ArcToolBox: Analysis

ArcToolBox

ArctoolBox is available from both ArcCatalog and ArcMap.

🞄 A toolbox can contain tools, toolsets, and scripts and is organized according to the collection of geoprocessing commands it contains.

🞄 A toolset can contain tools, toolsets, and scripts and is organized according to the geoprocessing commands it contains.

🞄 A tool is a single geoprocessing command.

🞄 A script is a set of instructions usually stored in a file and interpreted, or compiled, at run time.

🞄 A model consists of one process or, more commonly, multiple processes strung together.

Scripts

Toolsets

• Extract

• Overlay

• Proximity

• Statistics

Analysis Tools
- Extract
  - Clip
  - Select
  - Split
  - Table Select
- Overlay
  - Erase
  - Identity
  - Intersect
  - Spatial Join
  - Symmetrical Difference
  - Union
  - Update
- Proximity
  - Buffer
  - Create Thiessen Polygons
  - Generate Near Table
  - Multiple Ring Buffer
  - Near
  - Point Distance
- Statistics
  - Frequency
  - Summary Statistics
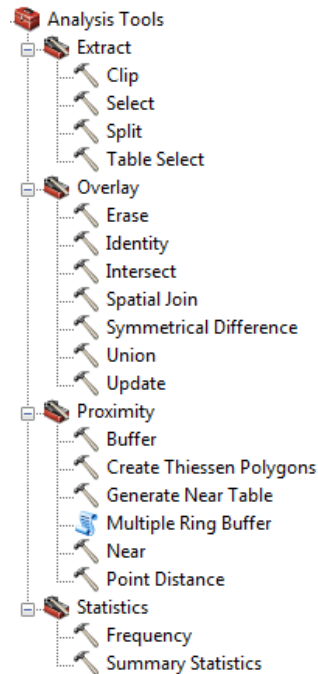
Extract - clip
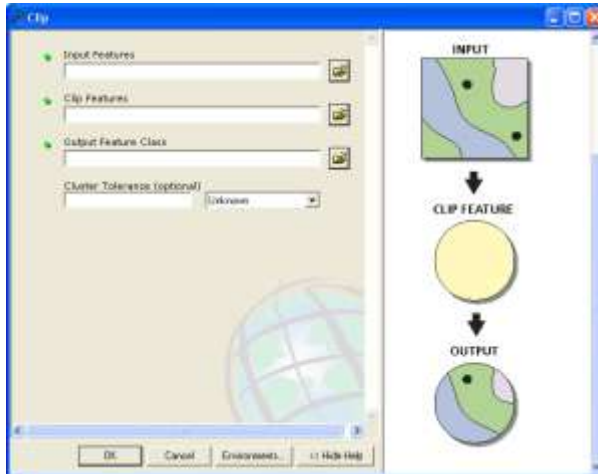
- Clip features must have polygon geometry.
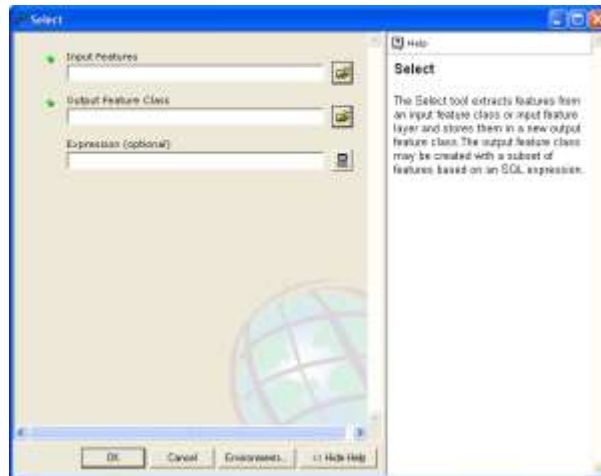
- When using ArcMap layers as input, only the currently selected features are used in the CLIP operation.

Extract - split

- Split features must be polygons.

- The Split Field datatype must be character.

Extract - select

Extract - table select

Overlay Procedures
# (for all but spatial join tool)

- Determine the spatial reference for processing. All the input feature classes are projected (on the fly) into this spatial reference.

- Crack and cluster the features.

- Discover geometric relationships (overlap) between the input features and the overlap features.

- Assign attributes based on the type of overlay.

