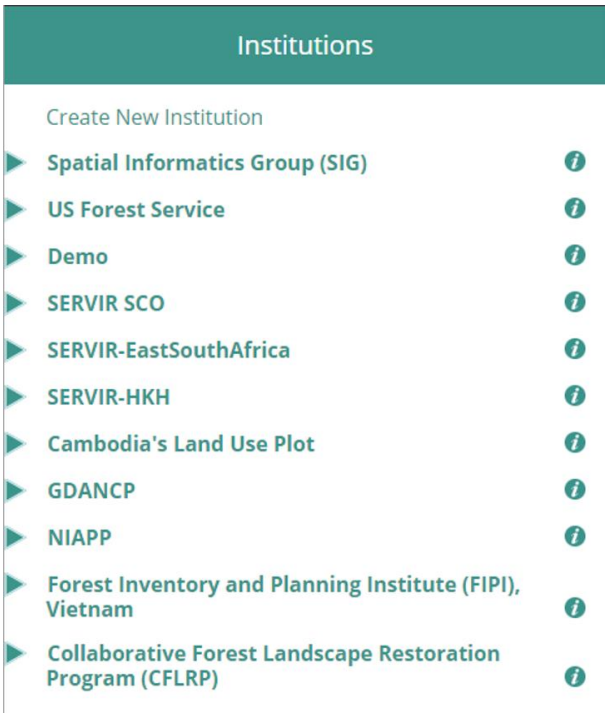


4. You will now be redirected to the home page, but you will be logged in this time.

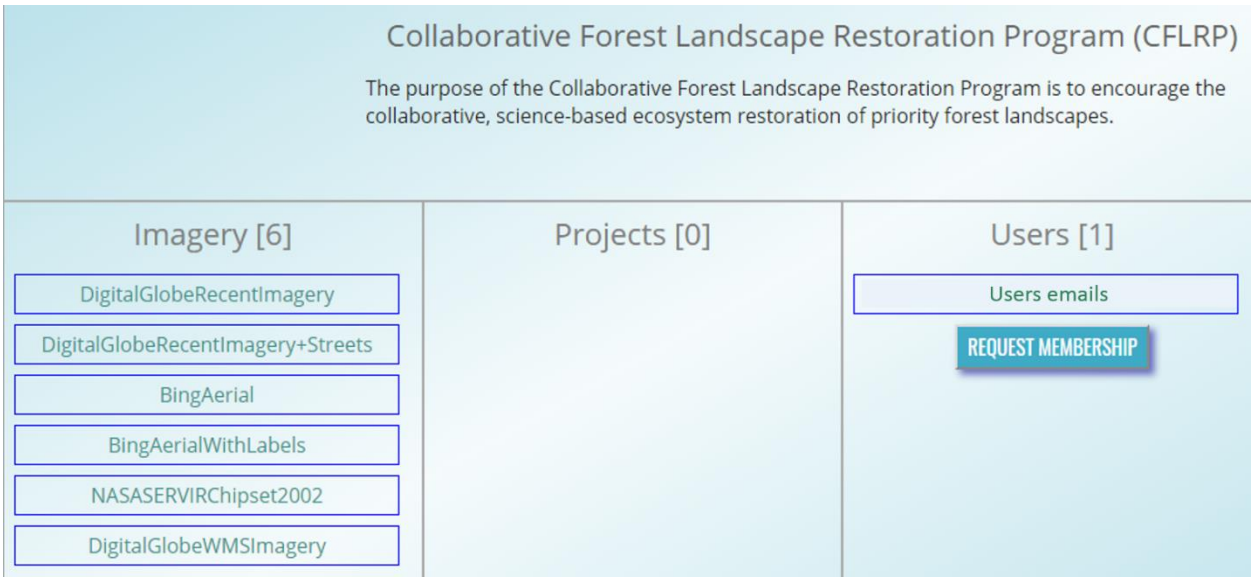
Part 2: Creating a project

A. Request membership to an institution

1. Most projects are associated with institutions, so before you can create a project, you will need to join an institution on CEO. On the left side of the home page, locate the Institutions panel, and scroll down to find the institution to which you belong. For this exercise, locate the **Collaborative Forest Landscape Restoration Program (CFLRP)** institution. Click the circled ***i*** icon to the right of the institution name.



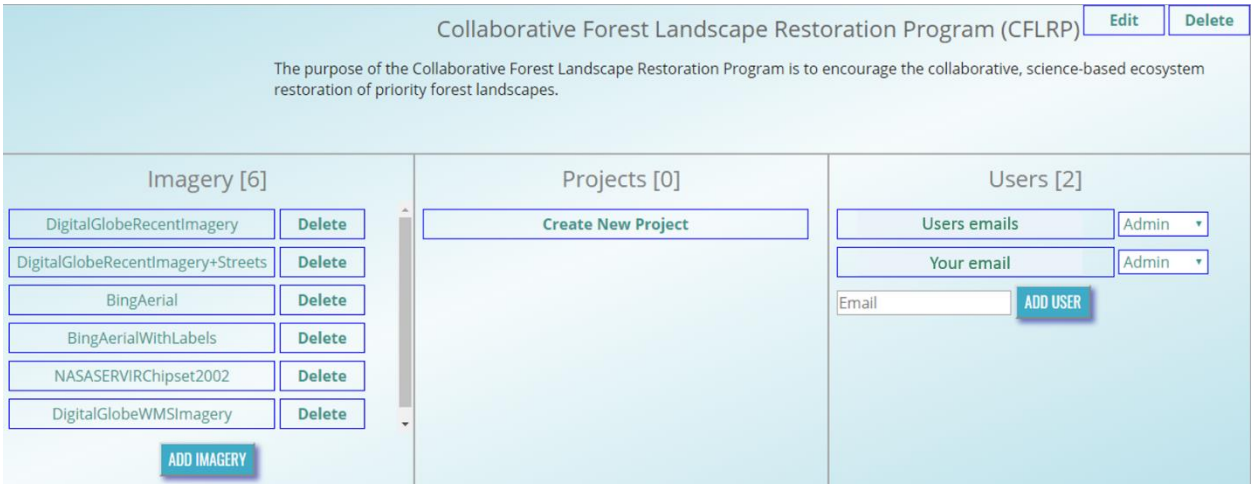
2. You will be redirected to the management page for that institution. This page contains a list of the available imagery, current projects, and users associated with the institution. Below the list of users, click the **Request Membership** button.



