Falcon User Guide

For General Use

Indiana Department of Homeland Security,
GIS Section

Version 2014.04.15

Introduction

This document serves to provide guidance in the general use of the Falcon Flex viewers (version 3.4) that are available in WebEOC. The viewers are designed to provide GIS information to WebEOC users. Not all users have access to every Falcon viewer; permissions are set by WebEOC administrators and/or Indiana Department of Homeland Security (IDHS) GIS staff.

It should be noted that this guide provides general viewer use and is not necessarily specific for each viewer and its associated contents. Some topics and tools covered in this document may or may not apply to the viewer(s) you can access. Should you have specific questions regarding a viewer please feel free to contact a member of the IDHS GIS staff (listed below).

Also, please be aware that some viewers contain Critical Infrastructure (CI) information that should not be disseminated to third party persons or agencies; this kind of information should in no way be shared with the public. The primary source for CI data contained in the viewers comes from the 2013 Homeland Security Infrastructure Program (HSIP) Gold dataset. For more information about this data, please visit: https://www.hifldwg.org/

For additional questions or concerns, please contact:

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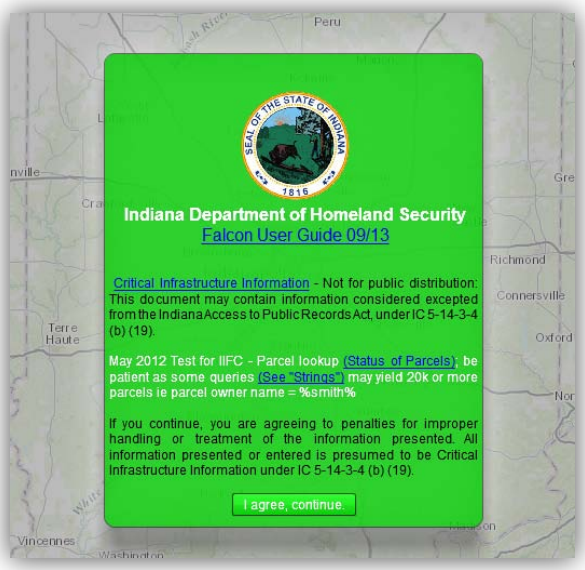
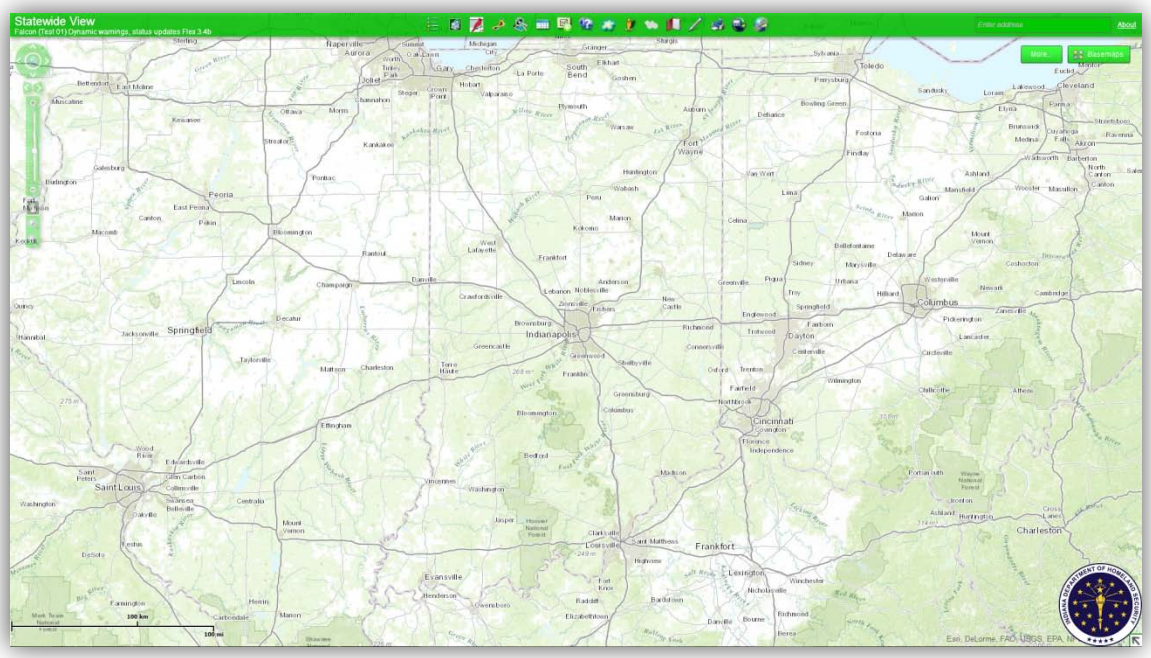
About the Viewer

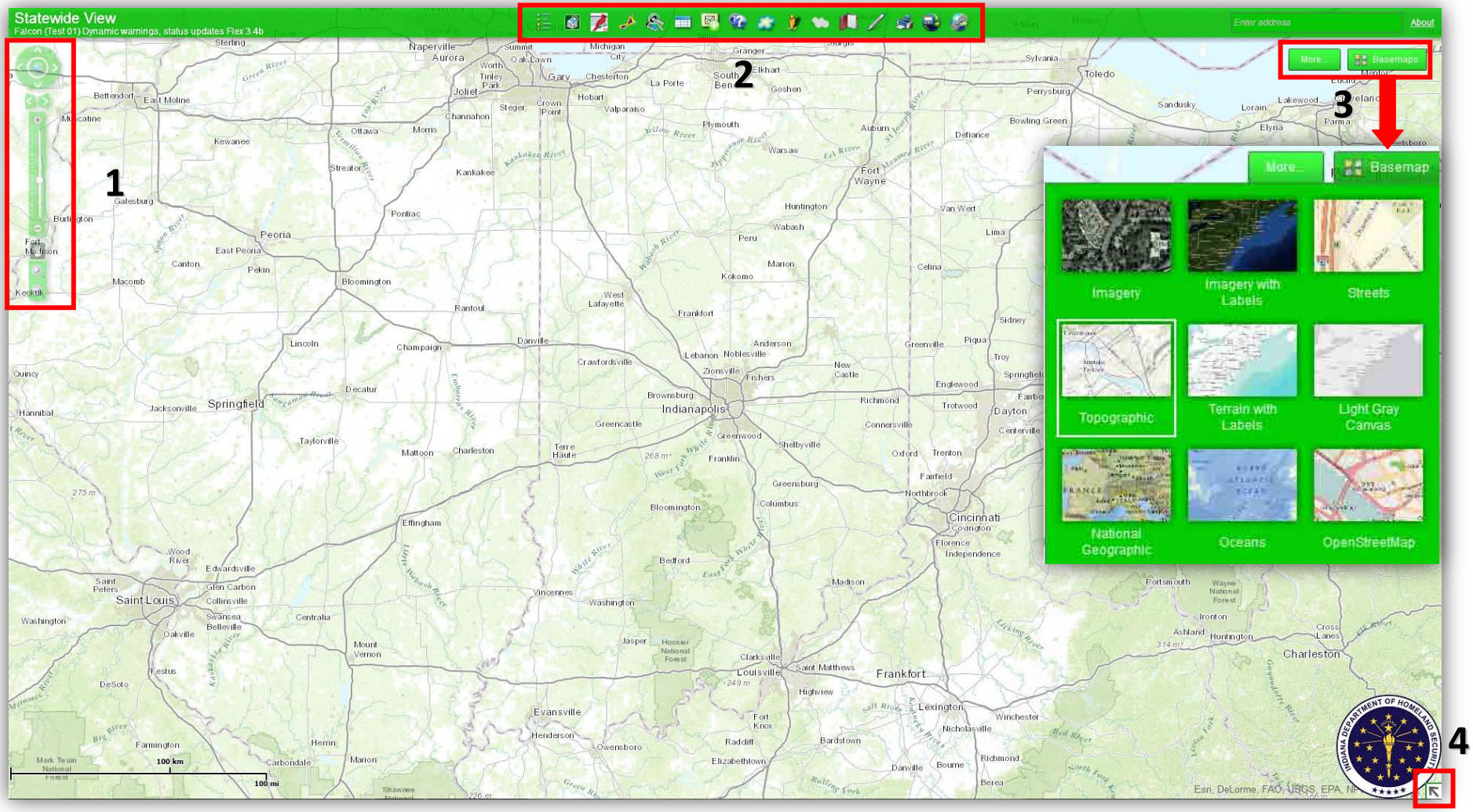
Current Falcon configuration requires that users log in to the viewer with their WebEOC log-in credentials; enter your WebEOC log-in information in the Sign In box when prompted.



Viewers also have an additional pop-up screen to remind users that Critical Infrastructure Information is available for viewing and is **NOT** to be shared or distributed to others. Please use discretion when accessing data within the viewers; CIKR information is not for public dissemination.



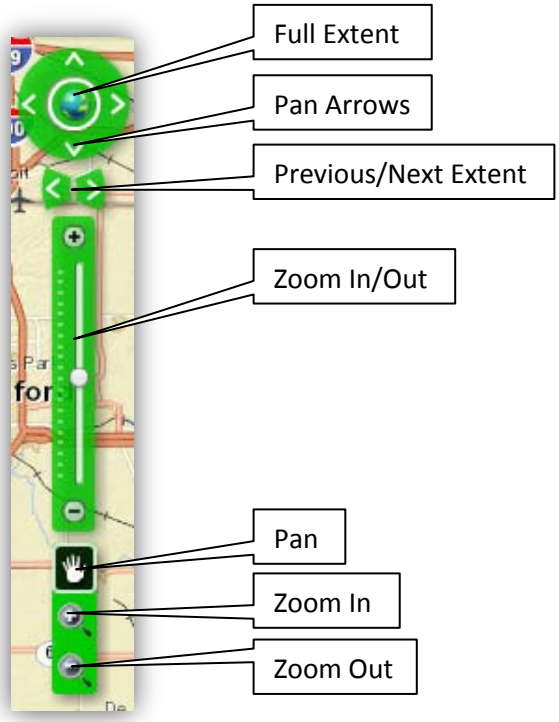
Typical Viewer Layout (This is an example)



