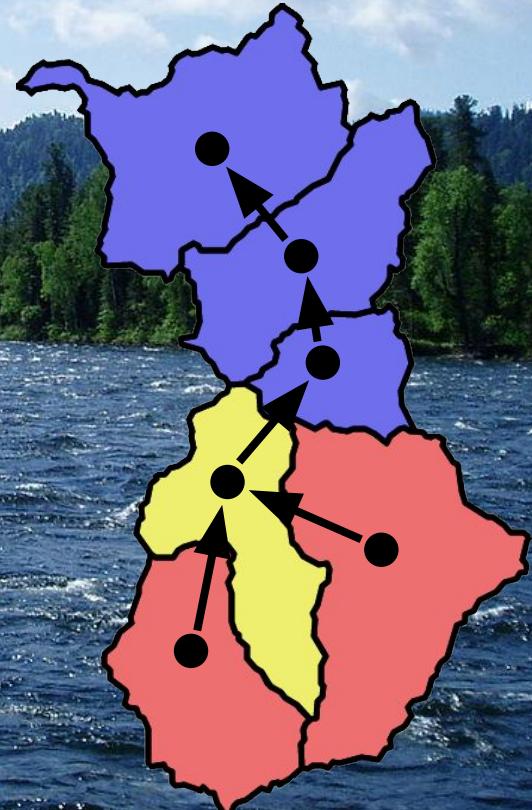
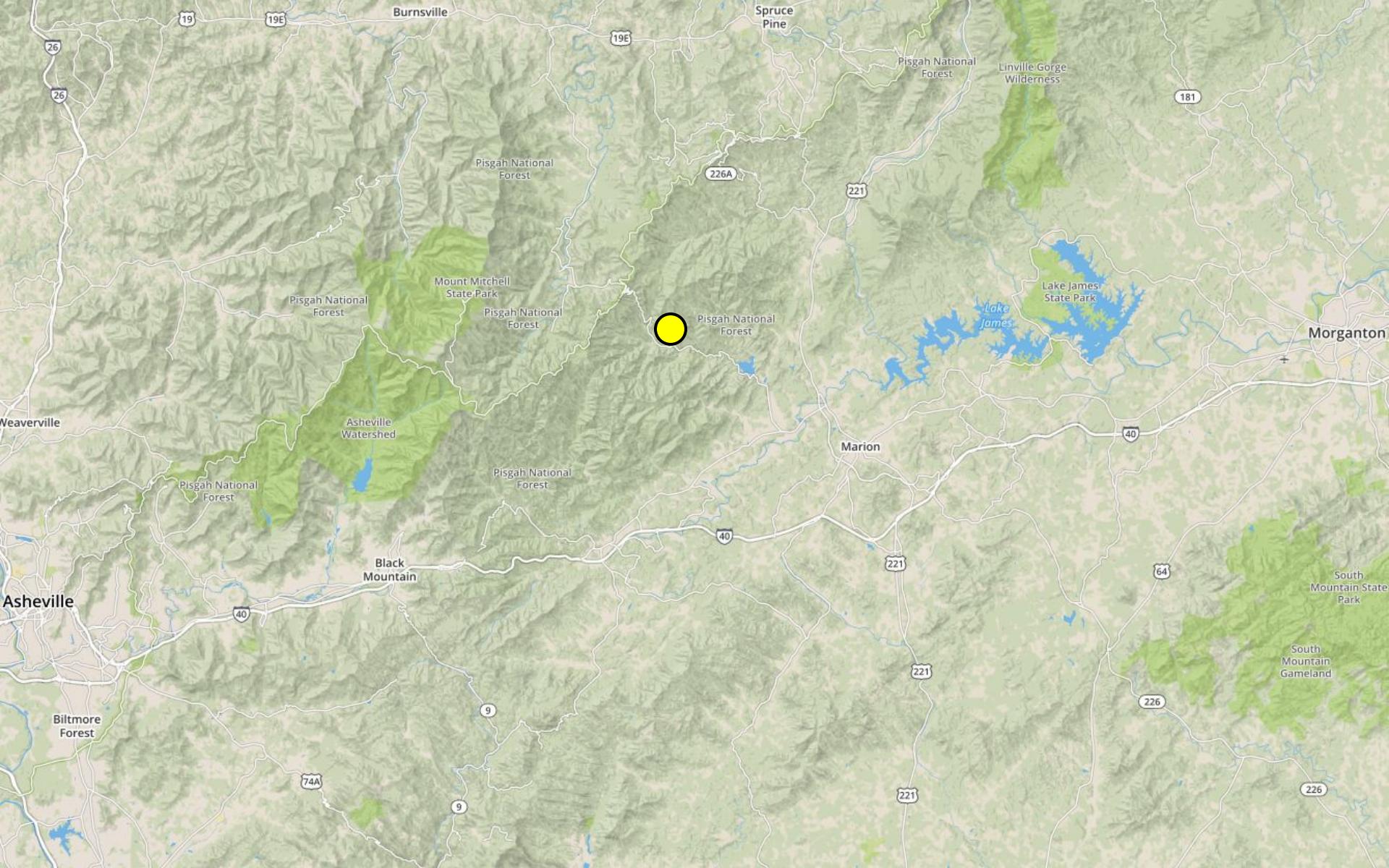
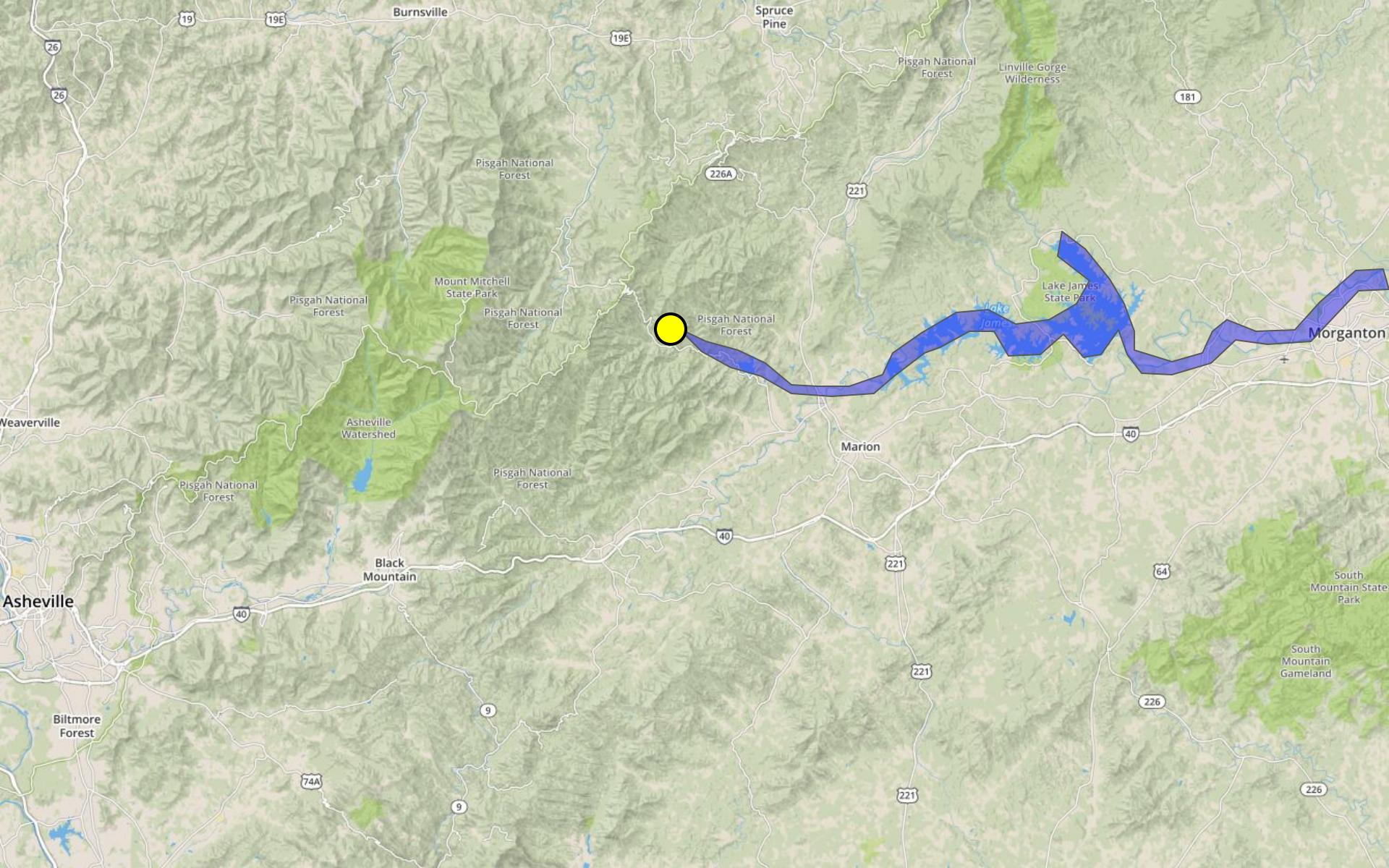


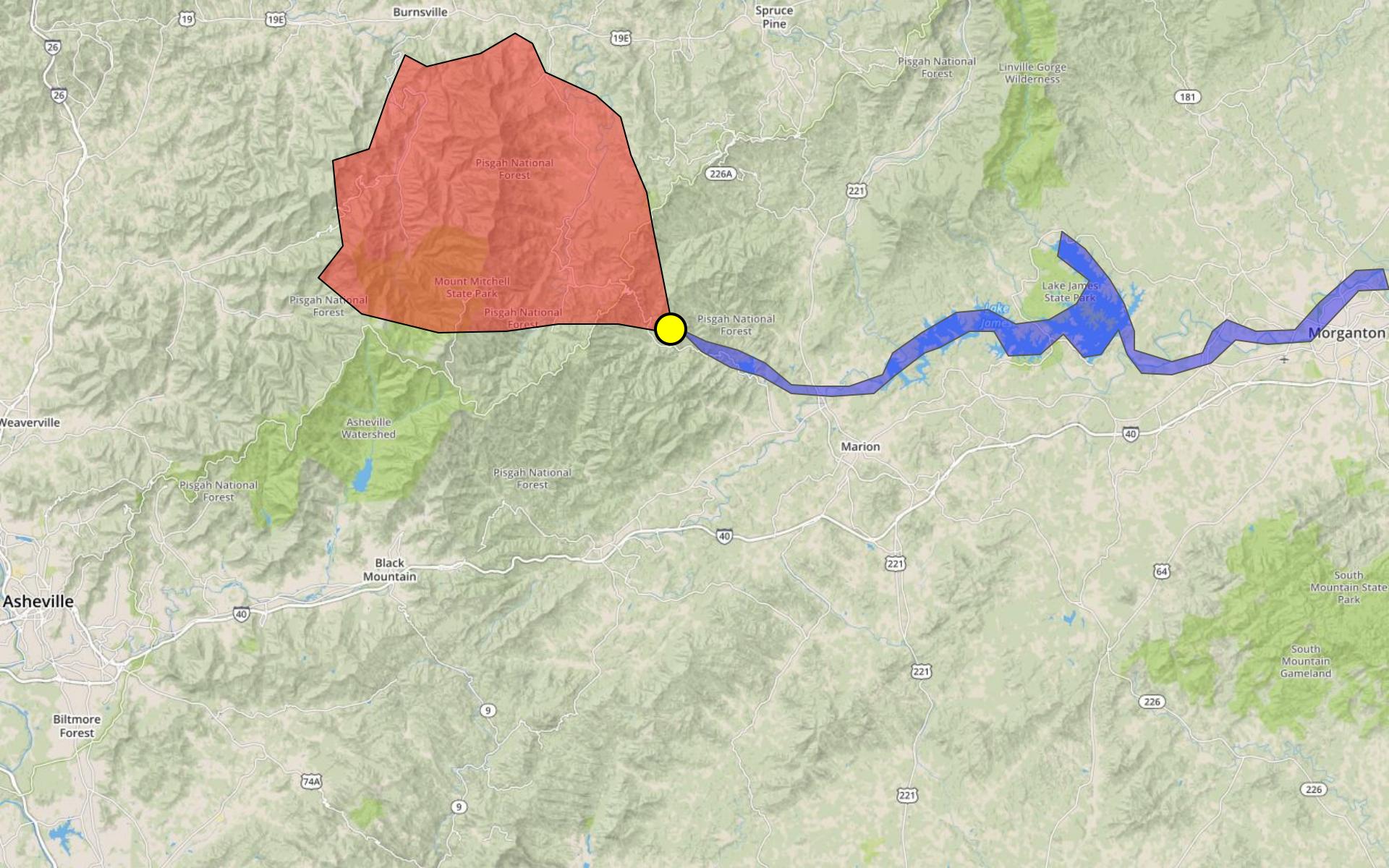
# Upstream/Downstream: Discovering and Displaying Watershed Topology

Mark Phillips











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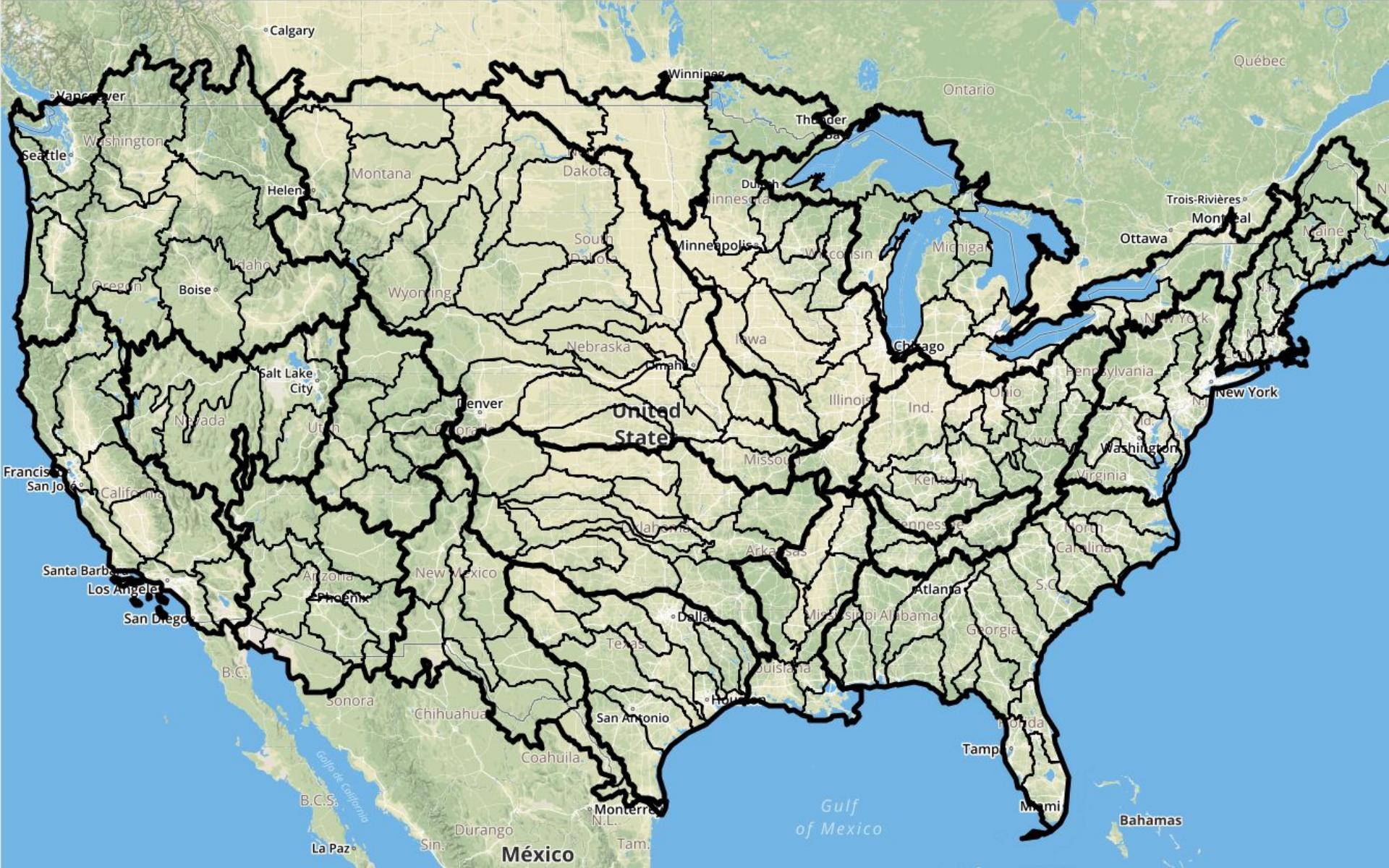
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# What is the WBD?



