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Tutorials

## EXPLORE REAL TIME DATA (2 PARAMETERS)

In this tutorial, you will learn how to:

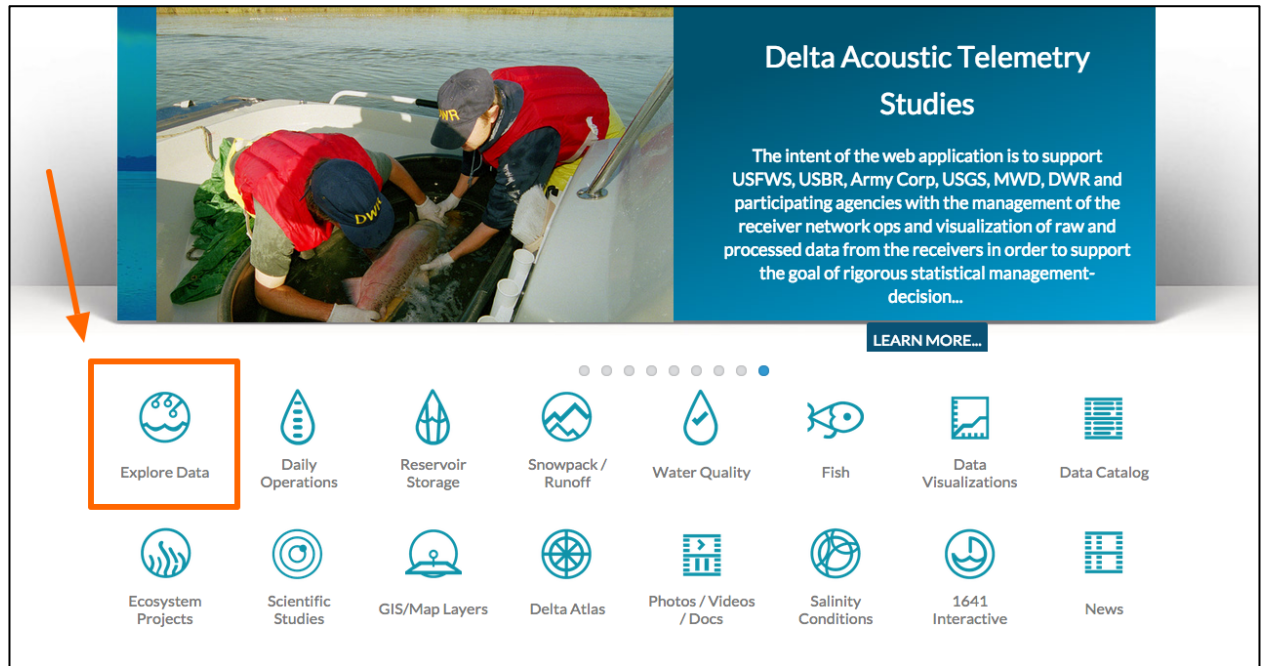
1. Explore multiple parameters at a time
2. Save your real time data preset for future viewing and use with project and research

### GETTING STARTED:

First, always be sure you are logged in by using the login/signup buttons at the top of the screen. If you don't log in, you won't be able to save your work.

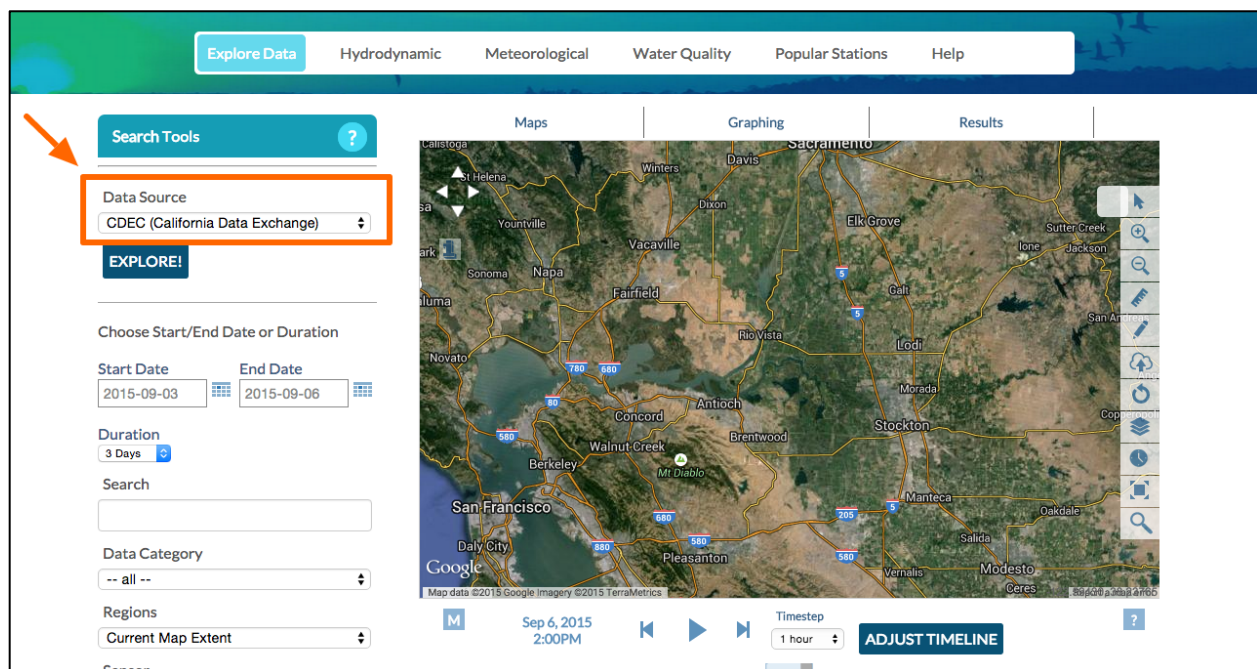
The screenshot shows the Bay-Delta Live website interface. At the top, there is a navigation bar with the BAY-DELTA LIVE logo on the left, a search bar on the right, and three buttons: LOGIN, JOIN BDL COMMUNITY, and HELP. An orange arrow points to the LOGIN button. Below the navigation bar is a main content area. On the left, there is a featured article titled "Managing Salinity in a Drought" with a "LEARN MORE..." button. On the right, there is a sidebar with a "Managing Salinity in a Drought" section. At the bottom, there is a horizontal menu with icons and labels for Explore Data, Daily Operations, Reservoir Storage, Snowpack / Runoff, Water Quality, Fish, Data Visualizations, and Data Catalog.

Once you are logged in, from the homepage, click on **EXPLORE DATA**.



