



QGIS – 2.14.2 – April 2016

Catchment areas and streams

Using Processing - Channel Network and Drainage Basin

This tutorial is a simple way to calculate catchment area and streams. There will be no calculations of absorptions to the ground or water to the sewer. Neither to calculate volume.

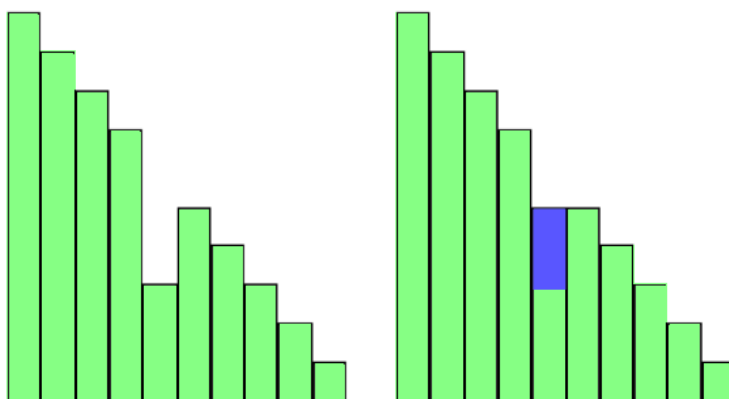
What is going to be found is the catchment area, streams and junctions.

Open the raster file **dtm_byg.tif**

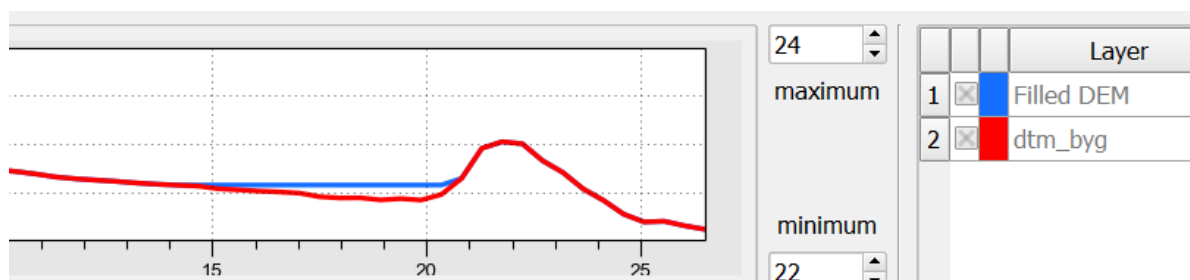
This file is a combination of ground and buildings.

First area with no outlet has to be filled. To do this we use the function **Fill Sink (Wang & Liu)**.

Result of this function



Using the **profile tool** it looks like this:



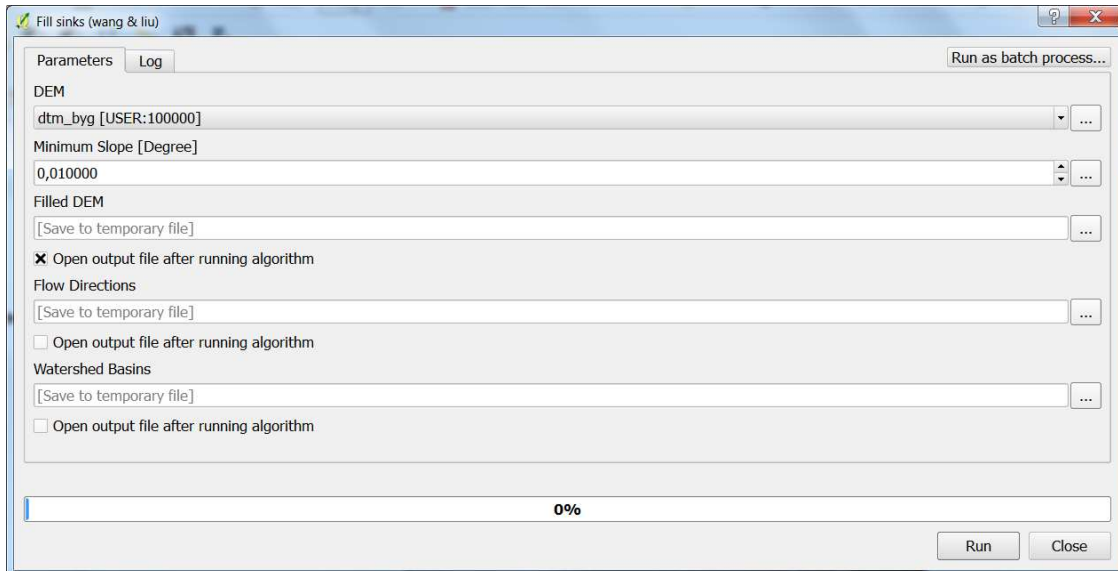
When you have filled the sinks, we can calculate where the water will run on the surface in channels (channel), and where the water comes from (drainage basin).

Click **Processing** search the function **Fill Sink (Wang & Liu)**

Disable **Flow Directions** and **Watershed Basins**.

