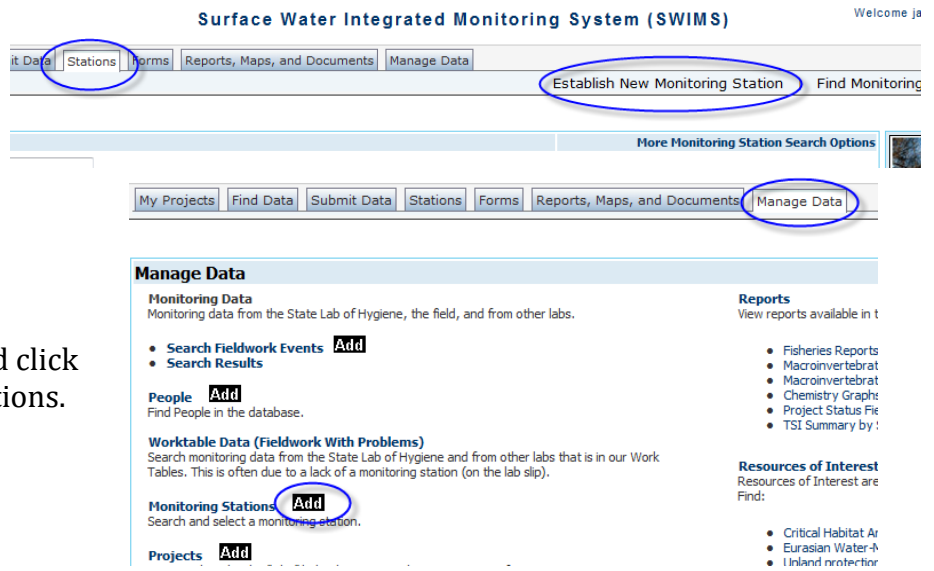


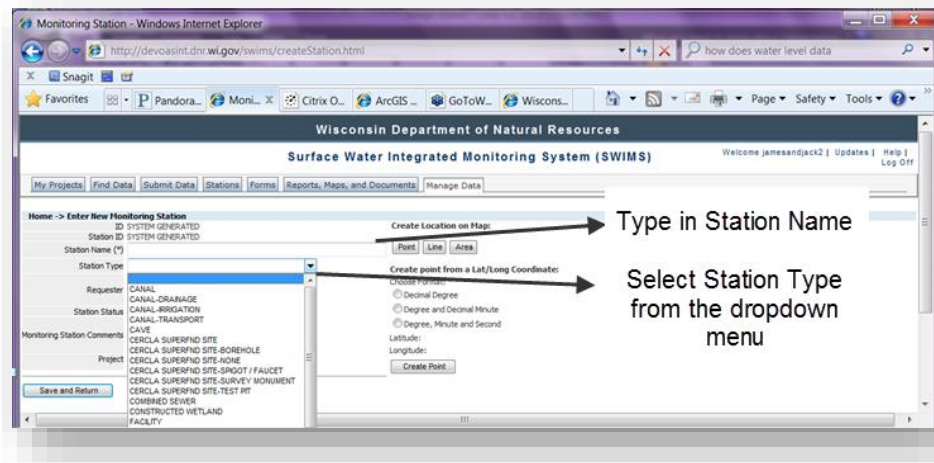
How to Create a Monitoring Station

1) Go to Stations tab and click "Establish New Monitoring Station"

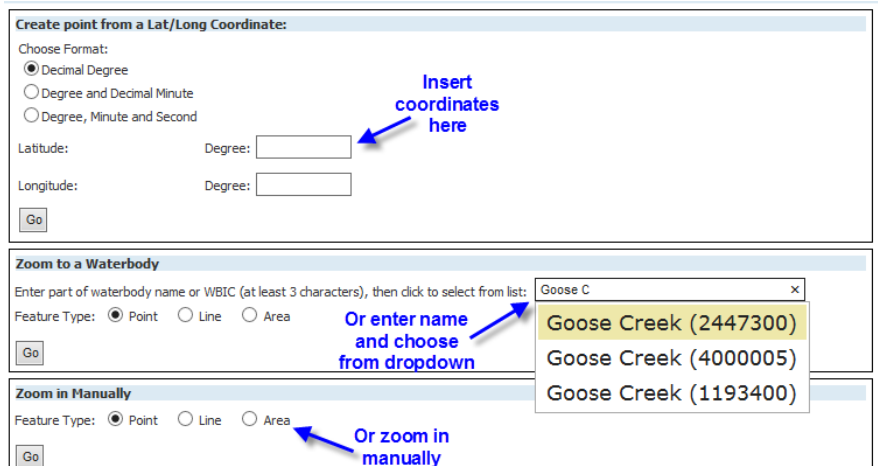


OR go to Manage Data tab and click "Add" next to Monitoring Stations.

2) Fill in Station Name and Type (comments and project are optional).

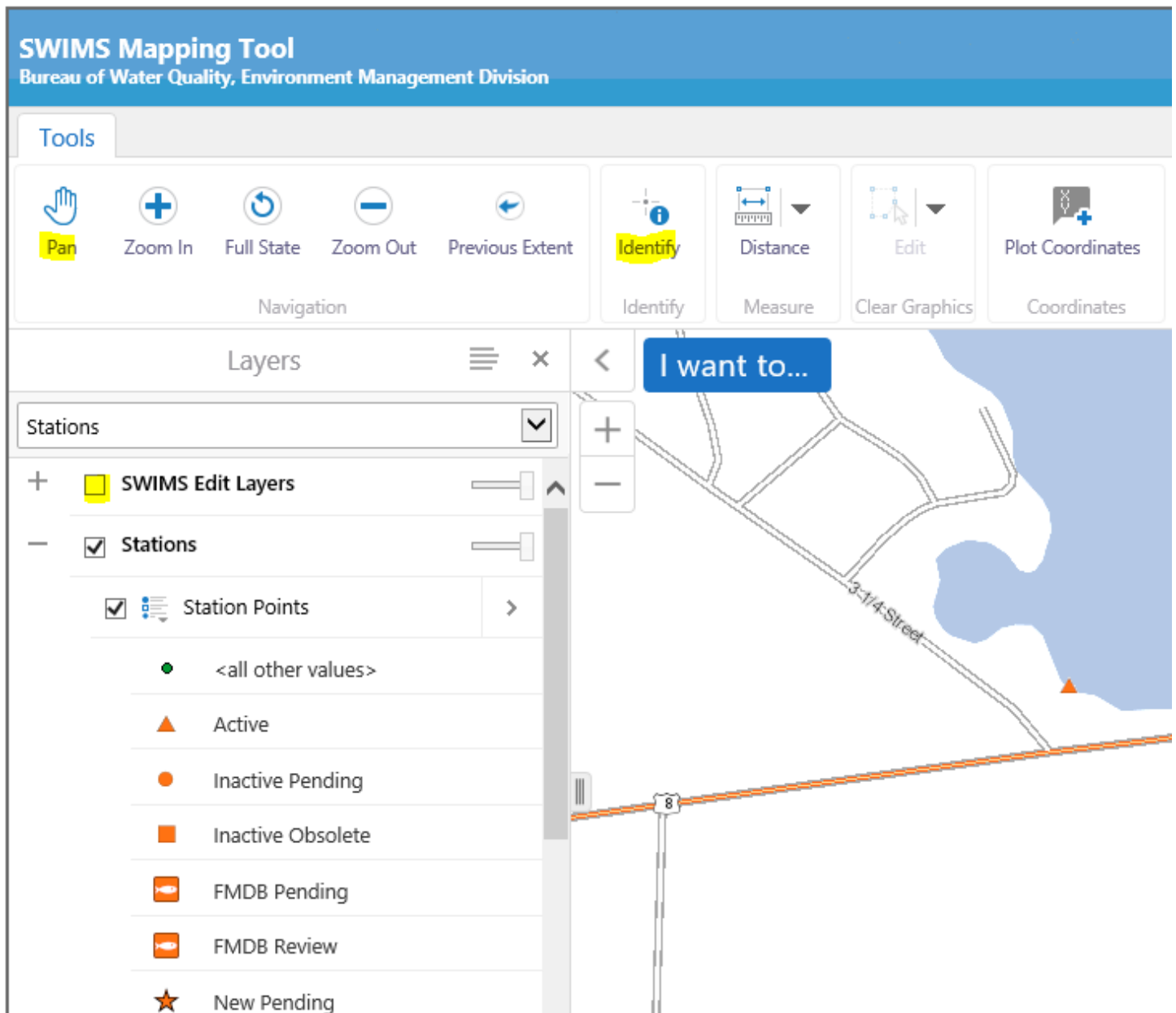


3) If Latitude and Longitude are known, enter coordinates in the proper format, click "Go", and skip to step 5a. If coordinates are unknown, enter part of the waterbody name and choose from the dropdown list OR zoom in manually by clicking the Point, Line, or Area feature



type.

- 4) The Embeddable Locator Tool (ELT) will open in a separate window. Note it takes about 5-10 seconds for the ELT to load completely. Zoom in and out using the mouse or the “Pan” tool to find a location. If a station already exists, click on “Tools” and “Identify” to obtain a Station ID. Note you will need to turn off the SWIMS Edit Layers (red points and lines) to view the existing stations (orange triangles underneath).



5) The ELT editing options you see will depend on whether selected a point, line or polygon feature in Step 3 above.

Points

When the ELT starts up, it will zoom into the area of interest you specified (waterbody, or lat/long coordinate). If you zoomed into a waterbody, you'll have one of three options:

- Simply digitize a point by clicking on the map
- Digitize a point, and snap it to hydro
- Digitize a point, and reference a hydro feature with a separate reference point

Why snap or reference to hydro?

Snapping to or referencing hydro is important when working with water-based features in that it ties the feature being digitized to the hydrography framework. This allows us to join datasets together that are also on the framework – for example, monitoring stations on an assessment unit, or different types of Resources of Interest so we can see what's "in" a waterbody.

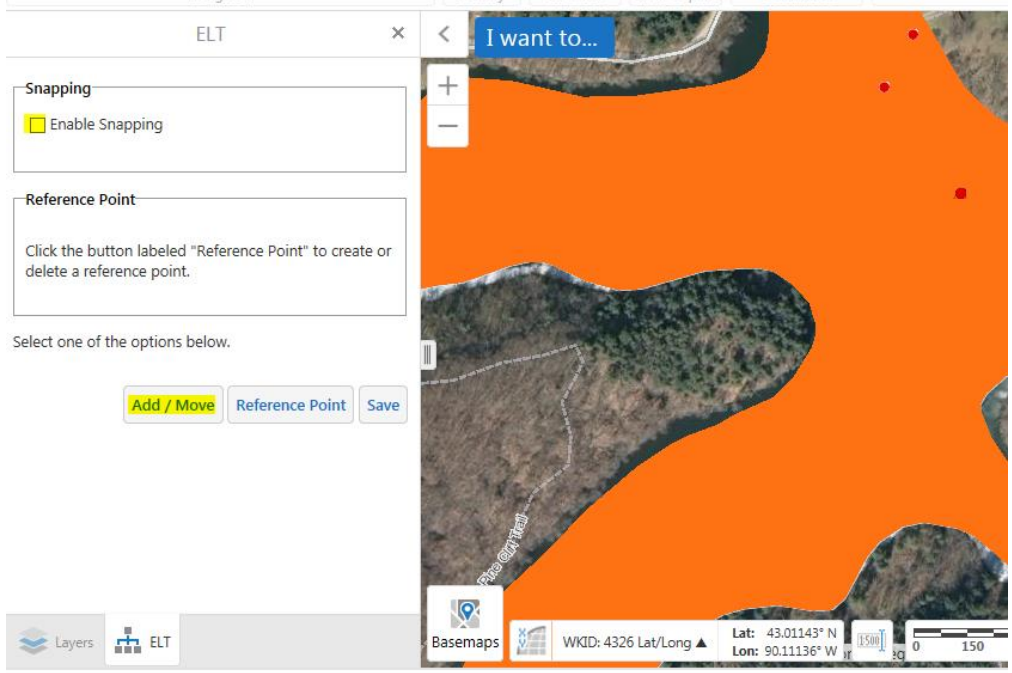
If you are creating a point that's inside a mapped hydro feature like a lake or larger river, you don't need to snap to hydro, since the point will intersect the hydro feature and automatically be associated with it. Likewise, a point associated with an unmapped water feature or a wetland does not need to be snapped to hydro.

Points on mapped water features should be snapped to hydro, for example a monitoring station on a stream, or a point on a lake or river shoreline.

