11-2023

## Perform a Search

EarthExplorer allows users to search, download, and order data held in USGS archives through many query options. EarthExplorer uses tabs in the search application to move through each portion of the process. The Data Search Functions on the left side of the main EarthExplorer interface (Figure 1).

***Note: August 21, 2019 transitioned from Google Map Interface to Leaflet Map Interface.***

Click the overlay icon ( ) and choose the layer(s) (

) to display on map.

**Figure 1 - Body/Data Search Functions on Left**

The EarthExplorer search process/component is divided into four main areas (Figure 2):

- **Search Criteria Tab** – Provides the interface for entering various search options.
- **Data Sets Tab** – Provides the interface for selecting the datasets to be searched.
- **Additional Criteria Tab** – Provides an interface for entering additional search criteria specific to the selected datasets.
- **Results Tab** – Provides the interface for displaying a textual and graphical view of the query results.

**Figure 2 - EarthExplorer Search Tabs**

**Search Criteria Tab** - The Search Criteria tab provides a location to enter search criteria for an area of interest. Users have the option to either type the location criteria via the textual information component or with the Leaflet Map interface.

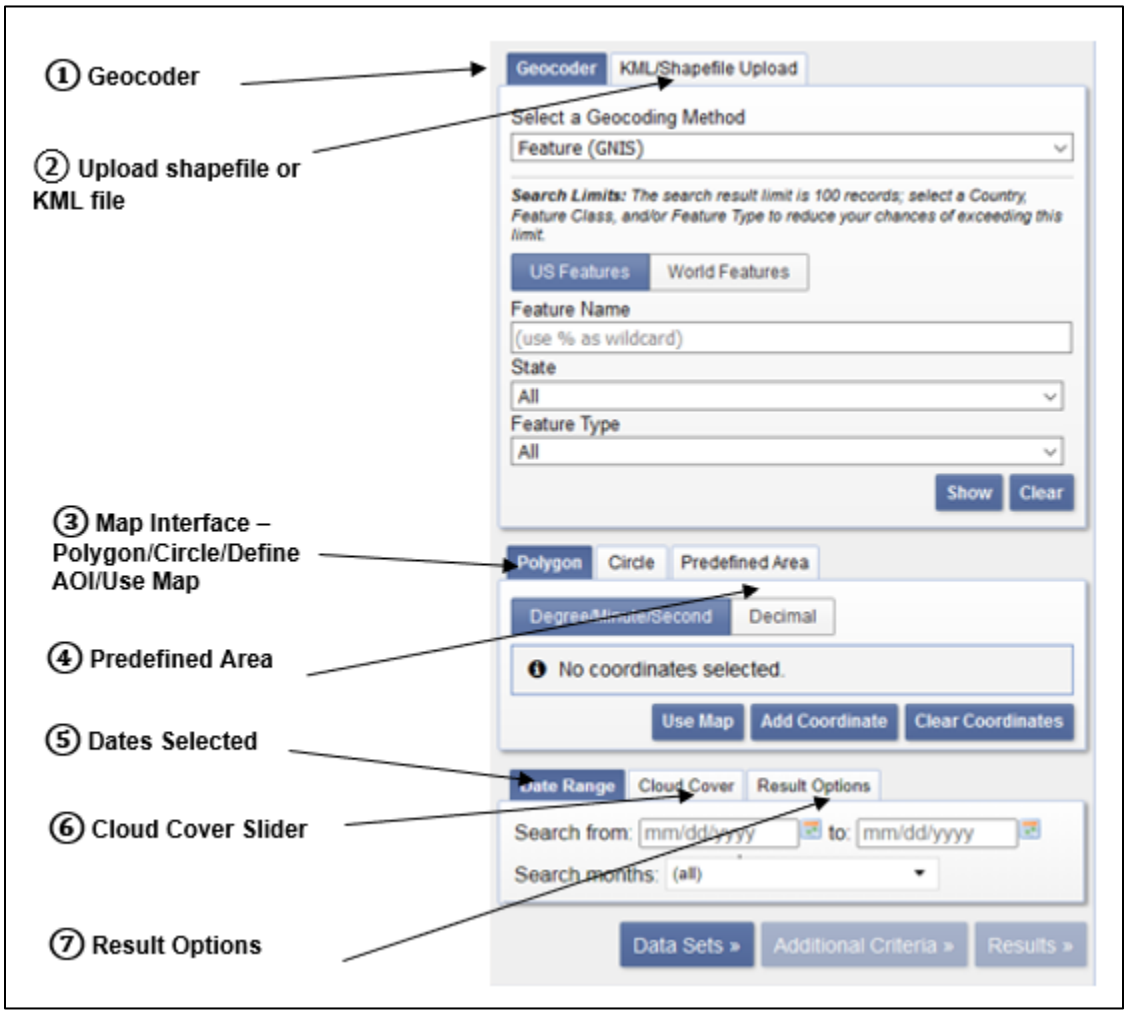
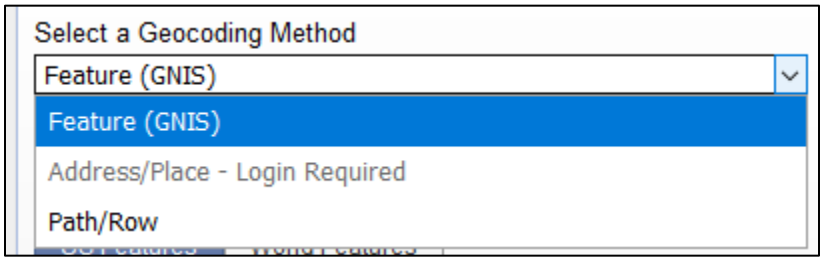



