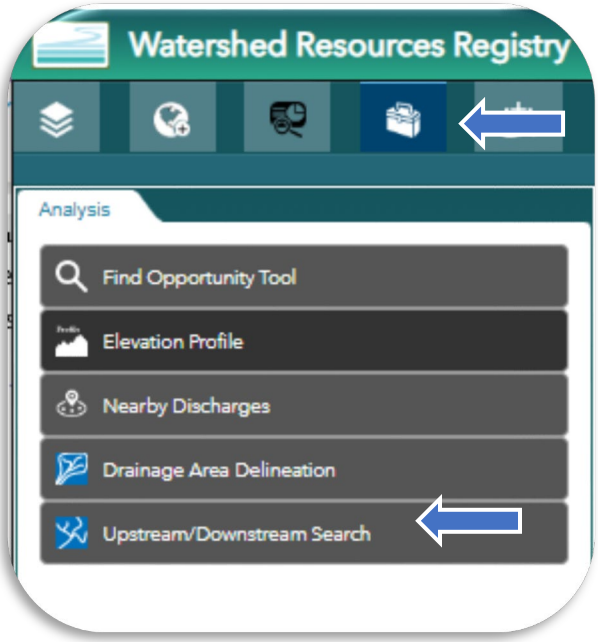
How to Use the Upstream/Downstream Search Tool

The Upstream/Downstream Search tool is a geoprocessing tool designed to take any point on the map and identify the flow of water to or from that point. The tool works by taking a user-designated point and snapping it to the nearest NHDPlus flowline based on NHDPlus flow direction data. Connecting NHDPlus flowlines, either upstream or downstream from the point are then identified on the map.

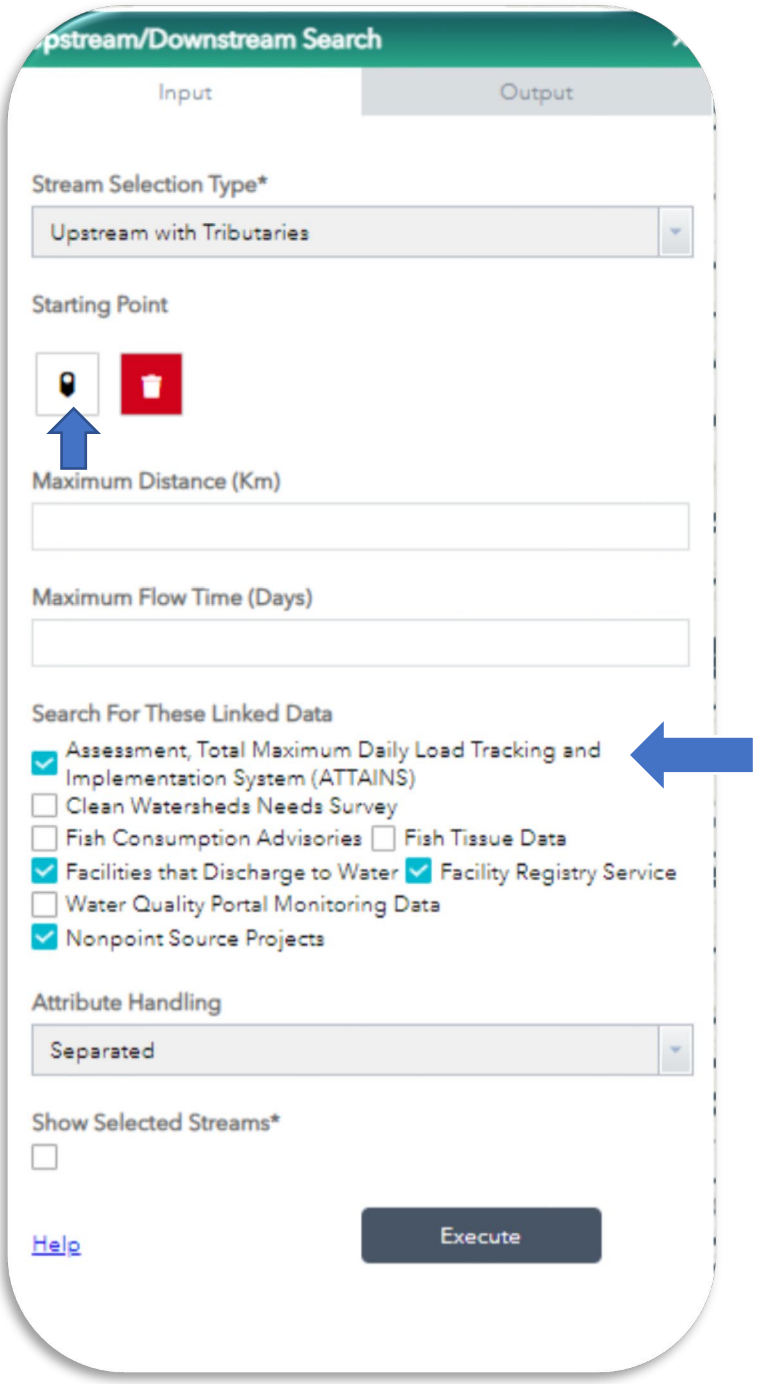
Accessing the Upstream/Downstream Search Tool