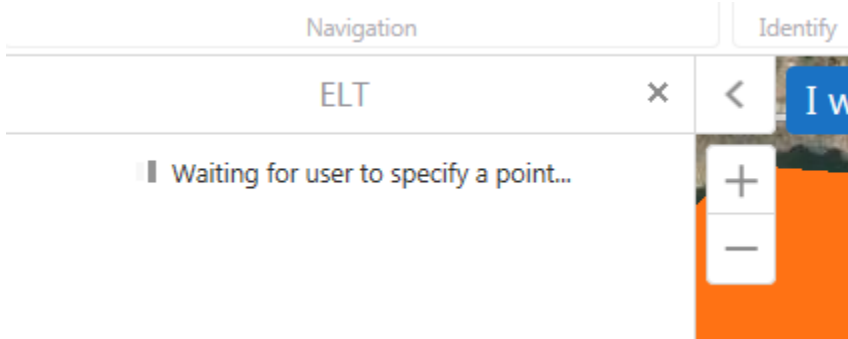
Points that are near mapped water features, but not exactly on the mapped features, should be referenced to hydro. This allows you to place the point where you want it, but still connect it to hydro. This is functionality we had in the first version of the ELT, but not in the second Silverlight version.

Creating a Point without Snapping

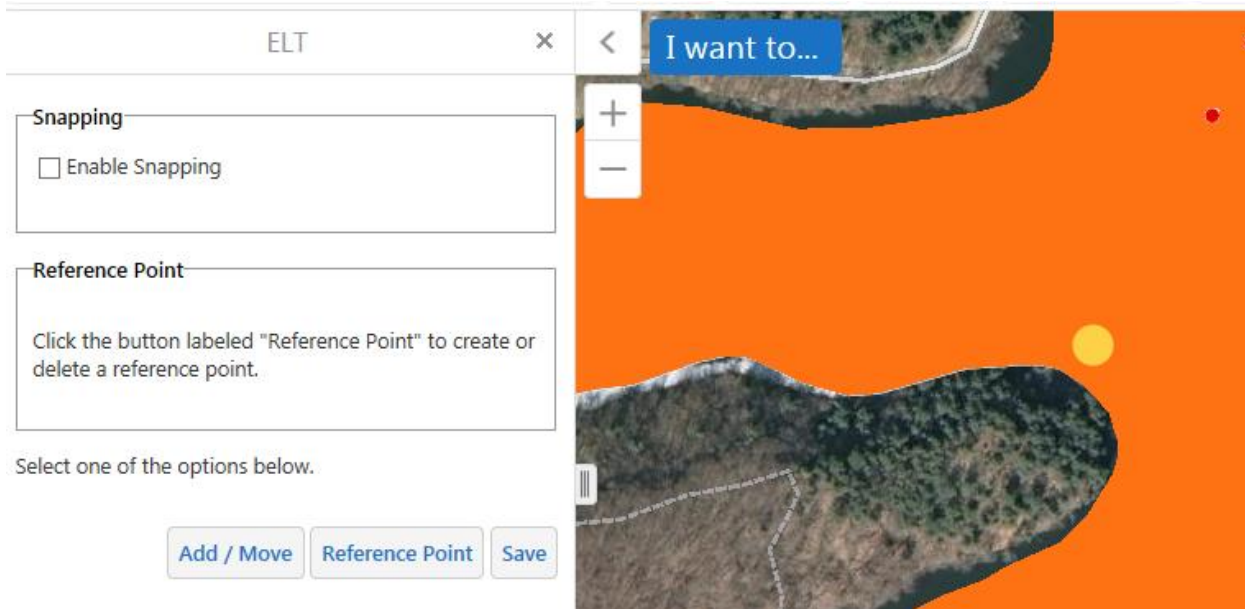
When the ELT finishes loading, leave the Enable Snapping checkbox unchecked, and click the Add / Move button.



The ELT will then say Waiting for user to specify a point...



This is your cue for you, the user, to click on the map where you want to place your point. A yellow dot will appear where you click.

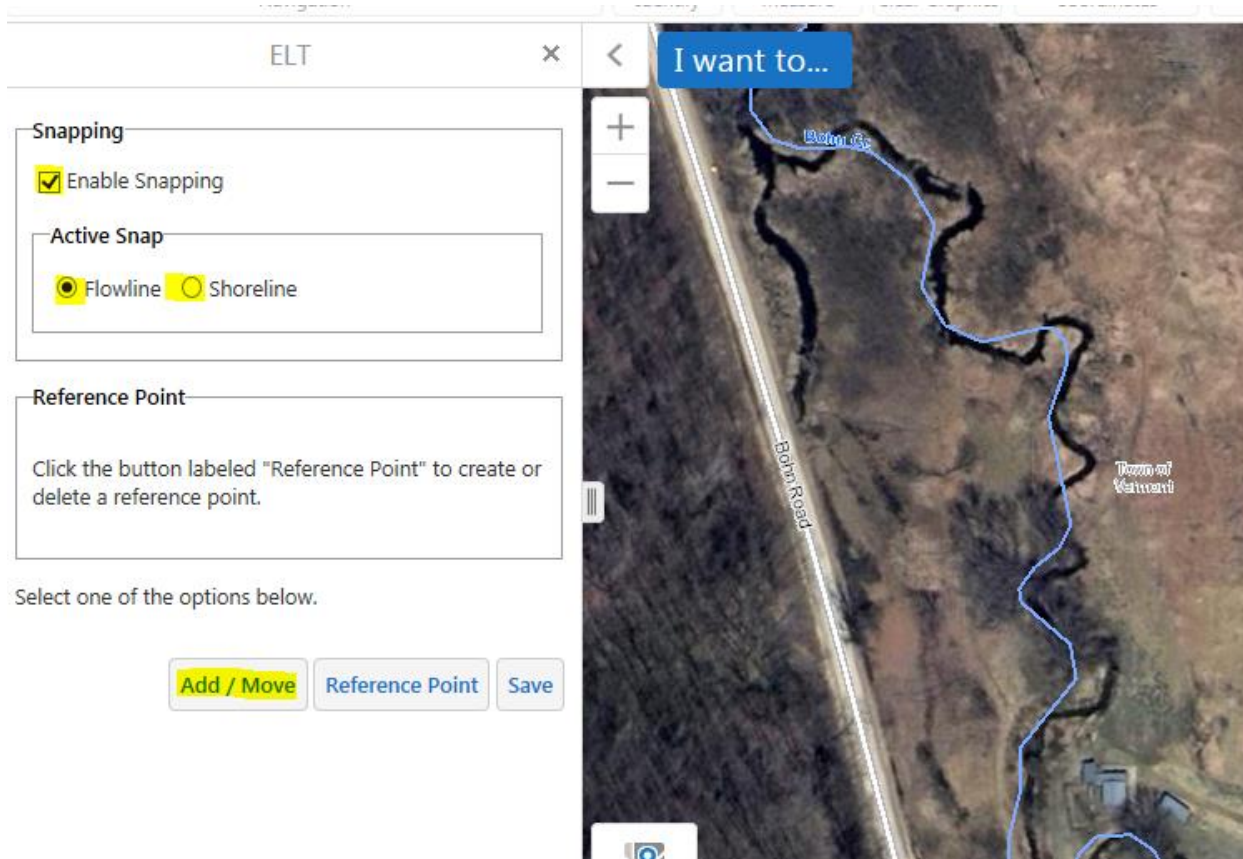


If you're satisfied with the point location, click Save. Otherwise, click Add / Move again, and click on the map where your point should be.

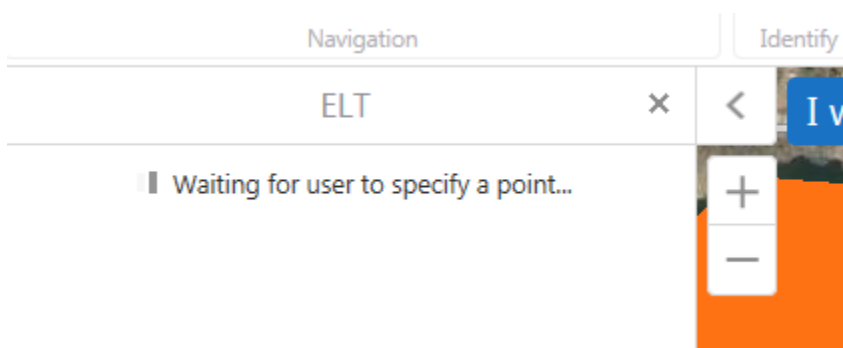
When you click Save, geoprocessing stuff will happen behind the scenes. It will take a few seconds, then the ELT window will close, and you'll be returned to the database.

Creating a Point with Snapping

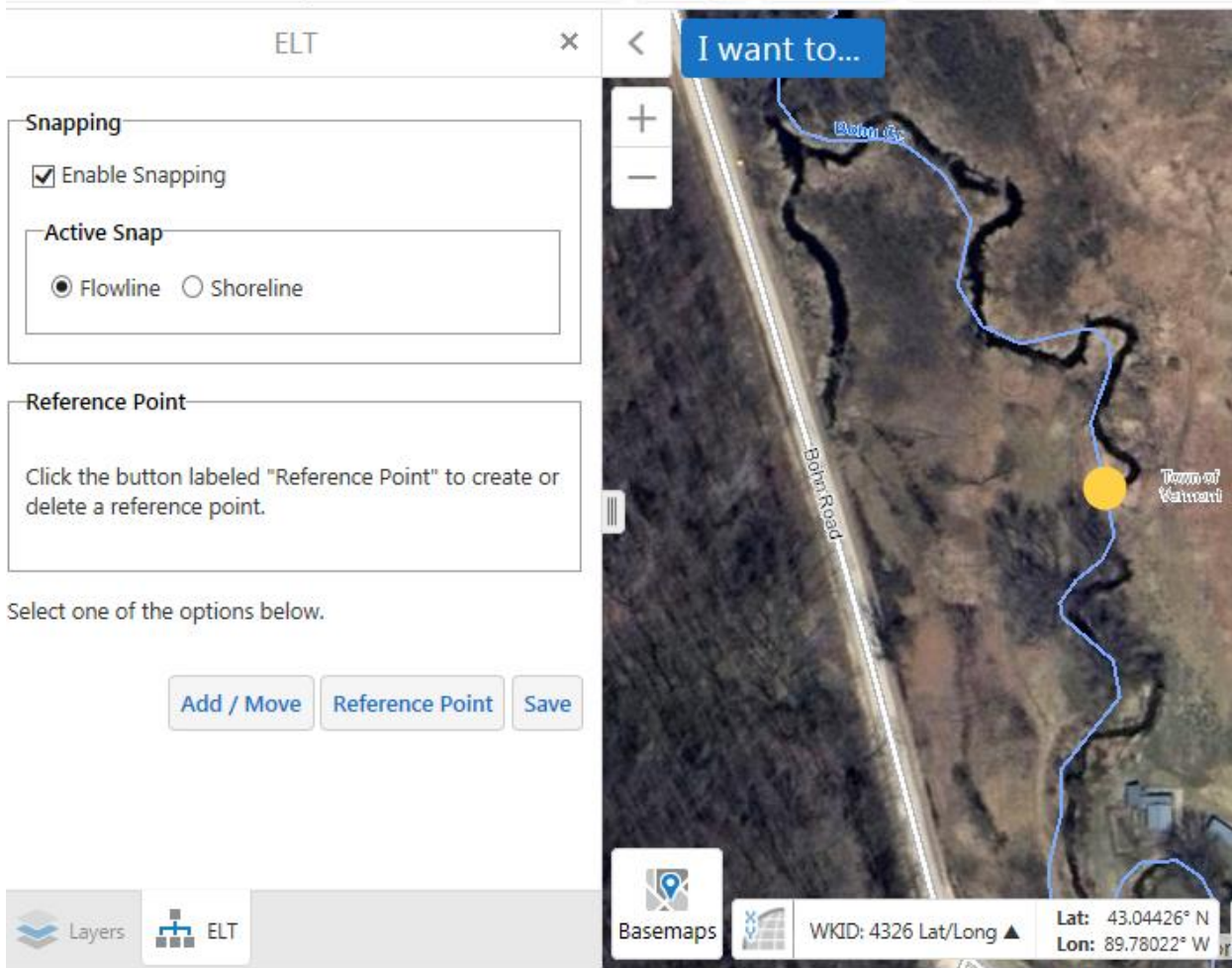
When the ELT finishes loading, check the Enable Snapping checkbox. You'll have the option of snapping to a flowline (stream) or shoreline. Choose whichever is appropriate, then click the Add / Move button.



The ELT will then say Waiting for user to specify a point...



This is your cue for you, the user, to click on the map where you want to place your point. A yellow dot will appear where you click, but the Waiting for user to specify a point... message will continue to display for several seconds while the snap to hydro process runs. When point options screen returns, it's done, and the point has been successfully snapped.