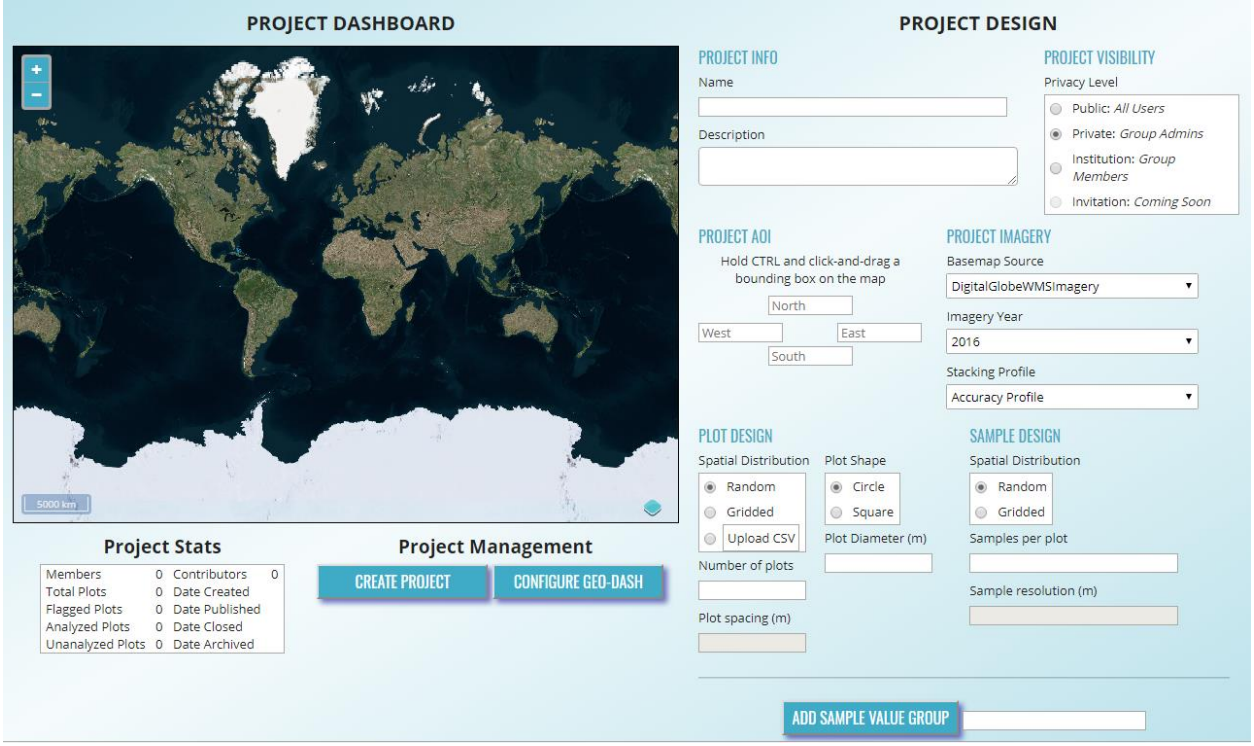
3. An alert may display on your browser indicating that you have requested membership. Click **ok**. A request has been sent to the institution page administrator(s).
4. At the moment, there is no way of indicating what kind of account you are requesting (e.g., member or admin). We recommend that you send an email to the admin for the institution (sometimes this information is in the institution description). In the email, explain that you are requesting an "admin" account. This will also remind the administrator to approve your request. You will have to wait until that person has approved your request before continuing.

B. Create a new project

1. Once you have been approved, **refresh** the webpage. **Log in** again to your account. Navigate to the **Collaborative Forest Landscape Restoration Program (CLFRP)** institution in the Institutions panel, and click the circled ***i*** icon. You will be redirected to an updated version of the management page. On the right side, you should now see your email listed, with the word **Admin** selected next to it. If you do not see this, contact the administrator to confirm that they have accepted your request and given you admin privileges.



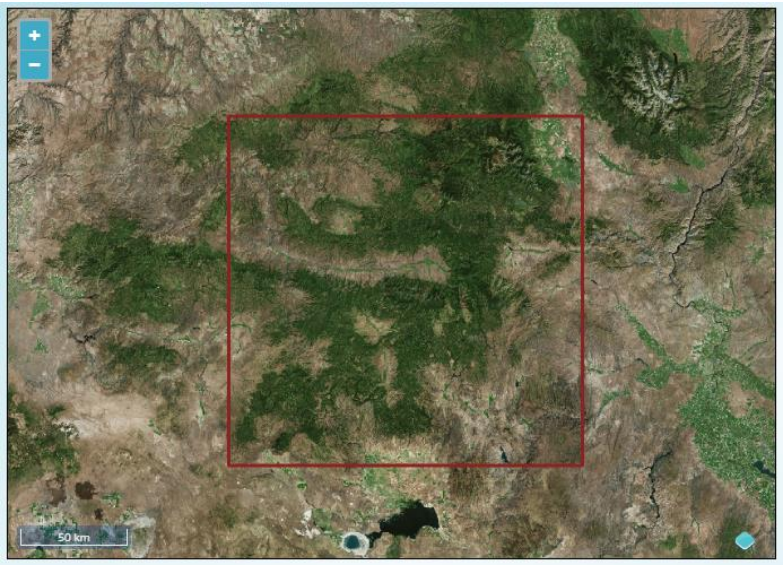
2. You will also notice that in the center panel under Projects there is now a button to **Create New Project**. Click this button. You will be redirected to the Project Dashboard page. This is the primary page where you will set up the sample design of the project.



3. Under **Project Info**, enter the project's name and description.
4. **Project Visibility** sets the privacy level. Set this to **Institution**, which means that all group members of your institution can see and edit your project.

C. Set project area

1. **Project AOI** sets the project area of interest. In order to manually select your study area by drawing a box, click into the map window. Zoom in/out using the scroll wheel of your mouse (or the + and – boxes in the map window) to locate your area of interest. You can pan the map by clicking on it and dragging the map window. Hold the CRTL-key down and draw a box while keeping the left mouse key pressed down. The coordinate boxes will populate with coordinates once the box is drawn and you let your mouse key go.
2. For this exercise, we have set the area of interest to a box around the Malheur National Forest in Oregon. If you want to copy this area, set **North** to 45.0663, **East** to -117.7635, **South** to 43.5724, and **West** to -119.8784.



D. Specify available imagery feed

1. Select the **Project Imagery** under **Basemap Source** in the dropdown menu. The map view will display the current selection. You can choose between Digital Globe, Bing maps, and all public and private WMS feeds from your affiliated institution.
2. Select **DigitalGlobe: WMS Imagery**.
3. Set the **Imagery Year** to 2016.
4. Under **Stacking Profile**, select **Accuracy Profile**. This profile returns high resolution features including those acquired using cameras mounted underneath aircraft and sub-meter satellite imagery.

