

Landsat Collection 2 EarthExplorer Help

Landsat Collection 2 (Level-1 and Level-2) products on EarthExplorer are available as a .tar.gz bundle download that includes all files associated with a scene. Users can also select individual bands and files to download. The list of possible files is below.

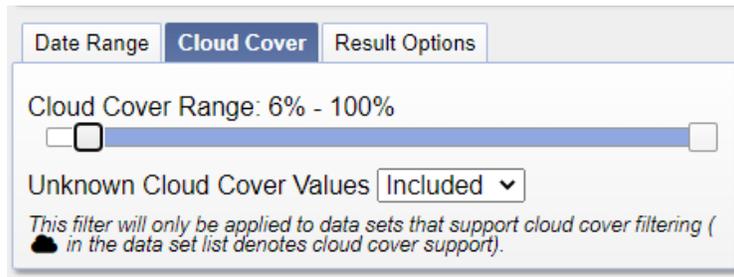
- Downloads are available as a .tar bundle, which includes all available files, or as individual files.
 - Spectral Bands in Cloud Optimized GeoTIFF (COG) format
 - Bands 1-11 (Landsat 8 OLI/TIRS)
 - Bands 1-8 (Landsat 7 ETM+)
 - Bands 1-7 (Landsat 4-5 TM)
 - Bands 1-4 (Landsat 4-5 MSS)
 - Bands 4-7 (Landsat 1-3 MSS)
 - Angle Band Files
 - Solar Azimuth Angle (SAA)
 - Solar Zenith Angle (SZA)
 - Sensor Azimuth Angle (VAA)
 - Sensor Zenith Angle (VZA)
 - Angle Coefficient File
 - Quality Assessment (QA)
 - Pixel Quality Assessment Band (QA_Pixel)
 - Radiometric Saturation and Terrain Occlusion QA Band (QA_RADSAT)
 - Metadata
 - Material Library File (MTL) (Object Description Language-based) format
 - Extensible Markup Language (XML)
- Landsat Collection 2 Level-1 and Level-2 Data Types
 - Level-1
 - L1GT -- Includes radiometric and geometric corrections
 - L1TP -- Includes radiometric, geometric, and precision correction
 - Level-2
 - L2SP – Includes Surface Reflectance (SR), Surface Temperature (ST), ST intermediate bands, an angle coefficients file, and Quality Assessment (QA) Bands.
 - L2SR -- Includes Surface Reflectance (SR), an angle coefficients file, and Quality Assessment (QA) Bands.

The [Landsat Collection 2](#) webpage contains more information concerning the products. The Data Format Control Board's (DFCB) are accessible from the webpage.

[EarthExplorer Help documents](#) are available through the [EarthExplorer](#) interface.

A pertinent item to point out within [Perform A Search](#) is the Cloud Cover option. The Cloud Cover tab, on the bottom of the Search Criteria tab, allows the user to filter for overall **scene cloud coverage** (percent) of Landsat scenes.

Cloud Cover - Use slider to select desired/undesired Cloud Cover for query.



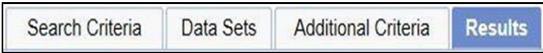
Selection will only be applied to data sets that support cloud cover filtering (☁ in the data set list denotes cloud cover support)

The Land Cloud Cover (cloud cover over land within a Landsat scene as percent) is available as a filter option within the [Additional Criteria](#) tab.

Landsat Collection 2 Download Functions

See [Results](#) for general results help. Information below pertains to Landsat Collection 2 download functions.

View Results

The “Results” Tab () executes a search using the search criteria and displays the results.

The left side of the page displays the results panel with thumbnail and textual information for each scene returned from the search. The right side of the page displays the map interface with the identified area of interest (Figure 1).

