

# A Getting Started Guide on how to Search, Order, and Download LP DAAC data with NASA Earthdata Search

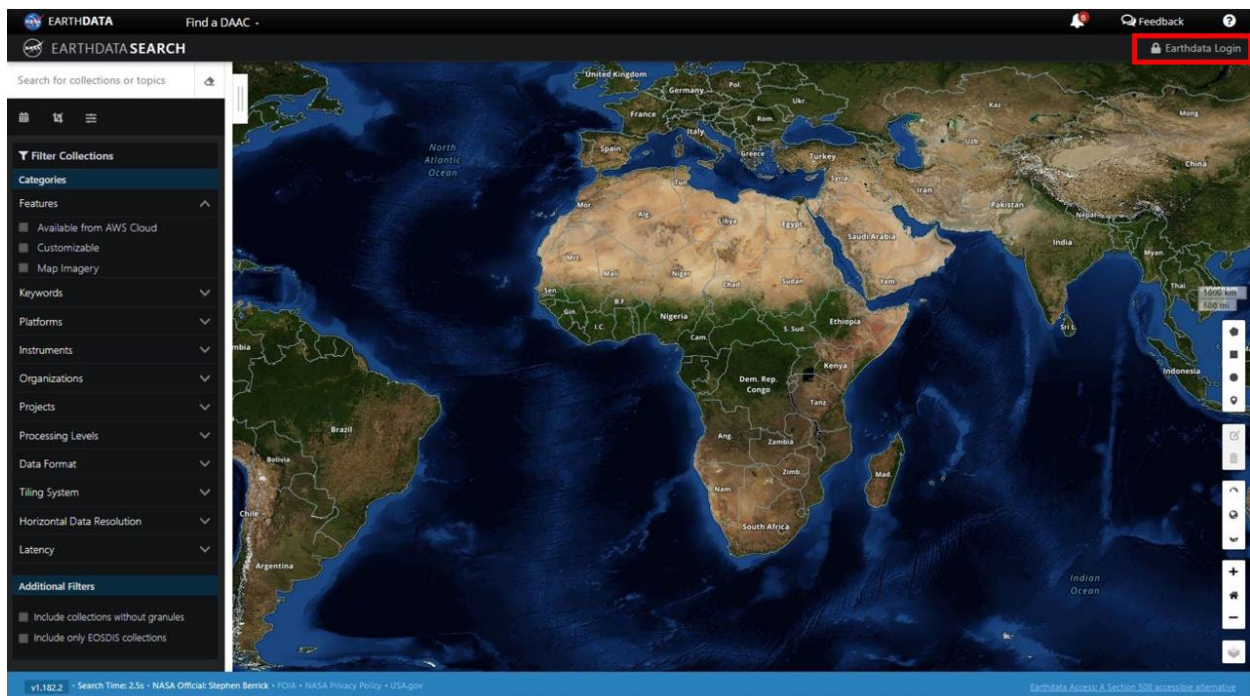
NASA Earthdata Search is a map-based interface where a user can search, discover, visualize, and access Earth science data. These directions will demonstrate basic steps for finding and downloading [MCD12Q1 Version 6.1](#) data.

**Note:** Users must have a free [NASA Earthdata Login](#) account to download data. Please [Register for a Profile](#) if you do not have an Earthdata Login account.

## Step 1: Access NASA Earthdata Search

Go to [Earthdata Search](#) and click **Earthdata Login** in the upper right portion of the Earthdata Search Landing Page.

Enter your Earthdata Login credentials (username/password).



