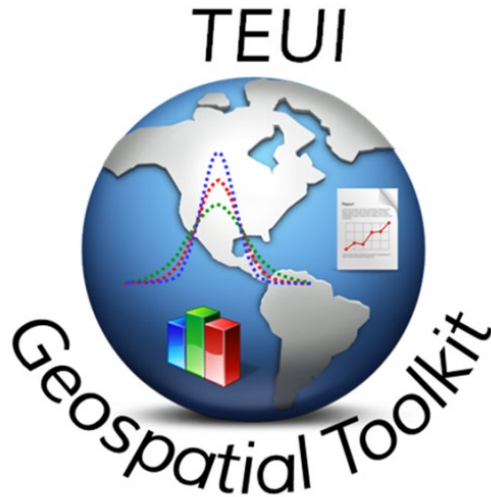


Connotative Legend Tool



The Connotative Legend Tool is a utility designed to assist with generating map unit symbols by incorporating descriptive landscape information from raster layers such as slope, aspect, elevation, and vegetation. The tool uses the zonal statistics created by the Toolkit to determine the majority values underlying each polygon or zone. Using a user-defined data classification and labeling scheme, the tool attributes each zone with the appropriate label, concatenating all labels for each layer together into a single map unit symbol. The tool is useful for developing and attributing pre-maps or for QA-QC of existing mapping. The tool is designed to handle both continuous and discrete raster data and to be used in an iterative manner.

Training Objective:

Learn to generate a connotative legend by selecting layers and determining value ranges for each class.

Required data:

- Your Toolkit project with statistics already run

Contents

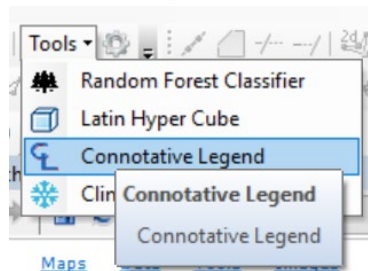
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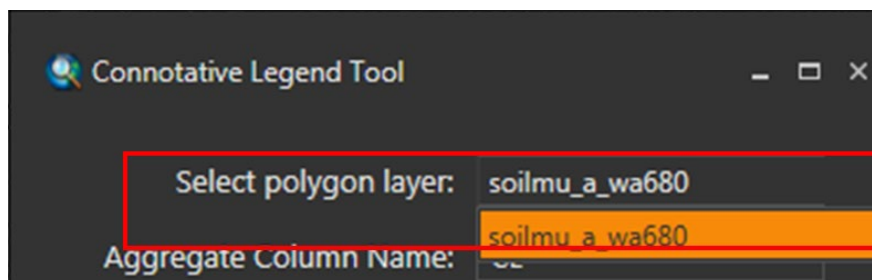
Part 1: Designing Your Connotative Legend

A. Select layers

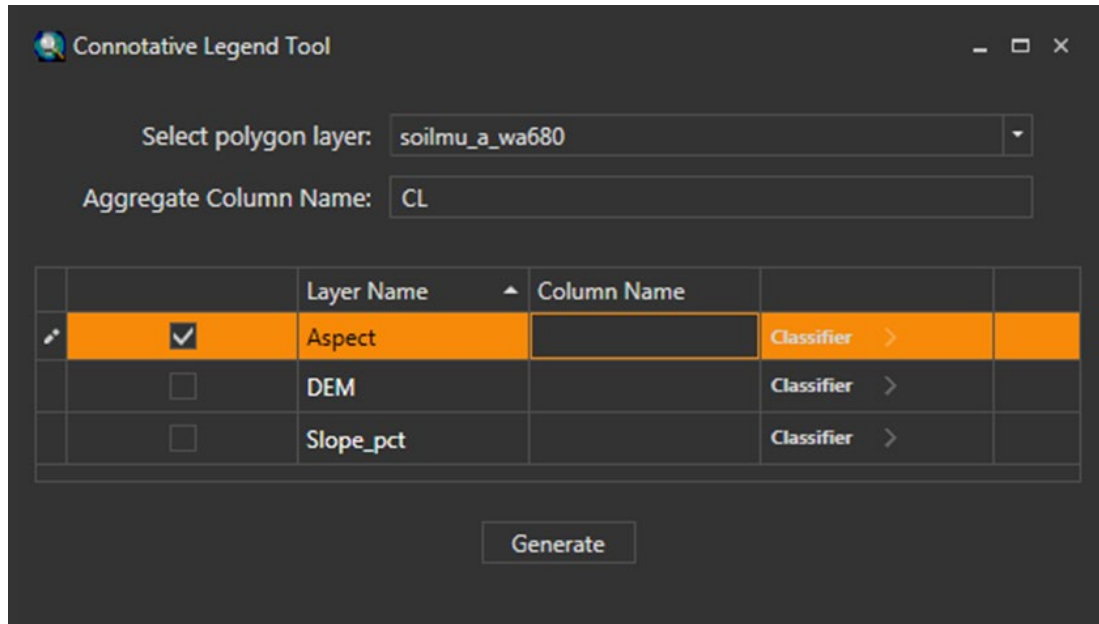
1. If your TEUI project from exercise 3 is not open, click the folder button and select it.
2. Click the **Connotative Legend Tool** button on the TEUI Toolbar to bring up the tool's window (outlined in red below).



