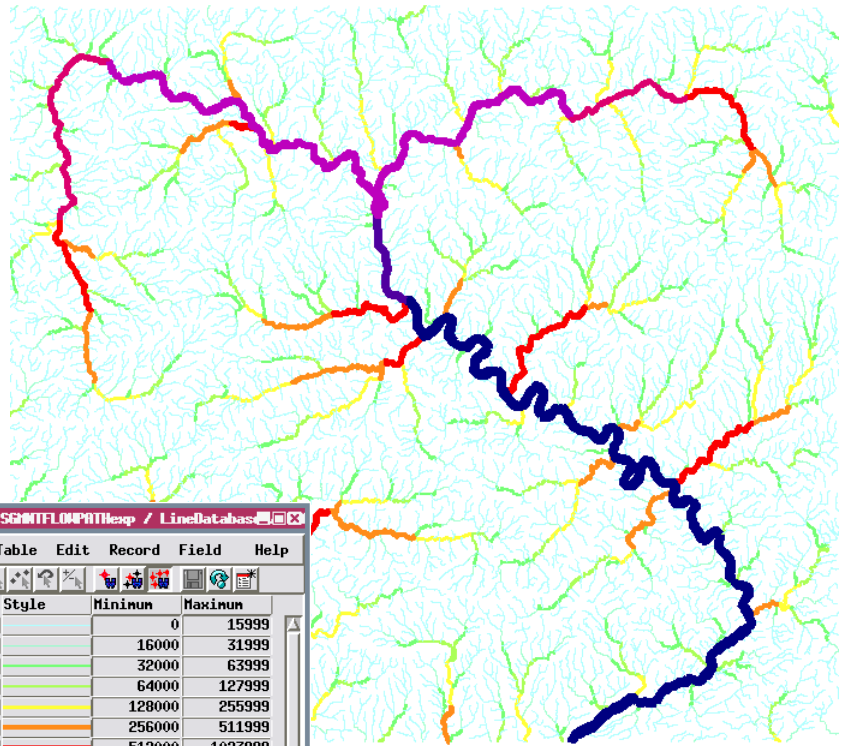


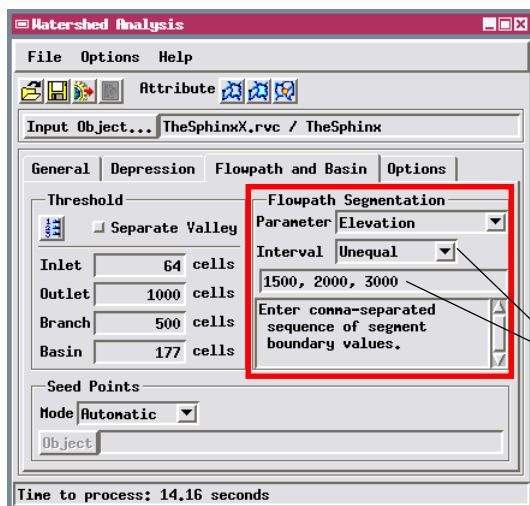
# Create Segmented Flowpaths

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 occasions when it is useful to subdivide stream lines into different ranges of these values.

The TNTmips Watershed process (Raster / Elevation / 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. You can segment



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

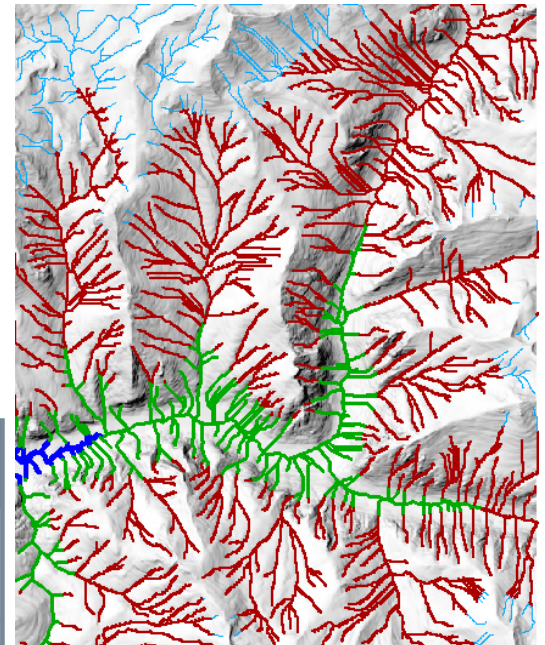


Style	Minimum	Maximum
	0	15999
	16000	31999
	32000	63999
	64000	127999
	128000	255999
	256000	511999
	512000	1023999
	1024000	2047999
	2048000	4095999
	4096000	8191999
	8192000	15646668

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

flowpaths using values of either elevation or flow accumulation (i.e. upstream contributing area expressed as the number of DEM cells). 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 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
	1462	1500
	1500	2000
	2000	3000
	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 1462 to 3597 m). Lines are styled using the Minimum field in the Range table (above left) created by the segmentation procedure.