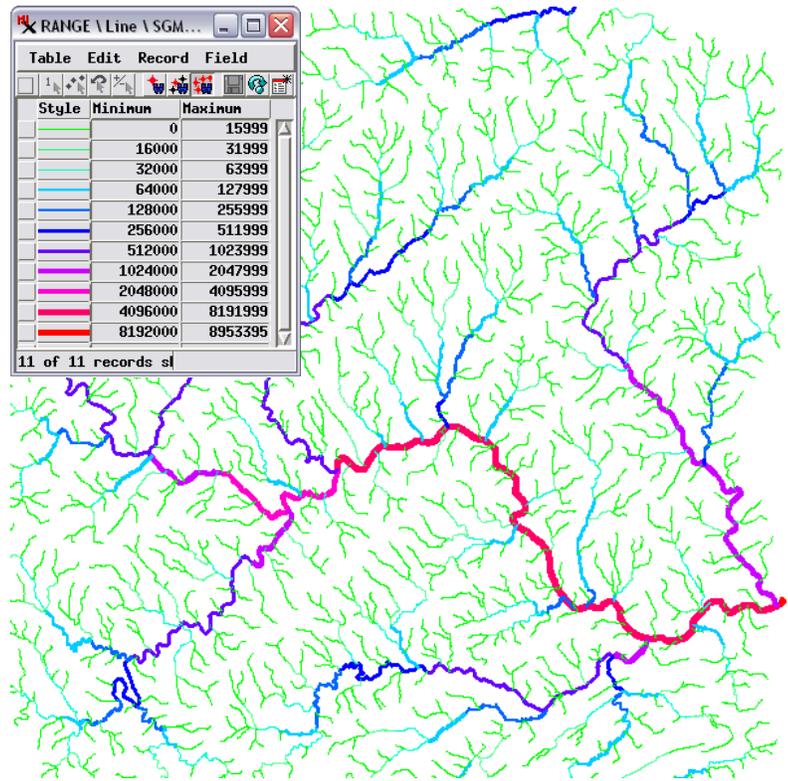
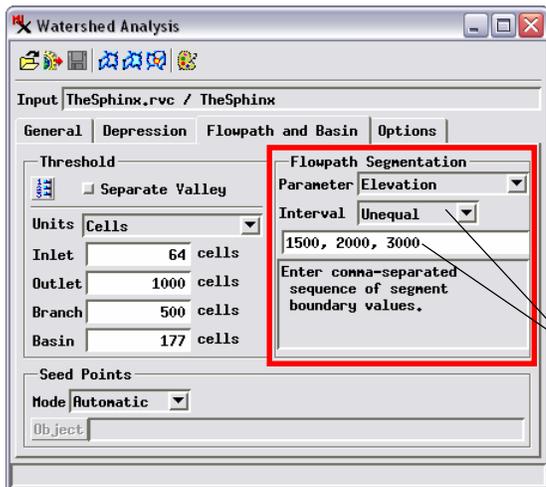


Create Segmented Flowpaths

The tree-like spatial pattern of typical stream networks reflects their function as systems that collect water from upstream areas and funnel it to lower elevations. Points at lower elevations along the stream network have larger upstream catchment areas and thus have larger channels and higher discharge. Since catchment area and channel elevation both vary systematically within stream networks, there may be applications in which it is useful to subdivide stream lines based on different ranges of these values.

The TNTmips Watershed process (Terrain / Watershed) provides the option to create a segmented flowpath vector object in addition to the standard flowpath vector. Controls for the segmentation procedure are on the Watershed Analysis window's Flowpath and Basin tabbed panel (illustrated below). You can segment flowpaths

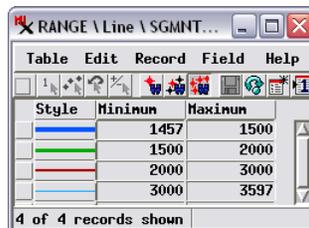


Segmented flowpaths based on Flow Accumulation with Exponential interval type. Lines are styled (color and width) using the Minimum field in the Range table created by the segmentation procedure.

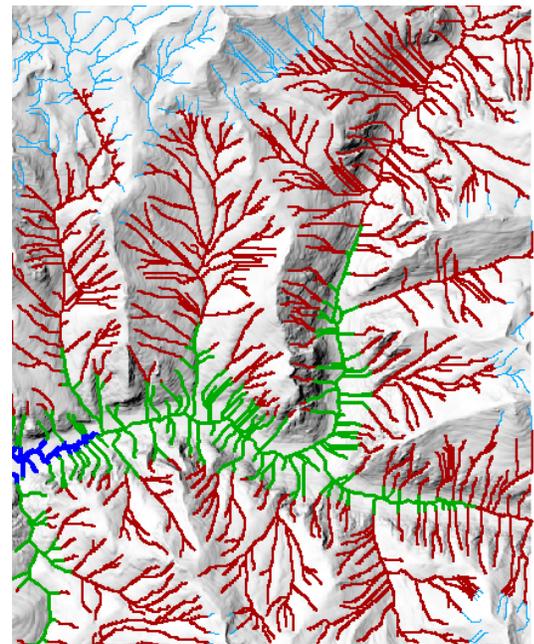
The Unequal Interval option allows you to enter specific boundary values for elevation or flow accumulation to use in segmenting flowpaths.

using values of either elevation or flow accumulation (upstream contributing area). You can set boundary values in three ways using the Interval menu: Equal, Exponential, or Unequal. With the Equal option, you enter a single value that serves as the first boundary value and as the interval between succeeding boundaries. With the Exponential option, the value you enter is used as the first boundary and first interval values, but successive intervals are each twice as large as the previous one. The Exponential option is useful for segmenting based on flow accumulation, which increases rapidly downstream along flowpaths. The Unequal interval option allows you to enter a sequence of explicit boundary values (separated by commas) for direct use.

The segmentation procedure creates a Range table with a record for each range that is attached to all corresponding flowpath lines. You can use either the Minimum or Maximum value field in this table as the basis for styling flowpaths By Attribute. All standard hydrologic attributes of flowpath lines are also recomputed for lines that have been split by the segmentation procedure.



Style	Minimum	Maximum
(Blue)	1457	1500
(Green)	1500	2000
(Red)	2000	3000
(Dark Red)	3000	3597



Segmented flowpaths based on Elevation with Unequal interval type and elevation boundaries set at 1500, 2000, and 3000 meters (the range of elevation in the DEM is 1457 to 3597 m). Lines are styled using the Minimum field in the Range table (above left) created by the segmentation procedure.