- Remove features based on the combinations of attributes and overlay types.
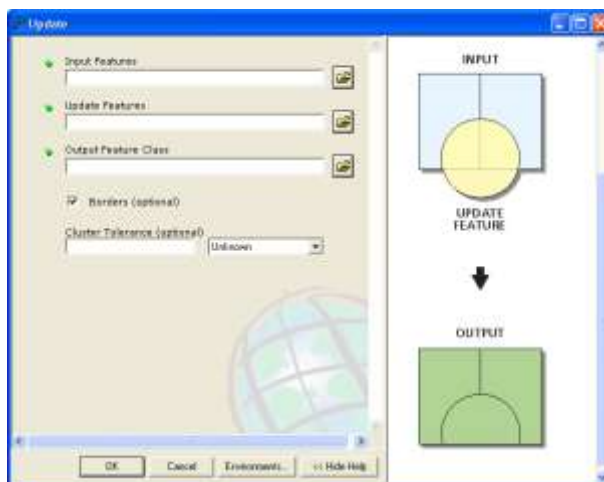
Overlay - erase
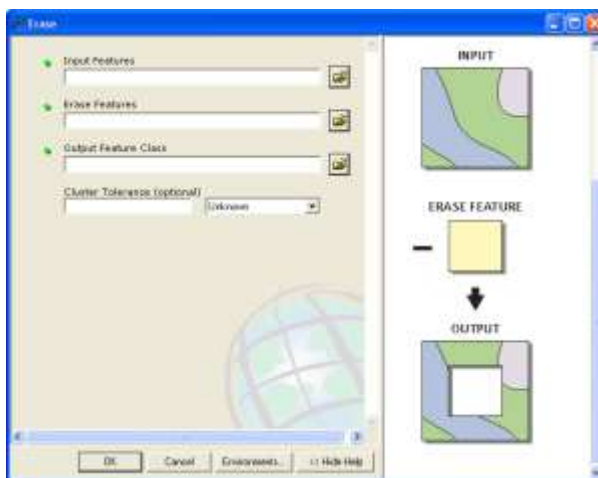
- Erase features must be polygons.
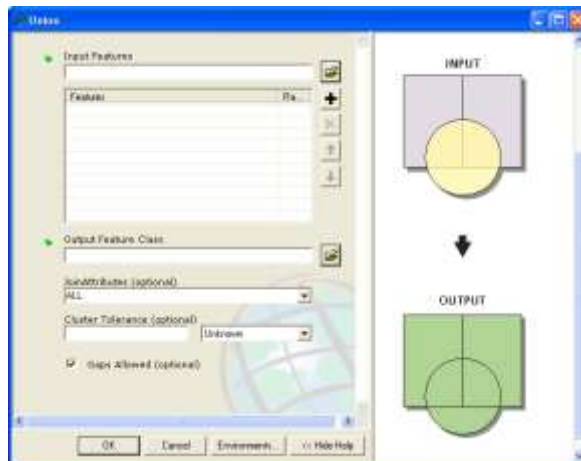
Overlay - identity
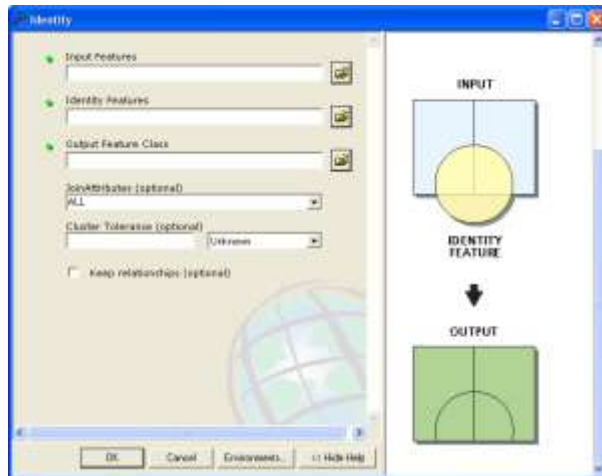
- Identity features must be polygons.
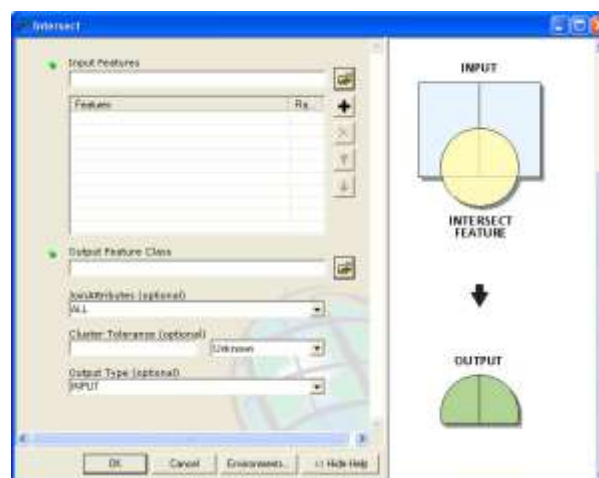
Overlay - update

