

facility. Municipal waste for the county is taken to the EBCI transfer station, on the Cherokee Indian Reservation east of the study area. The waste is then hauled to Palmetto Landfill in South Carolina. The transfer station can handle 300 tons of waste per day.

3.14 Utilities

3.14.1 GSMNP

Facilities within GSMNP that require utilities are concentrated around developed areas such as the visitor centers and the campgrounds. No utilities are provided within the study area portion of the park. However, a power transmission line servicing Fontana Dam traverses the western portion of the study area within GSMNP's boundary. Due to the park's size and the fact that it encompasses portions of two states and five counties, electricity providers and water and sewer services vary throughout the park. Five electricity providers service the park. Water and sewer service includes wells, septic tanks, municipal providers, and on-site sewage treatment facilities.

3.14.2 TVA's Fontana Reservoir

The original authorized purposes of Fontana Reservoir, operated by the TVA, were for flood control, navigation, and power generation. Water supply, water quality, power plant cooling, and recreation are also supported by the operation of Fontana Reservoir. The Tennessee Valley Public Power Association, Inc. (TVPPA) is the non-profit, regional service organization that represents the interests of consumer-owned electric utilities operating within the TVA service area. Members of the TVPPA include both municipal and electric cooperatives, and they serve more than 8.5 million customers in Alabama, Georgia, Tennessee, Mississippi, Kentucky, Virginia, and North Carolina (although not within the study area) (<http://www.tvppa.com/> 2003).

Fontana Reservoir provides 300 MW of electrical generating capacity and 583,000 acre-feet (774,383 ha-m) of flood storage capacity. It also plays an important role in operation of downstream hydro plants operated by Tapoco and the TVA, and in providing summer cooling water for downstream nuclear plants at Watts Bar, Sequoyah, and Browns Ferry. It is the largest tributary reservoir in terms of generating capacity and one of the most important tributary reservoirs in the operation of TVA's integrated river management system.

Because of its large flood storage capacity and protected watershed, which prevents sedimentation, the lifetime of the reservoir is estimated to exceed 100 years. With appropriate maintenance, Fontana Dam should be able to operate almost indefinitely. Water

releases from Fontana Reservoir help to maintain minimum navigational depth, as well as to maintain and improve water quality and aquatic habitat throughout the TVA system (TVA 2003).

3.14.3 Remaining Study Area Utilities

3.14.3.1 Electric Power

Electrical service within the study area is provided by Duke Power in both Swain and Graham counties. Major power transmission lines and substations are shown on Figure 21.

3.14.3.2 Natural Gas

Natural gas is not currently available in the study area. However, Public Service North Carolina (PSNC) Energy is in the process of expanding its natural gas service to Bryson City. This expansion is expected to be completed by the end of 2003. According to Kenneth Owenby with PSNC Energy, there are no plans to provide other portions of Swain County with gas service at this time. Mr. Owenby also indicated that PSNC Energy has relinquished its franchise rights for Graham County. There are no plans to provide Graham County with natural gas service at this time.

3.14.3.3 Water and Wastewater Facilities

Bryson City provides water and sewer services for residences within its municipal limit. Water and sewer service outside the town's municipal limits is scattered and primarily serves the developed areas north of town. Graham County does not provide its citizens with water and sewer services. Residences in the study area not serviced by Bryson City rely on private wells and septic systems. The location of water and sewer lines and the wastewater treatment plant are shown on Figure 21.

3.15 Public Projects in the Vicinity of the Study Area

The public projects described below will be evaluated in the DEIS for their potential, when combined with the North Shore Road project, to have cumulative impact on the study area. The CEQ defines cumulative impacts as "impacts on the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such other actions" (40 CFR 1508.7). Public projects in the vicinity of the study area are described below and include NCDOT TIP projects, projects discussed in local