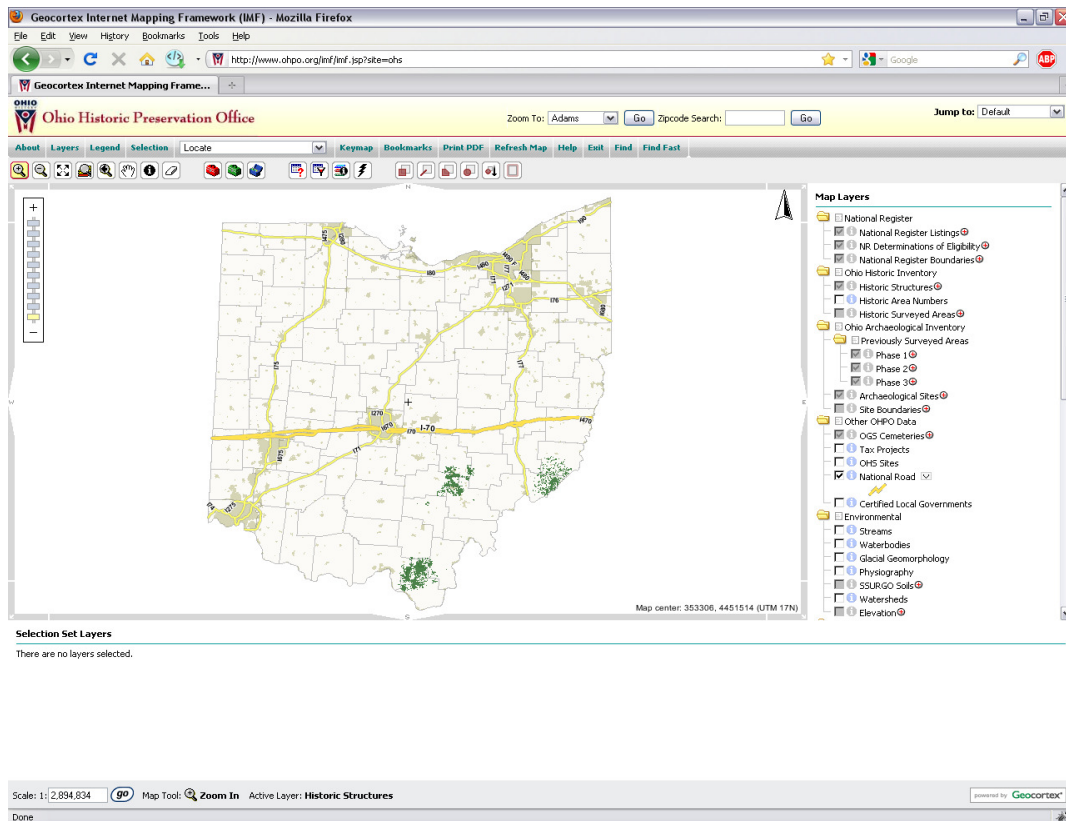


The Ohio Historic Preservation Office



Online Mapping System Training Manual

<http://www.ohpo.org/gis>

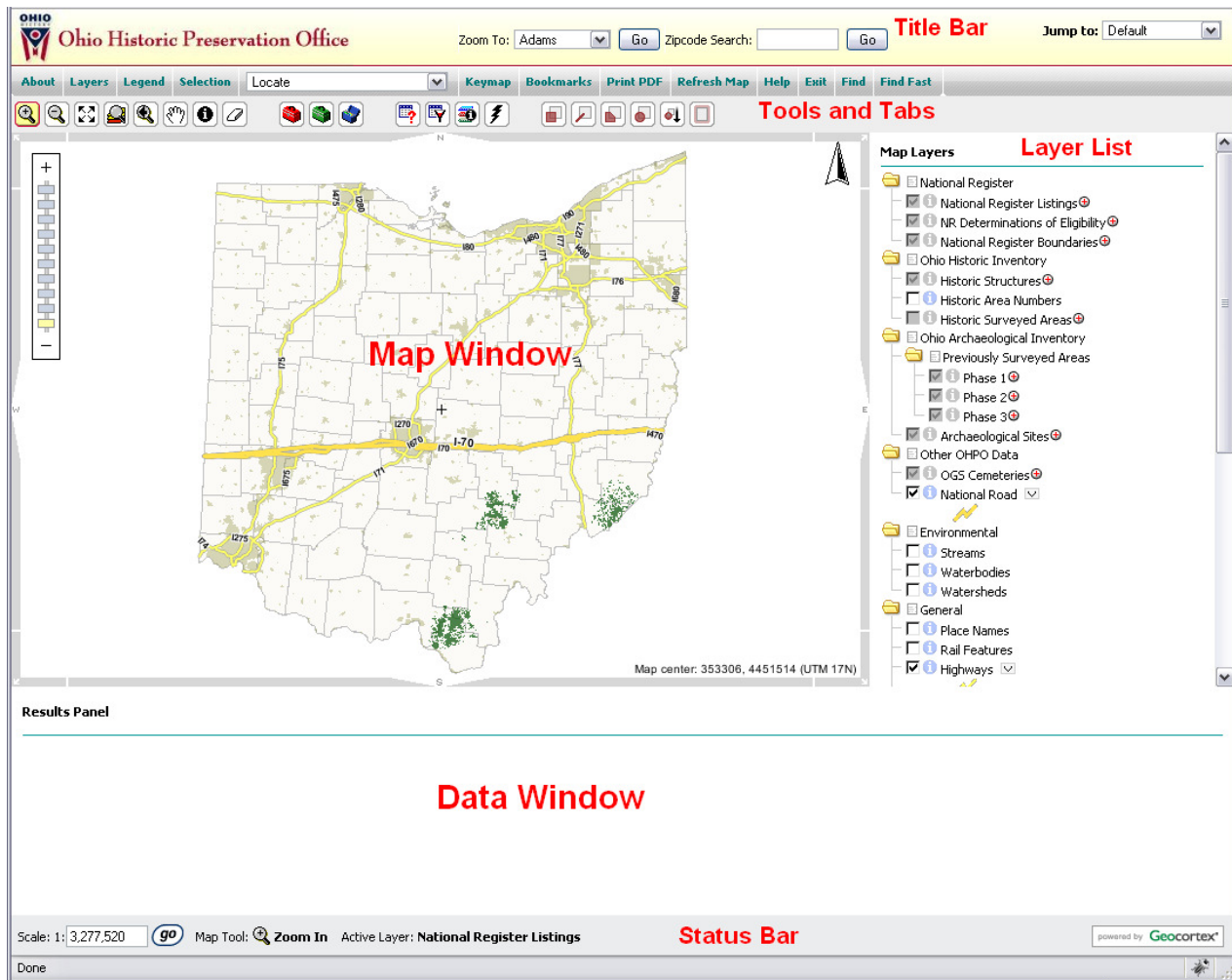
April 6, 2010 ■ April 15, 2010 ■ April 20, 2010 ■ May 13, 2010 ■ July 20, 2010

Ohio Historic Preservation Office ■ Ohio Historical Society
1982 Velma Avenue ■ Columbus, OH 43211
614-298-2000 ■ <http://www.ohpo.org>

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Mapping System Layout



Map Window: The main window contains an interactive map that can be navigated, queried for information and used to construct maps.

Data Window: Data returned through identification, selection and queries will be presented here. Some options for tools will also be presented here.

Tools and Tabs: All tools are located here. Tools are organized into color coded toolboxes that open to present more tools when clicked.

Layer List: Provides a list of the data available. Can be used to set layer visibility, set the active layer and to view layer symbology.

Title Bar: Contains the Zoom to County and Zipcode Search tools.



Status Bar: This bar identifies the user’s active tool and layer. It also provides the current scale and the option to jump to a specific user defined scale.

Map Navigation Basics

Navigation Tools

The basic map navigation tools are grouped together on the left hand side of the toolbar.

Zoom Tools

The zoom tools are used to move the map in and out. The  tool zooms in and the  tool zooms out. The tools can be used to click the map and zoom in increments or can be used to zoom in on a specific area by creating a zoom box. To create a zoom box click and hold the left mouse button then drag the mouse to create a box.

Zoom to Full Extent

This button will return you to the statewide view.

Zoom to Layer

This button will zoom you to the full extent of the active layer. Most layers are statewide layers and using this tool will return you to the statewide view. This tool is mostly useful for locating and zooming to user imported data.