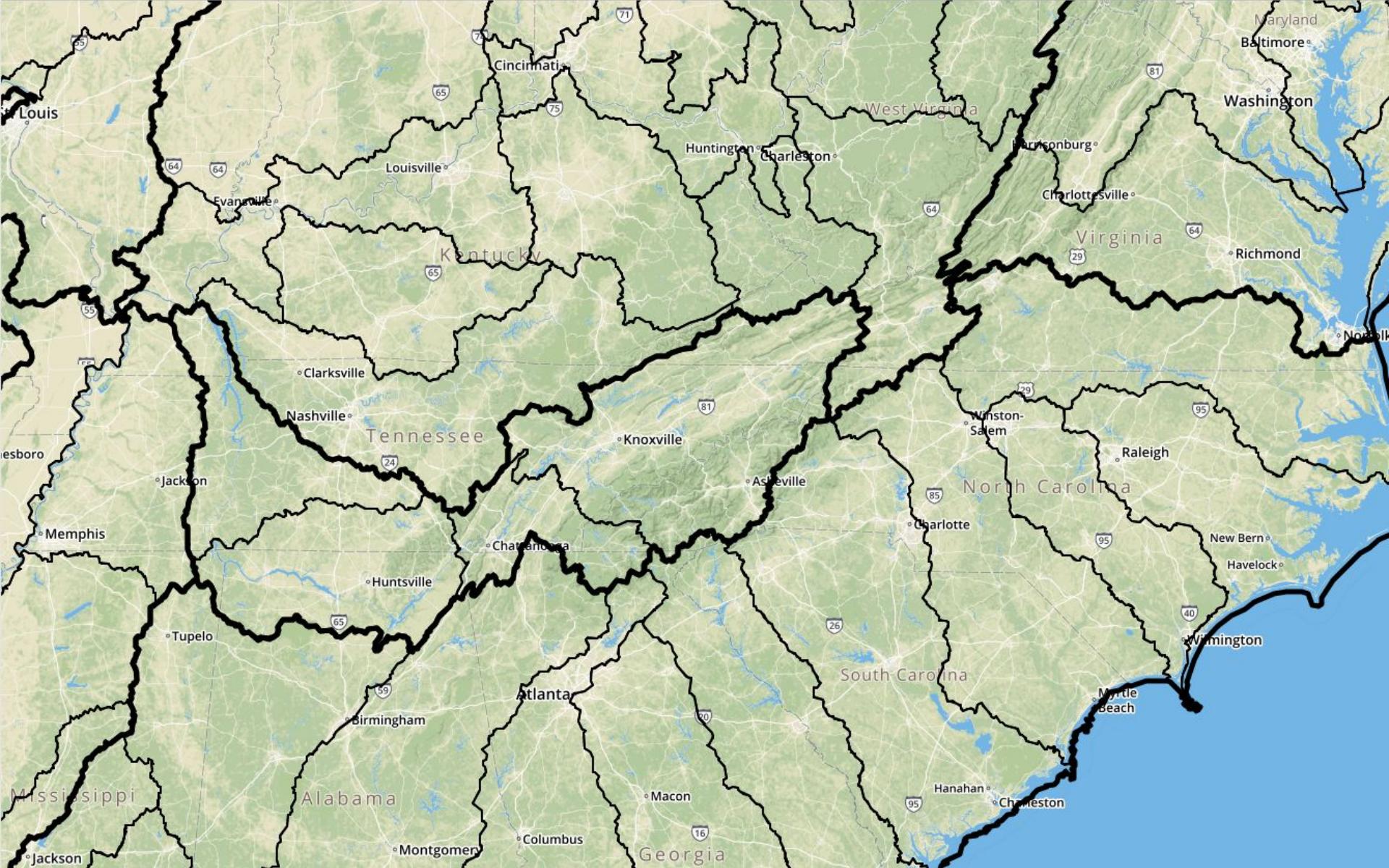
The Watershed Boundary Dataset (WBD) defines the areal extent of surface water drainage to a point, accounting for all land and surface areas. Watershed Boundaries are determined solely upon science-based hydrologic principles, not favoring any administrative boundaries or special projects, nor particular program or agency. The intent of defining Hydrologic Units (HU) for the Watershed Boundary Dataset is to establish a base-line drainage boundary framework, accounting for all land and surface areas. At a minimum, the WBD is being delineated and

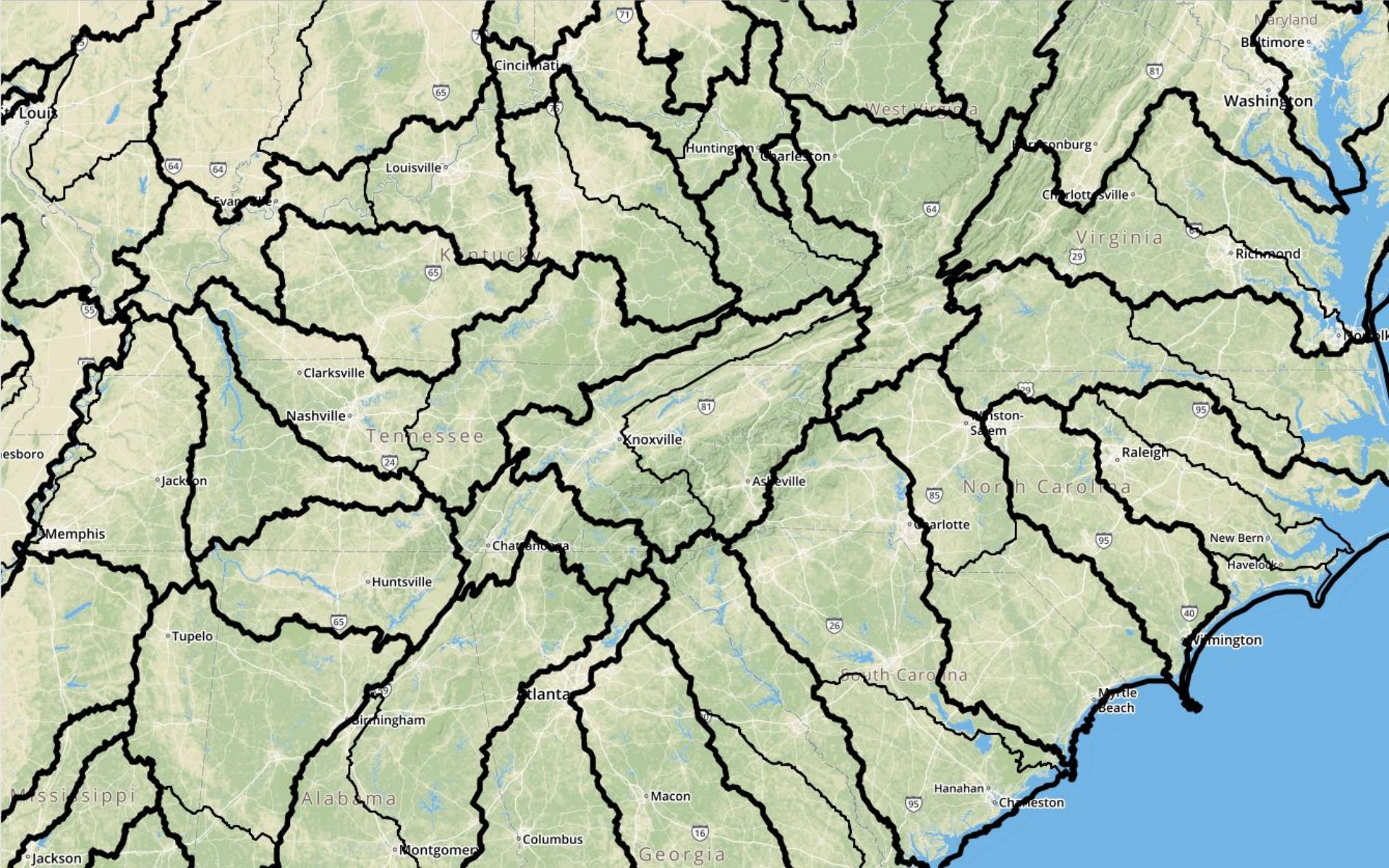
georeferenced to the USGS 1:24,000 scale topographic base map meeting National Map Accuracy Standards (NMAS). Hydrologic units are given a Hydrologic Unit Code (HUC). For example, a hydrologic region has a 2-digit HUC. A HUC describes where the unit is in the country and the level of the unit.