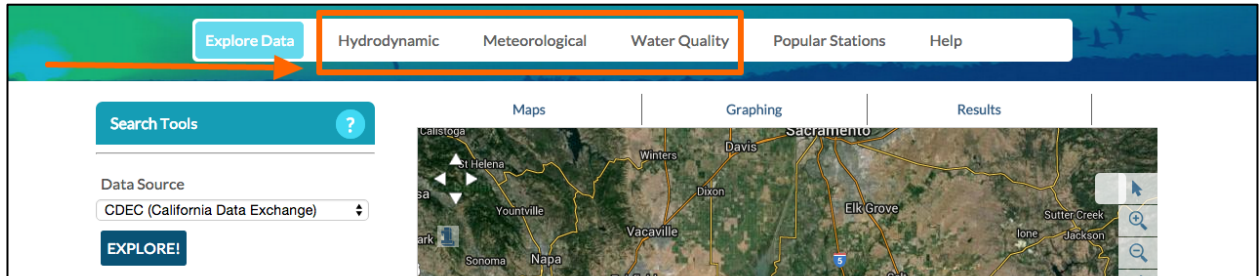
**Please note:** These data sources are accessed by remote web servers and are not hosted by www.baydeltalive.com. The data provider maintains data quality.

For this example, we will use CDEC.  
Choose that option in the **Data Source** drop-down menu.

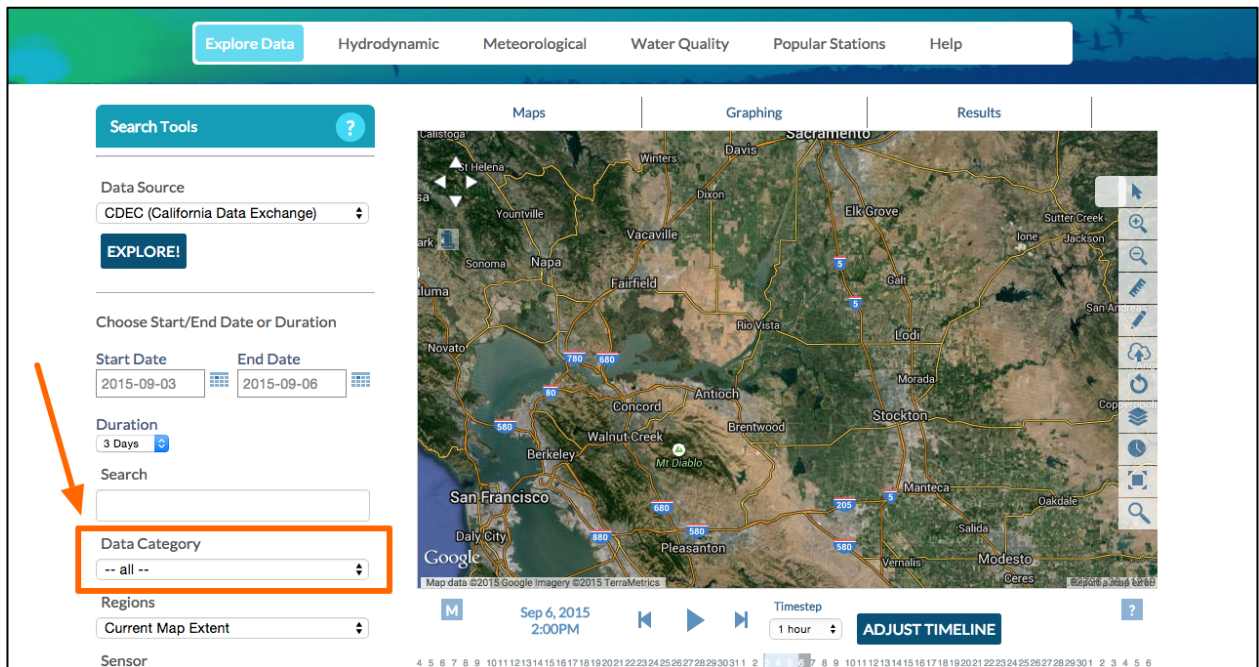


This dataset contains hydrodynamic, meteorological and water quality sensor information from the Delta and its watershed. For example you can explore things like snow pack, electrical conductivity, wind and more than 200 + other data parameters.

First you can choose to filter the data by sensor type using the quick links in the sub-navigation: Hydrodynamic, Meteorological or Water Quality.



Or you can choose to dig deeper by using the Data Category menu option. Choose **“Water Quality”** from the Data Category drop-down menu.



A drop-down list of sensors will appear on the left. You can scroll through the list to find your water quality parameter. **Choose turbidity.**

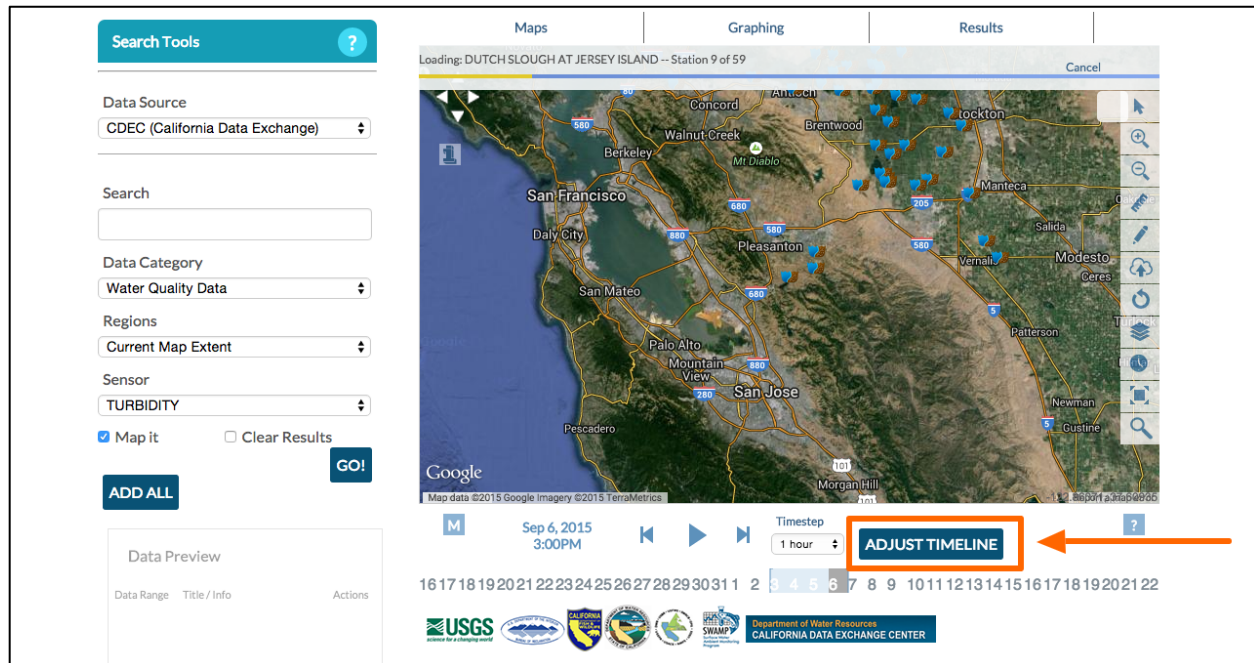
The screenshot shows the 'Explore Data' web application interface. At the top, there are navigation tabs: 'Explore Data', 'Hydrodynamic', 'Meteorological', 'Water Quality', 'Popular Stations', and 'Help'. Below these are three main sections: 'Maps', 'Graphing', and 'Results'. On the left side, there is a 'Search Tools' panel with the following settings: 'Data Source' set to 'CDEC (California Data Exchange)', 'Data Category' set to 'Water Quality Data', 'Regions' set to 'Current Map Extent', and 'Sensor' set to 'TURBIDITY'. An orange arrow points to the 'Sensor' dropdown menu. Below the search tools are checkboxes for 'Map it' (checked) and 'Clear Results', and a blue 'GO!' button. At the bottom of the search tools is a 'Data Preview' section with 'Data Range', 'Title / Info', and 'Actions' columns. The main map area shows a satellite view of the San Francisco Bay Area with various cities labeled. At the bottom of the map, there is a 'Timestep' section set to '1 hour' and an 'ADJUST TIMELINE' button. A timeline at the very bottom shows dates from 4 to 6.

