

## **ArcGIS Spatial Analyst—Suitability Modeling**

### **Goals of the workshop**

- Identify the applications for suitability modeling.
- Define the major steps in how to create a suitability model.
- Discuss a variety of approaches for performing suitability modeling.
- Explore various means to assign reclass values and weights.

### **Major topics covered**

- Uses of suitability models: Discuss the goals of suitability models and their applications.
- Identifying the different types of suitability models: Binary, weighted, and multicriteria approaches will be presented.
- Exploring the basic steps: (1) determine significant factors, (2) derive intermediate layers, (3) reclassify, (4) weight, (5) add, and (6) analyze.
- Understanding numbers: Examine interval, ratio, ordinal, and nominal numbers.
- Defining advance techniques for reclassifying: Discuss direct scaling, linear transformation, and value utility function reclassifying approaches.
- Discuss additional weight methods: Explore the ranking, rating, pairwise, and trade-off analysis weighting methods.
- Examining various ways to add the criteria: Present the group value and ideal point methods for adding criteria.
- Identifying limitations: Suitability models produce relative weights, not absolute values.
- Demonstrating the principles through models: Several demonstrations of actual models will highlight the steps for creating a suitability model. A basic linear model will be initially demonstrated, then more advanced principles will be used to determine the reclass values and weights.