



USDA-CSREES 2007 National Water Quality Conference

Improved Erosion Control BMPs for Road Construction Projects in the North Carolina Mountains

Sediment is the most common pollutant affecting North Carolina's waterways, impacting a range of aquatic organisms, reducing reservoir capacity, and hurting their aesthetic value. Construction activity, including roadway projects, is a significant contributor of state-wide sediment loading. The NC DOT program of widening and paving rural roads in the mountain region provided an opportunity to evaluate new types of roadside erosion control BMPs. The objective was to develop improved ways to help protect the particularly sensitive trout streams commonly found there. Two road projects were divided into three equal sections of 500' each. On two of the sections, numerous coir logs and straw wattles were installed instead of the standard rock check dams and small sediment traps. Granulated polyacrylamide (PAM 705) was applied to the logs and wattles on one section. The remaining section had the standard BMPs. The results suggest a significant advantage of the new BMPs. At the first site, from June to October of 2006 the average turbidity values (in NTUs) for the stormwater runoff for were 2,751 for the standard DOT BMPs, 610 for the logs and wattles alone, 69 for the logs and wattles with PAM. The second site had similar results with average turbidity values of 147 for the logs and wattles with PAM, compared to 1,656 for the standard DOT BMPs.

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