Welcome to the Surface Water Data Viewer!

Last Updated: October 2024

The Surface Water Data Viewer (SWDV) is a mapping tool for the State of Wisconsin. It provides interactive web mapping tools for a variety of datasets, including chemistry, physical, and biological data. The data managed in layers that can be turned on and off as needed. The following page shows the homepage of the Surface Water Data Viewer (SWDV) with many commonly used features labeled. Descriptions of the features are as follows:

Toolbars: There are a variety of toolbars with different themes to help complete tasks using the SWDV. The toolbars can be used to display the layers available to the map, add or remove shapes, text, or measurement features, identify points, print maps, and more!

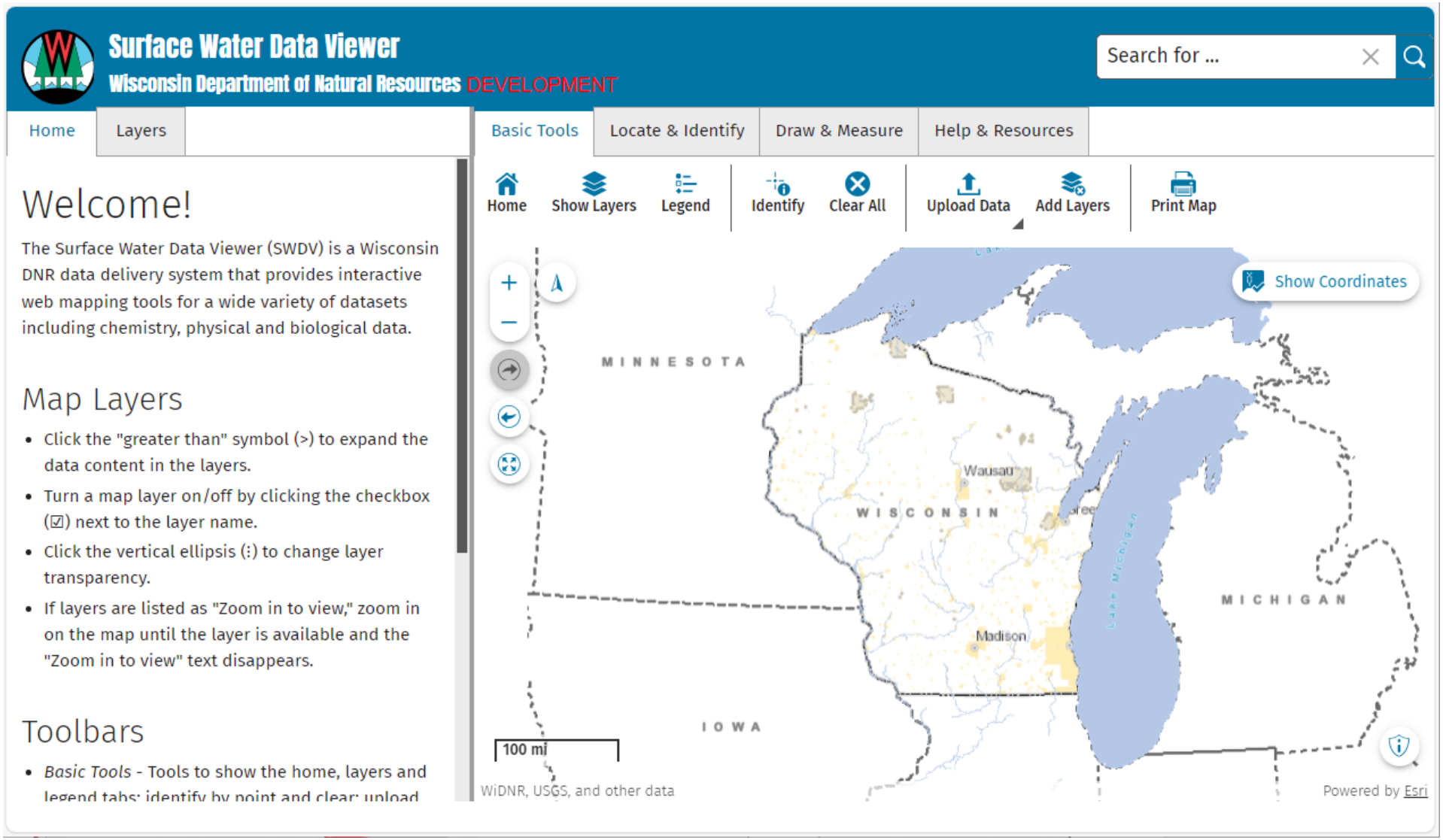
Search Bar: Using the search bar, you can search monitoring stations by number, locations by keyword, and waterbodies by WBIC. Be careful when using the search bar, partial matches do not always appear in the results.

Table of Contents: The table of contents panel is where results will appear from searches, where you are able to select layers for the map, and features for printing. You will be able to refine the data that is shown here, if desired. You can hide the navigation panel by clicking the left-facing arrow at the top.

Coordinates and Coordinate System: To view coordinates, click the Show Coordinates button in the upper right corner of the map. The coordinates will display for any point moused over on the map. Click the black triangle to select your preferred method for displaying Latitude/Longitude (DD, DDM, DMS) or Wisconsin Transverse Mercator.

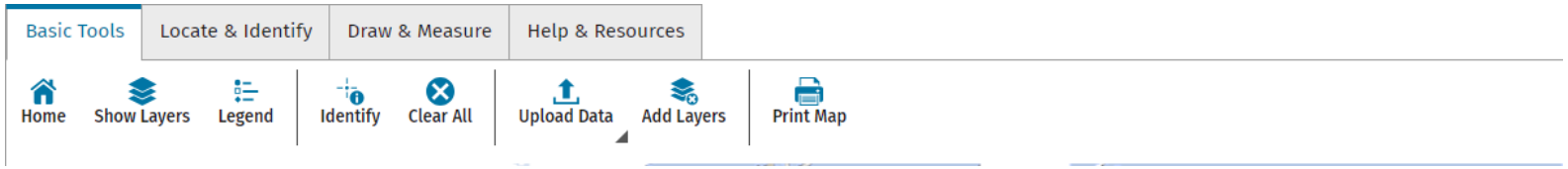
Scale Bar: The scale bar (lower left corner of the map) shows the current extent of the map.

Navigation Toolbar: Navigation tools for zooming in/out, zooming to next or previous extents, return to full extent and to reset the compass orientation.

