

coast of the state approximately one to two times per year, most often in the late summer and early fall. Since W. Kerr Scott Reservoir is located well inland, the main impact of hurricanes felt at the reservoir is increased precipitation.

Table 3: Historical Climate Report

Climate Phenomenon	Annual
Average High Temperature (degrees Fahrenheit)	68.9
Average Low Temperature (degrees Fahrenheit)	42.8
Average Total Precipitation (inches)	50.0
Average Total Snowfall (inches)	9.9

Figure 5: 2008 Precipitation Patterns (in inches)

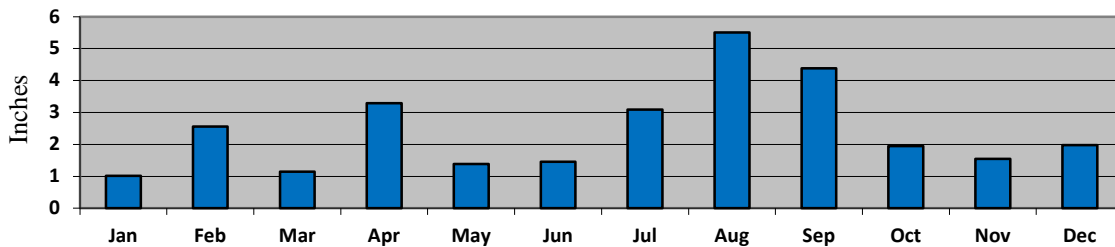


Figure 6: Annual High and Low Temperatures (degrees Fahrenheit)

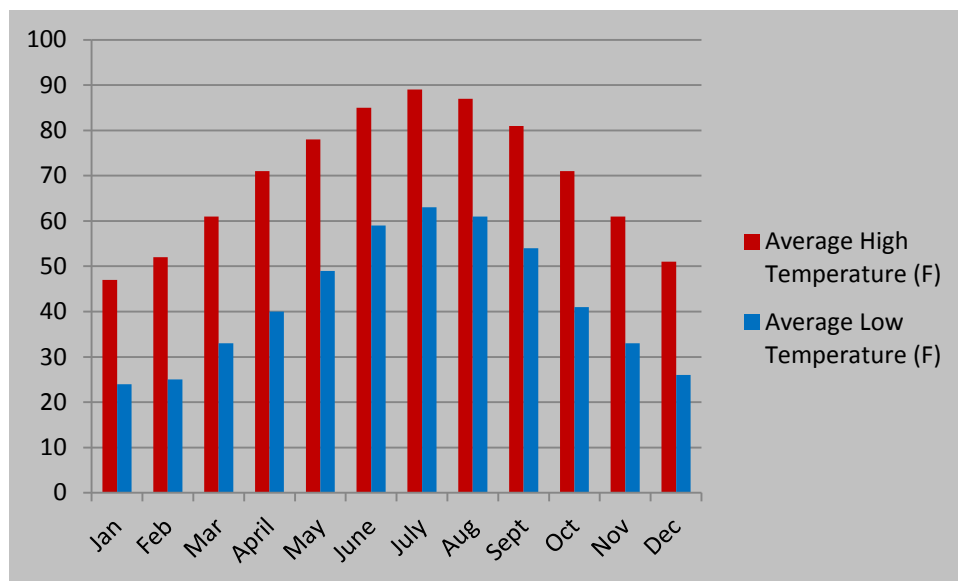
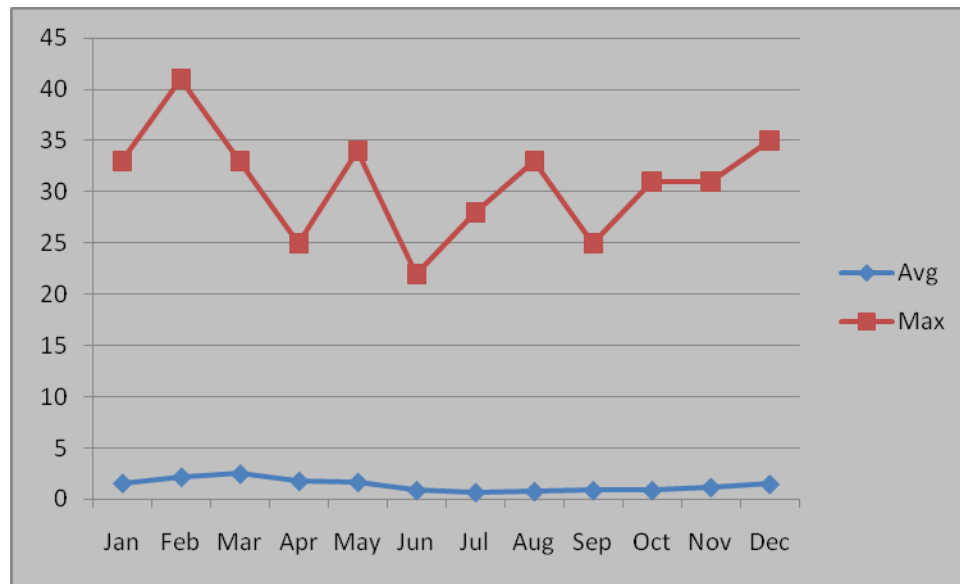


