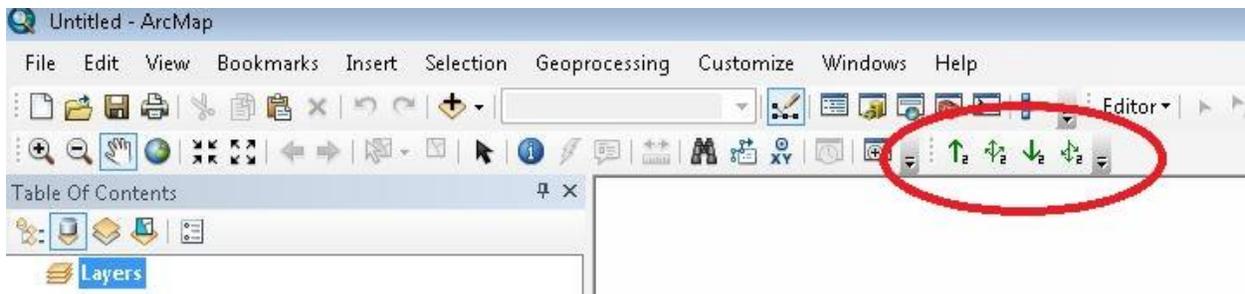


Exercise 4 – Navigating NHD with NHDPlus Flow Table and the NHDPlus Value Added Attributes – Last Updated on 5/23/2016

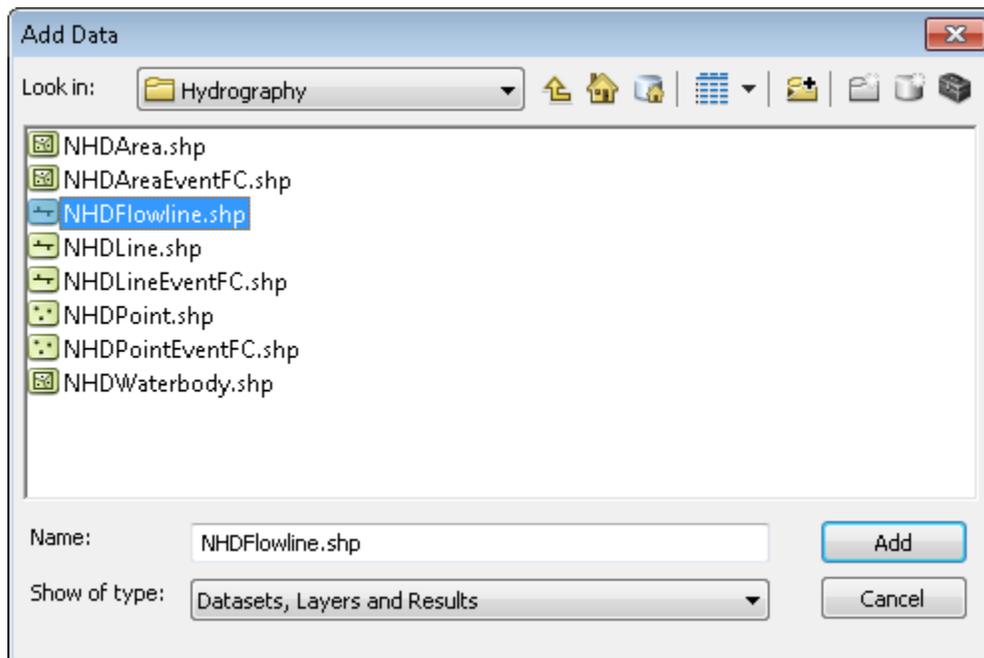
Within this document, the term NHDPlus is used when referring to NHDPlus Version 2.1 (unless otherwise noted).

1. Navigating NHD with NHDPlus Flow Table

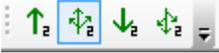
- a. Start ArcMap.
- b. Confirm that the NHDPlus V2 Flow Navigation Toolbar is present in ArcMap. It consists of a set of 4 green arrows. If the toolbar is not present, see Exercise 0 for installation instructions.