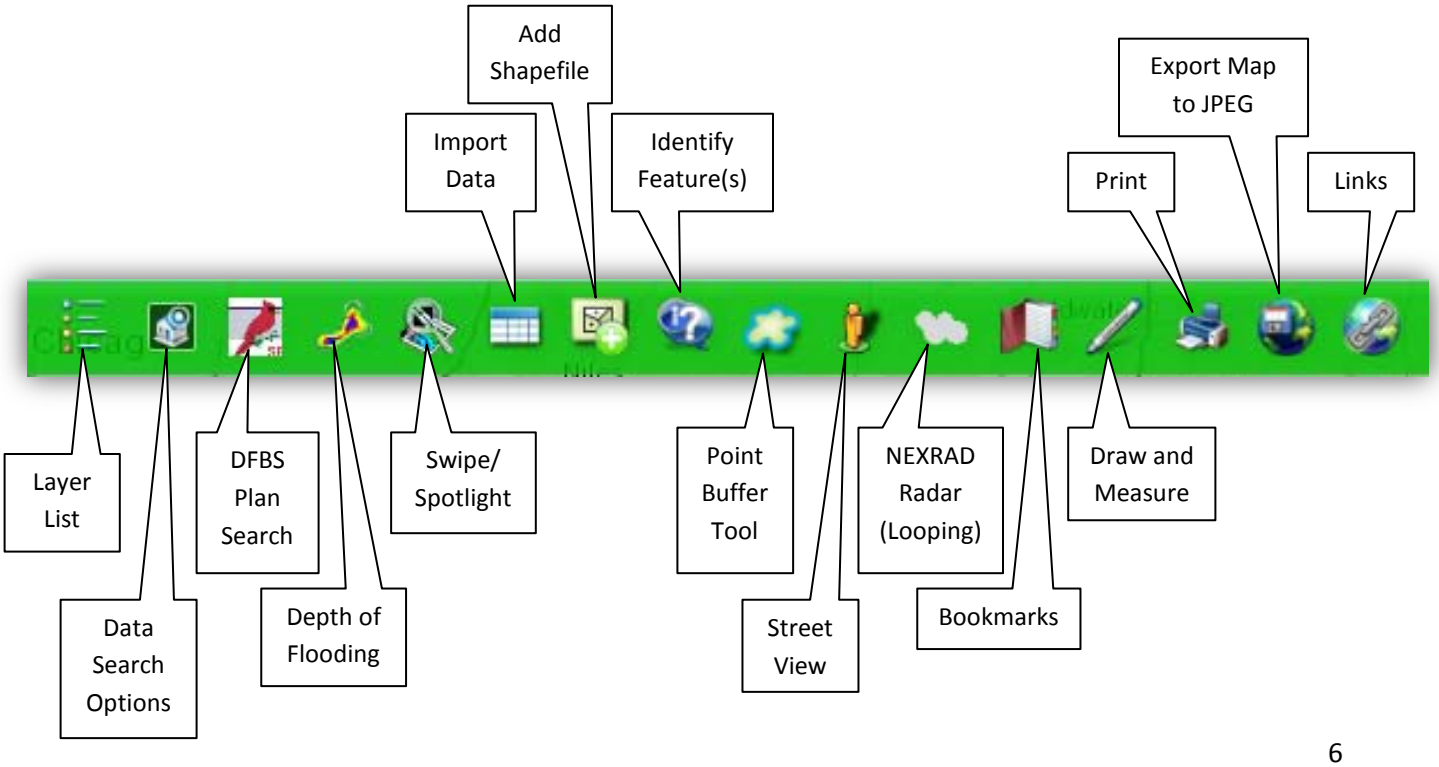
1 – Map controls (zoom in, zoom out, etc.)
2 – Widgets
3 – Map layers and base map options (imagery, street, topo, etc)
4 – Overview map

Map Controls

Map controls allow users to zoom in/out and pan the map.



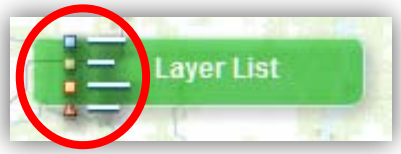
Widgets



Hover the mouse over a widget to see its name. To activate a widget simply click on the widget's icon in the toolbar. Widgets can be minimized and maximized once they have been opened.

To minimize a widget click on the minimize button in the upper right-hand corner of the widget.

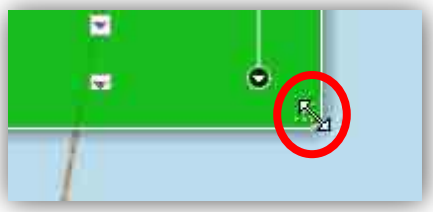
To maximize a widget, click on the widget icon.



To close a widget, click on the close button in the upper right-hand corner of the widget.

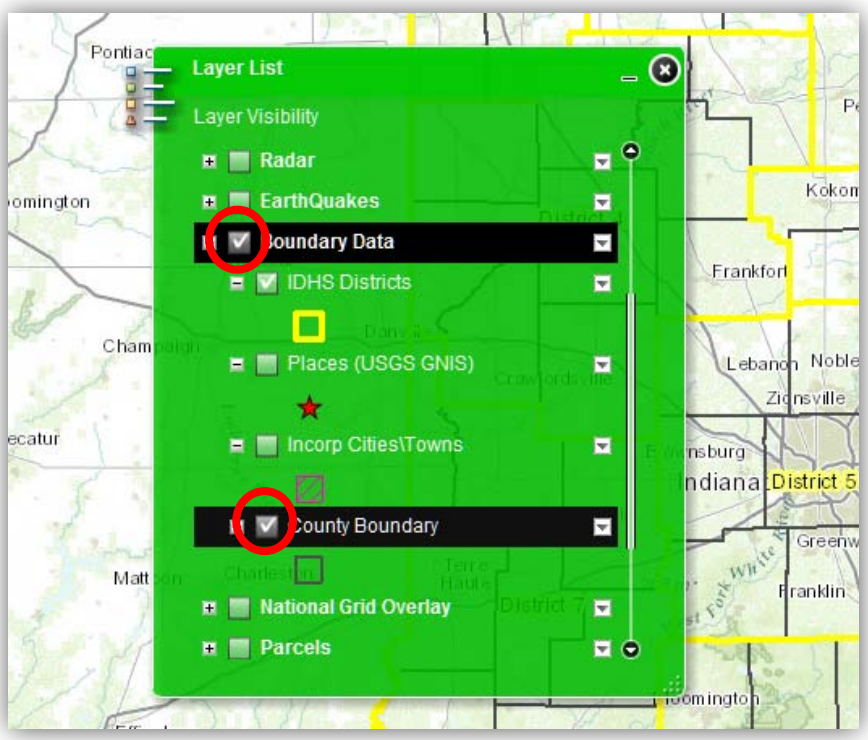
To move an open widget to another location on the screen simply left-click and hold down the mouse button on the widget's title bar and drag it to the new location; release the mouse button to stop dragging.

The size of a widget window can also be adjusted by dragging the lower right-hand corner of the widget window; left-click and hold down the mouse button while dragging, and release to stop.



Layer List widget

The Layer List widget allows users to view a list of available data (with associated symbology) and toggle the layers on/off in the map. To ensure a layer is visible on the map, be sure there is a 'check' in the box next to the parent layer group to which the layer belongs.



Additionally, users can zoom to the layer, adjust transparency, move the layer up/down (which affects the order in which the layer draws on the map), expand/collapse all layers within the layer group, and view a description of the data (if available). To access this functionality, click on the downward-facing triangle next to the *layer group*.

Data Search Options widget

Data search options correspond with parent data groups in the data layers (i.e. the way data is grouped in the table of contents is the same way it is grouped for searching). For example, if you want to search schools use the 'Search Educational Facilities' tool since school data is found in the Educational Facilities layer group.

To use the search options widget, select the appropriate option for the data you wish to search. The widget will open to the default search screen. For this example we will search using the Search Dams, Levees, & Breach Inundations widget. (Only one layer can be searched at a time.)

Use the 'Search Layer' dropdown menu to select the layer you wish to search.

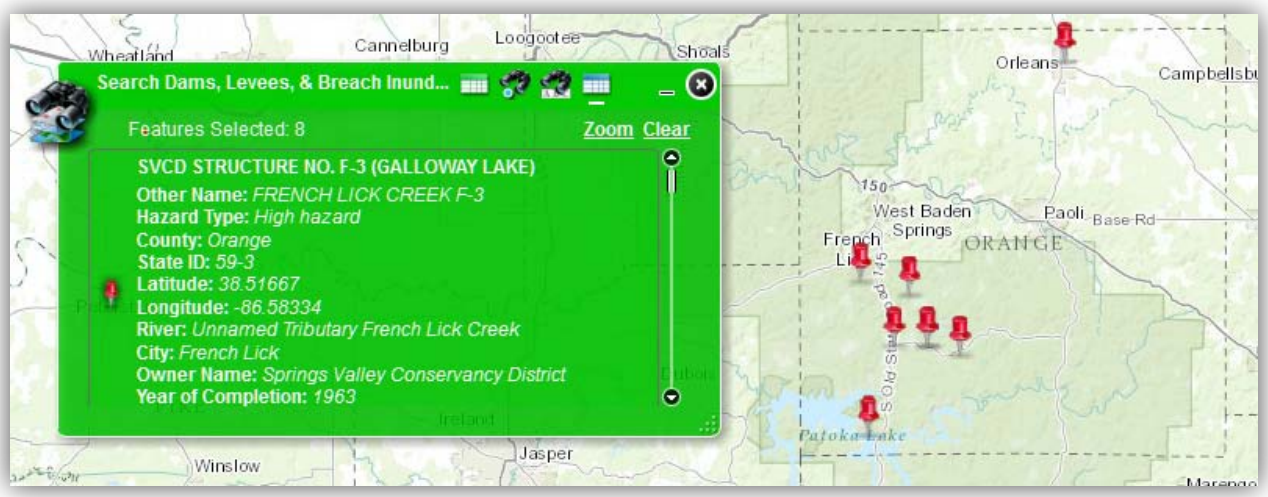
Use the 'Search Layer Field' dropdown menu to select the attribute by which you want to search. Some search options require a search word or phrase to be typed in while others will provide an additional dropdown menu to select a search option.

Search type examples:

Manual Search

Search Using a Dropdown Menu

Once the search criteria have been submitted, the widget will return a list of results. Zoom to a specific site by selecting the 'Zoom' option in the 'Results' window, or by clicking on an individual result in the list of results.



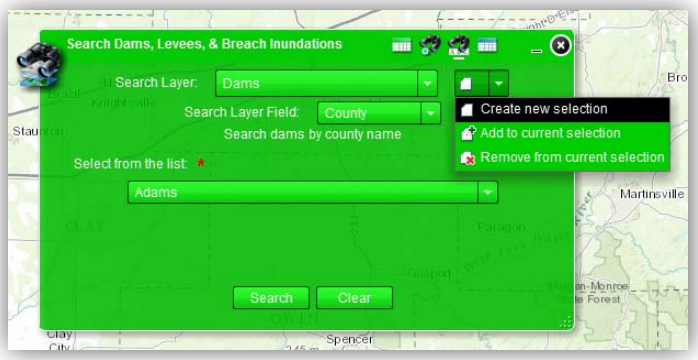
By clicking on the 'Show Result in Grid' menu button you can view the results in a tabular format, with the option to export them.

Dam Name	Other Name	Hazard Type	County	State ID	Latitude	Longitude	River	City	Owner Name	Year of Completion	EAP (Yes/No)
OLINGER LAKE DAM		Low hazard	Orange	59-13	38.42	-86.61945	Unnamed Tributary Patol	Dubois	*Indiana Department	1970	No
ORLEANS LAKE DAM		High hazard	Orange	59-5	38.87667	-86.44695	Unknown	Orleans	Town of Orleans	1950	No
SPRINGS VALLEY LAKE (F7)	TUCKER LAKE SPRIN	High hazard	ORANGE	77499	38.48139	-86.56695				1963	No
SVCD STRUCTURE NO. F-2 (LIG	FRENCH LICK CREEI	Low hazard	Orange	59-1	38.52555	-86.62611	Unnamed Tributary Frenı	French Lick	Springs Valley Conse	1965	No
SVCD STRUCTURE NO. F-3 (GAI	FRENCH LICK CREEI	High hazard	Orange	59-3	38.51667	-86.58334	Unnamed Tributary Frenı	French Lick	Springs Valley Conse	1963	No
SVCD STRUCTURE NO. F-6 (CO	Collins Lake Dam	High hazard	Orange	59-10	38.48167	-86.59666	Unnamed Tributary Frenı	French Lick	Springs Valley Conse	1965	No
SVCD STRUCTURE NO. F-7 (TUI	FRENCH LICK CREEI	High hazard	Orange	59-2	38.48167	-86.56305	French Lick Creek	French Lick	Lost River / Springs V	1963	No

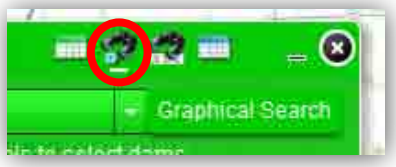
Results can be sorted by column by clicking on the column header. The window size can be adjusted by left-clicking and holding down on the mouse button and dragging the lower right-hand corner of the window; release the mouse button to stop.