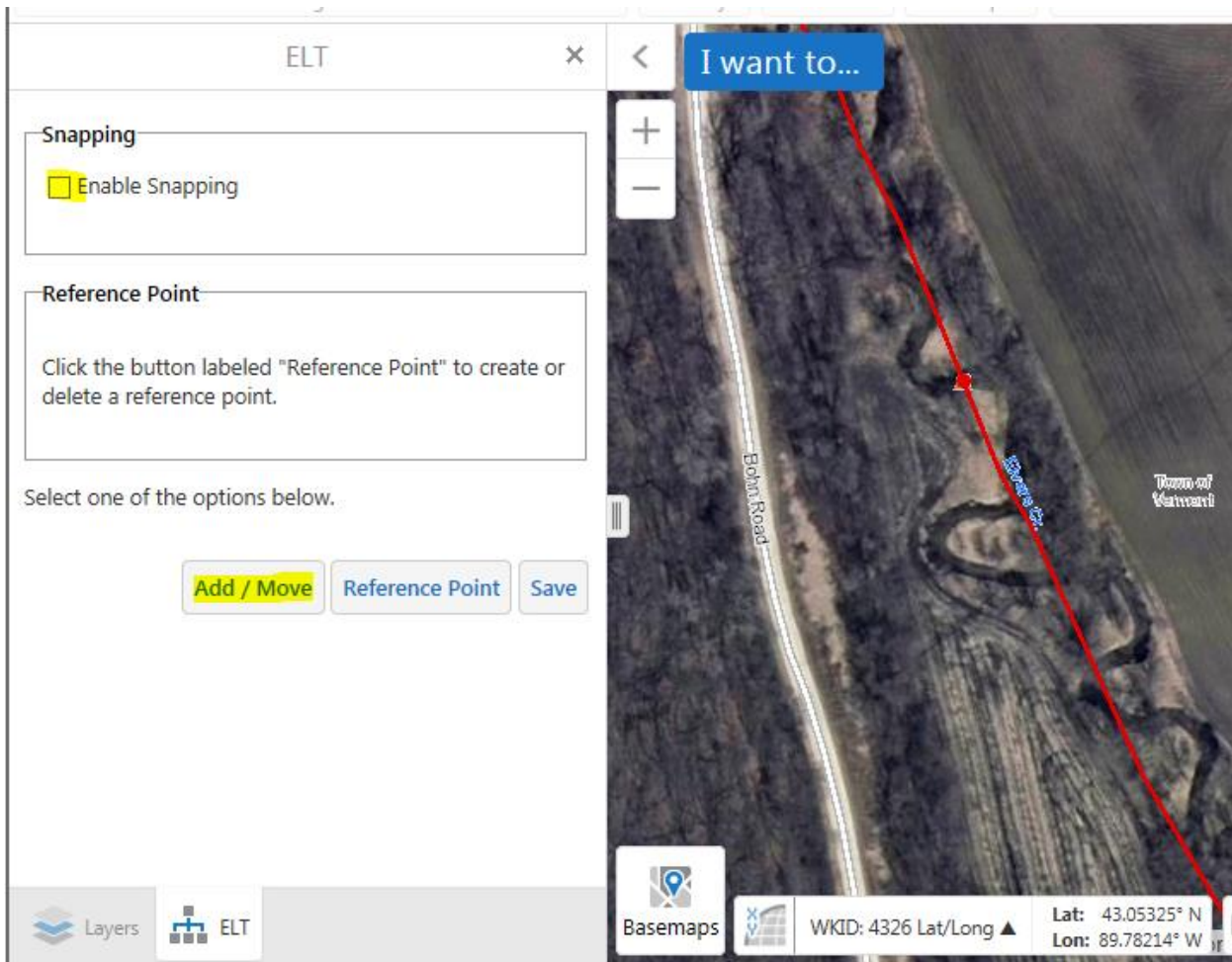


If you're satisfied with the point location, click Save. Otherwise, click Add / Move again, and click on the map where your point should be. Again, let it sit for a few seconds while the snapping process runs.

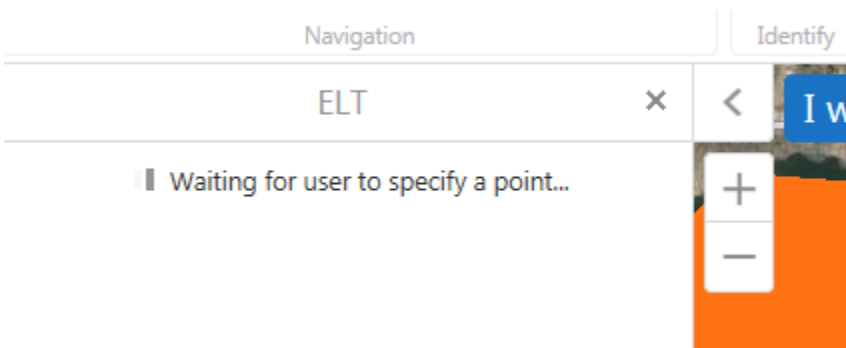
When you click Save, geoprocessing stuff will happen behind the scenes. It will take a few seconds, then the ELT window will close, and you'll be returned to the database.

Create a Point and a reference point

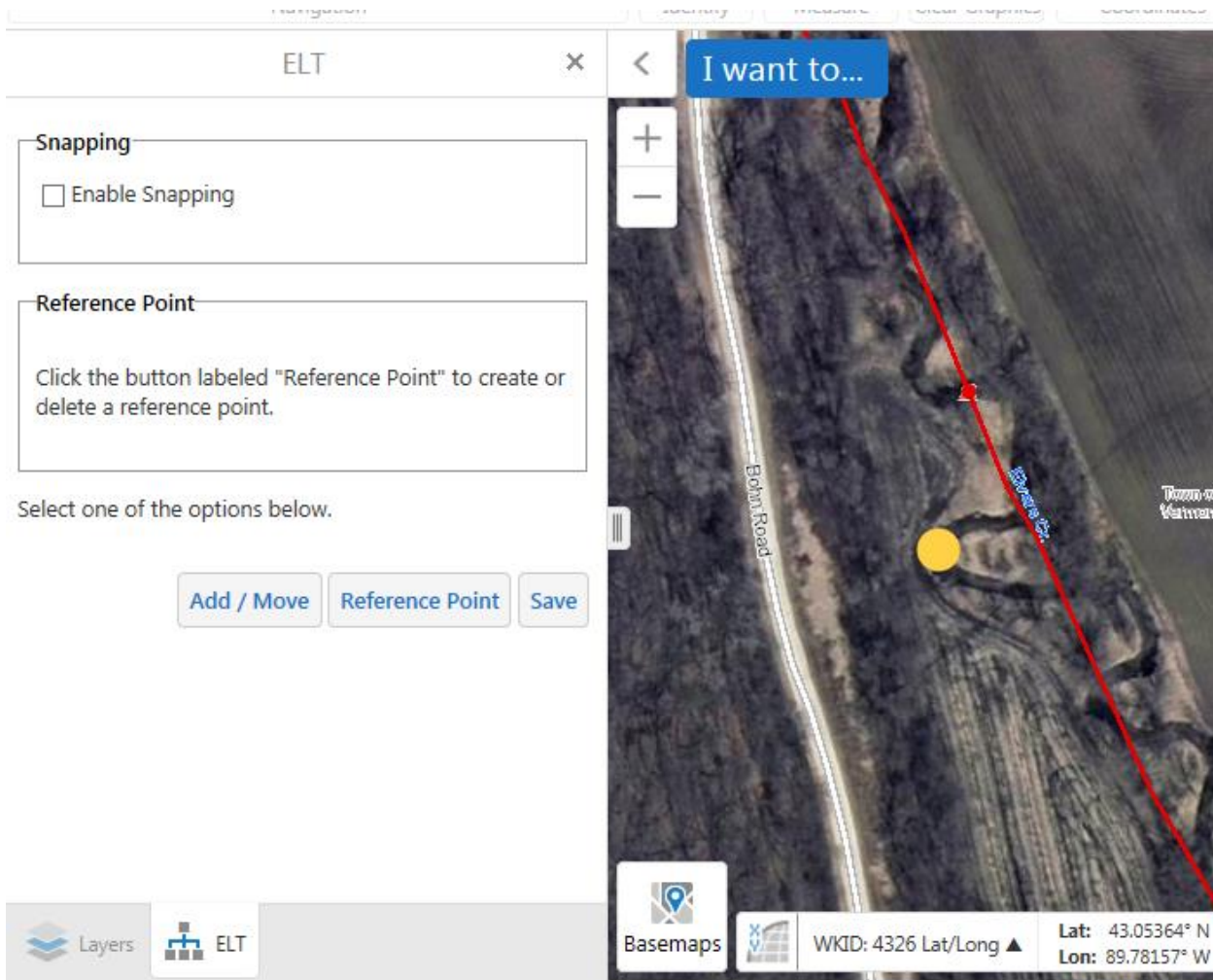
When the ELT finishes loading, leave the Enable Snapping checkbox unchecked, and click the Add / Move button.



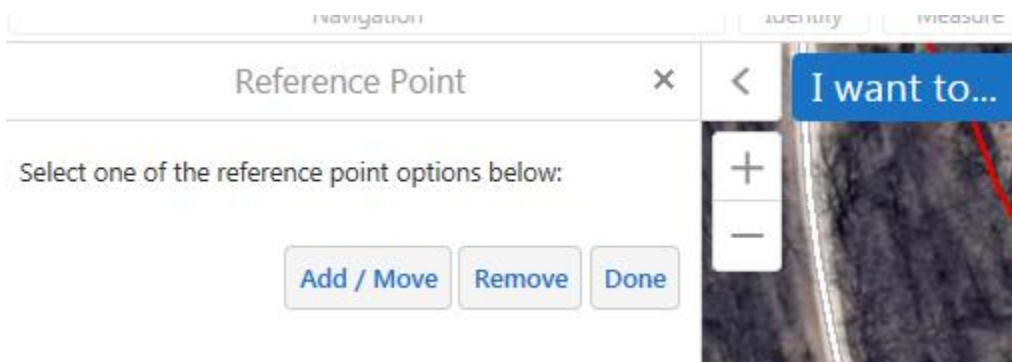
The ELT will then say Waiting for user to specify a point...



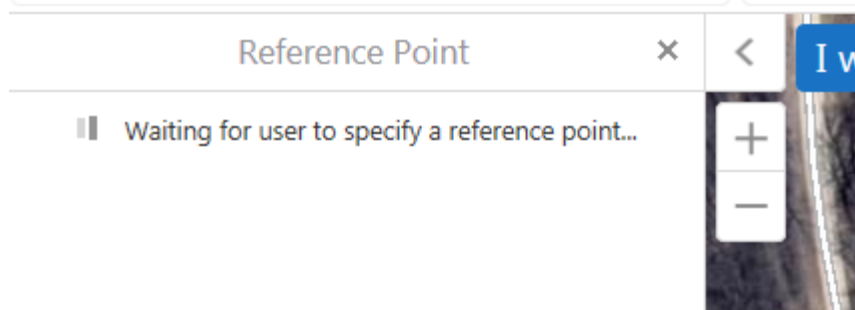
This is your cue for you, the user, to click on the map where you want to place your point. A yellow dot will appear where you click.