Click “GO!” to get the data.

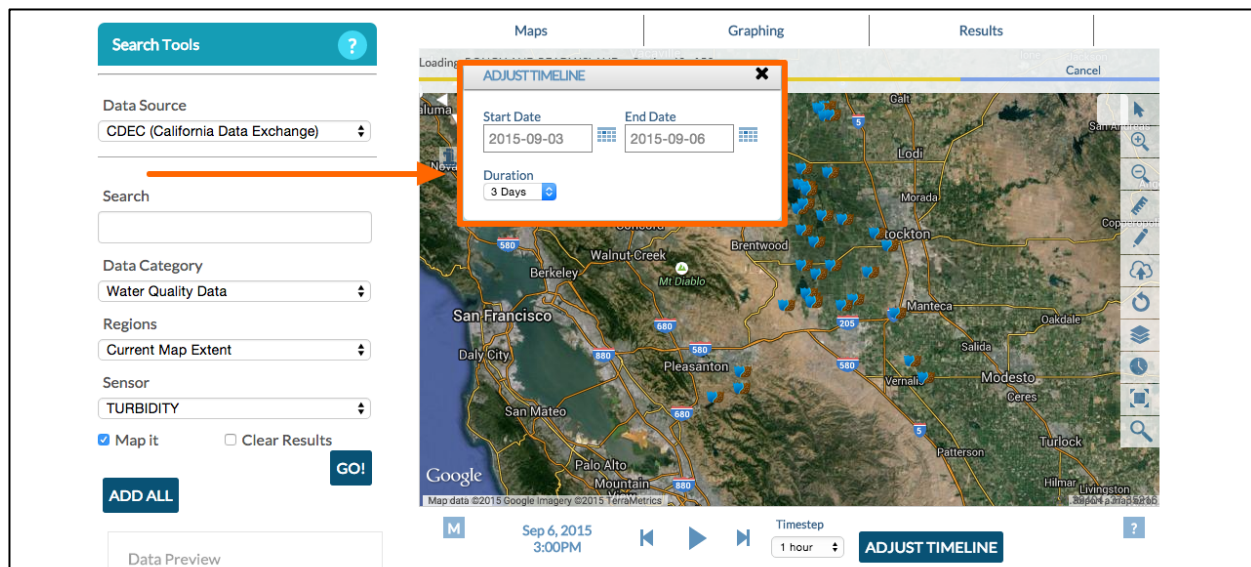
This screenshot is identical to the one above, but with an orange arrow pointing to the blue 'GO!' button in the search tools panel. The 'Sensor' dropdown is still set to 'TURBIDITY'.

The CDEC default time extent for CDEC is 3 days and now 3 days worth of data for each station is loading in my map extent.

You can change the time extent by clicking the “Adjust Timeline” button.



Note: If you choose new dates and adjust the timeline, let the new information load in the map before closing out of the adjust timeline pop-up (pictured below).



Now you can explore the data at each station using your mouse cursor.

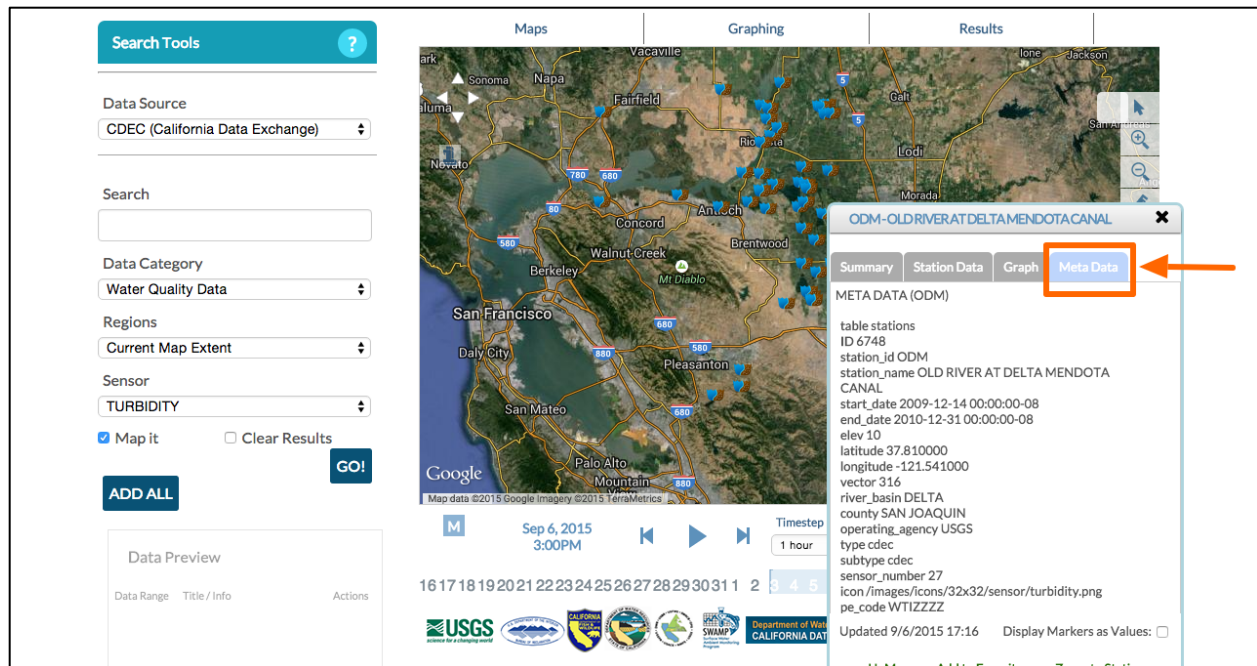
Hover over a station and a rollover will appear with detailed information including the current turbidity value at that station, a 3-day trend graph (unless you adjusted the time extent to include more days), station metadata and a link to the original data source.