**Figure 3 - Search Criteria Tab**

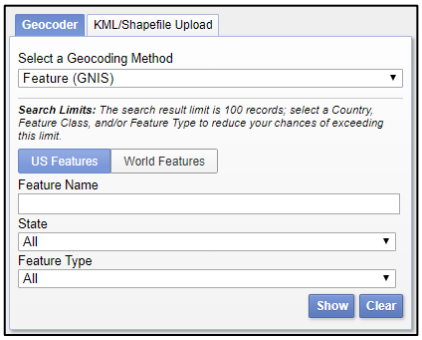
The search criteria options include:

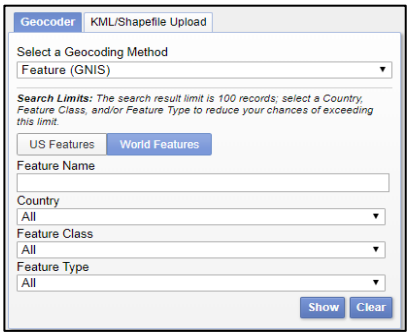
- **Geocoder** ① - Choose between Feature (GNIS), Address/Place (Login Required), and Path/Row - Choose search type and enter desired information.
- **Upload shapefile or KML file** ② - Upload a shapefile or KML file as the query area
- **Map Interface** ③ - Enter the area of interest through the Leaflet Map interface
  - Polygon - Enter coordinates (Add Coordinates) to define an area of interest. The area selected is updated as changes are made
  - Circle - Enter a center point and radius of area of interest. The area selected is updated as changes are made
  - Define Area of Interest (AOI) - Define a single point or multiple points on the Map Interface
  - Use Map - Zoom to area of interest on map interface
- **Predefined Area** ④ - Select from a list of predefined areas for a query
- **Dates Selected** ⑤ - Enter a date or date range
- **Cloud Cover** ⑥ - Use slider to select desired/undesired Cloud Cover (Scene) filter. It will only be applied to data sets that support cloud cover filtering ( ☁ in the data set list denotes cloud cover support).
- **Result Options** ⑦ - Standard Search Options