Now, click the Reference Point button. You'll be given a set of options:

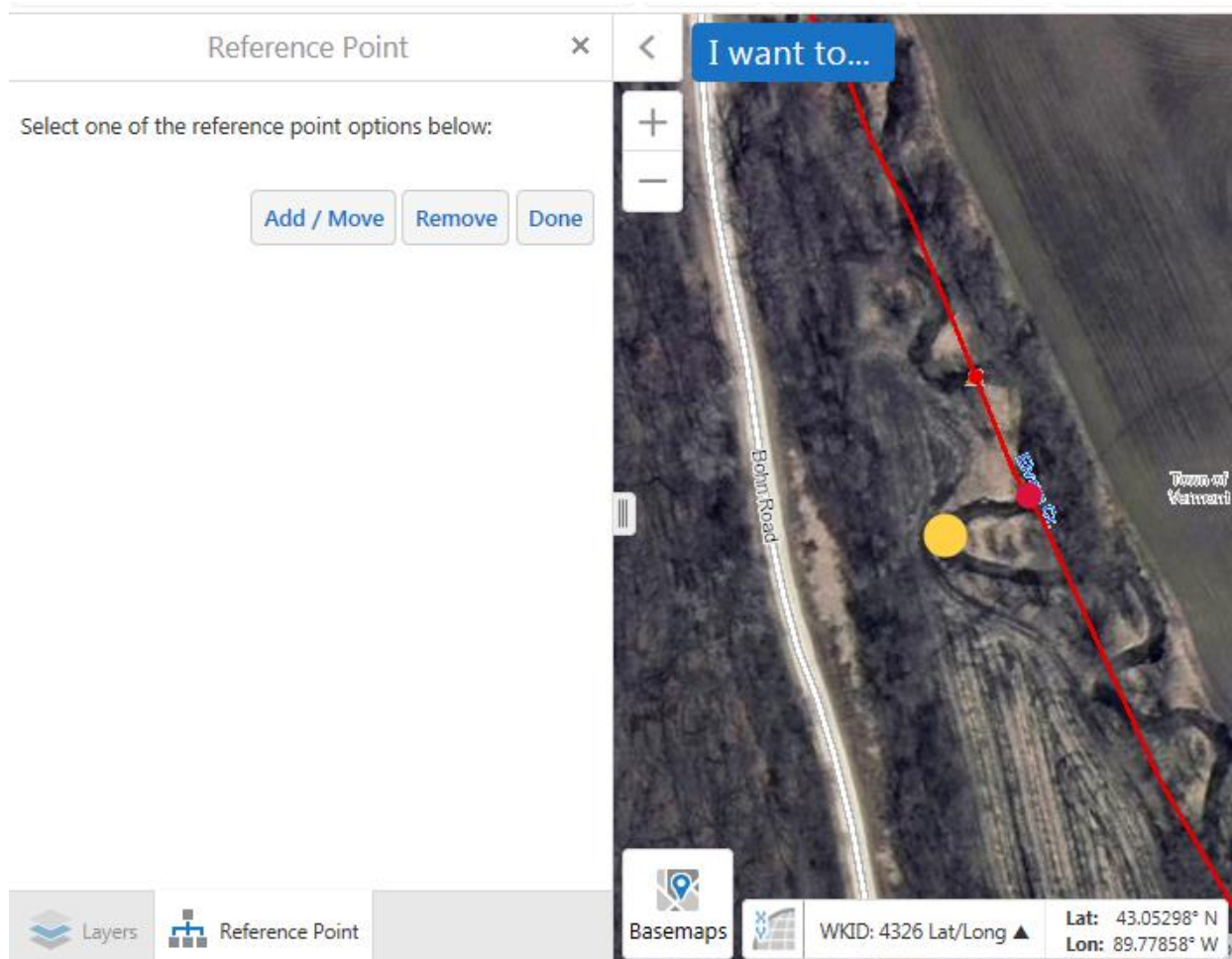


Click Add / Move. The ELT will then say Waiting for user to specify a reference point...

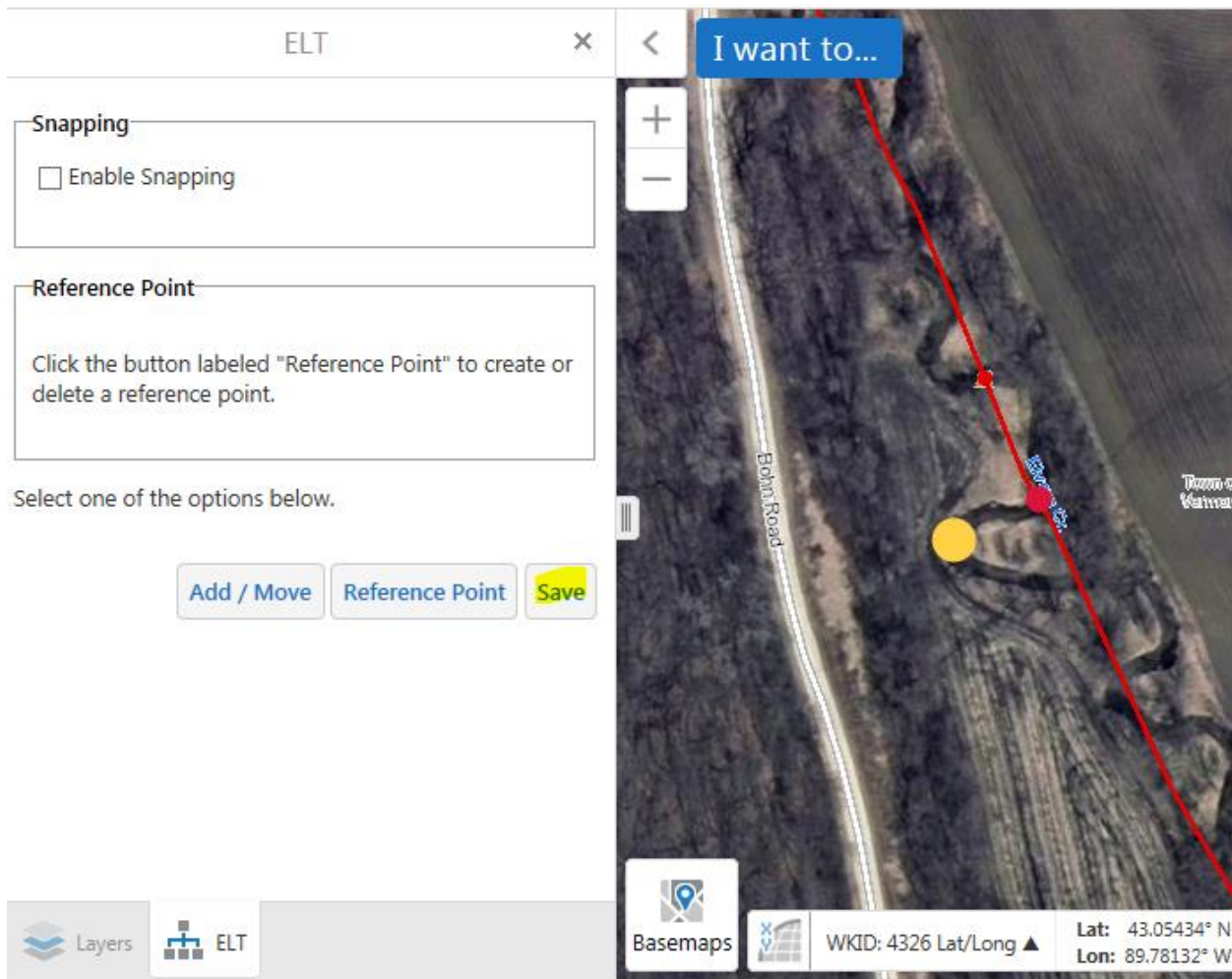


This is your cue for you, the user, to click on the map where you want to place the reference point. This should be inside the hydro feature for a lake or river, or on the hydro line for a stream. A smaller red dot will appear where you click.

If you're satisfied with the reference point location, click Done. Otherwise, click Add / Move again, and click on the map where the reference point should be.



You'll then be returned to the point options screen, where you can click Save to save the point and reference point.



When you click Save, geoprocessing stuff will happen behind the scenes. It will take a few seconds, then the ELT window will close, and you'll be returned to the database.

Creating a point from a lat/long coordinate

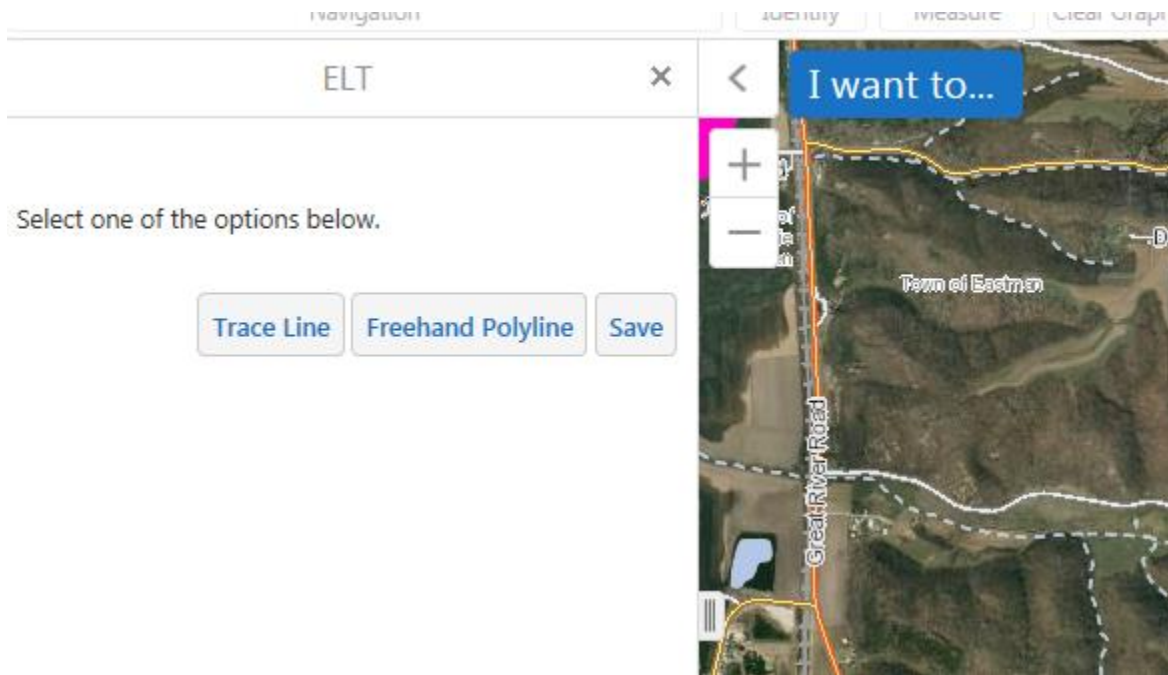
When you launch the ELT with a lat/long coordinate, it will automatically create a yellow dot at the location you specified. Unless this point is within a hydro feature, it will not be snapped to hydro. We recommend either snapping it to hydro if the hydro feature is close by, or referencing a hydro feature if appropriate.

Move an existing Point

This works just like creating a new point, except the ELT zooms into the existing point location when it starts up. The same editing tools are available. In the old ELT, you would "drag" the point to its new location. In this new version, you click the Add/Move button, and simply click on the map where you want the new point to go.

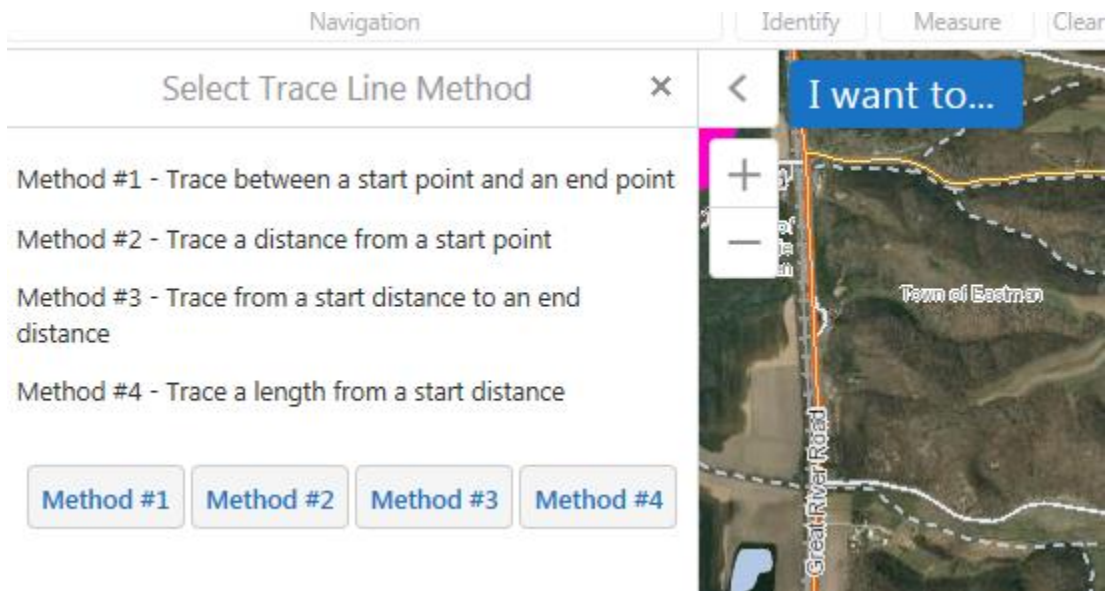
Lines

When creating a line feature with the ELT, you have the option of tracing part (or all) of a hydro feature, or manually digitizing a line.