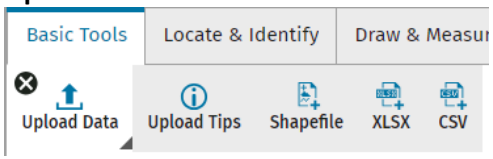

Surface Water Data Viewer
Wisconsin Department of Natural Resources DEVELOPMENT
Search for ...
Home
Layers
Basic Tools
Locate & Identify
Draw & Measure
Help & Resources
Welcome!
The Surface Water Data Viewer (SWDV) is a Wisconsin DNR data delivery system that provides interactive web mapping tools for a wide variety of datasets including chemistry, physical and biological data.
Map Layers
Click the "greater than" symbol (>) to expand the data content in the layers.
Turn a map layer on/off by clicking the checkbox (☑) next to the layer name.
Click the vertical ellipsis (⋮) to change layer transparency.
If layers are listed as "Zoom in to view," zoom in on the map until the layer is available and the "Zoom in to view" text disappears.
Toolbars
Basic Tools - Tools to show the home, layers and legend tabs; identify by point and clear; upload
Home
Show Layers
Legend
Identify
Clear All
Upload Data
Add Layers
Print Map
Show Coordinates
MINNESOTA
WISCONSIN
MICHIGAN
IOWA
Wausau
Madison
Lake Michigan
100 mi
WiDNR, USGS, and other data
Powered by Esri

When using the Surface Water Data Viewer, there are a variety of Toolbars that can be applied. Toolbars give you the ability to plot points on the map, make drawings, label points, measure distances, etc. The most common Toolbars that you will use are:

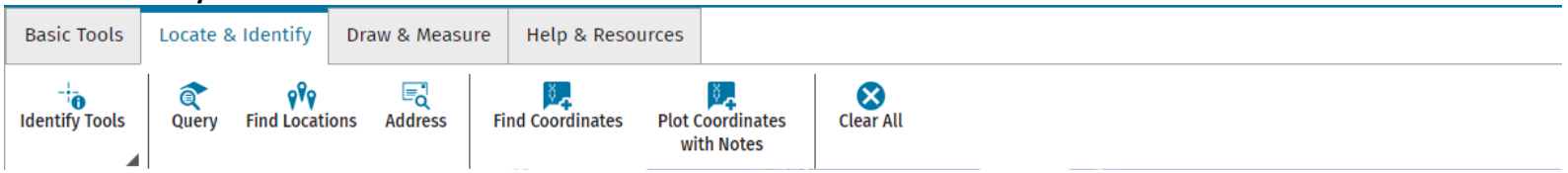
1. **Basic Tools Toolbar**



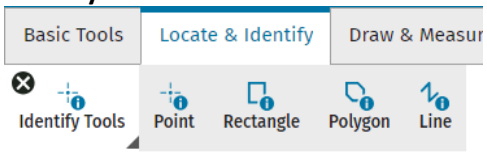
Upload Data Toolset



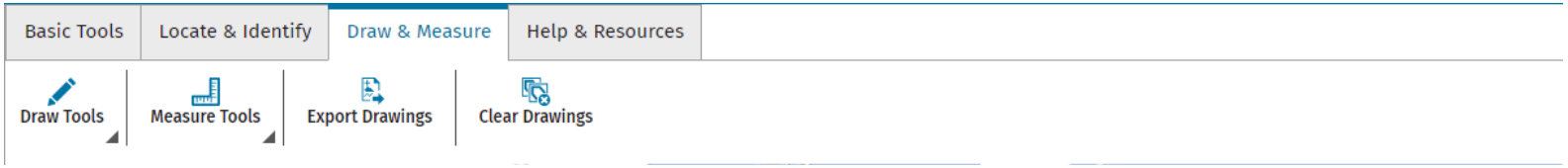
2. **Locate & Identify Toolbar**



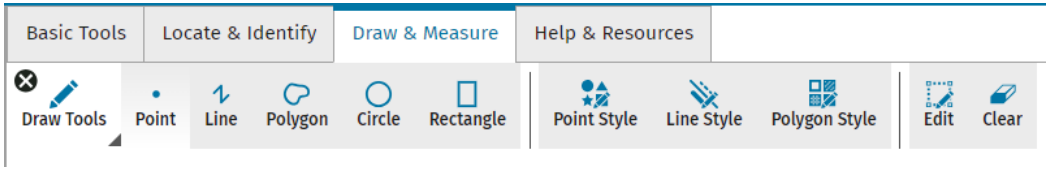
Identify Toolset



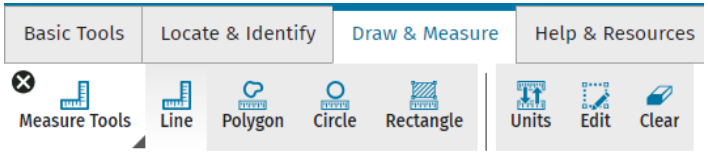
3. **Draw & Measure Toolbar**



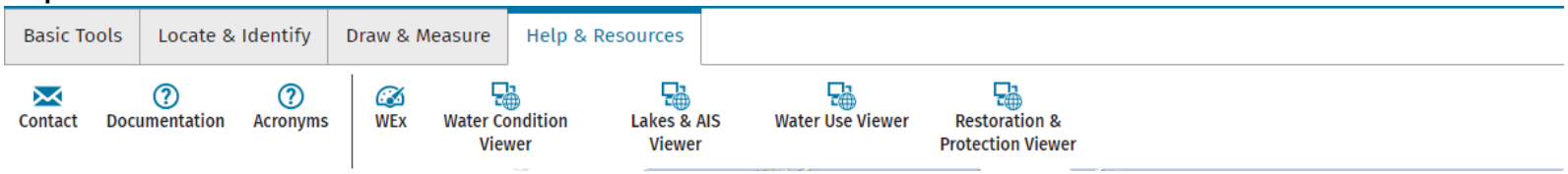
Draw Toolset



Measure Toolset



4. **Help & Resources**



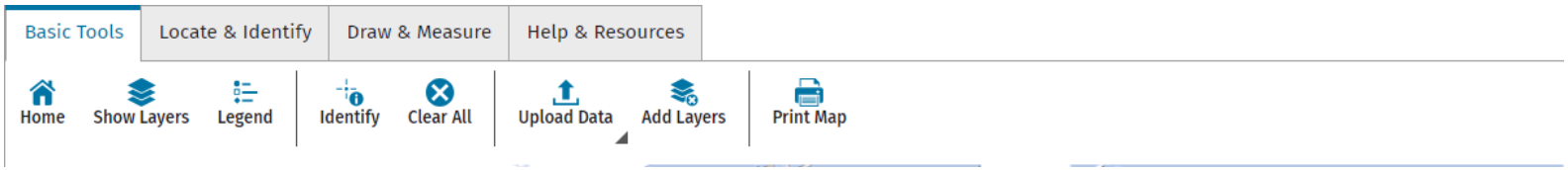
5. **Navigation Tools Toolbar (in Map Frame)**

Zoom In - There are three (3) ways to Zoom within the map frame.
(1) Click on the **+** symbol on the toolbar.
(2) Hold the SHIFT key, left click on the map, hold down the mouse key and drag.
(3) Using your mouse wheel scroll up.