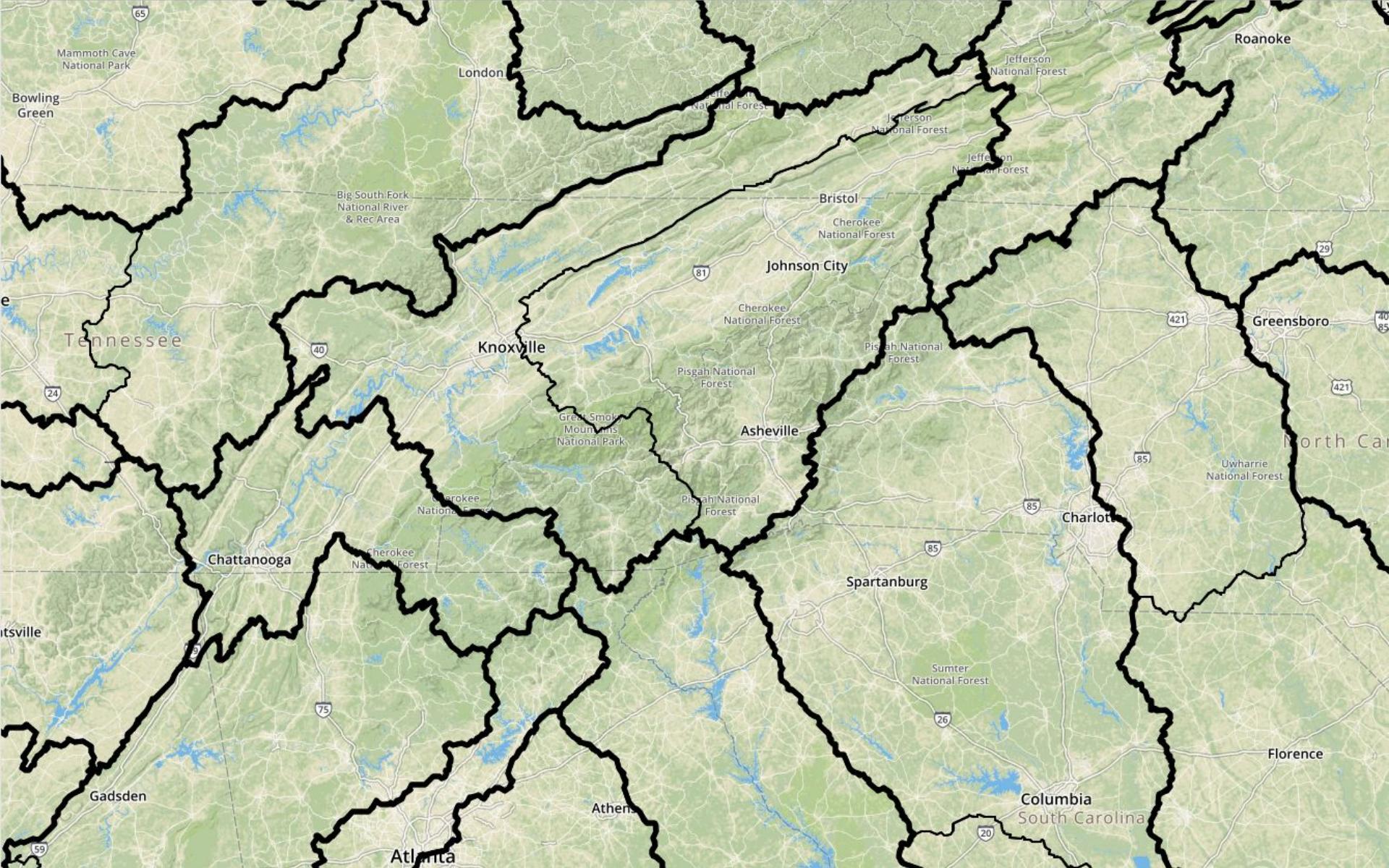


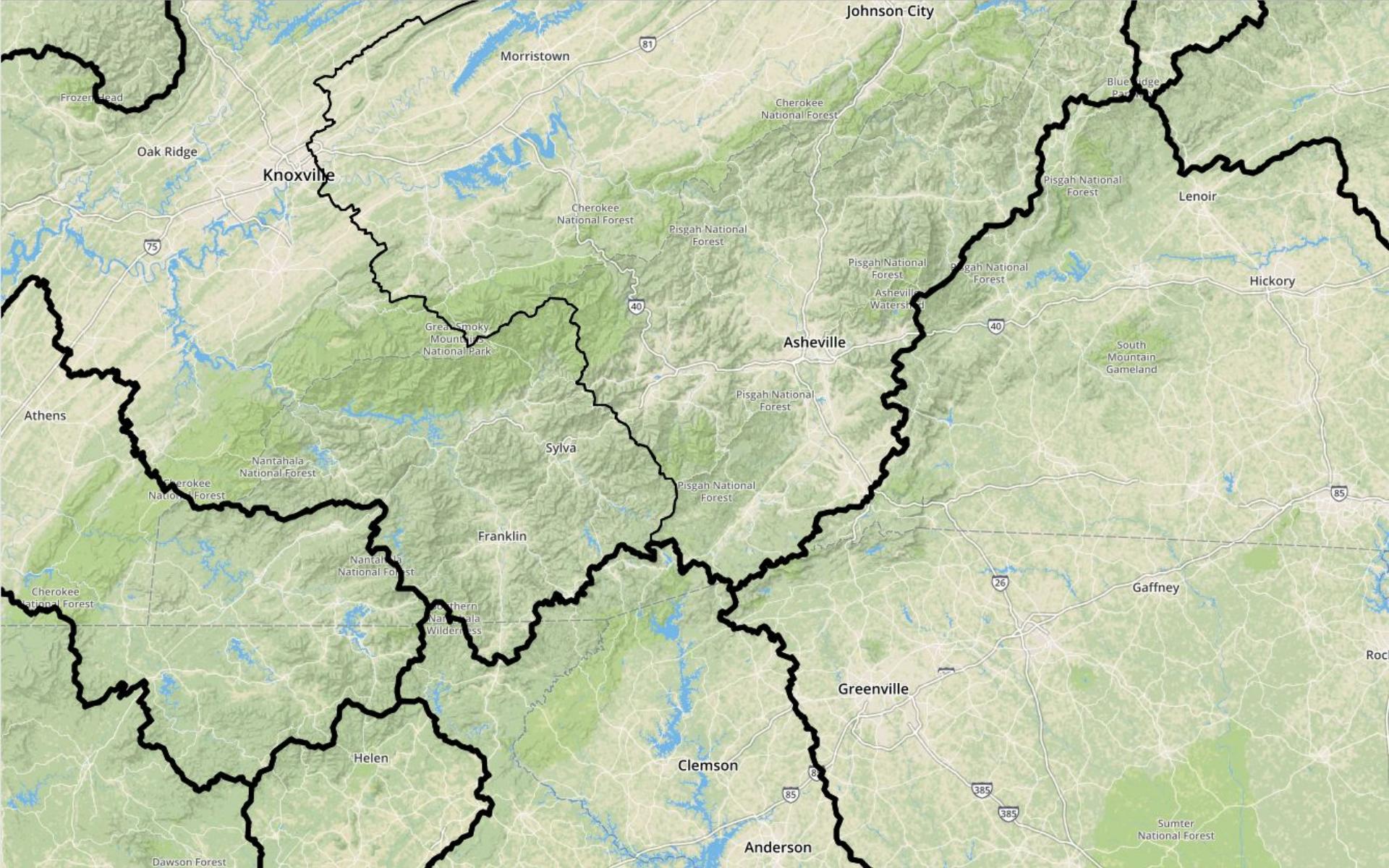


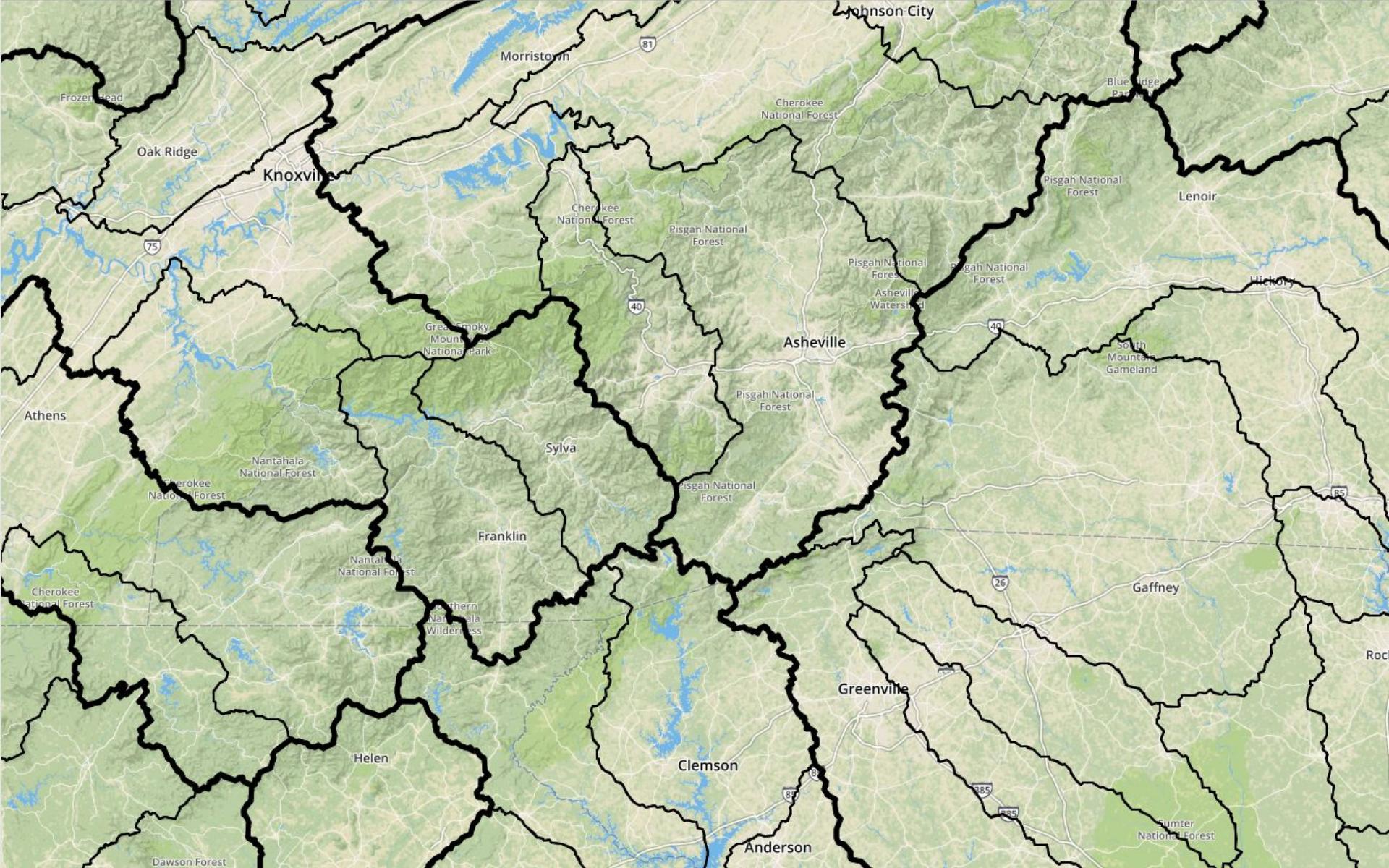


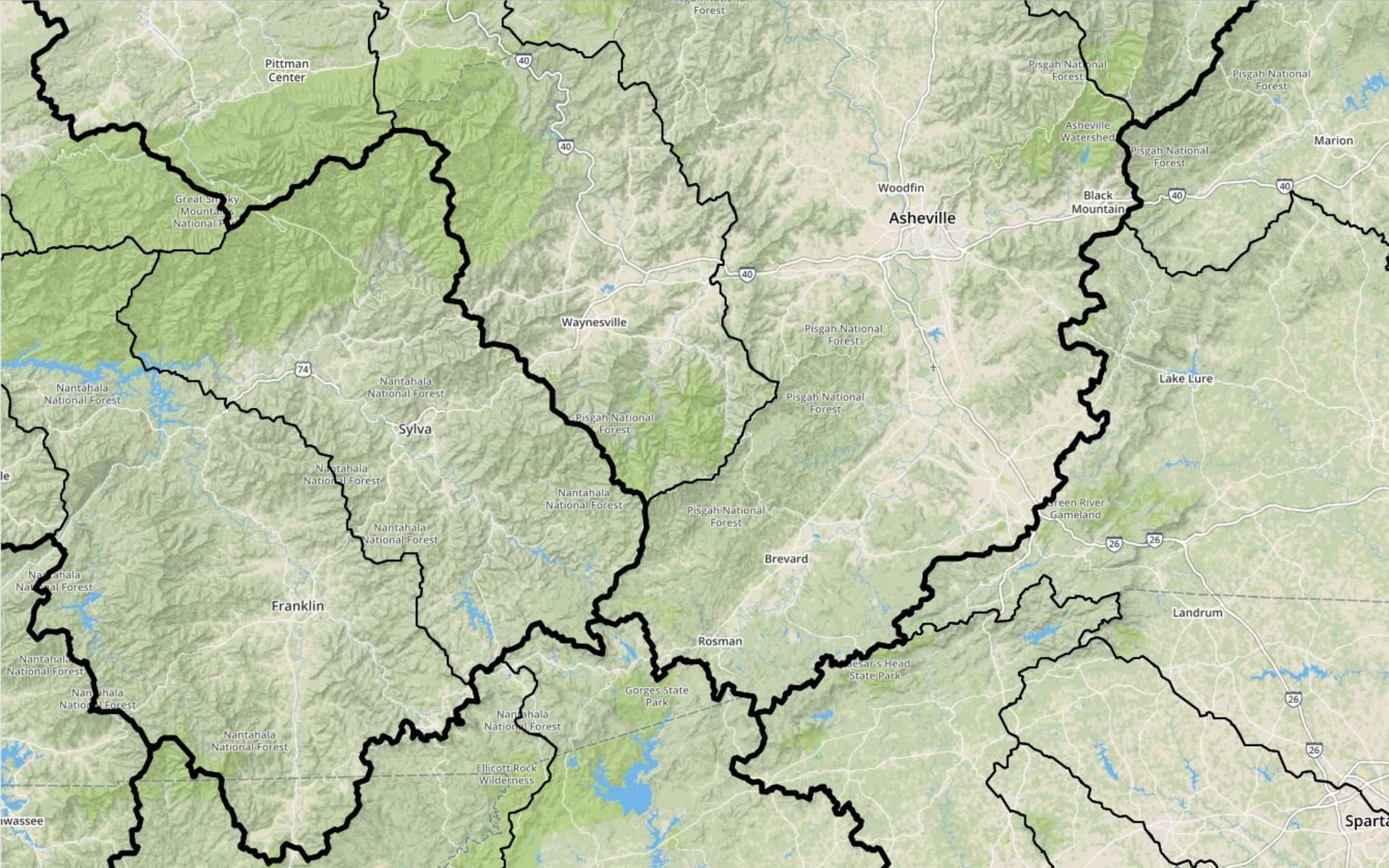


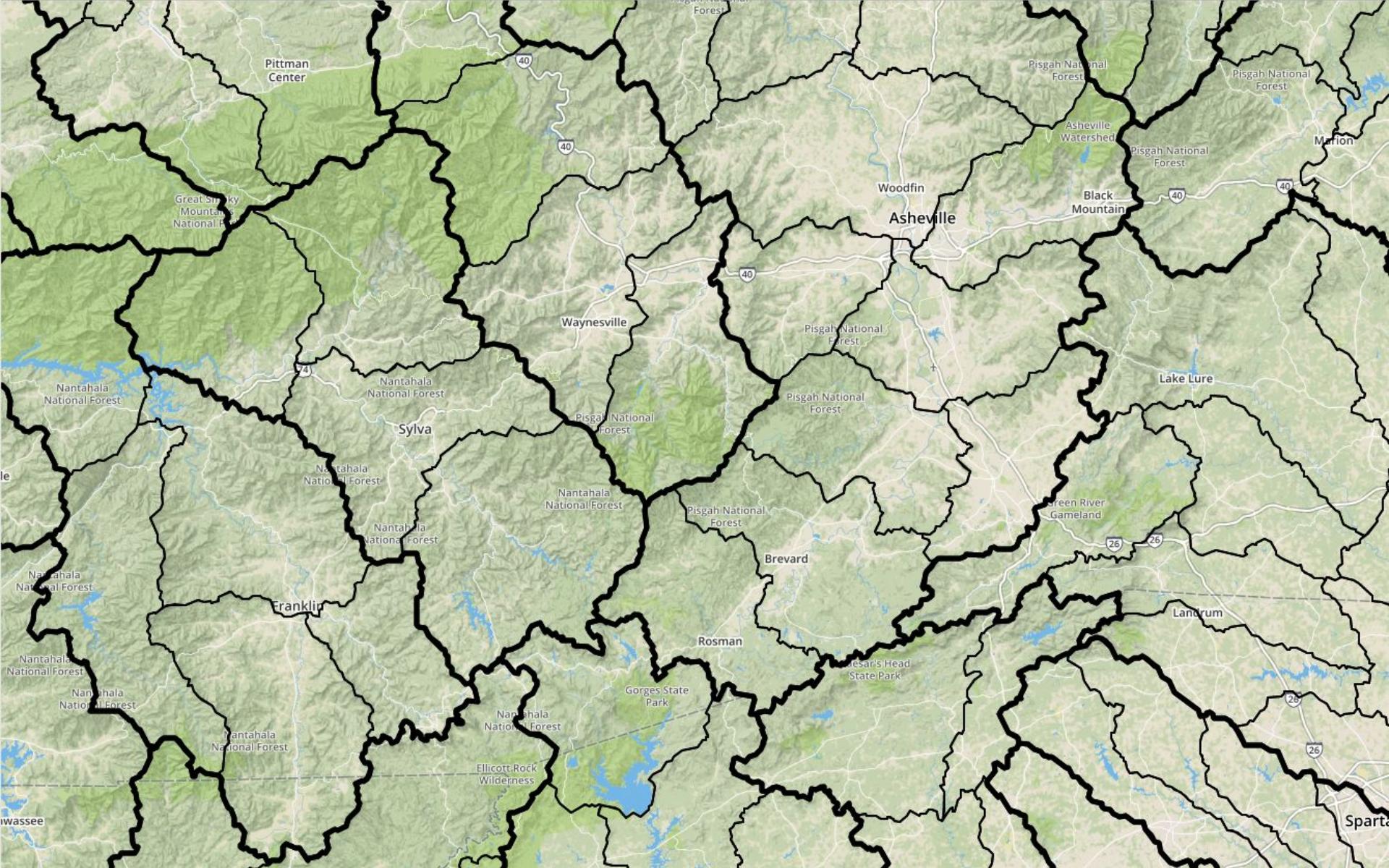
This map shows the southeastern states of the United States, including Kentucky, Tennessee, North Carolina, South Carolina, Georgia, and portions of Mississippi, Alabama, and West Virginia. The map includes state and county boundaries, major cities, and major interstate highways. The Mississippi River is shown flowing through the region. The Atlantic Ocean is to the east.