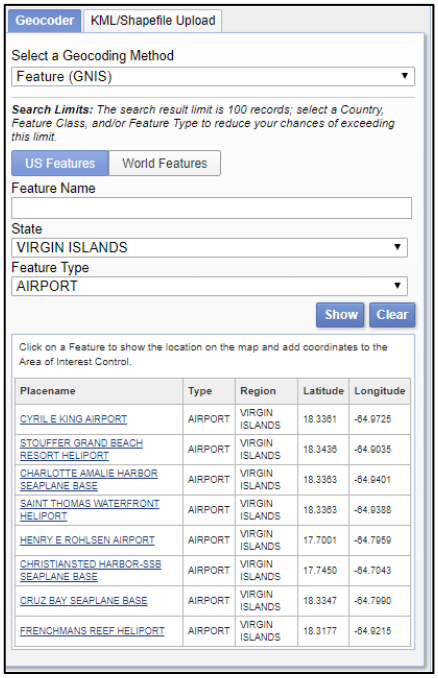
**Enter Search using Geocoder** ① - The Geocoder component allows you to enter a Features, specific address for United States or World feature, or Landsat Worldwide Reference System (WRS) Path/Row.

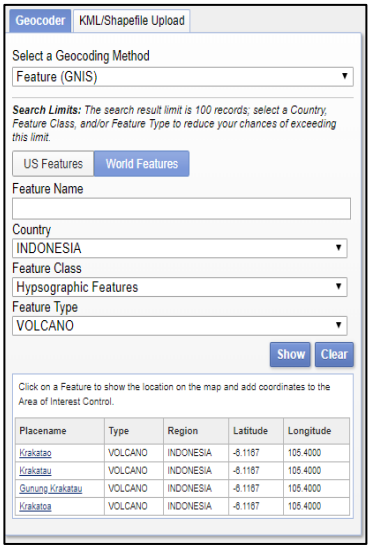


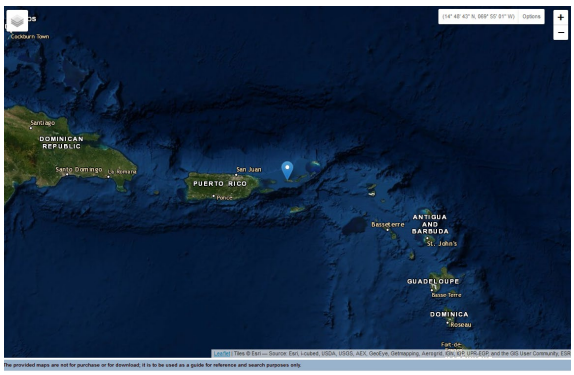

- **Feature (GNIS)** - Select either a US or World Feature. Click the 'Feature' button to display the US/World Feature Search dialog box. Type in a geographic feature name or select a State/Country, Feature Class or Feature Type from dropdown menu. A pin mark will be placed on the map along with the latitude and longitude displayed under the 'Coordinates' section.