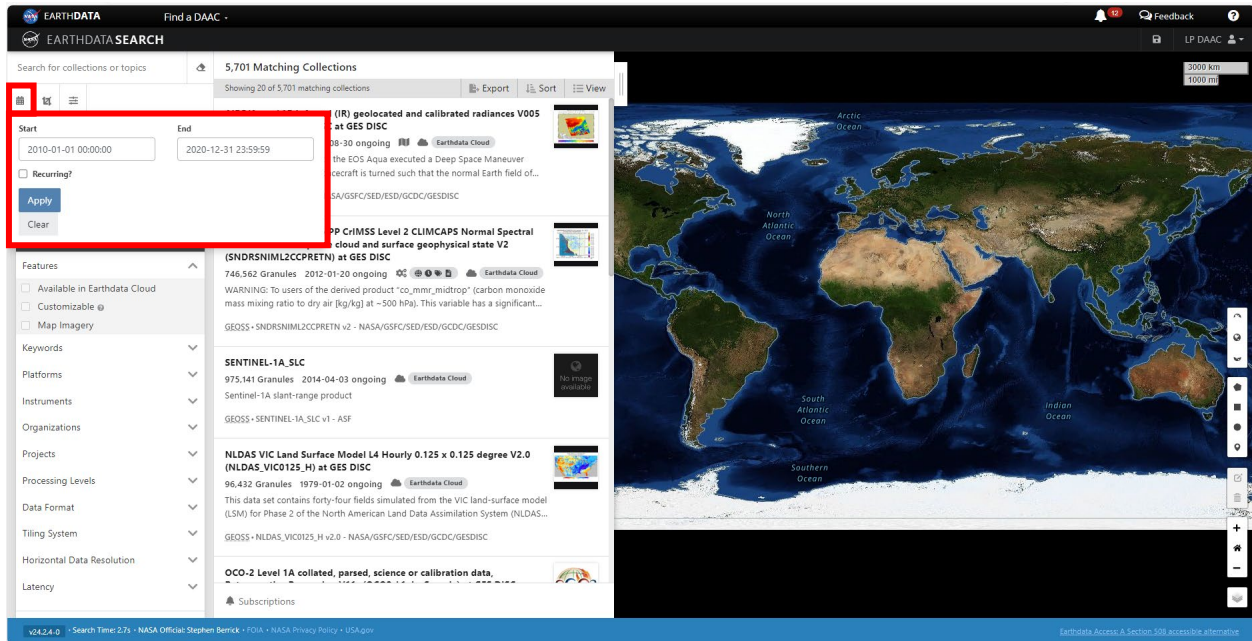
## Step 2: Enter date range and area of interest

The search panel on the left offers a variety of search filters. This allows users to filter data by criteria such as temporal range and geographic area of interest.

## Temporal Filtering

To filter by time period, click on the **Temporal** filter button (calendar icon) located on the top left side of the page. Populate the **Start** and **End** dates to specify the date range of interest.

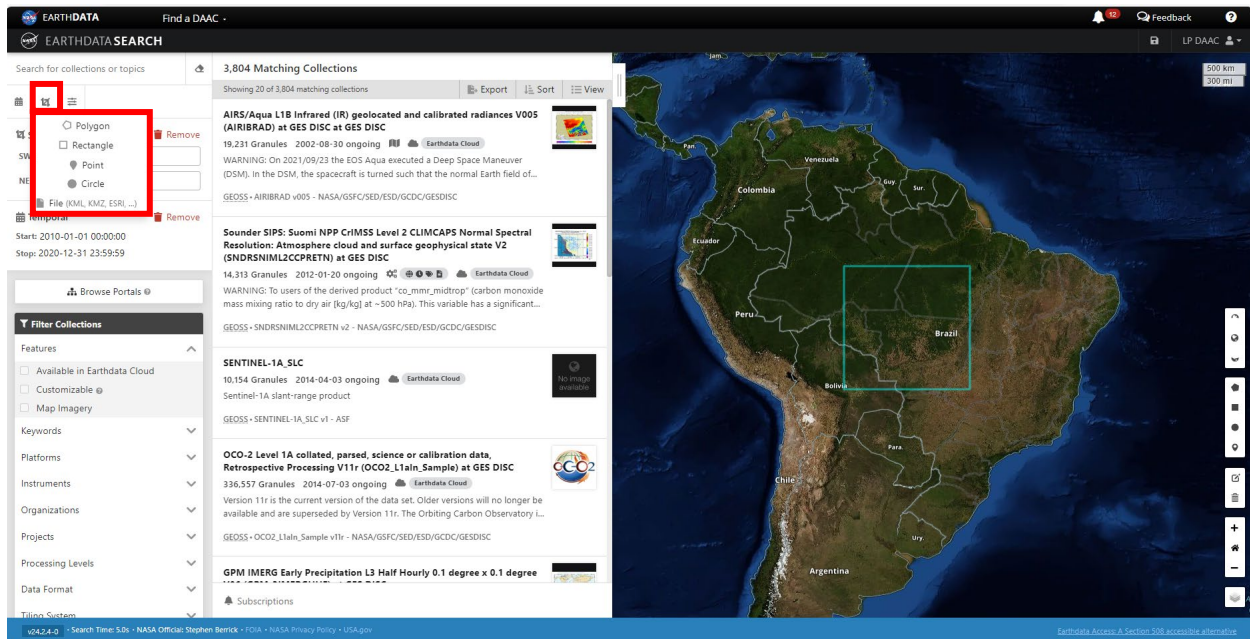
A temporal filter ranging from January 1, 2010, to December 31, 2020, is applied in the example below. Reoccurring date ranges can be defined by clicking the box next to Recurring.