Results in the table can be exported in two formats – CSV or text. By exporting as a CSV file, results can be opened in an MS Excel spreadsheet. You will be prompted to save the file when you click on the 'Export' button. Results can be cleared using the 'Clear' button in the 'Results' window.

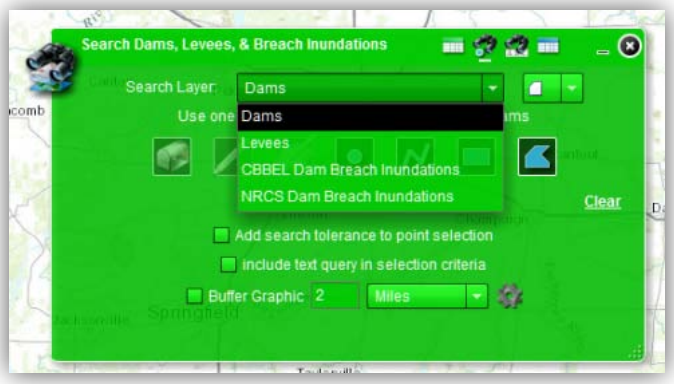
Users can also choose to create a new selection, add to the current selection, or remove from the current selection using the dropdown menu (paper icon) to the right of the 'Search Layer' option.



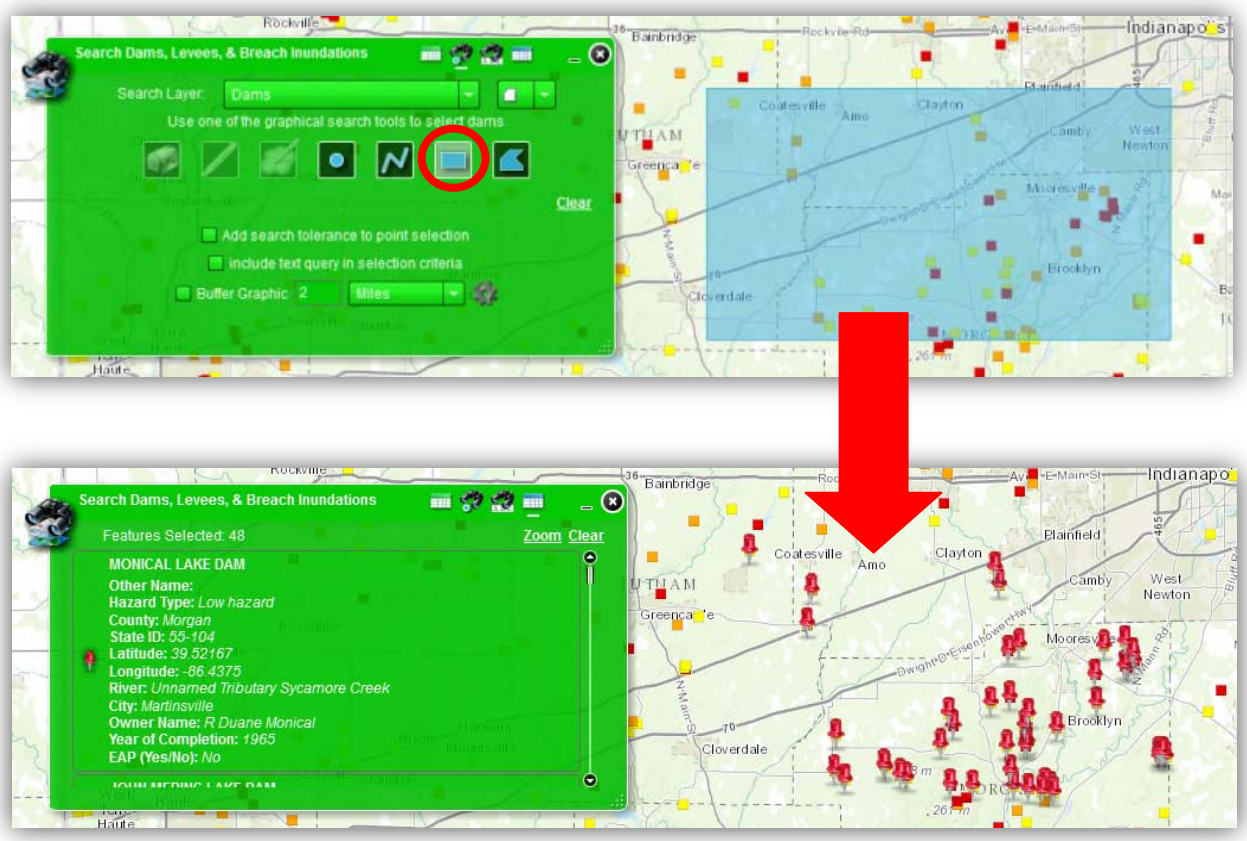
A graphical search can also be performed using this search widget. Click on the 'Graphical Search' menu button to enable this option.



Use the 'Search Layer' dropdown menu to select the data layer you wish to search.



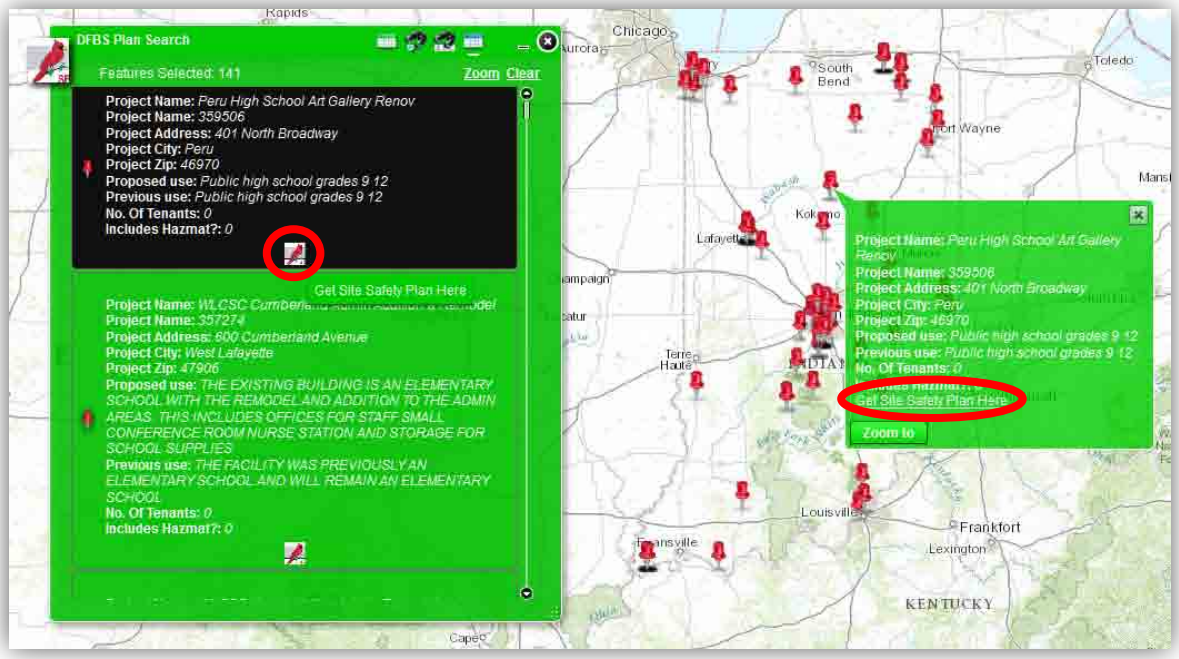
Select a graphical search tool, hold down the left mouse button and draw a shape (or drop a point); release the mouse button to stop drawing and view results.



DFBS Plan Search widget

The DFBS Plan Search widget allows users to search the IDHS Department of Fire and Building Safety/Services Plan database. From there, users can view site safety plans (when available). This widget works exactly like any of the other data search widgets (see the *Data Search Options widget* section in this document for more detailed information about how this widget works).

Users can search DFBS plans by project name, proposed use, or project ID. To access safety plans, click on the hyperlink in the pop-up for the building site (pop-ups will appear by hovering over or clicking on a result), or click on the cardinal icon under the site information in the results list. You will be prompted to open the safety plans; chose to open the plan as a PDF document. (See graphic on the following page.)



Depth of Flooding widget

This widget is designed to let users approximate flooding at a specified point location based on flood depth (in feet) and flood extent (in miles or feet).

Enter values for flood depth and flood extent into the appropriate boxes and select the units of measurement from the dropdown box for the flood extent. Click on the blue point icon and drop the point on the location you wish you be the center of the analysis on the map. Click the 'Submit' button to run the results. (See graphic on the following page.)

Click anywhere in the results to get the depth in feet for that location. To clear the results, click the 'Clear' button.

Swipe/Spotlight widget

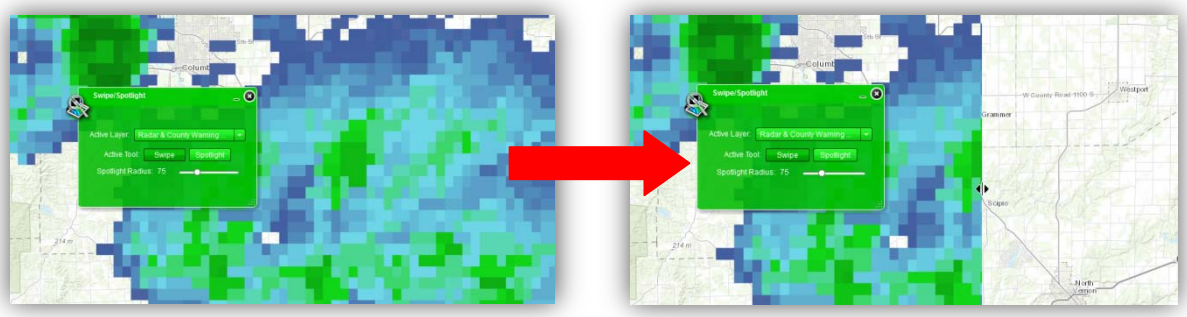
The Swipe/Spotlight widget allows users to easily switch back and forth between the data they are viewing without having to turn layers on or off. This widget is particularly useful for comparing data.

The swipe portion of the widget works by allowing users to swipe up/down or left/right with their mouse to see what is under a specified data layer; the spotlight portion of the widget uses a circle (with a user-defined size) to show what is under a specified data layer.