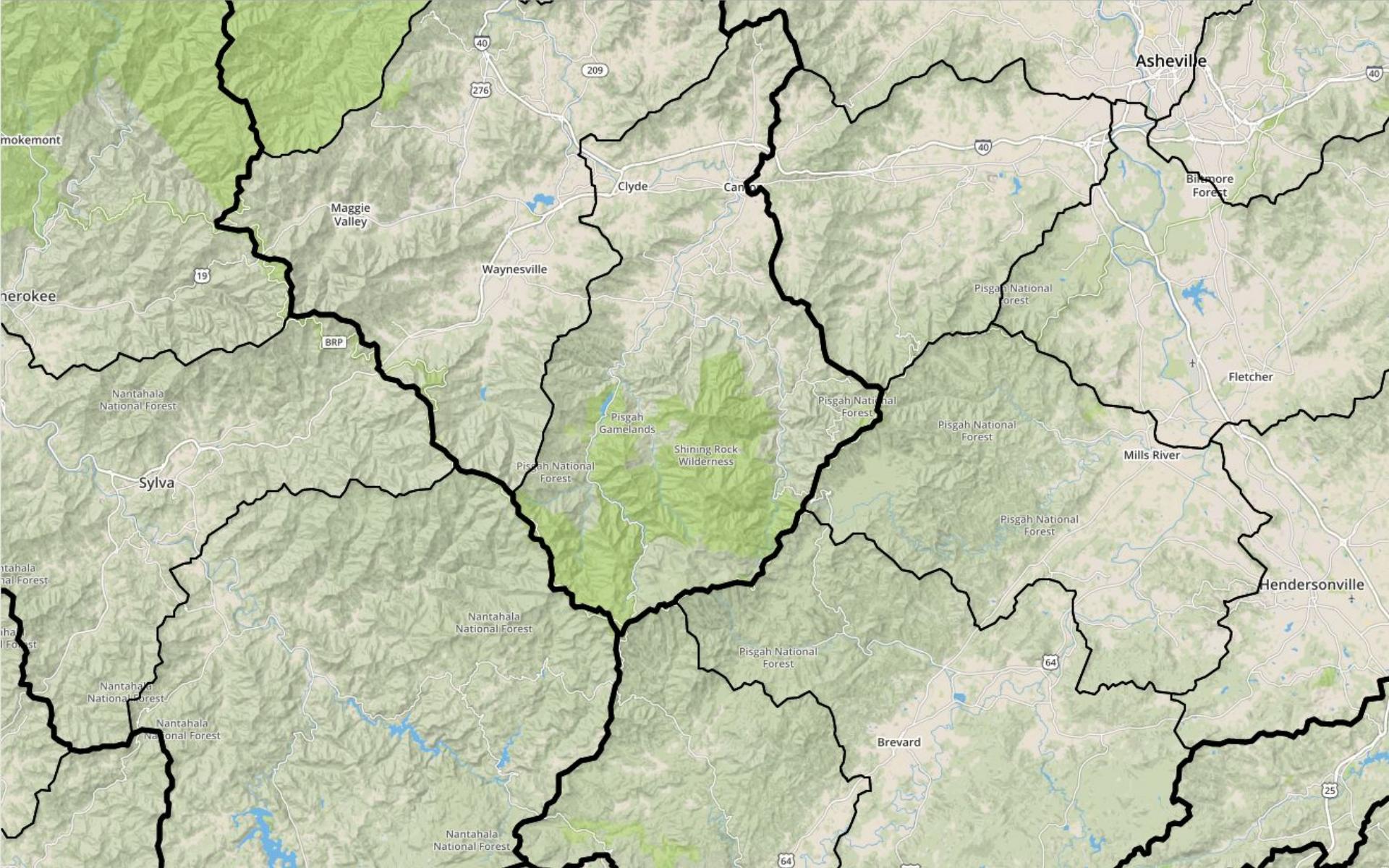


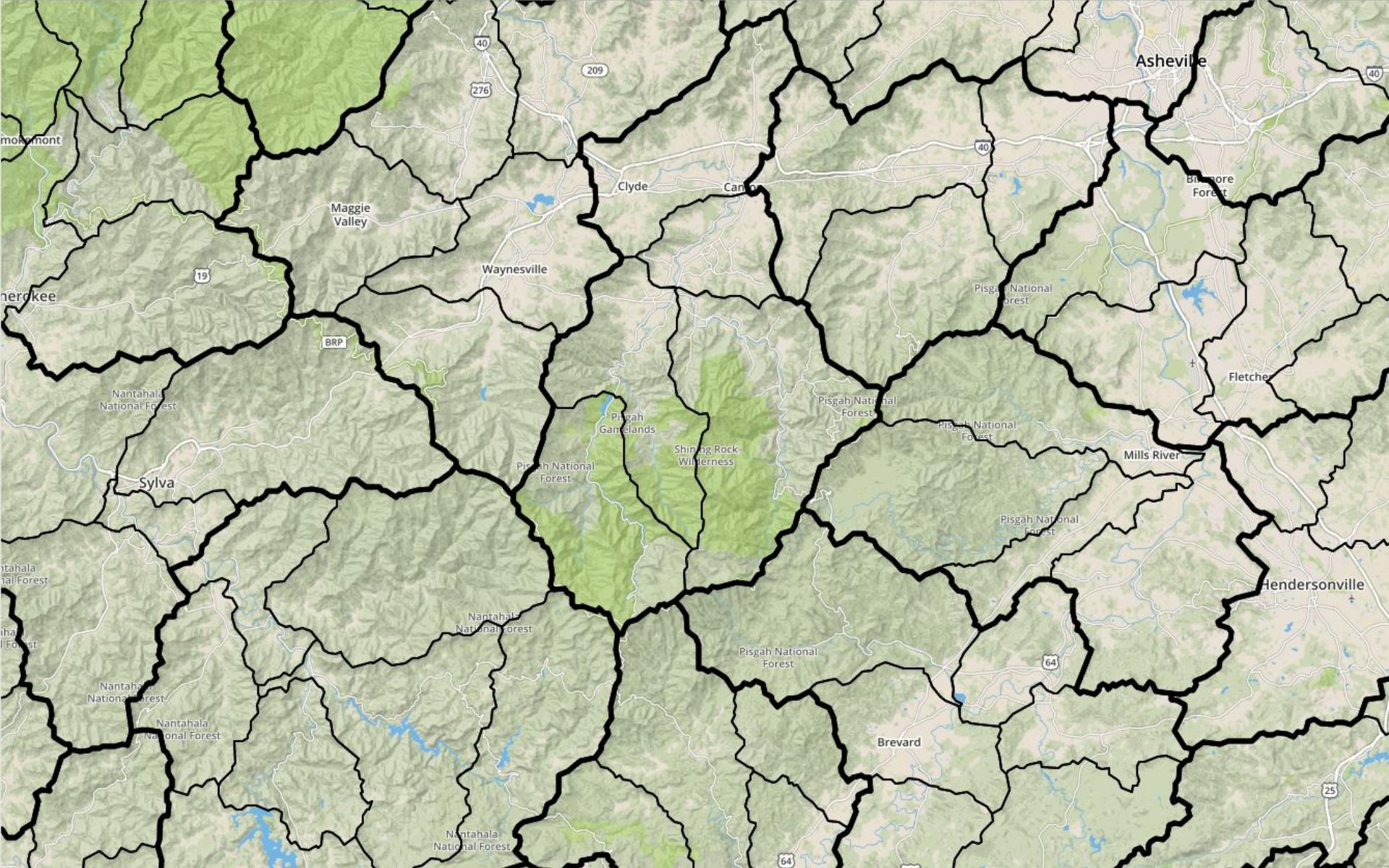


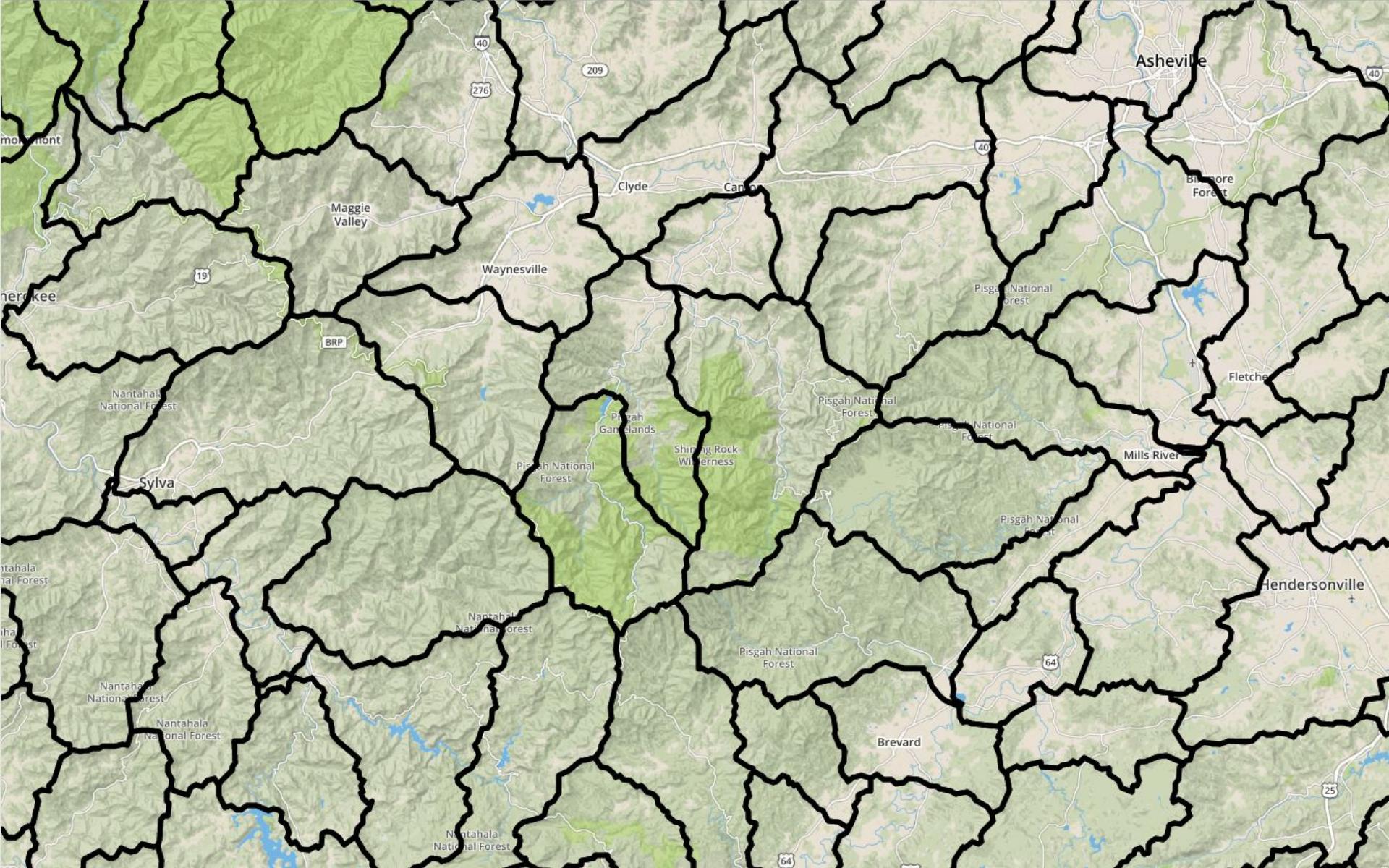


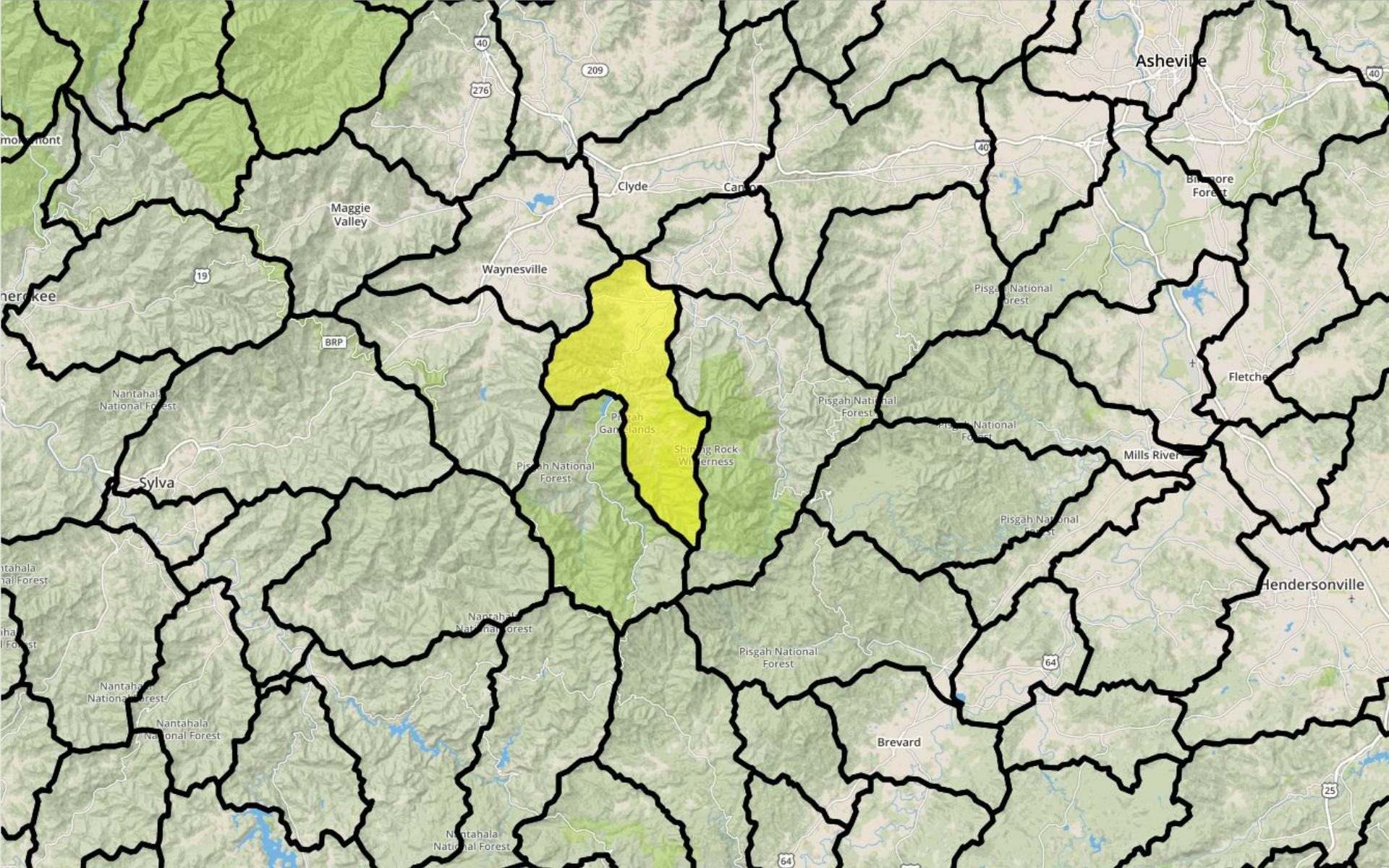


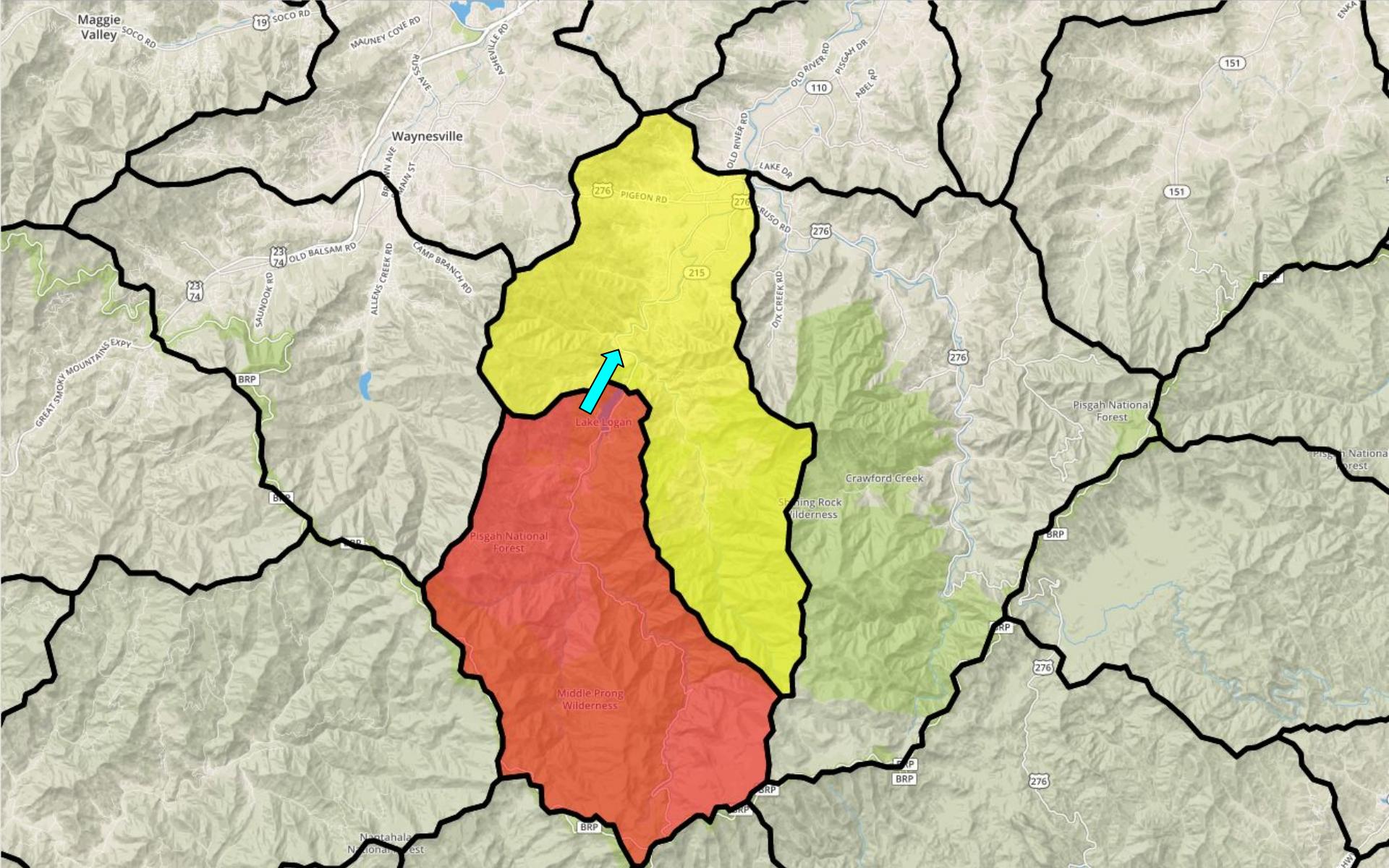


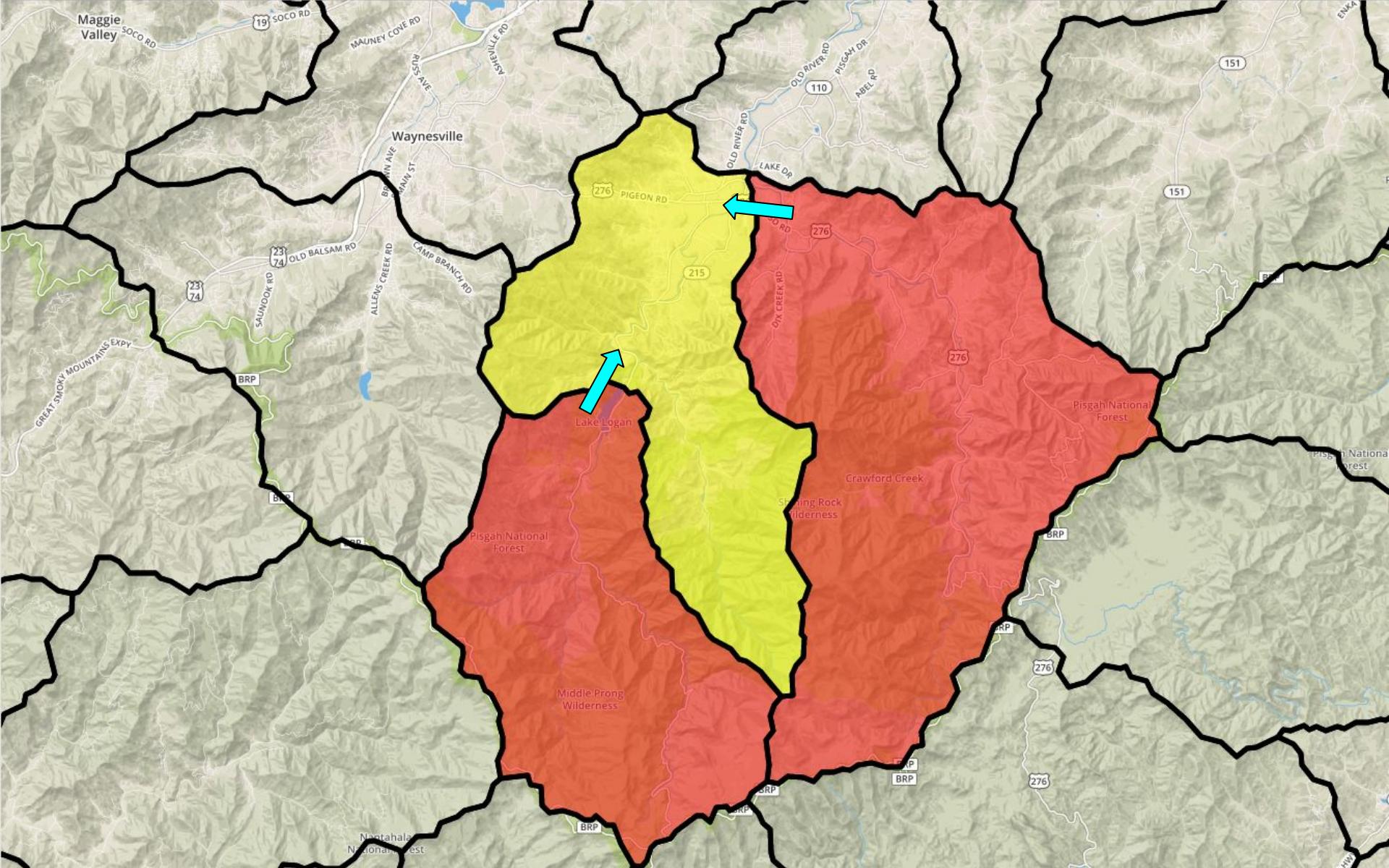