Zoom Out – There are two (2) ways to Zoom Out within the map frame.
(1) Click on the **–** symbol button on the toolbar.
(2) Using your mouse wheel scroll down.

Pan – Click on the map, left click on the map, hold down the mouse key and drag the map.
Next Extent – Click on the forward-facing arrow key to return forward to the last extent.
Previous Extent – Click on the reverse-facing arrow key to return to the previous extent.
Full Extent – Click on the button with 4 arrows to zoom out to the entire state.
Reset Compass Orientation – Click on the North Arrow key to reset map to the North.

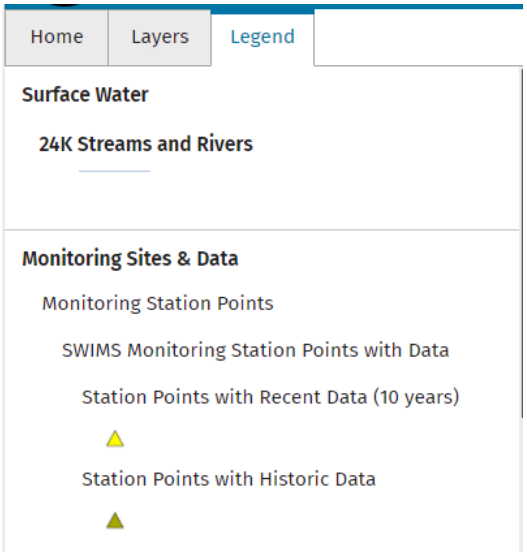
1. Basic Tools Toolbar



Home: The home button can be found in two places. The first is in the **Basic Tools Toolbar**. The second is in the ribbon at the bottom of the **Table of Contents** panel.

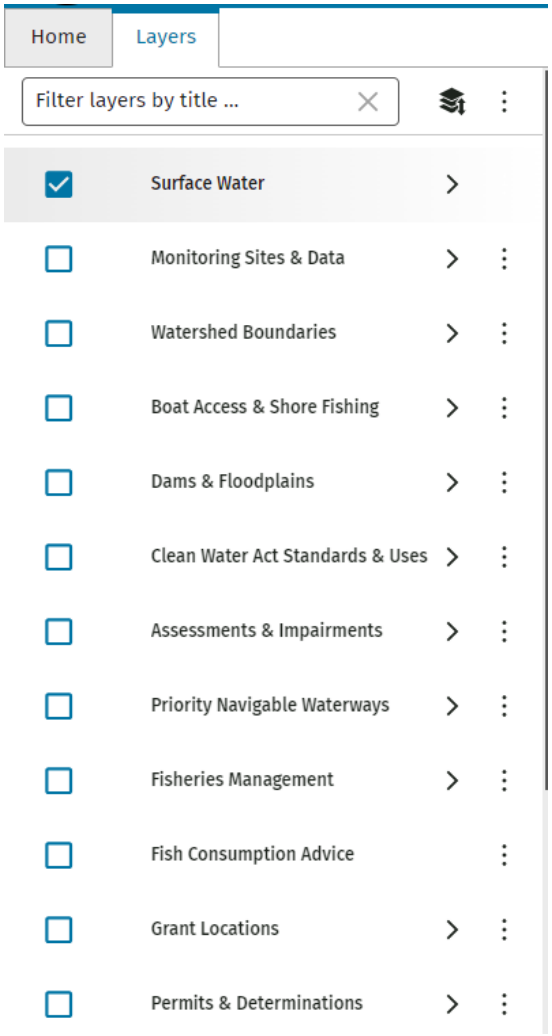
Clicking on **Home** tab will open a tab containing the basic description of the SWDV in the **Table of Contents** panel. If you have search results, don't worry, clicking **Home** does not lose your results.

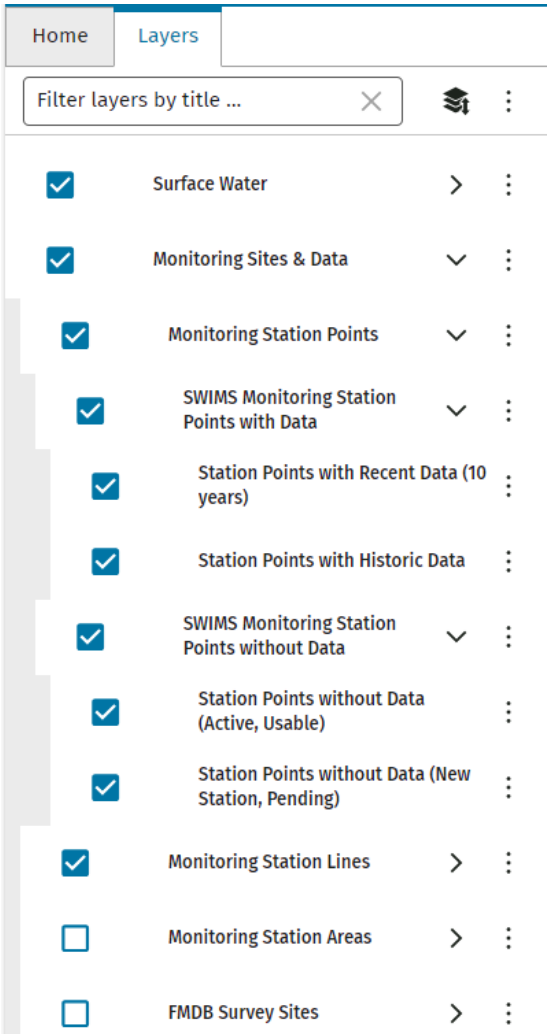
Legend: The **Map Legend** describes each of the features on the map. As more layers are added to the map, it will become more complicated, and more features will be added to the legend. When a map is printed, the legend will print alongside it.



Show Layers: This tool opens a list in the Table of Contents panel of data layers that can be applied to the map. See the following screenshots of the Show Layers panel. These layers can be turned on or off to apply different datasets to the map.

