

Research Memo

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New Publication

Logging and Soil Disturbance on Steep Slopes in the Quesnel Highlands, Cariboo Forest Region. J.W. Schwab and W.J. Watt.

Logging in the eastern portion of the Cariboo Forest Region is progressing from gentle terrain onto the steep mountain slopes of the Quesnel Highlands. Soil disturbance caused by tractor logging methods on steep slopes is now of concern to forest managers. This concern initiated a survey, in the summer of 1975, to determine the type and magnitude of soil disturbance associated with crawler tractor and running skyline logging.

Soil disturbance types were recorded at point samples along transects run within 15 cutblocks. Additional detailed road measurements were also made.

The survey found total disturbance on running skyline - yarded clearcuts to average 34.7% and on crawler tractor - logged clearcuts to average 62.6%.

Running skyline yarding under winter conditions causes the least soil disturbance (12.7%).

Much of the disturbance on crawler tractor-logged sites is deep disturbance attributed to blading skidroads on steep terrain. This disturbance increased with an increase in slope. Skidroad disturbance, averaging 36%, was found not to change appreciably on a seasonal basis, but the types of disturbance do vary for each season. Deep disturbance in the form of gouging is greatest during summer logging.

The measurement of soil disturbance reflects different degrees of alteration to the forest ecosystem. The effect may be beneficial or detrimental to the logged site in terms of erosion susceptibility, regeneration establishment and soil productivity.

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Further details on the study may be found in Research Note #88
*"Logging and Soil Disturbance on Steep Slopes in the Quesnel Highlands,
Cariboo Forest Region"* by J.W. Schwab and W.J. Watt. Copies may be
obtained from: Information Services Branch, Ministry of Forests,
1450 Government Street, Victoria, B.C. V8W 3E7.