

## Perform a Search

EarthExplorer (EE) allows users to search, download, and order data held in United States Geological Survey (USGS) archives through a number of query options. EE uses tabs in the search application to move through each portion of the process. The EE search process/component is divided into four main areas (Figure 1).

- 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 1 - EE Search Tabs

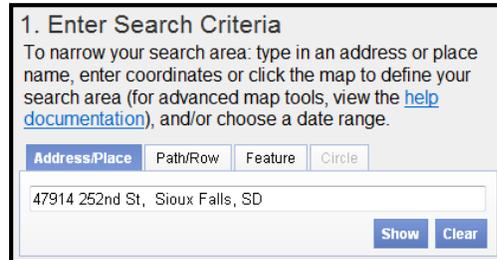
### Search Criteria Tab

The Search Criteria tab provides a location to enter search criteria for an area of interest. The search criteria options include:

- **Address/Place** - Type an address or place name
- **Path/Row** - Type WRS path and row
- **Feature** - Enter US Features/World Features, State, and Feature Type
- **Coordinates** - Enter Degree/Minute/Second or Decimal degrees
- **Predefined Area** - Select from a list of predefined areas for a query
- **Shapefile** - Upload an existing shapefile for the area of interest
- **KML** - Upload an existing KML or KMZ file for the area of interest
- **Google Map Options** - Select Auto-Center, Polygon, and Circle features from the map menu
- **Google Map Interface** - Click on the Google Map to define the area of interest
- **Dates Range** - Enter a date range for data acquisition
- **Result Options** - Modify the number of scenes returned for a standard search
- **Standard Search** - Number of records to return
- **Mass Media Search** - Mass Media Searches are not limited by number of results or size; however, Mass Media Orders in excess of 6 terabytes will require extra processing time and justification.

## Enter Search using Address/Place

The Address/Place subcomponent allows you to enter a specific address, latitude, longitude, United States or World feature, or Landsat Worldwide Reference System (WRS) Path/Row.



1. Enter Search Criteria  
To narrow your search area: type in an address or place name, enter coordinates or click the map to define your search area (for advanced map tools, view the [help documentation](#)), and/or choose a date range.

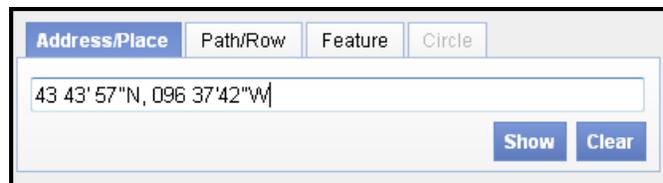
Address/Place Path/Row Feature Circle

47914 252nd St, Sioux Falls, SD

Show Clear

**Address** - Enter a specific address; for example, in the Address: field, type 47914 252nd St, Sioux Falls, SD (Figure 2). Press Enter or click 'Show' to display the location on the map along with the latitude and longitude under the 'Coordinates' section.

Figure 2 - Address



Address/Place Path/Row Feature Circle

43 43' 57"N, 096 37' 42"W

Show Clear

**Latitude/Longitude** - Enter a specific latitude/longitude; for example, type 43 43' 57" N, 096 37' 42" W (Figure 3). Click 'Show' to display the location on the map and to populate the 'Coordinates' section.

Figure 3 - Coordinates



Address/Place Path/Row Feature Circle

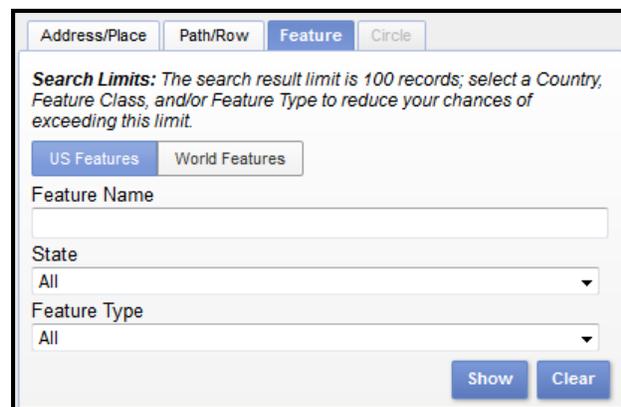
Point Polygon

Type: WRS2 Path: Row:

Show Clear

**Path/Row** - Select the Path/Row button to display the Path/Row WRS criteria dialog box (Figure 4). Select either WRS1 or WRS2 and then type the Path/Row for the desired area. For example, select 'WRS2' and type Path 31 and Row 29 to identify the center point for WRS2, Path 31, and Row 29. Click 'Show' to identify the path/row location on the map.