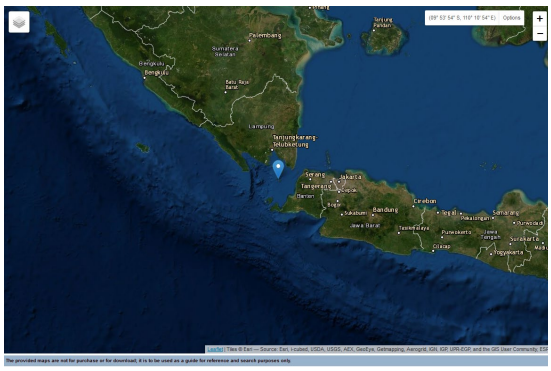


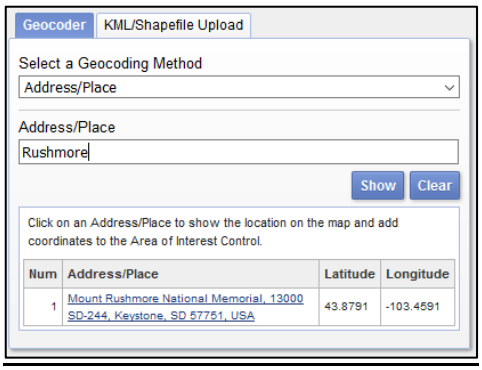



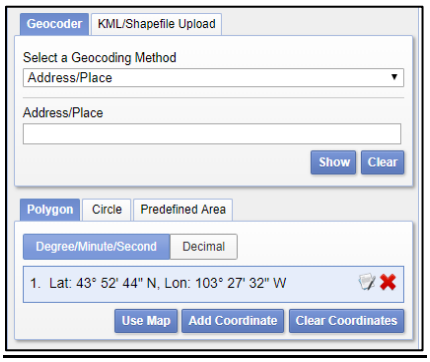



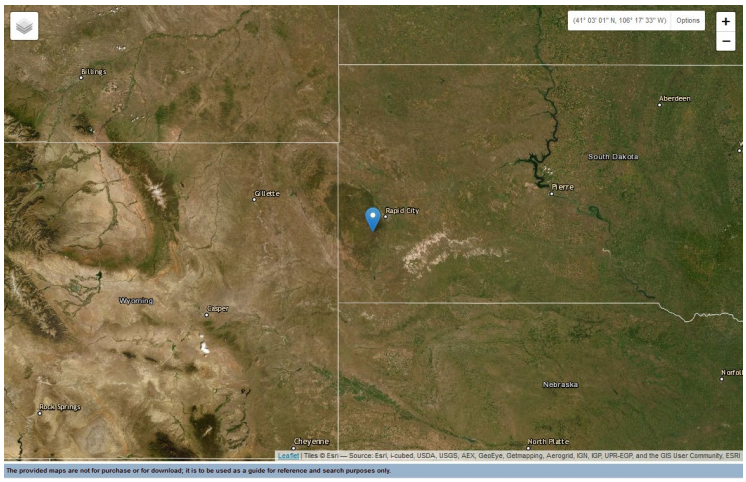


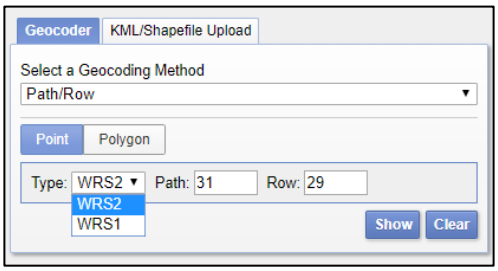
- **Address/Place** – EarthExplorer Login required. Enter a specific address; for example, in the Address: field, type Rushmore. Press Enter or click 'Show' to display the list of locations associated with information entered. Click the desired address and pin mark will be placed on the map along with the latitude and longitude displayed under the 'Coordinates' section.