The screenshot shows a web application interface for water quality data. On the left, there are search tools including a dropdown for 'Data Source' (CDEC (California Data Exchange)), a search bar, and filters for 'Data Category' (Water Quality Data), 'Regions' (Current Map Extent), and 'Sensor' (TURBIDITY). A 'GO!' button and an 'ADD ALL' button are also present. The main area features a map of the San Francisco Bay Area with several blue location markers. A rollover badge is displayed over one marker, titled 'ODM-OLD RIVER AT DELTA MENDOTA CANAL'. The badge has tabs for 'Summary', 'Station Data', 'Graph', and 'Meta Data'. The 'Summary' tab is active, showing a current turbidity value of 2.7 NTU. Below this, there is a list of 'Station Sensors' with columns for sensor names and actions like '(G)' and '(Add)'. The badge also shows the time 'Sun Sep 06 2015 15:00:00 GMT-0700 (PDT)' and a 'DOWNLOAD TIME SERIES DATA' link. At the bottom of the badge, there are 'UnMap', 'Add to Favorites', and 'Zoom to Station' options.

Pictured: rollover badge appears when mouse cursor scrolls over stations, showing turbidity value

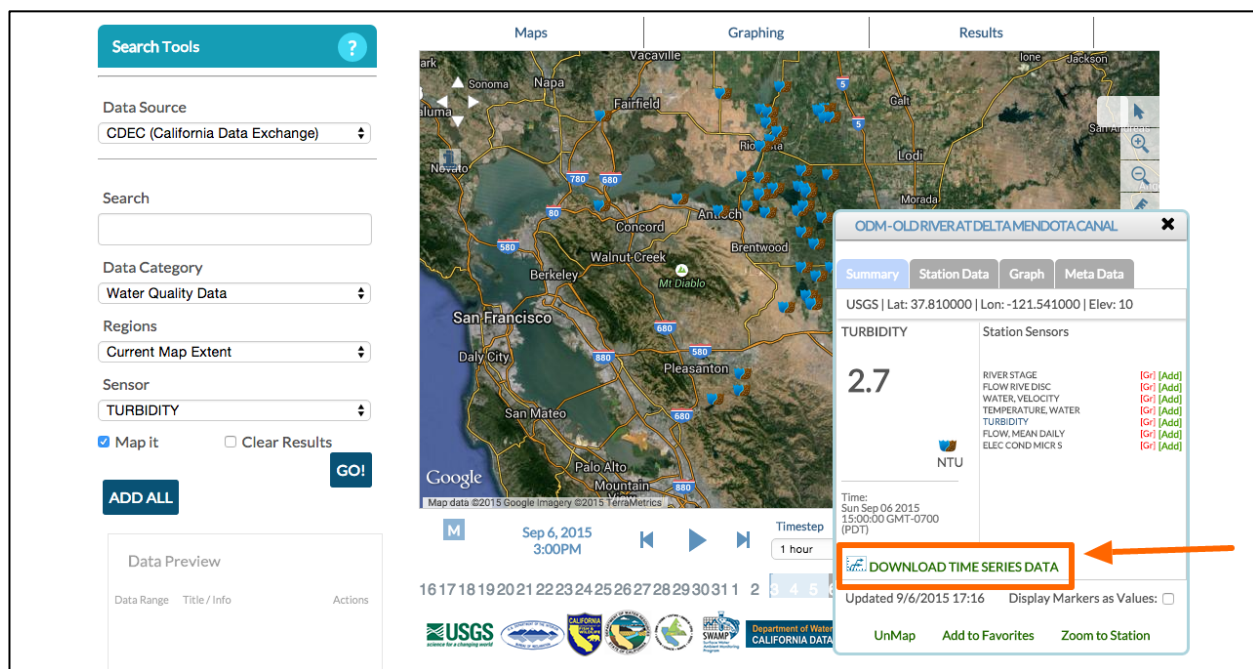
This screenshot shows the same interface as the previous one, but with the 'Graph' tab selected in the rollover badge. The graph is titled 'ODM-TURBIDITY' and shows a line plot of turbidity values over time. The y-axis is labeled 'NTU' and ranges from 0 to 40. The x-axis shows dates from Sep 4 to Sep 6, 2015. The graph shows a sharp peak in turbidity on Sep 4, followed by a period of low, stable values. An orange arrow points to the 'Graph' tab in the badge's navigation bar.