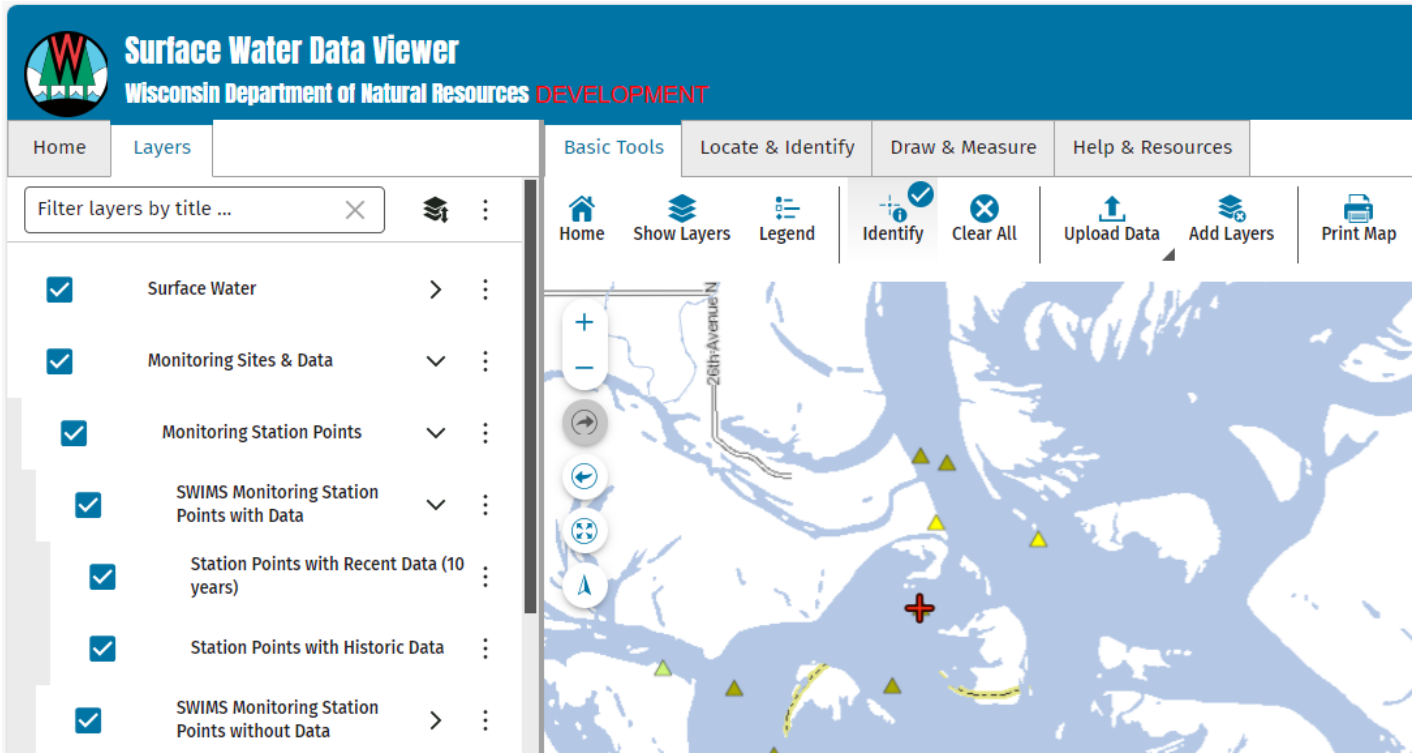
This is a partial list of layers that will appear when the Show Layers button is clicked. Scroll down through the **Table of Contents** panel to view all available layer categories. Select the > symbol on the layer category to view available layers within that category.



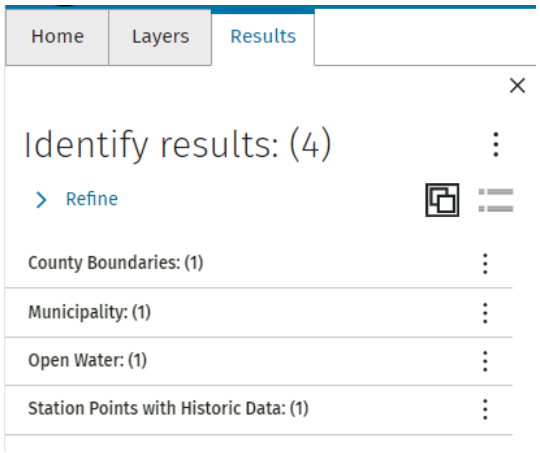


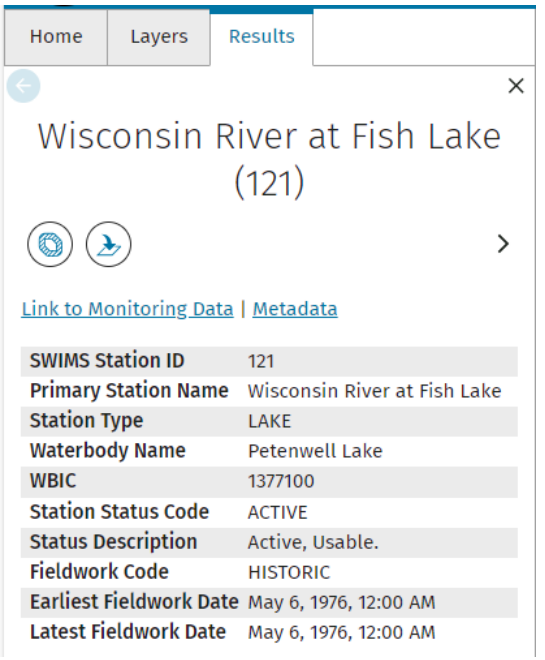
Point Identify: Use the **Point Identify** tool to gather information about features on the map. Select the tool, then click on the feature. Information will appear in the **Table of Contents** panel to the left.

For example, clicking on the map using the **Point Identify** (as seen below) results will be displayed in the **Table of Contents** panel under the **Results** tab.

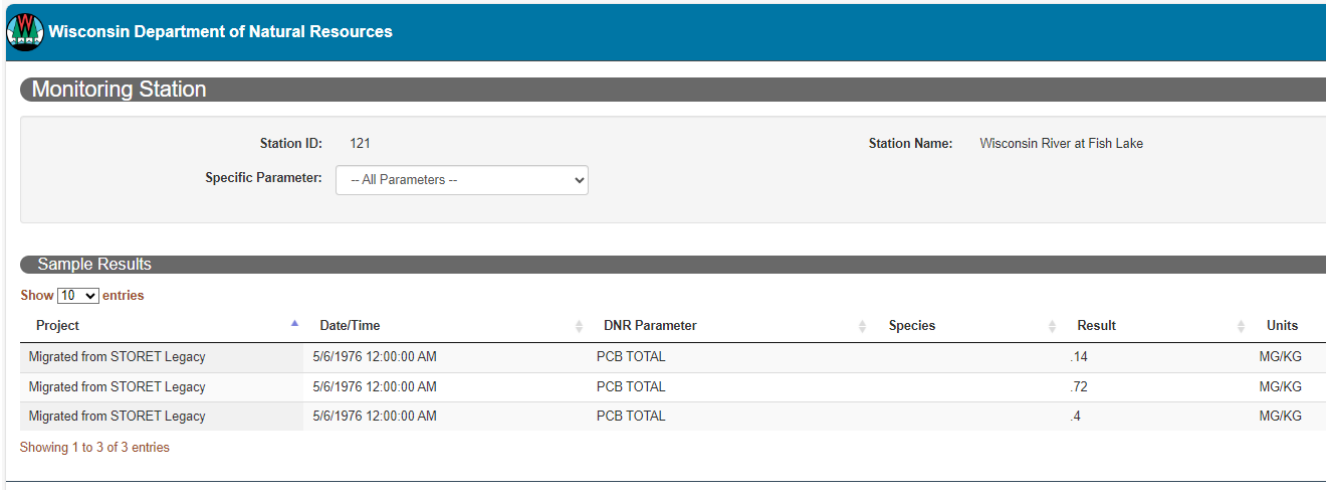


To view more detailed information (3 levels of detail) about the results returned, click on the layer of interest. Each level provides more detailed information (e.g., first level – layers identified, second level – general information about the layer as well as links to additional information, third level – detailed information about the layer (e.g., field names and values).



