

SWAPInfo 2.1 Application Instructions

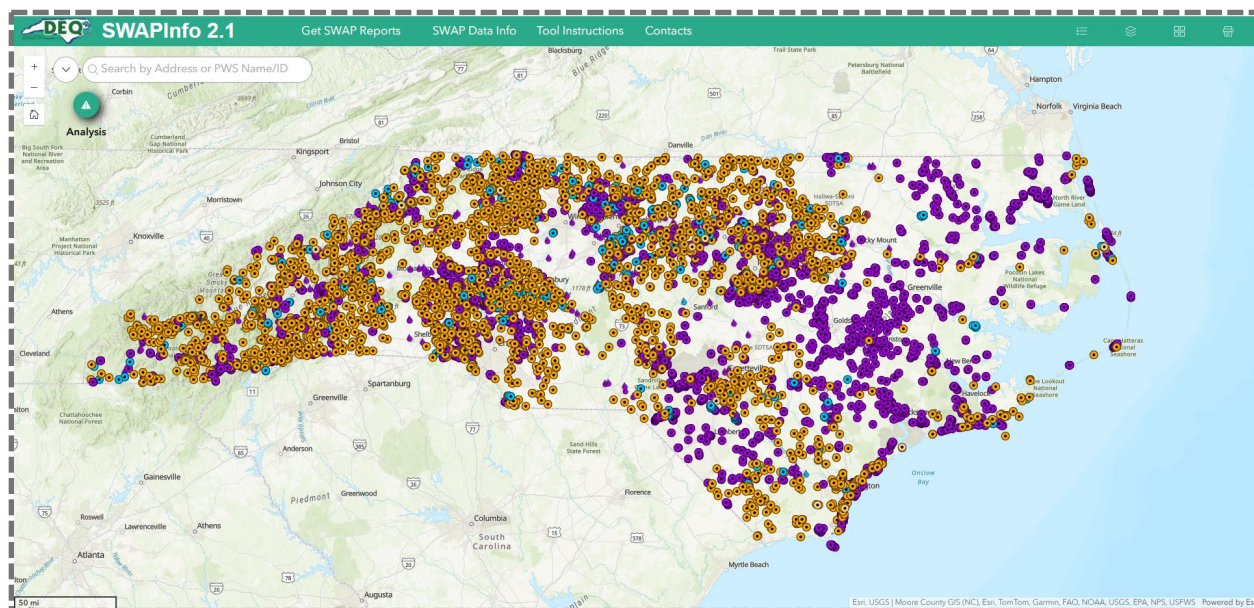


Figure 1 SWAPInfo 2.1 Application

1 Summary

This application provides an interactive map that displays specific (or identified) potential contaminant sources (PCSs) and public drinking water sources and includes a proximity analysis tool. The following documentation provides detailed instructions for using the application.

2 Header

The header bar contains the title of the application (far left), links to helpful resources (left), and map tools (far right).

Links



Figure 2 Application header menu with links

1 Get SWAP Reports

Opens new window to the [Public Water Supply – Source Water Assessment Reports](#) database where the most up-to-date SWAP reports can be downloaded by system ID or Name.

2 SWAP Data Info

Opens new window to the NC DEQ Division of Water Resources webpage about the [Source Water Assessment Program \(SWAP\)](#) data and methodology.

3 Tool Instructions

Opens new window to view this instructional document.

4 Contacts

Opens new window to the NC DEQ Division of Water Resources [Drinking Water Protection Program](#) contact list.

Map Settings

The map settings panel of the header provides options to configure map layers and a tool to print the map as a layout with legend, north arrow, etc.

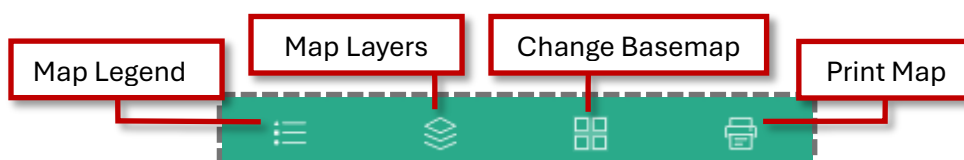


Figure 3 Map settings configuration panel

Legend

The Legend window shows symbology of features currently displayed in the map.