## Spatial Filtering

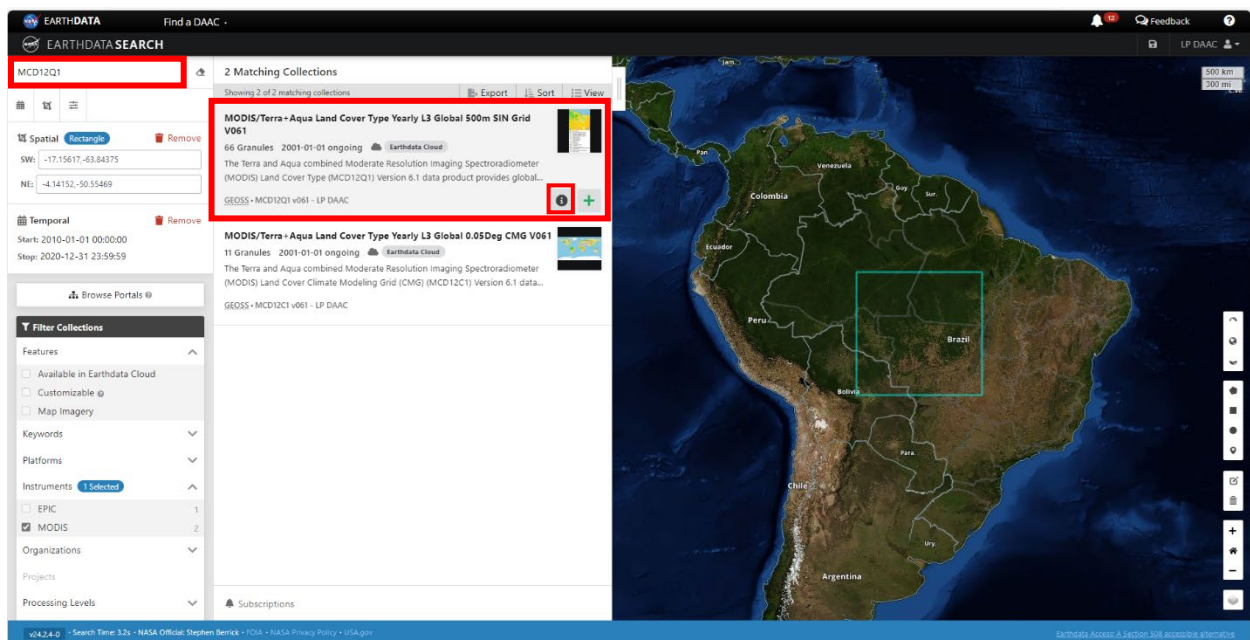
To filter by region of interest, click the Spatial filter button (crop icon) on the top left side of the page. Several options for filtering such as Polygon, Rectangle, Point, Circle, and File (KML, KMZ, ESRI...) are available.

In the example below, the Rectangle option is used to draw an area of interest in South America. Additional prompts such as "Click and drag" or "Click to continue drawing shape" are given to define the spatial extent.



## Step 3: Search for a dataset and view results of data search

In the top left portion of the screen, enter dataset short name such as “MCD12Q1.” Selecting additional filters such as Instrument, Organization, or Keywords may help narrow search results.



Select the collection that you want to view. If you are unsure which collection to choose, hover your cursor over a collection and click the **View Collection Details** info icon for more information about each data product.

Once the dataset of interest is selected, browse imagery can be viewed by clicking an image, when available.

## Granule Search

The Granule search dialog box can be used to search for specific files. The use of wildcards can be applied to search and filter by filenames:

- Use ? (question mark) to match any one character.
- Use \* (asterisk) to match any number of characters in the filename.
- Delimiters (space, comma, or new line) can be used to search on multiple files.

The example below (\*h08v07\*) defines a search for granules having horizontal tile number 8 and vertical tile number 7. The spatial filter was not used in this example.

A string of multiple granules using a delimiter could also be entered (MCD12Q1.A2020001.h20v10.061.2022171222400, MCD12Q1.A2020001.h19v10.061.2022171221457, MCD12Q1.A2020001.h21v10.061.2022171232359).

