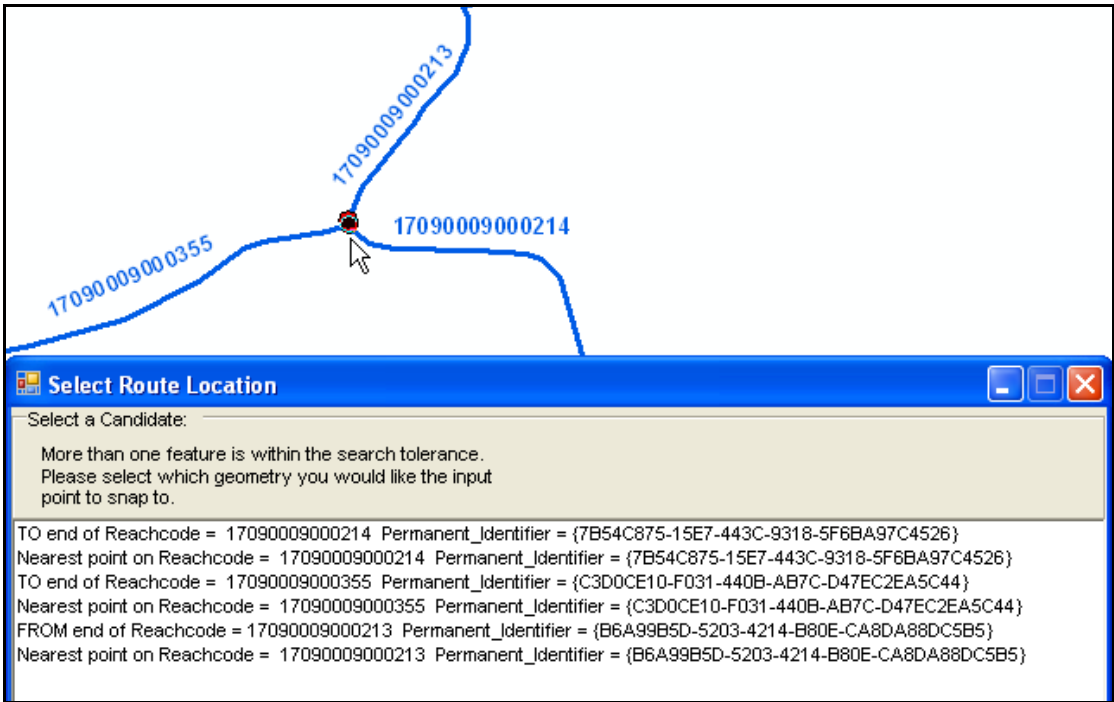


HEM Route Location Options Help Document

Background

When the HEM tool attempts to return a route location and measure at a point, multiple “candidates” can be returned. Currently, the user has to make the decision on which candidate should be used. For instance, at the point in the graphic below, there are 6 candidate locations. For each of the three reaches at the intersection point there are two candidates, for a total of six candidates.



Route Location Options

Within the HEM tools there are options for reducing the number of candidates that appear in the Route Location form. Users should review the descriptions of the options below to best pick the options that meet their editing needs.

Route Location Candidate Options

☒ Explicit

☐ Only List Junctions (End Points)