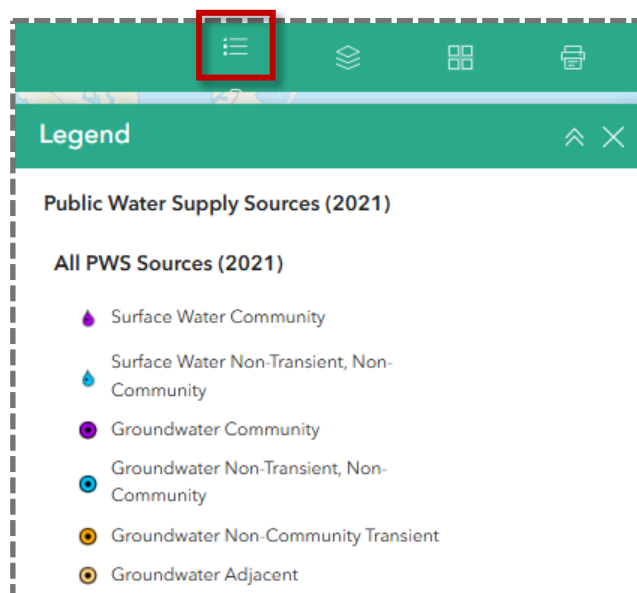


Figure 4 Application map legend

Layers Menu

The Map Layers menu allows users to toggle layer visibility and adjust the layer's level of transparency on the map.

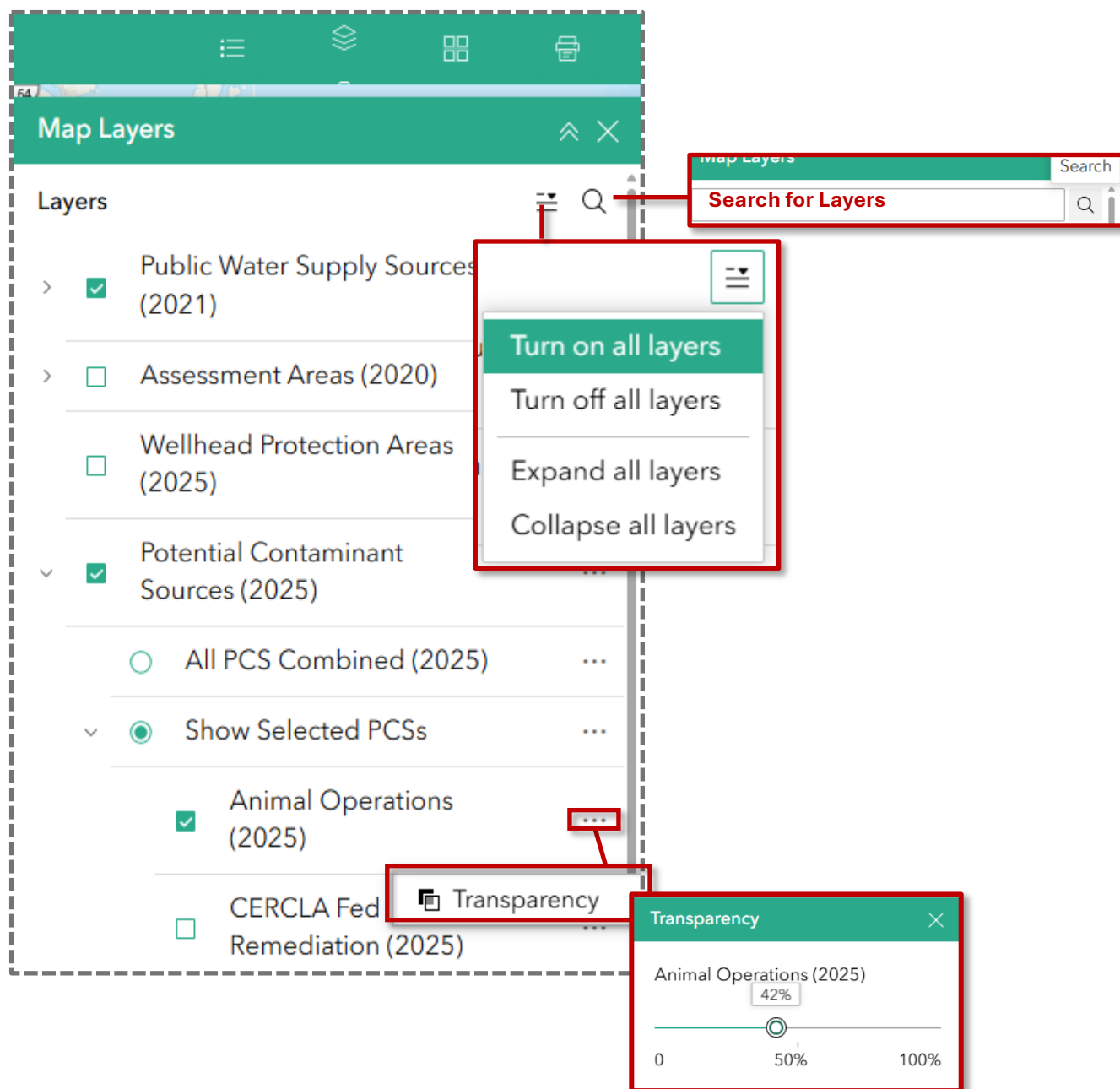


Figure 5 Application layer window with search and visibility toggle options at the top and transparency level options for each layer

Basemap

Opening the basemap options menu allows users to change the background that is shown in the map. For example, the Terrain with Labels basemap will show boundaries and multidirectional hillshade.