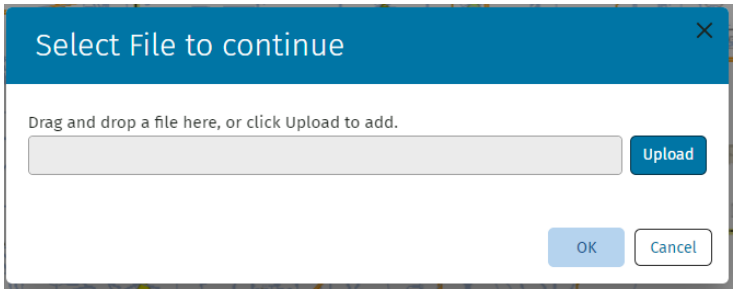


As mentioned above, some layers have links to additional information. As seen in the above example, by clicking on the “Link to Monitoring Data”, a new web page will be opened.

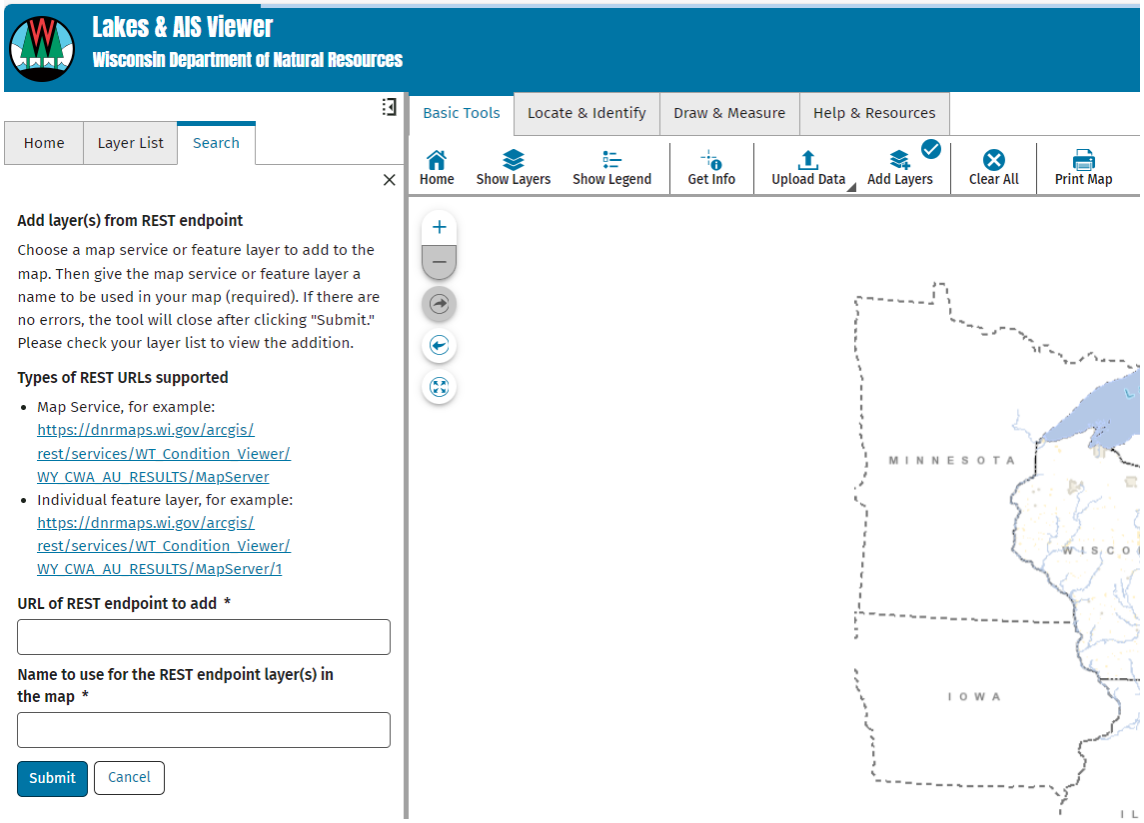


Clear All: Use this tool to clear ALL graphics from the map frame.

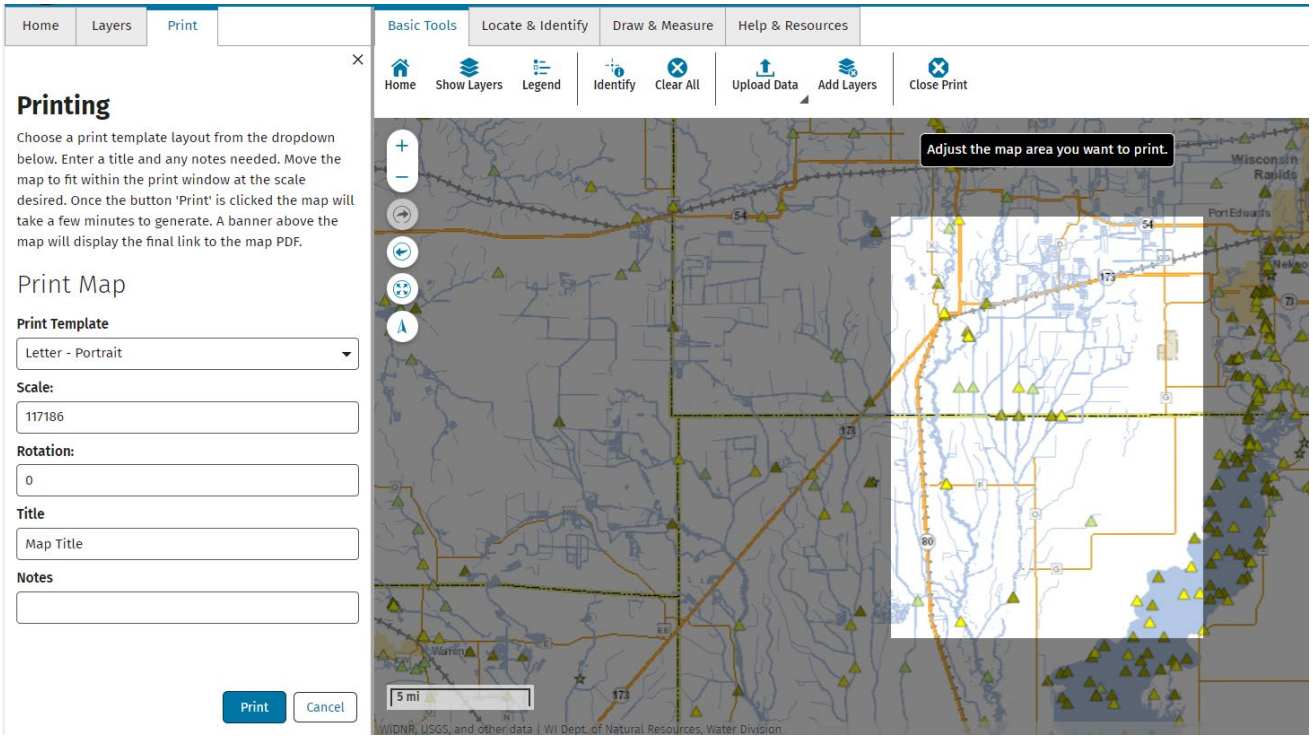
Upload Data: Use this tool to temporarily upload data from your computer to the map. Select the **Upload Data** button and click one of the options (click on the Upload Tips button for additional information). A dialogue box will appear.



