

Technical Reports

BC Coastal Forest Sector Hem-Fir Initiative

Harvest of Unprocessed Coastal Logging Residues with Bin Trucks

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Abstract

A trial was conducted to monitor removal of harvesting residues from a coastal hemlock site on a widened right-of-way on northern Vancouver Island. The piles contained more branches than typical coastal cutblocks since many of the trees had branches over their full length as they were grown adjacent to the road. Residue piles contained about 55 oven-dry kg of wood per cubic meter of bulk volume at an average moisture content about 50% (green basis). 79% of the piles were between 25 kg/m³ and 100 kg/m³. Residues were loaded into semi-trailer bin trucks using a conventional hydraulic log loader, and reached an average load density of 106 oven-dry kg/m³. The trailers had a bulk volume of 61.6 m³, and an average payload of 6.5 ODT. Average loading times were about 21 minutes. The trial recovered 61.8 ODT/ha of residue, at a biomass ratio of 24% (residue volume recovered / merchantable volume harvested). There were 54.6 ODT/ha of residues remaining on the site after the recovery operations were completed.

Keywords: Roadside residue, biomass, single pass harvesting, bin truck, density payload, residue piles

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