Figure 7: 2008 Average and Maximum Wind Speeds (mph)

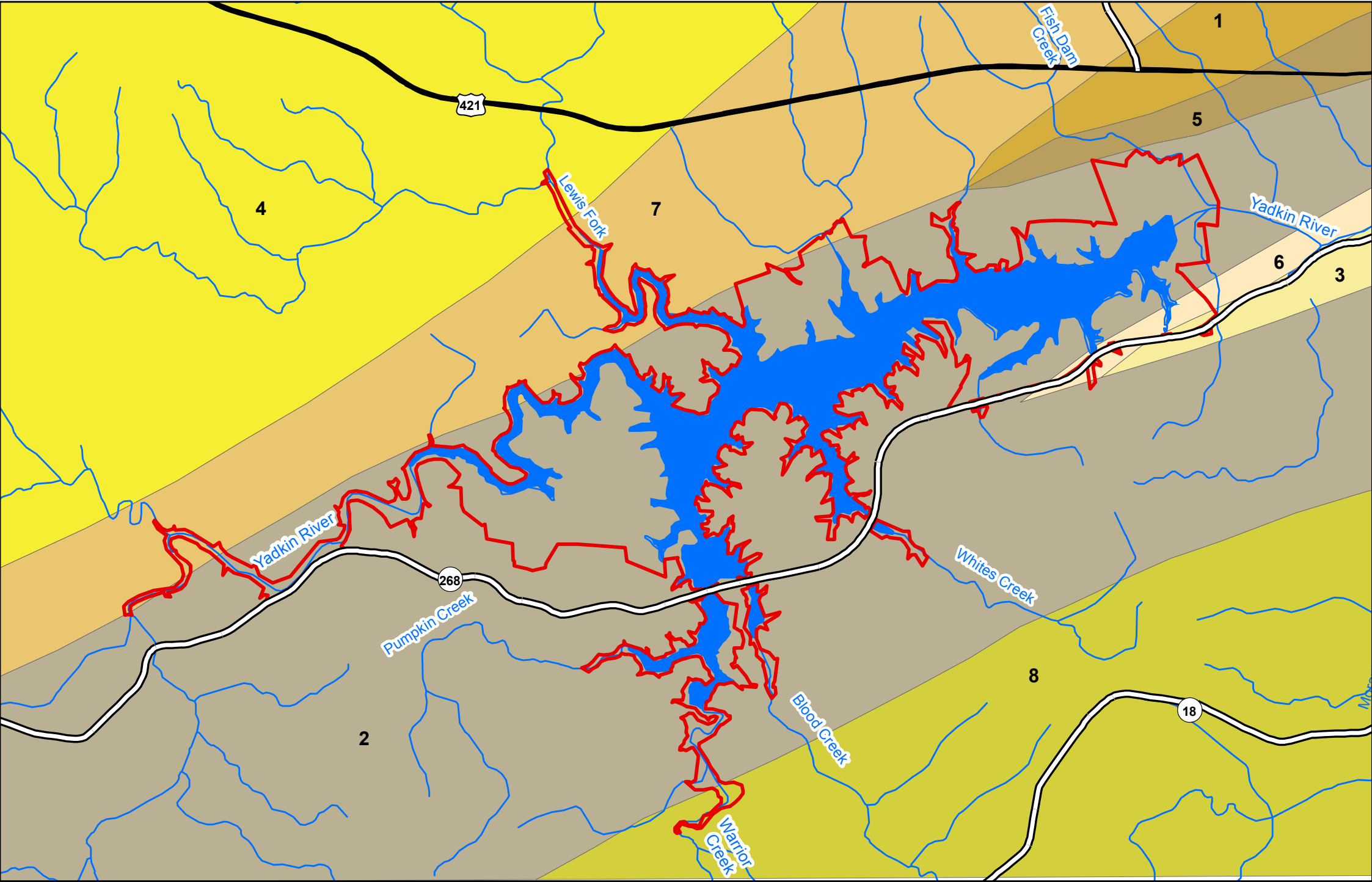


2.8 Geology, Topography, and Soils

The local geology (Appendix H, Figure 8), topography (Appendix H, Figure 9), and soils have been an important influence in the development and management of W. Kerr Scott Reservoir. The relationship between these three resources dictates the type of vegetation that can succeed in a given area, the availability of ground water, susceptibility to flooding, and appropriate recreational uses. Since the publication of the 1983 Master Plan, there have been limited changes to the topography, geology, or soils on project lands. Any measureable changes that have occurred have been a result of the construction of new facilities or shoreline erosion. The development of new facilities has required grading of existing land surface, construction of impervious surfaces over undeveloped soils, and some subsurface disturbance to access utilities or ground water supplies. Shoreline erosion also results in changes in topography within a confined area; however, the cumulative effects of shoreline erosion can result in more notable impacts to soils and geologic resources. As the shoreline erodes, the subsurface rocks and minerals are exposed to similar erosive conditions.

2.8.1 Geology

The project is located within the inner belt of the Piedmont physiographic province between the Blue Ridge and Brushy Mountain ranges (Appendix H, Figure 4). The general area is underlain by ancient metamorphic rocks of sedimentary origin, most of which belong to a broad geologic group known as the "Carolina Gneiss" (USACE 1983). Since the publication of the 1983 Master Plan, there has been little development that may have impacted geologic resources. The geology beneath the project lands has an impact on soil conditions, described below, and ground water, discussed under Section 2.3.2.



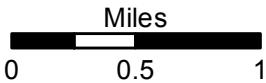
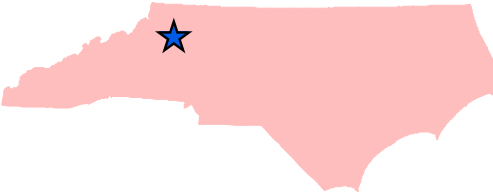
W. Kerr Scott Reservoir

