



## **HOBBS, UPCHURCH & ASSOCIATES, P.A.**

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*Consulting Engineers, Land Surveyors, and Planners*  
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### **Geographic Information Mapping Beech Mountain, North Carolina**

Hobbs, Upchurch & Associates provided GPS Locating and GIS mapping services for the town's water and sewer systems. We installed 10 flow meters, monitored, collected data, and generated an Inflow and Infiltration study of the wastewater collection system, a detailed assessment of all manholes, and systems flow metering. Each manhole assessment consisted of 4 photographs to capture the condition of the manhole and information such as invert elevation, pipe diameter, number of pipes, etc. HUA also located all water features including hydrants and linked photographs back to tanks, critical valves, etc.

The HUA team analyzed their findings and made recommendations to the town regarding repair and replacement, including a project approach and a cost estimate.

**This project received a 2001 Engineering Excellence Award from the American Council of Engineering Companies of North Carolina.** Projects that receive these awards are judged on criteria such as overall innovation, exceeding client expectations, number of people served, future value to the engineering industry, and social and economic benefits.