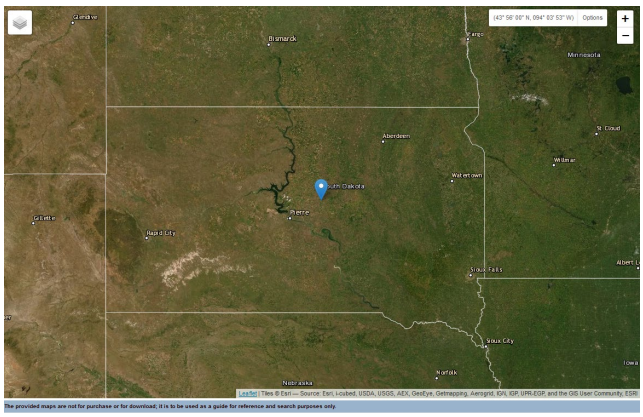


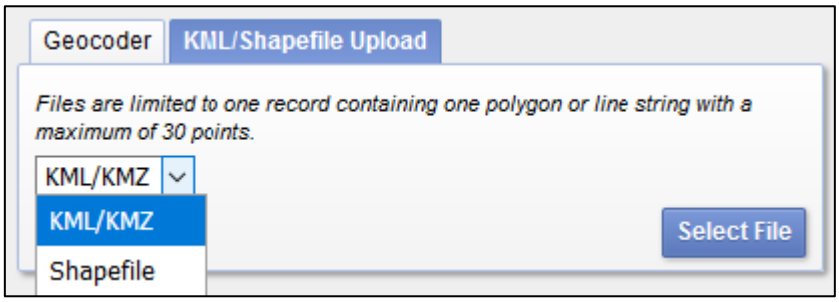




- **Path/Row** - Select the Path/Row option to enter WRS1 or WRS2 path row Select the Path/Row button to display the Path/Row WRS criteria dialog box Select either WRS1 or WRS2 and then type the Path and Row for the desired area. Click 'Show' to identify the path/row location on the map. A pin mark will be placed on the map along with the latitude and longitude displayed under the 'Coordinates' section.



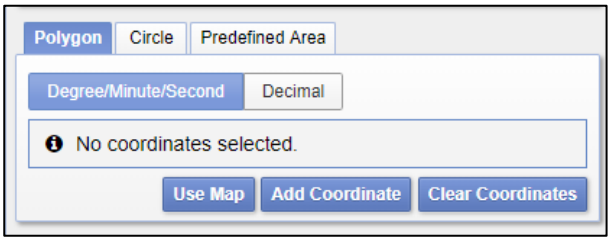



**Enter Search Using Uploaded shapefile or KML file** ② - Upload a shapefile or KML file as the query area. Files are limited to one record containing one polygon or line string with a maximum of 30 points. See KML/Shapefile Help for more detail.



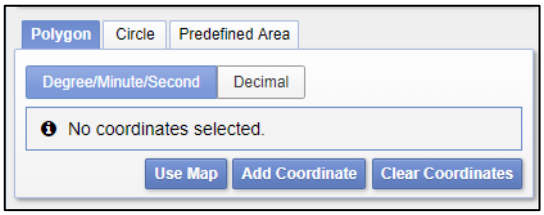

**Map Interface** ③ - Enter the area of interest through the Leaflet Map interface using Polygon (Add Coordinates), Circle, Define Area of Interest (AOI), or Use Map methods to select area of interest.

- **Polygon** - Enter coordinates (Add Coordinates) to define an area of interest. The area selected is updated as changes are made
- **Circle** - Enter a center point and radius of area of interest. The area selected is updated as changes are made
- **Define Area of Interest (AOI)** - Define a single point, multiple points (Polygon), or Circle on the Map Interface by clicking on the map.
- **Use Map** - Zoom to area of interest on map interface

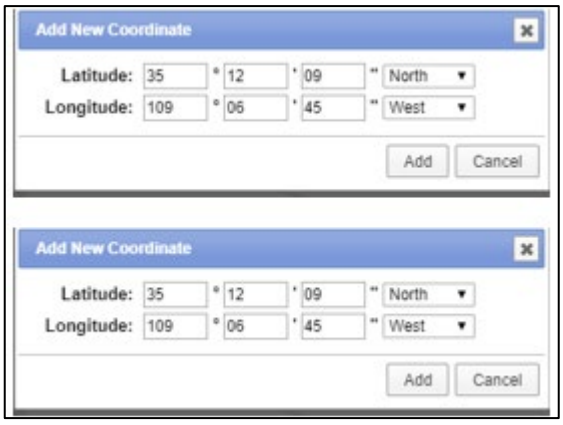



- **Polygon** - Define an area of interest by manually typing the latitude/longitude in the Coordinates tab. To enter latitude/longitude coordinates manually, select the 'Degree/Minute/Second' or 'Decimal' option. This method displays how the latitude/longitude information is entered. Click 'Add Coordinate' to display the 'Add

new Coordinate’ dialog box.



