

CoastWatch Data Portal: How to Use the Data Portal Tutorial

The Data Portal is a web-based platform that provides easy access to global and regional satellite data for use in understanding, managing and protecting ocean and coastal resources. In this tutorial we will go over how to access the Data Portal, set the date, view datasets and more.

Accessing the Data Portal

Step 1: You can access the CoastWatch Data Portal by going to https://coastwatch.noaa.gov/cw_html/cwViewer.html

Now that we have opened the portal the next step is to select a date. The date we choose will determine which day we will get data for. It is also possible to select a range of dates.

Date/Calendar Panel

Step 2: On the left side of the screen is a set of panels where we set our options. We will be using these panels a lot in this tutorial. Using the **Date/Calendar panel**, select a date. In this example we will select the date March 8, 2022. Click on the drop-down menu next to 'Date' and change the year, month, and day to March 8, 2022. Click "Apply" to apply the date. Now the date has been set and we are ready to move on to our next step: Selecting a dataset.

Selecting a Dataset (L3/L4)

Step 3: Before choosing a dataset, click the **trashcan icon in the upper right-hand side** of the screen. This will clear all current layers. Now we can select our dataset using the same left-hand set of panels where we set the date. We want the third panel this time. Under the **CoastWatch Data Layers panel** click on "Sea Surface Temperature" and then click the checkbox next to "Blended 5km Night (2016-present)." The map will now load the dataset.

Dataset Icons

Each dataset has its own icons directly below it to perform certain actions. The **star icon** will add the dataset to the **Active Layers panel**. Any layer added to the **Active Layers panel** will persist on the map, even if a new date is selected. This panel can be found in that set of panels on the left side of the screen above the **CoastWatch Data Layers panel**.

Clicking the **gear icon** (to the right of the star icon) will show the layer tools. Once you click the gear icon the **Layer Tools panel** will appear on the right side of the screen. Click the **Layer**

Tools panel to open it. Layer tools allow for the adjustment of palette color, data range, and opacity.

Selecting a Dataset (L1/L2)

Step 4: Next we will select a Level1/Level2 dataset. Open the **Date/Calendar panel** on the left side of the screen. Click on the drop-down menu next to 'Date' to change the year and month to June, 2021. In this example we will select a start date and an end date to get a range of dates. Our start date will be June 10, 2021 and our end date will be June 17, 2021. Click once on June 10 and then click again on June 17. Then click "Apply".

Step 5: Now our date range is set and we are ready to do a **L1/L2 spatial search**. Locate and click on the **L1/L2 Spatial Search tab** within the **CoastWatch Data Layers panel**. Next click on the word "Polygon" and click the bubble next to "N-20 Ocean color". This will allow us to drop points on the map to create a shape.

Step 6: Now we can draw a polygon around the region we want to look at. Let's draw a rectangle around Florida. Click once to drop a point off of Florida's West coast and click again to drop another point off of Florida's East coast. Click again to drop a third point off of Florida's Southwestern coast. On the last point, off the Southeastern coast, double click to complete the polygon.

Once you have made the rectangle, return to the **L1/L2 Spatial Search tab**. Scroll to the bottom to the "**Search Results**" button. You may have to click to minimize the **Date/Calendar panel** and close the **Active Layers Panel** by clicking the **X** next to the Active Layers panel to make room for the Search Results button.

Once you have clicked the **Search Results** button, open the **Search Results panel on the right-side** of the screen. Here you can see the results of your L1/L2 Spatial Search.

Time range, Coverage, and Metadata

Step 7: To access the time range, coverage, and metadata of a dataset click on the **information icon** associated with a dataset.

Comparing Data

Step 8: Comparing data is easy and can be done by adding two or more datasets to the **Active Layers panel**. In step 6 we optionally closed the **Active Layers panel** and we will need to open

it again. To do this, click the “**Toggle Menus**” button in the top right-hand side of the screen two times. The Active Layers panel should reappear.

To add a layer to the **Active Layers panel** click the star icon next to a dataset. In this example we will compare the Sea Surface Temperature of 2 days: January 1, 2021 and June 1, 2021.

First set the date to January 1, 2021 and click Apply. Now under the **CoastWatch Data Layers panel** click on Sea Surface Temperature and then click the checkbox next to “Blended 5km Night (2016-present).” Click the **star icon** next to this dataset to place it in the Active Layers panel.

Now set the date to June 1, 2021 and click Apply. Again under the **CoastWatch Data Layers panel** click on the **star icon** below “Blended 5km Night (2016-present).” We have just placed this dataset into the **Active Layers panel**. We should now have two datasets in the **Active Layers panel**.

Click on the Active Layers panel to open it. Active layers can be dragged into a display order. The layer on top will be shown on the map. You can hide a layer by clicking the **eye icon** next to a layer in the **Active Layers panel**. Clicking the **eye icon** again will make it reappear. This makes it easy to compare data between two different dates.

Downloading DataSets

Step 9: Downloading a dataset can be done by clicking the **download icon** associated with the dataset. By default the global dataset is retrieved and downloaded to your computer. A user-defined region can also be drawn for downloading data from a desired region. Click the **gear icon in the upper-right hand corner**. Then click the bubble next to “User-Defined.” Your pointer will turn into a cross. Click and hold the mouse and drag to create a region. Let go of the click once you have made a region. Now click on the download button again to download. Note: You must have the CoastWatch Data Analysis tool or another program that can read nc files to view the data. You can also download the dataset by clicking on the **shopping cart icon**. This shopping cart will present you with two options. The first option lets you download the “Wget URL List” and the second option “Download Now” will let you download the data directly to your computer. Downloading using this method is still free of charge.

Reference Layers

To view reference layers, click on the **Reference Layers panel**. It can be found at the bottom of the panels list on the left-hand side of the screen. You will have to minimize the **CoastWatch Data Layers panel** to see it. Click on the **Reference Layers panel** to open it. From here you can select which reference layer you would like to see. There are many options to choose from

and multiple layers can be viewed at one time. Clicking the **blue information icon** next to Reference Layers shows the source information for the imagery and the reference layers.

Contact Information

If you have any questions or comments you can contact NOAA CoastWatch at CoastWatch.info@NOAA.gov