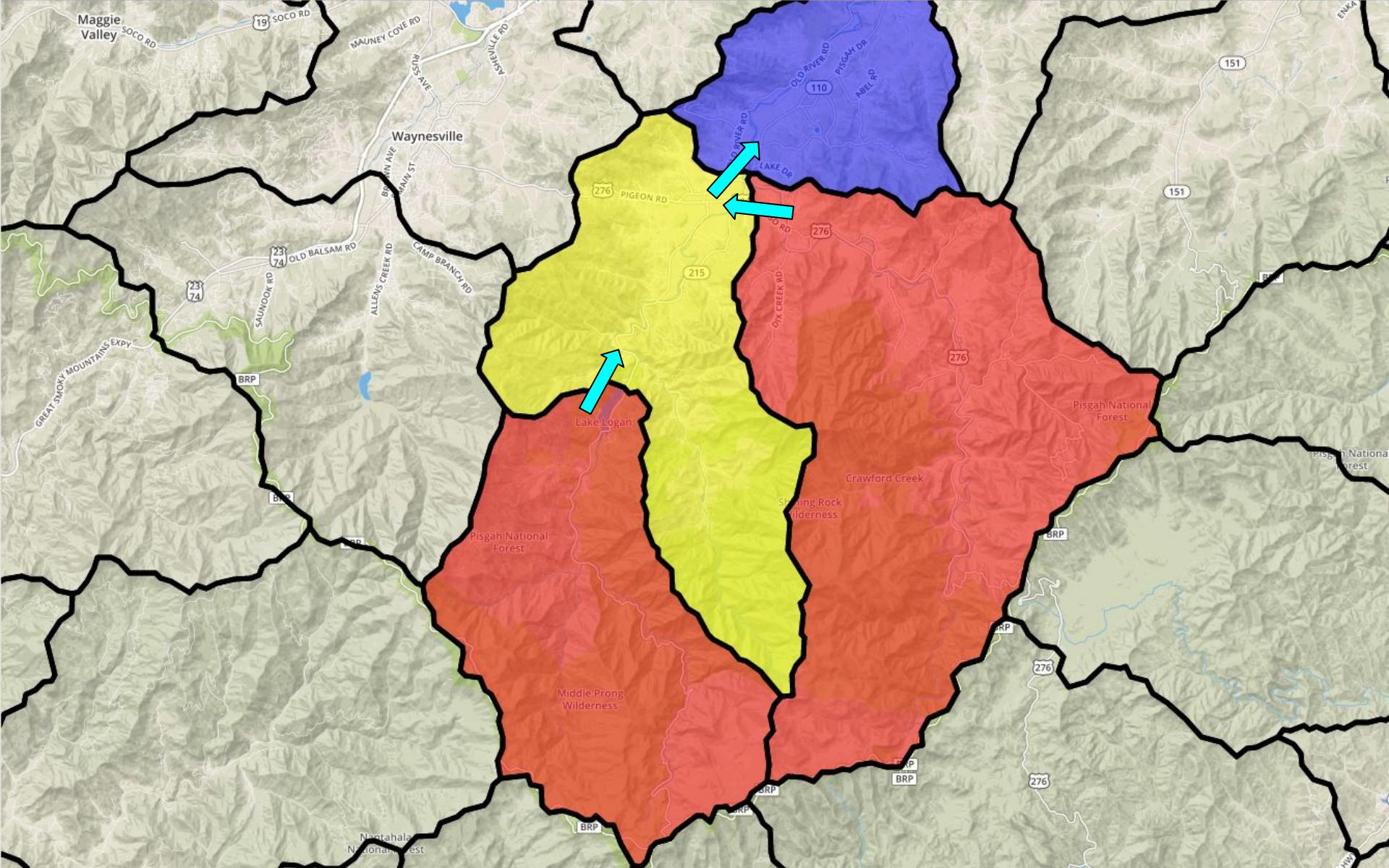


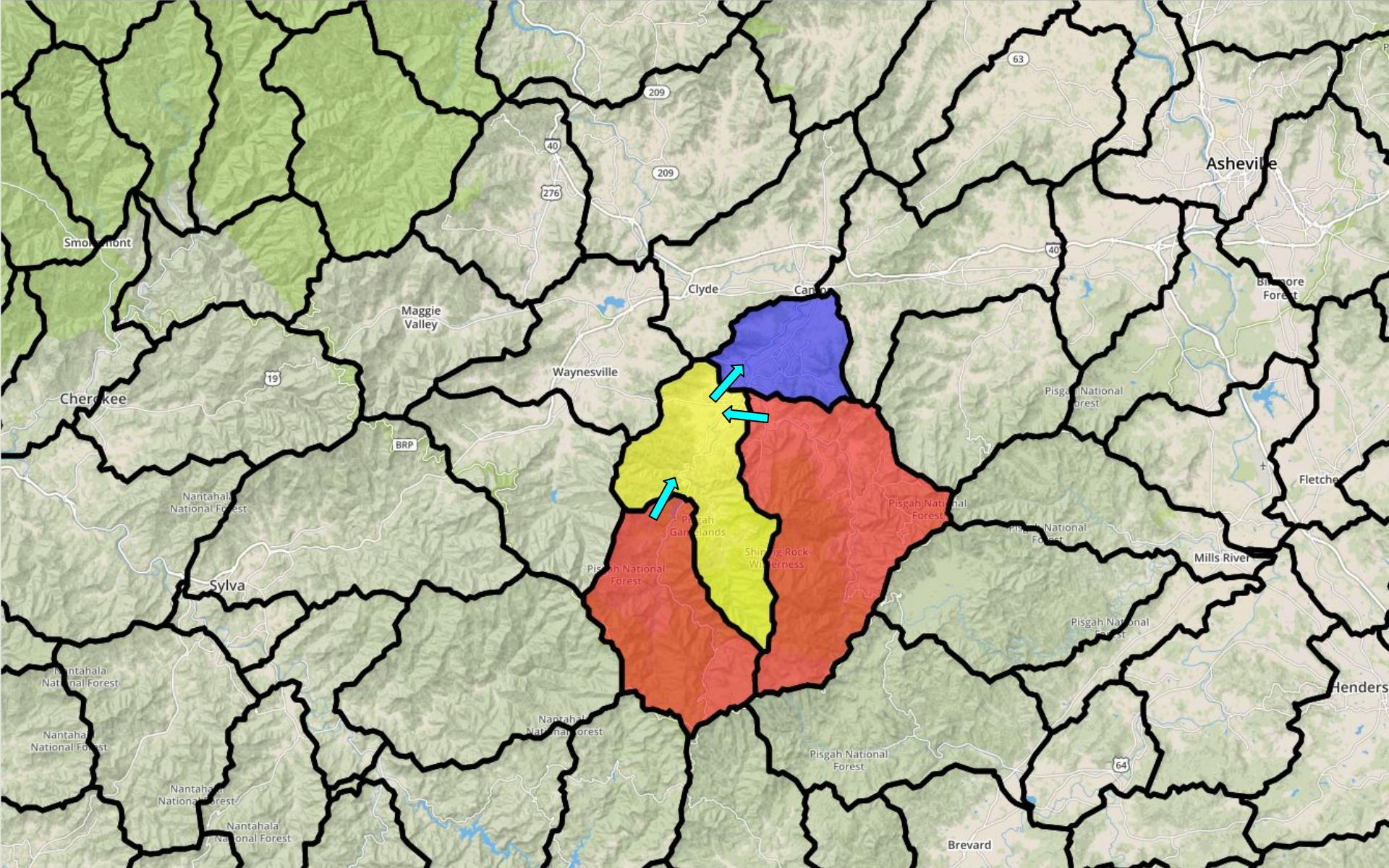










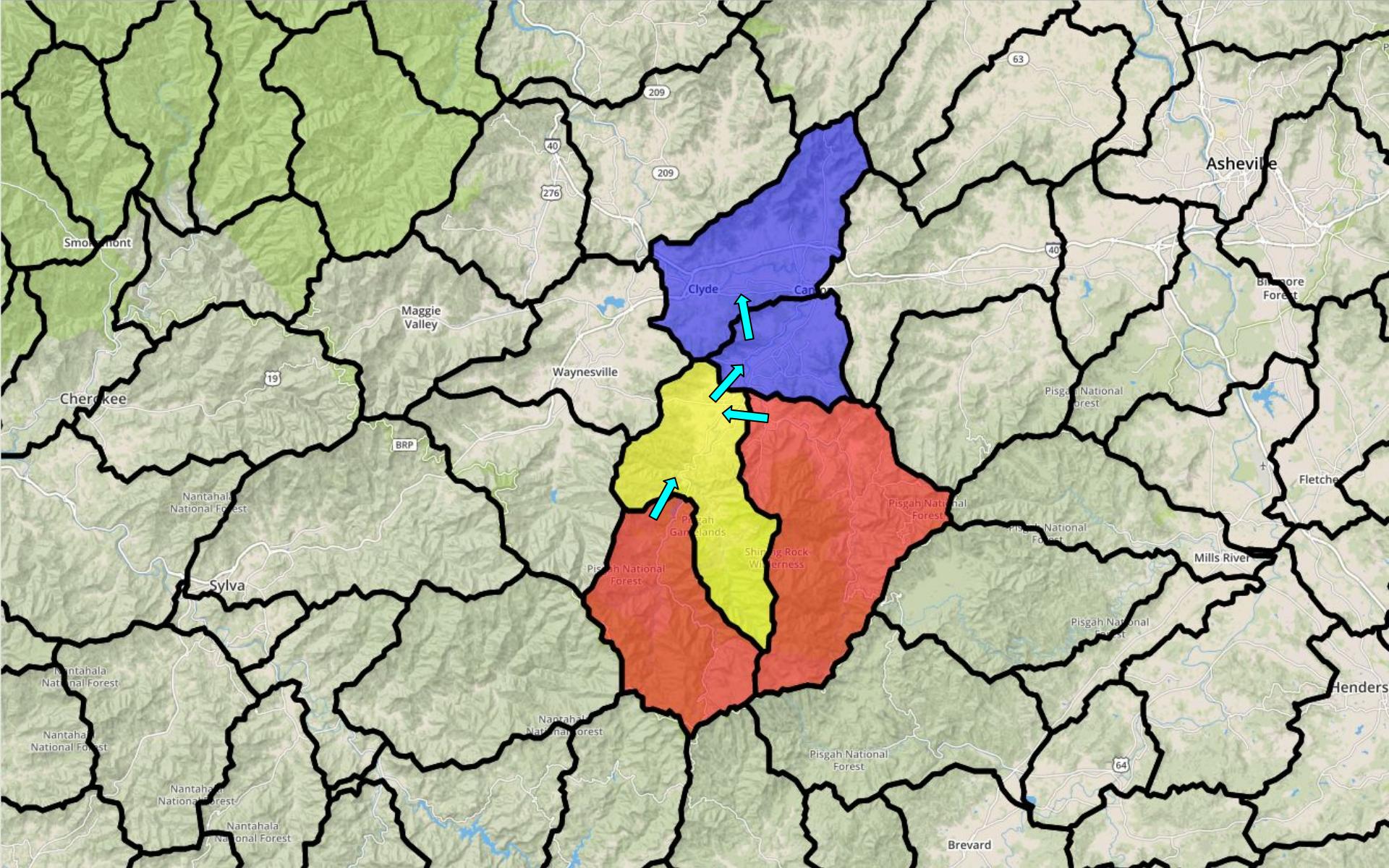


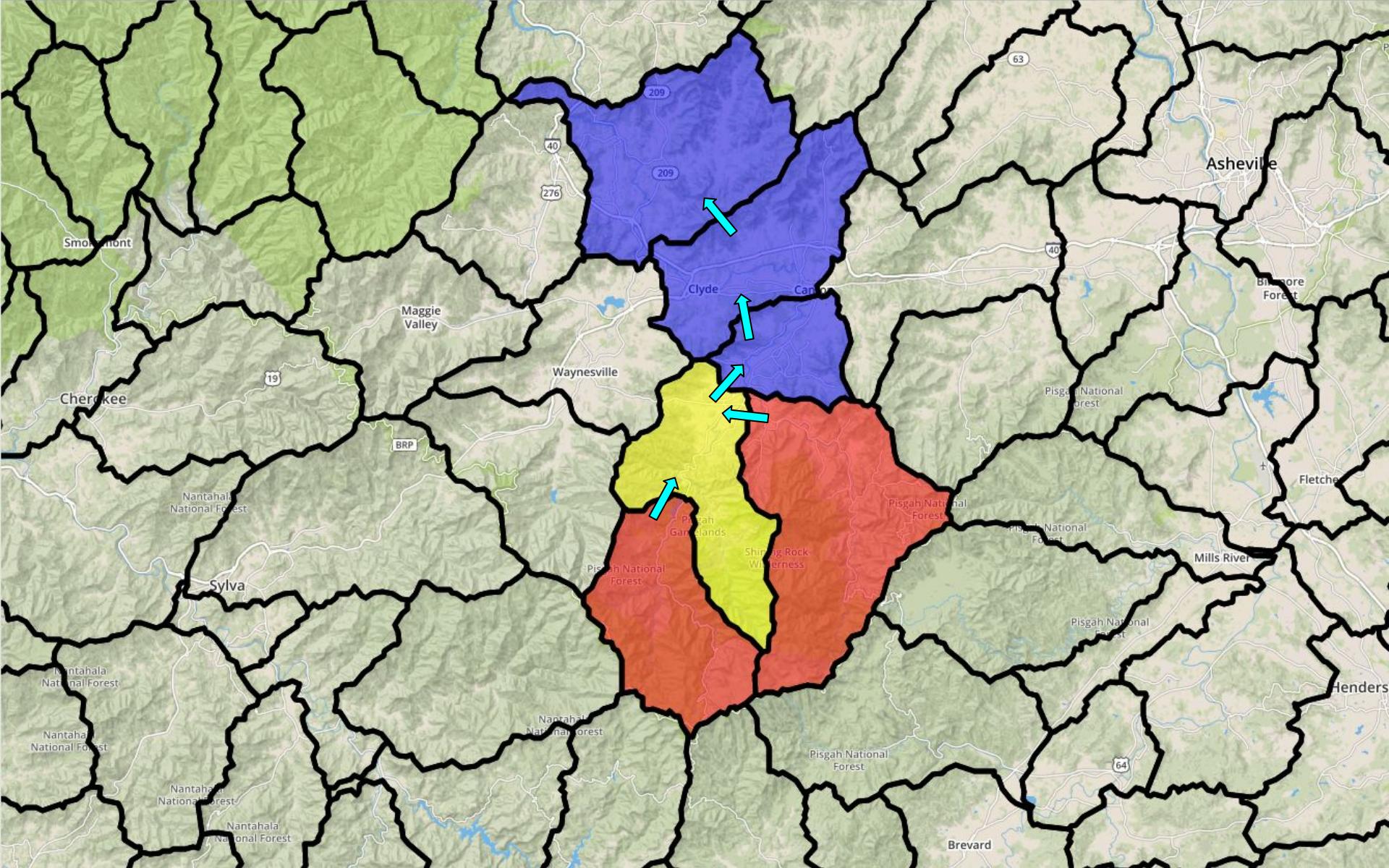
Pisgah  
National  
Forest

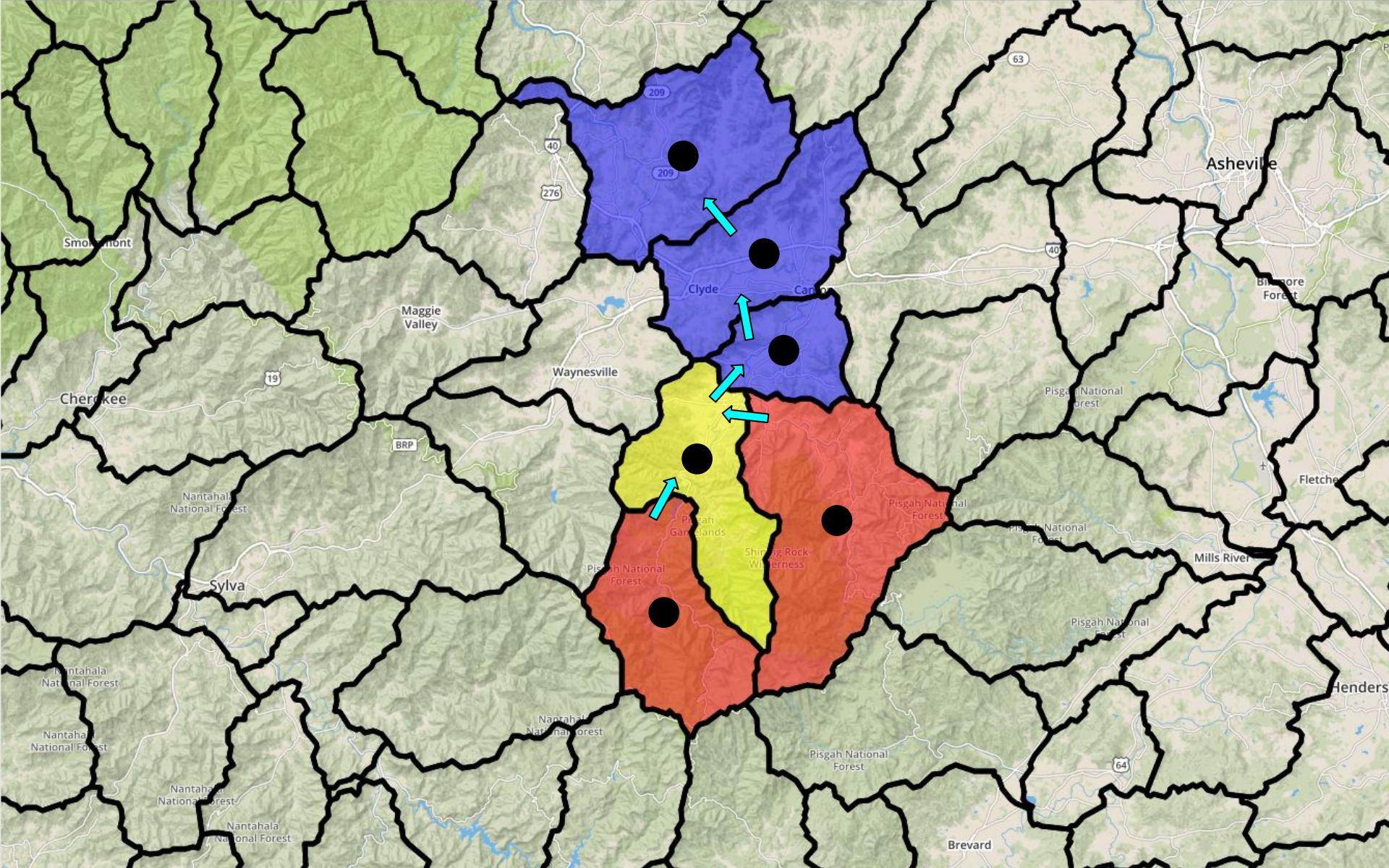
Shining Rock  