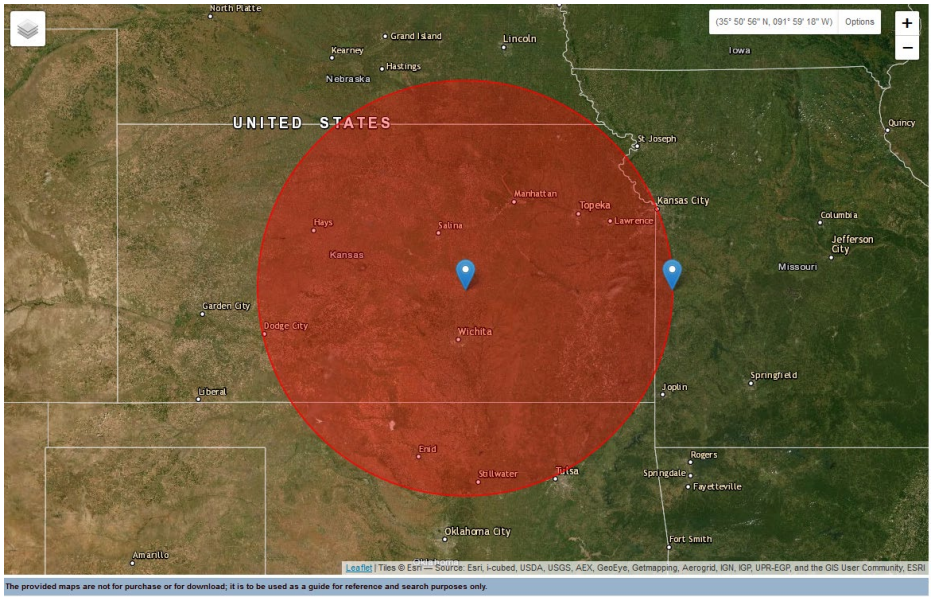

To enter latitude/longitude coordinates manually, select the ‘Degree/Minute/Second’ or ‘Decimal’ option. This method displays how the latitude/longitude information is entered.



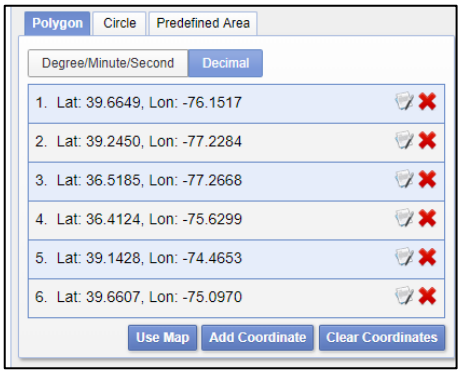

Click ‘Add Coordinate’ to display the ‘Add new Coordinate’ dialog box. Enter degrees, minutes, and seconds of a point in the dialog box. After clicking Add, the dialog disappears, the point displays on the map, and the coordinates are displayed. Use this method to enter multiple points

- **Circle** - Define an area of interest by manually typing the center point latitude/longitude in decimal degrees and setting the radius.