Pictured: rollover badge 3-day trend graph tab



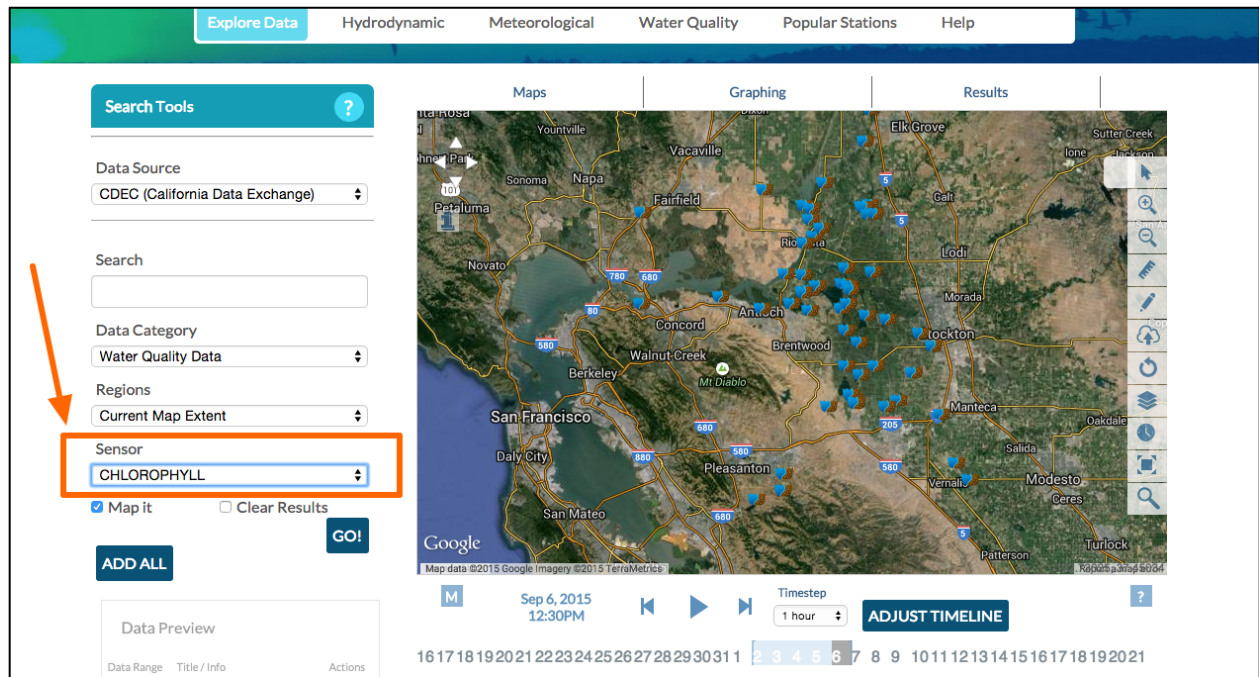
Pictured: rollover badge meta data tab

You can download the data and graph for a project through the "download time series data" link.

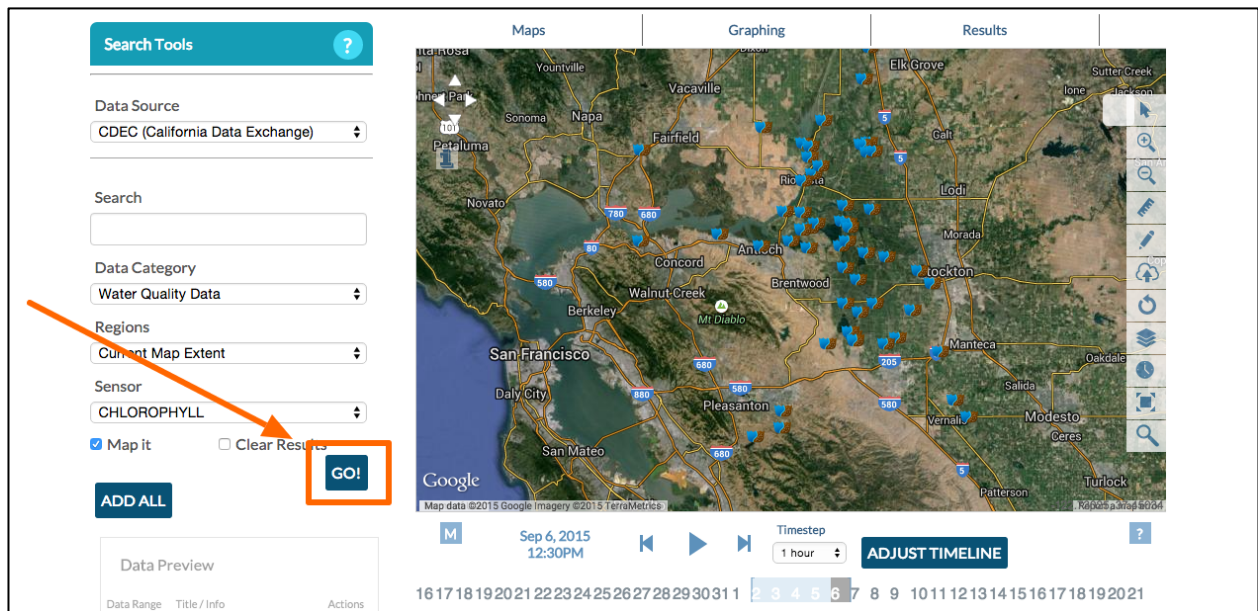


Pictured: rollover badge link to original data source / download time series data

To add another parameter to the map, choose a different sensor type under the “Sensor” drop-down menu.  
Choose, “Chlorophyll.”



Then click, “GO!”



The stations with the Chlorophyll data will load on the map for the same days that you requested the Turbidity data.



If you roll the mouse cursor over the stations, roll-over badges appear with the same information – Chlorophyll value at that station, 3-day trend graph, meta data, and a link to the original data source.

The screenshot shows the 'Explore Data' application interface. On the left is a 'Search Tools' sidebar with filters for Data Source (CDEC), Data Category (Water Quality Data), Sensor (CHLOROPHYLL), and a 'Map it' checkbox. The main area features a map of California with blue station markers. A pop-up badge for 'ROUGH AND READY ISLAND RRI' is highlighted with an orange box. The badge includes a 'Summary' tab, station coordinates (37.963000, -121.365000), and a large '6.1' value for 'CHLOROPHYLL' in 'ug/L'. A list of 'Station Sensors' is shown with 'Add' links for each. The badge also displays the time 'Sat Sep 05 2015 23:00:00 GMT-0700 (PDT)' and a 'DOWNLOAD TIME SERIES DATA' link. At the bottom of the badge are 'UnMap', 'Add to Favorites', and 'Zoom to Station' buttons.