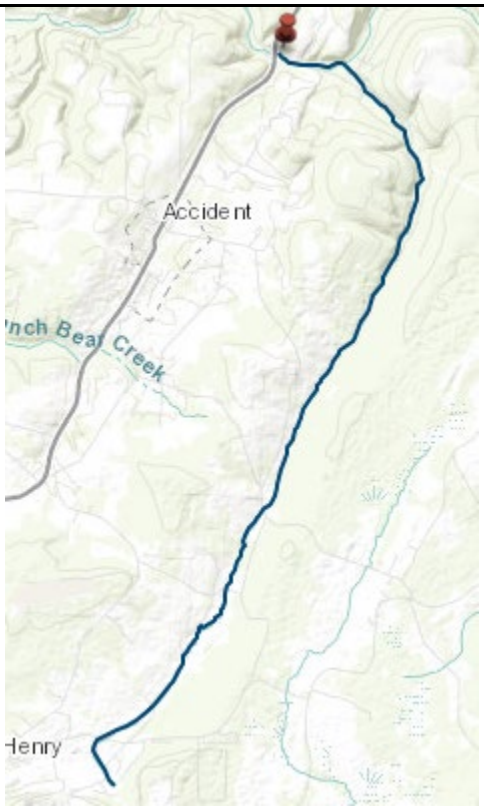
The Upstream/Downstream tool can be found under the Analysis Widget on the main tool panel