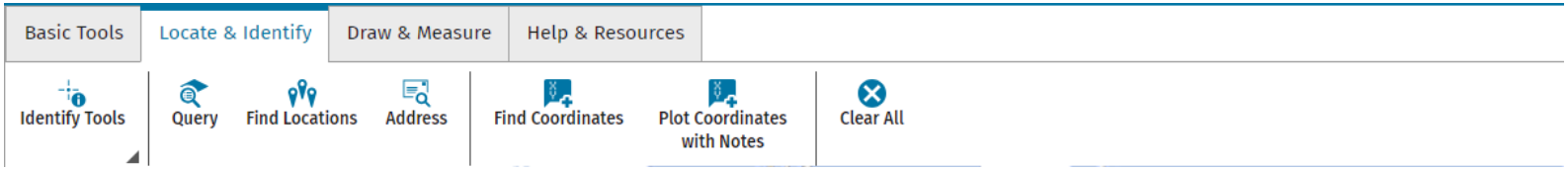
Add Layers: Use this tool to temporarily add layers from an outside valid map service to the Surface Water Data Viewer map.



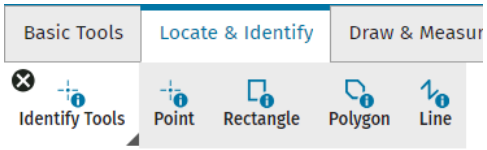
Print: This tool will print the current extent of the map, including all plotted points and drawings within that extent. The printed map will also include the **Whole State View**.



2. Locate & Identify Toolbar



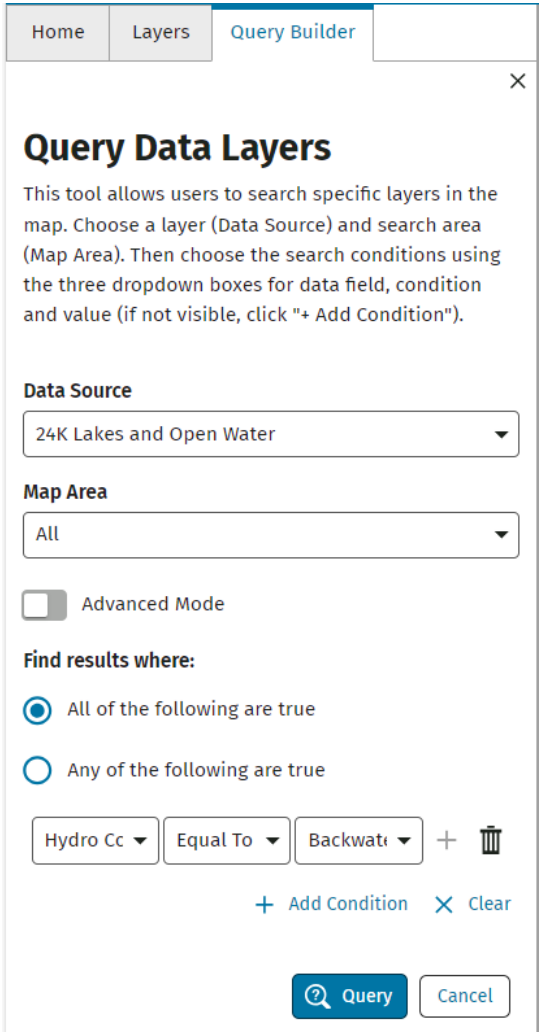
Identify Tools: To use the **Identify Tools**, first select the **Identify Tools** button. The **Identify Tools** button is not named on the toolbar. Instead, it appears as whatever identification form you have selected. Click any of the identify tools to activate them (you will not be able to identify if you do not click one of them).



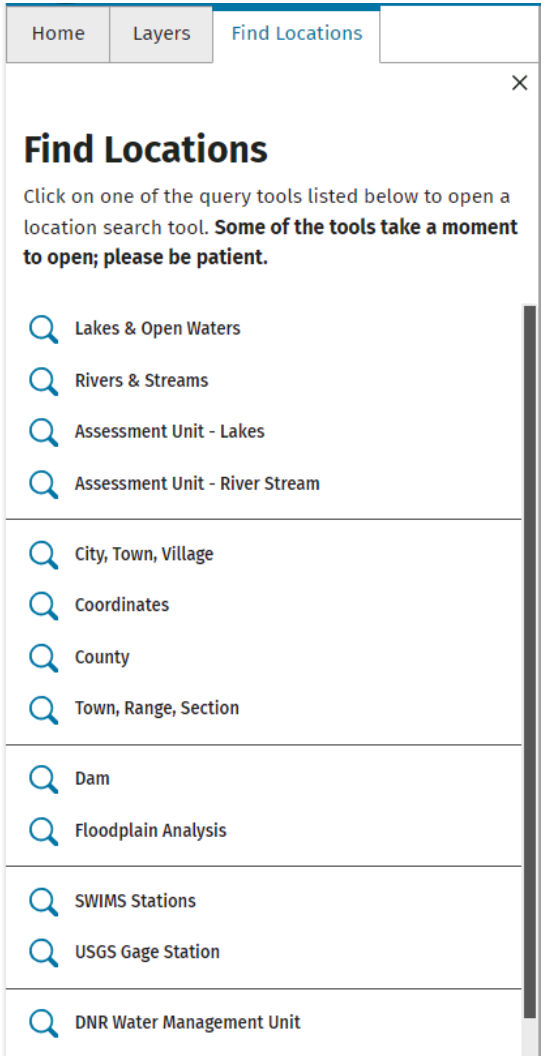
NOTE: Once results are returned, the tool must be clicked on again.