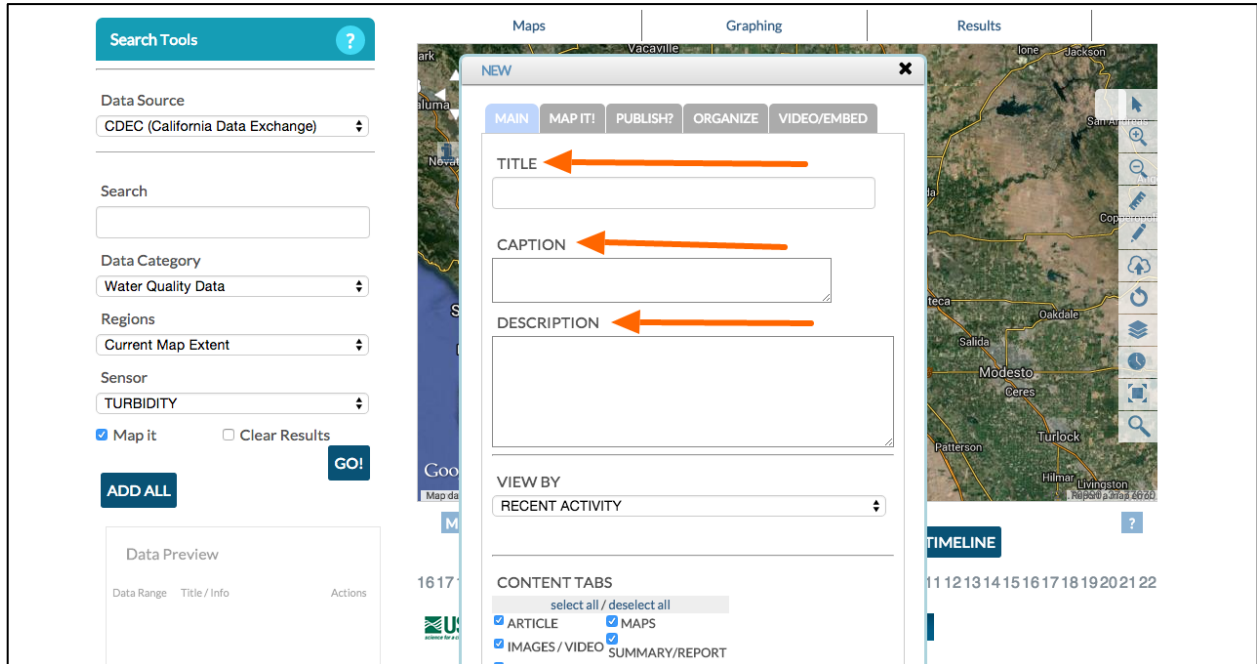
You can add other parameters to the map. Once you're done gathering the data, you can save the data preset.

### SAVE THE DATA PRESET:

To save the data preset, go to the toolbar on the right-hand side and click the “save map” icon.

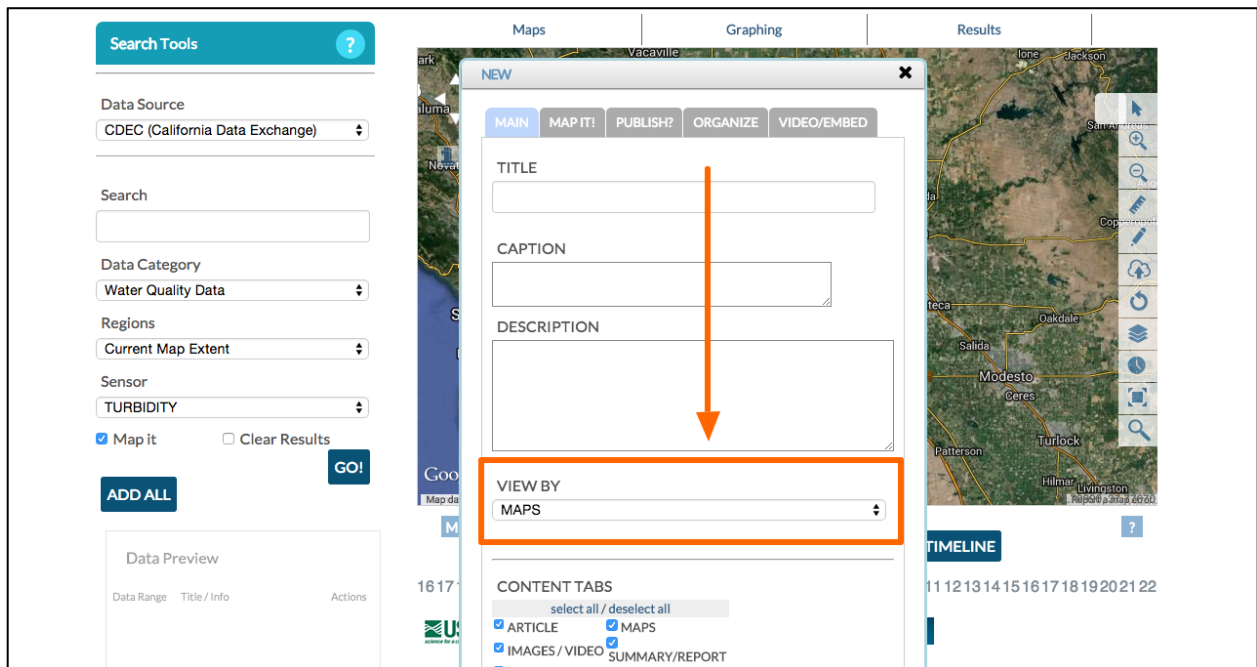
This screenshot shows the same 'Explore Data' interface as the previous one, but with the 'Sensor' filter set to 'TURBIDITY'. The 'Save Map' icon, which is a blue floppy disk, is highlighted with an orange box in the bottom-right toolbar. An orange arrow points to this icon from the right side of the screen.

You have several options here such as the title, caption, description, and where to publish it.



For now, title this one “Turbidity Stations” and go down to the “view by” drop-down menu.

These options are correlated to how the map will show up when you go to look at it later. Choose “map.”



Then scroll down and click, “save changes.”

Presets Clear All

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CONTENT ADDONS

WEB LINK (Opens a new window)

META DATA URL

CONTACT

Save changes Cancel

Subscribe email  
Name Name  
Email Email address  
Submit

Errors

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A box will appear and you can view the map now or go on to create other maps. Click “view” and go in to edit some of the information.

BAY-DELTA LIVE

Explore Data Hydrodynamic Meteorological Water Quality Popular Stations Help

Search Tools ?

Data Source  
-- CHOOSE --  
EXPLORE!

Maps Graphing Results

NEW

\*\*\*\*\*  
Data length is 134178  
\*\*\*\*\*

Updates were successful.