The screenshot displays the EarthData Search interface. On the left, the search results for the query "MCD12Q1" are shown, including a list of granules with their IDs and temporal ranges. A red box highlights the "Filter Granules" section, which contains a search box with the query "\*h08v07\*". Below this, there are sections for "Grid Coordinates" and "Temporal" filters. On the right, a map of the Americas is shown with a green box highlighting a search area over the United States and Mexico. The map includes a scale bar and a legend.

## Granule Details

If you are unsure which granules to choose, click the three vertical dots next to the granule ID then select **View details** for more information.

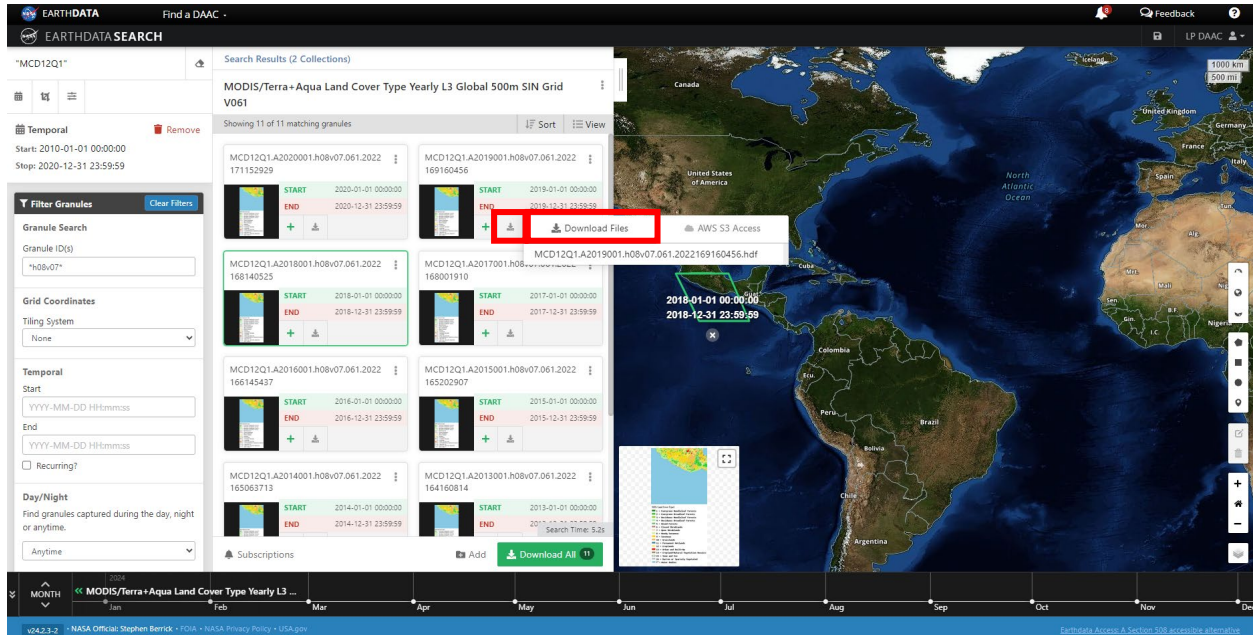
The screenshot shows the Earthdata Search interface. On the left, there are filters for Temporal (Start: 2010-01-01 00:00:00, Stop: 2020-12-31 23:59:59), Filter Granules, Granule Search (ID: \*h08v07\*), Grid Coordinates, Temporal (Start/End), and Day/Night. The main area displays 11 matching granules in a grid. A red box highlights the 'View details' button next to the granule ID MCD12Q1.A2019001.h08v07.061.2022. At the bottom of the search results, there is a 'Download All' button with a download icon and the number '11'.

