As a biological scientist, I study environmental processes related to how human and forest management activities will impact water and air quality.

Johnny Boggs
Biological Scientist
M.S., Alabama A&M University
USDA Forest Service scientist

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Important Scientist Characteristics

Curiosity and creativity are big parts of research and discovery. Formal training in math and science is also necessary to answer complex ecological questions. These talents and skills complement each other and keep exploration fun and interesting with the goal of producing sustainable environmental conditions for future generations to enjoy.

Example of a simple research question I have tried to answer:

Forestry Best Management Practices (BMPs) are designed to prevent water pollution during tree harvest operations. A key research question that I am trying to answer is, how effective are forestry BMPs at keeping streams and rivers clean and healthy?

Technology or equipment used in research:

I use Sapflow Sensors and Sigma Samplers to collect large volumes of tree water use and streamflow data. I then use data analysis and statistical software to process these data and address a series of research questions related to forest water use and water pollution.

Most Exciting Discovery

I discovered the effects of soils on the amount and health of water in some of North Carolina's forested areas. Since water runs underground to streams and water supply reservoirs, well-planned forest management helps reduce the amount of pollution in local water supplies. Land managers will use my discovery to improve water quality for human use.

When did you know you wanted to be a scientist?

I was always curious about nature and how all aspects of it worked as an interconnected system. I started thinking about forestry or environmental science as a career after I took an environmental science class in high school.