☐ Only List Nearest Point on Edges

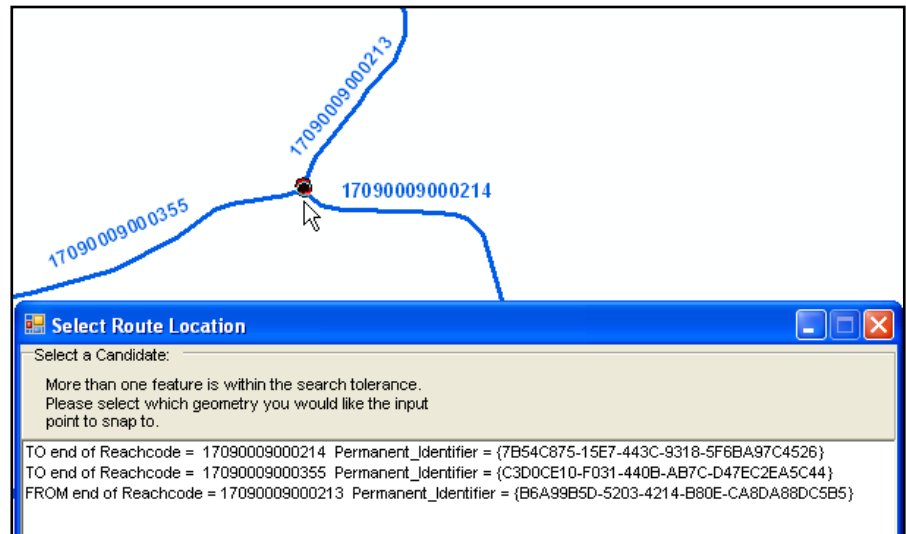
☐ Suppress the Candidate Form

Explicit

All Route Location Candidates are displayed (see image above). This is the default setting for the tools.

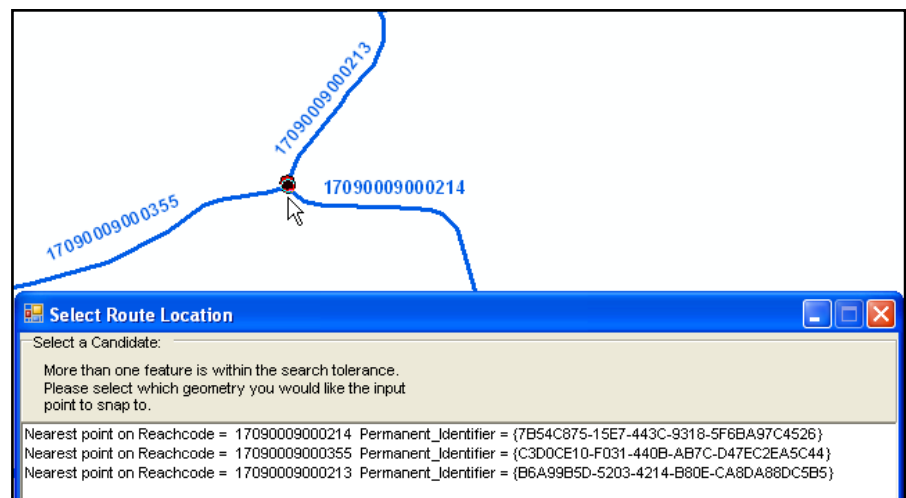
Only List Junctions

This option tells the HEM tool to display only the candidates that are described as From or To points. Using the example above with the Only List Junctions on, the list of candidates will be reduced to three – two TO ends, and one FROM end.



Only List Nearest Point on Edges

This option tells the HEM tool to display only the candidates that are described as Nearest. Using the example above with the Only List Nearest Point on Edges option on, the list of candidates will be reduced to three Nearest points (one for each Reachcode).



Suppress the Candidate Form

This option tells the HEM tool to pick the best candidate from the list and do not display the Route Location Candidate form. When selecting this option, you must pick a Route Location Default Suppression Method (see next section). *This is the best option to use when using the Import Points and Import Lines tools.*

Route Location Default Suppression Method

This section of the options form only enables when you choose to suppress the candidate

Route Location Default Suppression Method

☐ Off

☒ Use Top of the Downstream first, then use Closest Candidate

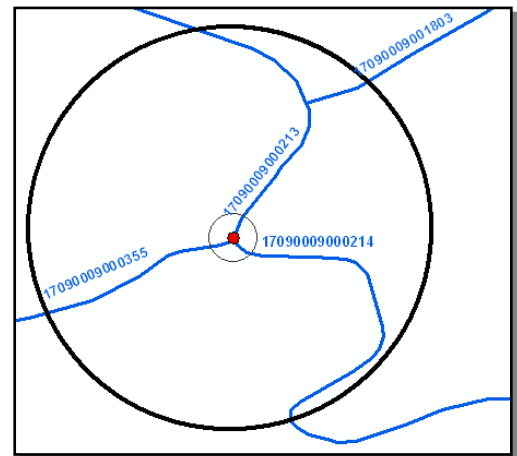
☐ Use Closest Candidate first, then use Top of the Downstream

form. These options tell the HEM tools how to choose the best candidate from the list.