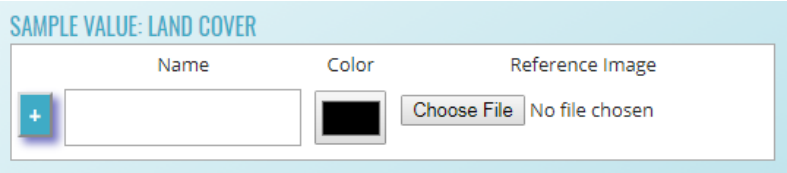
E. Sample design set up

1. **Plot Design** specifies the type and number of sample plots.
   i. *Spatial Distribution* defines the distribution of the sample points. There are three options: simple random, gridded, or uploading your own csv file specifying plot locations.
      (a) When selecting Random, the number of plots needs to be assigned.
      (b) If selecting Gridded, the plot spacing parameter (in meters) needs to be selected.
   ii. *Plot shape* can be set as a Circle or a Square. The plot radius (for a circle) or the plot width (for a square) must be chosen.
   iii. For this exercise, set the **Spatial Distribution** to Random, the **Plot Shape** to Square, the **Number of Plots** to 300, and the **Plot Width** to 90.
2. The **Sample Design** options allow the user to specify the spatial distribution of the samples in each plot.
   i. When choosing Random, the sample numbers per plot must be defined.
   ii. When choosing Gridded, the sample resolution or spacing (in meters) must be specified.
   iii. For this exercise, set the **Spatial Distribution** to Random, and the **Samples per plot** to 25.

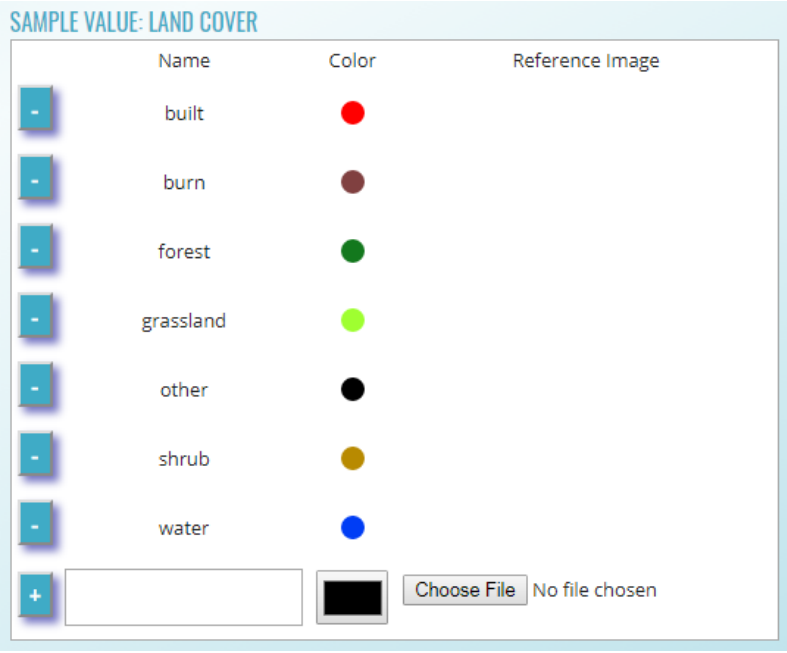
*Note: Sample point locations can also be uploaded as a csv file. The coordinates must be in **WGS84 EPSG:4326** format. The first column must contain longitude and the second column latitude. A column header must be given, which can be freely chosen.*

F. Design plot attributes and labels

1. To the right of the **Add sample value group** button, type LAND COVER, and then click the button. A new input area titled SAMPLE VALUE: LAND COVER should appear.

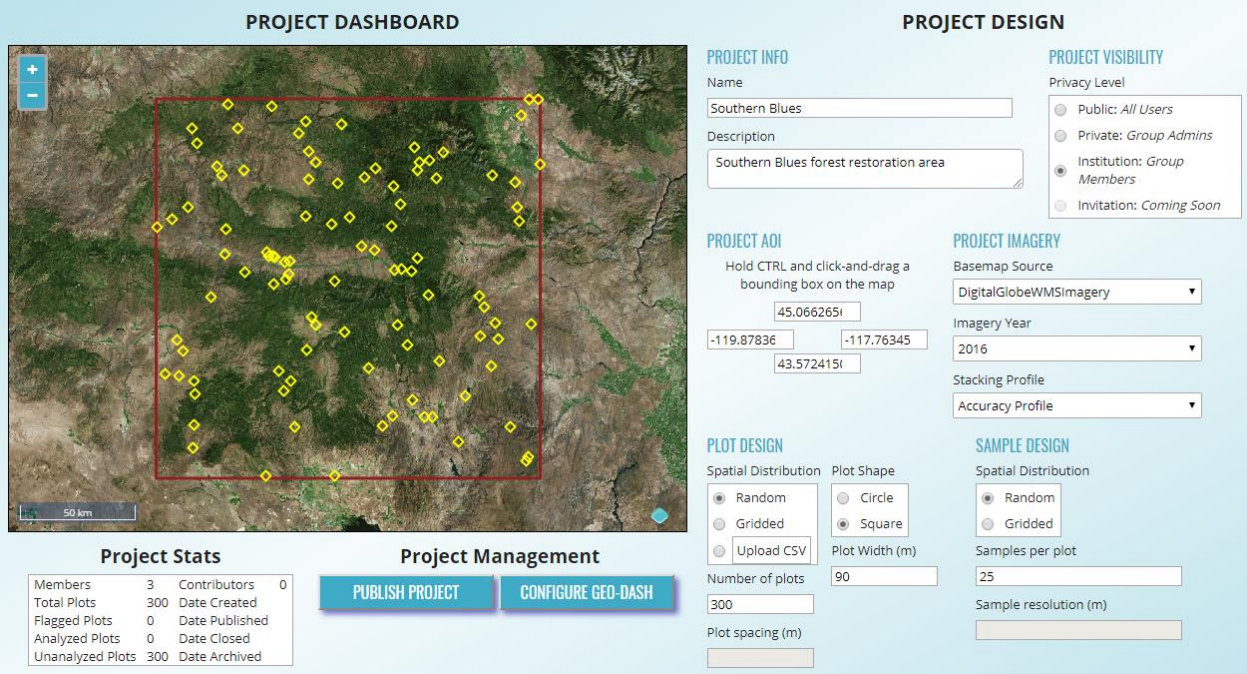


2. Next you will supply a scheme for classifying the land cover classes created under SAMPLE VALUE: LAND COVER.
   i. Type the first sample class name (e.g., built) under **Name**. Try to use names with around 15 characters or fewer so that the full name is displayed during analysis.
   ii. Click on **Color** to choose a unique color for that label.
   iii. An optional feature is uploading a reference image, which you can select by clicking on the **Choose File**. Click on the Plus button to save your label and start a new sample class.
   iv. A finished sample class appears in the list. It can be removed again by clicking the minus button. After entering the last sample class, you still need to click the Plus button once more to save the final sample class.
   v. Repeat this process until all sample values have the labels of interest. See example image below.