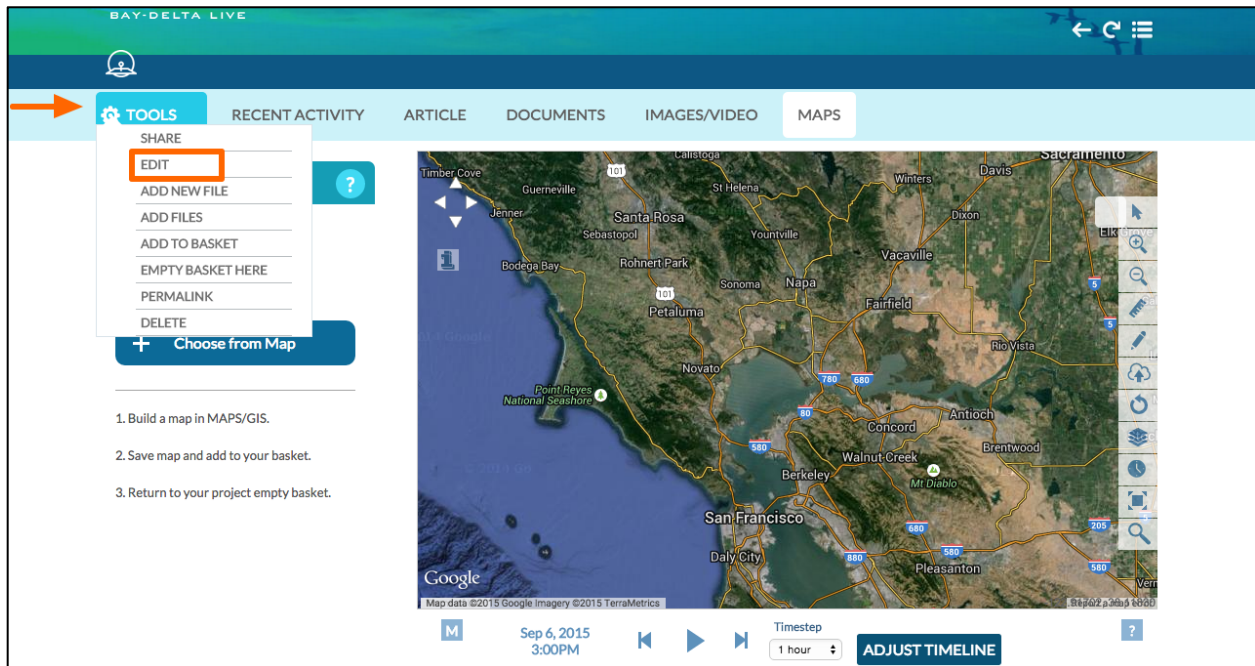
Changes Saved.

View

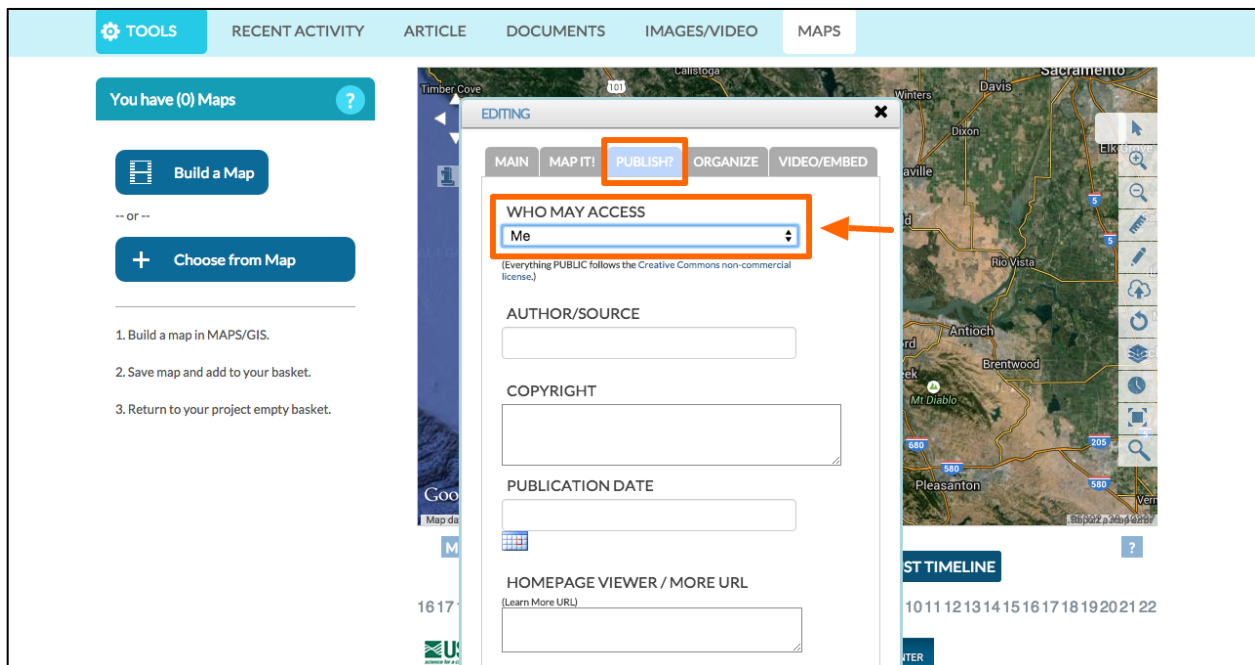
Map data ©2015 Google Imagery ©2015 TerraMetrics

Sep 6, 2015 3:00PM Timestep 1 hour ADJUST TIMELINE

Hover over the TOOLS menu in the upper left corner, and choose "edit."



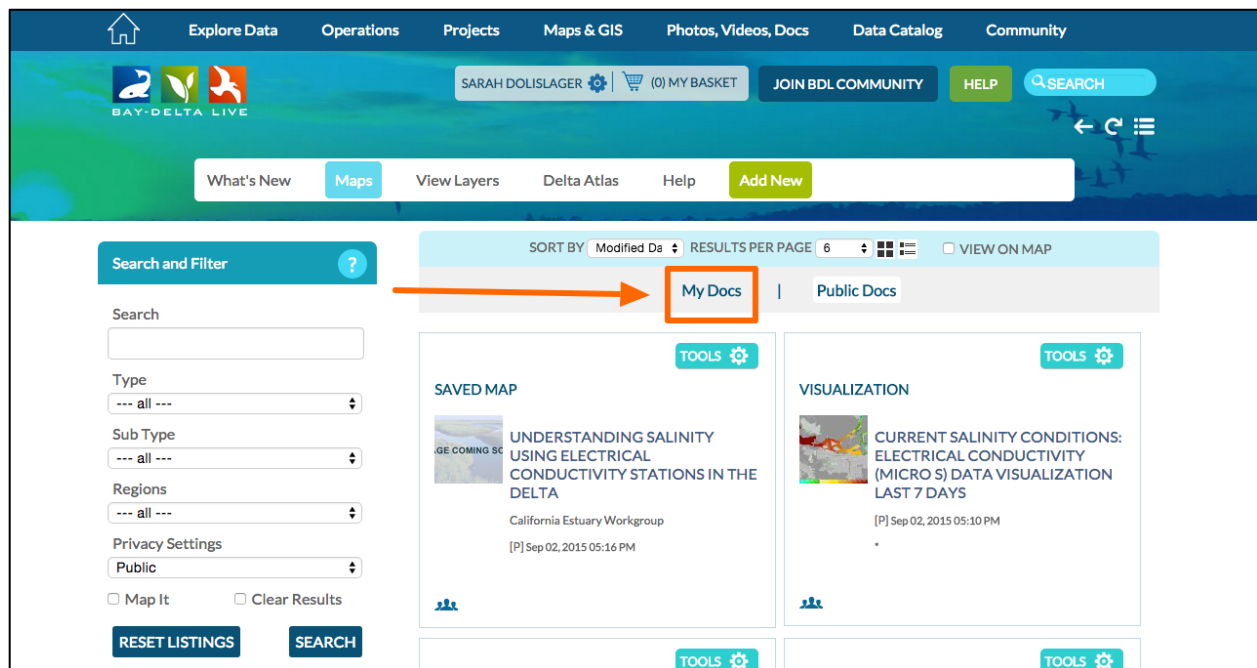
If you would like to make your map public, you can do so through the "publish?" tab.