Figure 4 - Path Row



Address/Place Path/Row Feature Circle

**Search Limits:** The search result limit is 100 records; select a Country, Feature Class, and/or Feature Type to reduce your chances of exceeding this limit.

US Features World Features

Feature Name

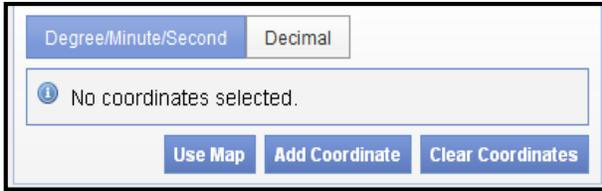
State  
All

Feature Type  
All

Show Clear

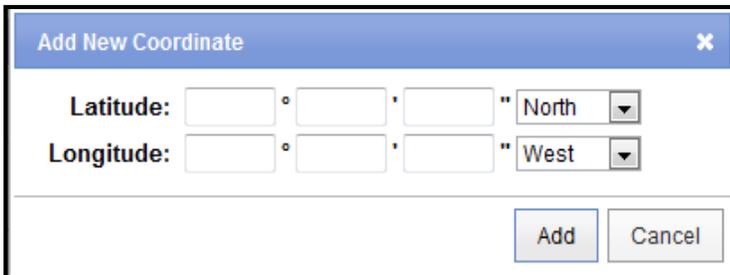
**US/World Feature** - Select either a US or World Feature. Click the 'Feature' button to display the US/World Feature Search dialog box. Type in a geographic feature name or select a State/Country, Feature Class, or Feature type from a pop-down menu (Figure 5).

Figure 5 - US/World Feature



**Figure 6 - Degree/Minute/Second**

**Enter Search using Coordinates** - 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' (Figure 6)

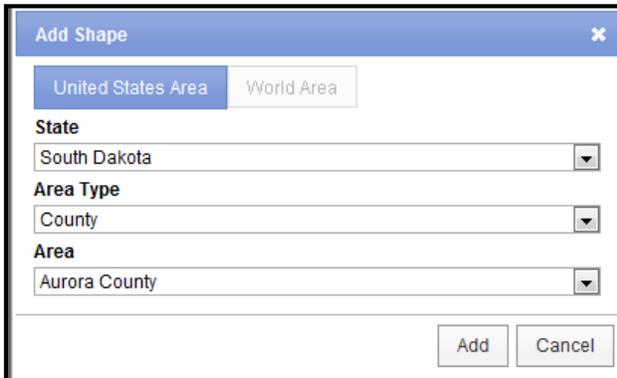


**Figure 7 - Add New Coordinate**

Click 'Add Coordinate' to display the 'Add new Coordinate' dialog box. As shown in Figure 7, 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.

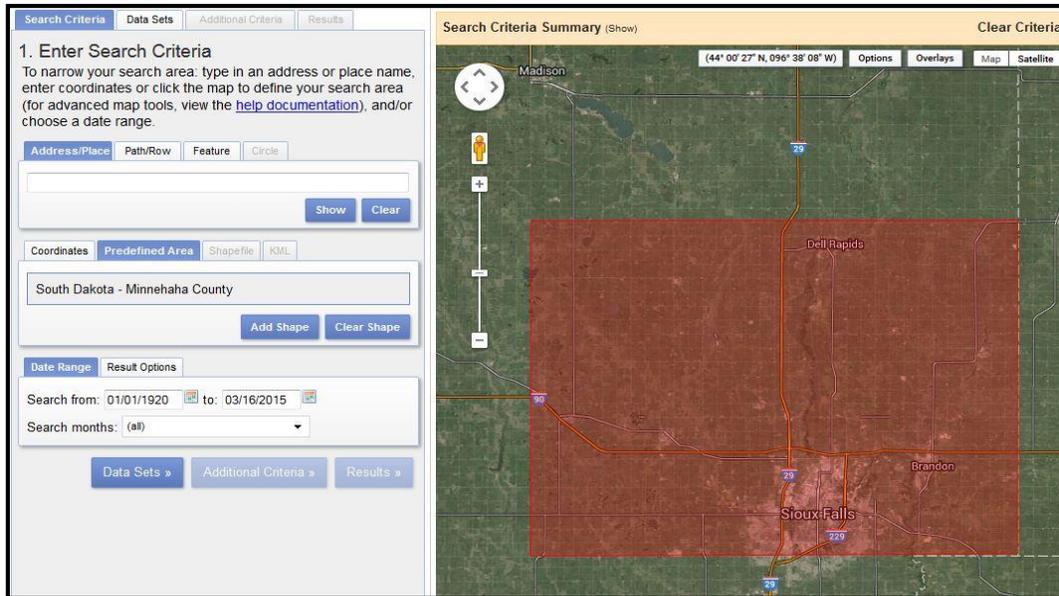
**Predefined Area** - The 'Predefined Area' option provides a list of predefined areas for a search. The list of predefined areas includes:

- States
- Counties
- Congressional Districts



**Figure 8 - Add Shape**

Selecting the 'Predefined Area' tab displays the 'Add Shape' dialog box as shown in Figure 8. Select the desired State, Area type (State, County, Congress District), and Area (County name or Congressional District name).