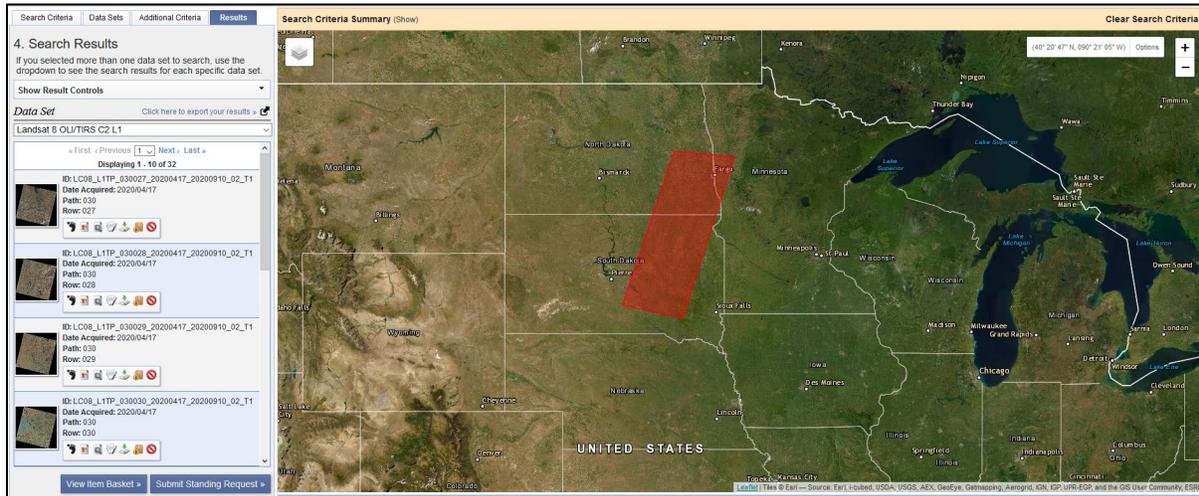


Figure 1 - Results



Download Options – For a desired scene (),
 Click the “Download Options” icon  to display the available data. Users must be registered and logged in.

The Download Options box displays (Figure 2):

Product Options – Dropdown opens to list bundle and individual band/files (see Figure 3 and 4 below for more details)

Download – Click to immediately download the Full-Resolution Browse files.

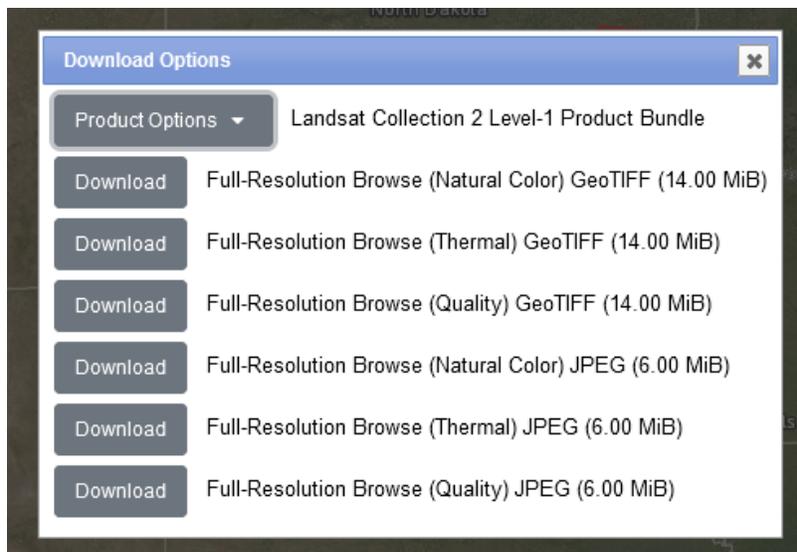


Figure 2 – Download Options Box

Product Options – Click on Product Options (Figure 3) and list of available downloads displays (Figure 4).

