Referencing Water Right PODs in the Payette Subbasin to the NHD using the Hydro Event Management (HEM) Tools (v 2.2).

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SETUP

1. Install HEM Tools (\\HEM_Tool_Training\HEM (v2.2)).

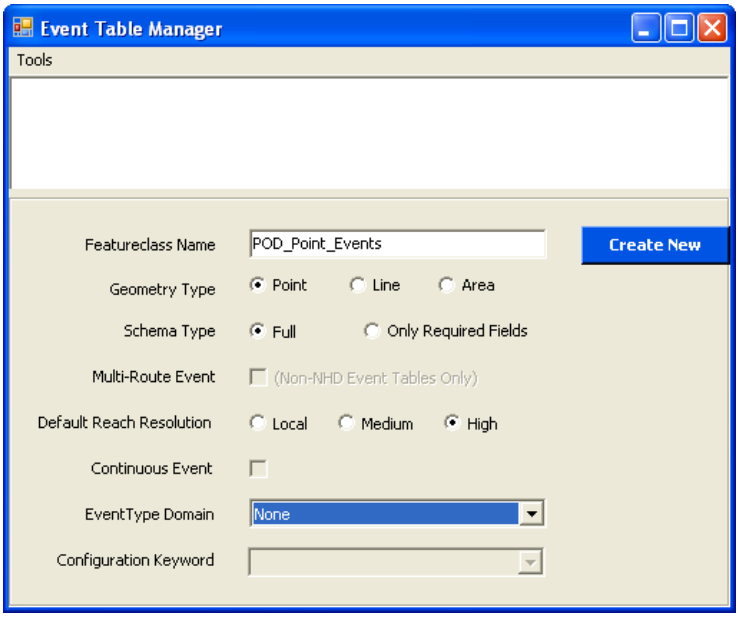
2. Start ArcCatalog.

3. Add the HEM Toolbar to ArcCatalog (View -> Toolbars -> Hydro Event Management Tools).

4. Create new empty personal geodatabase on your hard drive and call it POD_HEM_EVENTS (or you can pick a different name)

5. Single click the POD_HEM_EVENTS personal geodatabase you just created in the table of contents, and then click the Event Featureclass Manager button on the HEM Toolbar.
   Note: Dialog will be blank

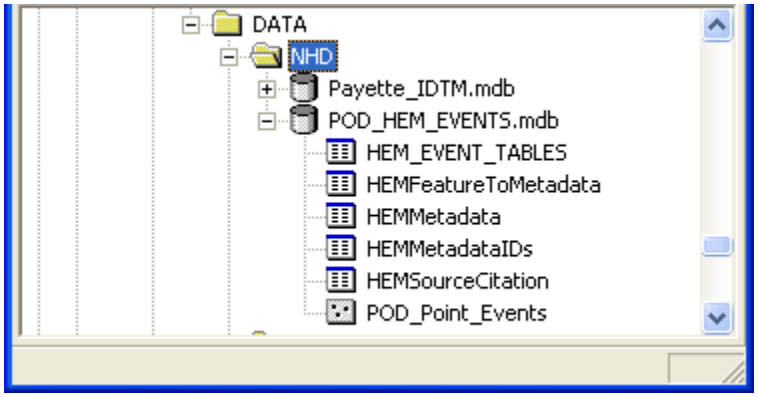
6. Using the Event Featureclass Manager (Tools -> Add New), create an events feature class. Name it. The rest of the settings should be similar to the dialog below. Click "Create New".



7. Set the spatial reference
   a. This will open the spatial reference dialog box.
   b. Import the coordinate system of the NHD Flowline. The coordinate system should match the system of the layer/network you are referencing to. Next through the defaults (2 next, 1 finish).

8. Close the Event Table Manager

9. Refresh (F5 or View>Refresh) and look at what you just created:



10. Close ArcCatalog

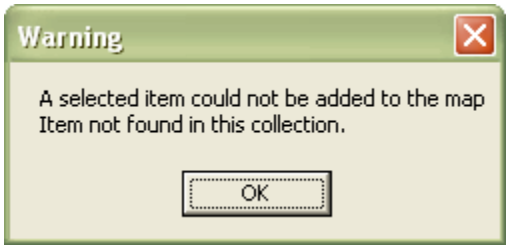
11. Start ArcMap and load the Hydro Event Manager toolbar. (View>Toolbars)

12. Add Data

    a. The Entire NHD Database.