Wilderness

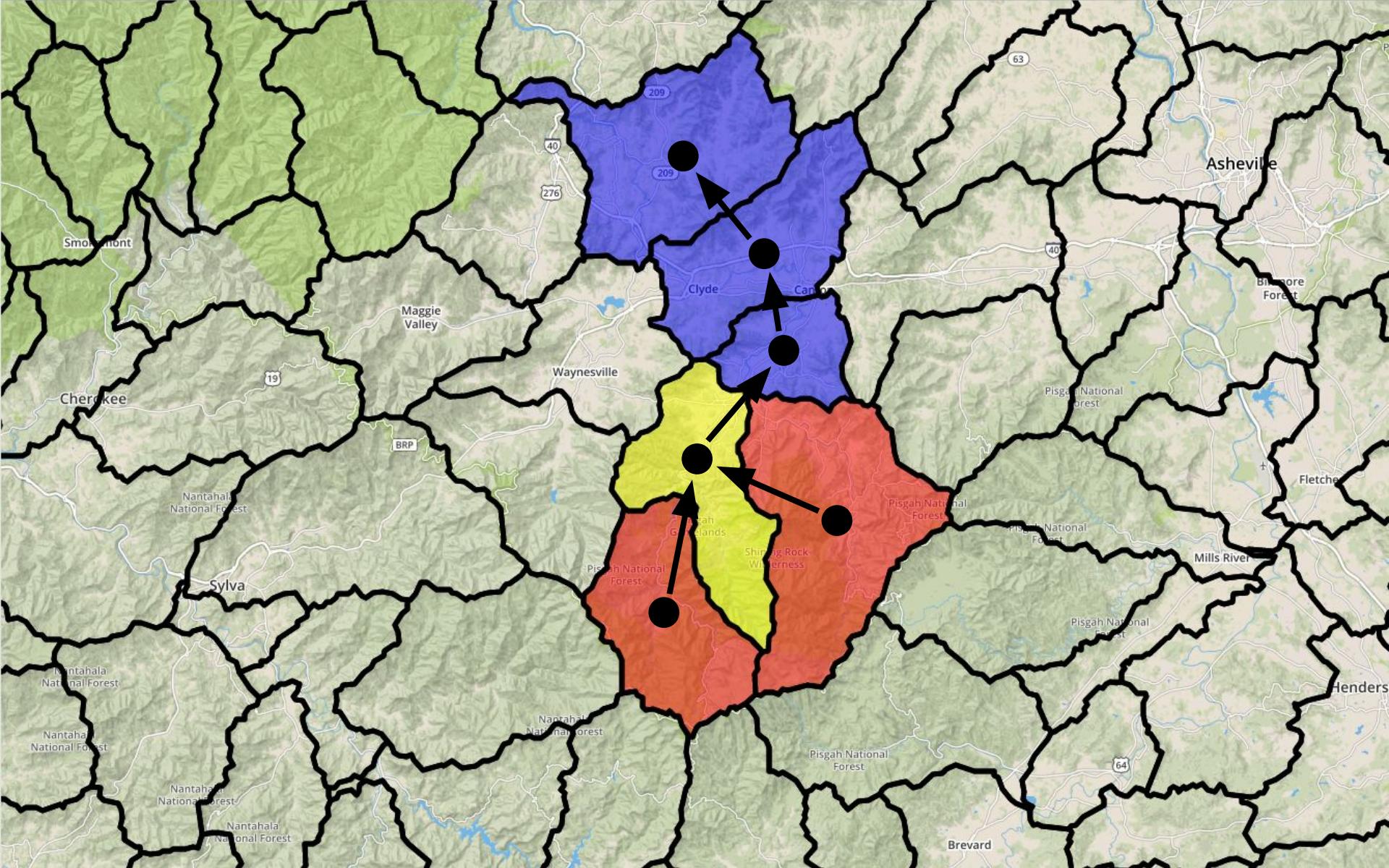
Nantahala  
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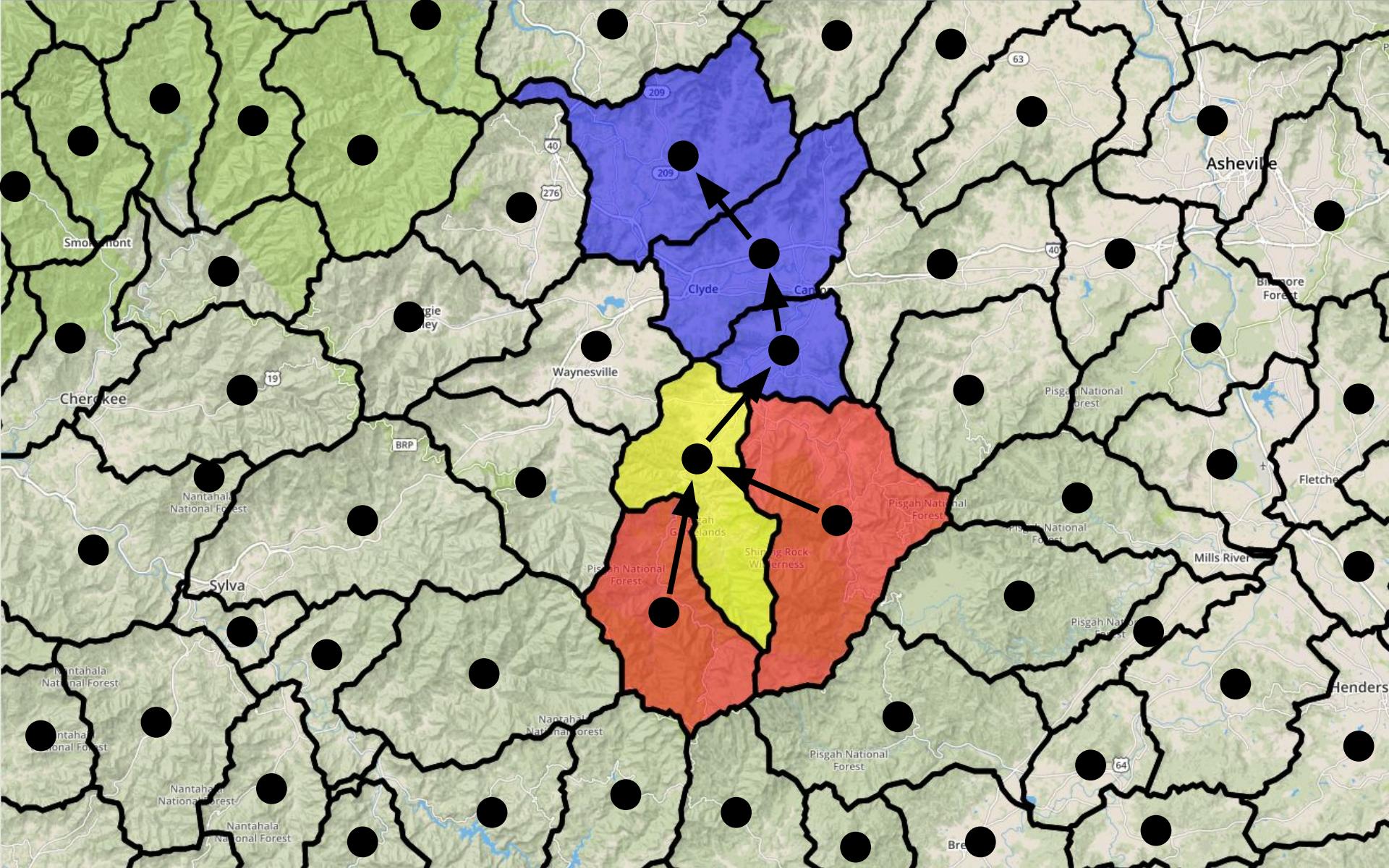
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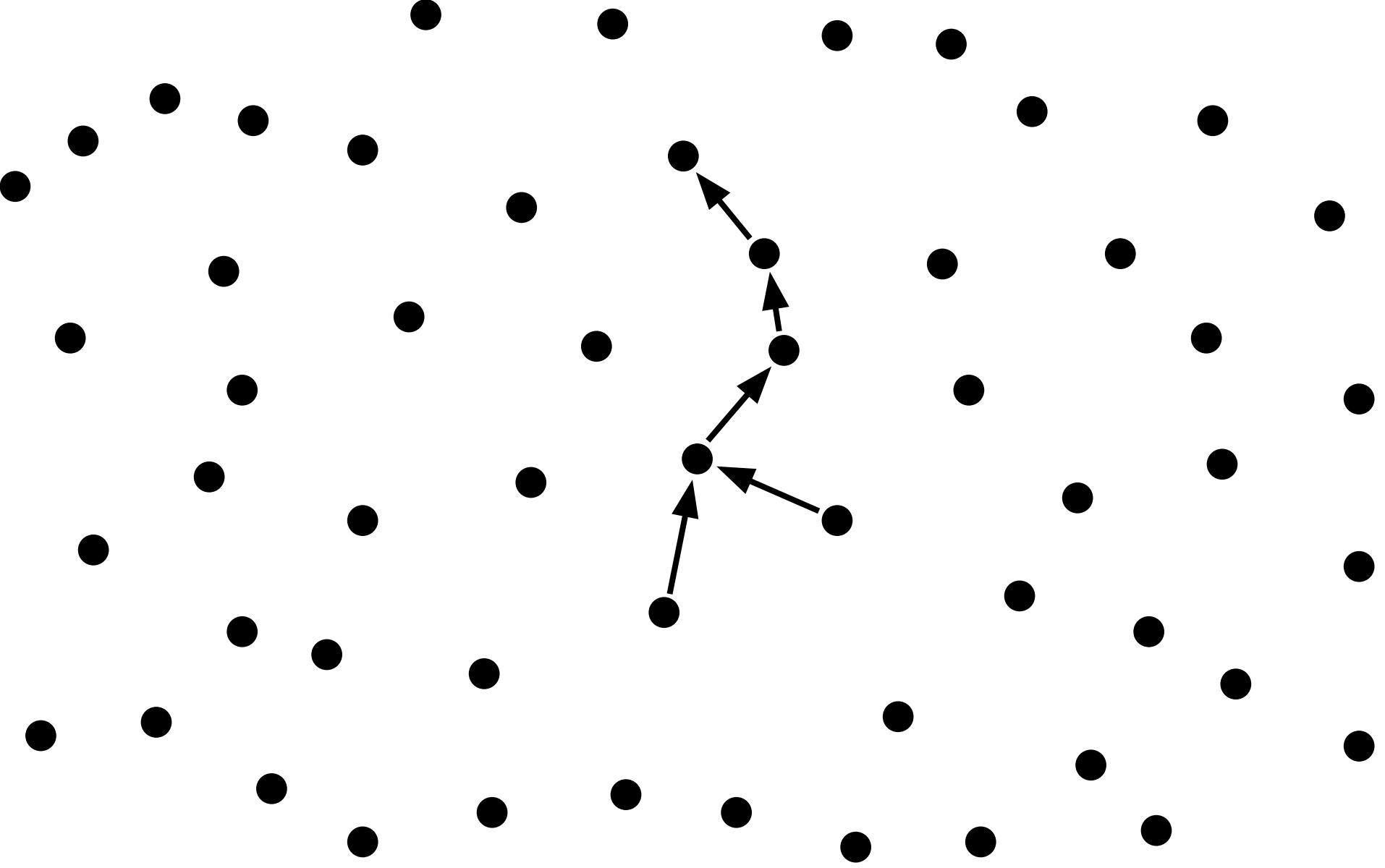


