VI. Tutorial 5: Output

The purpose of this tutorial is to provide instruction on advanced output options. The first part involves modifications to the text input file, *hydro.inp*. The second part describes the use of *groups* in the GUI. With *groups*, the user can enter a small number of expressions to specify many output locations. The following steps will instruct you on how to add the *groups*.

1. Add Output Paths to *hydro.inp*:

a. In Windows Explorer, navigate to the directory, *dsm2_training**tutorial**simulations**simple**t5_output*.

b. Open the file *addin.inp* and note the new output paths for the channels and reservoir. The information in this file is similar to that required for the text version of DSM2, but has an additional *Name* field plus the identification of the location being output.

c. Copy the entire file contents to the clipboard.

d. Open the file *hydro.inp*.

e. Navigate to the bottom of the file and paste the information.

2. Add *Boundary* and *Source Groups* to the Database:

a. Navigate back to the GUI.

b. In the *Simulations Navigator*:

1) Expand the *model: tutorial_qual_ec* folder.

2) Expand the *Groups* folder.

3) Double-click on *Groups.*

c. Add a Groups Layer:

1) In the *Layers panel*, right-click and select *New layer*.

2) Select *Yes* to confirm the refresh.

3) Name the new layer, *tutorial_ groups*, and add a description.

4) Enter *1* for the layer number.

d. In the *Layers panel*, right-click and select *Set edit layer*.

e. In the *Select Layers* window, double-click the *tutorial_groups* layer.

f. In the *Groups table*:

1) right-click and select *Insert row*.

2) Enter the following values into the appropriate fields:

i) Name: *boundary*

ii) Description of Group: *boundary*

iii) Use: Make sure that the entry contains a checkmark.

g. In the *Group Members table*:

1) Right-click and select *Insert row*.

2) Enter the following values into the appropriate fields:

i) Member Type: *Boundary Stage*

ii) Identifier/Pattern: *.*stream.**

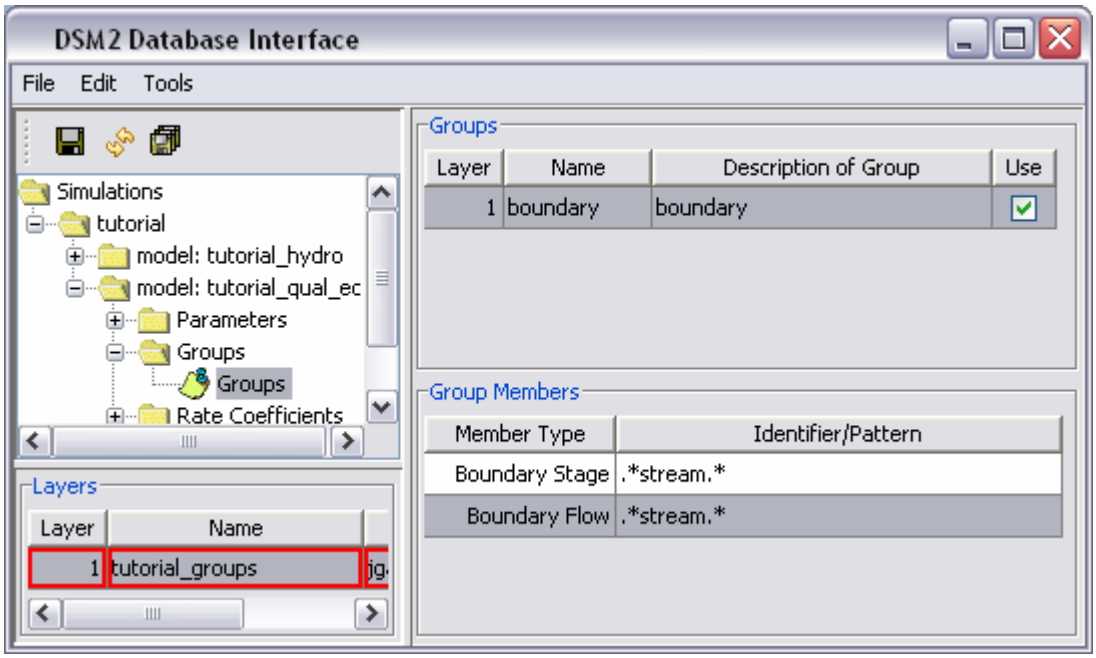
3) Again, right-click and select *Insert row*.