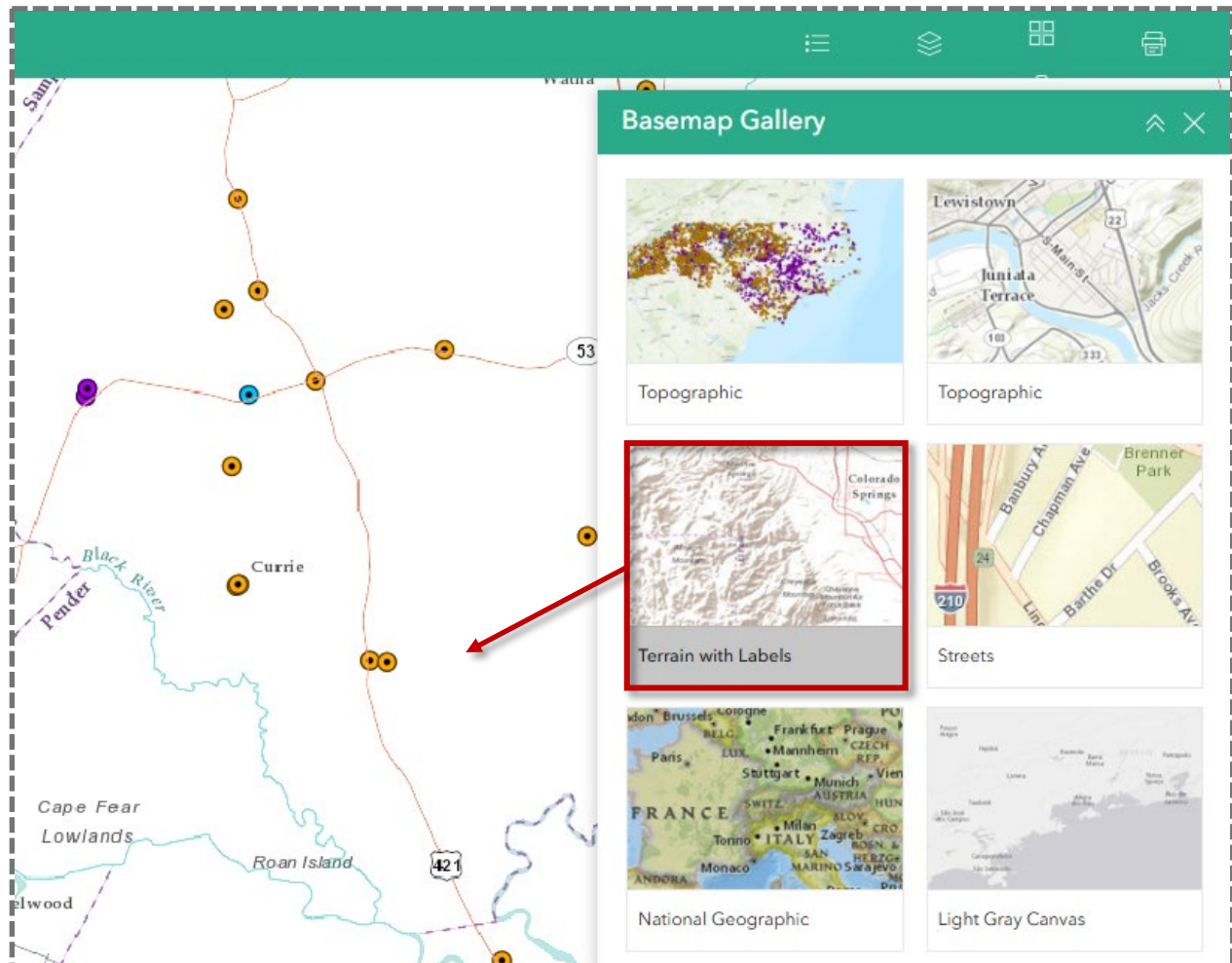


Figure 6 Using the basemap options window to change the background map

Print

The Print window allows users to select an area of the map to print as an image or PDF document.