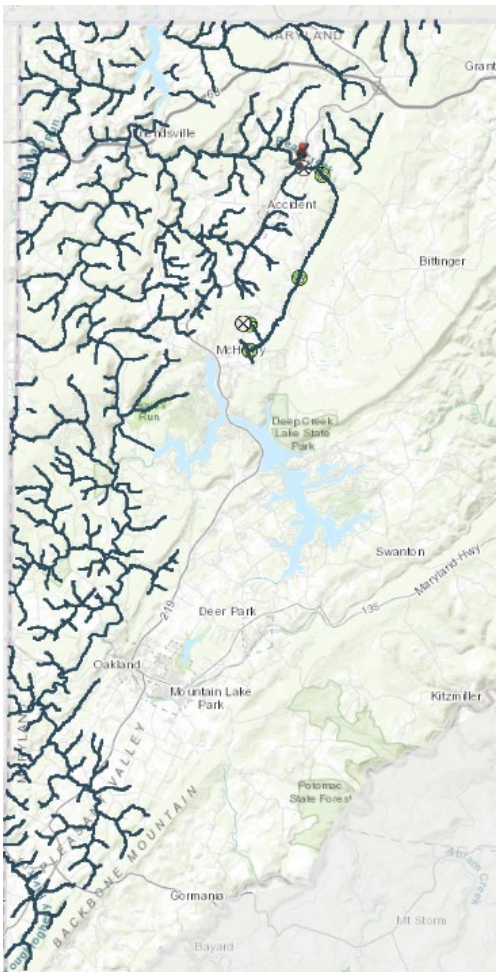


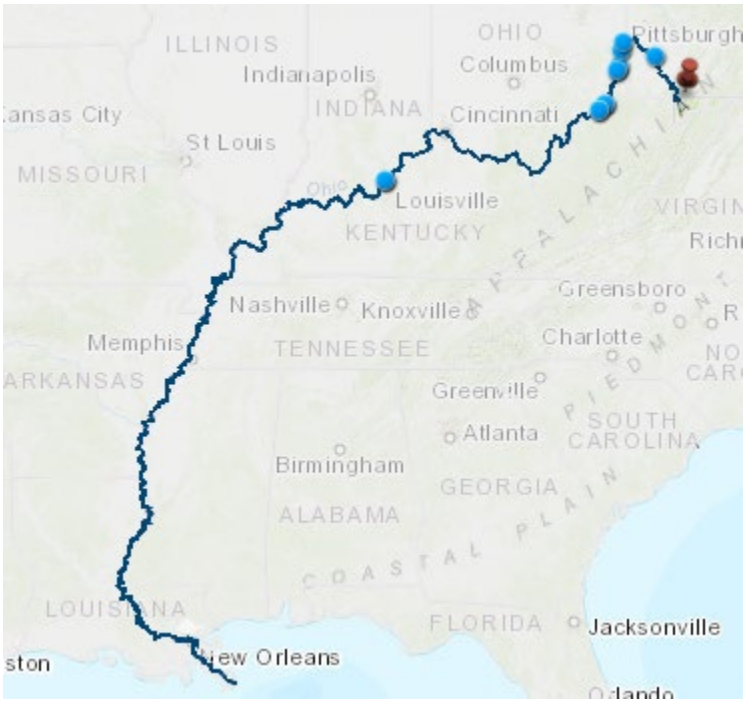
This will open a tool panel with two tabs: Input and Output.

In the Input tab, you must first select the 'Stream Selection Type'. There are five options as outlined below (example area: MD WRR - 79.29942, 39.65103):



Option	Description	Snapshot
Upstream Main Path Only	Highlights the main flowline upriver of the dropped point	

Upstream with Tributaries	Highlights the main flowline and connecting tributaries UPRIVER of the dropped point.	

