USING SPECIFIC ELECTRICAL CONDUCTANCE TO COMPARE RAINFALL RUNOFF IN NH URBAN AND RURAL CATCHMENTS

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The EPSCoR Project has provided Plymouth State University with a unique opportunity to gather aquatic data throughout New Hampshire. Currently, there are 32 volunteers hosting 156 aquatic sensors in 51 unique rivers. These data loggers are collecting electric conductance (EC), water level and temperature measurements. Preliminary data focused on how river water EC changes after rain events in urban and rural catchments. Specifically, we used EC to separate the river water into "old" and "new" water (Pinder and Jones, 1969). Specific EC of the stream water and precipitation were used in a mixing model that compared peaks of new water entering the stream to water level peaks during rain events. The goal of this study is to better understand source water variation during storm events across New Hampshire watersheds and to understand how urban catchments function differently than rural/forested catchments. This information may also help to better understand non-point source pollutant transport.