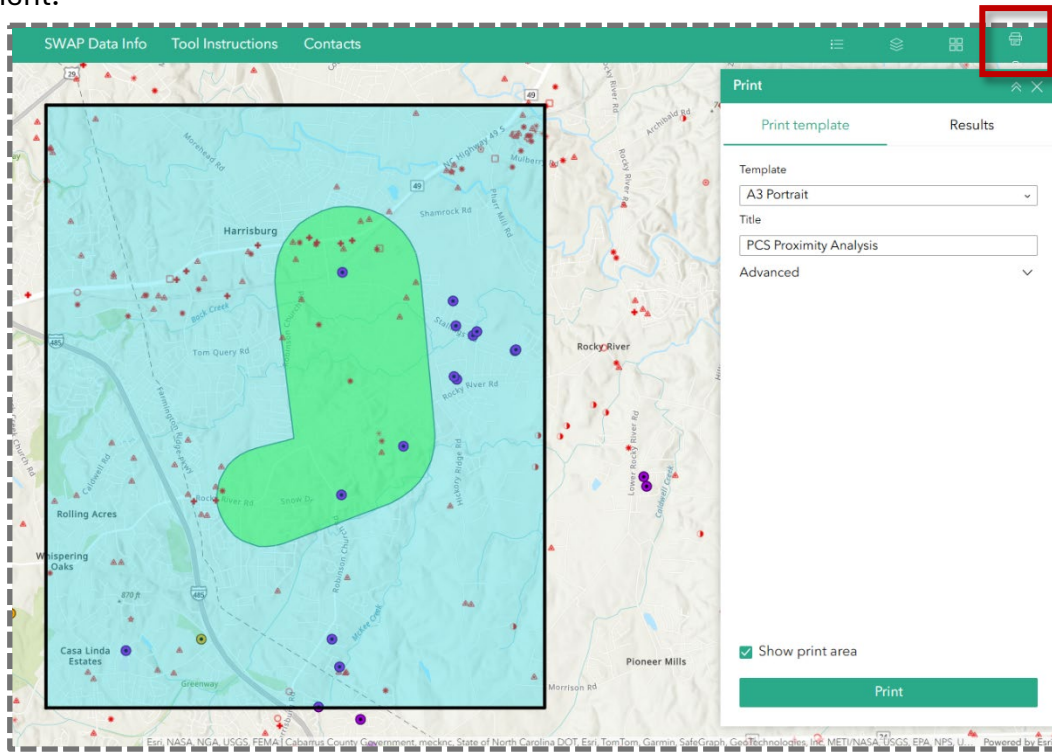
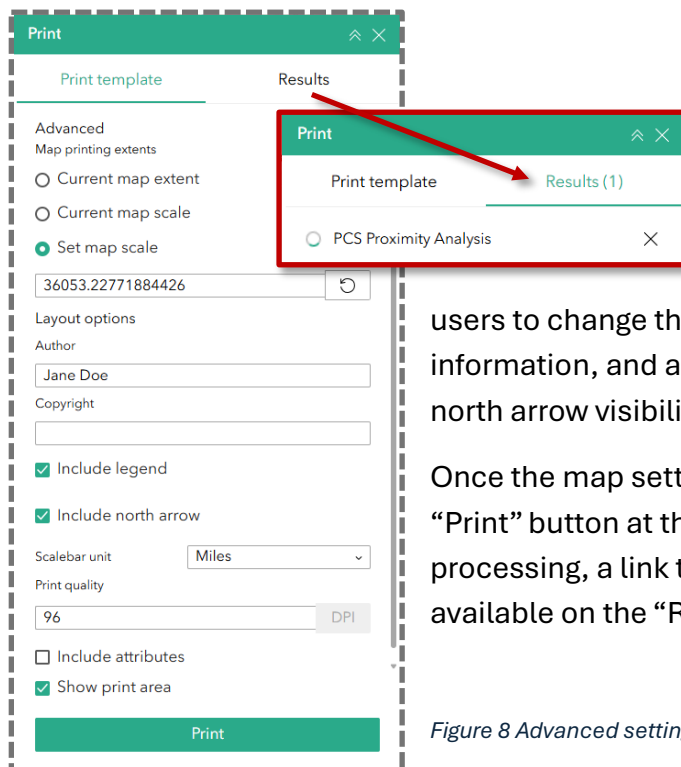


Figure 7 Print tool window



There are options to configure the template size, Title, plus more advanced settings under the “Print template” tab. Opening the dropdown for the Advanced settings allows

users to change the print mapping extent, add Author information, and adjust mapping elements like legend and north arrow visibility or the scalebar units.

Once the map settings are configured, users can click the “Print” button at the bottom of the window. After processing, a link to access the printable map will be available on the “Results” tab.