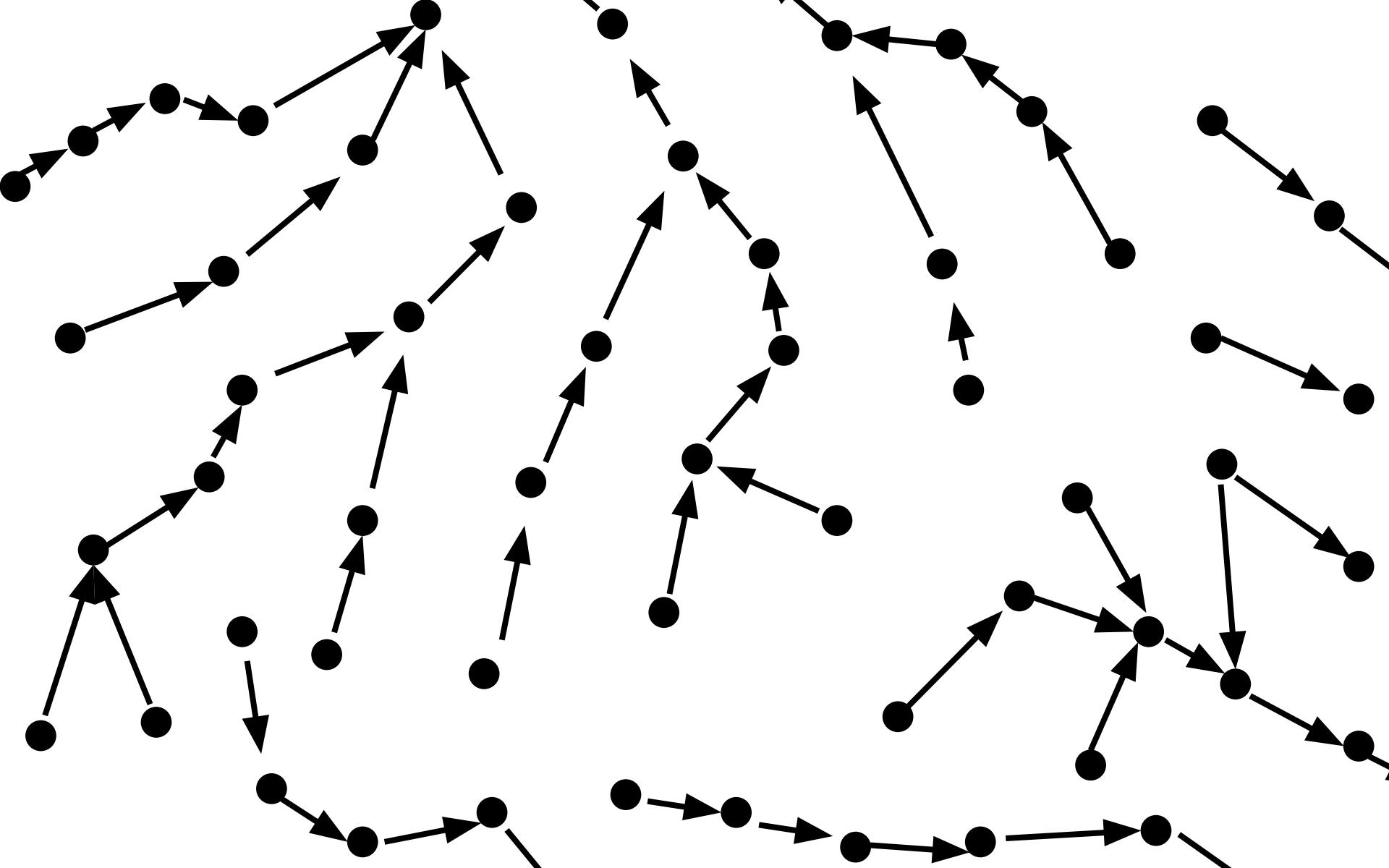


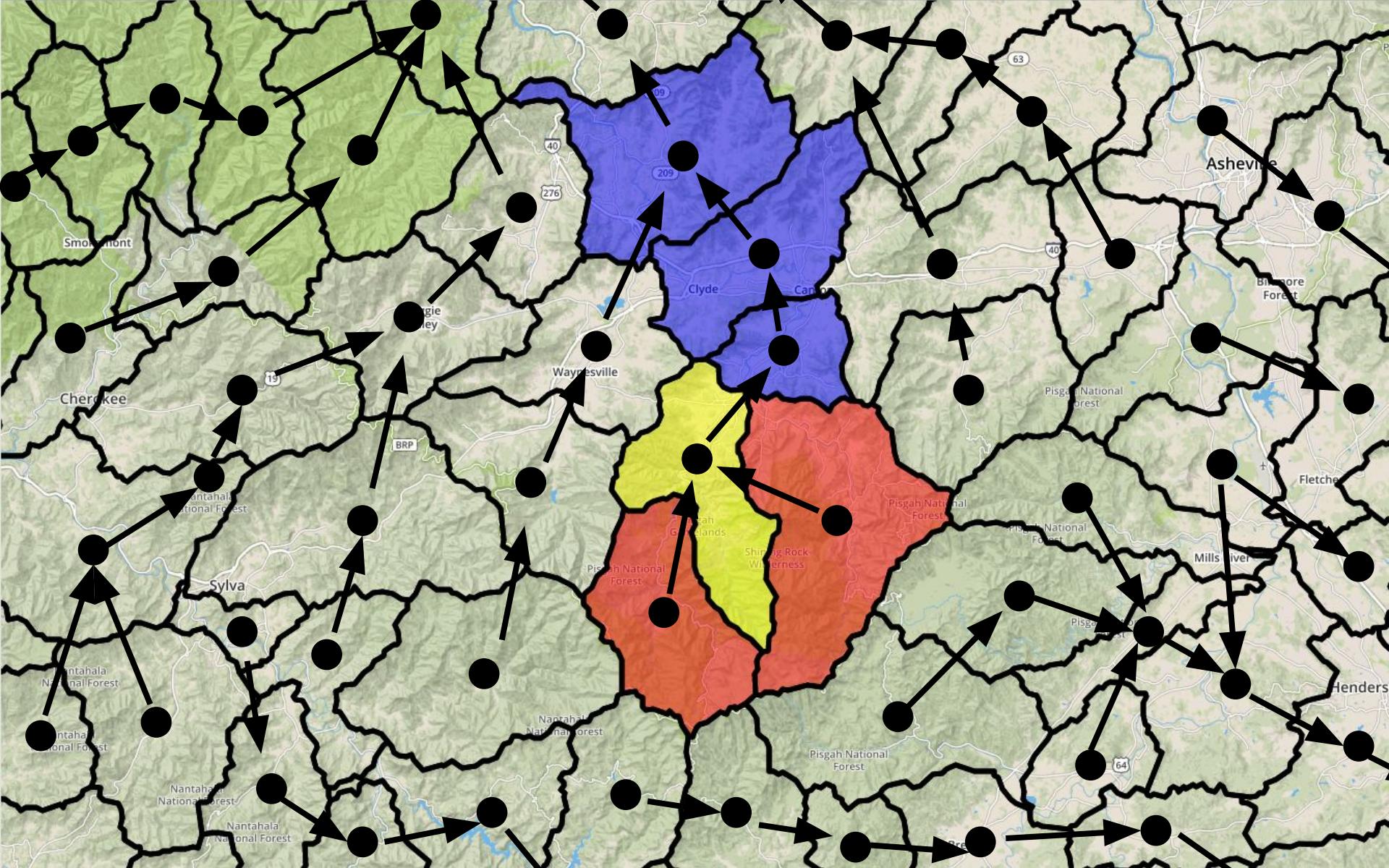


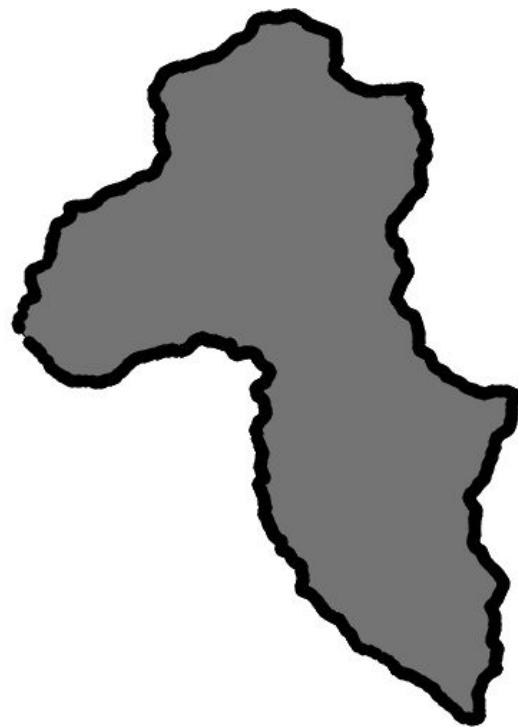




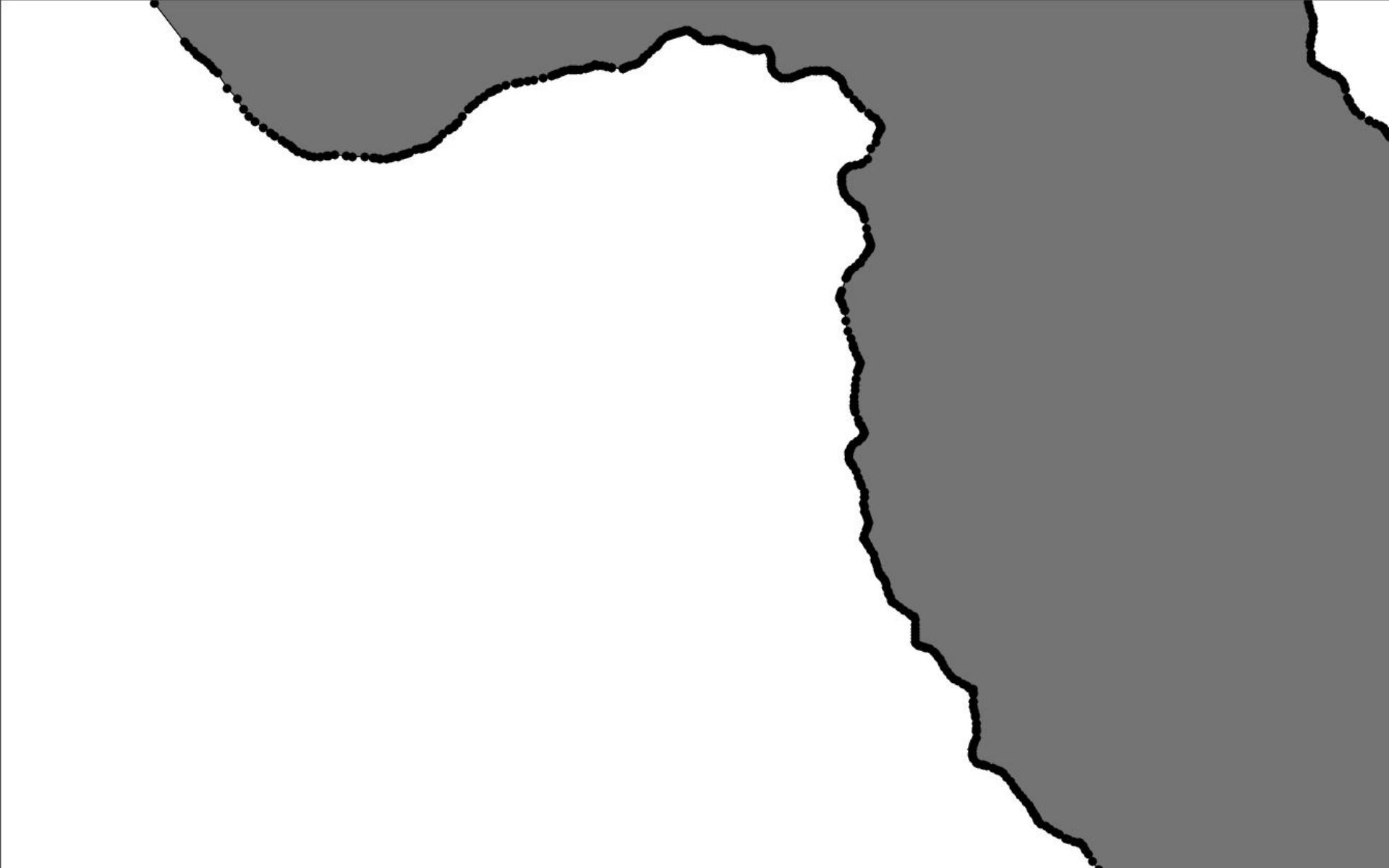




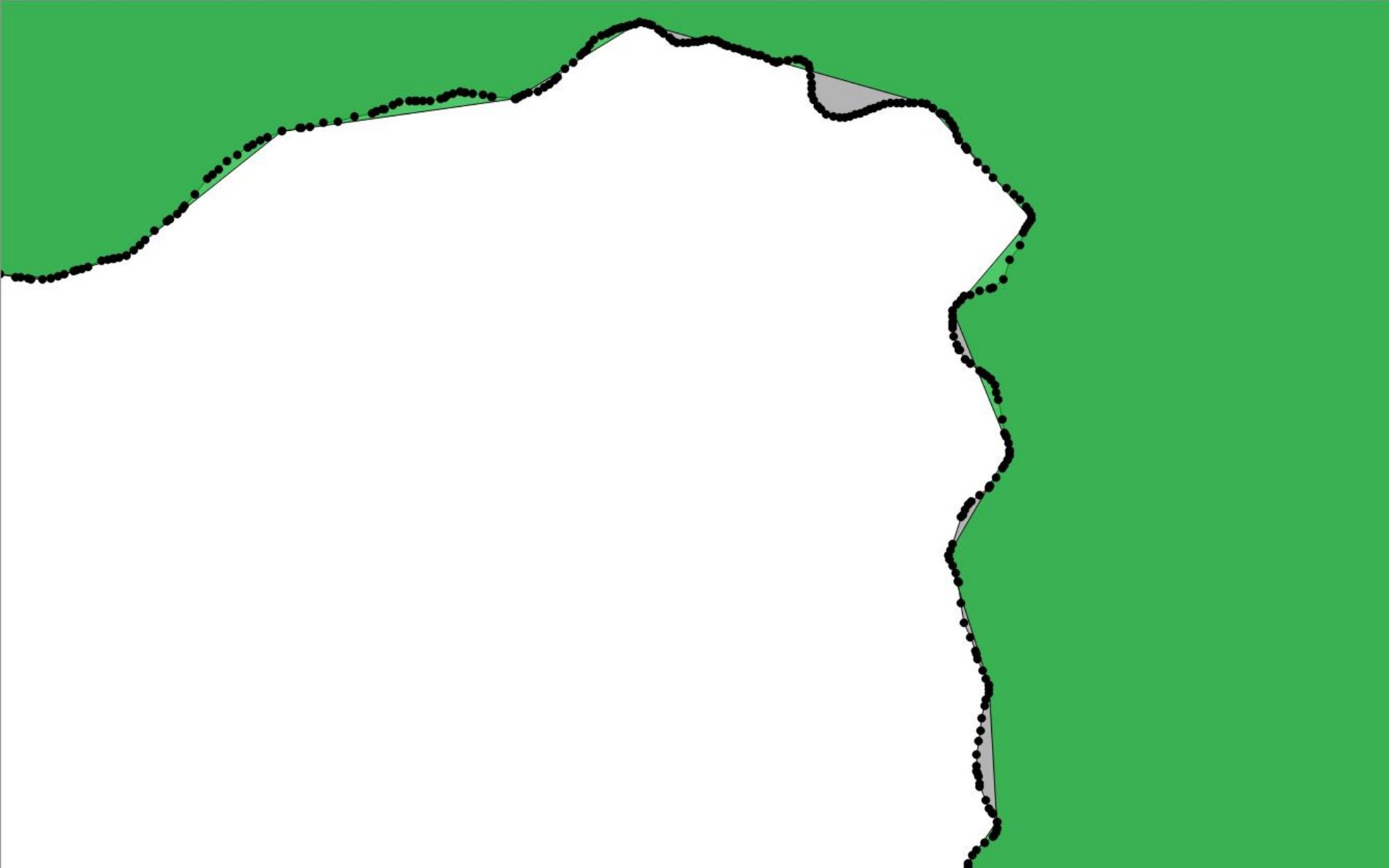


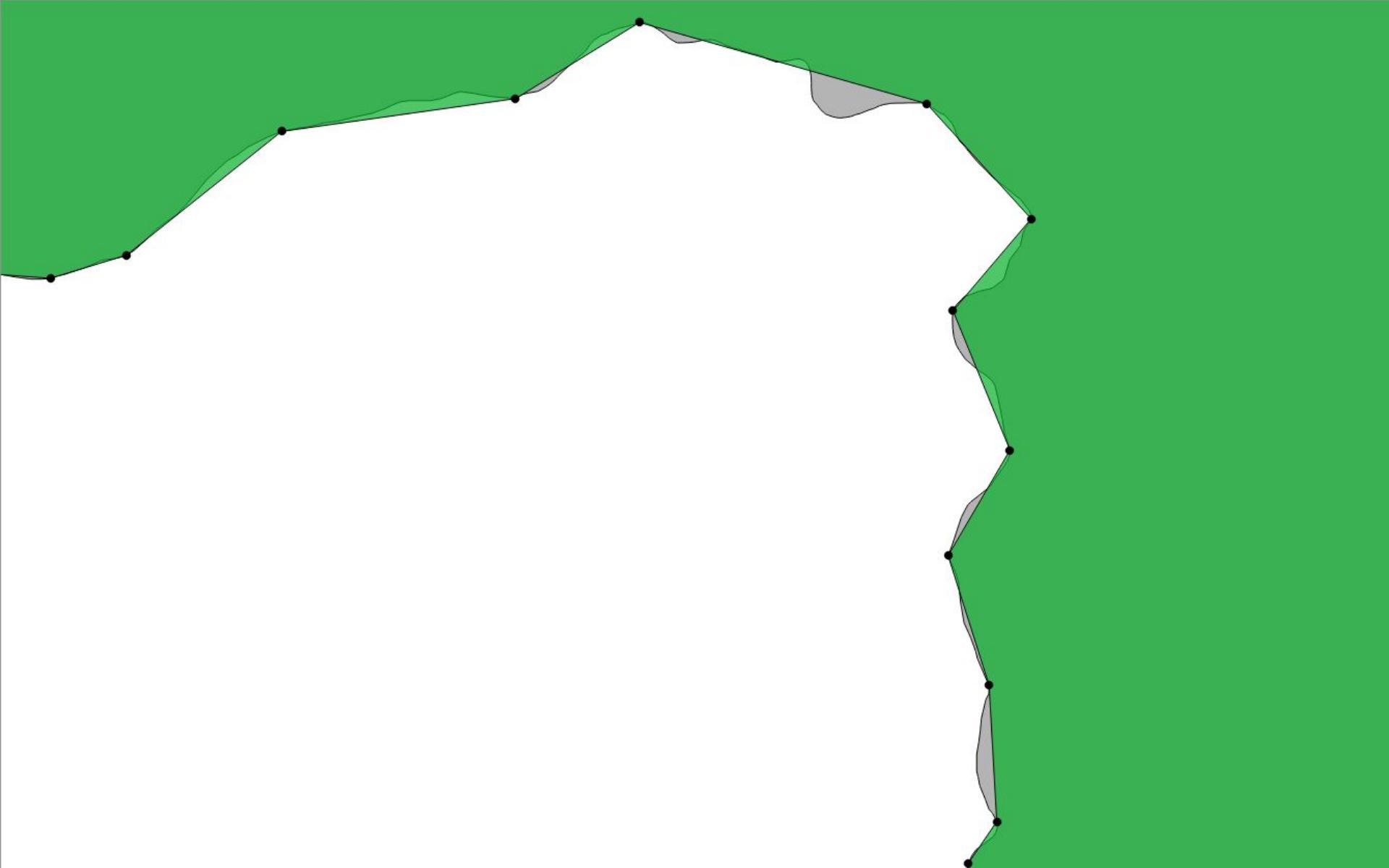




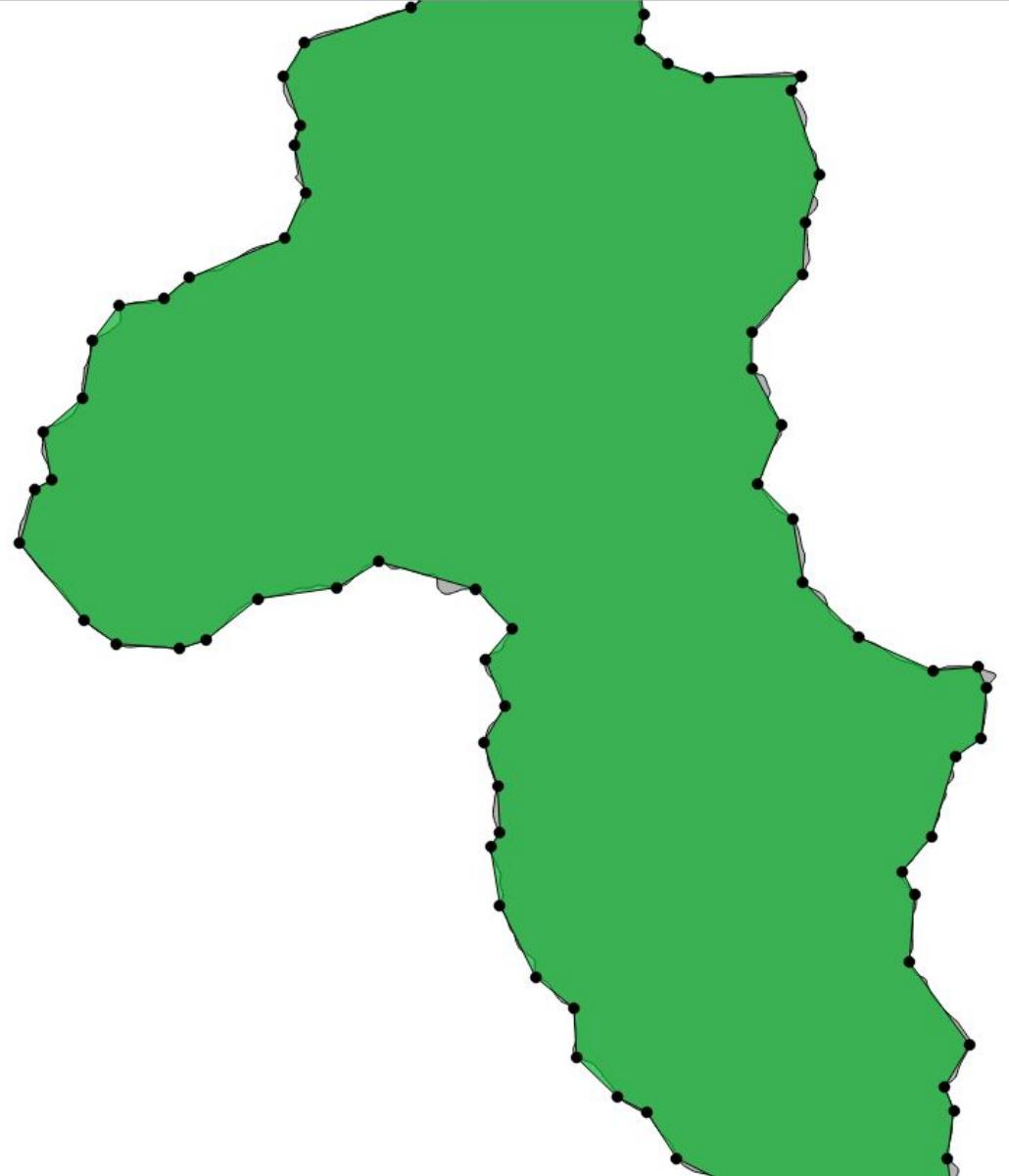


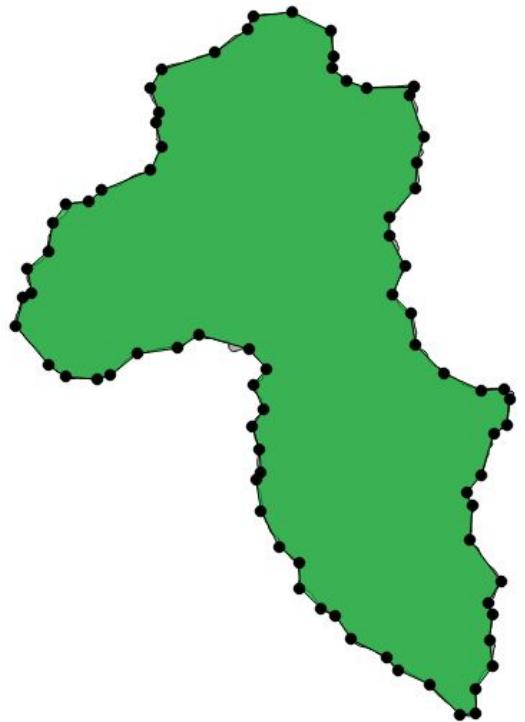


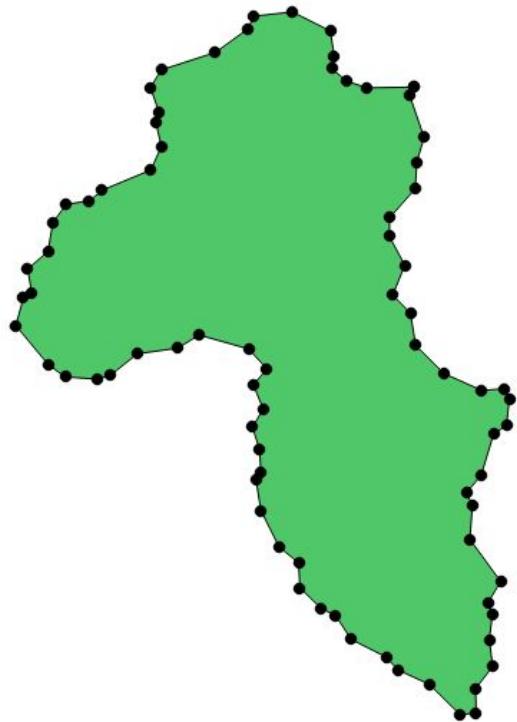


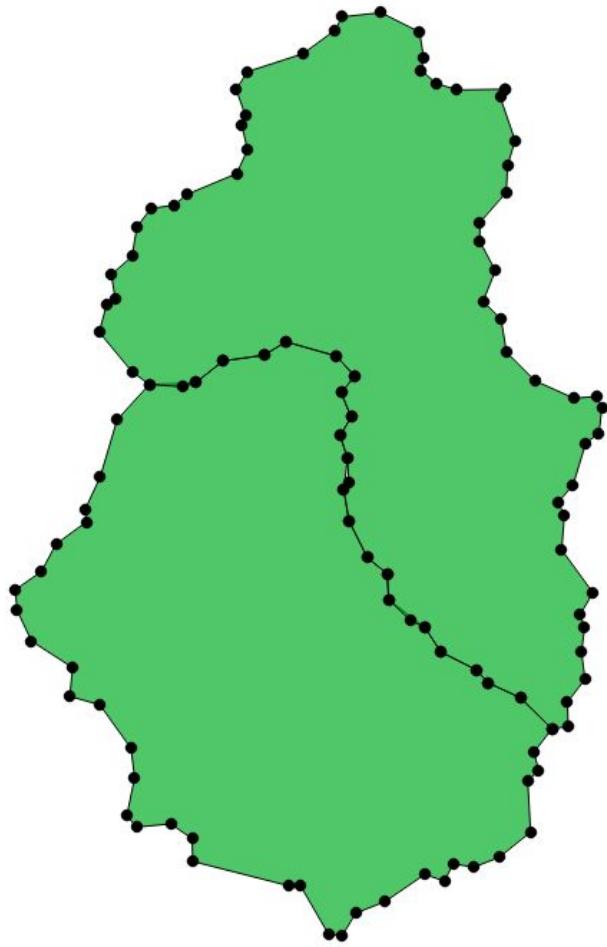


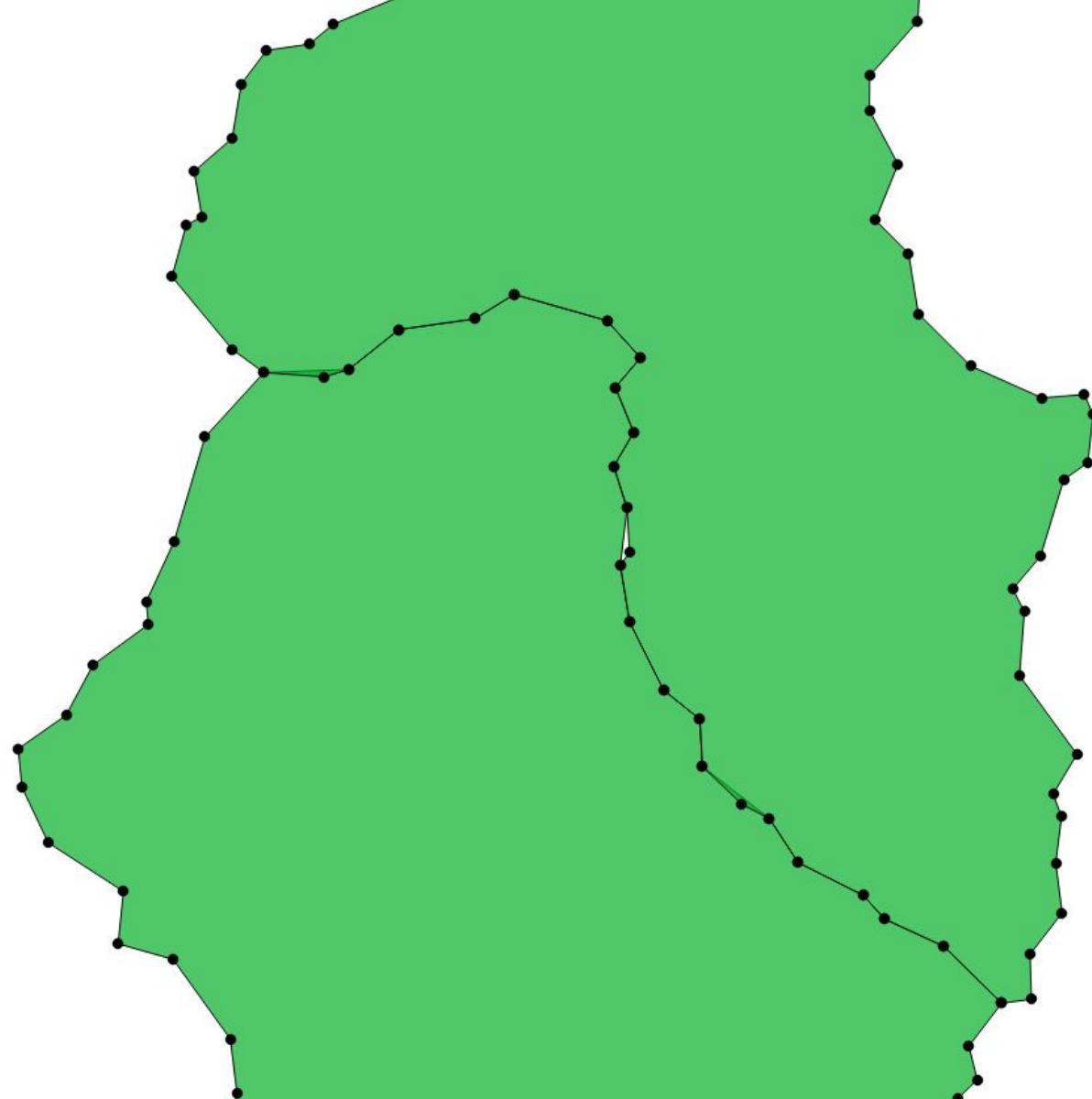


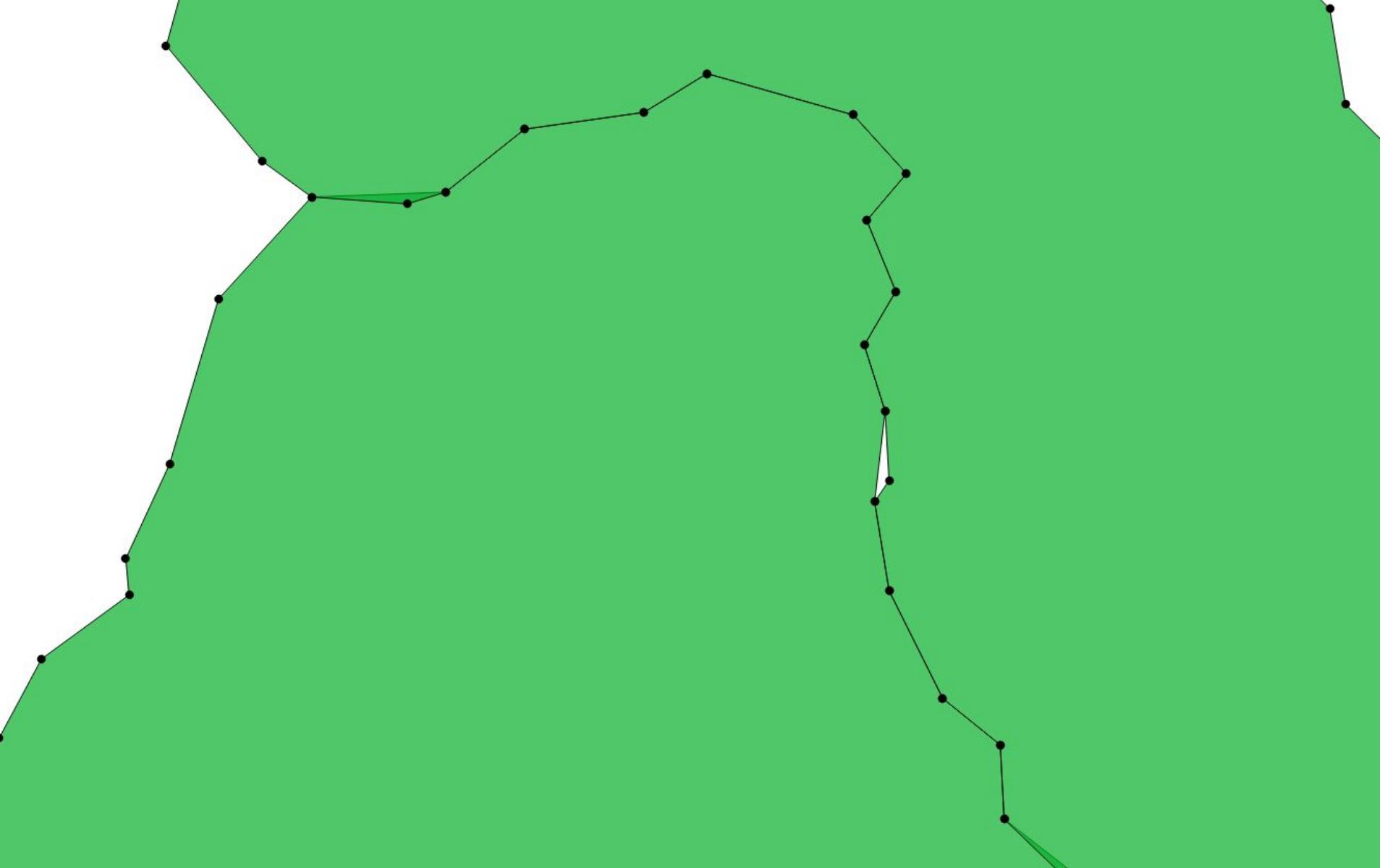