**Figure 9 - Predefined Area**

The outline of the selected Predefined area is then displayed on the Google Map interface (Figure 9).

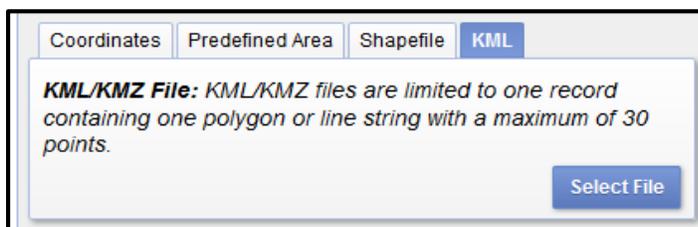
**Upload ESRI Shapefile** - Select the 'Shapefile' tab to display the input form for uploading ESRI Shapefile information for a search area (Figure 10). Shapefiles are limited to one record containing one polygon or line string with a maximum 30 points. The shapefile dialog box allows for the upload of a zip file containing .shp, .shx, .dbf and .prj files.



**Figure 10 - Upload ESRI Shapefile**

The ESRI Shapefile requires all of the following files: .shp, .shx, .dbf and .prj.

**Upload KML/KMZ File** - Select the 'KML' tab to display the input form for uploading a KML or KMZ file for a search area (Figure 11). The KML or KMZ file is limited to one record containing one polygon or line string with a maximum 30 points.



**Figure 11 - Upload KML/KMZ**

Browse to the desired KML or KMZ file, select the desired file, and then select 'Open' to upload the KML/KMZ file.

## Enter Area of Interest Search using Google Map Interface

Using the Google Map interface, enter the geospatial area of interest using the mouse or other pointing device. The up-to-date Google map is not for purchase or for download; it is to be used as a guide for reference and search purposes only.

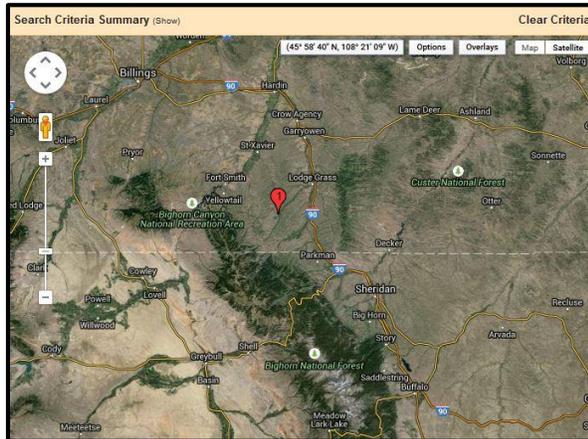


Figure 12 - Single Point Search

**Define a single point search** (Figure 12) - Click an area on the map once using the mouse to define a single point search. The latitude and longitude of the point selection displays under the 'Coordinates' section. The coordinates can be toggled between Degree/Minute/Second and Decimal degrees.

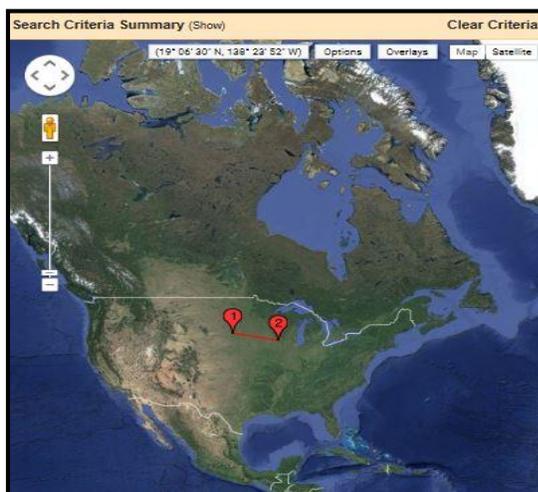


Figure 13 – Line Search

**Define a line search** (Figure 13) - To perform a line search, select two points on the map to define a line segment. The latitude and longitude of the two points selected display under the 'Coordinates' section.