       Note that the NHD database **must have a geometric network**.

       When adding the NHD Database, you may see the dialog box



       Say OK

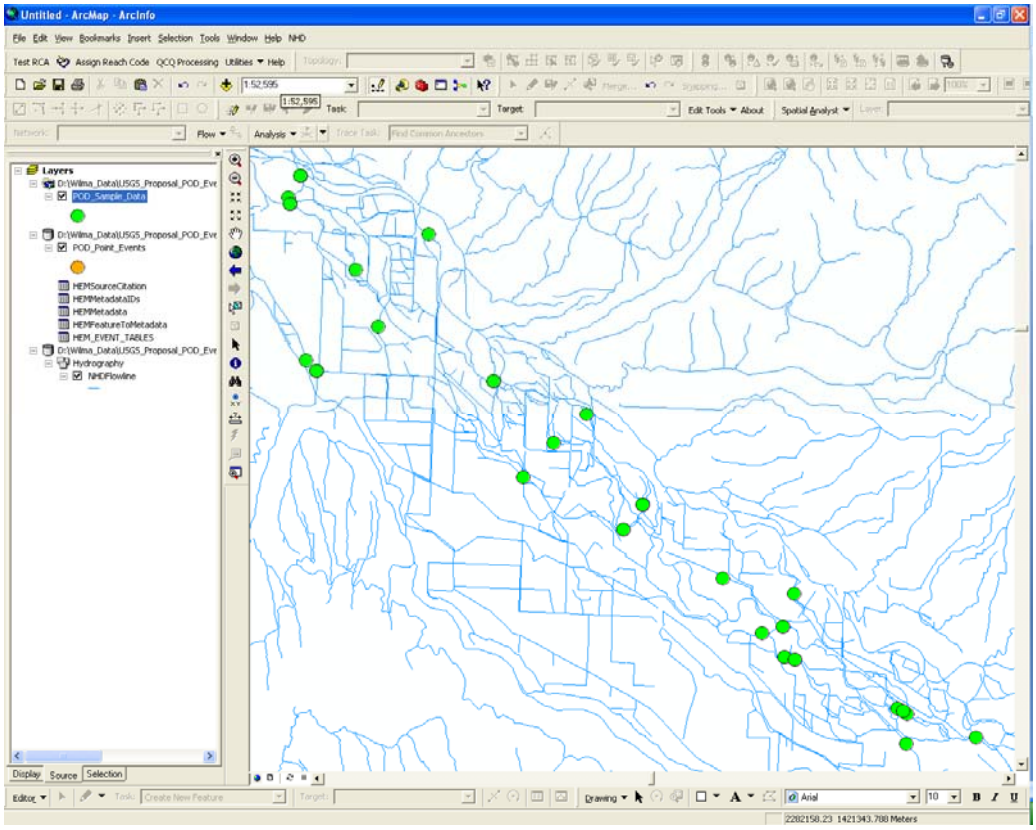
    b. Point Data you wish to reference to the NHD.

    c. The Events feature class and tables you just created.

13. Click to the Display tab in the Table of Contents. Turn off and group NHD layers that are not helpful with referencing. (Usually, the layers that are useful are the NHD flowline and the Hydro_Net_Junction layers.)

14. Adjust the symbology of the layers added.

15. Label the NHD Flowline with the GNIS name. Label the Point Data with attributes that can help you reference it.



16. You are able to transfer one attribute from the data point shapefile to the event database.

    a. Open the point shapefile attribute table

    b. Options>Add Field

    c. Name the field DSCODE, Text, length:2

    d. Populate this field with a two-digit code for each collection source, as follows:

Digitized	DZ
GPS	GP
Section	SE
Q	Q1
QQ	Q2
QQQ	Q3
Blank	XX

    e. Create another field called “HEMCODE”

    f. Options>Add Field

g. Name the field HEMCODE, Text, length: 40

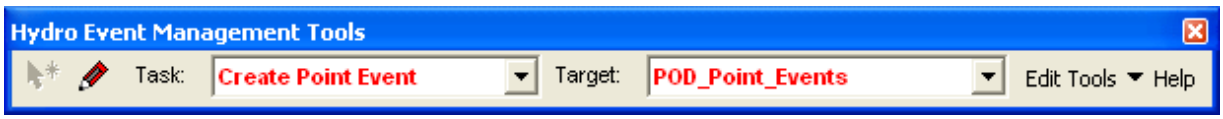
h. Calculate the HEMCODE field with a unique identifier. Concatenate the IDWR spatial data ID, POD Source, and the newly created field, DSCODE:

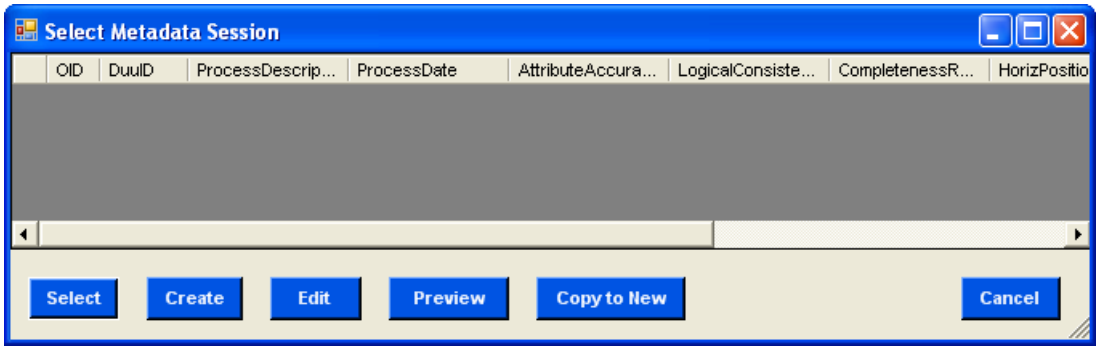
Calculation: [sp_data_id] &"_" & [Source] &"_" & [DSCode]
i.e., “00001_PAYETTE RIVER_DZ”

i. Close the attribute table

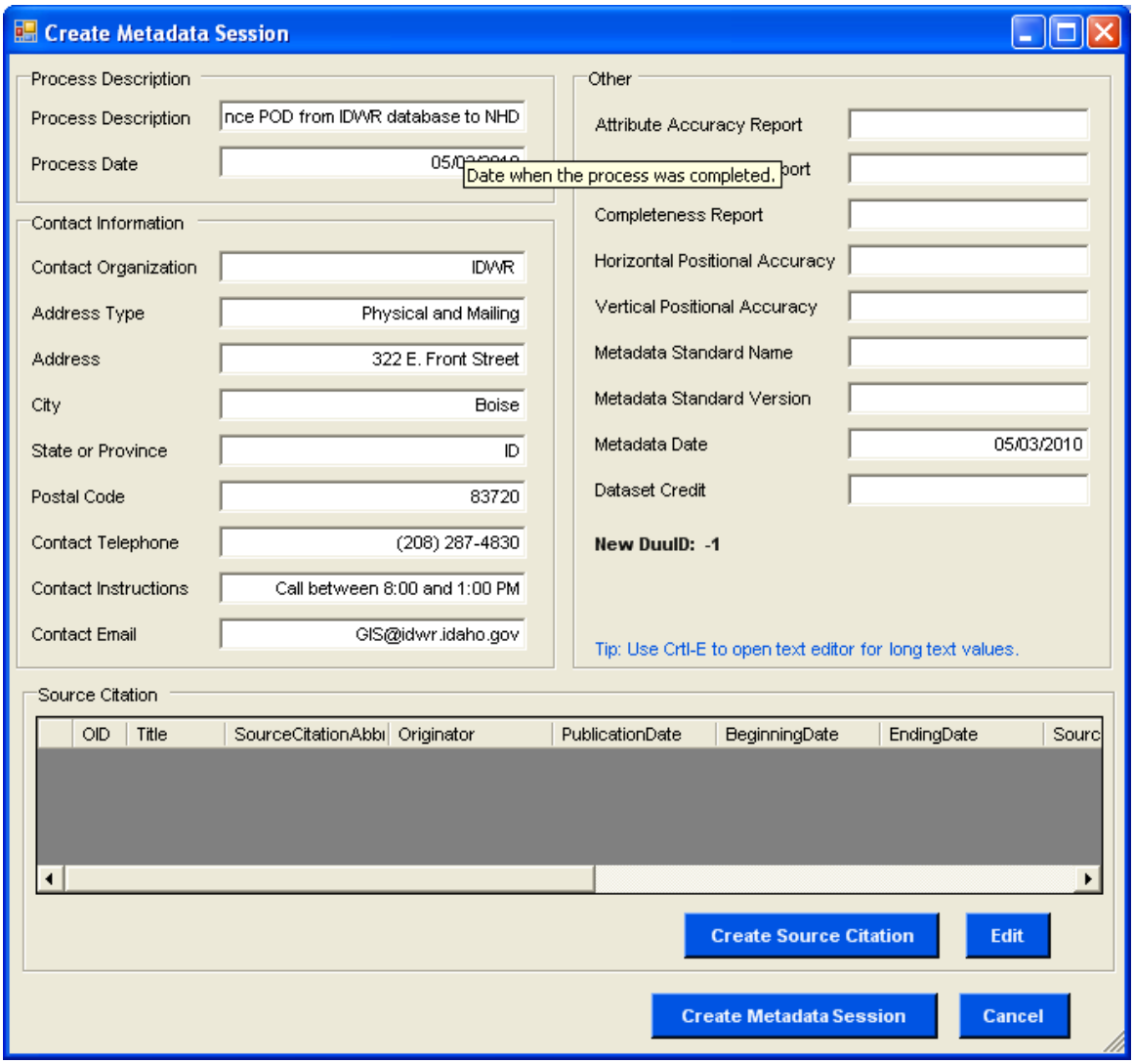
17. On the Editor toolbar, Editor > Start Editing. Select the Personal Geodatabase that contains the Event tables you set up earlier in ArcCatalog.