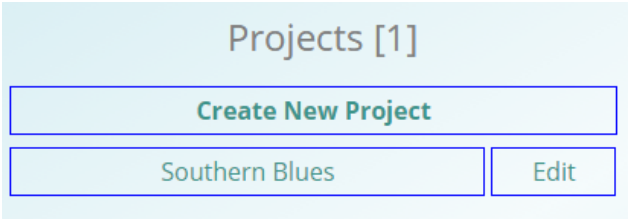


G. Create the project

1. Once the project set up is complete up to this point, click on **Create Project**.
   i. A pop-up window will ask 'Do you REALLY want to create this project?' Click **OK**.
   ii. Now the map box will automatically zoom into your region of interest and draw a red box corresponding to the extent of your sample plots.



2. Before you can begin having members collect data, you need to publish the project. Click the **Publish Project** button.
3. A pop-up window will appear that asks 'Do you REALLY want to publish this project?' Click **OK**.
4. Now if you return to the **Home** page, and click the **Collaborative Forest Landscape Restoration Program (CFLRP)** circled ***i*** icon under Institutions you will see the new project that you created as well as an Edit button. This button will take you back to the project dashboard.



5. At this point, you can invite members to collect data for your project. Instructions for collecting data are in Exercise 2.

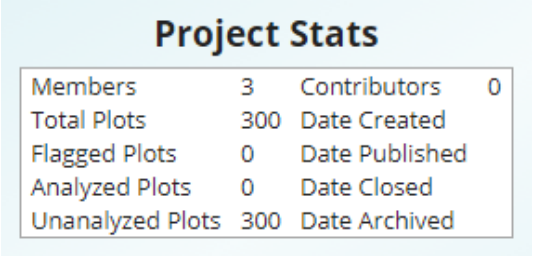
Part 3: Managing a project and exporting data

A. Add and manage users

1. The administrator of an institution can add and manage its users. Go to **Home** and select your institution.
2. To add a user, enter the user's email address in the **Users** tab and click **Add User**.
3. If the email address is associated with a member, a pop-up window notifies you that the user [email address] has been given the role 'member'. Click **OK**.
4. If the email address is not associated with a member, a pop-up window notifies you that [email address] is not an existing user's email address. Click **OK**.
5. Once a user has been added, the user's email address appears in the Users panel. Using the drop-down menu, the role can be changed from **Member** to **Admin** or **Remove** to remove the user from the list.

B. Project Statistics

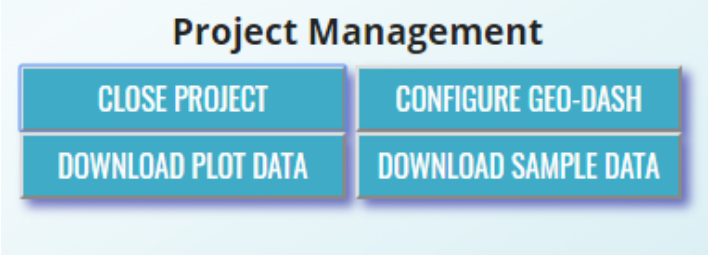
1. Return to the projects dashboard page by clicking the **Edit** button next to your project name in the CFLRP Institution management page.
2. The **Project Stats** are listed under the Project Dashboard. It gives an overview over members, contributors, the points classified, plots flagged as bad, and the date the project was created, published and closed.
3. The **Project Stats** are also shown when starting data collection, featuring the percent of assigned, flagged as well as completed plots and total plot number.



4. As members continue to collect data, the number of analyzed plots will increase, as will the number of contributors. Eventually, when the number of analyzed plots plus the number of flagged plots equals the number of total plots (e.g., 300), the project will be completed.

C. Download your data

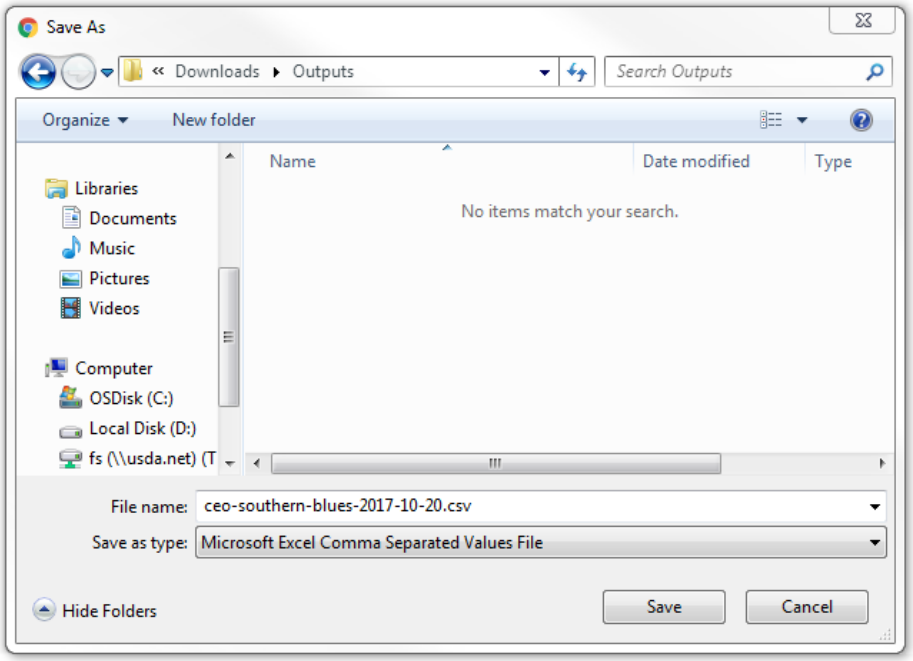
1. To the right of the Projects Stats is the Project Management section. Here you have two files available for download. Click **Download Plot Data**.