- Update features must be polygons

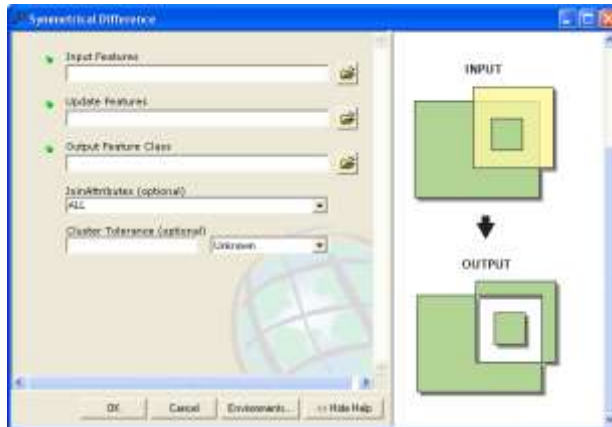- The Input Features and Update Features field names must match

Overlay - union
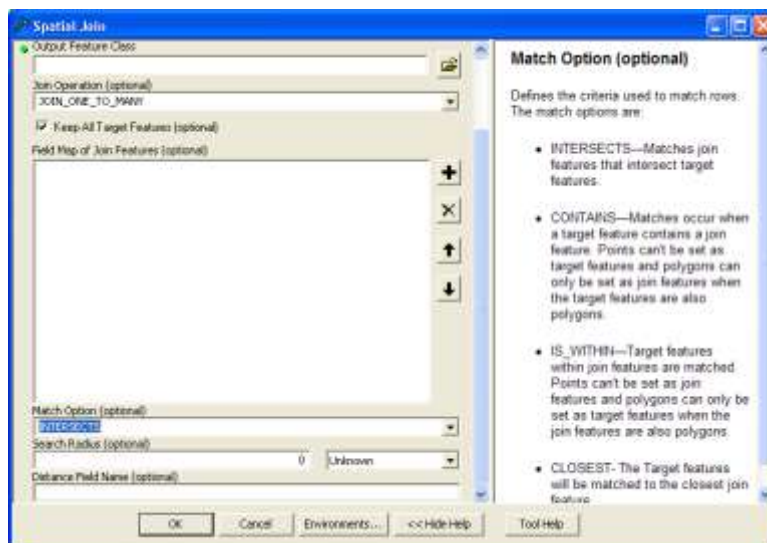

- Input features must be polygons
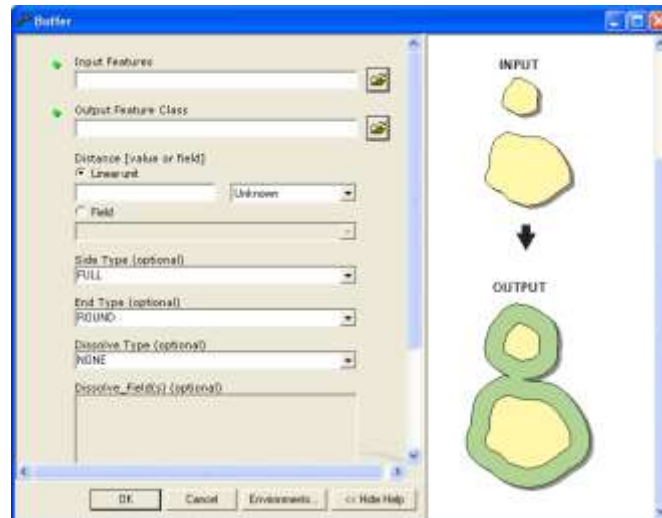
Overlay - intersect

