Stream Temperature

Stream Temperature Response to Forest Harvest: Type N, Washington

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A major function of riparian buffers is to reduce the impact of forest harvest on stream temperature. We investigated the effect of variable length, 50-foot width, no-cut riparian buffers on stream temperature in a Before-After-Control-Impact study. Three buffer treatments; one following the current Washington state forest practices (FP) buffering a minimum of 50 percent of the perennial stream channel, one buffering 100 percent of the channel, and one with no buffer – or zero percent, were compared with an unharvested reference treatment. Over the first two years post-harvest, shade loss was nine, 32, and 71 percent in the 100 percent, FP, and zero percent treatments, respectively. Temperature increased by 1.2 °C in both the 100 percent and FP treatments and 3.2 °C in the zero percent treatment. These results are similar to those from other studies of similar sized streams and buffers and may be used to guide further refinements of the forest practices rules.

Ehinger et al., Aerial photos of one block of Type N study sites in Washington.