4) Enter the following values into the appropriate fields:

i) Member Type: *Boundary Flow*

ii) Identifier/Pattern: *.*stream.**

h. At this point, the GUI should look as follows:



i. In the *Groups table*:

1) Right-click and select *Insert row*.

2) Enter the following values into the appropriate fields:

i) Name: *sources*

ii) Description of Group: *inflow from mid-stream sources*

iii) Use: Make sure that the table contains a checkmark.

j. In the *Group Members table*:

1) Right-click and select *Insert row*.

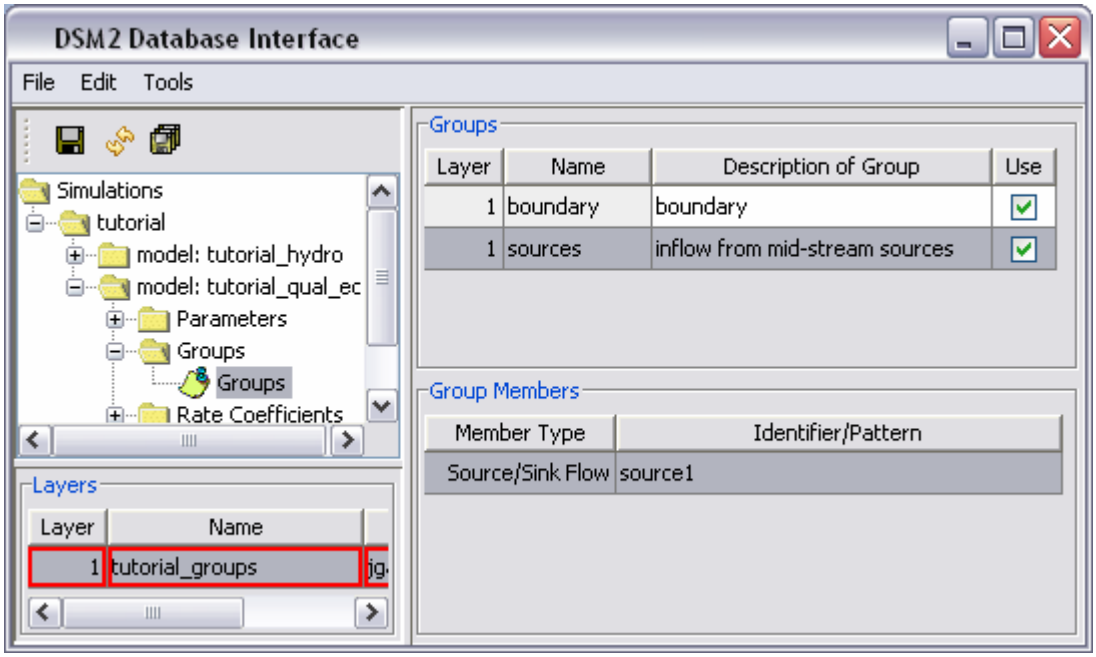
2) Enter the following values into the appropriate fields:

i) Member Type: *Source/Sink Flow*

ii) Identifier/Pattern: *source1*

k. Save the current settings.

l. At this point, the GUI should look as follows:



m. In the *Layers panel*, right-click and select *Unset edit layer* [optional].

3. Add *Group Output* for *Channel 5*:

a. In the *Simulations Navigator*:

1) Collapse the *Groups* folder [optional].

2) Expand the *model: tutorial_qual_ec* folder.

3) Expand the *Output Time Series* folder.