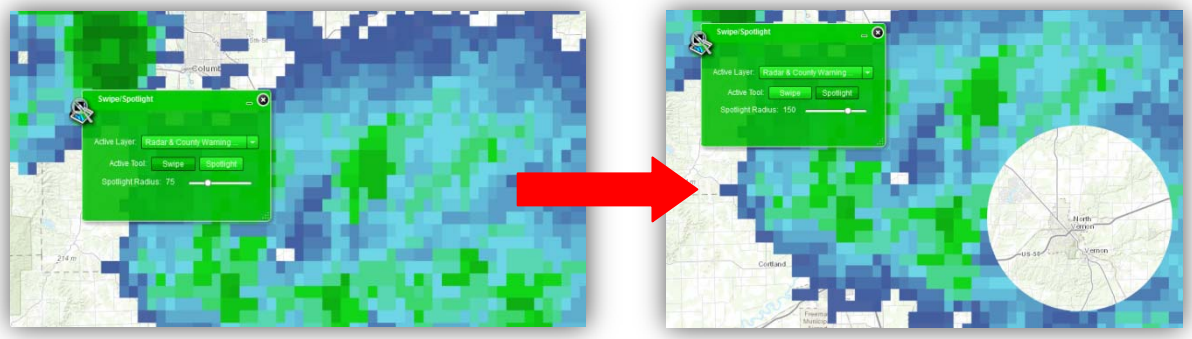
Select the active layer from the Active Layer dropdown box (this is the layer that can be swiped or spotlight-ed). Then, select whether you wish to use the Swipe or Spotlight tool by clicking on your selection next to the Active Tool option. Adjust the Spotlight Radius as necessary by using the slider bar.

Click and hold down on the left mouse button to use the swipe or spotlight tool. Drag the mouse around the map. Release the mouse button to stop.

Swipe tool



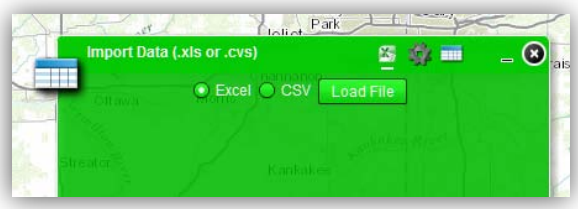
Spotlight tool



Import Data widget

The Import Data widget can be used plot points using latitude and longitude fields from an .xls or .cvs file.

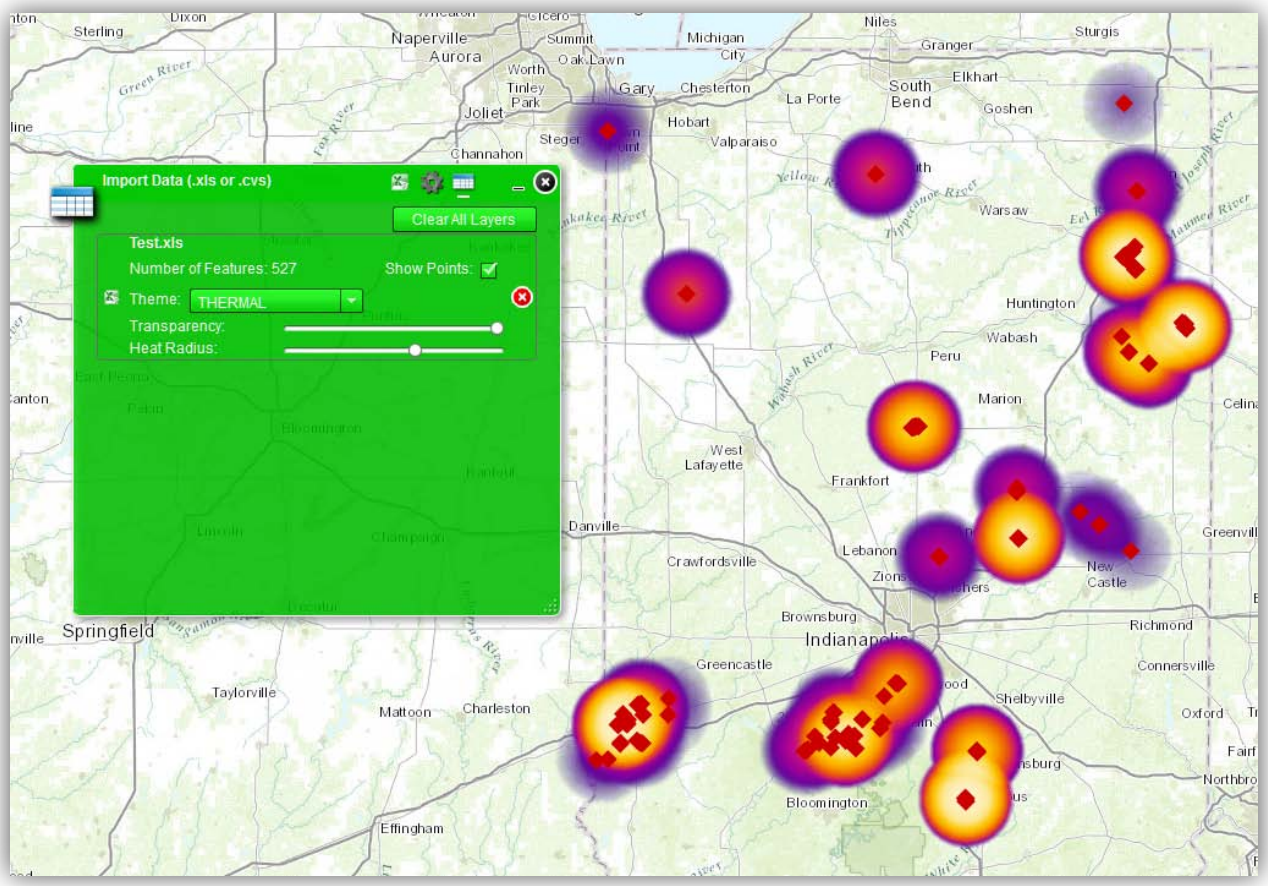
Open the widget and select the file type to be uploaded. Then, select 'Load File' and navigate to the file location. The file you import needs to have a field titled 'latitude' and a field titled 'longitude.' These fields should be in decimal degrees.



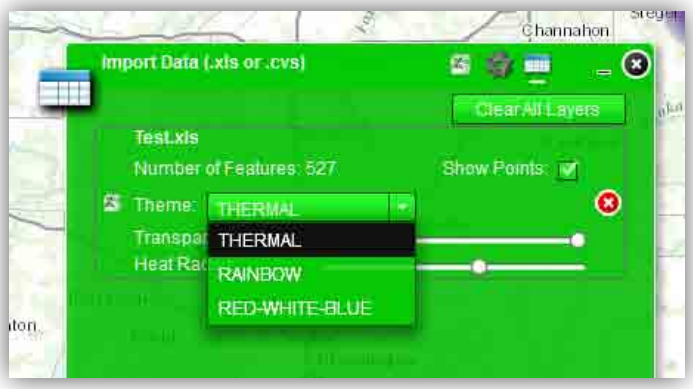
Once the file is selected, set the Projection of data on file: to Lat/Long. Make sure the X Coord Field is set to Longitude, and the Y Coord Field is set to Latitude. You may also choose a title field, link field, or alias field. Additionally, you can choose to enable the heat map function.

Point characteristics, such as size, shape, and color, can be change on the Preferences tab ***before*** clicking the 'Add data on map' button.

Once preferences are set, click the 'Add data on map' button to load the file and add it to the map.



You can choose to show the points by checking the 'Show Points' box. The color theme and heat map transparency and radius can also be adjusted. Click the red 'X' to the right of the settings to clear the layer from the map.

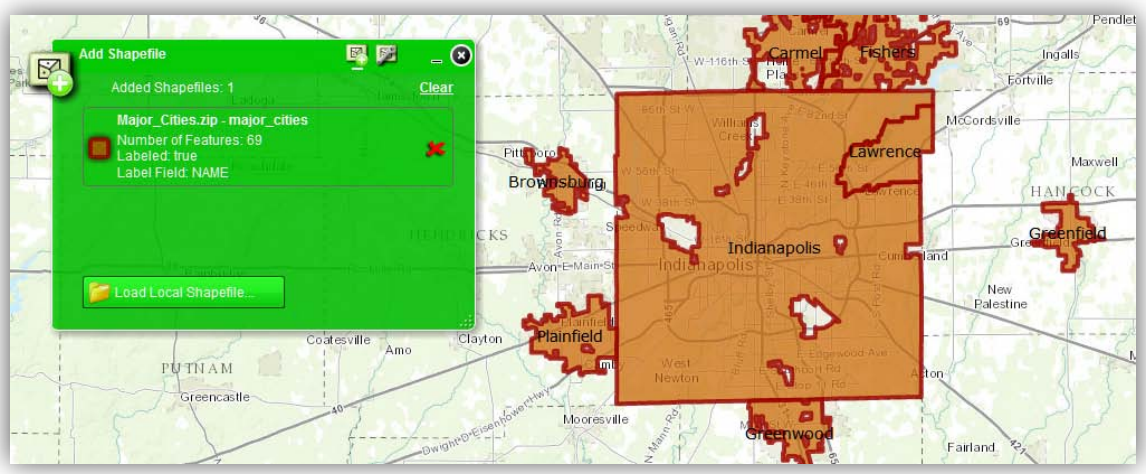


Add Shapefile widget

The Add Shapefile widget allows users to load a GIS shapefile directly into the viewer. Shapefile are comprised of multiple files (i.e. .shp, .dbf, .shx, .prj, .sbn, .xml). Because shapefiles consist of multiple files, the files must be zipped in a .zip file in order to be uploaded into the viewer. The .zip file must contain (at a minimum) a .shp and .dbf file; however it is suggested that a .prj file also be included.

Before loading the shapefile, symbology for the shapefile being uploaded can be defined. Click on the Preferences tab. Labels, line characteristics, fill characteristics, and marker characteristics can be set.

After setting symbology preferences, click on the Load Shapefile tab. Click on the 'Load Local Shapefile' button. Navigate to the location of the .zip file you wish to upload and click 'Open.'

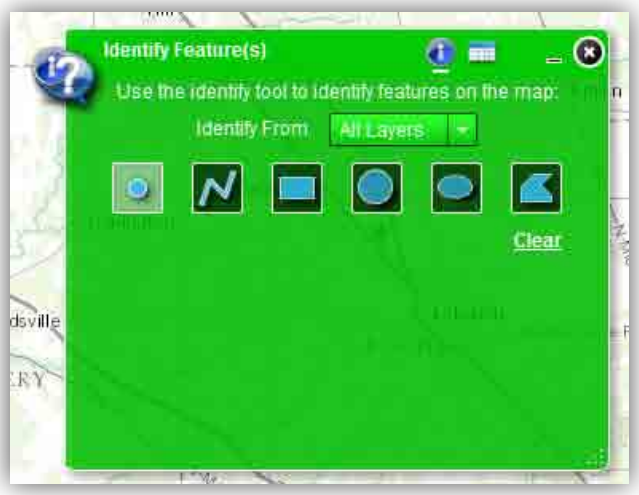


The shapefile can be deleted by clicking on the red 'X' next to the results. Multiple shapefiles can be uploaded to the viewer, one at a time.