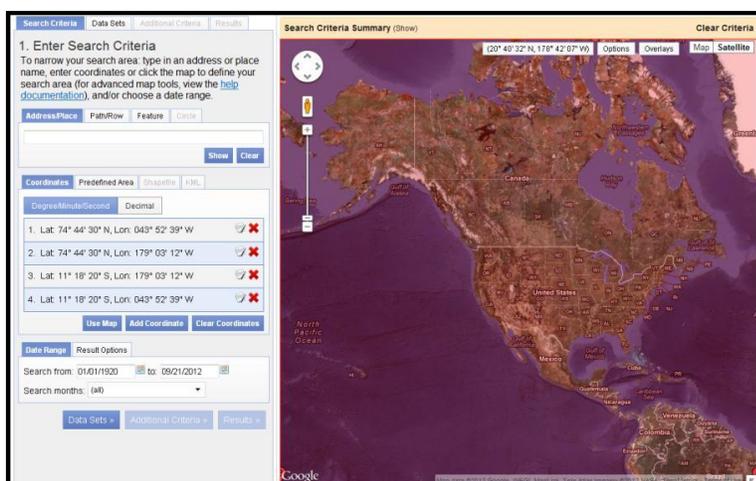
**Define a rectangle** - Press the Shift key then click and drag mouse to define rectangle or square. This action defines the constraints of the rectangle/square. If you press the Shift key before making the selection, the resulting selection is added to the existing selection. The latitude and longitude of the four points selected display under the 'Coordinates' section. To modify the rectangle, click one of the numbered points on the map and drag the point to a new location.

**Define a polygon** - Click multiple times on the map to form shape around interested area. As each point of the polygon is selected, the latitude and longitude of the defined polygon displays under the 'Coordinates' section. To modify the rectangle, click one of the numbered points on the map and drag the point to a new location.



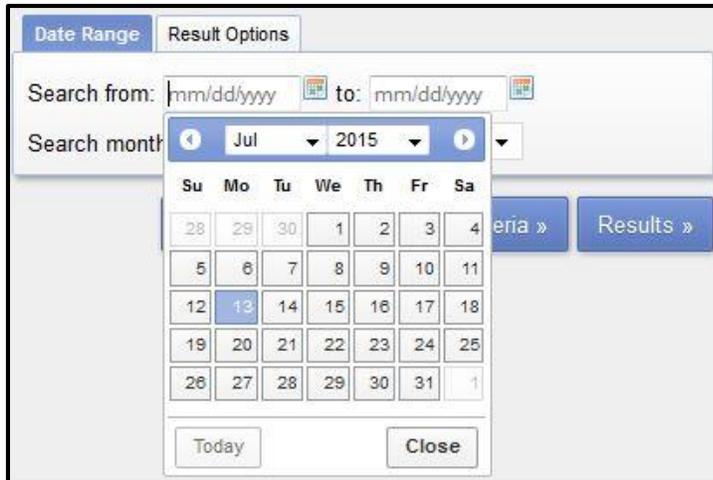
**Define a circle** - Select the Options tab on the Google Map display then click the 'Circle' option. To define a circle, click two points on the map (Figure 14). To modify the circle radius, click and drag one of the points to a new location. The coordinates of the points defining the circle display under the

Figure 14 - Define Circle View



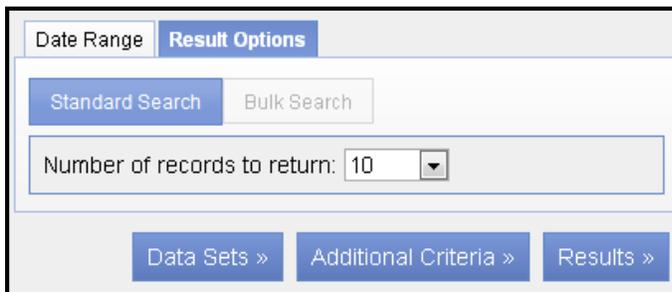
**Use Map** - Click the 'Use Map' button to add the current map view as the area of interest. The color of the screen changes, indicating the area displayed on the map as an area of interest (Figure 15). The latitude and longitude of the map extent display under the 'Coordinates' section.

Figure 15 - Use Map View



**Figure 16 - Date Range**

**The Dates Selected** - option provides a method for entering a beginning and ending date range to refine the search criteria (Figure 16). You are not required 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.



**Figure 17 - Number of Results**

**Results Options** - Number of records to return. The EarthExplorer interface allows you to select the number of records to return from a search. Use the 'Results Options' tab to select the maximum number of scenes returned (Figure 17).

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.