Elevation Data

- We want to use elevation data to map watershed boundaries and see the interactions along the surface to the water.
- DEMS come from spot heights from the topo maps which were surveyed locations, most quad maps had about 10-20 points to use.
- Scale of 30m DEMS are really about 1:40,000 scale not 1:24,000.
- The hypsography from the 1:24K topomaps which are the elevation lines could be called a true 1:24,000 scale data source.
- The hypsography interpolated to create a surface of elevation gives us ~ 10m DEMS which we will use today.
- The National Map viewer provides a good interface for getting elevation data.
- It helps to have a good reference of background layers to orient an locate your study area of interest in the National Map viewer.
- Once data is downloaded, be sure to note that data is in dd, not good for measurements such as shape, area, distance and direction.
- Projections minimize distortions so we need to use one here and project this unprojected data, dd geographic is a coordinate system but not a projection.
- Also, the data is floating point which is not needed, takes up too much space, runs slower, etc so we need to convert it to integer. We don’t care about .XX values.
- Since data values are in meters, we should pick a projection like UTM in which the base measurements are in meters.

- Also, the cell size is a funny 9.259 value in which we should round up to 10 during the projection.
- A hillshade provides a good background for seeing topography.

Student Notes:

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