Figure 8
Geology

- Streams and Rivers
- US Route
- NC Route
- Reservoir
- Project Boundary

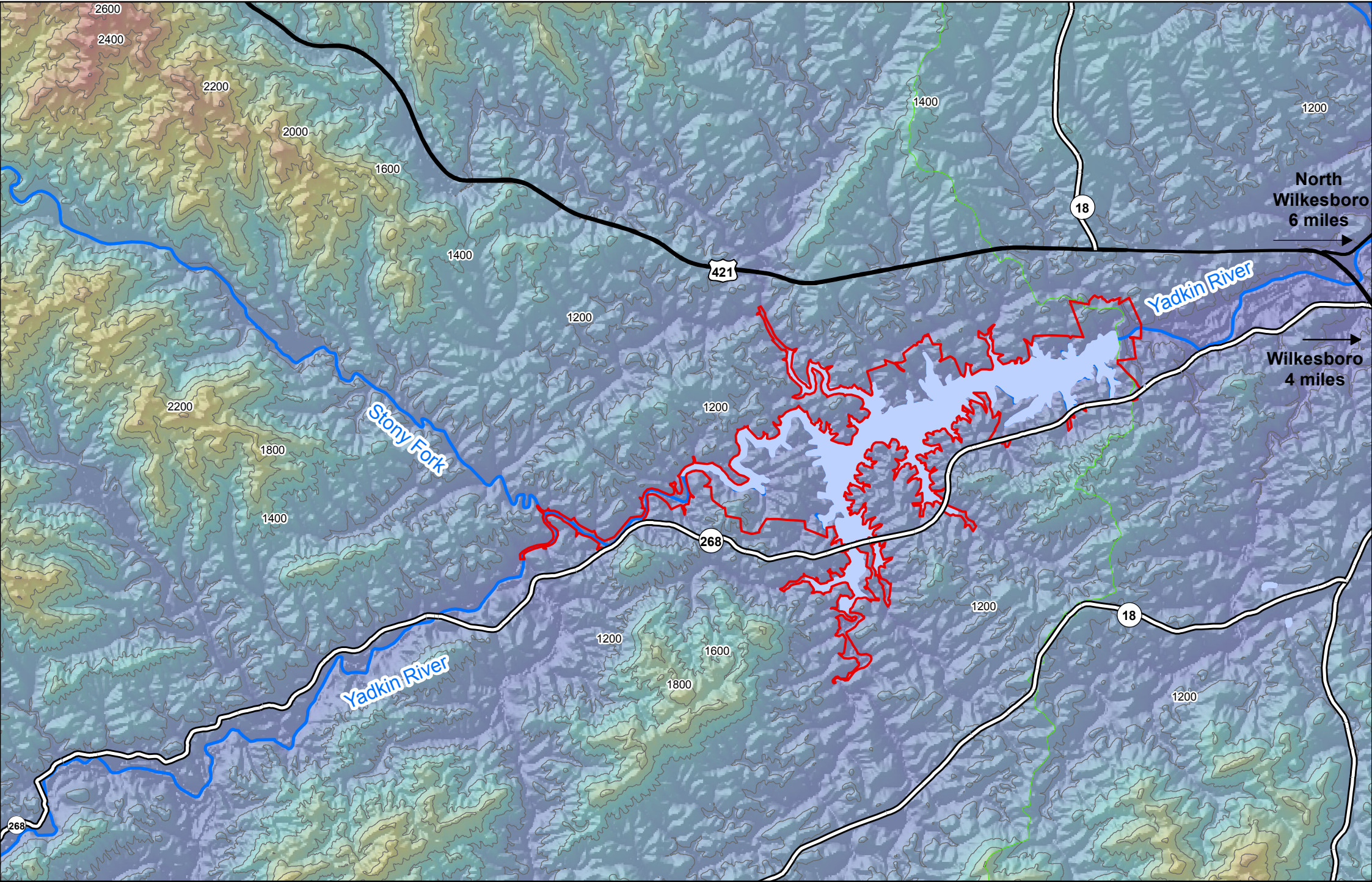
Geology

- 1: Banded gneiss
- 2: Biotite gneiss and schist
- 3: Fine-grained biotite gneiss
- 4: Gneiss
- 5: Metagraywacke, amphibolite, and kyanite schist
- 6: Metamorphosed granitic rock
- 7: Mica schist and phyllite
- 8: Migmatitic granitic gneiss



Source:
NCDOT 2006; NC OneMap 2007; TIGER 2000;
USACE 2010

The general area is underlain by ancient metamorphic rocks of sedimentary origin, most of which belong to a broad geologic group known as the "Carolina Gneiss" (USACE 1983).



