Introduction
The Horse Creek watershed in Aiken County, SC, is known for its history of high coliform pollution. Previous studies have identified one particular tributary, Sand River, as being a major contributor to the upper portions of the watershed, but the source(s) remain unknown. Sand River drains Hitchcock Woods, an urban forest that is heavily used by equestrians; it is transected by both old and new sewer lines; and is surrounded by older homes, some of which depend upon aging septic systems. In addition, Sand River in Hitchcock Woods receives an enormous volume of stormflow from the downtown area during rain events. This study focused on fecal pollution in two of Sand River’s smaller tributaries, Calico Creek and Cuthbert Branch.

Objectives
1. Evaluate fecal coliform counts in Sand River and two tributaries, Calico Creek and Cuthbert Branch.
2. Use antibiotic resistance analysis as a microbial source tracking technique to identify likely sources of fecal coliforms in these two small streams.

Methods
Feces from known species were collected within the Horse Creek watershed. These included samples from horses, waterfowl, dogs, and one sample of mixed sewage inflow from the Horse Creek Wastewater Treatment Plant. Fecal samples were homogenized under sterile conditions in the laboratory, and approximately 1 gram of homogenate was suspended in 10 mL of sterile Nanopure water. Samples were then diluted, and fecal coliform bacteria were isolated as shown below.

- Fecal coliforms from unknown sources were isolated from Sand River, Calico Creek, and Cuthbert Branch in Hitchcock Woods (Figures 2-4).

Conclusions
Calico Creek contributed the greatest number of fecal coliforms to the watershed with an average of 195 cfu/mL. Error bars represent one standard deviation.

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