## Step 4: Download data

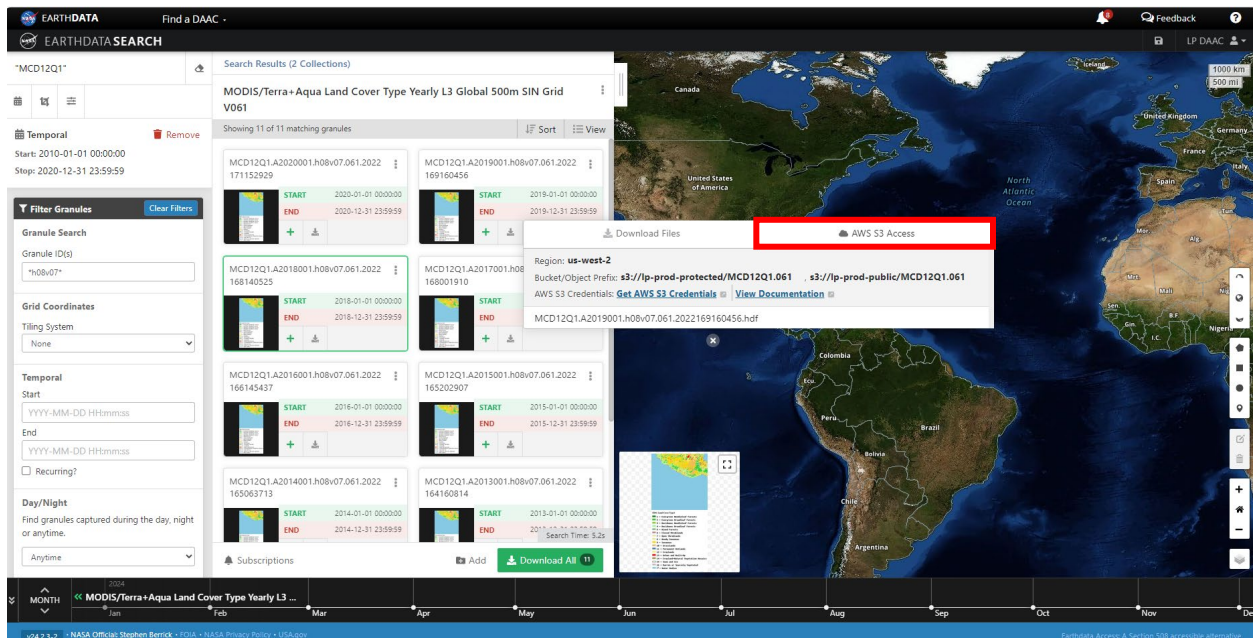
To download all granules discovered by the Earthdata search, select the **Download All** icon at the bottom of the search results page. This will take you to the options page for customizing your download.

This screenshot is identical to the one above, but with a red box highlighting the 'Download All' button at the bottom of the search results page. The button is labeled 'Download All' with a download icon and the number '11'.

For a single scene, click the download arrow button for the selected granule. You will then be able to download the file(s) related to that image.

