

Quarterly Progress Report
April - June 2009

Project Name: Type N Experimental Buffer Treatment Project - Basalt Lithologies
Project Status: Data collection
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Sponsoring SAG: Landscape and Wildlife Advisory Group/Riparian Science Advisory Group (LWAG/RSAG)

Background:

This study is an experimental test of the effects of three riparian buffer strategies (compared to an un-harvested control basin) on amphibian, water quality, and downstream exports of nutrients, detritus, macroinvertebrates and suspended sediment, and downstream fish populations. The study design has four blocks, each consisting of a reference stream and one of each buffer treatment. Two years pre- and two years post-harvest data will be collected. Data has been collected during the first two pre-harvest years and was collected for the post-blowdown, pre-harvest year. Data is currently being collected for the first year post-harvest sampling. In order to include amphibians, the study sites are confined to basins with basalt or other competent lithologies.

Current Status:

WDFW work included continued tracking of the timber sales, harvest schedules, and other activities associated with the treatment of basins. Harvest has been completed at 9 study basins and is near completion at another. Harvest is in progress at one basin which is scheduled for completion August 2009. Landowners' have delayed the harvest at two basins until the economy rebounds. The Project Manager and Primary Investigators met to discuss the implications of the delayed harvest with two WDFW statisticians. Statisticians recommended that additional pre-treatment data collection at delayed basins is not necessary. Therefore, sampling will not occur at the 2 delayed basins in 2009.

Four temporary employees and 3 WCC were hired to collect field data, starting April 1, 2009. There are 18 sites in the study. Of the 18 sites, 17 have been reflagged as well as mapping for slash input in the stream. One basin has been inaccessible due to snow. Stream characterization and woody debris sampling has been completed at 15 basins. Periphyton tiles have been placed at 15 basins. They were not placed at the two delayed harvest basins or the one currently being harvested. Vegetation sampling is completed at 12 basins. Light touch and rubble rouse amphibian sampling began in June.

Ecology continues to collect water quality and litterfall data according to the study plan. Detritus, litterfall, and invertebrate samples have been sorted and processed through April 2009 and data entered in the database. Nutrient and suspended sediment data were downloaded during May for analysis. Downloading the spring 2009 temperature data has been completed for all of the basins except for one, which is currently inaccessible due to snow. All temperature data has been processed and QA'd through spring of 2009. QA of the continuous turbidity data is complete through fall 2008. All data that has been processed and QA'd has been entered into the Stream Trac database. The Department of Ecology Manchester Laboratory completed analysis of

the fish, amphibians, macroinvertebrates, leaf litter, nutrient, and periphyton stable isotope samples through May 2009. All 2008 canopy photos have been processed and analyzed. The 2009 post-harvest canopy photos began in June and have been completed at 3 sites.

WSU completed final analyses for the entire genetic dataset for all samples of coastal tailed frogs, Cope's giant salamander and Pacific giant salamander. The results of these analyses will be outlined in the final report, which is due July 10, 2009.

Budget

Total allocated through fiscal year 2009: \$2,564,352

Total spent through March 2009: \$2,137,744

Total allocated for fiscal year 2009: \$853,841

Total allocated budget remaining: \$426,608

Contract end date: **WSU:** June 30, 2009 (contract is amended annually to add budget and time as it is approved - It is anticipated this project will end on June 30, 2010). **WDOE:** June 30, 2009 (contract is amended annually to add budget and time as it is approved - It is anticipated this project will end on June 30, 2012).