Figure 8 Advanced settings options in print tool

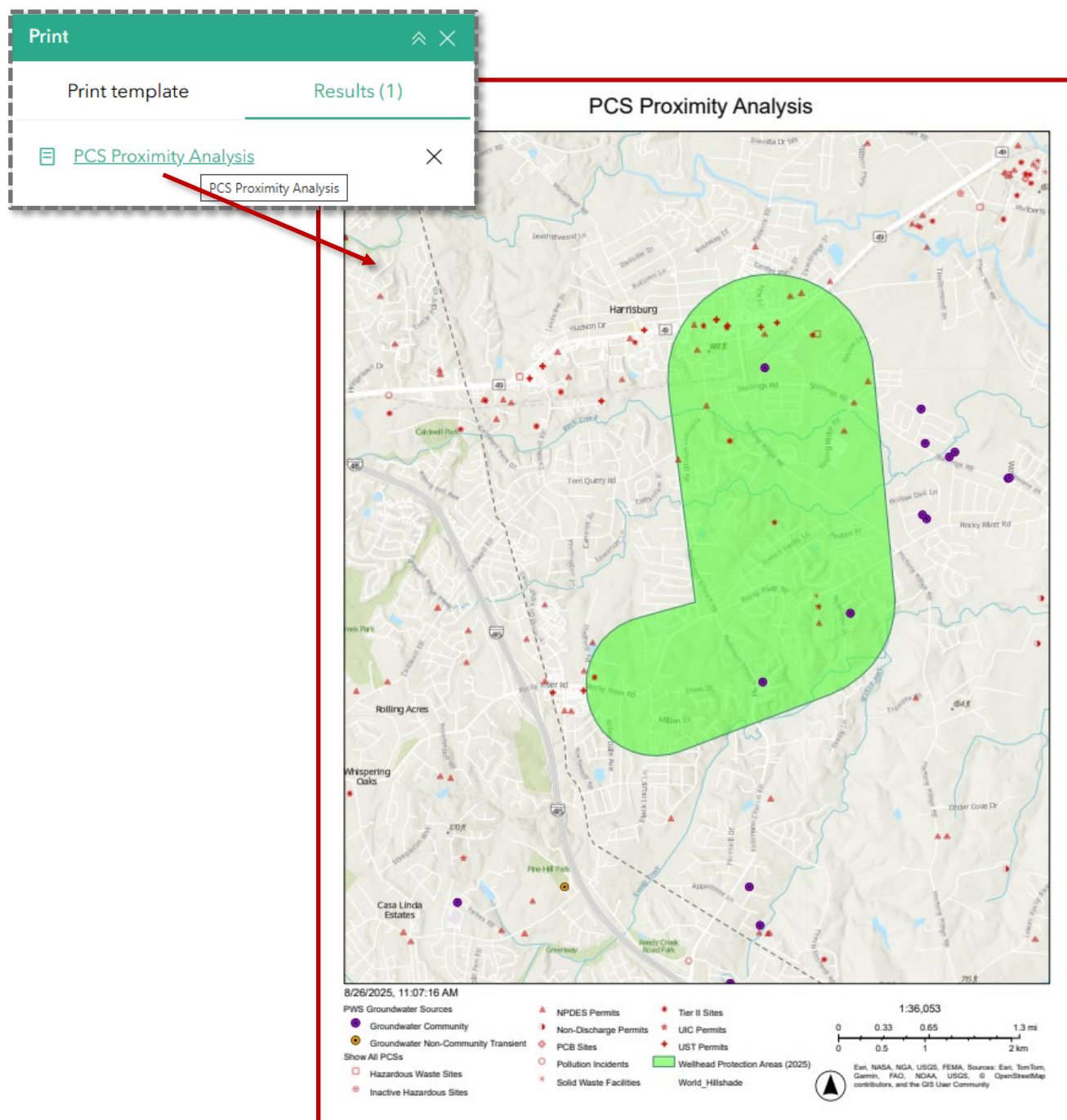
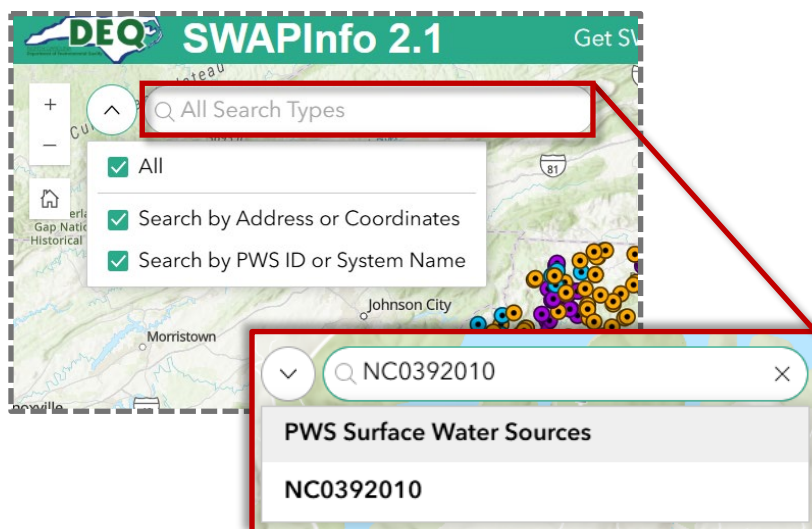


Figure 9 Accessing the printable map document from the Results tab

3 Map Interface

The map interface is where location and analysis tools can be accessed. Users can pan and zoom to a specific area, or use the search bar to find a location of interest based on coordinates, an address, water system name, or PWS ID.