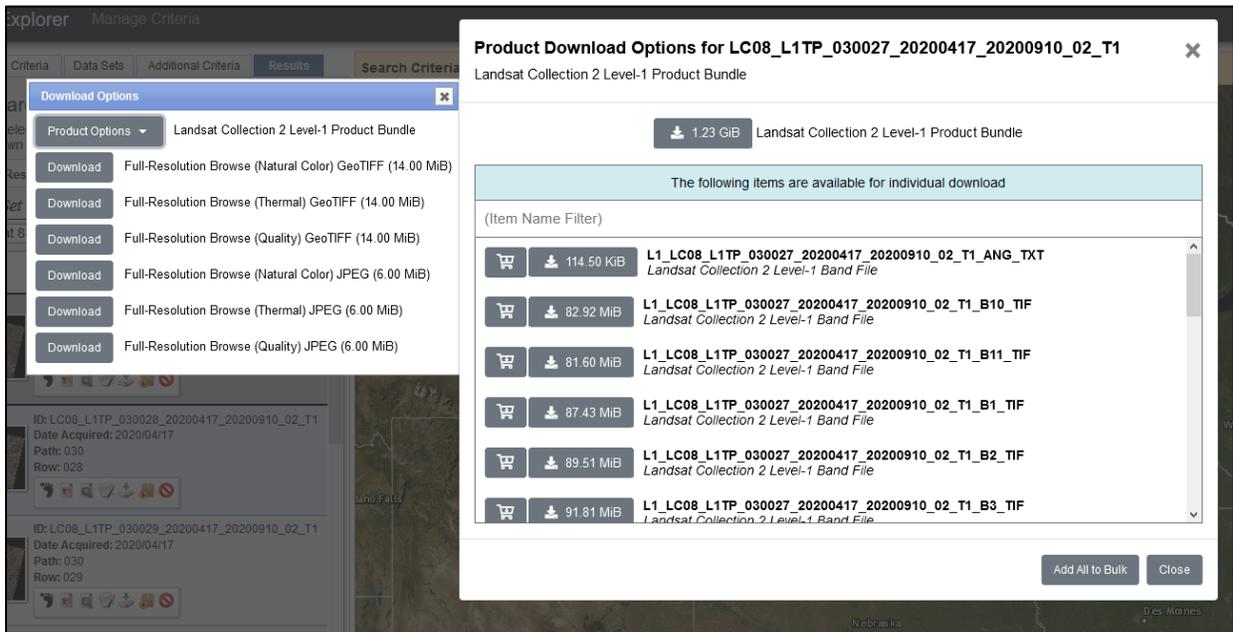


Figure 3 – Product Options

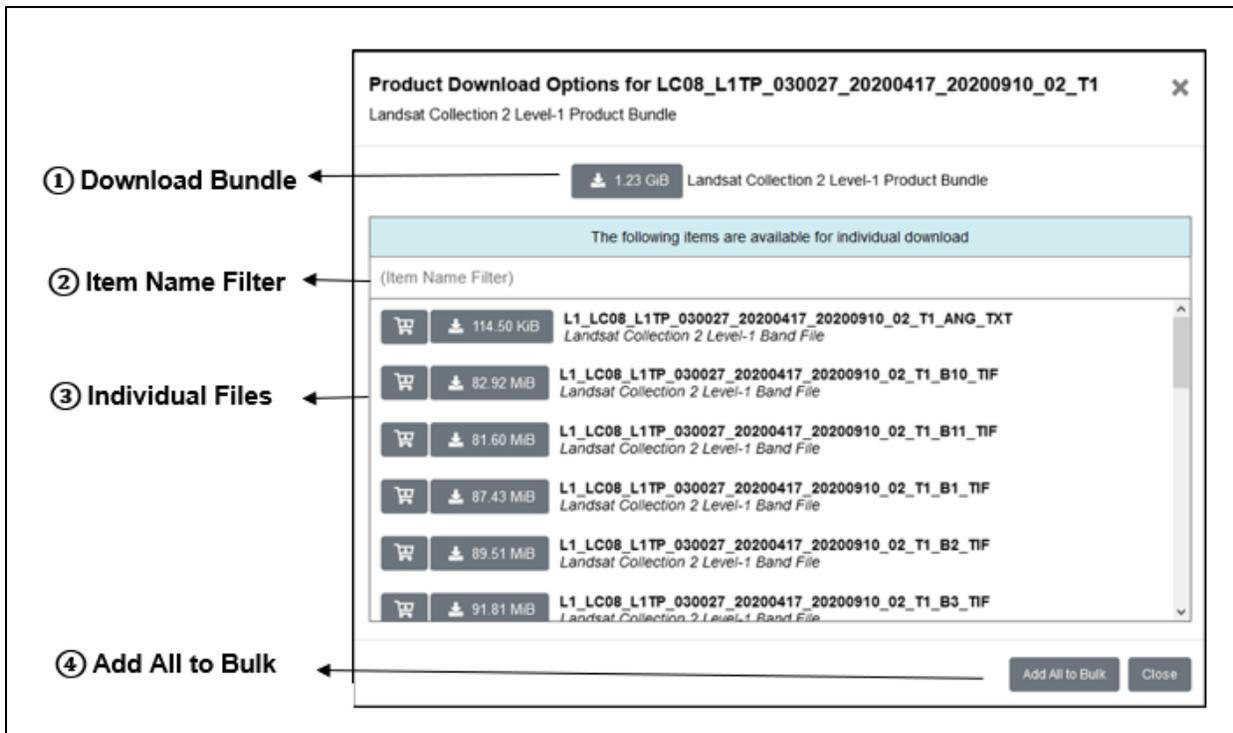


Figure 4 – Download Listing

① **Download Bundle** – Click to download the Landsat Collection 2 product bundle. The file is a .tar file. The bundle download size is provided and contains the list of individual files as one bundle.