2. A new browser tab should open displaying the plot data in a comma-separated values (CSV) format. See the graphic below for an example of this data. Note that the user IDs (emails) have been whited-out for privacy, but would appear in your data.

```
PLOT_ID,CENTER_LON,CENTER_LAT,SIZE_M,SHAPE,FLAGGED,ANALYSES,SAMPLE_POINTS,USER_ID,LAND COVER:BUILT,LAND COVER:BURN,
1,-119.04879174067749,44.07989743597892,90.0,square,false,1,25,                ,0.0,0.0,100.0,0.0,0.0,0.0,0.0,0.0
2,-118.24627748647394,44.19913464971132,90.0,square,false,1,25,                    ,0.0,0.0,72.0,0.0,8.0,20.0,0.0
3,-119.421723996102,44.90364519155654,90.0,square,false,1,25,                ,0.0,0.0,16.0,84.0,0.0,0.0,0.0
4,-117.81236663637041,44.185986725773546,90.0,square,false,1,25,                ,0.0,0.0,12.0,80.0,0.0,8.0,0.0
5,-119.17863282934377,44.26958394678565,90.0,square,false,1,25,                ,0.0,0.0,52.0,28.0,0.0,20.0,0.0
6,-119.142900684962,44.96949747377132,90.0,square,false,1,25,                ,0.0,0.0,40.0,0.0,4.0,56.0,0.0
7,-118.01030146929592,44.19004806612141,90.0,square,false,1,25,                ,0.0,0.0,0.0,0.0,0.0,100.0,0.0
8,-118.41190330012863,44.5863947473075,90.0,square,false,1,25,                ,0.0,0.0,56.0,0.0,0.0,44.0,0.0
9,-118.82188773223923,43.89490477786383,90.0,square,false,1,25,                    ,0.0,0.0,40.0,0.0,36.0,24.0,0.0
10,-119.11115147391797,43.77807097802334,90.0,square,false,1,25,                ,0.0,0.0,0.0,0.0,0.0,100.0,0.0
11,-118.31093223250689,44.88064012372217,90.0,square,false,1,25,                ,0.0,0.0,24.0,76.0,0.0,0.0,0.0
12,-117.96766530494784,43.57412335259447,90.0,square,false,1,25,                ,0.0,0.0,0.0,8.0,0.0,92.0,0.0
13,-118.09374086034514,44.13495933785047,90.0,square,false,1,25,                ,0.0,0.0,0.0,96.0,0.0,4.0,0.0
14,-118.15933600979176,44.96918009060056,90.0,square,false,1,25,                ,0.0,0.0,100.0,0.0,0.0,0.0,0.0
15,-117.80701378235966,44.80891706698797,90.0,square,false,1,25,                ,0.0,0.0,0.0,0.0,100.0,0.0,0.0,0.0
16,-118.99934856883011,44.17965875509802,90.0,square,false,1,25,                ,0.0,0.0,0.0,0.0,100.0,0.0,0.0,0.0
17,-118.78180288351533,44.08731673202168,90.0,square,false,1,25,                    ,0.0,0.0,60.0,0.0,0.0,24.0,16.0,0.0
```

3. Enter **CTRL-S** to save the file (or **right-click** and choose **Save As**). A **Save As** dialog should appear, allowing you to choose the location and name of your CSV file. Click **Save**.



D. [*Optional*] Close and archive project

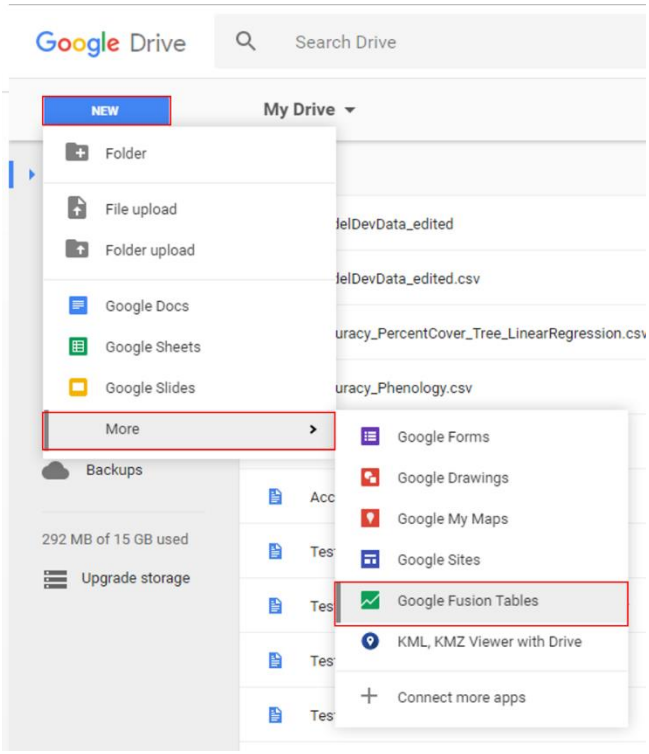
1. If you are finished collecting data for a project, and want to close the project from being worked on by anyone else, you can click the **Close Project** button under the Project Management section.
2. A pop-up window will appear that asks 'Do you REALLY want to close this project?' Click **OK**.

3. If you want to permanently remove the project from the Projects list for your institution, and thus prevent anyone (including you) from seeing or downloading project data, you can click the **Archive Project** button under the Project Management section.
4. A pop-up window will appear that asks 'Do you REALLY want to archive this project?' Click **OK**.

Part 4: [*Optional*] Converting CSV to Fusion Table

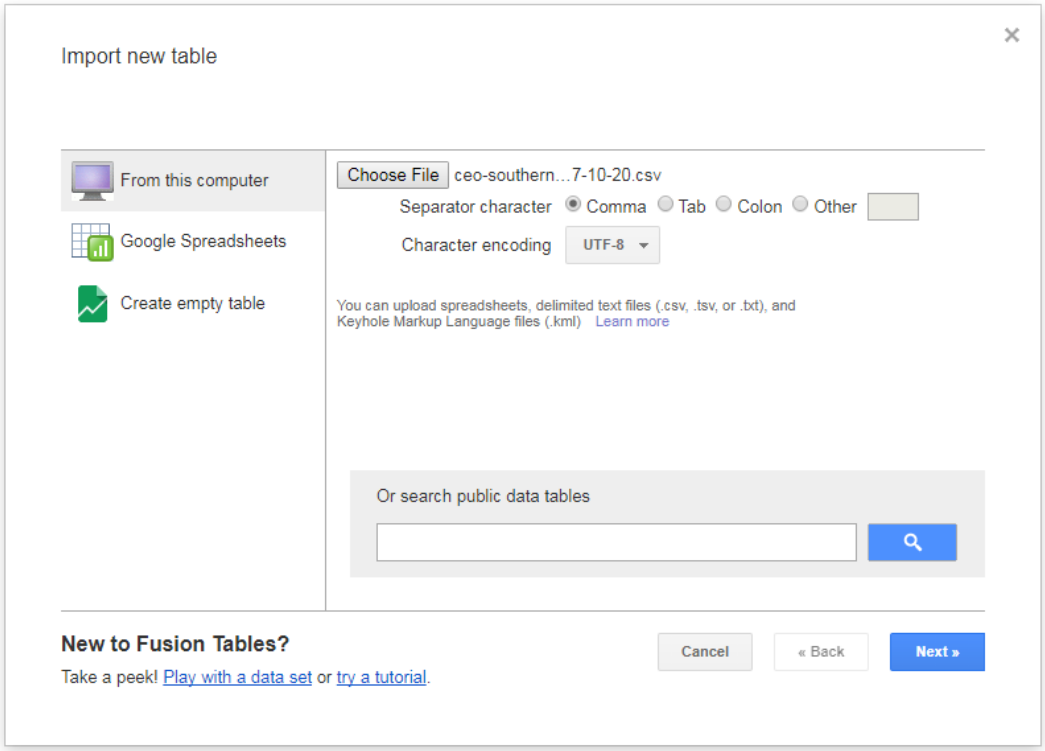
A. Go to your Google Drive at https://drive.google.com/drive/my-drive

1. You may need to **log in** to your Google account.
2. We are now going to upload the CSV file to a Fusion Table. In the upper left of your browser, click **NEW**, then **More** and then **Google Fusion Tables**.