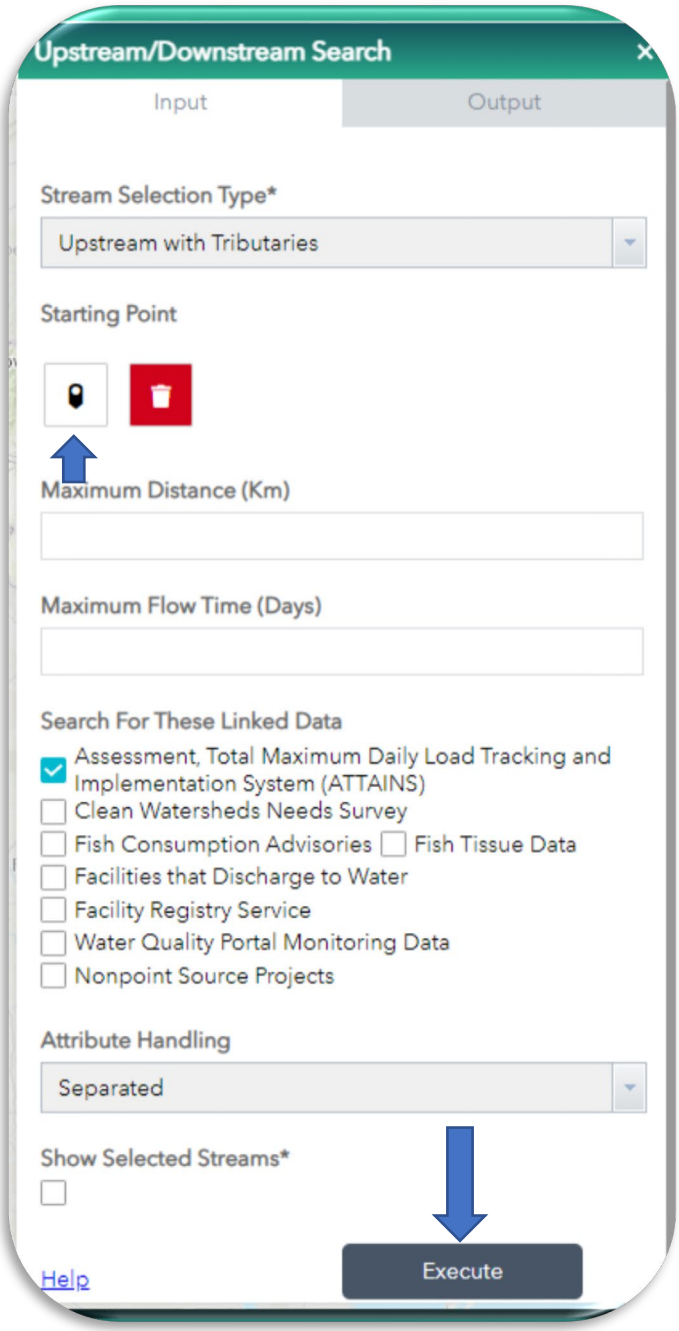
Downstream Main Path Only	Highlights the main flowline DOWNSTREAM of the dropped point to its discharge point.	
Downstream with Divergences	Highlights the main flowline and connecting divergences DOWNRIVER of the dropped point.	

Click on the ‘Starting Point’ button and drop a point onto your desired location on the map. This point does not need to be on a river/stream for the tool to work.