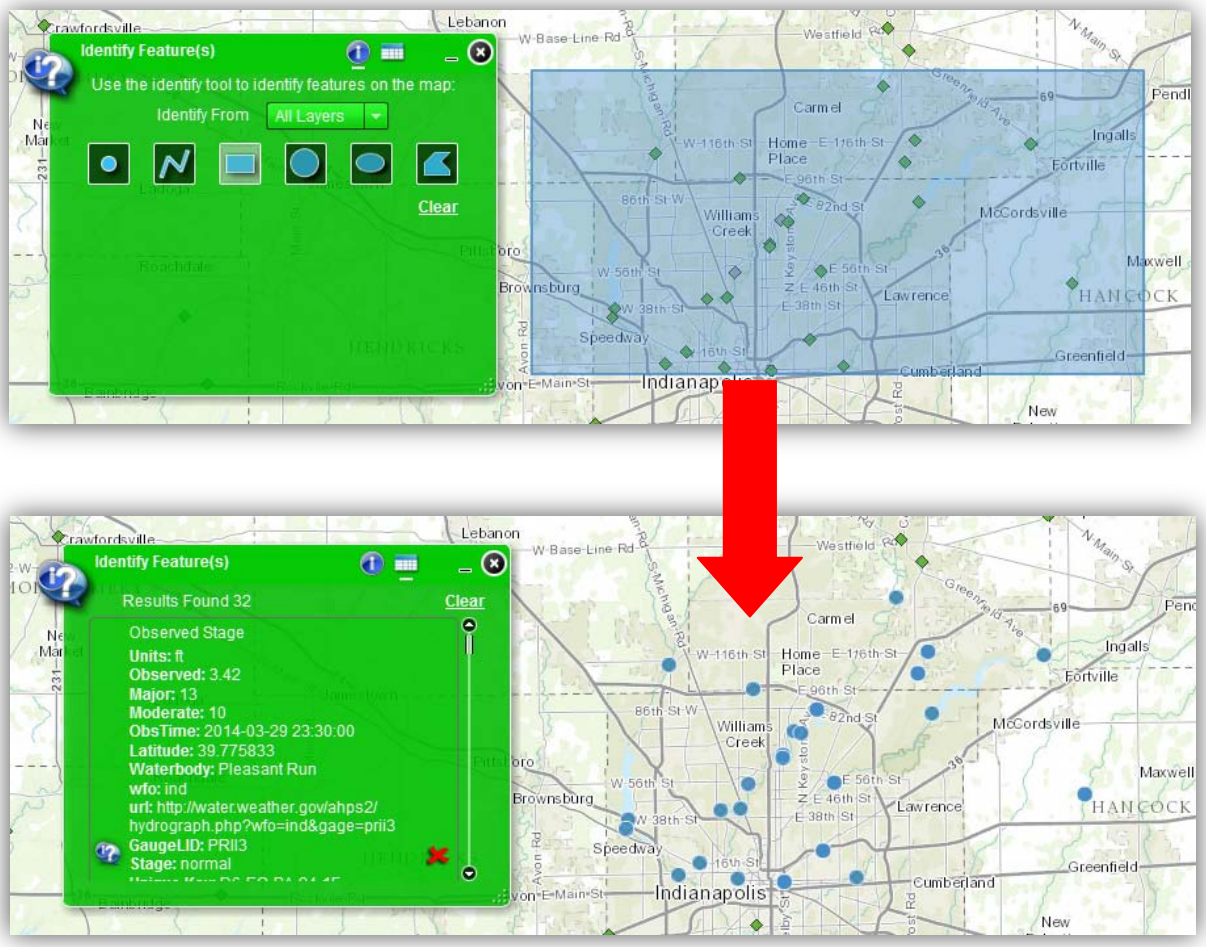
Identify Feature(s) widget

The Identify Feature(s) widget allows users to select one or more features at a time and see attributes about those feature(s).

Open the widget, select the layer to identify from the dropdown box (or select All Layers), choose a graphical search option, and draw a point, line, or polygon around the feature(s) you wish to select.



If All Layers is selected, then every layer included in the selection area will show up in the results.

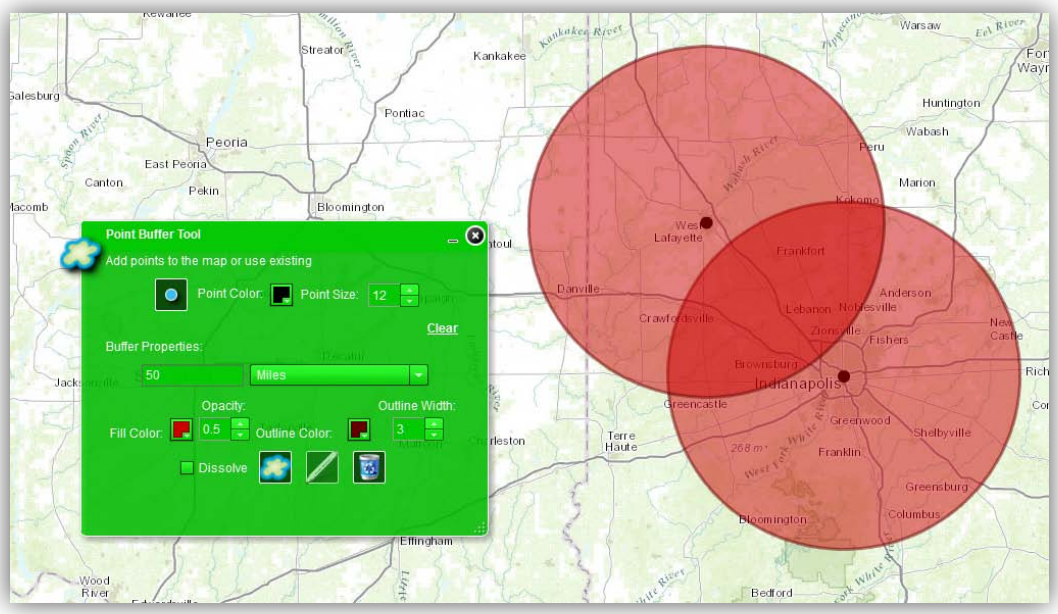


Clear individual results by clicking on the red 'X' next to that result, or clear all results by clicking the 'Clear' button on either tab in the widget.

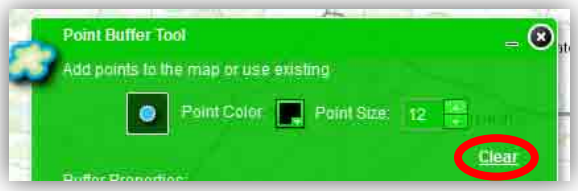
Point Buffer widget

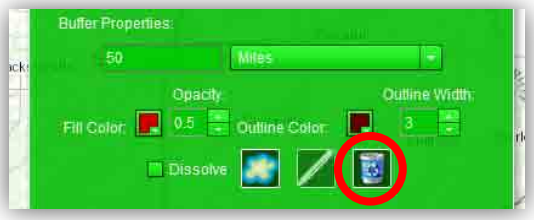
The Point Buffer widget allows users to define a point location and apply a buffer around that point. Buffers are user-defined and can be applied in various units of measurement. Open the widget, specify the buffer properties, and set the symbology properties for the point and buffer area. (See graphic on the following page.)

Once the buffer properties are set, click on the 'Add Point(s)' button and place a point or points on the map. Then click the 'Apply Buffer' button (the button that looks like a cloud).



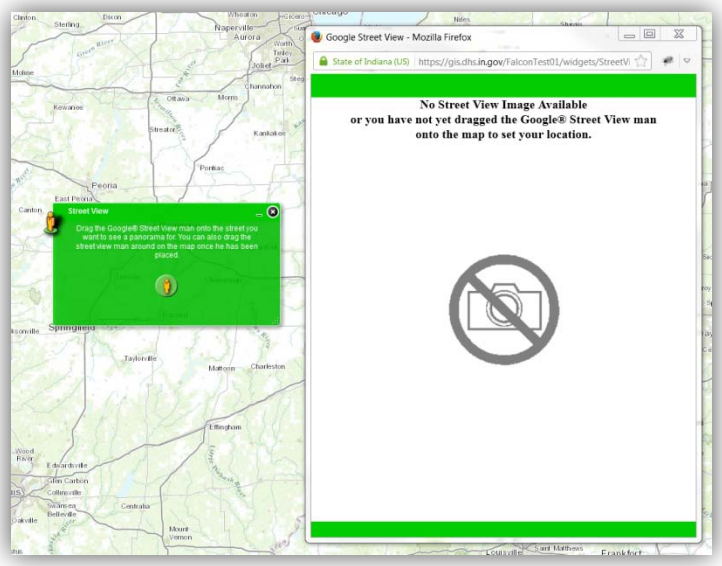
To clear the point(s), click the 'Clear' text/button next to the point properties. To clear the buffer(s), click the 'Clear' button (the button looks like a recycle bin) under the buffer properties.



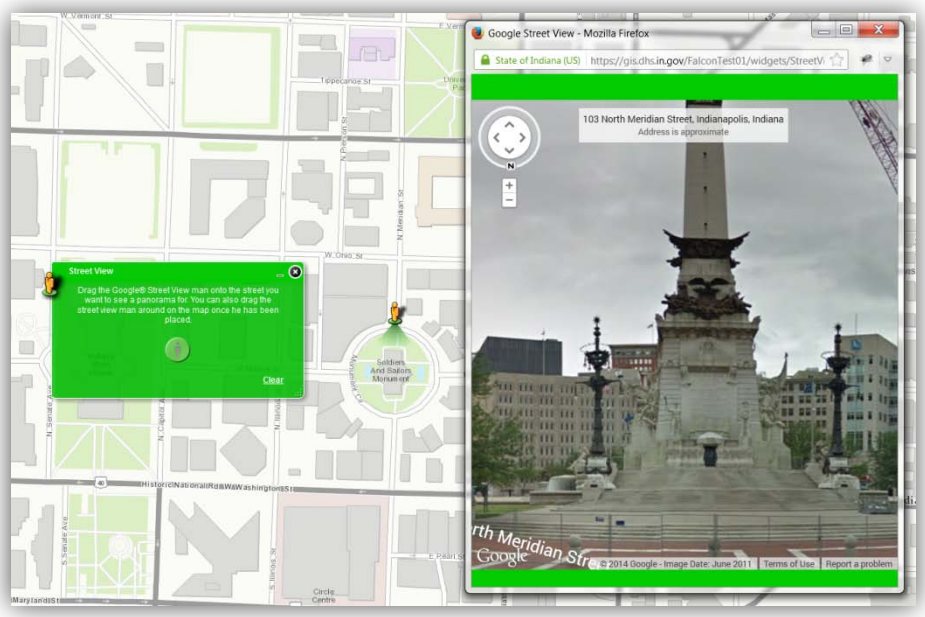


Street View widget

The Street View widget provides street level views of most major locations. The caveat with this widget is that it is dependent upon available information from Google map services. (i.e. If Google does not have data for the location that is selected, there will not be a result.)

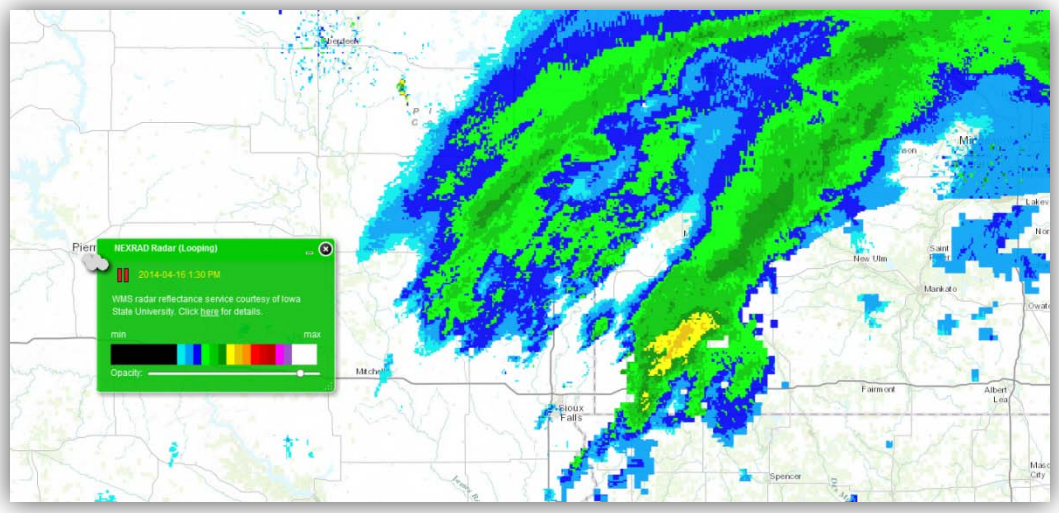


Upon opening the widget, an additional browser window will open. The window will not have an initial street view. Click on the yellow-man icon in the widget window and drag-and-drop the icon in the location on the map where you wish to view the street view. If information is available, the browser window will automatically display the street view; you can pan the view.