18. The Select Metadata Session dialog box may appear. If it doesn’t, on the HEM Toolbar > Edit Tools > Metadata > Start Session

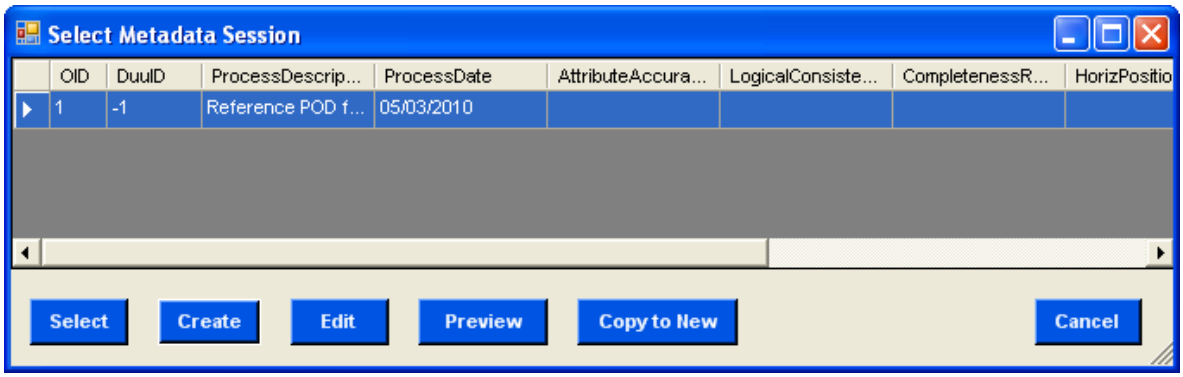




19. Click on Create Button
20. Type in metadata information:



21. Click Create Metadata Session.

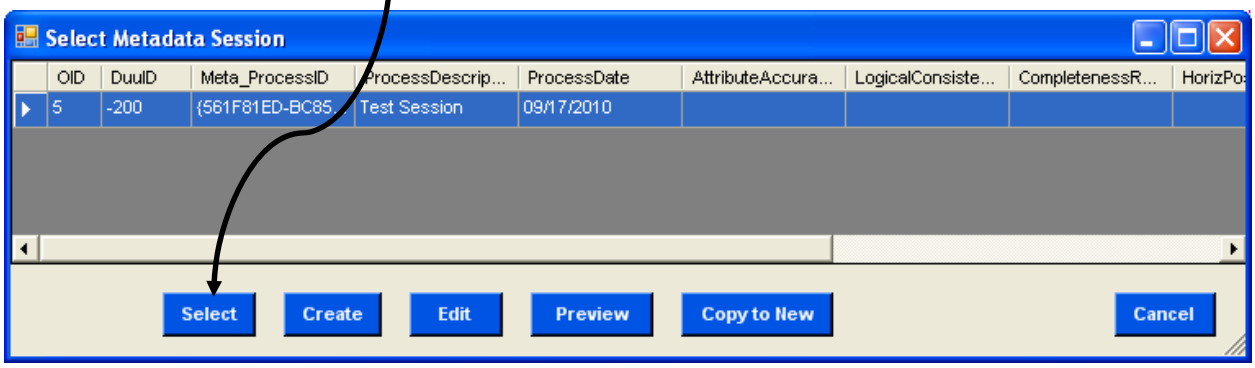


22. Make sure the Metadata session you selected is highlighted. Click Select.

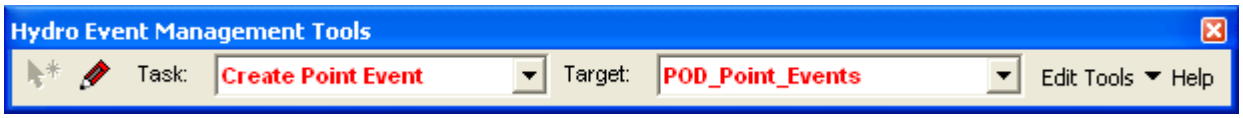
