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# Suspended sediment concentration in the Brushy Creek watershed, Kentucky

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Suspended sediment concentration in the Brushy Creek watershed, Kentucky.

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Suspended sediment concentration (SSC) can be used as a proxy for environmental health of stream water. For example, large sediment loads can cause harm to aquatic life and are a mechanism for introducing and transporting fecal microbes. We measure SSC of the Brushy Creek watershed, located in Rockcastle, Pulaski, and Lincoln Counties, where the Eastern Kentucky Environmental Research Institute (EK-ERI) has been conducting an assessment of the watershed. Two auto sampling units were placed in Brushy Creek to collect water samples for determination of SSC. The units collect samples every 14 hours for a two-week period, then samples are retrieved for analysis, and new sample bottles are loaded into the auto samplers. Sediment sampling has been in progress since January 2011 and will continue until November 2011. We measure sediment transport during dry, wet, and storm periods. Retrieved samples are brought to the laboratory where sediments are filtered and weighed to determine SSC. The SSC data have been evaluated along with records of rainfall events, as recorded by the UK Agriculture weather station located in Somerset, KY. Due to operational difficulties with our water and sediment samplers, we have only collected intermittent data, however, rainfall events seem to be correlated with increased SSC.

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