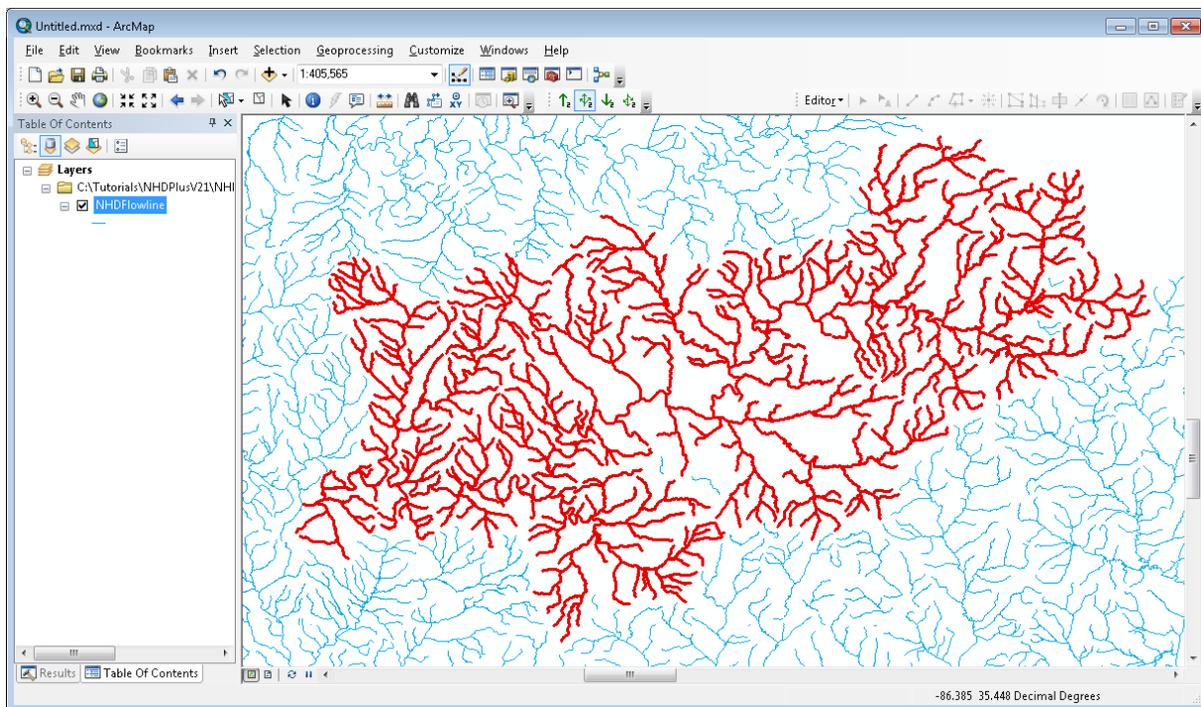


- c. Use the **File, Add Data** menu. In the **Add Data** dialog, navigate to the NHDPlusMS\NHDPlus06\NHDSnapshot\Hydrography folder and select NHDFlowline.shp. Click **Add**.



Note: The Flow Navigation Toolbar requires that the NHDPlusAttributes component be present for the VPU that will be navigated (i.e the NHDPlusAttributes component must be downloaded and installed). However, none of the tables in NHDPlusAttributes need to be loaded into Arcmap.

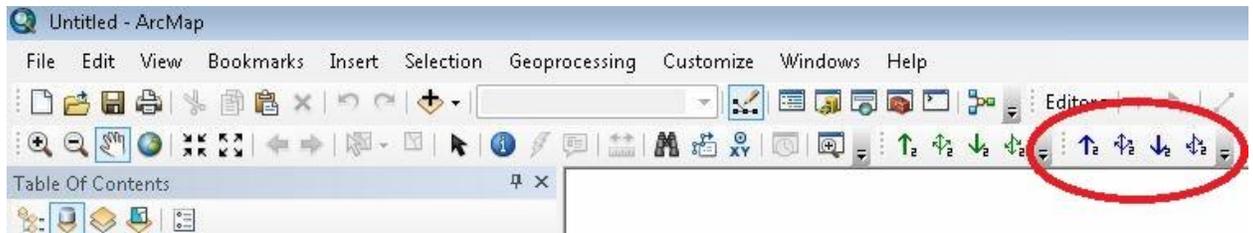
- d. Use the zoom-in tool , to zoom in to an area in the NHDFlowline layer.
- e. Select one of the NHDPlus Flow Table Navigation tools.  Point and click on a NHDFlowline feature. There is no indicator that shows that the navigator is working. Wait for the results to appear.
- f. The Flow Table Navigator does not have a distance option and navigates whole flowlines. The results are displayed as a selected set of NHDFlowlines.

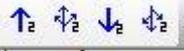


- g. Clear the selection

2. Navigating NHD with NHDPlus Value Added Attributes

- a. Add the NHDPlusV2 VAA Navigation Toolbar to ArcMap. It consists of a set of 4 blue arrows.



- b. Select one of the NHDPlusV2 VAA Navigation tools.  Point and click on an NHDFlowline feature.

In the Navigation Options dialog, the “Navigator Database Path” is a folder where the Navigator can create a permanent navigation SQL database for this and future navigations in the VPU about to be navigated. In this example the VPU is NHDPlus06. It is recommended that you create a folder under your NHDPlus data folder called \NavigationDBs. Click the Browse button and select the folder for the navigation databases.

The “Navigation Start Options” allow the user to start the navigation at the top or bottom of the “clicked” NHDFlowline, or at the reachcode and measure of the click point. If you select “NHDFlowline”, the entire selected flowline will be in the navigation results. If you select “Reachcode measure”, the navigation will start exactly at the click point.

The next option is “Stop Navigation based on Distance Traveled”. If this is set, the navigation will stop at the distance provided. If you are performing an upstream with tributaries or downstream with divergences navigation, the navigation will stop along each path at the distance specified. If 0 is specified, the navigation will stop at the end of the network.

The last option, “Stop Navigation base on an Attribute Value”, is where the navigation when the comparison identified by the attribute name (PathLength, ArbolateSu, TotDASqKM, DivDASqKM), the operator, and the comparison value is no longer true.

For this exercise:

- I. Set the Navigation Start Options to: Start at Reachcode Measure
- II. Set Navigation Stop Distance: 0
- III. Leave the Stop Navigation based on an Attribute Value fields blank
- IV. Click “Navigate”

NHDPlusV2 VAA Navigation Options

Navigation Information

Navigator Database Path: 

Navigation Start Options

Start at top or bottom of "clicked" NHDFlowline

Start at Reachcode measure:

Stop Navigation based on Distance Traveled

Navigation Stop Distance: KM

Navigation will stop at the distance provided. 0 means that navigation will continue until completion.

Stop Navigation based on an Attribute Value

Navigation starts based on the mouse "click" and start options and stops when the comparison identified by the attribute name, operator, and comparison value is no longer true.

Attribute Name:

Operator:

Attribute Comparison Value:

The NHDPlusV2 VAA Navigator adds a layer to the map called Navigation Results. The results are also populated in a table located the VPU's folder called TNavResults.dbf. If you would like to save the navigation results, export the Navigation Results layer prior to performing another navigation.