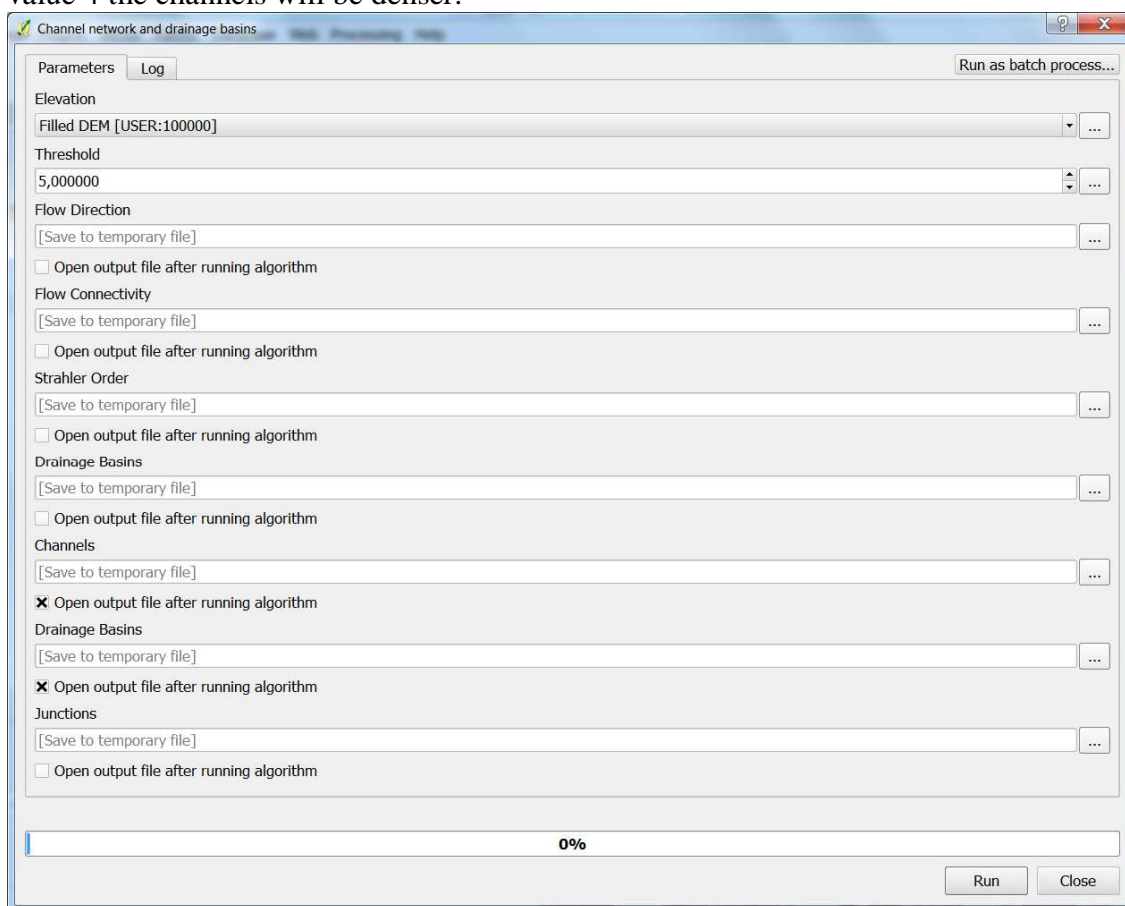
The result is a temporary raster file with new Z- values in band 1. The Z-values are meter above sea level.

Click **Run**



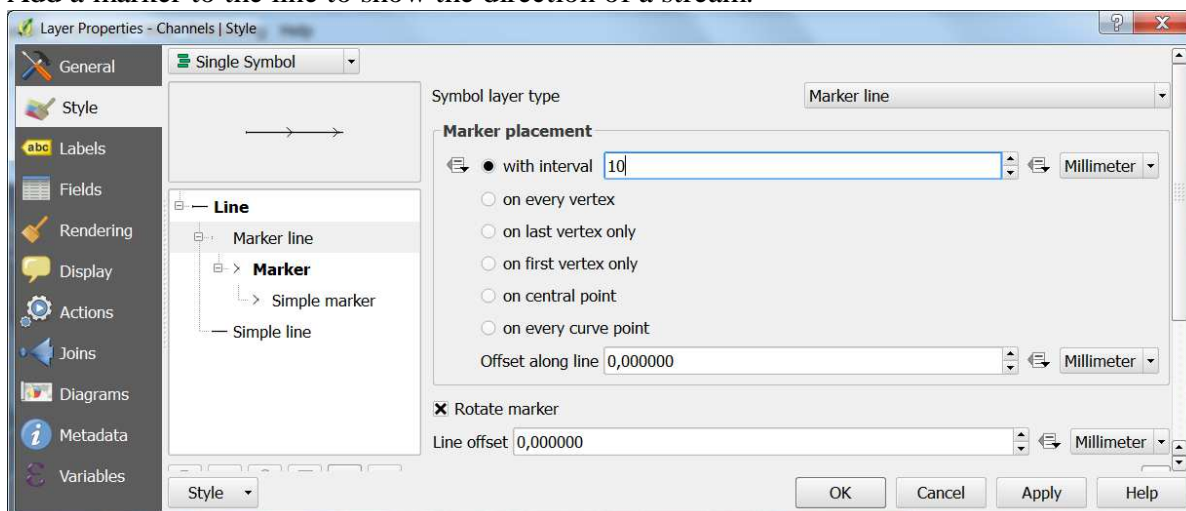
Next step is to calculate the **Channel Network, Drainage Basin and junctions**.

Threshold indicates how dense the channels will be. Use the value 5 for this dataset. With the value 4 the channels will be denser.



Colorize channels

Add a marker to the line to show the direction of a stream.



Colorize by Order