Zoom to Previous Extent

This tool is similar to a browser’s back button. Using this tool will take your map view back one step. Clicking the tool multiple times will move the map back multiple steps.

Pan Tool

This tool can be used to easily move the map. To move the map, click and hold the left mouse button to “grab” the map. While still holding the mouse button, move the mouse to move the map. Release the mouse button to reposition the map.

Directional Pan Buttons

Directional pan buttons are found around the outside edge of the map and can be used to pan the map in a specific direction.

Scale Slider

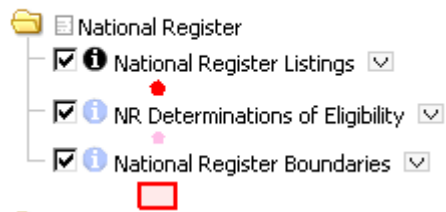
The scale slider is located on the left side of the map window. It can be used to zoom the map in and out at set scale levels. Clicking one of the boxes on the slider will zoom the map. Hover your mouse over a specific box to see the corresponding scale.

Zoom to Scale

The current scale of your map is listed in the status bar at the bottom of the page. The scale window can also be used to zoom to a specific scale by entering the scale and hitting go.

Layer List

Map Layers



The layer list is found to the right of the map window. The list serves as a legend and allows users to toggle layer visibility, activate a layer and zoom to a visible scale level.

More information on the layer list can be found by scrolling to the bottom of the list and expanding the “Hints” section.

Hints:

Please refer to the following for descriptions of the functions of the controls in the layer list above.

- Click folder to show or hide contents.
- Click to turn off all layers in the associated folder.
- Click the check box to turn layer on and off.
- If the check box is grayed out, the layer is not available at the current scale.
- This is the active layer.
- Click to make the layer be the active layer.
- This layer cannot be activated at the current scale.
- Click to zoom in to the closest scale at which this layer is available.

The Active Layer

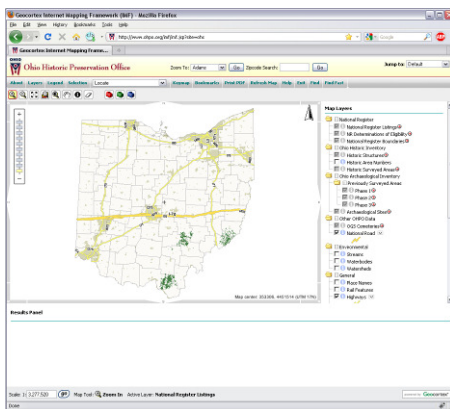
The active layer is identified by a black identify symbol . To select the layer active, click the light blue identify symbol next to the layer.

- A layer must be set as the active layer to be identified or selected with most tools.
- There can be only one active layer.
- The active layer is also listed on the status bar.

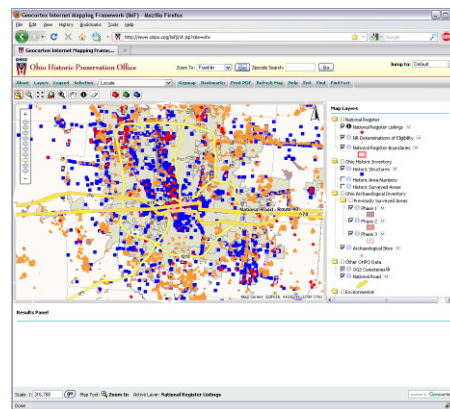


Scale and Data Visibility

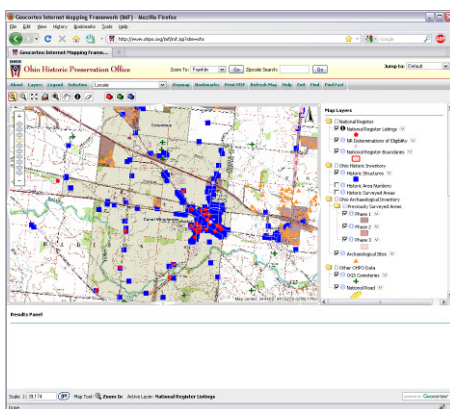
When you first enter the site you will notice there is a limited amount of visible data in the map window. Many of the layers are turned off to reduce map clutter and reduce map loading times. However, there are many layers, including inventory data and USGS basemaps, which can not be viewed at the initial statewide level. To view this data you must zoom the map in to a scale at which the data will appear. Data visibility dependent on scale is a method of filtering large amounts of geographic data and preventing the system from bogging down.