(continue to next page)

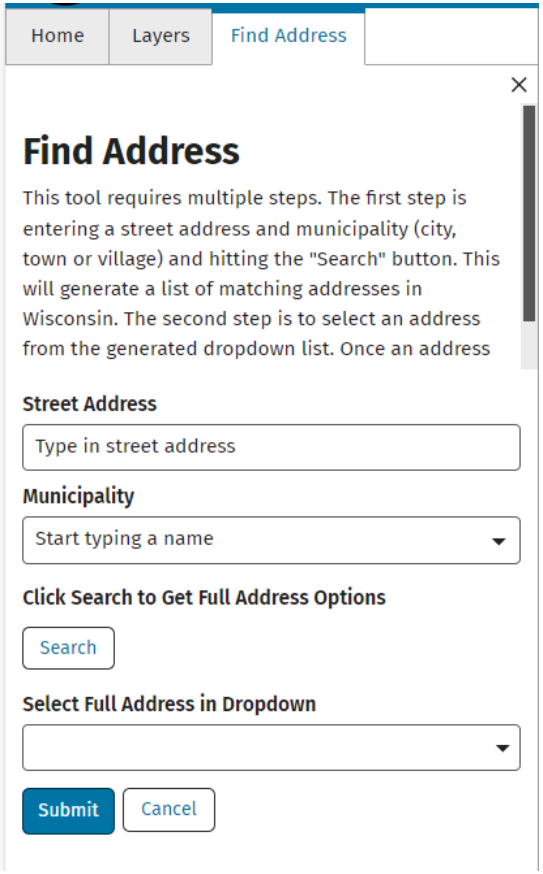
Query: Use this tool to perform an advanced search for a feature. Selecting **Query** will open a process in the **Table of Contents** panel**.** Select the **Data Source** on which you would like to perform the query and enter the **Query** parameters (Find results where).



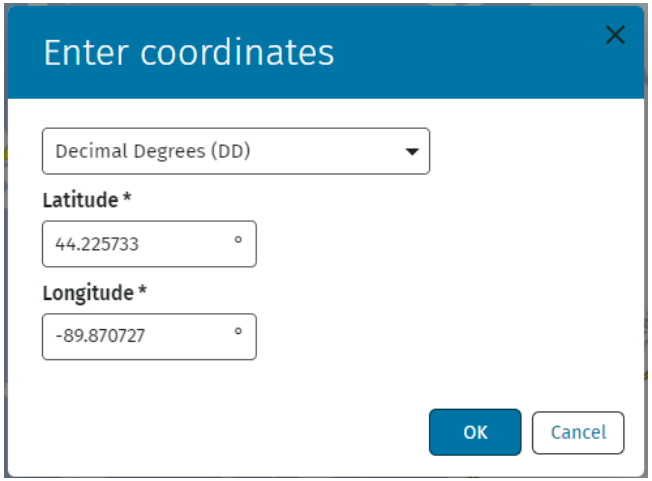
Find Locations: Use this tool as a search feature to find specific features on the map. Selecting **Find Locations** will generate a list of search options in the **Table of Contents** panel**.** To find a location, select the feature magnifying glass.



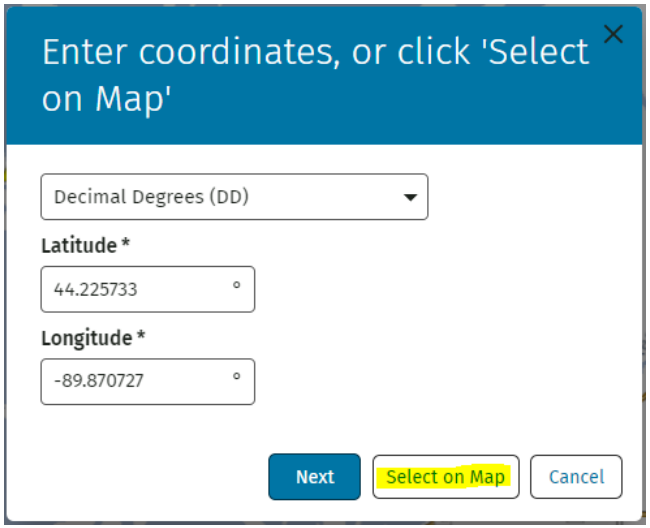
Find Address: Use this tool as a search feature to find a specific address.



Find Coordinates: Use this tool to find enter and plot a point on the map at the desired X,Y coordinates (Lat/Long – DD, DDM, DMS or WI Transverse Mercator (WTM)).

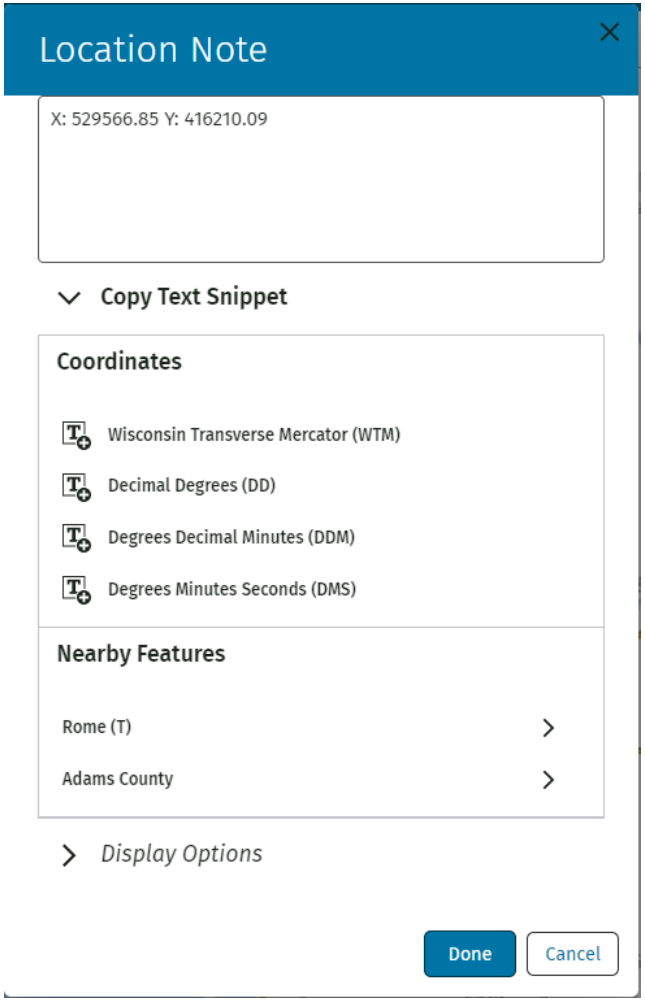


Plot Coordinates with Notes: This tool is very similar to the Find Coordinates. However, the **Plot Coordinates with Notes** allows users to **Select on Map** the location that they would like to return coordinates for.