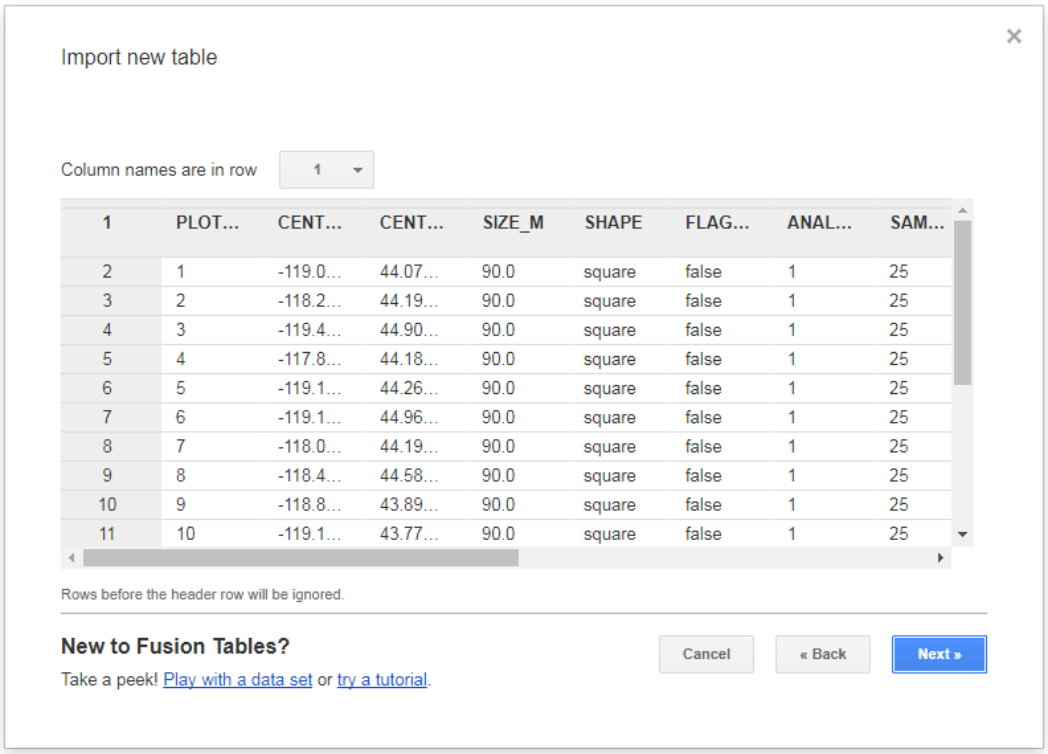


*Note: If you do not see "Google Fusion Tables" in the available applications, click **Connect more apps** and search for **Google Fusion Tables**. Follow the steps to add the app.*

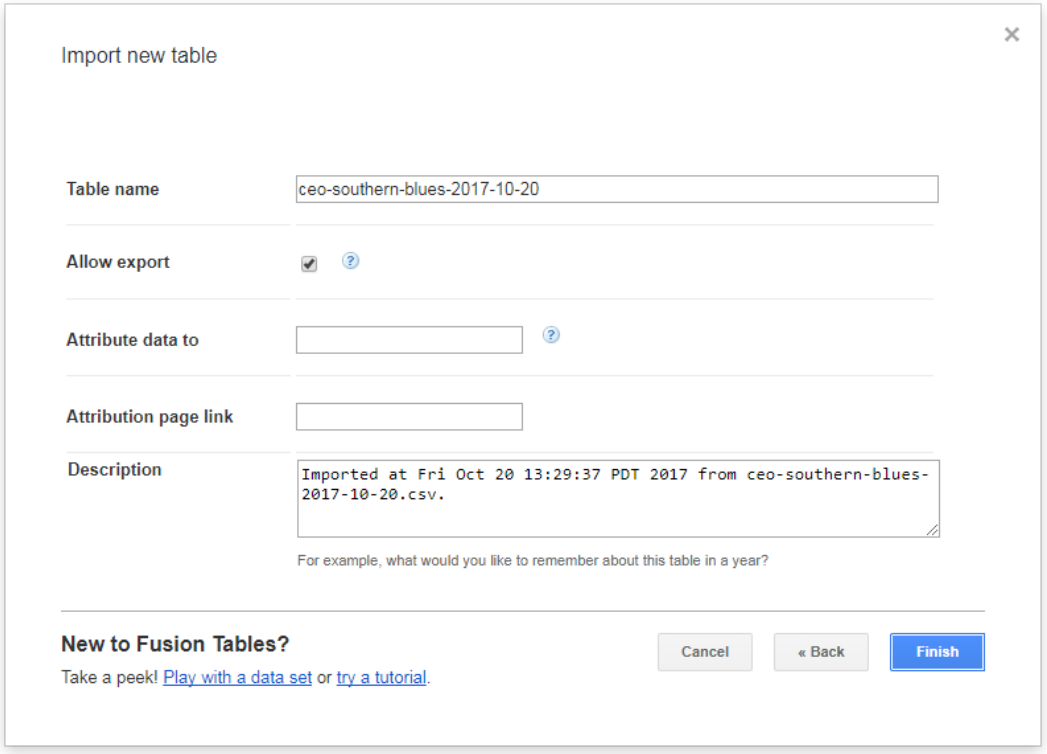
3. You should see a dialog box titled "Import New Table". Click **Choose File** and navigate to where you have stored your CSV file. Click **Next**.