Initial statewide view.



County level.



Street level.

Tips for zooming to data quickly

- Zoom to a specific county using the dropdown in the title bar.
- Zoom to a specific zipcode using the search box in the title bar.
- Click the red plus \oplus next to the layer you want to view. Hovering your mouse over the \oplus will show you the scale at which the layer becomes visible.
- Use the locate tools in the tab bar if you have specific UTM coordinates.

- Use the Find or Find Fast tools to quickly jump to specific features.

How to use the Select and Identify Tools

The first step in any feature identification or selection is to set the active layer in the layer list. The active layer is the layer with the **i** symbol next to it. To set the active layer, click the **i** symbol and it will highlight black. The status bar at the bottom of the main window will also list the active layer.

Basic Identification **i**

The identification tool is used to return information on a specific feature, such as a road or National Register Listing.

To use the tool select it from the tools menu. When a tool is active it will be highlighted yellow and have a red outline.



Once the tool is active and your active layer is set, click the specific feature on the map you would like to identify. Your results will be listed in the data window below the map.

Selection Button Selection

This button is located in the tab bar just above the identification tool. Data returned by selection tools will be presented in the data window. Often, when switching tools or working with another layer, the previous data selection will be replaced with other information. The previous selection you've made isn't gone and can be viewed again by clicking the selection button.

Selection Tools

There is a wide variety of selection tools. Each has a unique function, but they all serve the same overall purpose. A selection is very similar to identification in that it returns feature data. However, selection tools are capable of returning information on a large number of features.

Select by Rectangle

This tool can be used to select features with a user made rectangle. To use the tool, click and drag the mouse over the features or area you would like to select. You will see a red tinted box when you drag your mouse showing what is in your selection area. Release the mouse button to complete the rectangle. Your results will appear in the data window.

Select by Line

This tool allows users to draw a line that selects features the line overlaps. Since most OHPO data is point based, this tool is not highly versatile. To create a line, click the map

where the line should be and a red line will appear. When you have completed, click the submit button in the data window below. You may need to scroll the window down to see the button.

Select by Area


Similar to the Select by Rectangle tool, it allows users create a custom shape used for selecting features. To create the shape, begin clicking the outline of the shape you would like to create. You will see a red outline of the shape you are creating. When you have completed, click the submit button in the data window below. You may need to scroll the window down to see the button.

Select by Radius and Drill Down by Radius

As their names suggest, these tools are used to select features within a circular area. These two tools are very similar, however the Drill Down tool is an enhanced version of the standard Select by Radius tool designed to facilitate research of OHPO data. The standard Radius tool will select and return data from the active layer, much like the other selection tools. The Drill Down tool will select features from the National Register, Historic Inventory and Archaeology Inventory in one selection regardless of the active layer. The results are presented by a clickable list divided by inventory.

To use one of the Radius tool, click the map where the center of your selection should be. You will be presented with options for the size of your radius and units of measure. Keep in mind, a 50 foot radius will create a circle with a 100 foot diameter. Click Submit and your radius will be drawn on the map. Any results will be shown in the data window.

When using the Drill Down tool, your initial results will be presented with a list of OHPO layers and the number of selected features. Click on one of the inventory links to view the selected features.

The selection button  in the tab bar can be used to cycle back to the results list.

Selection Set Layers

Choose one of the following selected layers to view its feature details.

[Archaeological Sites](#)
(3 records selected)

[Historic Structures](#)
(3 records selected)

[National Register Listings](#)
(1 records selected)

Select by Buffer

This tool is used to select features within a specified distance of a selected feature. For example, you could select all the NR Listings within a specific distance from a selected road.

To use the tool, you must first select a feature to be buffered. This can be any selectable feature, such as roads, inventory points or NR Boundaries. You can also import or create your own shapes to be buffered.

Once a feature is selected, click the buffer tool and a list of options will appear in the data window. Set the layer you would like to select data from, the distance of the buffer and then the layer with the selection to be buffered. Click submit. The buffered area will be drawn on the map.

Viewing Data

Data returned by identification or selection appears in the data window below the map. How the data appears differs slightly between the id and selection tools. With the identification tool the data is immediately displayed and can not be directly exported. However, when a selection tool is used, the user is presented with a list of ways to view or export the data.

