

## Grouping cell values into categories: Classifying your data

The purpose of grouping cell values is to both explore your data and make it easier to understand. The cell values of a grid theme can be grouped for display in one of five ways:

- Equal Area - Groups cells so there is an equal number of cells in each of the output classes. Use this to display integer grid themes that contain a continuous variable, such as elevation, when you wish to see more contrast between cell values.
- Equal Interval - Groups cells by dividing the range of cell values into equal sized sub-ranges.
- Natural Breaks - Groups cells by identifying breakpoints between classes using a statistical formula (Jenks optimization). The Jenks method minimizes the sum of the variance within each of the classes. Natural Breaks finds groupings and patterns inherent in your data.
- Quantile - Groups cells so there is an equal number of features in each of the output classes. For grid themes Quantile and Equal Area classifications are exactly the same.
- Standard Deviation - Groups cells by finding the mean cell value and then placing class breaks above and below the mean at intervals of either 1/4, 1/2, or 1 standard deviations until all the cell values are contained within the classes. Any cell values beyond three standard deviations from the mean are put into two classes, greater than three standard deviations above the mean (" $> 3$  Std Dev.") and less than three standard deviations below the mean (" $< -3$  Std. Dev.").

Floating point grid themes only allow the Equal Interval and Standard Deviation classification methods, because not all of their values are easily available to perform other classification methods.