

Campbell, Robert. Elisa Cook. Greg Lewis. Min-Ken Liao. Furman University. Trends of Free-Living and Attached Coliform and *E. Coli* Upstream and Downstream of a Wastewater Treatment Plant on the Enoree River in Upstate South Carolina.

Studies during the summer of 2000 indicated that populations of free-living coliform and *E. coli* found in the Enoree River in upstate South Carolina dramatically increased downstream of a wastewater treatment plant (WWTP), while lower levels were reported upstream of the same plant. This began a two-year (2002-2003) study of trends for both free-living and attached forms of coliform and *E. coli* in the Enoree River. Samples were collected and tested using IDEXX methodology, and data were analyzed using Kruskal-Wallis statistical tests. The first year of the study, which was done under drought conditions, showed that free-living coliform and *E. coli* populations were at low levels upstream of the WWTP while the levels increased downstream of the plant. However, the attached forms of coliform and *E. coli* did not follow the same trends seen in their free-living counterparts. During the second year of the study, which was conducted under non-drought conditions, free-living coliform and *E. coli* populations did not follow the same trend as they had in the previous two studies. In addition the attached forms of the two microorganisms did not follow the same trend as the free-living organisms.