Network segment output file

The following files are produced if a stream and road network are specified:

Name:

`Stream.Flow` or `Road.Flow`

Written by:

channel_save_outflow_text()

Format:

ASCII

Purpose:

Reports, for each time step, the results of stream or road channel routing, including results for the entire network (a "totals" line)

Comments:

The format of the stream/road output file is designed so that data can be plotted easily with gnuplot. For example, if one of the segments in the example network file is marked to save with the tag `Mouth"`. To plot the outflow from that segment, one would use the following commands in gnuplot:

```
gnuplot> set xdata time
gnuplot> set timefmt '%m/%d/%Y-%hhr'
gnuplot> plot '<grep Mouth Stream.Flow.bin' using 1:5 with lines
gnuplot>
```

would produce a plot with dates and times on the x-axis.

This way, gnuplot can be used to monitor the progress of a DHSVM simulation. Simply execute the above commands and, while DHSVM is running, execute the gnuplot replot command at intervals.

Using the stream/road network option, the outflows are given in m^3/timestep (i.e. in m^3 per 3 hours if your time step is 3 hourly).

Details:

The fields in the channel routing results output file are:

Field	Type	Description
1	string	Simulation time stamp of the form MM/DD/YYYY-HH
2	integer	Segment identifier, as specified in the stream/road network file; zero for the "Totals" lines
3	real	inflow, m^3/timestep, to the segment from upstream segments; not printed for the "Totals" lines
4	real	lateral inflow, m^3/timestep, to the segment, or entire network in "Totals" lines
5	real	outflow, m^3/timestep, from the segment, or entire network in "Totals" lines
If the line is for a single segment the remaining fields are as follows:		
6	real	Change in segment storage, m^3, occurring within the previous routing time step.
7	"string"	Segment title specified in the stream/road network file
If the line is for the entire network (i.e. "Totals" line) the remaining fields are as follows:		
6	real	Total network storage, m^3, for the previous routing time step.
7	real	Change in entire network storage, m^3, occurring within the previous routing time step.
8	real	Estimate of the mass balance error for the time step
9	"Totals"	identifier for "Totals" lines

Stream flow or road flow only files

Name:

`Streamflow.Only` or `Roadflow.Only`

Written by:

channel_save_outflow_text()

Format:

ASCII

Purpose:

Reports, for each time step, the results of stream or road channel routing.

Comments:

These files do not provide any information that is not in the `Stream.Flow` and `Road.Flow` files, but are in a format that may be easier to read by most plotting programs.

Details:

The file has a one-line header indicating the columns. The first column contains the date, the following columns contain the flow at a particular location in m^3/s (the units are different from `Stream.Flow` and `Road.Flow` who has m^3/timestep, units here ARE m^3/s.). There is a column for each "SAVE" identifier that have been inserted in your `stream.network.dat` or `road.network.dat`.