

Quarterly Progress Report April – June 2013

Project Name: Type N Experimental Buffer Treatment in Soft Rock Lithologies
Project Status: Field Implementation – Pre-harvest Sampling
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Sponsoring SAG: Soft Rock Science Advisory Group (SRSAG)

Background

The purpose of the Type N Experimental Buffer Treatment Project in Soft Rock Lithologies is to determine the effectiveness of Type N prescriptions to achieve 1999 Forests and Fish Report performance targets and resource objectives for temperature and sediment in western Washington headwater basins underlain by incompetent or soft rock lithologies. The study examines the effectiveness of the different components of the Type N buffers to maintain water temperature within state standards at the Type Np/F junction and within the perennial portion [buffered and unbuffered] of headwater streams. Similarly, the study will examine the effectiveness of each buffer type to minimize erosion and sediment input to and exports from Type N streams. A grant from the Environmental Protection Agency (EPA) awarded to the Department of Ecology in October 2010 is partially funding the soft rock lithologies project.

Description:

This study is a field experiment analogous to the “hard rock” project but implemented on more erodible (soft rock, largely marine sedimentary) lithologies. A draft report for the hard rock is currently in development. This project:

- employs a Multiple Before-After/Control-Impact (BACI) experimental design,
- tests only the forest practices rule (50%) buffer treatment (no alternative buffers are tested),
- includes benthic macroinvertebrate sampling, but
- does not include amphibian, fish, litterfall, or drift measurements.

Current Status

A project charter was approved by CMER and Policy in November of 2011 and a Quality Assurance Project Plan (QAPP) was published in September 2011 to meet the required guidelines established by EPA for the grant. The QAPP included components of the CMER study design, QA/QC plan and field manual. Site selection was completed in August 2012. Temperature monitors have been installed; woody debris, channel dimensions, stream cover, and substrate size class measurements have been completed; and Montana flumes have been installed in four basins.