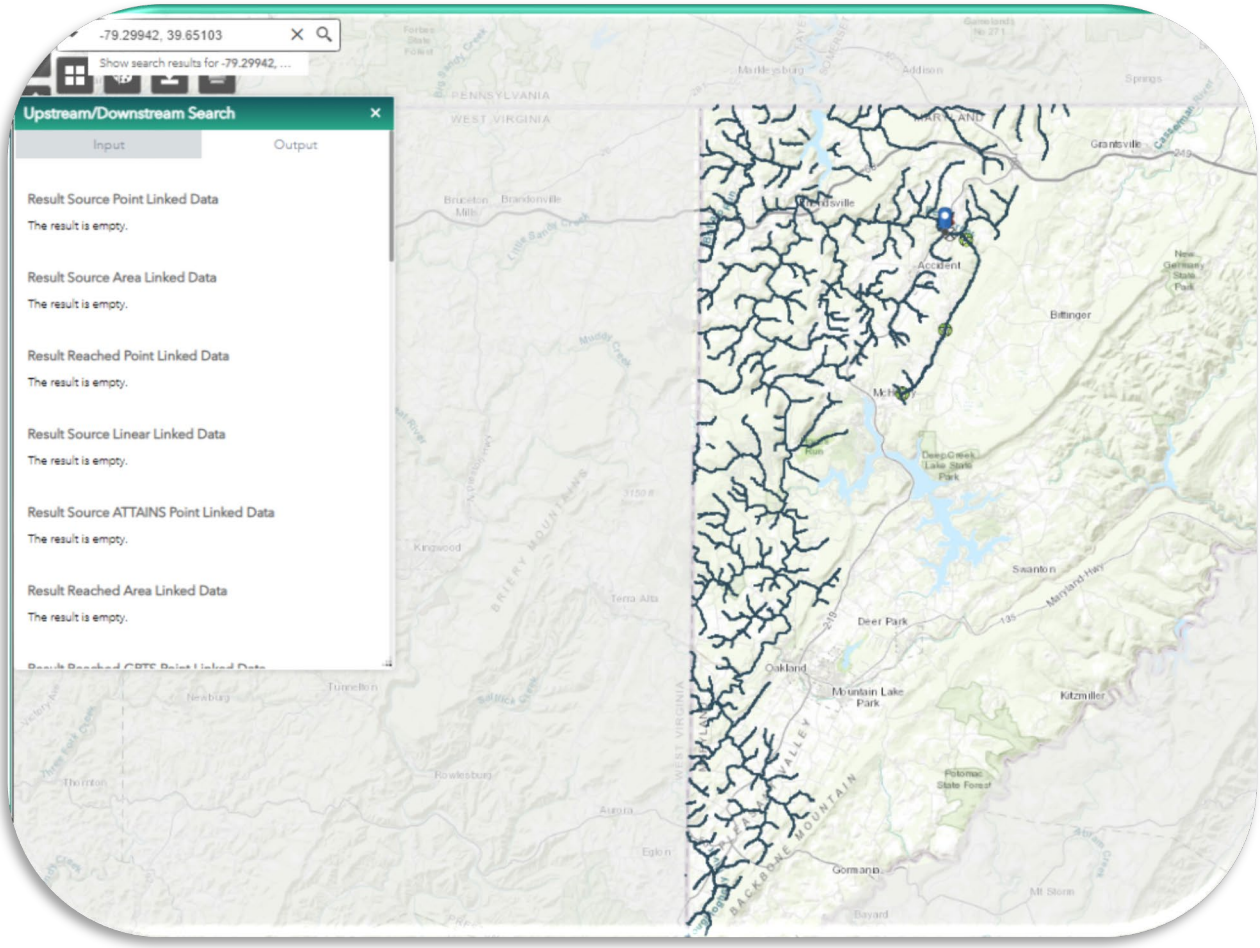
Enter in the desired maximum distance (in kilometers) into the text box. This is best used if you want to constrain your trace to a small area. Otherwise leave it blank to ensure you capture the full upstream or downstream water course.

The Maximum Flow Time (Days) feature is not functional at this time and can be ignored.

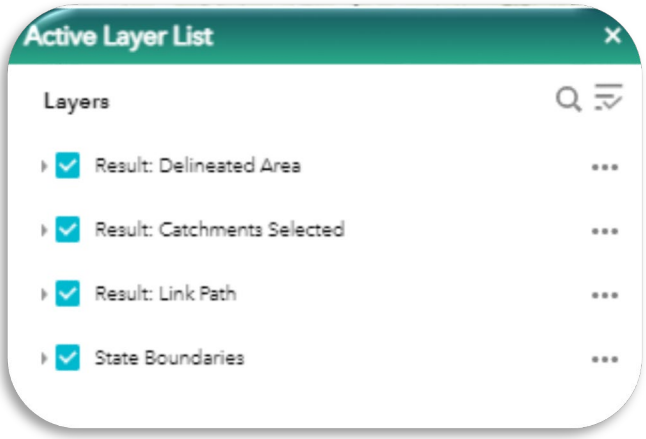
Click the blue ‘Execute’ button. Give the map time to process this request. This tool can take a couple of minutes to work depending on the size of the trace.



When the tool has finished processing the tool panel will automatically shift to the Output tab. Clicking on the ellipses next to any of the results will give you access to pop-ups, statistics, and attribute tables.



If you navigate to the Active Layer List, all the results will be available as data layers. These layers can be manipulated further and turned on and off as desired.



To reset this tool, navigate back to the Input tab on the Delineation pop-up. There is a red button with a trash can icon. Select this.

This will remove the point from the map. The results will remain. To remove the results from your map, uncheck the boxes on the Active Layer List.