② **Item Name Filter** – Allows user to filter for specific files. Example 1: Only want Quality files. Type in q. The list will only display the QA files.

Product Download Options for LC08_L1TP_030027_20200417_20200910_02_T1 ✕

Landsat Collection 2 Level-1 Product Bundle

1.23 GiB Landsat Collection 2 Level-1 Product Bundle

The following items are available for individual download

q

	4.44 MiB	L1_LC08_L1TP_030027_20200417_20200910_02_T1_QA_PIXEL_TIF <i>Landsat Collection 2 Level-1 Band File</i>
	225.68 KiB	L1_LC08_L1TP_030027_20200417_20200910_02_T1_QA_RADSAT_TIF <i>Landsat Collection 2 Level-1 Band File</i>

Add All to Bulk Close

Example 1 – Filter for Quality files

Example 2: Only want Band files. Type b[123456789]. The list will only display Band files.

Product Download Options for LC08_L1TP_030027_20200417_20200910_02_T1 ✕

Landsat Collection 2 Level-1 Product Bundle

1.23 GiB Landsat Collection 2 Level-1 Product Bundle

The following items are available for individual download

b[123456789]

	82.92 MiB	L1_LC08_L1TP_030027_20200417_20200910_02_T1_B10_TIF <i>Landsat Collection 2 Level-1 Band File</i>
	81.60 MiB	L1_LC08_L1TP_030027_20200417_20200910_02_T1_B11_TIF <i>Landsat Collection 2 Level-1 Band File</i>
	87.43 MiB	L1_LC08_L1TP_030027_20200417_20200910_02_T1_B1_TIF <i>Landsat Collection 2 Level-1 Band File</i>
	89.51 MiB	L1_LC08_L1TP_030027_20200417_20200910_02_T1_B2_TIF <i>Landsat Collection 2 Level-1 Band File</i>
	91.81 MiB	L1_LC08_L1TP_030027_20200417_20200910_02_T1_B3_TIF <i>Landsat Collection 2 Level-1 Band File</i>
	94.25 MiB	L1_LC08_L1TP_030027_20200417_20200910_02_T1_B4_TIF <i>Landsat Collection 2 Level-1 Band File</i>

Add All to Bulk Close

Example 2 – Filter for Band files

③ **Individual Files** – Click on shopping basket icon () to add desired files to Bulk Download. Or click on download icon (114.50 KiB) to download desired file.

④ **Add to Bulk** – Click on Add All to Bulk icon () to add all individual files to Bulk Download. The shopping basket icon will turn green (). After adding data to Bulk Download, close the Product Options window.

Click the “Item Basket” on the menu bar (), to display the Bulk Download Item Basket (Figure 5). To begin the download process, the Bulk Download Application (BDA) <http://earthexplorer.usgs.gov/bulk/> is required. **First time users:** please download, install and open the BDA. **Returning users:** please open the BDA installed on your system. You will be required to login using the EE username and password used to complete your bulk download request. See [Results Help](#) or [Bulk Download Tutorial](#) for further assistance.

Bulk Download - 20 Scenes

The Bulk Download Application is an easy-to-use tool for downloading large quantities of satellite imagery and geospatial data. This application allows users to submit groups of downloads that can be executed without the user physically downloading every scene. The current implementation operates as a Java desktop application. The application can be downloaded [here](#).

Landsat C2 L1 Band Files

Scene List

This is an advanced feature, formerly known as the filelist upload. It has been extended to be compatible with any Machine-to-Machine API v1.5+ scene list. Scene lists are created and managed through your [user settings](#) are associated with your ERS account. These scene lists are also accessible via the [Machine-to-Machine \(M2M\) API](#).

Be aware that some products are not available for all scenes; we will only submit orders for all available products.

Figure 5 – Bulk Download