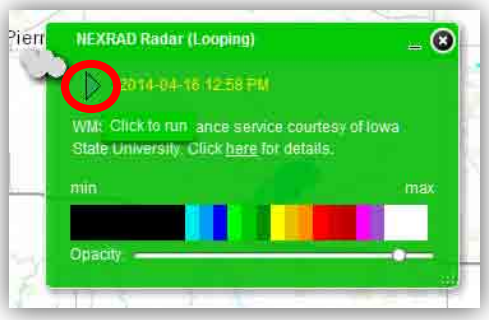


NEXRAD Radar (Looping) widget

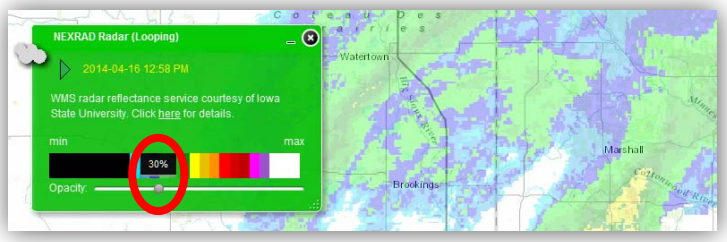
The NEXRAD Radar (Looping) widget provides a looping radar mosaic. The loop can be paused and the opacity of the radar can be changed to see more/less of the underlying maps. The timestamp is given for each radar image. This looping radar widget is provided by Iowa State University.



The loop can be paused by clicking the 'Click to pause' button. Play the loop by clicking the 'Click to run' button.



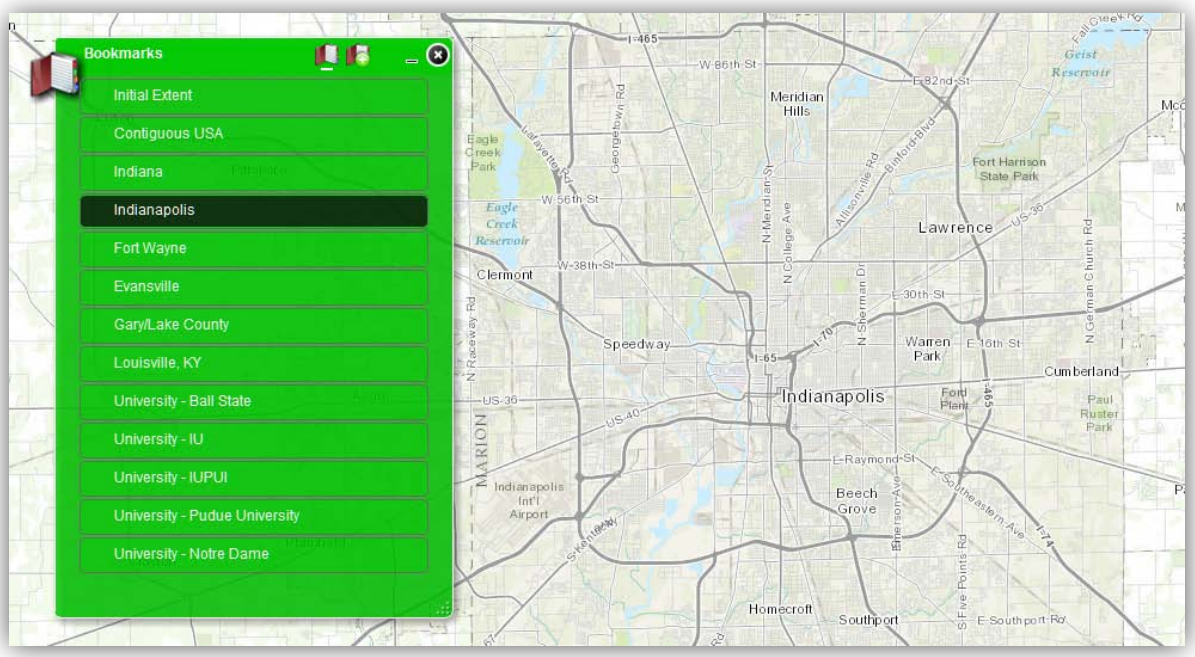
Use the 'Opacity' slider bar to change the opacity of the radar images.



Bookmarks widget

The Bookmarks widget contains a pre-populated list of bookmarked locations. Temporary bookmark locations can be created by the user. User-added bookmarks will only remain active on the list while the current browser session is open; once the current window is closed the user-added bookmark will be absent from the list when the viewer is re-opened.

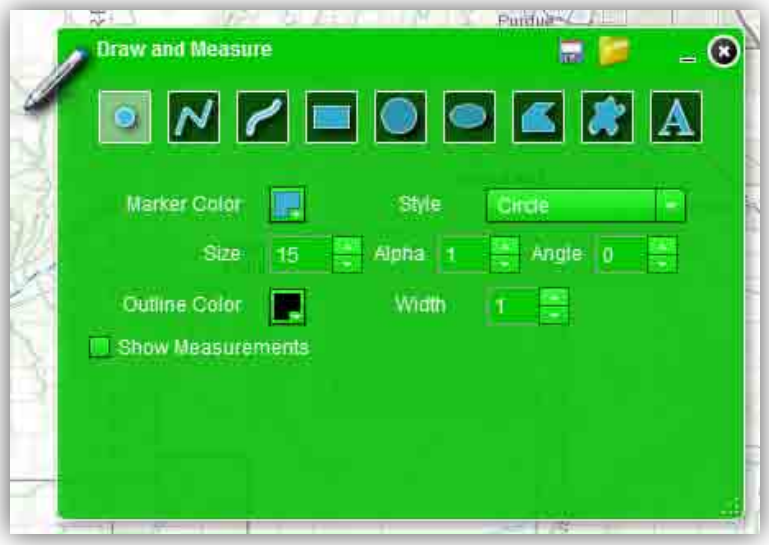
To zoom to a location simply click on the location in the list.



To add a temporary bookmark, zoom to the location/extent you wish to bookmark. Click on the 'Add Bookmark' tab in the widget. Enter a name for the new bookmark and click the 'Add Bookmark' button. The new bookmark is now added to the list.

Draw and Measure widget

The Draw and Measure widget allows users to add points, lines, polygons and text to the map. Additionally, users can measure area and distance in various units. This widget does **not** edit or alter underlying data; it merely provides overlays to the map. Users also have the option to save graphics/text by clicking on the 'Save Graphics Layer' tab and saving the graphic to their computer.



The Draw and Measure widget has 9 tools to choose from:

Draw Point

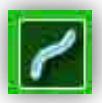
Draw Rectangle

Draw Polygon

Draw Line

Draw Circle

Draw Freehand Polygon



Draw Freehand Line

Draw Ellipse

Add Text

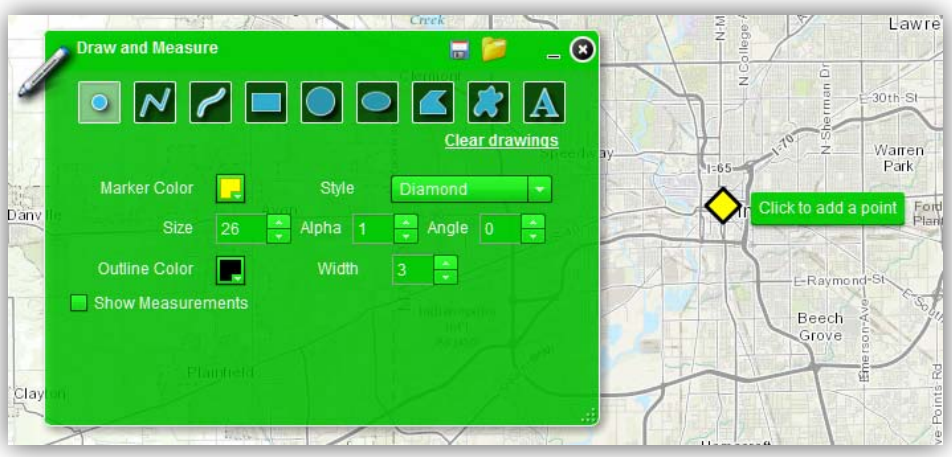
For all the draw options, measurements can be calculated by checking the 'Show Measurements' box. Additionally, drawings can be cleared by clicking the 'Clear drawings' button.

Draw Point

Functionality: Users can place point markers consisting of various shapes.

Properties: Point color, style, size, outline, angle, and transparency (alpha) can be defined.

To add a point, click on the 'Draw Point' button, specify the point's properties (color, size, etc.), and then click the desired location on the map to place the point.

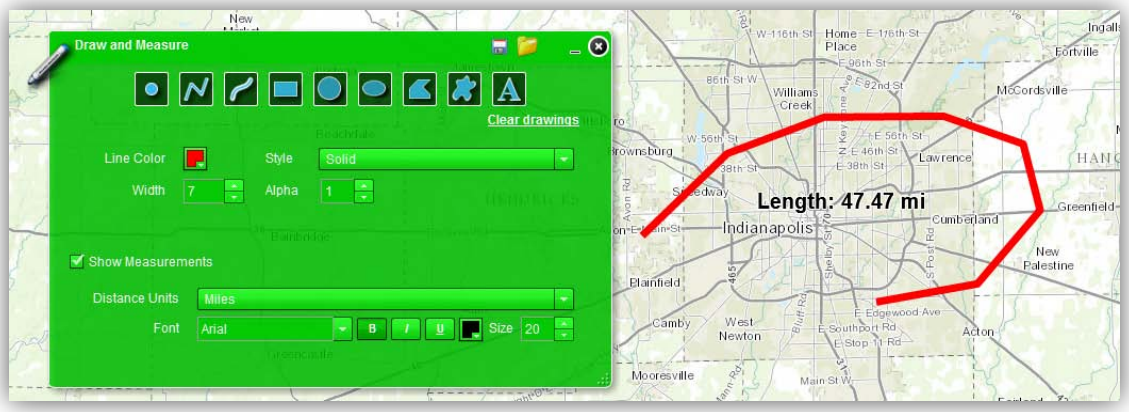


Draw Line

Functionality: Users can draw multi-part line features that measure distance in various units.

Properties: Line color, style, width and transparency (alpha) can be defined.

To add a line, click on the 'Draw Line' button and specify the line's properties (color, width, etc.). Specify the units from the dropdown box; set the unit display properties. Then click on the desired starting location to begin drawing the line. Click once to create a node; double-click to end the line.