Search bar



Typing inside the search bar will populate a list of matching results based on the selected criteria ("Search by Address or Coordinates", "Search by PWS ID or System Name", or both). Selecting a result from the list (shown left) will pan and zoom the map to the selection.

Figure 10 Location of search bar in map window

If a PWS system source is selected from the list, a pop-up window with detailed information will open when the map zooms to the source point (shown on the right).

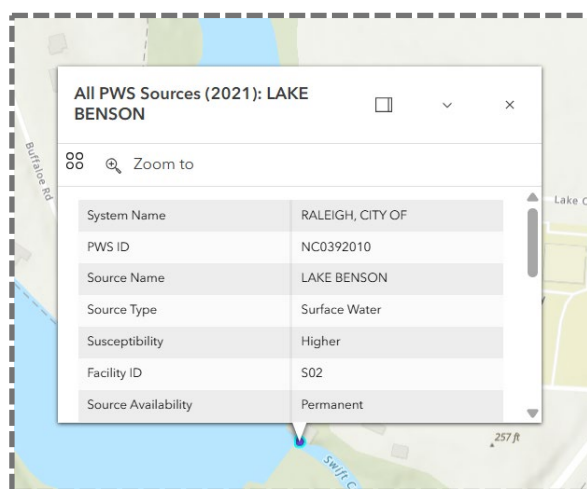


Figure 11 Pop up window result of search by PWS ID

Alternatively, users can search by address to automatically navigate to a specific location on the map (shown below).

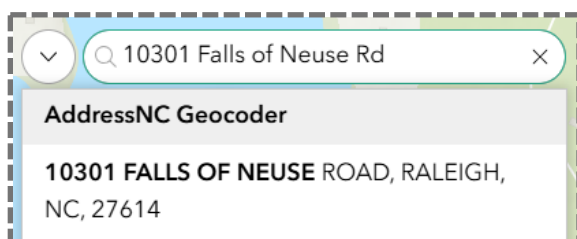


Figure 12 Option to search by address

PCS Proximity Analysis Tool

To launch the proximity analysis tool, users can click the analysis icon underneath the search bar. A window will open with the option to define a location for the analysis as either a point, line, or area. If a point feature in the map is already selected, the analysis tool will automatically create an analysis area around the selected point.