23. You are now ready to start creating Events!!

CREATING POINT EVENTS FROM A POINT FILE

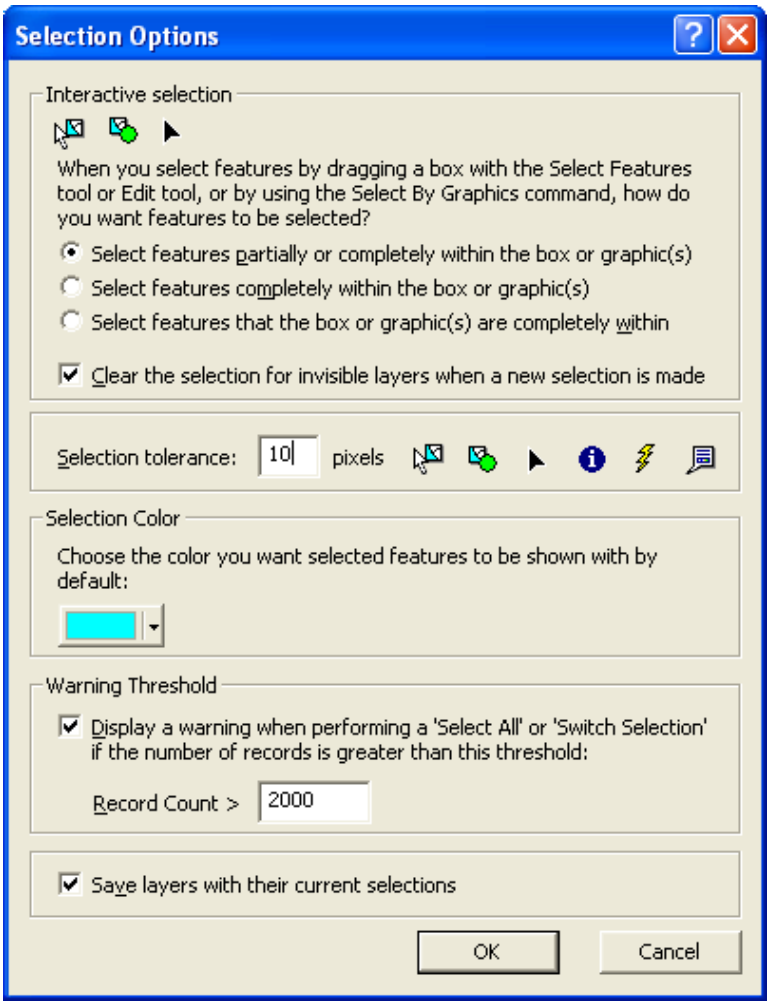
NOTE: If your ArcMap project, Point Events database, and metadata have already been set up; Open ArcMap, Editor toolbar, Editor > Start Editing. Make sure your HEM toolbar Target is the Point Events layer. HEM Toolbar > Edit Tools > Metadata > Start Session. Highlight the existing Metadata record, & click "Select".