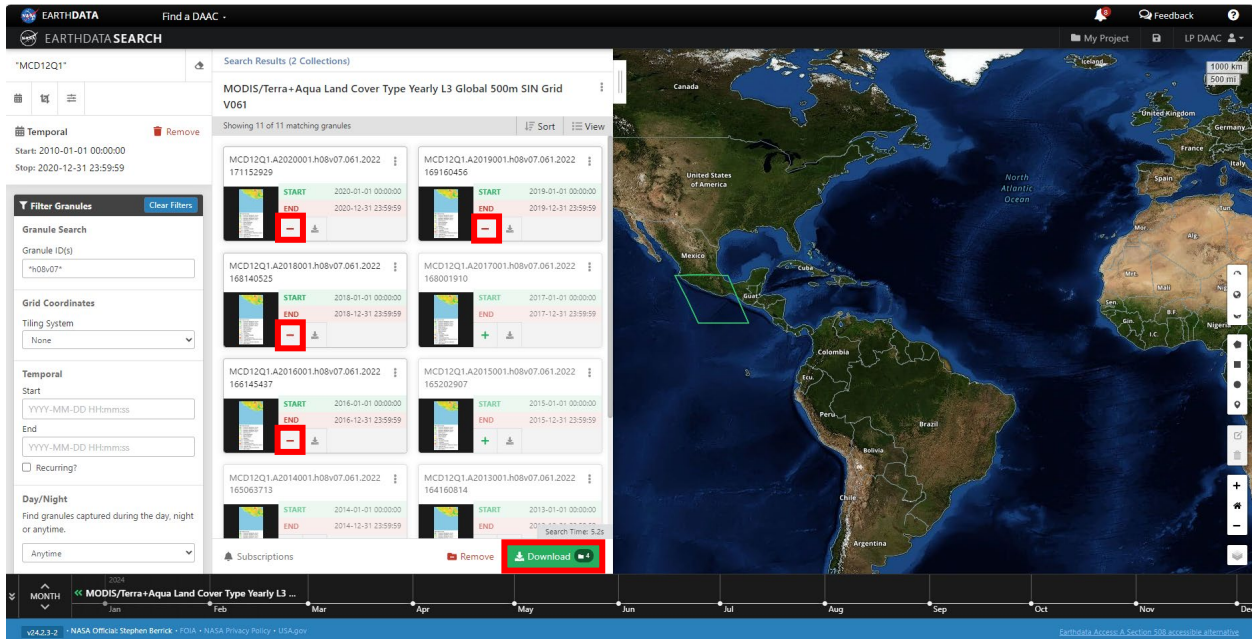


You can also access S3 information (e.g., AWS region, bucket, temporary credentials for S3 access, and file names) if the data is hosted in the cloud.



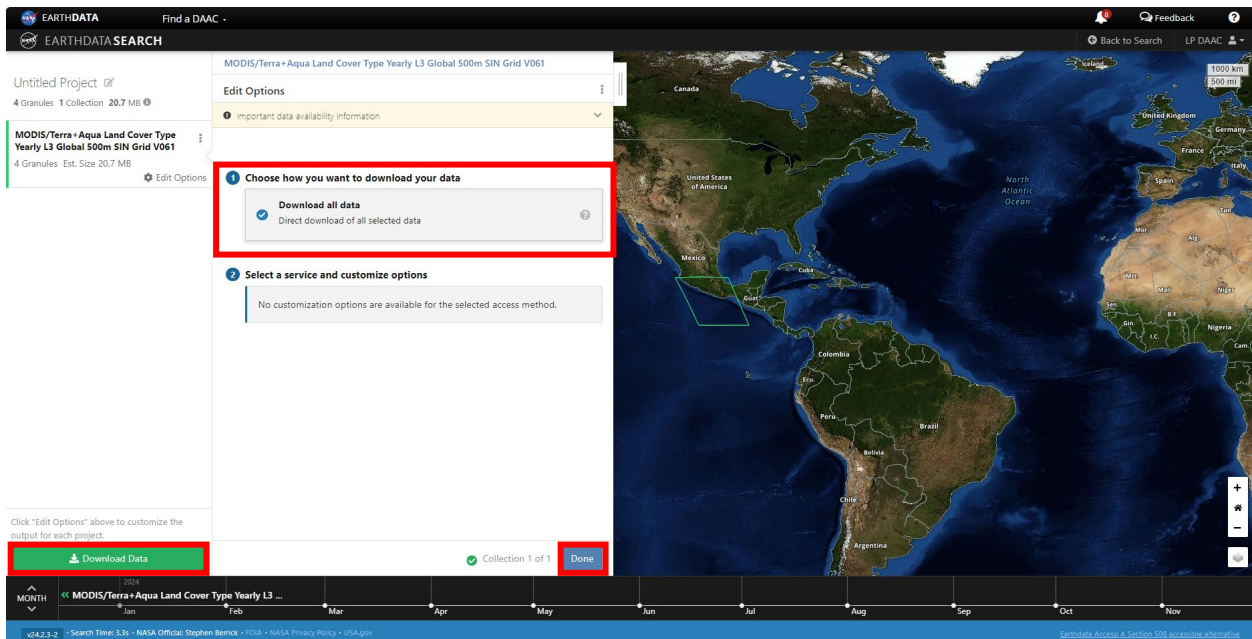
To download multiple granules, click on the green plus (+) symbol button to add files to the project. Once you've added all your granules, click on the green button on the bottom of the page that says **Download**. (Note: The number next to this button will update to the quantity of

granules that you have selected.) This will take you to the options page for customizing the download.