3. In the **Select polygon layer** field select the **soilmu_a_wa680** from the dropdown menu (see below).



- A new window will open within the dialog box. The tool will display a table with one row for each raster layer in the project.
4. Next, create a **label** for the **attribute aggregate column name**, the default is "CL". Standard ArcGIS shapefile and feature class attribute naming rules apply (see below).

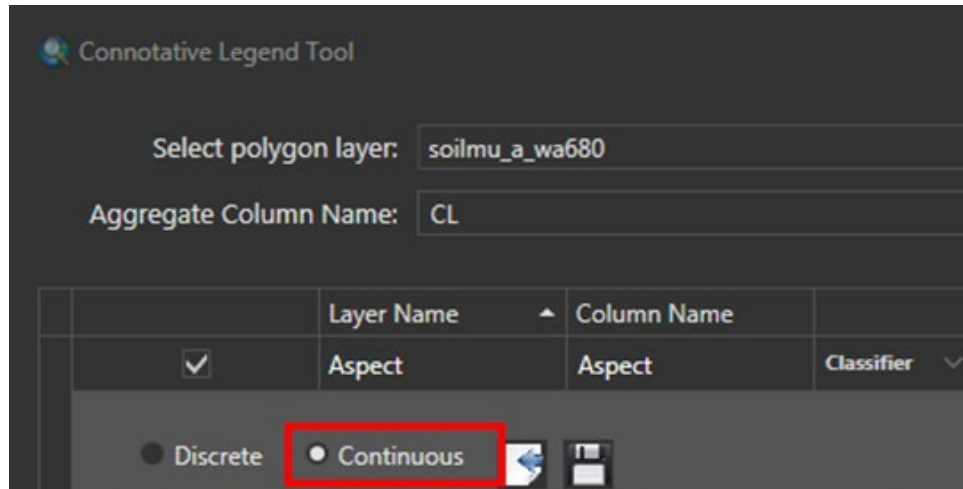


5. Place **checks in the boxes** next to the **Aspect**, **DEM**, and **Slope_pct** layers.
6. Click in the cell that says “layer name.” You will see an **arrow** which will allow you to **sort your raster data layer** in ascending or descending order. When you hover your cursor over that cell you should see a filter symbol which allows you to set a filter for that column. This also applies to all other columns.
7. Under “column name”, **enter a name for the field** that will hold the **classification label** for each layer (e.g. “Aspect” or “DEM”). Standard ArcGIS shapefile and feature class attribute naming rules apply.

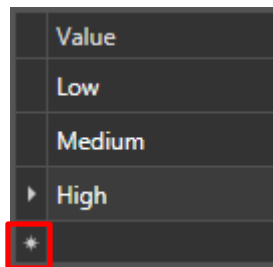
Part 2: Classifying Layers

A. Enter a classification for the Aspect layer

1. Click on the “**Classifier**” cell in the first data layer (“**Aspect**”). The window will expand. You may wish to expand the window even further by clicking your mouse and holding down the corner of the window while dragging to an appropriate size.
2. First, select the type of raster data you are using. Continuous would be for layers such as DEM, slope or aspect while discrete would be for a geology map or vegetation map. All of the layers we are using in this exercise are **Continuous** (see below).