After selecting a location on the map, the user will need to select the coordinate type from the **Coordinates** section. Once a Coordinate type has been selected (e.g., Wisconsin Transverse Mercator), coordinates will be added to the **Note** section. Click **Done** and the coordinates will be added

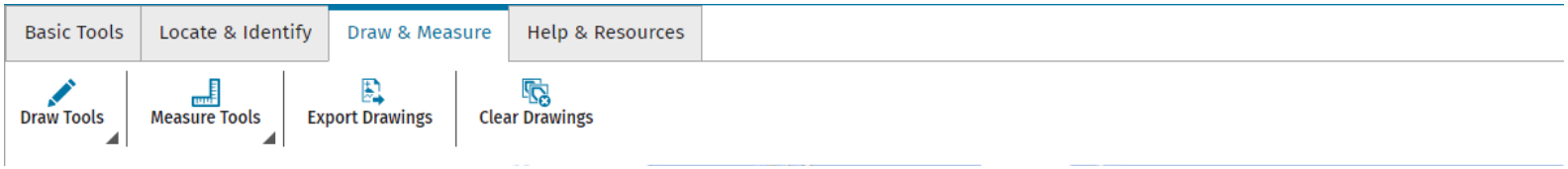
to the map.



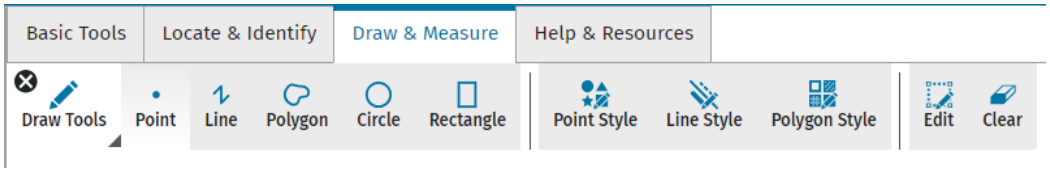
Clear All: Use this tool to clear ALL graphics from the map frame.

3. The Draw & Measure Toolbar

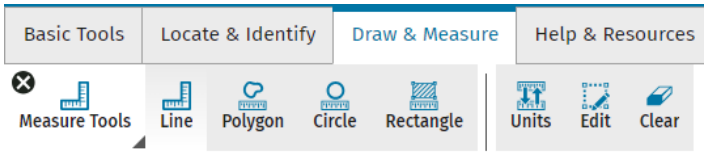
The **Draw & Measure Toolbar** is an excellent tool for making your own custom maps. It is very helpful to show where individual monitoring sites are – you can type the names of the sites next to their identification points or color-code them! It is also useful if you need to perform calculations of area or distance on the map.



Draw Tools: To use any of the drawing tools, first select the desired tool from the **Draw Tools** options. Like the **Identify** tool, use the dropdown to select the desired tool. Click on the Point, Line or Polygon Style buttons to change the default settings for the Draw tools.



Measure Tools: To use any of the measuring tools, like the **Draw Tools**, first select the desired tool from the **Measure Tools** options. Like the **Identify** tool, use the dropdown to select the desired tool.

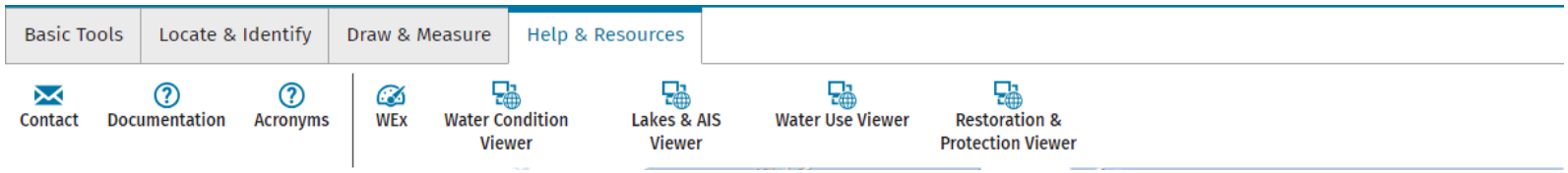


Measure Tools: To use any of the measuring tools, first select the desired tool from the **Measure Tools** options. Similar to the **Identify** tool, click the desired tool. Click on the Units button to change the default settings for the Draw tools.

To Edit existing measurements, click the Edit button, then select the measurement to be editing. Adjust measurement as needed.

4. Help & Resources Toolbar

If you need to troubleshoot any issues with the Surface Water Data Viewer or would like to learn more about the features of the viewer, you can toggle through the resources in the **Additional Features Toolbar**. If you encounter a problem with the Surface Water Data Viewer, use the **Contact** tool to send a message to the Surface Water Data Viewer Team.



Contact: If you encounter a problem with the Surface Water Data Viewer, use the **Contact** tool to send a message to the Surface Water Data Viewer Team.

Documentation: Use this tool to open the Surface Water Data Viewer guidance document.

Acronyms: Use this tool to open a new panel in the **Table of Contents** panel that provides a list of abbreviations and their meanings.

Other DNR Viewers: Use these tools to launch other DNR mapping applications.

WEx (Water Explorer Tool): A data visualization tool that allows users to interface with water quality data for waterbodies throughout the state.

Water Condition Viewer: A web mapping tool that focuses on water condition, monitoring, assessment and management data.

Lakes & AIS Viewer: A web mapping viewer that allows users to search and map monitoring locations for lakes and aquatic invasive species (AIS).

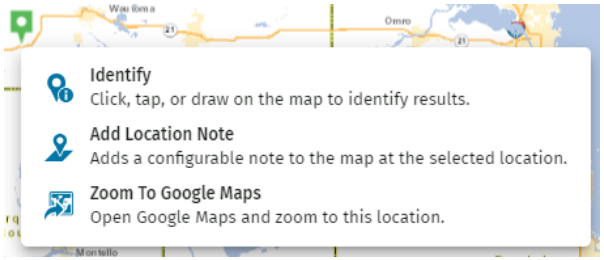
Water Use Viewer: The Water Use Viewer is a mapping tool that allows the public to view the locations and volumes of high capacity wells and surface water withdrawals.

Watershed Restoration & Protection Viewer: A web mapping tool designed to help users view water quality improvement projects across the state.

Other Features

There are a few Surface Water Data Viewer features that are not housed in a **Toolbar** or **Table of Contents** panel**.**

Right Click: Use this tool to generate a dropdown menu of options for the location selected on the map. **Right Click** a location to select. A small map marker will drop on the site.



Identify: This tool works in a similar way to **Point Identify.** Selecting **Identify** will return results for identifiable features at the selected location in the **Results** panel**.**

Add Location Note: This tool replicates the functionality of the **Plot Coordinates with Notes**. Users select a point on the map, choose the desired **Coordinates**, and click **Done**.

> **Note:** This tool can also be used to add text to the map. Instead of selecting a **Coordinates**, type in the text the is wanted on the map. Click **Done** and the text will be added to the map.

Zoom to Google Maps: Use this tool to open Google Maps and zoom to the current location.