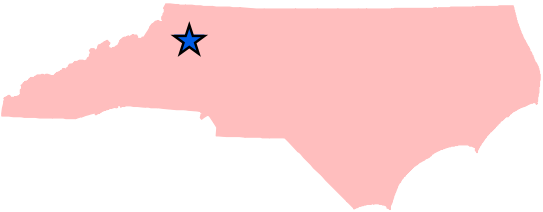
W. Kerr Scott Reservoir

Figure 9

Topography

- US Route
- == NC Route
- ▭ Project Boundary
- ▭ Reservoir
- Streams and Rivers

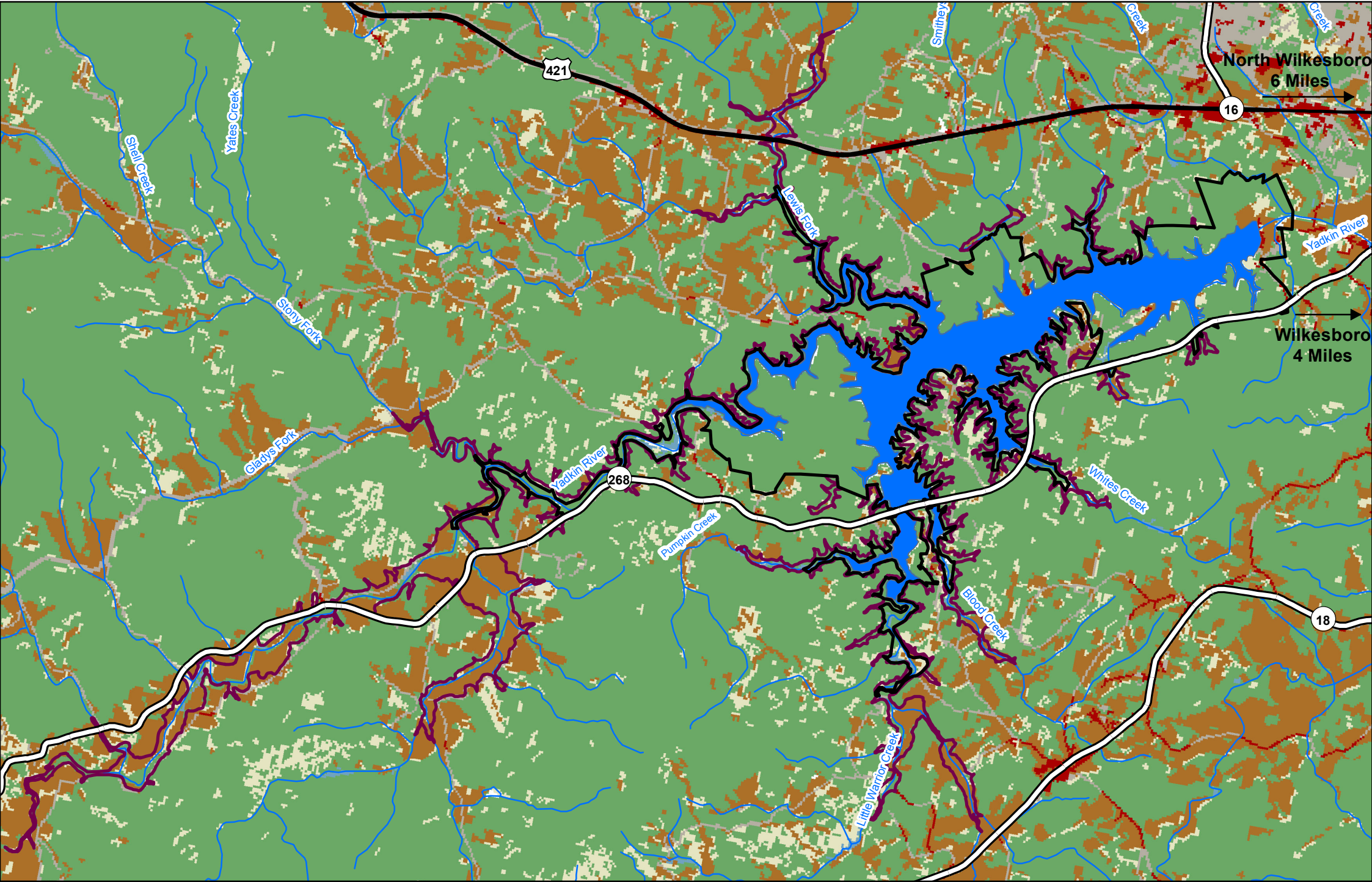
Elevation
High : 2,700 feet
Low : 950 feet
— 200' contours



0 1 2
Miles

Source:
NCDOT 2004 and 2006; TIGER 2000;
USGS 1994

Located in the foothills of the Blue Ridge Mountains, the topography within the W. Kerr Scott Reservoir watershed is rather varied. Elevations drop to approximately 950 feet msl within the floodplain below the reservoir before rising to nearly 2,700 feet msl in the upper reaches of the watershed (USACE 1983).