Tracing a Hydro feature

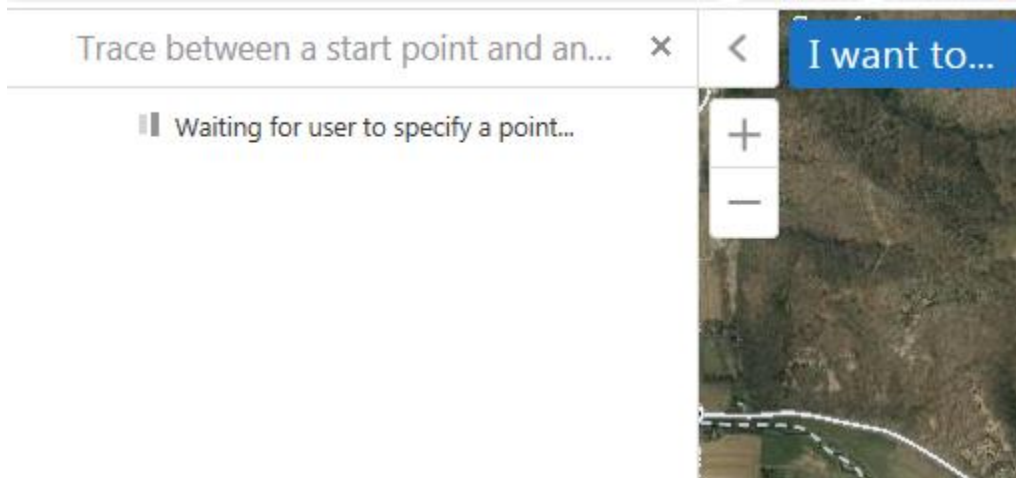
Click the Trace Line button to trace a mapped hydro feature. You'll have four options.



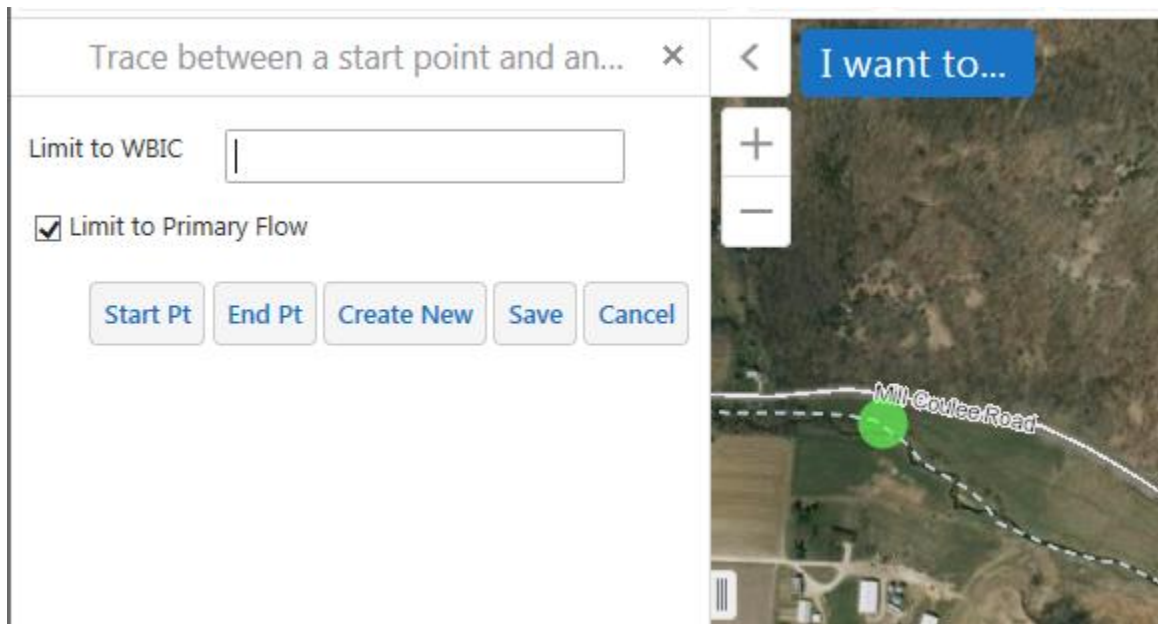
Method #1 – Start point and end point

Click the Method #1 button. You have the option to limit the trace to a specific WBIC, otherwise the ELT will follow the path between your start point and end point.

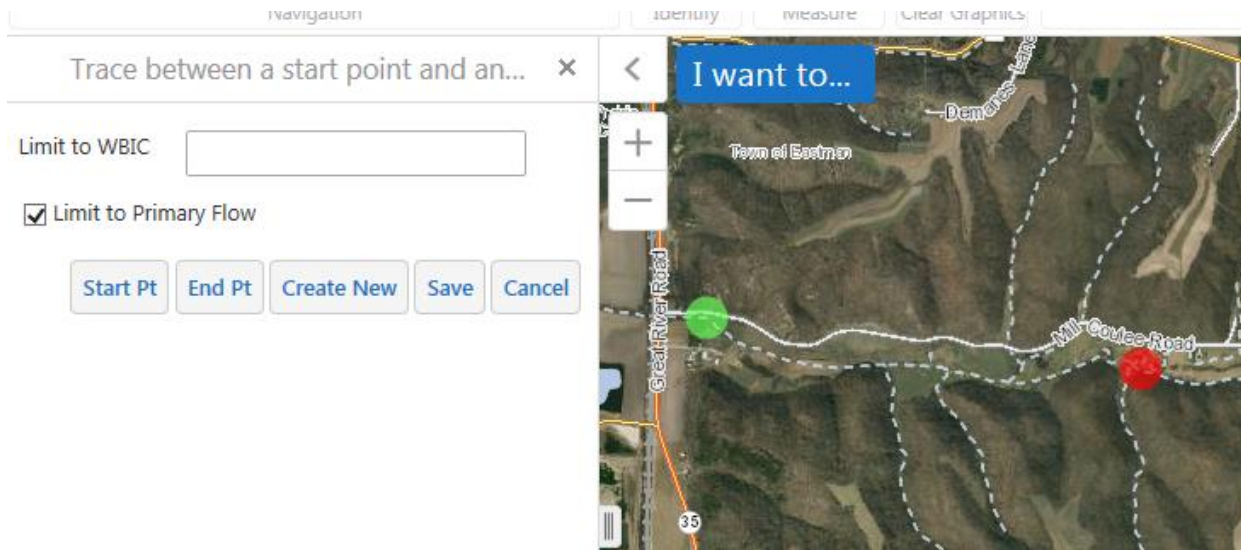
Click the Start Pt button. The ELT will display Waiting for user to specify a point...



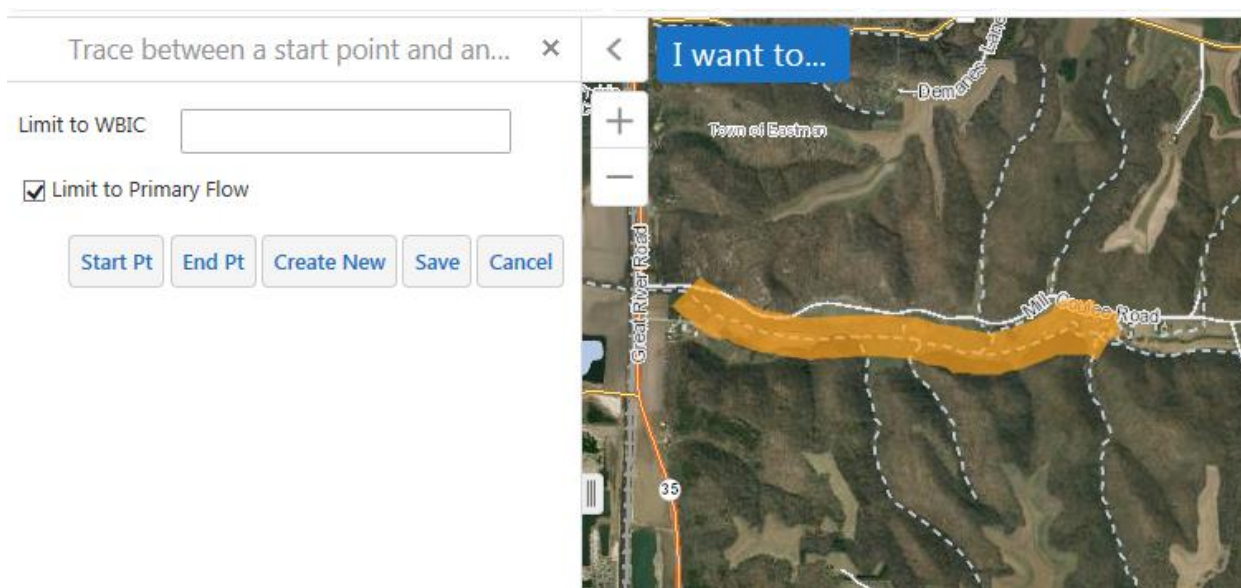
This is your cue for you, the user, to click on the map where you want the start point to be. The start point should be at the *downstream* end of the trace. A green dot will appear where you clicked.



Repeat the process for the end point. The end point should be at the upstream end of the trace. A red dot will appear where you clicked.



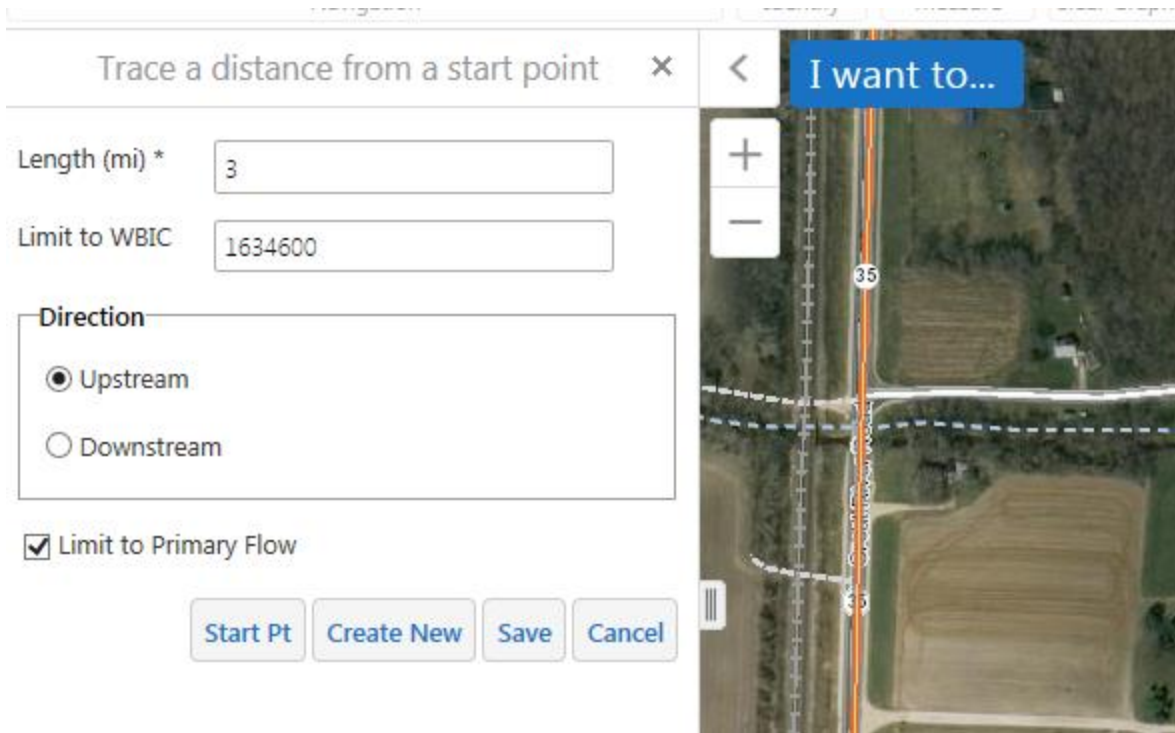
Next, click Create New. This will execute the call to the geoprocessing service (run the trace). It will take a few seconds to run. The trace will appear in yellow.



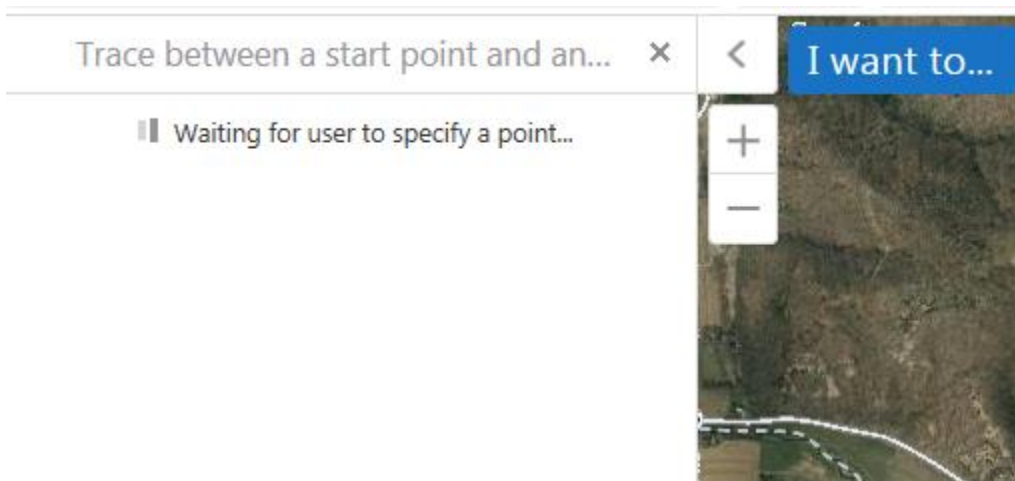
If you're satisfied with it, click Save. Otherwise, click Cancel and repeat the procedure.