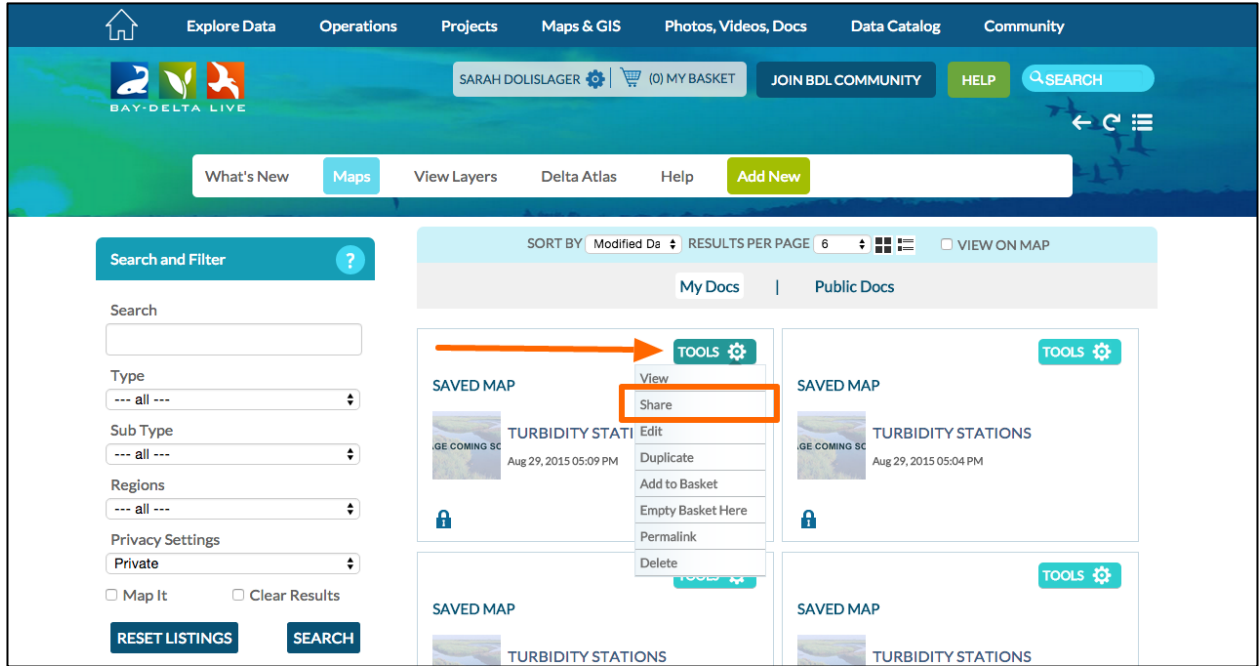
Now to access your map from the homepage, click on “GIS/Map Layers” icon.



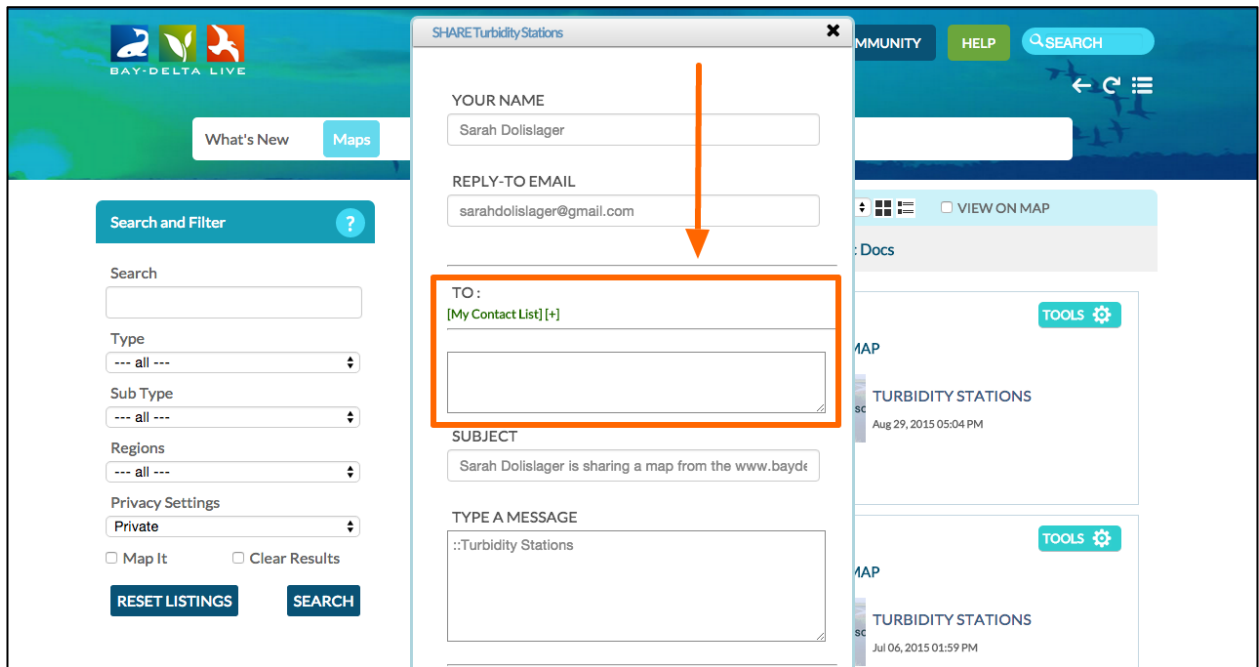
Then click on “My Docs” and there you’ll see the data preset you created.



Lastly, you can share this data preset from the tools menu. Choose "share" from the drop-down menu.



You can add an email address or use the built-in contact list to share with colleagues.



This concludes the "Explore Real Time Data (2 Parameters)" tutorial. We hope this will help you to get started using data for your Delta science research.