4. Click **Next** again.



5. You may change any of the text fields if you wish. When you are finished, click **Finish**.



6. You should now see a spreadsheet with 100 out of 300 rows and roughly 15-20 columns. Don't worry, the other columns are still there, they just cannot be seen until we import the data into another program such as Google Earth Engine.

ceo-southern-blues-2017-10-20

Imported at Fri Oct 20 13:29:37 PDT 2017 from ceo-southern-blues-2017-10-20.csv.
Edited at 14:29

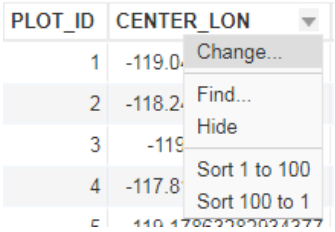
File Edit Tools Help | Rows 1 | Cards 1

Filter | No filters applied

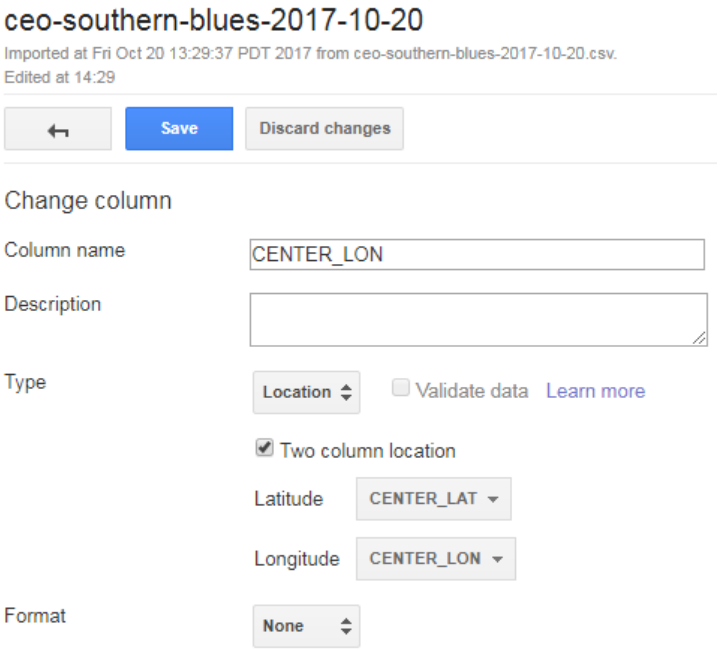
1-100 of 300

PLOT_ID	CENTER_LON	CENTER_LAT	SIZE_M	SHAPE	FLAGGED	ANALYSES	SAMPLE_POINTS
1	-119.04879174067749	44.07989743597892	90.0	square	false	1	25
2	-118.24627748647394	44.19913464971132	90.0	square	false	1	25
3	-119.421723996102	44.90364519155654	90.0	square	false	1	25
4	-117.81236663637041	44.185986725773546	90.0	square	false	1	25
5	-119.17863282934377	44.26958394678565	90.0	square	false	1	25
6	-119.142900684962	44.96949747377132	90.0	square	false	1	25
7	-118.01030146929592	44.19004806612141	90.0	square	false	1	25
8	-118.41190330012863	44.5863947473075	90.0	square	false	1	25
9	-118.82188773223923	43.89490477786383	90.0	square	false	1	25

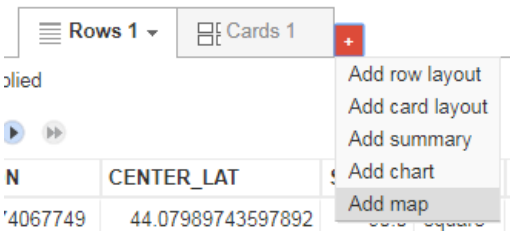
7. The main issue at the moment is that the data need to be geo-located. The Fusion Tables application does not yet understand that "CENTER_LON" and "CENTER_LAT" represent longitude and latitude, respectively. To fix this, click on the down-arrow next to "CENTER_LON" and then click **Change…**.



8. Change **type** to **Location**. Make sure to check the box for **Two column location**. Then set **Latitude** to CENTER_LAT, and **Longitude** to CENTER_LON. Finally, click the blue **Save** button.

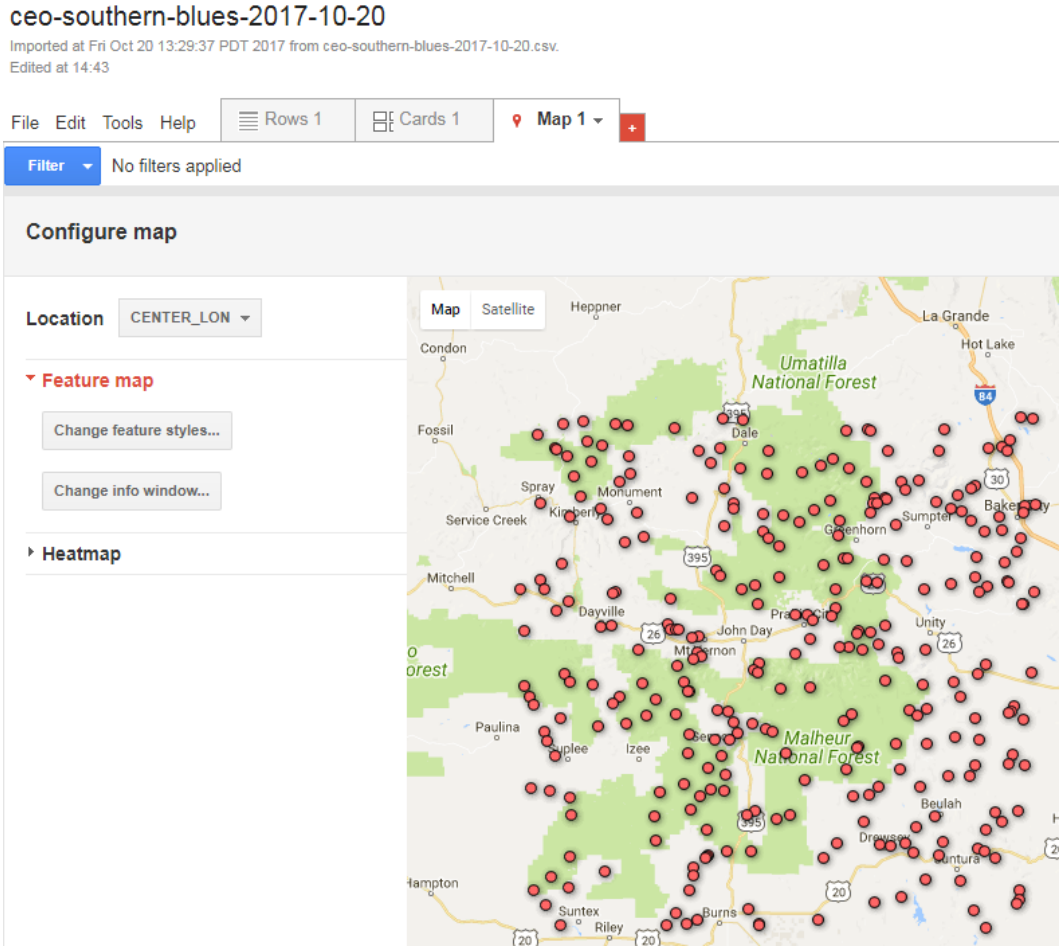


9. A yellow message should briefly appear saying that "Column type change is in progress". Wait for this message to disappear. To verify that the data are geo-located, click the red **+** symbol by the Rows 1 and Cards 1 tabs, and then click **Add map**.