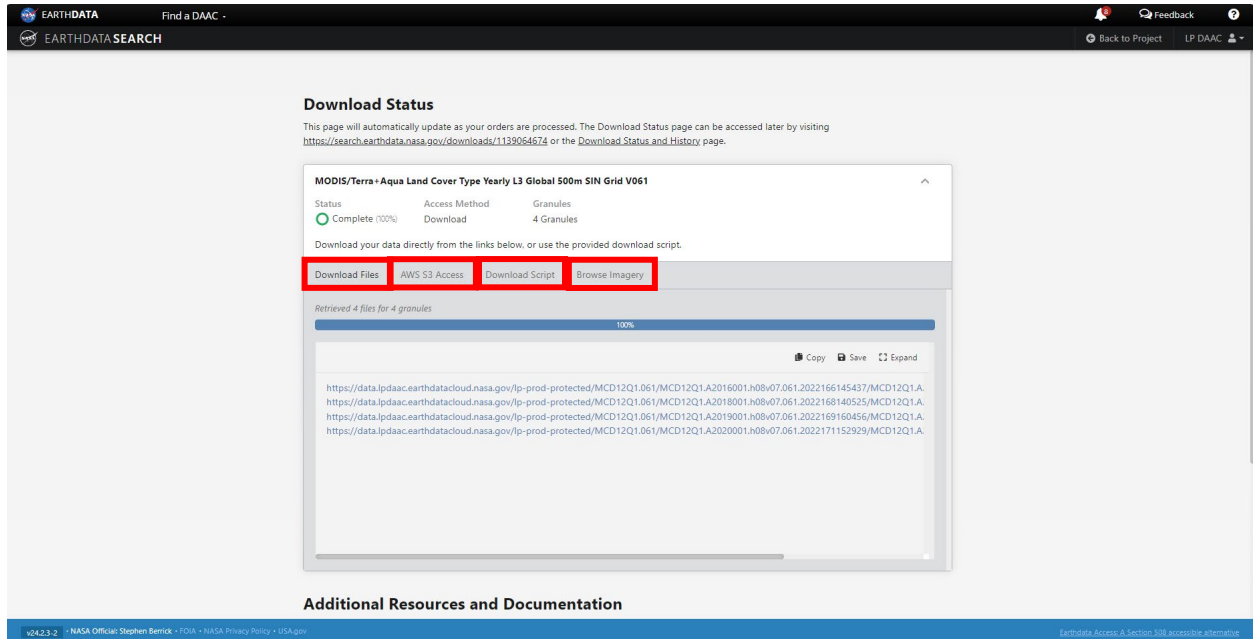
## Step 5: Access data

On the next page ensure **Download all data** is selected. Click **Done** (blue button) to confirm the order then **Download Data** (green button) on the bottom left side of the page.



## Step 6: Download status

The Download Status page will automatically update as your order is processed. When files have been retrieved, four tabs will be displayed: Download Files, AWS S3 Access, Download Script, and Browse Imagery.



**Download Status**

This page will automatically update as your orders are processed. The Download Status page can be accessed later by visiting <https://search.earthdata.nasa.gov/downloads/113954674> or the [Download Status and History](#) page.

**MODIS/Terra Aqua Land Cover Type Yearly L3 Global 500m SIN Grid V061**

| Status          | Access Method | Granules   |
|-----------------|---------------|------------|
| Complete (100%) | Download      | 4 Granules |

Download your data directly from the links below, or use the provided download script.

[Download Files](#) [AWS S3 Access](#) [Download Script](#) [Browse Imagery](#)

Retrieved 4 files for 4 granules

100%

Copy Save Expand

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https://data.lpdaac.earthdatacloud.nasa.gov/lp-prod-protected/MCD12Q1.061/MCD12Q1.A2016001.h08v07.061.2022166145437/MCD12Q1.A
https://data.lpdaac.earthdatacloud.nasa.gov/lp-prod-protected/MCD12Q1.061/MCD12Q1.A2018001.h08v07.061.2022168140525/MCD12Q1.A
https://data.lpdaac.earthdatacloud.nasa.gov/lp-prod-protected/MCD12Q1.061/MCD12Q1.A2019001.h08v07.061.2022169160456/MCD12Q1.A
https://data.lpdaac.earthdatacloud.nasa.gov/lp-prod-protected/MCD12Q1.061/MCD12Q1.A2020001.h08v07.061.2022171152929/MCD12Q1.A
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**Additional Resources and Documentation**

v0423.2 | NASA Official: Stephen Berrick | FOIA | NASA Privacy Policy | USA.gov | Earthdata Access: A Section 508 accessible alternative

The **Download Files** tab provides the `https://` links for downloading the files locally.

The **AWS S3 Access** tab provides the `s3://` links to access the data directly in region (us-west-2) within the AWS cloud.

The **Download Script** tab provides a command line script for Linux or Windows to download your data.

The **Browse Imagery** tab provides links to access the browse images for the granules in your order.

The [Discover and Access Earth Science Data Using Earthdata Search](#) webinar is another helpful resource for learning how to search and access data in Earthdata Search.

Please contact [LP DAAC User Services](#) if you need any additional assistance accessing data.