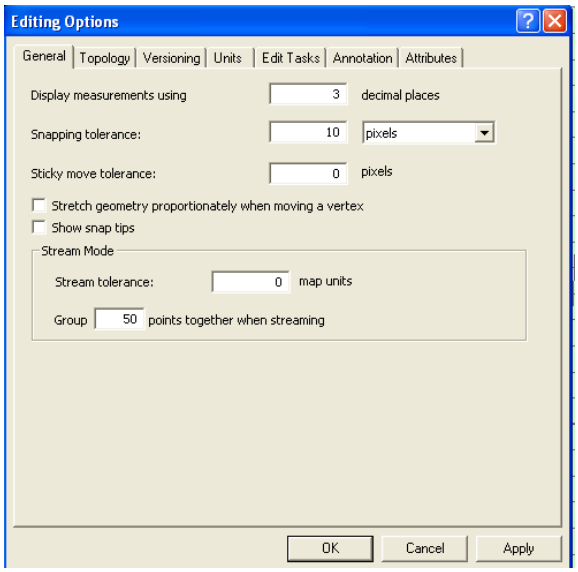
1. On the HEM toolbar, set Task to Create Point Event and the Target to Point_Events:



2. Go to Selection > Options (on main menu near the top of your screen) and set Selection Tolerance. Set this value to 10 pixels. Click OK. You do not need to change this value during different iterations.



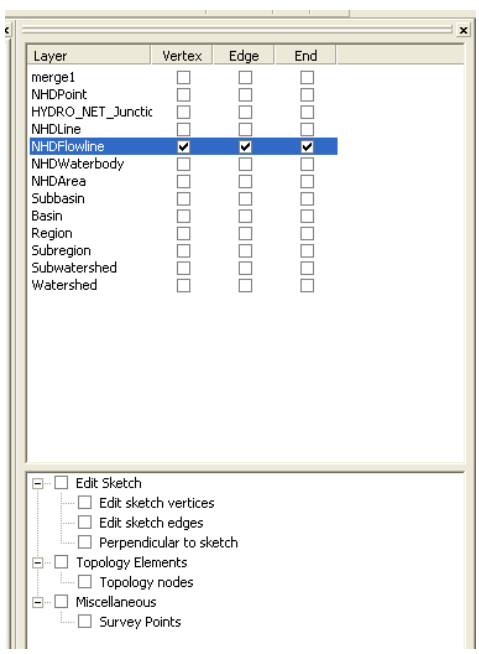
3. On the Editor Toolbar, go to Editor > Options. Set Selection Tolerance to 10 pixels on the General tab. Click OK. You do not need to change this value during different iterations.



4. Set the Snapping Environment

    a. Editor toolbar, Editor > Snapping

    b. Make sure that Vertex, Edge, and End are checked for NHD Flowline.