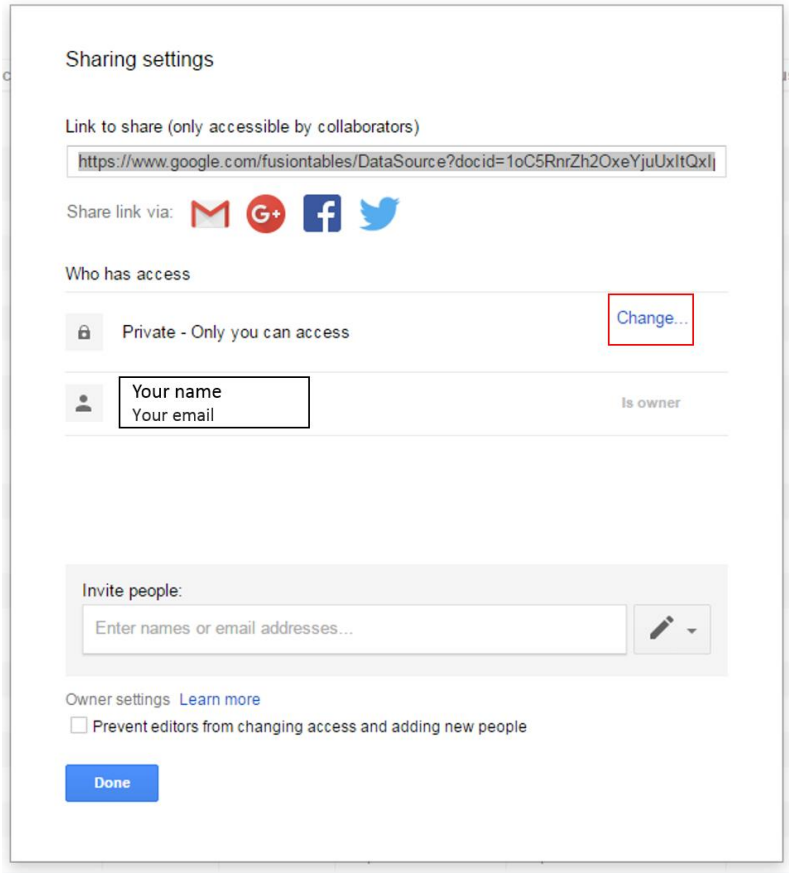


10. A map window should appear. Zoom in/out using the scroll wheel of your mouse, or the + and – boxes in the map window to verify that the data have been geo-located. If no data

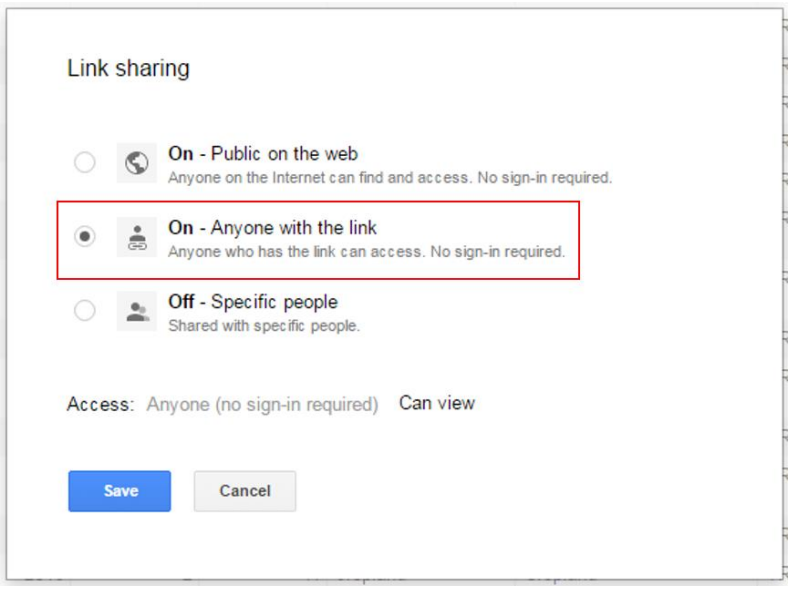
appear on the map, return to the Rows 1 tab and repeat the steps to change the "CENTER_LON" to a location.



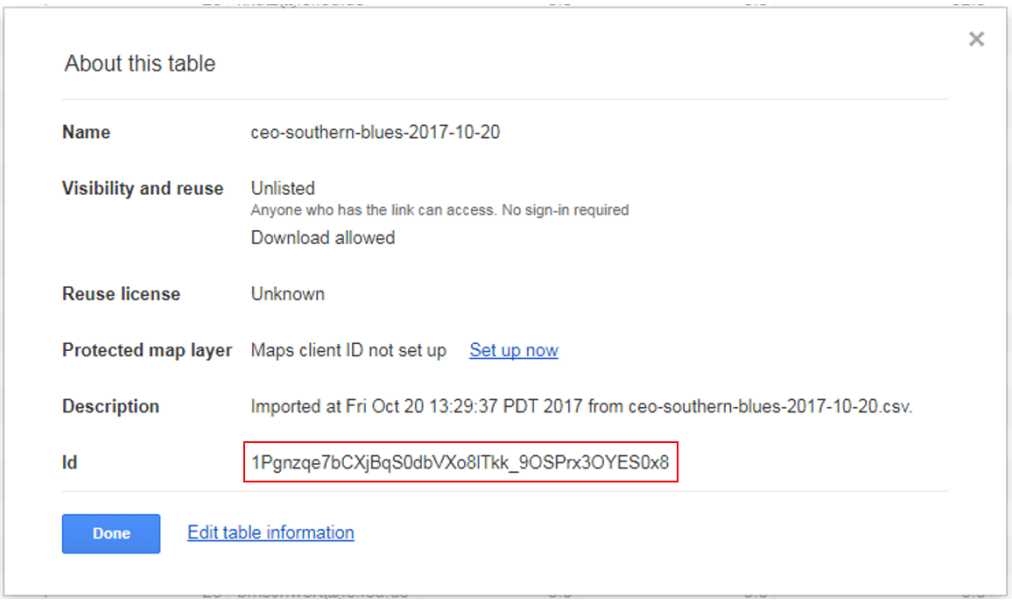
11. Lastly, let's change the sharing settings of the data. In the top right of the browser, click **Share**. A dialog titled "Sharing settings" will pop up. Next to "Private – Only you can access", click **Change…**.



12. A Link sharing dialog will pop up. Click **On – Anyone with the link**. When you are working with your own data, you may of course skip these steps and keep your data private. But if you are ever troubleshooting and need assistance, or wish to use your data in an application, you can change your sharing settings here. Click **Save**. Click **Done**.



13. To get the Fusion Table ID, click **File** -> **About this table**. The ID is listed at the bottom of the dialog box. For this example, it is **1Pgnzqe7bCXjBqS0dbVXo8lTkk_9OSPrx3OYES0x8**.



Congratulations! You have completed this exercise on setting up and managing a Collect Earth Online project as an administrator. You have also learned how to export your data and convert it to a Fusion Table.