Method #2 – Trace a distance from a start point

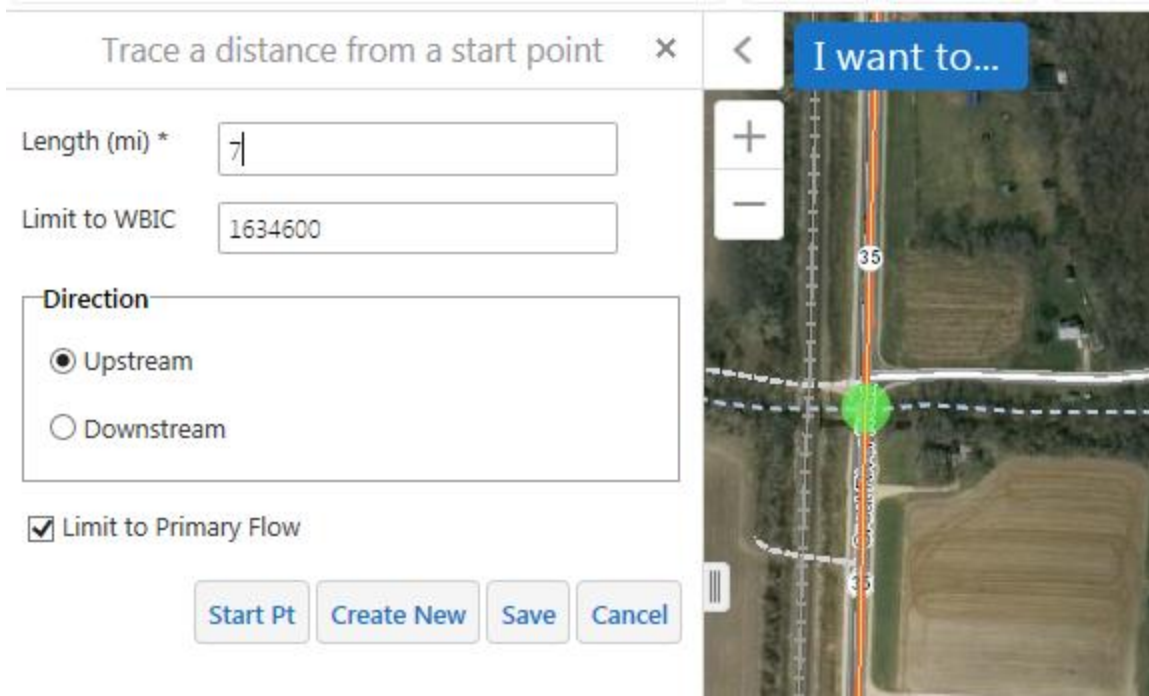
Click the Method #2 button. You have the option to limit the trace to a specific WBIC, and this is recommended. Otherwise, you may get unexpected results. You can trace upstream or downstream from your start point. You can also limit the trace to primary flow – this is recommended when tracing a stream with islands.



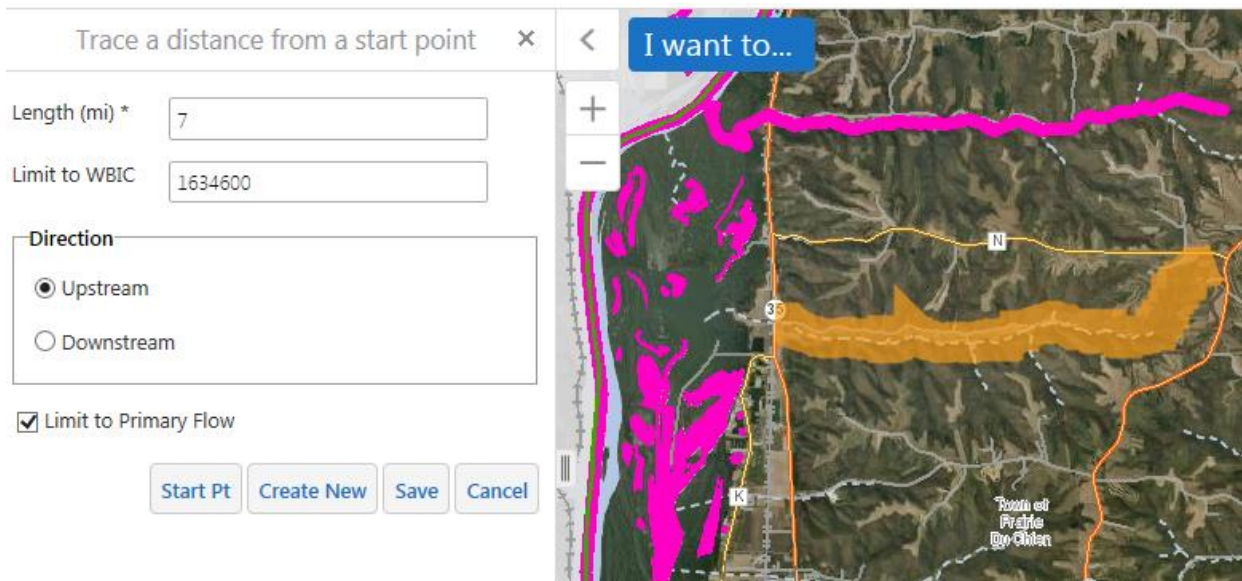
Click the Start Pt button. The ELT will display Waiting for user to specify a point...



This is your cue for you, the user, to click on the map where you want the start point to be. A green dot will appear where you clicked.



Select your options, and then click Create New. This will execute the call to the geoprocessing service (run the trace). It will take a few seconds to run. The trace will appear in yellow. If you want to trace up the headwater of a stream, enter a length that's going to be longer than the trace. The ELT will trace up to the end of the hydro line.



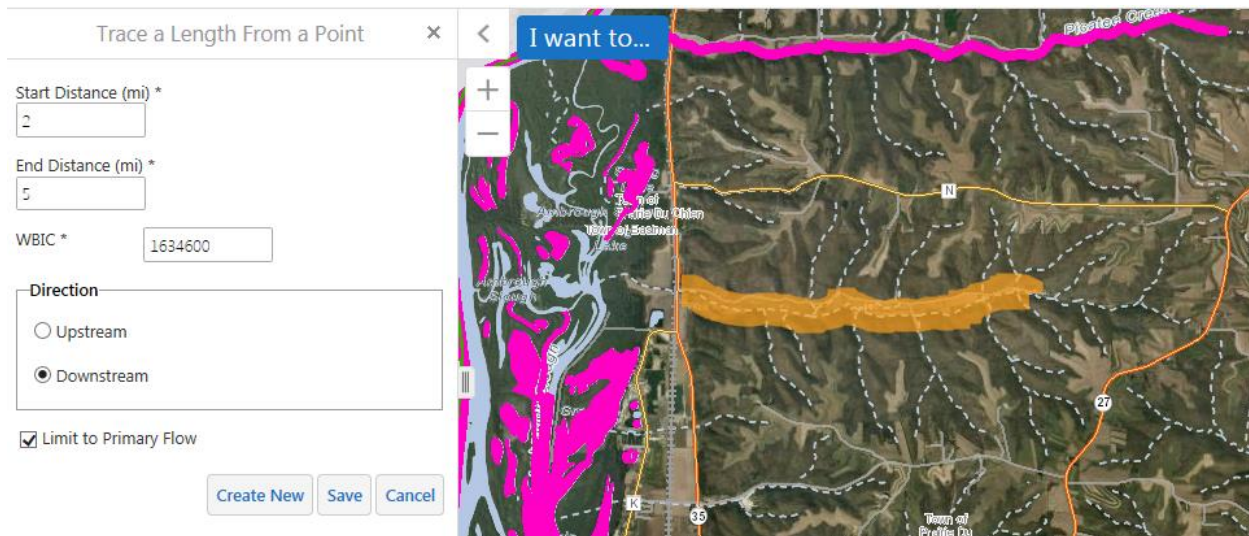
If you're satisfied with it, click Save. Otherwise, click Cancel and repeat the procedure.

Method #3 – Trace from a start distance to an end distance

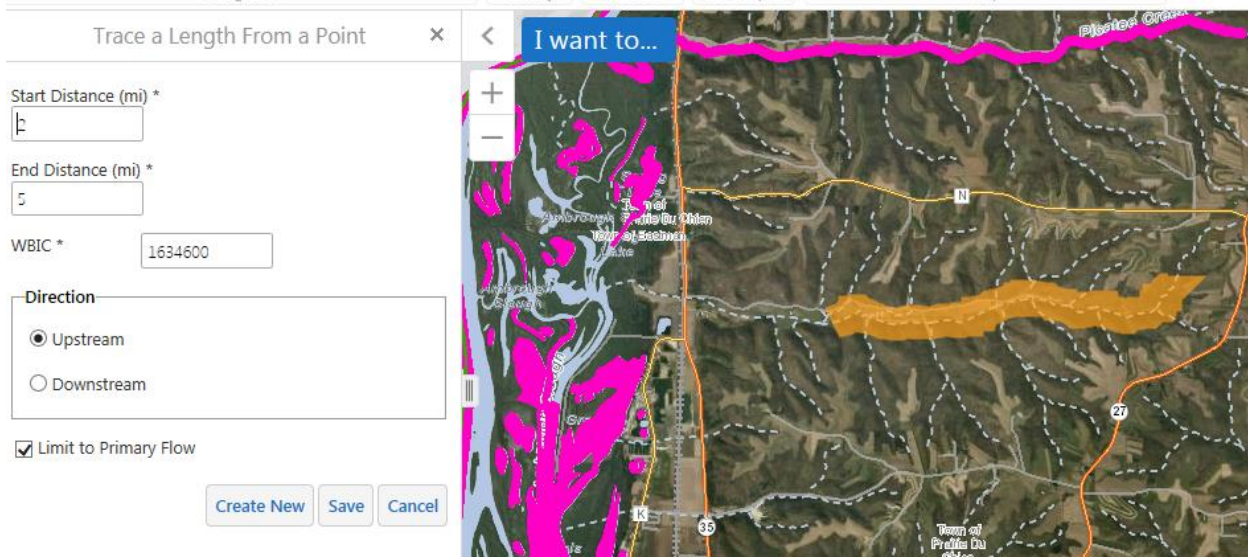
Click the Method #3 button. There's no clicking on the map with this method. Fill out the options in the form – start distance, end distance, WBIC to trace, whether to trace upstream or downstream, and whether to limit to primary flow. Click the Create New button to run the trace.

The Start Distance and End Distance are measured from the headwaters if you select Downstream, and from the mouth if you select Upstream. For example, tracing from mile 2 to mile 5 will get you different results.

Tracing downstream (starting 2 miles from the headwaters):



Tracing upstream (starting 2 miles from the mouth):



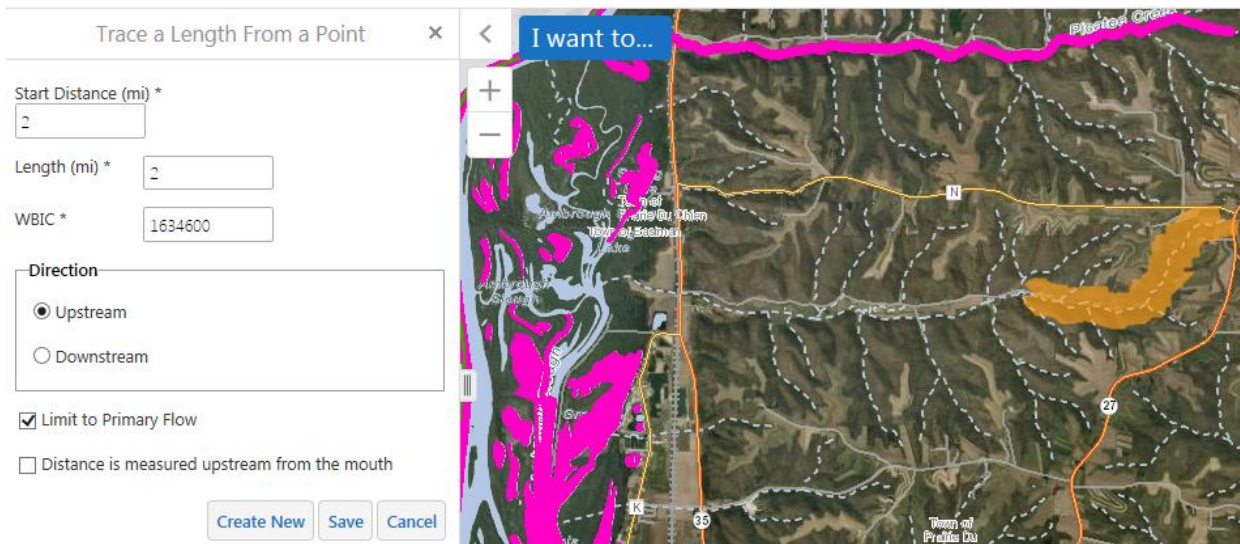
If you're satisfied with the trace, click Save. Otherwise, click Cancel and repeat the procedure.