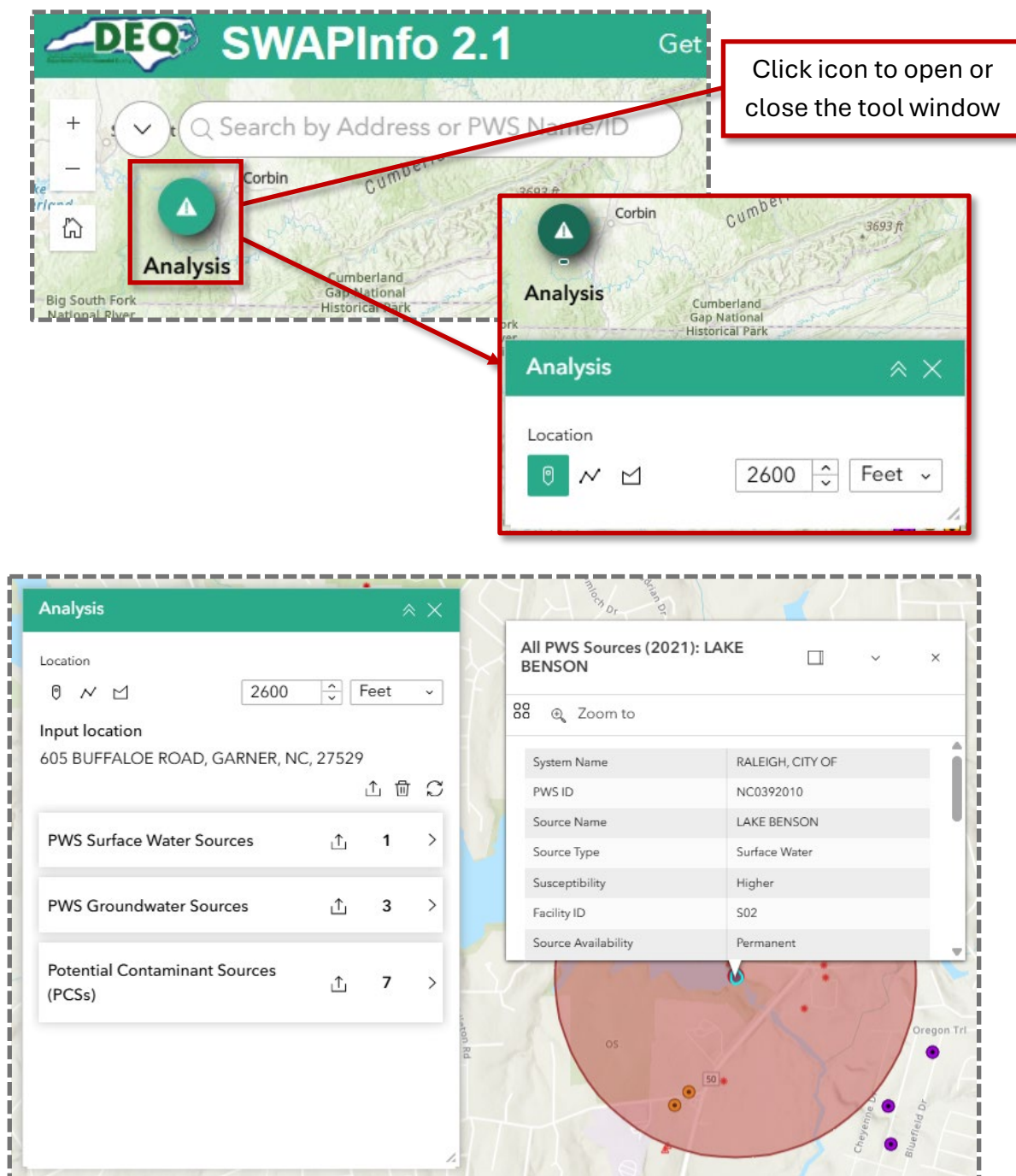


Figure 13 Automatic analysis occurs when a point location is already selected before opening analysis tool window

There are multiple options for creating and adjusting an analysis area. Once a location is chosen, the size of the analysis area can be updated using the buffer radius. The dropdown menu next to the radius number can be used to change the measuring units.

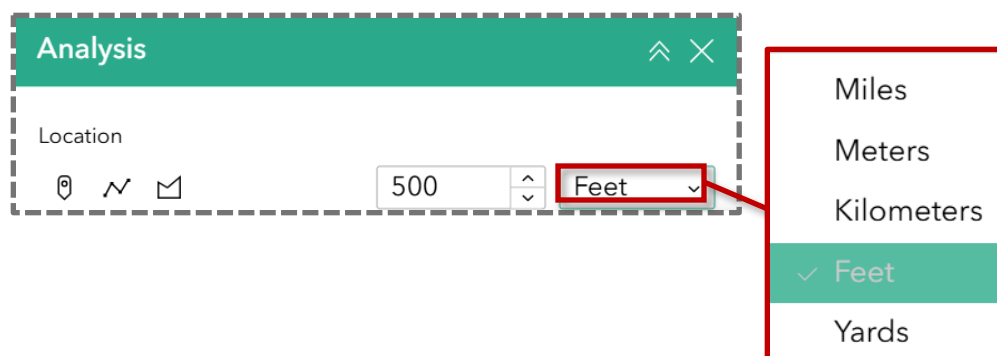
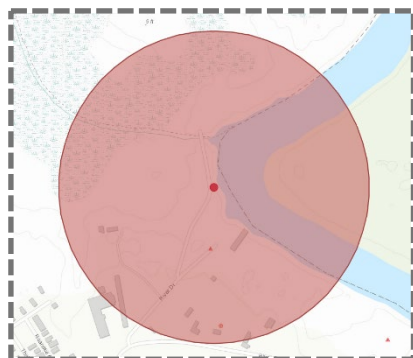
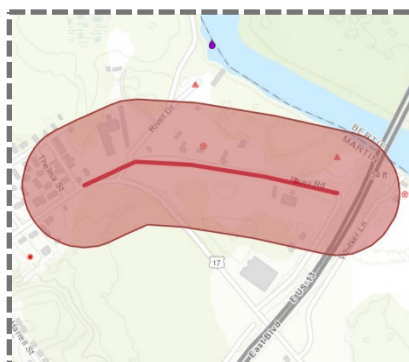


