

How to extract landsat images from Earth Explorer

1. Enter Search Criteria

- You can pan (click and drag) and zoom (mouse roller ball or zoom buttons in the lower right corner) on the world map. Once you get to a place of interest, you can just click on the corners of a polygon that bounds the area you want to look at. You can click on the little pins on the map that define your boundaries and drag them to new locations if you aren't happy with them.
- In the Date Range section, I always click on the little calendar icons to pick starting and ending dates for my search. You can also select certain months to look at. For example, I could say I want to start January 1st 2011 and go to December 31st 2011 but only look at summer images. To do that search, you would enter those start and end dates then just need to click on the check boxes in the drop-down Search months section to de-select the winter months.
- If you click on the Result Options tab that is nestled in there with the Date Range tab, you want to change the number of returns to 1000 or more depending on the length of the time period you are covering to make sure that it gives you all results.
- Click on the Data Sets button at the bottom when you're done.

2. Data Sets

- Scroll down to the Landsat Archive and expand the list. Images from the 1980s-present will then be under the Collection 1 Level-1 list if you expand that as well.
- The box you check to specify the Landsat satellite you want to use depends on the time period that you want data. You'd check the LM 4-5 TM C1 Level-1 box if you want images from the 80s-2000s. If you want slightly higher quality images from 2000-present, you'd check the L7 ETM+ C1 Level-1 box. These Landsat 7 images are really great from 2000-2003 but there was a failure with the satellite in 2003 and all the images taken after then have stripes where no data were collected. From 2013-present you would use L8 OLI/TIRS C1 Level-1. These images are the best.
- Click on the Results button at the bottom when you've selected your dataset(s).

3. Results

- If you checked off that you want images from more than one Landsat satellite, you'll use the drop-down menu just below where Data Set is written in italics to go between your different satellites.
- To look at images in the map, not just their thumbnails, you click on the little symbol that looks like a painting on a piece of paper. If you hover over the button, it will say Browse Image Overlay.
- If you are logged in to the website, you'll have a bunch of options for downloading the images. Click on the Download Options button (green downwards arrow pointing at a drive). What you select really depends on what you want it for. I download geotiffs because they are the highest resolution and are spatially referenced, meaning I can compare images with real-world coordinates using image-xprocessing software like ArcGIS, QGI, ENVI, or Matlab. You probably just want to download the much smaller Natural Color Images, which will look very much like photos. They can be opened with any sort of image viewer (Preview, Acrobat, Photos, etc) and look like photographs, but they don't contain spatial referencing info.