Options:

- [Export Report](#) Export the report data to a variety of print-ready formats.
- [Tabular Report](#) Show a tabular report for the selected features.
- [Default Report](#) Show the default report for the selected features
- [Zoom to Extent](#) Zoom the map to the extent of the selected features.

The tabular report option is recommended for best results. Export report will allow you to export your results to multiple formats, including pdf and excel.

If you perform a second query on a layer you have the options of creating a whole new selection or modifying the existing selection by adding or removing data.

Options:

- [New](#) Sets the selected set of this layer to the features just selected.
- [Add](#) Adds the features just selected to the set of features that were previously selected.
- [Subtract](#) Removes the features just selected from the set of features that were previously selected.
- [Subset](#) Select only the features just selected that are within the set of features that were previously selected.
- [Unchanged](#) Leaves the selected set as it was, ignoring the selection that you just made.
- [Clear](#) Unselects all the selected features in this layer.

How to use the Search and Query Tools

Query Tools

There are several tools to help users query layers for information. Two of the most obvious and easier to user are the Find and Find Fast tools located in the tab bar. A complex query builder and a Filter tool are located in the leftmost portion of the blue toolbox.

Find and Find Fast Tools

The Find and Find Fast tools are very similar and both perform basic queries. The standard Find tool is slightly more complex and allows for more complex queries, while the Find Fast Tool is easier to use, but allow for fewer query options.

To use the Find Fast tool, click it and search options will appear in place of the Layer List. From the search options, select the layer you would like to search and then enter your search criteria. Click search when ready and your results will appear in the data window. Clicking one of the results will zoom your map to that specific feature.

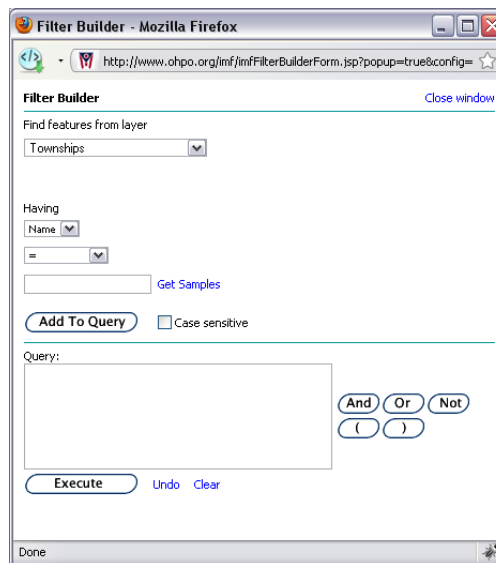
The Find tool works almost the same, but with the added option of choosing a search operator, such as equal to or greater than. The Find tool also has the option to search within visible extent. This means your results will be filtered to only include features that are visible on your map. This can be very useful for searching for road names.

Query and Filter

The Query and Filter Tool are very similar tools that provide different results. The Query Tool is used to perform complex searches and highlight selected features. The Filter Tool also performs complex searches, but can be used to filter out unwanted information. For example, the filter tool can be used to limit archaeological sites to only show sites of a specific temporal period. Any sites not within the temporal period would be removed from the map until the filter is reset.



Query Builder



Filter Builder

To create a query or filter

1. Set the layer to be queried or filtered.
2. Set the field name under "Having".
3. Set the operator. For example, = to, greater than or Contains. Use Contains to perform wildcard queries.
4. Enter the search criteria in the text window.

5. When you're ready, click the Add to Query button and your query text will be added to the lower text window.
6. Click execute to perform the query.

Results from the query builder will appear much like the results of a selection. The queried features will be highlighted on the map and data will be displayed in the data window. Results from the Filter tool are much different. Instead of highlighting the queried features, it makes all features not included in the query invisible. This can be a good way to reduce map clutter to get a better look at a feature.

County Dropdown

Zoom To: Adams

The county dropdown tool located in the title bar can be used to quickly zoom to a specific county. To use the tool, select a county from the dropdown and click Go.

Zipcode Search

Zipcode Search:

The zipcode search tool located in the title bar can be used to zoom directly to a specific zipcode. To use the tool, enter a zipcode into the text window then click Go.

