

Common GIS Analyses

ISTC Topic:

8.1

In this Chapter you will learn

- To perform some of the most common GIS analysis: merge, intersect and unions.

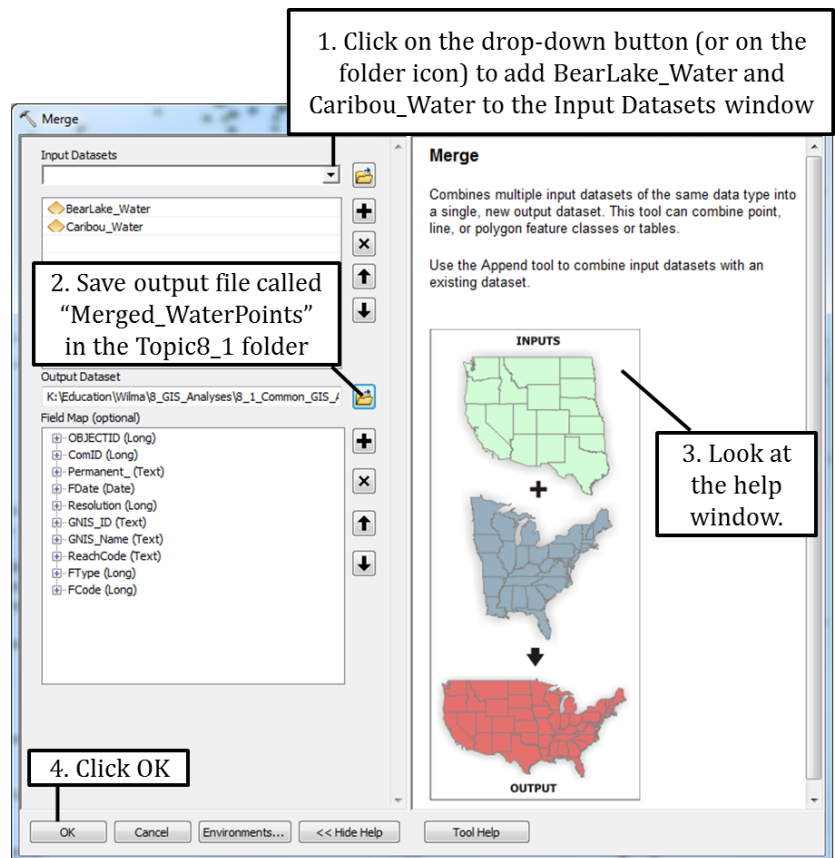
1. Merge

Exercise 1: Merging two point shapefiles

- Start ArcMap and open a new map document. Add the BearLake_Water and Caribou_Water shapefiles from the Topic8_1 folder. Both layers show contain data from the National Hydrography Dataset depicting the location of water-related features such as wells, sinks, gauges and waterfalls.
- Open the merge tool by click on Geoprocessing > Merge or opening the ArcToolbox and clicking Data Management Tools > General > Merge
- Use the instructions on the right to merge both shapefiles in a new shapefile called "Merged_FinalPoints" in your Topic8_1 folder.
- The merged layer will automatically be added to your map.



8.1: Merge, Intersect and Union



1. Click on the drop-down button (or on the folder icon) to add BearLake_Water and Caribou_Water to the Input Datasets window

2. Save output file called "Merged_WaterPoints" in the Topic8_1 folder

3. Look at the help window.

4. Click OK

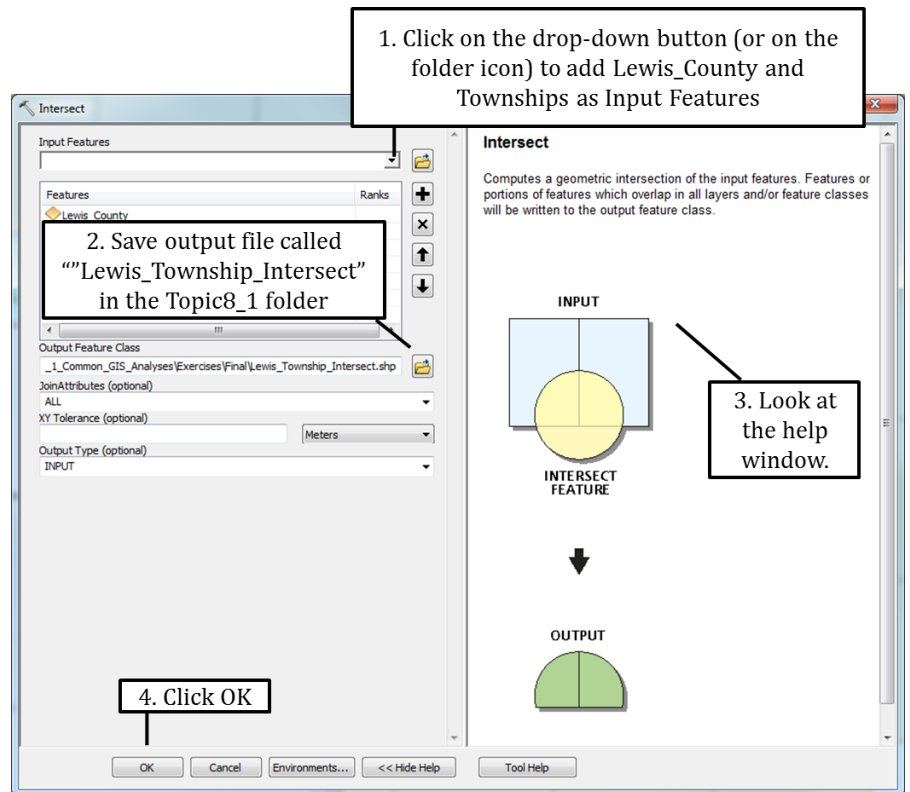


8.1: Merge, Intersect and Union

2. Intersect

Exercise 2: Intersect two shapefiles

1. Open a new map document in ArcMap and add the Townships and Lewis_County shapefiles from the Topic8_1 folder. Make sure to move the Lewis_County layer to the top in your Table of Contents so it is not covered up by the Townships layer.
2. Open the Intersect Tool from ArcToolbox by clicking Analyses Tools > Overlay > Intersect.
3. Populate the tool as shown on the right.
4. Turn off the Lewis_County and Townships layer to view the output of your intersect procedure. Leave you map open since we will perform a Union on the same two input datasets.



8.1: Merge, Intersect and Union

3. Union

Exercise 3: Union two shapefiles

1. Continue from the previous exercise. Open the union tool by clicking geoprocessing > Union. Choose the Townships and Lewis_County layers as Input Features. Save the output file as "Lewis_Township_Union" in your Topic8_1 folder.
2. Compare the intersect your created in the previous exercise with the merge you created in this exercise. How are they different?