There are two methods for reducing the list of candidates.

Top of the Downstream – candidates that are described as “From End of Reach ###.” When creating an point at a confluence of streams, in many cases there is a single FROM candidate and multiple TO candidates. Generally, using the top of the downstream candidate creates data that is better suited for analysis.

Closest Candidate – reduces the candidate list to only those that are spatially nearest to the point on the map display where the user clicked. This option is only effective when the map search tolerance is set to a higher number and the candidate list includes invalid candidates. In the example graphic, the thin black circle represents a reasonable search tolerance that will only return candidates at the junction of the three flowline features. The larger circle represents a much higher search tolerance that would return many candidate locations. Using the Closest Candidate option ensures that only the candidates closest to the user clicked (red) point are included.



In many cases, neither one of these suppression methods will reduce the candidate list to a single candidate., so they must be used together.

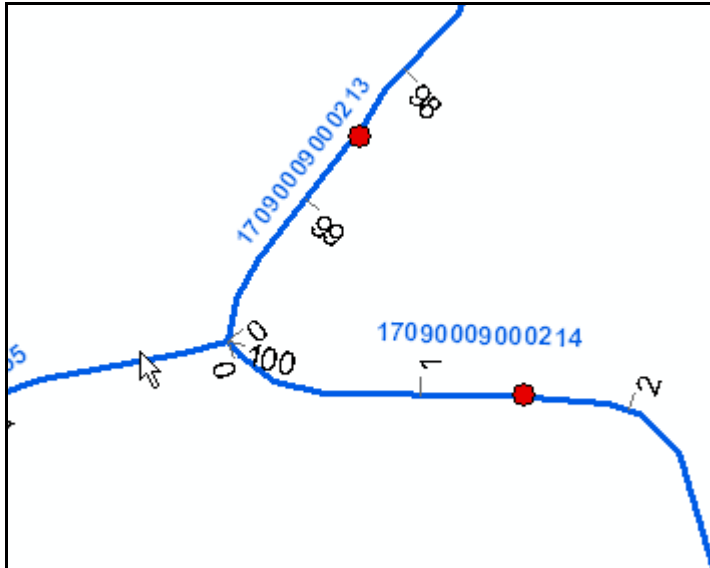
Use Top of the Downstream first, then use Closest Candidates – this option reduces the candidate list to only the FROM End candidates first. If there is more than one FROM End candidates in the list, the one closest to the user clicked point is selected. *This is the recommended setting.*

Use Closest Candidate first, then use Top of the Downstream – this option reduces the candidate list to only the candidates closest to the user clicked point. Because there can still be many candidates at the same geographic location, the candidates are then evaluated to select the FROM End candidate in the list. This setting returns better results if for some reason you need to have your map selection tolerance set high.

Round Events

When turned on, this option will round the clicked point if it is within two measures of the start or end of the NHD Reach.

Round Events
Events within two measures of an endpoint will be rounded to the endpoint.
☒ Off
☐ On (events 0-2 will be rounded to 0, 98-100 will be rounded to 100)



In the example graphic, both red points represent where a user clicked the mouse when creating a point event or the start or end of a line event. The numbers represent the measure along the labeled Reach. In the case of the point located at approximately measure 1.5 of Reach 17090009000214, this point would be rounded down to the stream confluence and the point would be created at measure 0 of 17090009000214.

In the case of the point located at approximately measure 98.5 of Reach 17090009000213, this point would be rounded up to the stream confluence and the point would be created at measure 100 of Reach 17090009000213.

Note: the Rounding Option works in conjunction with the Route Location Candidate suppression options. If you choose to suppress the candidate form using the Top of the Downstream method, the point located at approximately measure 1.5 of Reach 17090009000214 would be rounded down to measure 0 of 17090009000214, but would get created on the top of the downstream reach, which in this case is measure 100 of Reach 17090009000213.