



You should keep the last column, it contains musym numbers that are typically seven digits (e.g., 1677202), as you will use this column as a key later when you join tables. Also save the first two columns, and the two columns that contain text like “Somewhat excessively drained.”

The column sequence corresponds to the order of description in the `muaggatt_table_description.pdf` found in the `CLD:\ESPMX295\Soils` directory. This describes each column, and contents.

Add column names, and save this table to an Excel file.

Use the ArcMap tool “Table to Excel” to convert this to a table in your geodatabase, name it something like `muaggatt`.

Join the `soilmu_a_aoi` table with the `muaggatt` table via the `musym` attribute. The attribute is labeled in the polygon shapefile, and you can match it to the last column (the 16xxxxxx number) in the `muaggatt` table by the values.

For our purposes, we’ll make the gross generalization that descriptions like “somewhat excessively drained” values give us an index of absorption capacity. Note that one of the two columns is more complete (has fewer blank rows), but still has blank rows. We’ll first complete this “almost full column,” with values, then use this column to fill another column, with the maximum absorption capacity, in cm, for the soils in our study area.

Note that the blank rows in our “nearly complete” column are all identified as urban in other columns, so add the value “urban” to the descriptive column.

Then assign maximum absorption values:

Excessively or somewhat well drained can absorb 75% of the first 7.5 cm (3”) of rain reaching the ground, all after that is runoff (don’t enter 7.5, you have to do a calculation for 75% of 7.5 cm)

Well drained can absorb 75% the first 2.5 cm (1”) of rainfall, all after that is runoff and

Urban lands can absorb 75% of the first 1.25 cm (1/2”) of rainfall, all after that is runoff.

Export the joined file to create a new layer, with the soil properties integrated.

Name the new soil Feature Data Class `soils_absorption` in the geodatabase.

Create a map with your study area boundary, and the `soil_absorption` layer, symbolized with different colors for the different absorption levels found. Export this map and submit it to the class site.