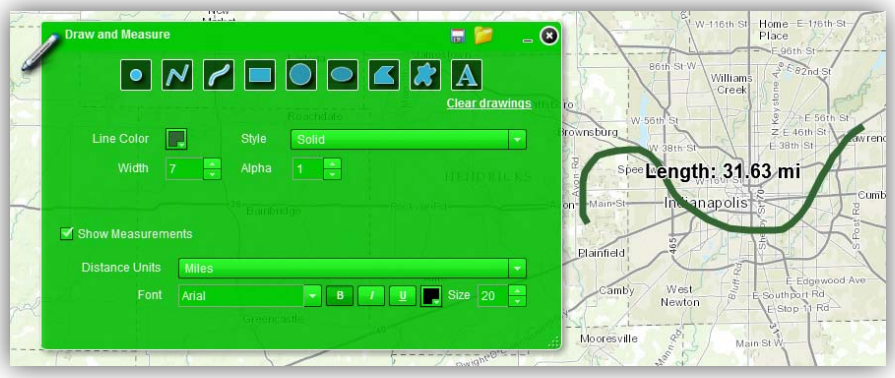


Draw Freehand Line

Functionality: Users can draw a freehand line that measures distance in various units.

Properties: Line color, style, width and transparency (alpha) can be defined.

To add a freehand line, click on the 'Draw Freehand Line' button and specify the line's properties (color, width, etc.). Specify the units from the dropdown box. Then click on the desired starting location to begin and hold down as you draw. Release the mouse to end the line.

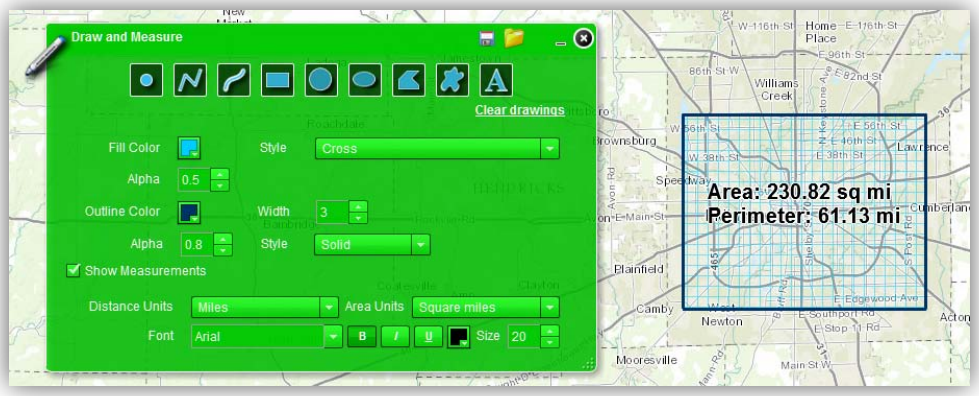


Draw Rectangle

Functionality: Users can draw a rectangular box that measures area/distance in various units.

Properties: Fill color, outline color, style, and transparency (alpha) can be defined.

To add a rectangle, click on the 'Draw Rectangle' button and specify the rectangle's properties (color, style, etc.). Specify the units from the dropdown box. Then click and hold the left mouse button and drag a box around the desired area. Release the mouse button to complete the rectangle.

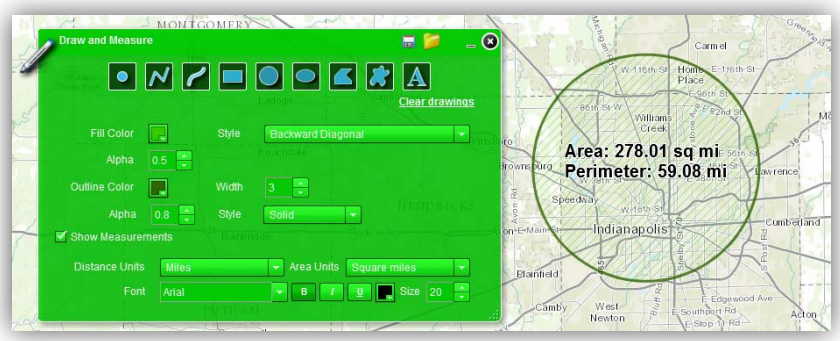


Draw Circle

Functionality: Users can draw a circle that measures area/distance in various units.

Properties: Fill color, outline color, style, and transparency (alpha) can be defined.

To add a circle, click on the 'Draw Circle' button and specify the circle's properties (color, style, etc.). Specify the units from the dropdown box. Then click and hold the left mouse button and drag a circle around the desired area. (Note: Click on the desired center point of the circle to begin – the circle expands outward around a center point.) Release the mouse button to complete the circle.



Draw Ellipse

Functionality: Users can draw an ellipse that measures area/distance in various units.

Properties: Fill color, outline color, style, and transparency (alpha) can be defined.

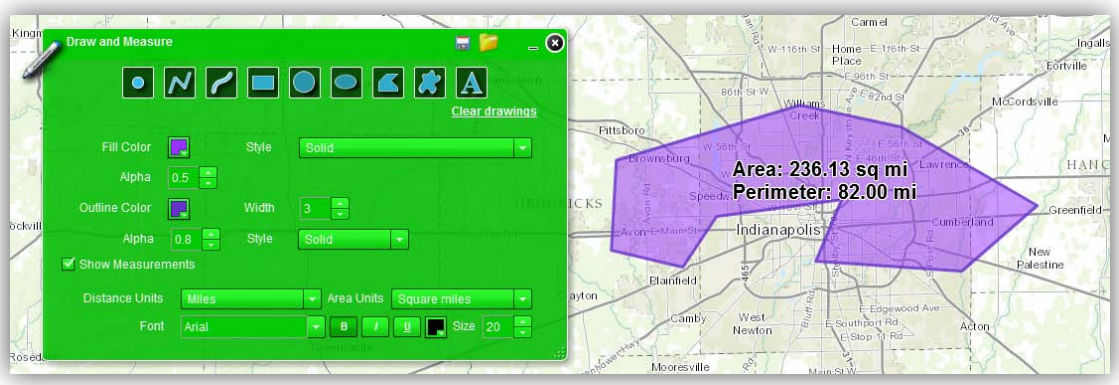
To add an ellipse, click on the 'Draw Ellipse' button and specify the ellipse's properties (color, style, etc.). Specify the units from the dropdown box. Then click and hold the left mouse button and drag an ellipse around the desired area. (Note: Click on the desired center point of the ellipse to begin – the ellipse expands outward around a center point.) Release the mouse button to complete the ellipse.

Draw Polygon

Functionality: Users can draw a polygon that measures area/distance in various units.

Properties: Fill color, outline color, style, and transparency (alpha) can be defined.

To add a polygon, click on the 'Draw Polygon' button and specify the polygon's properties (color, style, etc.). Specify the units from the dropdown box. Then click once to start drawing; click once to add additional nodes/points to the shape. Double-click to end the polygon.

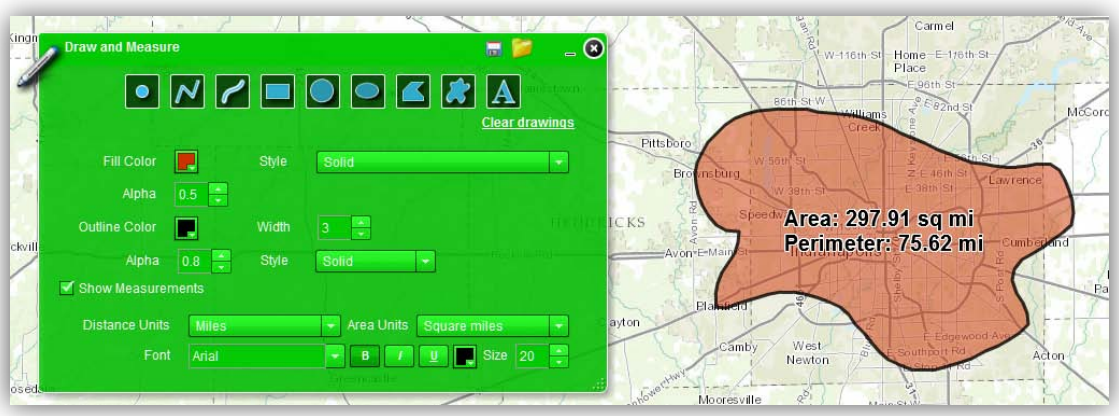


Draw Freehand Polygon

Functionality: Users can draw a freehand polygon that measures area/distance in various units.

Properties: Fill color, outline color, style, and transparency (alpha) can be defined.

To add a polygon, click on the 'Draw Freehand Polygon' button and specify the polygon's properties (color, width, etc.). Specify the units from the dropdown box. Then click once to start drawing; click once to add additional nodes/points to the shape. Double-click to end the polygon.

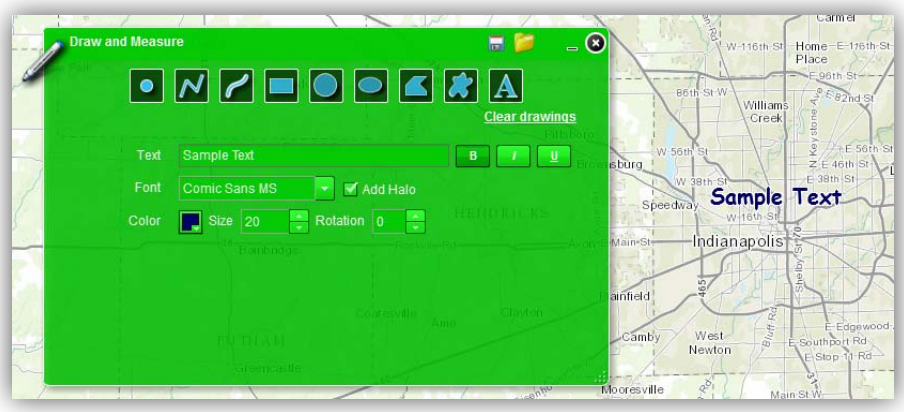


Add Text

Functionality: Users can add text labels.

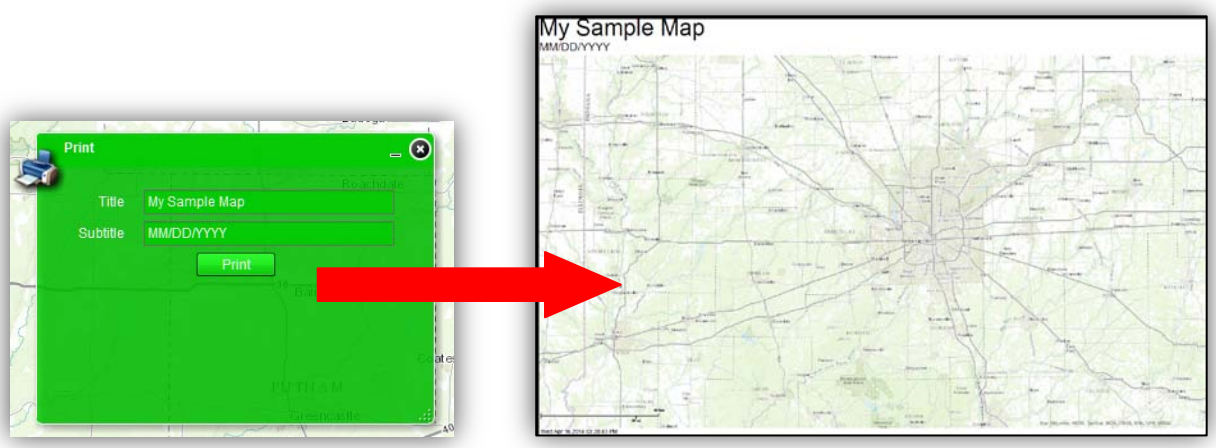
Properties: Color, text font and text size can be defined.

