Determining Sources of Highway Runoff Fine Sediment in Stormwater, Streams, and Lake Tahoe using Fingerprinting Techniques

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A variety of road affiliated materials and storm runoff samples have been collected from around the Tahoe Basin and processed over the past year for fingerprinting analysis to assign fine-sediment source attributions. A Geographic Information Systems (GIS) tool that identifies landscape, soil and land use characteristics relevant to fine-sediment mobilization and transport is in development to target highway areas with high potential for fine sediment loading to stormwater runoff.

Progress Report: October 1 to December 31, 2009

Work continued on refinement of the GIS tool for targeting highway runoff sampling for this project. That GIS targeting tool is now ready for testing. A limited number of additional stormwater samples were collected during fall runoff events. Some additional archived samples were processed and prepared for trace element analysis using the methods developed for fractional filtration. Further data analysis is pending results from the targeted sampling effort. Targeted sampling is planned for the new quarter, with subsequent analysis and refinement of the GIS targeting tool.

[†] This document is an intermediate progress report, not a final report; consequently, any results should be considered preliminary and should not be cited. Please contact the principal investigators or the Tahoe SNPLMA Science Program Coordinator if you have questions.