Figure 14 Adjust analysis area options



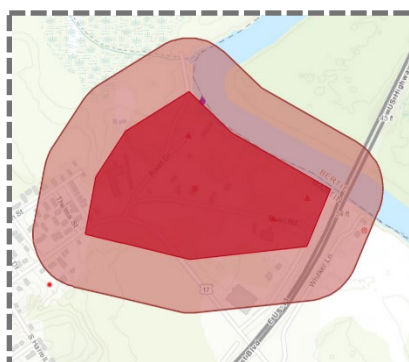
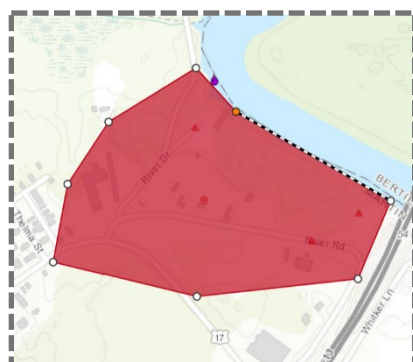
Selecting the point (📍) icon in the analysis window allows the user to click a single location in the map to use as the center of the analysis area.

Figure 15 Point location selection



Selecting the line (📏) icon allows the user to draw a path that will have a buffered area around it.

Figure 16 Line location selection



Selecting the polygon (📐) icon allows the user to draw a polygon that will have an additional buffered area around it (unless the buffer area is set to 0).

Figure 17 Polygon location selection

After an analysis area has been defined, the tool will summarize features located within the area and list them in the window. The features are separated by map layer and layers can be expanded using the dropdown arrow (∨) to view specific features within the area. Data can be exported all together to an external file (ex. CSV or PDF) using the export option (↑) above the layers; or exported by layer type using the export option in the layer name.

The screenshot displays the 'PCS Proximity Analysis' window. At the top, there's a green header with the title and expand/collapse icons. Below the header, the 'Location' section includes a map icon, a location pin icon, and a text input field containing '3843-3915 PERNEY COURT, CARY, NC, Apex'. To the right of the location input are fields for '1000' and 'Feet'. The 'Input location' section is below the location input. The main area shows two layers: 'Groundwater Sources' and 'PCS'. Each layer has an export icon (↑), a count (2), and a dropdown arrow (∨). The 'Groundwater Sources' layer lists 'SWIFT CREEK MASTER SYSTEM' (0 ft) and 'KILT VALLEY ESTATES' (671.15 ft). The 'PCS' layer lists 'Utility Sys Maint Div: Holly Brook p.s.' (414.1 ft) and 'Hollybrook WTP' (491.49 ft). Two callouts are present: one pointing to the export icon above the layers, labeled 'Export all data results', and another pointing to the export icon next to the 'PCS' layer, labeled 'Export data results only for this layer'. The callout for 'Export all data results' shows a menu with 'Export to PDF' and 'Export to CSV' options, and a form for 'Template' (A4 Portrait), 'Title' (PCS Proximity Report), and 'Legend' (checked), with an 'Export' button. The callout for 'Export data results only for this layer' shows a menu with 'Export to CSV' option.

Export all data results

Export data results only for this layer

Figure 18 Viewing and exporting data results

Detailed information for results of the analysis tool can be viewed by clicking the dropdown arrow (▼) next to the feature in the list. After reviewing the results, they can be cleared by selecting the bin icon (🗑).

The screenshot shows the 'Analysis' window of the SWAPInfo 2.1 application. At the top, there's a green header with the title 'Analysis' and expand/collapse icons. Below the header, the 'Location' section includes a map icon, a line icon, and a mail icon, followed by a distance input field set to '3000' and a unit dropdown set to 'Feet'. The 'Input location' is 'ALAMANCE'. To the right of the input location are three icons: an upload icon, a trash bin icon (highlighted with a red box and a callout 'Clear analysis results and reset area'), and a refresh icon. Below this is a table of 'Potential Contaminant Sources (PCSs)' with 2 items. The first item is 'ATKINSON PROPERTY, SUSAN' at '2,337.59 ft'. The second item is 'Tobacco Road Stream Mitigation Site' at '2,919.73 ft', with a dropdown arrow (highlighted with a red box and a callout 'View detailed information table') next to the distance. Below the table is a section titled 'NPDES Permits: Tobacco Road Stream Mitigation Site' with a hamburger menu icon. This section contains a table with the following data:

PCS Name	Tobacco Road Stream Mitigation Site
PCS ID	NCC233029
Address	Thom Road
City	Burlington
State	NC
Zip	27302
County	Alamance
Groundwater Risk Rating	Lower
Surface Water Risk Rating	Higher

Figure 19 View detailed output results or clear all analysis results

4 Contact

For questions regarding this document or the SWAPInfo 2.1 application, please contact the NC DEQ Drinking Water Protection Program at swap@deq.nc.gov.