Method #4 – Trace a length from a start distance

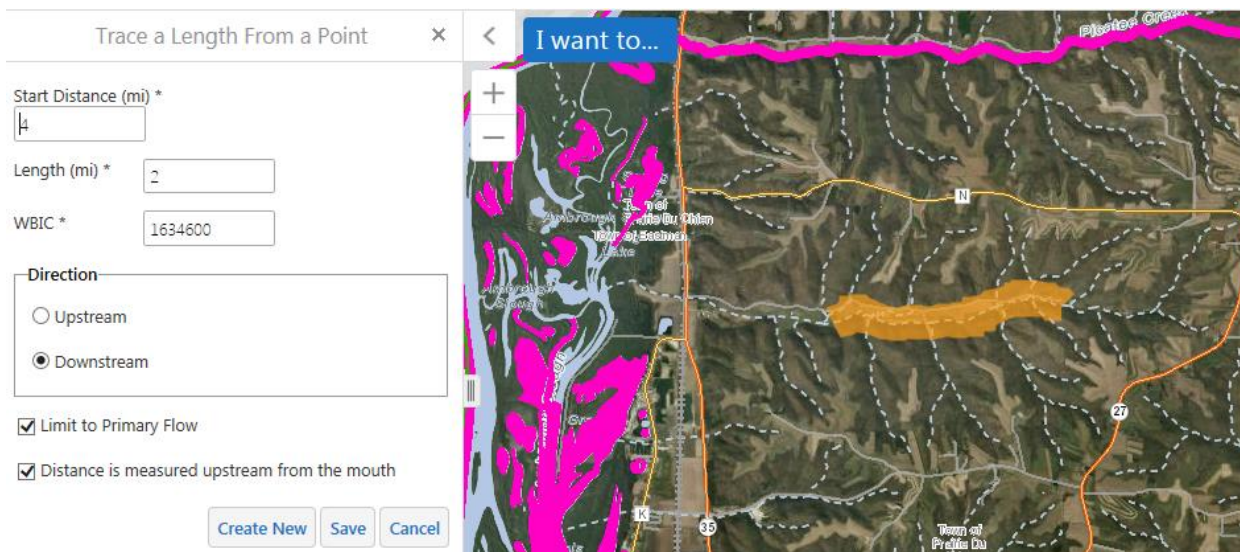
Click the Method #4 button. There's no clicking on the map with this method. Fill out the options in the form – start distance, length to trace, WBIC to trace, whether to trace upstream or downstream, whether to limit to primary flow, and how to define the origin of the measured distance. Click the Create New button to run the trace.

The options provide a logical puzzle for you to solve. The start distance will be measured upstream from the mouth, if the checkbox at the bottom is checked. If left unchecked, the start distance will be measured downstream from the headwaters. And then, the trace direction (upstream or downstream) will determine whether the stream is traced upstream or downstream for the specified length from that point.

For example, tracing upstream 2 miles from a point 2 miles down from the headwaters will get you the uppermost two miles of the stream:

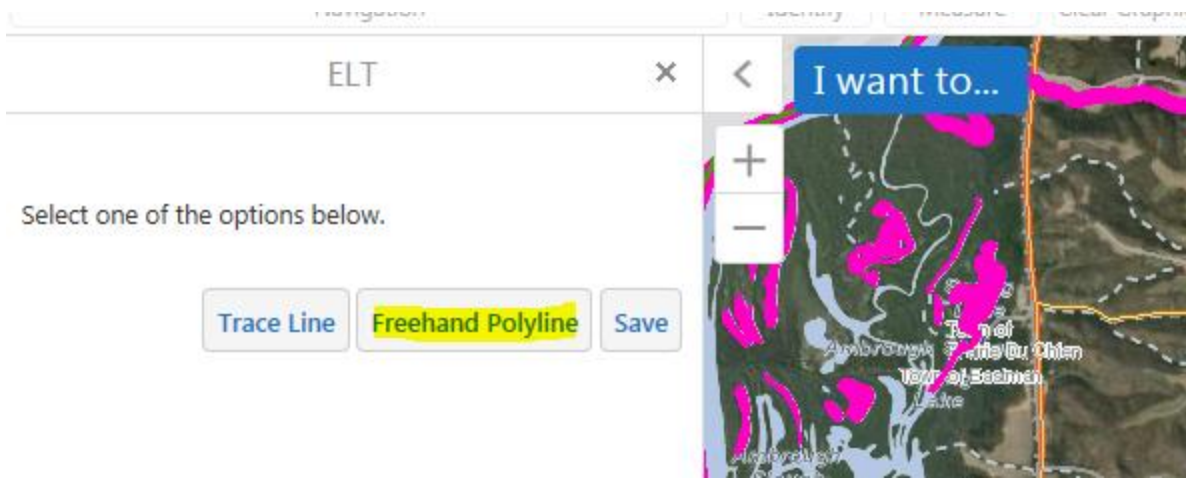


And tracing downstream 2 miles from a point 4 miles up from the mouth will get you the middle of the stream:

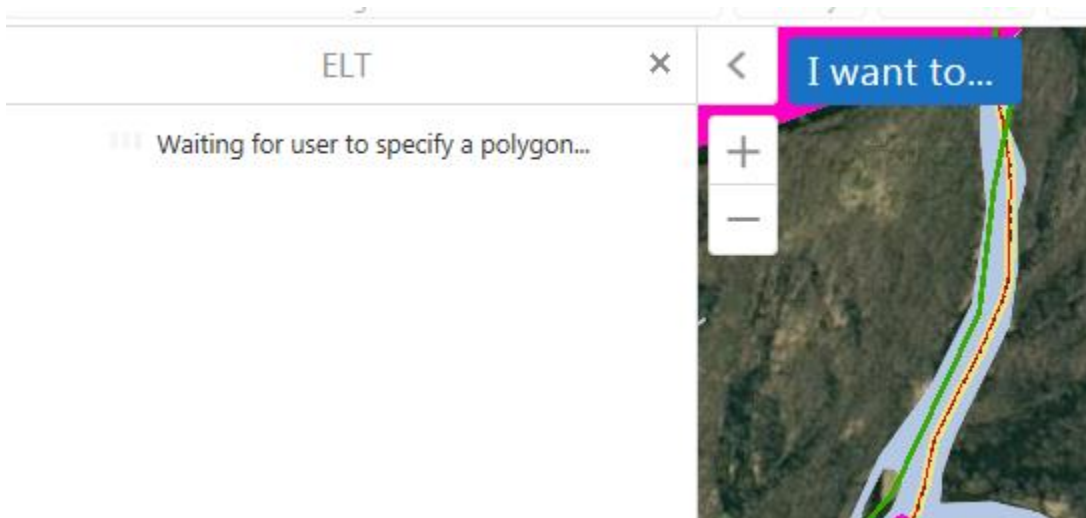


Manually digitizing a line

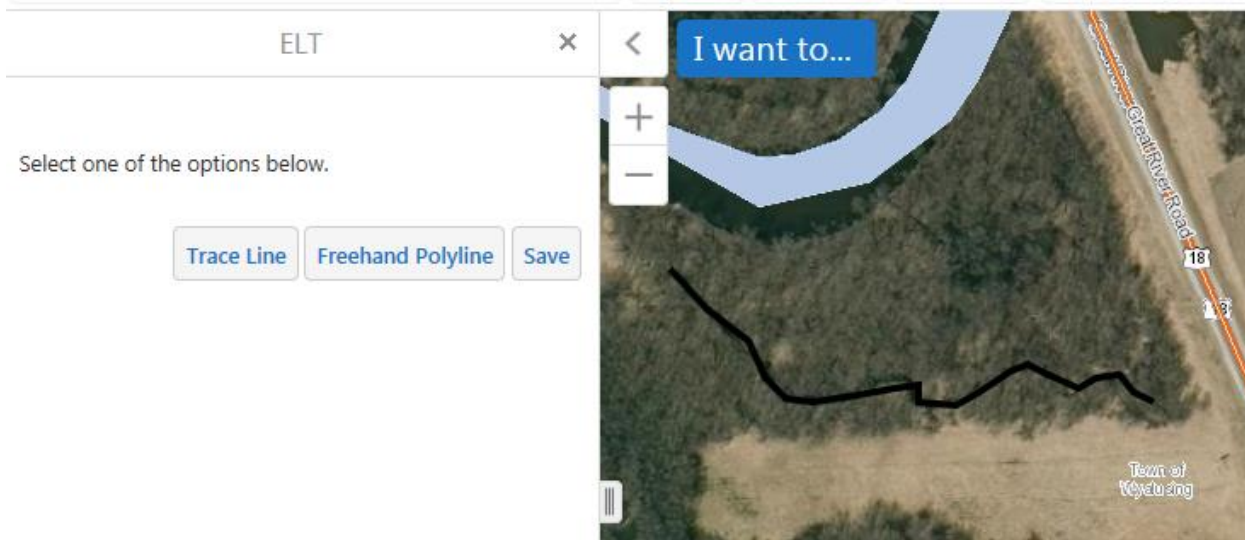
Use this option if you are tracing a feature that's not in hydro. Click on the Freehand Polyline button in the initial line options.



The ELT will display Waiting for user to specify a polygon... (That's a bug, it should say "polyline")



This is your cue for you, the user, to start clicking on the map to draw a line. Allow about a half second between each click for the ELT to register your click. Double-click to finish the line. The line will then appear in black. If you're satisfied, click Save. Otherwise, click Freehand Polyline again to start over.



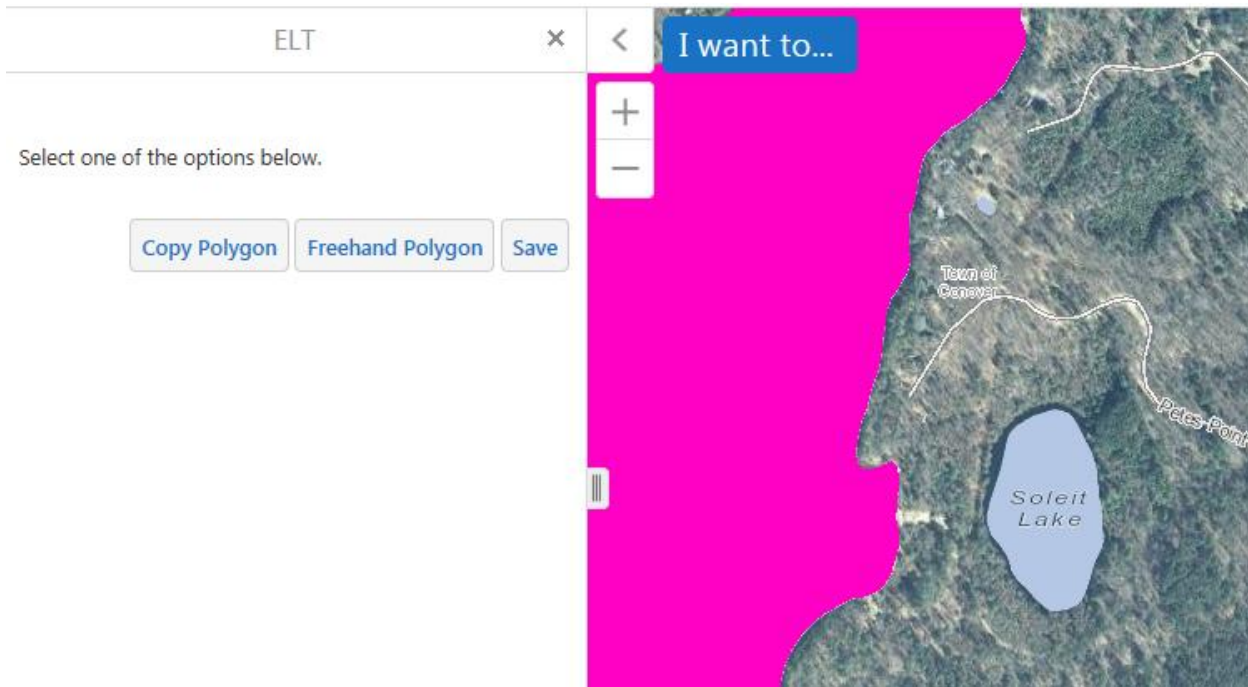
When you click Save, geoprocessing stuff will happen behind the scenes. It will take a few seconds, then the ELT window will close, and you'll be returned to the database.