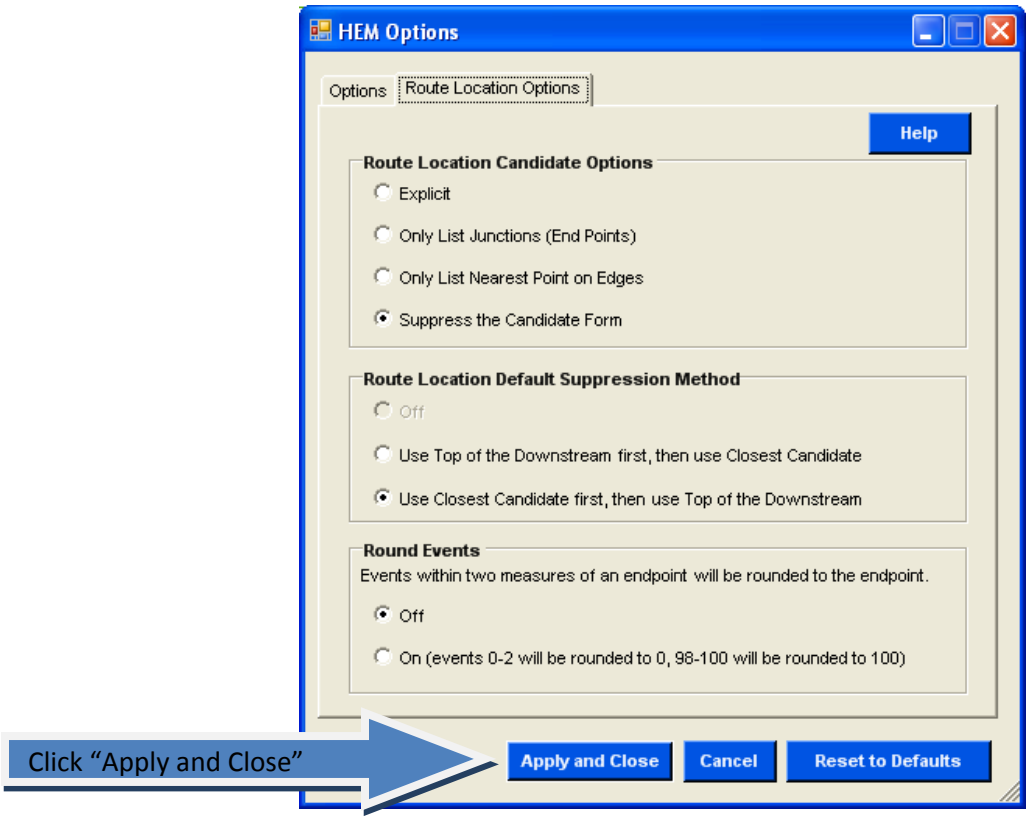


    Close the snapping environment

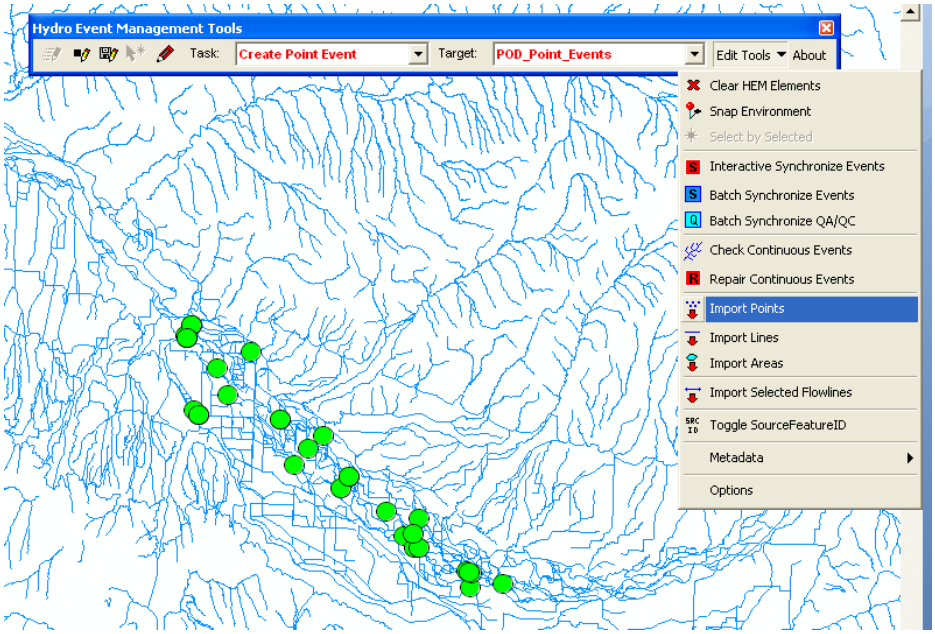
5. In the table of contents click once on the Import point Shapefile to highlight it (these are the points that will be imported into the POD_POINT_EVENTS geodatabase).

6. Set the scale of your map; zoom out to a little larger than the full extent of your import dataset, usually the subbasin boundary.

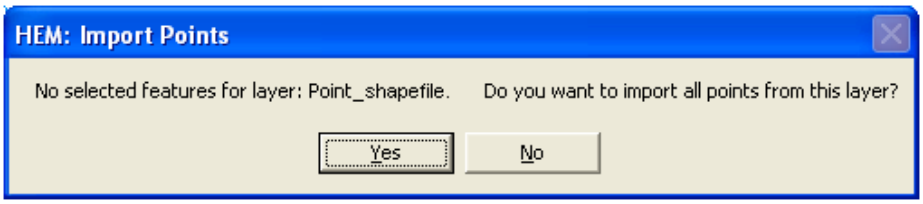
7. On the HEM toolbar, click Edit Tools > Options. Click the Route Location Options tab and populate as follows:



8. On the HEM toolbar, click Edit Tools > Import Points

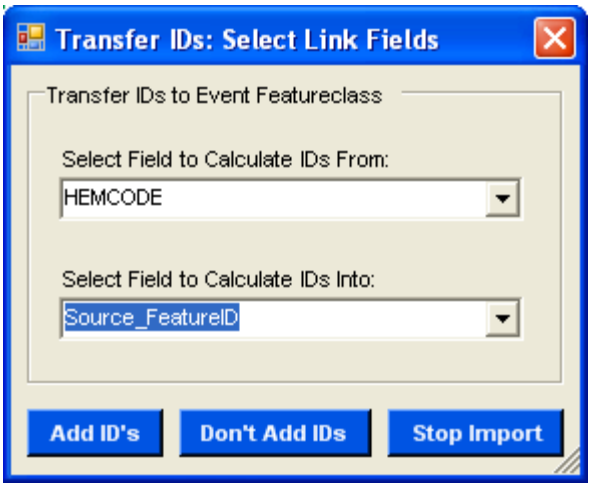


9. If no features were selected in the Data Point Shapefile, you will see this dialog box:



10. Check to make sure that the layer is your original source points. If working in iterations, all points should only be imported on the first iteration. On additional iterations, use a selections unless the first iteration failed to import any points. Click Yes if first iteration.

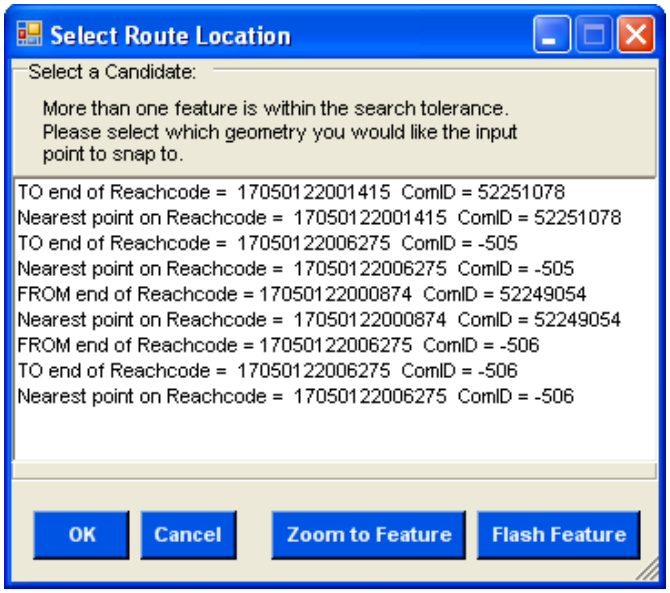
11. Transfer the unique attributes from your Data Points Shapefile to the Point_Events Database:



12. Click “Add ID’s”.

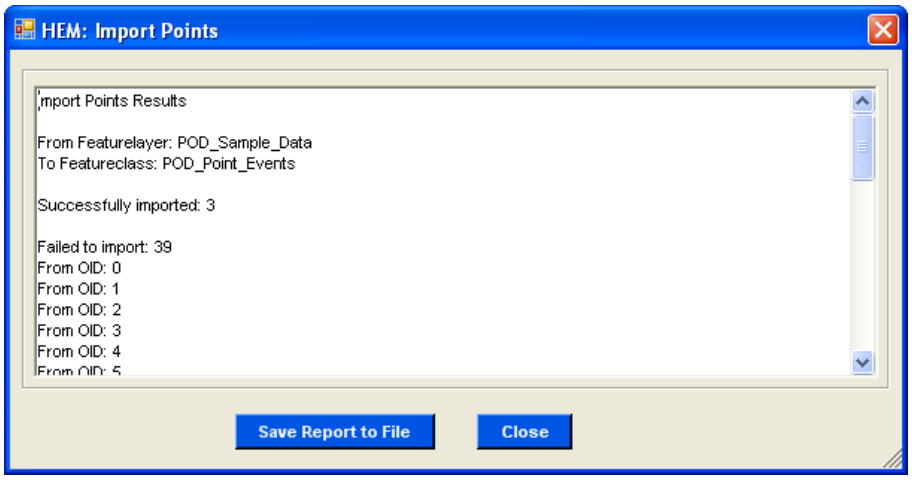
13. The program will run.

14. If more than one NHD feature should fall within the search tolerance of a point, a dialog box will appear. If this dialog box appears, select the top record and say “OK” (see step 5).



15. Select the top record and say OK. Do **<u>not</u>** Zoom to Feature.

16. A report will be generated showing how many point features have successfully been transformed into events.



17. When finished. Editor Toolbar, Editor > Save edits. Stop Editing.