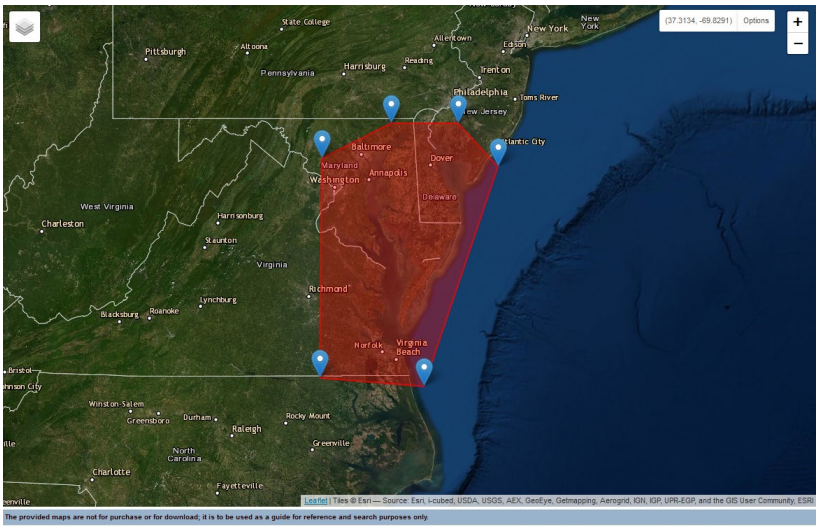
Enter center point coordinates in latitude/longitude in decimal degrees. Choose a unit of measure for the radius and enter desired value.



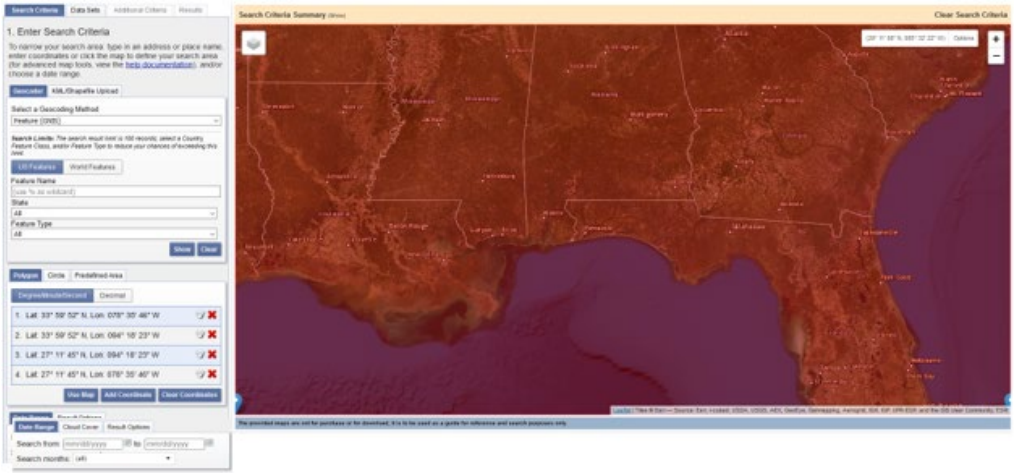

- **Define Area of Interest (AOI)** - Define a single point, multiple points (Polygon), or Circle on the Map Interface by clicking on the map.



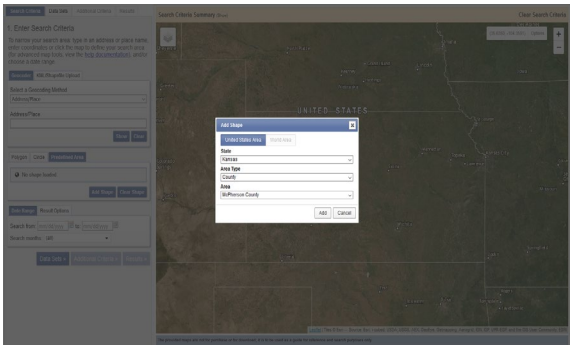

Define Area of Interest by clicking points on the map interface. The points are added in the coordinate section. The coordinates can be removed or edited within this section.