Edit an existing line

This works just like creating a new line, except the ELT zooms into the existing line location when it starts up. The same editing tools are available.

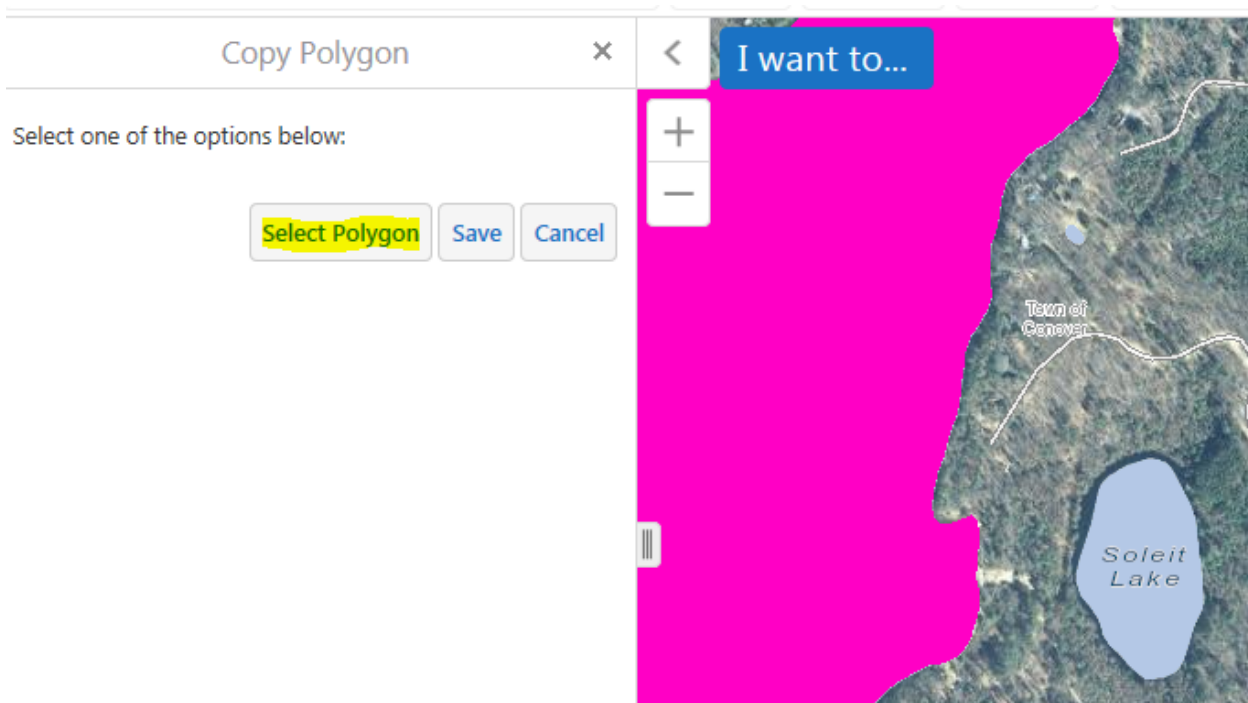
Polygons

Creating polygon features with the ELT is fairly simple – you can either clone (copy) an existing hydro polygon, or manually digitize a polygon. Options to clone part of a polygon have been lost with this update, but will return with future iterations.

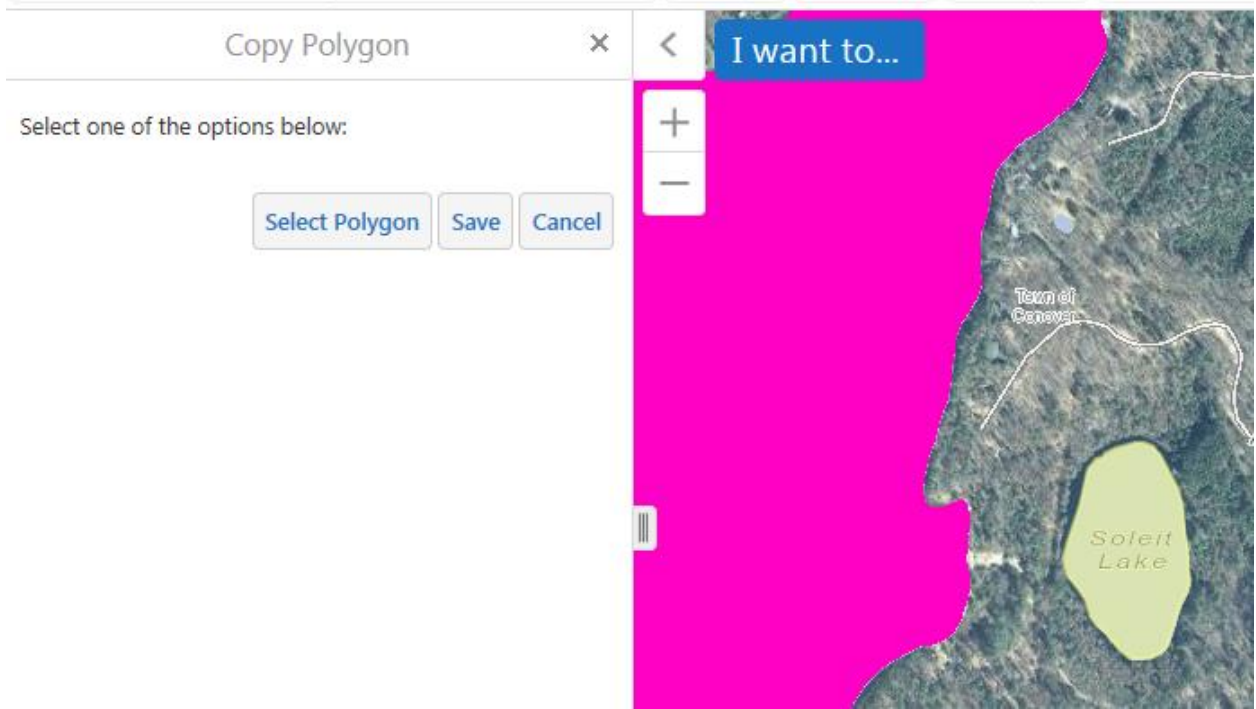


Copy an existing Hydro polygon

To copy an existing hydro polygon, click Copy Polygon. Then click Select Polygon.



The ELT will prompt you to select a feature. Click the polygon you want to select on the map. The polygon will highlight in pale yellow.

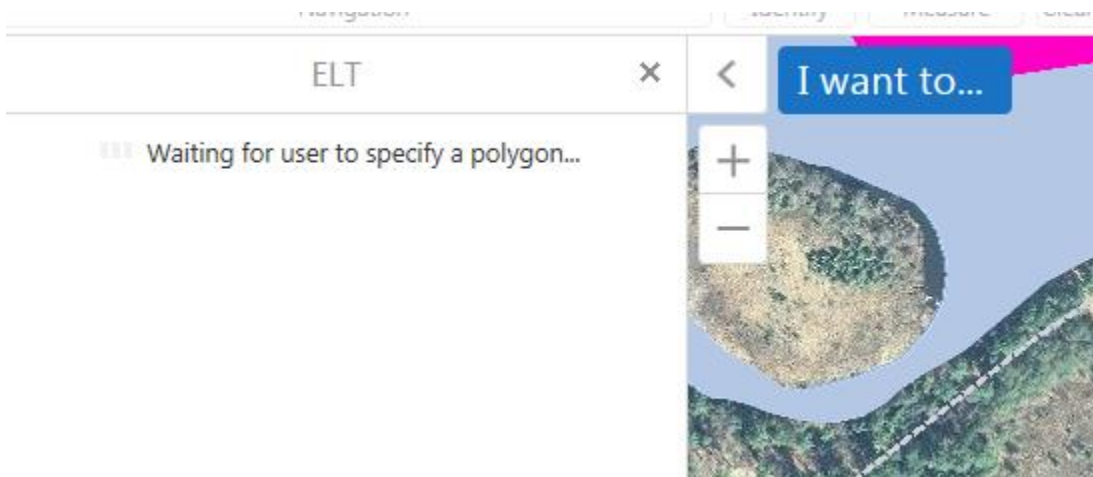


If you're satisfied with it, click Save. If you goofed, click Cancel to return to the main polygon menu.

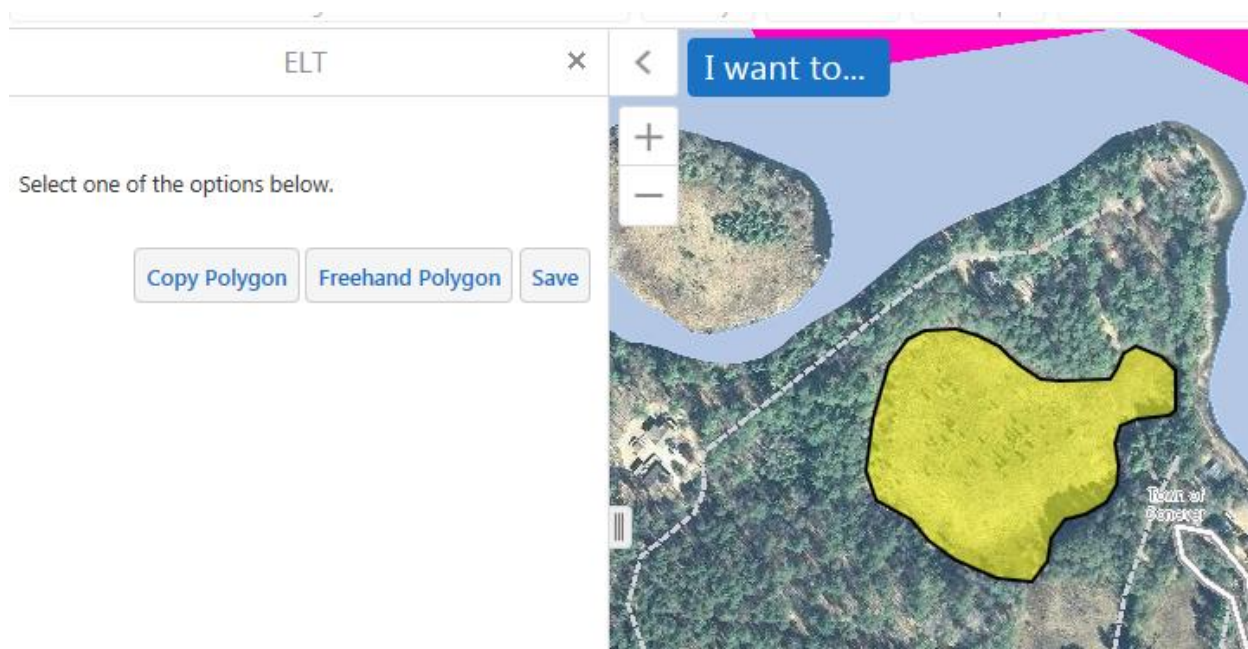
Manually digitizing a polygon

Use this option if you are digitizing a feature that's not in hydro. Click on the Freehand Polygon button in the initial polygon options.

The ELT will display Waiting for user to specify a polygon...



This is your cue as the user to start clicking on the map to draw a polygon. Allow about a half second between each click for the ELT to register your click. Double-click to finish the polygon. The polygon will then appear in yellow with a black outline. If you're satisfied, click Save. Otherwise, click Freehand Polygon again to start over.



When you click Save, geoprocessing stuff will happen behind the scenes. It will take a few seconds, then the ELT window will close, and you'll be returned to the database.

Edit an existing polygon

This works just like creating a new polygon, except the ELT zooms into the existing polygon location when it starts up. The same editing tools are available.

6) Click “Save and Return” once the ELT window closes and you are directed back to “Enter New Monitoring Station” screen.

The screenshot shows a web form titled "Home -> Enter New Monitoring Station". The form contains the following fields and controls:

- ID: SYSTEM GENERATED
- Station ID: SYSTEM GENERATED
- Station Name (*): Text input field containing "Test station at intersection of Highway A and B"
- Station Type: Dropdown menu with "RIVER, STREAM" selected
- Requester: Text input field containing "MARCANGELI, APRIL N" and a "Search People" button
- Quick Find by Name: Text input field
- Station Status: Text input field containing "NEW-PENDING"
- Monitoring Station Comments: Text area with up/down arrow controls
- Project: Text input field and a "Search Projects" button
- At the bottom, a "Save and Return" button is circled in blue.

On the right side of the form, there are two panels:

- Create point from a Lat/Long Coordinate**: Includes a "Choose Format:" section with radio buttons for "Decimal Degree", "Degree and Decimal Minute", and "Degree, Minute and Second". It also has "Latitude:" and "Longitude:" labels and a "Go" button.
- Zoom to a Waterbody**: Includes the text "Enter part of waterbody name or WBIC (at least 3 characters)" and a "Feature Type:" section with radio buttons for "Point", "Line", and "Area".