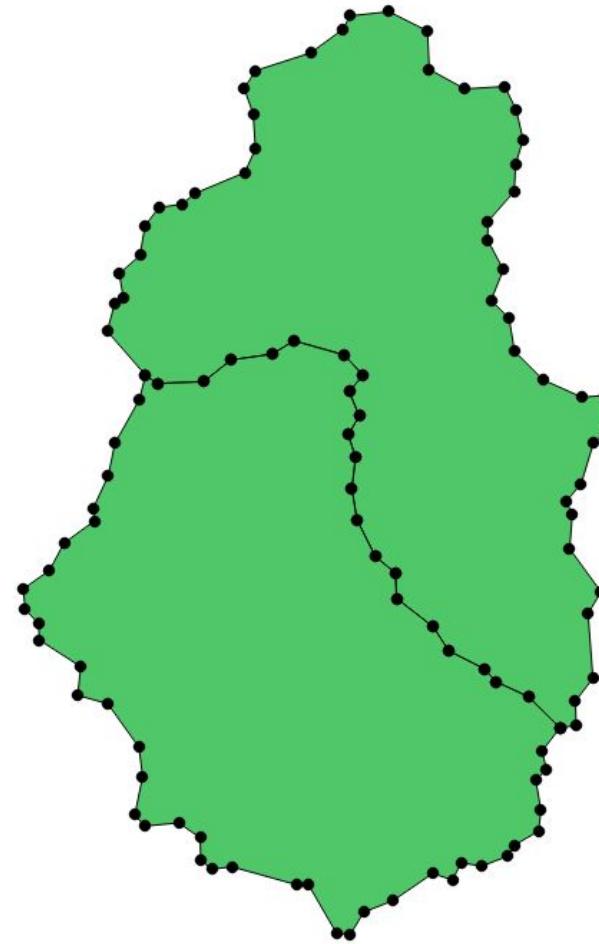








# TopoJSON



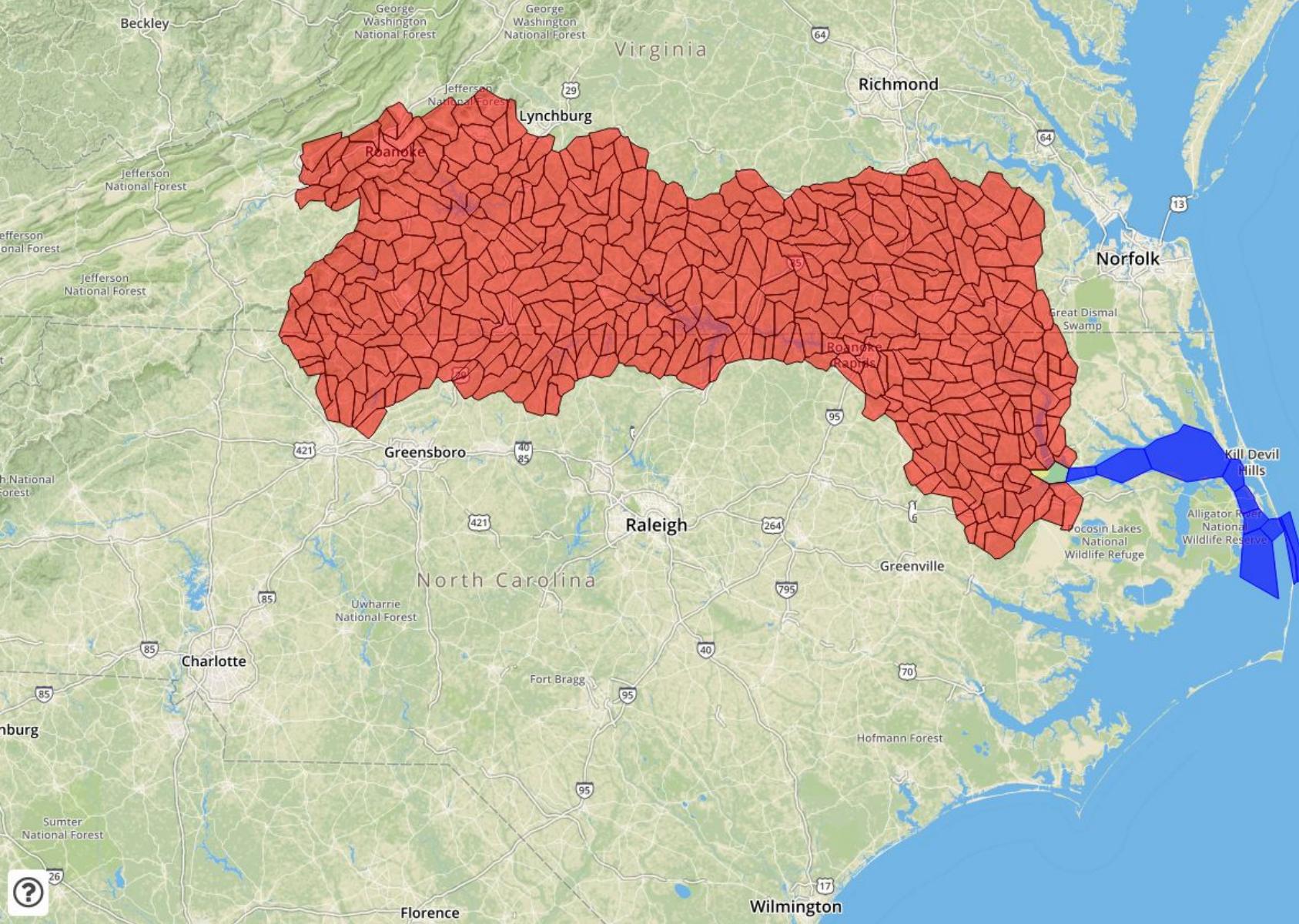


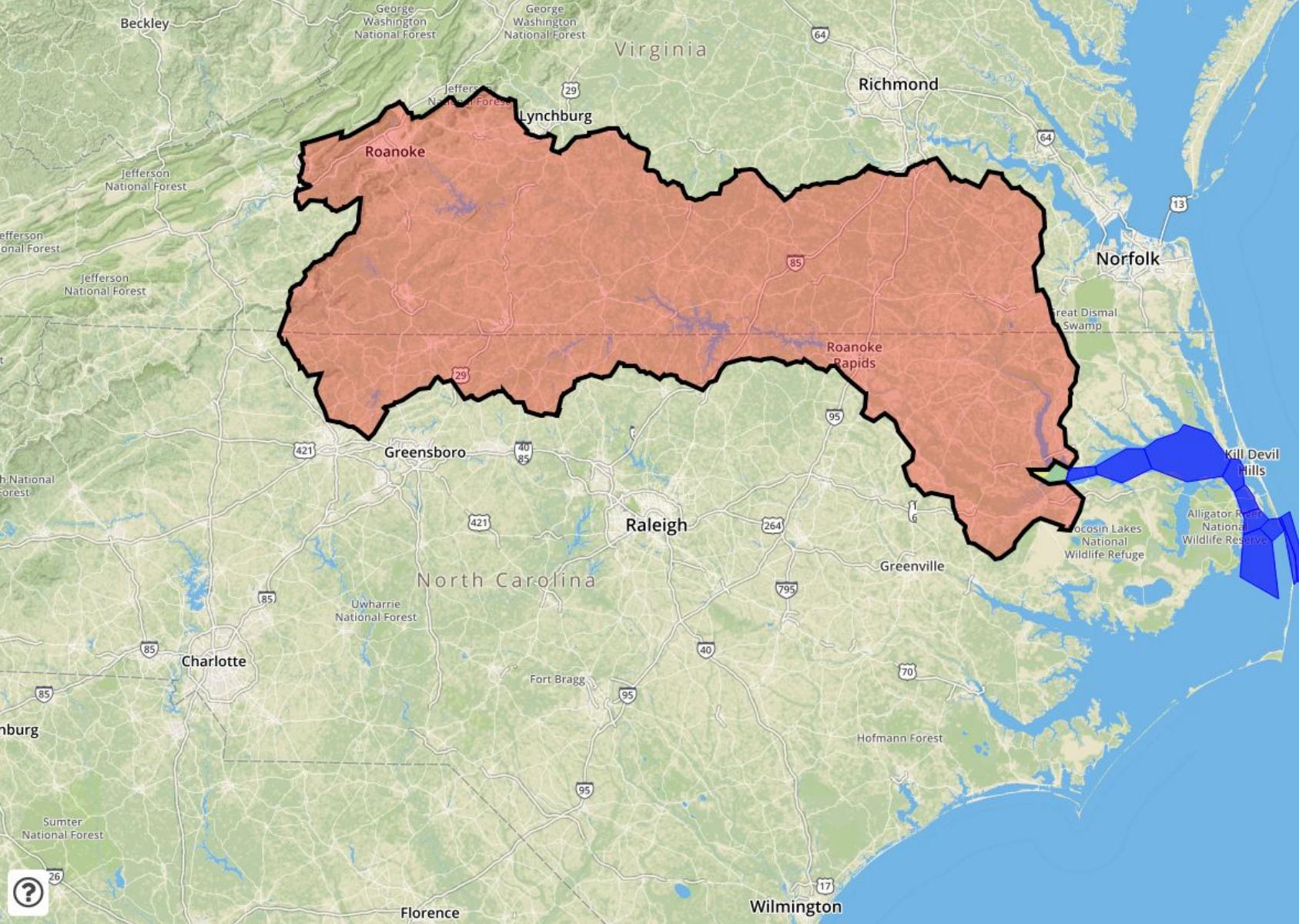


**DOM Manipulation: slow!**



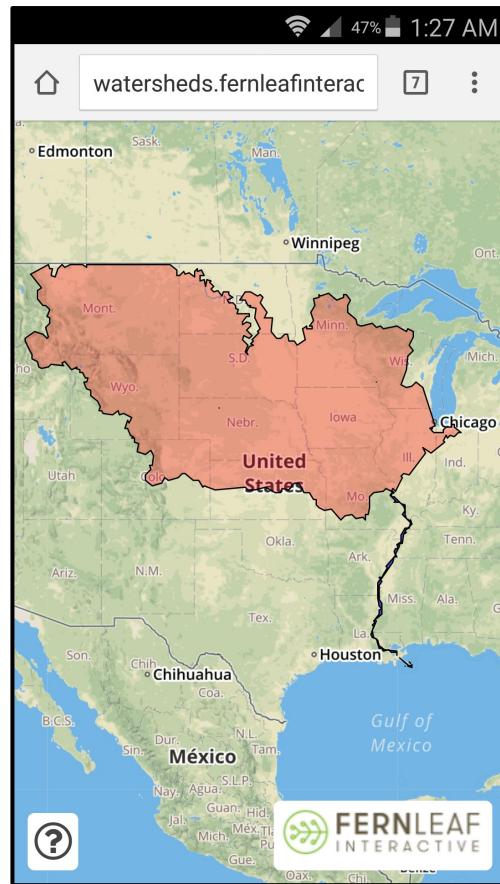
The text "HTML5 Canvas" is positioned at the top left of a white rounded rectangle. To its right is a red square containing a white stylized number "5". To the right of the "5" is the word "fast!" in a bold, black, sans-serif font.







# watersheds.FernLeafInteractive.com





Thanks!

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