4) Double-click on *Channel Output.*

b. Add a new Output Layer:

1) In the *Layers panel*, right-click and select *New layer*.
2) Select *Yes* to confirm the refresh.
3) Name the new layer, *tutorial_ source_output*, and add a description.
4) Enter *2* for the layer number.

c. In the *Layers panel*, right-click and select *Set edit layer*.
d. In the *Select Layers* window, double-click the *tutorial_source_output* layer.
e. In the *Channel Output* table:
   1) Right-click and select *Insert row* a total of three times. Or, if you feel comfortable, you can click on an established row, right-click and select *Copy to edit row (with subtables)*, and make the following corrections.
   2) For the first new row, enter the following values into the appropriate fields:
      i) Name: *ch5*
      ii) Channel: *5*
      iii) Distance: *5000*
      iv) Variable: *ec*
      v) Source Group: Leave this field blank.
      vi) Output File: *${QUALOUTDSSFILE}*
      vii) Time Interval: *15min*
      viii) Period Op: *inst*
      ix) Use: Make sure that the entry contains a checkmark.
   3) For the second new row, enter the following values into the appropriate fields:
      i) Name: *ch5_bnd*
      ii) Channel: *5*
      iii) Distance: *5000*
      iv) Variable: *ec*
      v) Source Group: *boundary*
      vi) Output File: *${QUALOUTDSSFILE}*
      vii) Time Interval: *15min*
      viii) Period Op: *inst*
      ix) Use: Make sure that the entry contains a checkmark.
   4) For the third new row, enter the following values into the appropriate fields:

i) Name: *ch5_src*

ii) Channel: *5*

iii) Distance: *5000*

iv) Variable: *ec*

v) Source Group: *source*

vi) Output File: *${QUALOUTDSSFILE}*

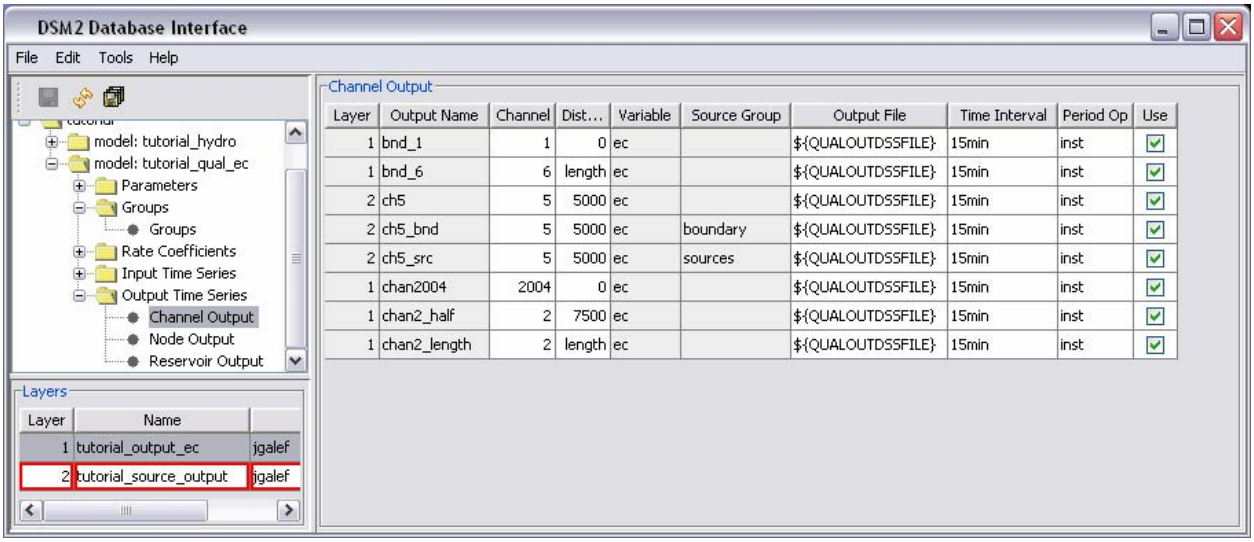
vii) Time Interval: *15min*

viii) Period Op: *inst*

ix) Use: Make sure that the entry contains a checkmark.

f. Save the current settings.

g. At this point, the GUI should look as follows:



h. In the *Layers panel*, right-click and select *Unset edit layer*.

4. Running HYDRO and QUAL

a. Open a command window for the *t5_output* directory.

b. In the command window, type: *hydro hydro.inp*.

c. In the command window, type: *qual qual.inp*.

d. Open the *output.dss* file in the *t5_output* directory, and examine the results.