

Fish, Aquatic Ecosystem Response

A perspective from the interior PNW: A comprehensive assessment of the effects of harvest practices on stream systems

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Evaluation of the environmental effects of timber harvest is generally lacking for current forest management practices. This is true for industrial forestlands, harvest in second-growth forests, and in particular, the interior Pacific Northwest. The Mica Creek Project in northern Idaho is a comprehensive monitoring program that fills a critical knowledge gap about the environmental effects of contemporary timber harvest practices in the region. The first phase of the project evaluated the effects of forest road construction and both clear cut and thinning harvests applied to 50 percent of watershed areas on aquatic resources. Harvest effects on streamflow, sediment, stream shade, water temperature, nutrients, bugs, and fish were monitored across both large and small watersheds. Increases were observed in streamflows, nutrients, temperatures in harvested areas, and in the number and distribution of fish after harvest. Very small or no changes were found in downstream water temperatures, sediment following the first year after harvest, and in the amount and kinds of bugs. In summary, the results suggest that current forest harvest practices in northern Idaho are effective at protecting stream resources for the given level of land cover change that occurred in this study.