

MIXING OF STREAM WATERS IN THE MOUNTAIN CREEK WATERSHED

Caleb W. Brockman (C. Brannon Andersen, Sandra K. Wheeler, Kenneth Sargent)
Department of Earth and Environmental Sciences, Furman University, Greenville, SC
29613

The Mountain Creek Watershed (31km²) drains an area of diverse land cover, ranging from forested to industrial. The northern half of the watershed (mostly rural/suburban) has a water chemistry with <100μmol/L H₄SiO₄⁰ and <120μmol/L Na⁺+K⁺. A tributary that drains the southern half of the watershed (industrial/suburban) has a water chemistry ≈135μmol/L H₄SiO₄⁰ and ≈230μmol/L Na⁺+K⁺. These two waters mix forming a water of intermediate composition that is subsequently diluted by a small tributary. The concentrations then continue to increase downstream. The results show that mixing is an important control over stream chemical composition.