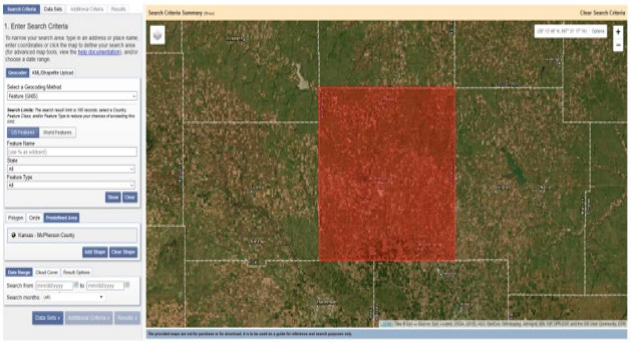



- **Use Map** - On the map interface manipulate the map to display the Area of Interest within the map window. Then Click 'Use Map'

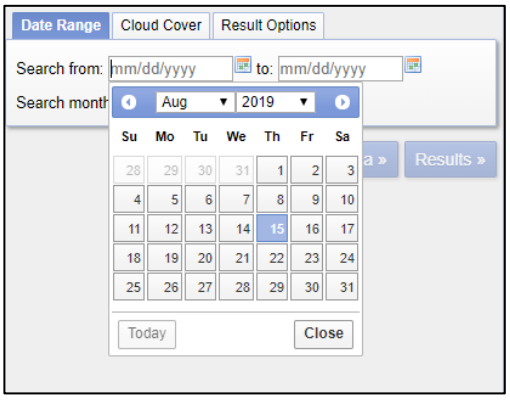


**Predefined Area** ④ - Select from a list of predefined areas for a query. The available predefined areas include U.S. States, Area Type, and Area. Select desired State, Area Type (Congressional District, County, State), and Area. Click 'Add' and the area will be highlighted on the map and area name displayed in the coordinates section.



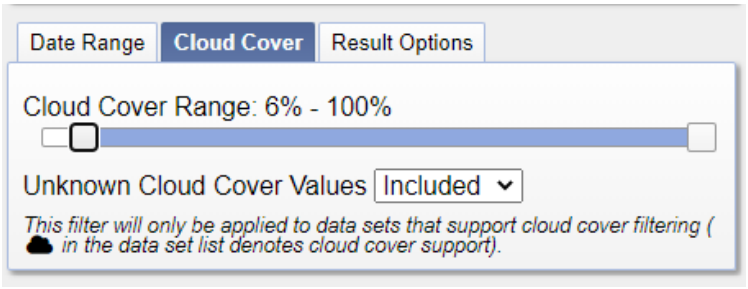


**Dates Selected** ⑤ - Enter a date or date range



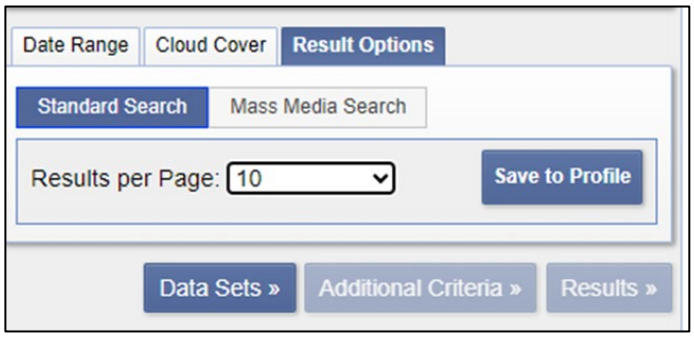

The Date Range option provides a method for entering a beginning and ending date range to refine the search criteria. It is not a required field to modify the default date range; however, a date range is highly recommended to reduce the number of search results returned from a search. 'Search Months' allows you to specify which months to search within the date range specified.

**Cloud Cover** ⑥ **-** 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)

**Results Options** ⑦ - The Results Options allows you to change the number of results displayed on the Results Tab when completing a search for imagery.




Select the dropdown arrow next to Results per Page
Select the desired number of results per page. (10 is the default.)
Select Save to Profile

Once you enter the search criteria, you are ready to select the ‘Data Sets’ tab at the top or bottom of the ‘Enter Search Criteria’ form.  Information on Select Data Set Help Documentation.