To add text, click on the 'Add Text' button and specify the text properties (color, font, etc.). Enter the desired text in the 'Text' box. Click once to place the text on the map. (Note: Text cannot be moved once it is placed; it can only be cleared.)



Print widget

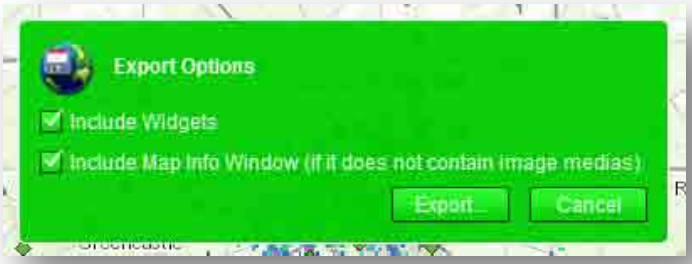
The Print widget allows users to send a snapshot of their viewer to a specified printer. Enter a title and/or subtitle (if desired), and click the 'Print' button. A printer settings window will open; select the desired printer and print options.



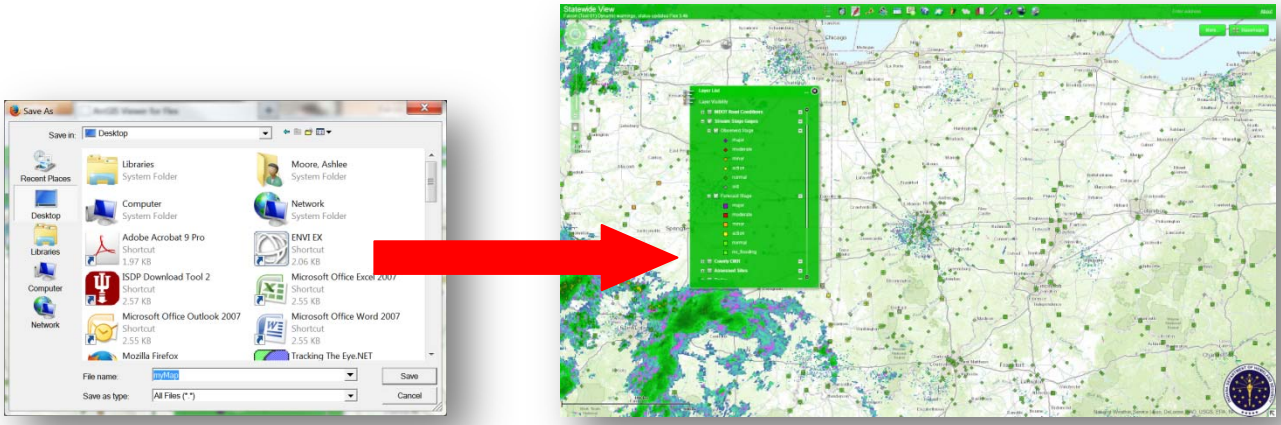
Export Map to JPEG widget

The Export Map to JPEG widget allows users to export a snapshot of the viewer and export that view as a JPEG file. Click on the widget icon to open the widget. An additional icon (a globe with a computer disc) will appear in the upper left-hand area of the viewer; click on this icon to specify preferences and export.

Set Export Options. (Enabling the 'Include Widgets' setting will ensure that any open widgets are visible on the JPEG file that is created – it is often helpful to include the Layer List widget to serve as a legend.)



Click 'Export,' name the file, and save it to the desired location.



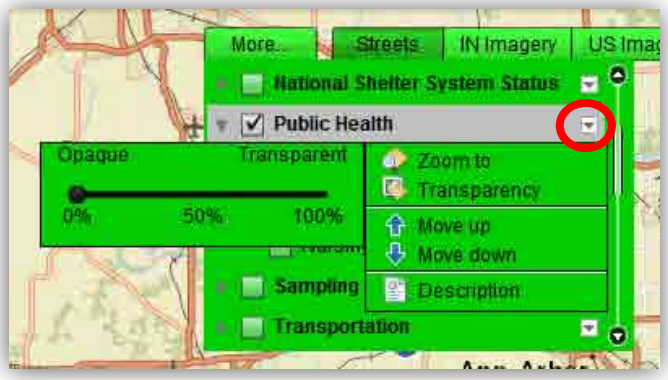
Links widget

The Links widget provides links to useful websites and documents. Additional documents and links can be added by sending a request to the IDHS GIS staff. Click on a link or document from the list to open it. (The *Falcon User Guide* can be found in the list.)

Map Layers

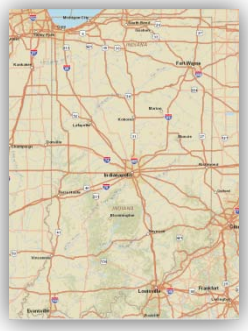
Map layers can be viewed by mousing over the 'More…' button in the viewer. The layers in the list are the same as the layers listed in the 'Map Layers & Legend' widget. The list can be scrolled, but the window cannot be resized like the widgets. Toggle layers on/off using the 'check' boxes next to them. Remember that a parent layer must be on/visible in order to 'see' the child layers beneath it. Layers can also be moved up/down in the list to control the drawing order and the transparency of the layers can be adjusted.

To change the order of a layer, or its transparency, click on the arrow next to the layer or layer group to activate a dropdown menu showing the options. Adjust the options until the desired outcome is achieved.



Base Map Options

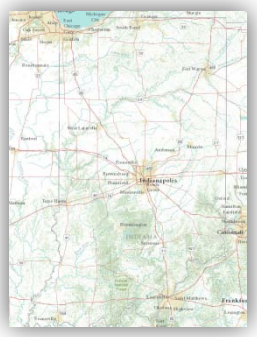
Several base map options are available within the viewer. There is an option for street maps, Indiana imagery, US imagery, and topographic maps. Toggle the base maps within the viewer for the desired look.



Street

IN Imagery

US Imagery

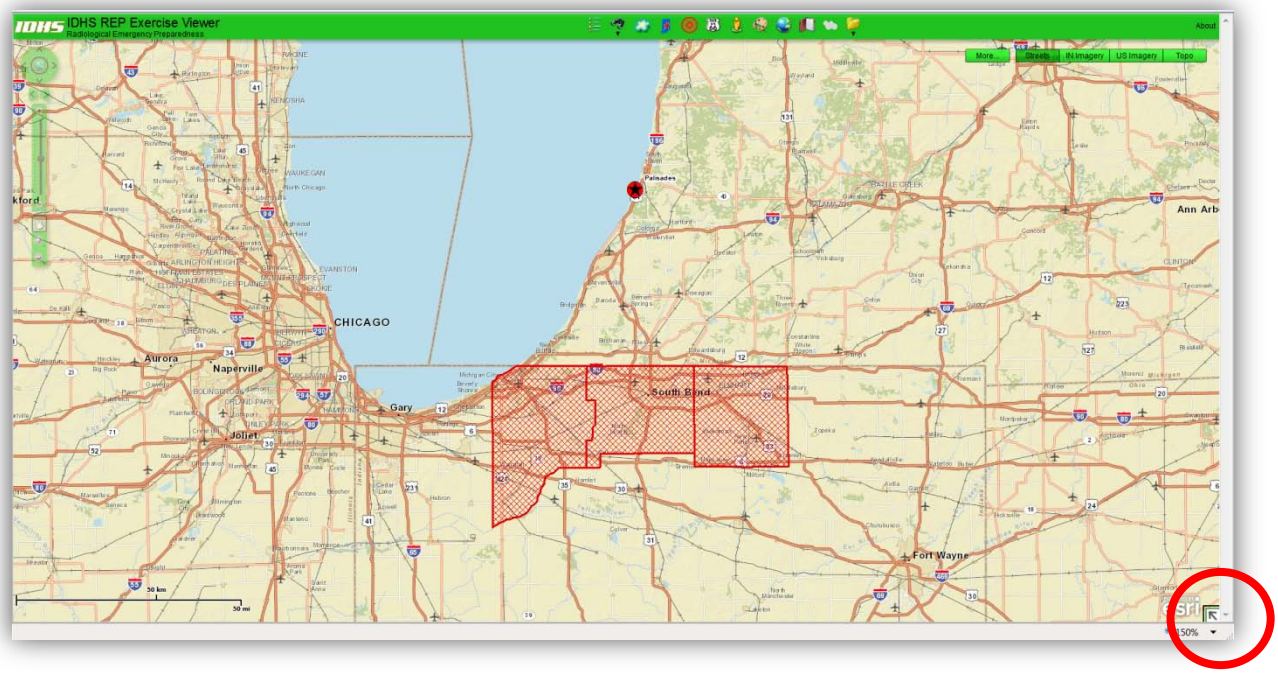


Topo

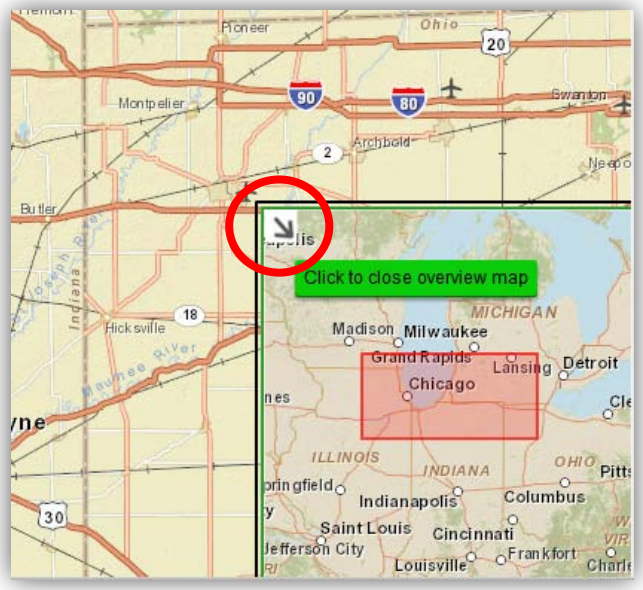
Overview Map

The overview map highlights the area visible in the viewer while including the area surrounding the current extent, as well. This a good map to reference in order to identify the general area on which the viewer is focused.

To open the overview map click the arrow in the lower right-hand corner of the viewer.



To close the overview map click on the arrow in the upper left-hand corner of the overview map window.



Additional Information

FYI: Pop-Ups

Viewer data, with the exception of weather data, has associated pop-up information. To view information about a point, line, or polygon click on the feature and a pop-up window will open. The pop-up provides information about the feature without having to use one of the Search widgets. To close the pop-up window click on the 'X' in the upper right-hand corner of the pop-up.

What If: Layers Fail to Load

If layers in the viewer fail to load try refreshing the viewer webpage. If a refresh is unsuccessful try clearing the cache. To clear the cache in Internet Explorer follow these steps:

1. Open the 'Tools' menu in the Internet Explorer window
2. Click on 'F12 developer tools'
3. In the 'F12 developer tools' window click on the 'Cache' menu (along the top bar of the window)
4. Click on 'Clear browser cache…'
5. Answer 'Yes' when prompted to clear the browser cache
6. Refresh the webpage
7. (Optional) Close the 'F12 developer tools' window by clicking on the 'X' in the upper right-hand corner of the 'F12 developer tools' window

If neither of those options resolves the issue please contact a member of the IDHS GIS staff and alert them of the error message that shows up when the data attempts to load.