USACE Wilmington Master Plan

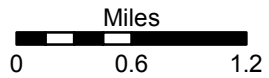
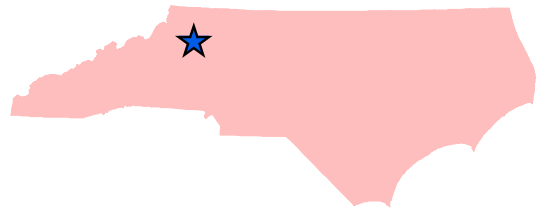
W. Kerr Scott Reservoir

Figure 10
Land Cover

- US Route
- NC Route
- ▭ Project Boundary
- ▭ Easement Lands
- Reservoir
- Streams and Rivers

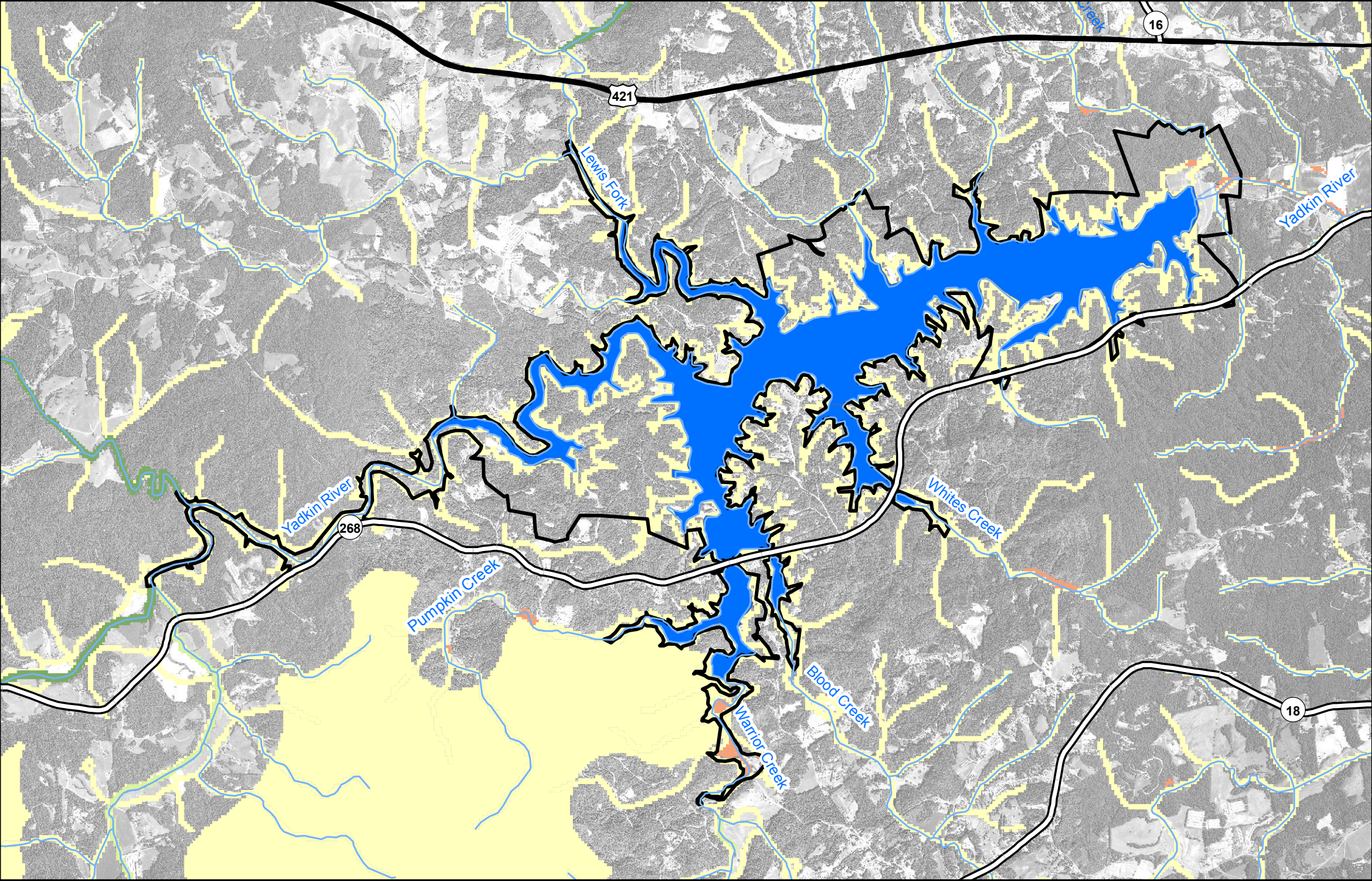
Land Cover

- Barren
- Agriculture
- Forest
- Developed
- Wetlands
- Shrub/Scrub



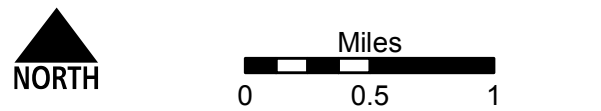
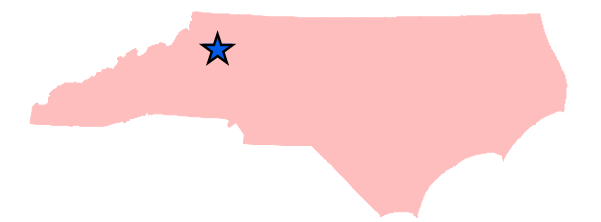
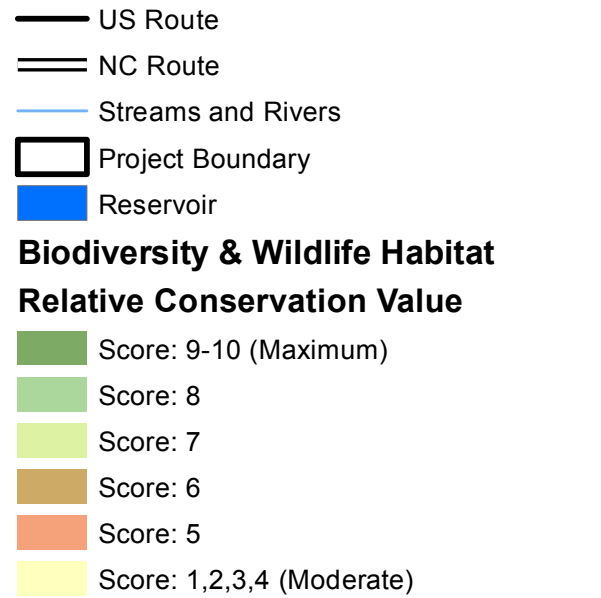
Sources:
TIGER 2000; National Land Cover Database 2001;
NCDOT 2006; USACE 2010

Adjacent to the project lands, forest and agriculture are the predominant land uses, with pockets of single family residential development along the north and south shores of the reservoir. Higher density commercial and residential development is concentrated about 5 miles east of the project, in the twin towns of Wilkesboro and North Wilkesboro. These towns contain the area's highest concentration of commercial, industrial, and visitor services.



W. Kerr Scott Reservoir

Figure 11
Biodiversity and Wildlife Habitat



Sources:
NCDOT 2006; NC OneMap 1998; One NC Naturally
Conservation Planning Tool 2010;
TIGER 2000; USACE 2010

Fish and wildlife resources are influenced by regional and site specific conditions, including climate, water supply and quality, as well as appropriate habitat for breeding, nesting, and feeding. Continued monitoring of wildlife species, along with the development and maintenance of WMA's will allow the USACE to maintain and promote fish and wildlife resources at W. Kerr Scott Reservoir. The conservation priority values range from "moderate" (1) to a "maximum" (10) focusing on areas that warrant the most urgent, most intensive or strongest efforts at protection. No values below a score of 1 were assigned, nor are shown in this map.