7

Overlay – symmetrical difference

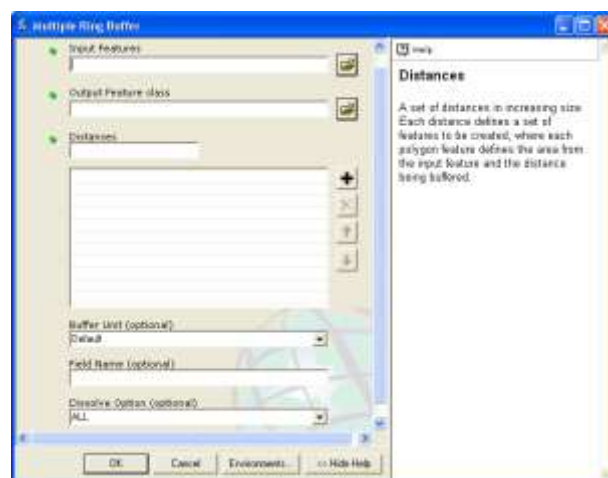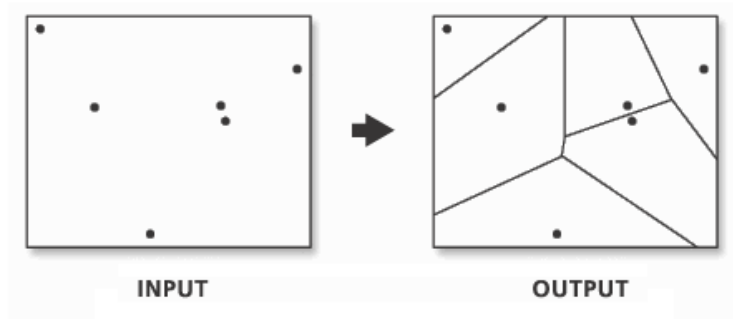- Input and update features must be polygons
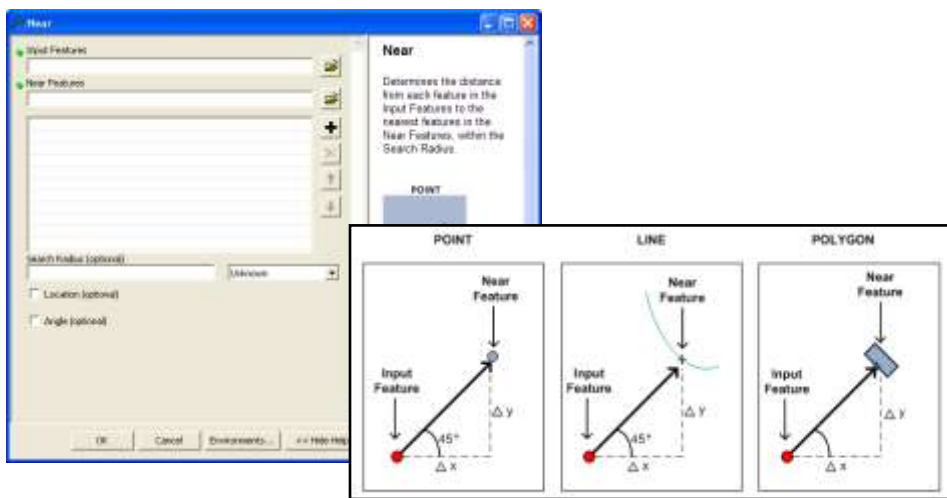
Overlay – Spatial Join
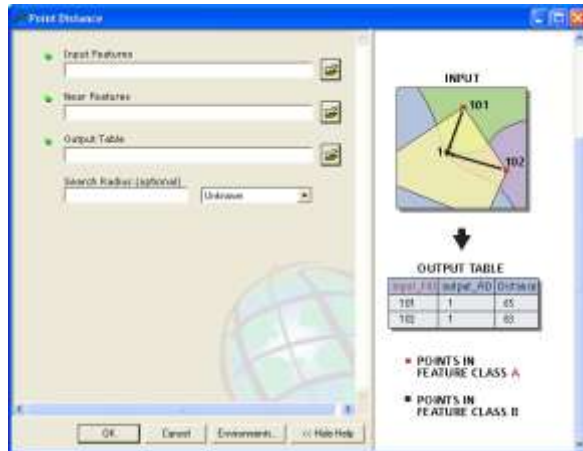
Proximity - buffer

Proximity – multiple ring buffer

Proximity – create Thiessen polygons

INPUT   OUTPUT

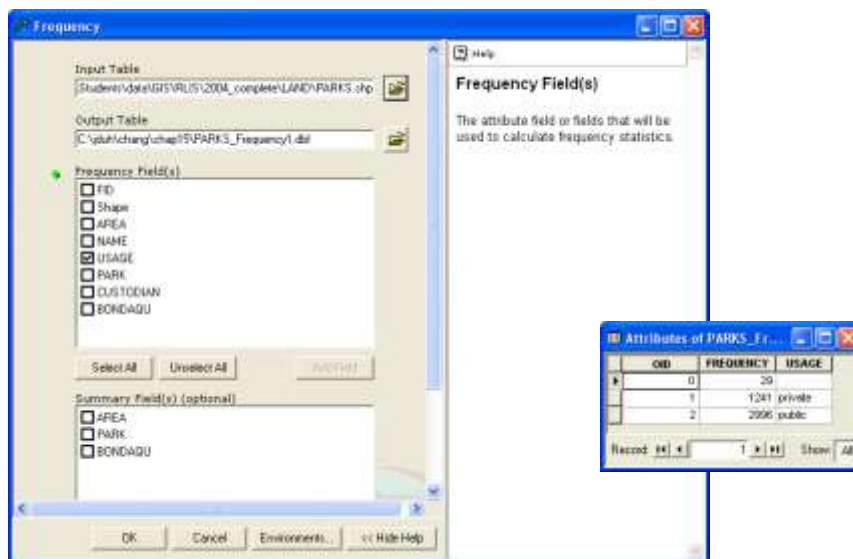# Proximity – near
- generate near table

Proximity – point distance

- Both input and near features (layers) must have point geometry.

Statistics – frequency

Statistics – summary statistics