- Under the **Value** column, you will notice the default labels of “Low, Medium, and High.” In each row, **enter the label for each class**. It can be a letter, word, number, etc. No special symbols (\, #, %, \$, etc.). To add additional classes, click on the star to the bottom left of the last class labeled “High” (see below).



- Enter the min and max value for each of your classes** as shown in the following graphic. The full range of possible aspect values should be covered by the class value ranges (see below).

Value	Min Data Value	Max Data Value	
NE	0	90	✕
SE	90	180	✕
SW	180	270	✕
NW	270	360	✕
flat	-1	0	✕
▶			

- You can hit the **red “X”** next to each row to **remove the class** if you wish.

- Click on the **floppy disk image** to **save the classification** if you would like to use it later for other projects. Alternatively, you can also click the **paper with a blue arrow** to **import a classification** from a previous project (see below).



B. Enter classifications for the DEM and Slope_pct layers

- Follow the previous directions in step **A** and refer to the following example graphic to set the classifications for the DEM and slope layers (see below).

✓
DEM
elevation
Classifier ▾

Discrete
 Continuous

Value	Min Data Value	Max Data Value	
1	0	500	✗
2	500	1500	✗
▶ 3	1500	2500	✗
★			

✓
Slope_pct
slope
Classifier ▾

Discrete
 Continuous

Value	Min Data Value	Max Data Value	
▶ Gentle	0	50	✗
Moderate	50	150	✗
Steep	150	1000	✗
★			

C. Generate the legend

1. When finished setting the classifications, click on the **Generate** button at the bottom of the window.
2. After the tool has finished running (“**Done!**”), open the attribute table of your polygon layer (shapefile) in the table of contents in ArcMap and view the results. Notice the new columns that have been added for the three classified layers and the map unit symbol column “CL” which is an aggregate of those layers (see below).

FID	Shape *	AREASYMBOL	SPATIALVER	MUSYM	MUKEY	slope	elevation	Aspect	CL
1	Polygon	WA680	5	9	75690	Gentle	3	SE	Gentle 3 SE
3	Polygon	WA680	5	101	75305	Gentle	2	NE	Gentle 2 NE
4	Polygon	WA680	5	49	75511	Gentle	3	NE	Gentle 3 NE
5	Polygon	WA680	5	26	75403	Gentle	3	NE	Gentle 3 NE
6	Polygon	WA680	5	128	75342	Gentle	2	NE	Gentle 2 NE
7	Polygon	WA680	5	27	75404	Gentle	2	NW	Gentle 2 NW
8	Polygon	WA680	5	91	75693	Gentle	3	NE	Gentle 3 NE
9	Polygon	WA680	5	9	75690	Gentle	2	NE	Gentle 2 NE
10	Polygon	WA680	5	76	75633	Gentle	2	NE	Gentle 2 NE
11	Polygon	WA680	5	94	75696	Gentle	2	NE	Gentle 2 NE
12	Polygon	WA680	5	68	75594	Gentle	2	SE	Gentle 2 SE
15	Polygon	WA680	5	83	75670	Gentle	3	SE	Gentle 3 SE
16	Polygon	WA680	5	45	75497	Gentle	2	NE	Gentle 2 NE
17	Polygon	WA680	5	139	75357	Gentle	3	NW	Gentle 3 NW
18	Polygon	WA680	5	3	75413	Gentle	2	SE	Gentle 2 SE
19	Polygon	WA680	5	93	75695	Gentle	3	NE	Gentle 3 NE
20	Polygon	WA680	5	143	679189	Gentle	2	NE	Gentle 2 NE
21	Polygon	WA680	5	8	75654	Gentle	2	NE	Gentle 2 NE
22	Polygon	WA680	5	90	75691	Gentle	1	NE	Gentle 1 NE
23	Polygon	WA680	5	16	75375	Gentle	2	SW	Gentle 2 SW
24	Polygon	WA680	5	62	75568	Gentle	2	SW	Gentle 2 SW
25	Polygon	WA680	5	141	75361	Gentle	3	SW	Gentle 3 SW
26	Polygon	WA680	5	31	75415	Gentle	2	SE	Gentle 2 SE
27	Polygon	WA680	5	133	75351	Gentle	3	NE	Gentle 3 NE
28	Polygon	WA680	5	90	75691	Gentle	2	NW	Gentle 2 NW
29	Polygon	WA680	5	65	75581	Gentle	2	SW	Gentle 2 SW