Locate Tool

Locate

The Locate tool is a dropdown located in the tab bar. It can be used to zoom directly to specific UTM or Lat/Long Coordinates. To use the tool, select UTM coordinate or Lat/Long coordinate. Enter your coordinate information in the data window and click Go.

UTM coordinates must use the NAD1927 datum.

Printing Maps and Exporting Images

Printing PDF Maps

The primary map creation tool is located in the tab bar and named Print PDF. To use the tool, make sure your map window shows the area and features you want to print. Next, click the Print PDF button and options will be presented in the data window. First, set your paper size and orientation under template. You can choose to set a specific scale, but changing the scale may change how your map appears. The default scale option will print your current map view. You can also set a map title and add map notes. Click the OK button you're ready and your pdf will be created. When the pdf is ready you will be presented with an "open map" link that will open your newly created map in a new browser window when clicked. The map can be printed or saved for later use.

Exporting Images



The Export Image tool is located in the red toolbox. This tool is used to create a .bmp image of the current map view. To use the tool, click it and a download link will appear in the data window. There are no options to be set and the image does not include a scale or legend. It is simply an image of your current map view. The downloaded image will be compressed in a .zip file.

Exporting IForm Images

The Export IForm Image tool is specifically designed to export images that are compatible with IForm. The created images will be the appropriate dimensions and file size to be imported into IForm. The images are also locked to certain scale levels that are acceptable for IForm submissions. Markup tools in the green toolbox can be used to plot site and project boundaries to be included on the exported image.

More information and a video on creating IForm compatible images can be found here <http://www.ohpo.org/gis/tutorials.htm>

Miscellaneous Tools

Saving and Loading

Tools to save and load your session are located in the red toolbox. Saving a session will keep your current extent and user created markup, such as labels.

To save your work, click the blue disk. You will be prompted in the data window to choose a file name and save location. Files are saved with a .ssn file extension.

To load a previous session, click the open folder icon. Browse to your saved file and select Open Session.

Bookmarks Bookmarks

The current view can be bookmarked, much like bookmarking a web page, by using the Bookmarks button in the tab bar.


To create a bookmark, click the Bookmarks button. In the data window, click the Add Current Extent link that appears. Name your bookmark and click OK. The new Bookmark will be added to the data window.

To open a bookmark, click the Bookmarks button. Then click a bookmark link you've created from the data window. Your map will auto-zoom to your bookmarked location.

To remove an unwanted bookmark, click the red X next to it.

Exporting and Importing Shapefiles

User created markup can be exported as a shapefile using the Extract Data tool in the red toolbox. User created markup is any point or polygon added to the map using the Create Markup tools in the green toolbox.

To export a shapefile, you must first create a point or polygon. Once the point or polygon is created, click the Extract Data tool . In the data window, click Markup Shapefile and then click Download the ZIP file when it is ready. The shapefile(s) will be compressed in a .zip

file. Point and polygon data will be separated into their own shapefiles. Labels are not exported as part of a shapefile.

All exported shapefiles are projected in UTM Z17N NAD1927.

The Import data tool can be used to import shapefiles that have been created with the Online Mapping System to another GIS.

To import a shapefile, click the Import Data tool. You will be prompted to browse to 3 separate files that are all part of a shapefile. After selecting the 2 files, choose the layer name, symbology and location in the layer list. Once loaded, the shapefile will appear in the map and in the layer list. Imported shapefiles can be used for buffer and selection queries.

External Map Visualization

The Online Mapping System can access aerial imagery from a variety of sources including, Google Earth, Bing Maps and Yahoo Maps. To view the aerial imagery use the External Map Visualization tool in the red toolbox.

To use the tool, select it and then click the map location you would like to view aerial imagery for. After clicking your location you will be prompted to choose an image provider, Google, Bing or Yahoo. After selecting an image provider, the aerial imagery will open in a new window. If you navigate through the aerial imagery window you can refocus the Online Mapping System to match by clicking the Focus IMF option in the aerial imagery window.

Measuring Distance and Area

Tools for measuring distance and area are located in the red toolbox.

To measure distance, select the tool and then click along the feature you want to measure. The results will be shown in the data window. The units of measure used are relative to your current scale and will change as you zoom in and out.

To measure an area select the tool and then click along the border of the area you want to measure. The overall area will be presented in the data window along with the option to select measurement units.