

Steep slope logging

This resource outlines the key regulatory requirements when operating logging equipment on steep slopes. It includes the specific requirements for steep slope logging as well as some of the requirements for all workplaces that are most relevant for this type of forestry operation.

Note that the Occupational Health and Safety (OHS) Regulation and *Workers Compensation Act* references included here are not a complete list. As an employer it is your responsibility to understand and apply all relevant regulatory requirements. Visit worksafebc.com/searchable-regulation for the OHS Regulation and related materials.

Equipment maximum slope limits	Reference
Equipment manufacturer's maximum slope operating limits	OHS 26.16(2)
If manufacturer's limits are unknown, limits are based on equipment type	OHS 26.16(3)
Do not operate equipment if stability cannot be assured	OHS 26.16(5)

Owner and licensee responsibilities	Reference
Ensure prime contractor is qualified to oversee steep slope activities	OHS 26.1.1(1)
Ensure prime contractor and/or employer has a system to manage steep slope work, safely and effectively without undue risk	OHS 26.2(3)(a)
Provide all known information to the prime contractor so they can control risks (information and maps with slopes and other hazards)	Act 25(b)
Ensure that a landslide risk assessment (geotechnical report) has been conducted if there is a risk of landslides in the harvesting area and that it includes an assessment of ground-based harvesting operations	OHS 26.18
Ensure a steep slope risk assessment is conducted and that written safe work procedures are developed and implemented, prior to conducting the work	OHS 26.2(1)

Prime contractor responsibilities	Reference
Ensure steep slope risk assessment is conducted and documented	OHS 26.2(2)
Ensure written safe work procedures for steep slope activities have been developed and implemented, prior to conducting the work	OHS 26.2(2)
Ensure that steep slope activities are coordinated with other on-site activities	Act 24(1)(a)
Ensure that ground-based harvesting plans are consistent with recommendations and safe work procedures from landslide risk assessment (geotechnical report)	OHS 26.18

Employer responsibilities	Reference
Have a qualified person conduct and document steep slope risk assessment	OHS 26.16
Develop written safe work procedures to control risks identified in assessment	OHS 26.16
Provide training to workers for safely working on steep slopes and operating steep slope equipment competently	OHS 26.3
Hold crew safety meeting to review steep slope risks and control measures, including applicable safe work procedures	OHS 26.5
Ensure that crew is aware of recommendations and safe work procedures from landslide risk assessment (geotechnical report)	OHS 26.18
Ensure workers are aware of responsibility to report unsafe conditions, including previously unknown hazards or changing conditions	OHS 3.10
Ensure workers are aware of responsibility to refuse to conduct unsafe work, especially where it concerns machine stability on steep slopes	OHS 3.12
Ensure equipment can safely perform functions on steep slopes and that it is selected and used in accordance with manufacturer's instructions, as specified by a professional engineer, or in a manner acceptable to WorkSafeBC	OHS 4.3 OHS 26.12.1
Inspect steep slopes, equipment, and work processes at frequent intervals to prevent the development of unsafe working conditions, especially machine instability	OHS 3.5
Keep records of planning, assessments, procedures, training, instruction, meetings, orientations, equipment inspections, and maintenance	Various

Supervisor responsibilities	Reference
Actively supervise work on steep slopes to ensure the safety of workers	Act 23(1)(a)
Promptly investigate unsafe conditions or acts and take corrective action, especially signs of machine instability	OHS 3.10

Worker responsibilities	Reference
Inspect steep slope equipment prior to every shift, especially critical components	OHS 16.3(1)
Continuously monitor equipment performance during operations	OHS 16.3(2)
Report any unsafe conditions or defects in the equipment	OHS 16.3
Operate equipment safely, according to employer's training and manufacturer's instructions	Act 22(2)(a) OHS 4.10
Work according to employer's plan, safe work procedures, and training	Act 22(2)(a)
Report any hazards or concerns with the plan and safe work procedures	Act 22(2)(e)
Immediately stop work if machine stability cannot be assured or work may create an undue hazard to the operator or any other person	OHS 3.12

Equipment inspection and maintenance	Reference
Conduct and document equipment inspections per manufacturer's instructions	OHS 16.3
Conduct equipment maintenance and repairs per manufacturer's instructions	OHS 4.3(2)
Ensure safeguards and safety warning devices are functioning effectively	OHS 4.12

Guarding and emergency escape	Reference
Rollover protective structures (ROPS) are in place and meet standards	OHS 16.34-37
Cab and window guarding is in place and meets standards	OHS 16.33
Safeguarding is in place to protect operators from saw chain shot (windows are shot resistant and/or protective guards prevent shot from striking cab windows)	OHS 26.13.4
Secondary means of escape from cab is available and functioning	OHS 16.24

Radio controlled equipment	Reference
Remotely controlled equipment is equipped with a fail-safe or stop mechanism that operates if the remote control device fails	OHS 26.12.2

Rigging and attachment points	Reference
Rope and anchor attachment points on equipment are engineered for expected loads and working load limit ratings are marked	OHS 4.8
Rigging components working load limits are adequate for expected loads	OHS 15.4(2)
Inspect wire rope per manufacturer's instructions and rejection criteria	OHS 15.25
Inspect rigging at regular intervals according to manufacturer's instructions	OHS 26.42

Anchors	Reference
Select and use anchors in accordance with manufacturer's recommendations	OHS 26.12.1
Secondary safety features are used in accordance with manufacturer's instructions (tethered movement sensors, stump monitors, etc.)	OHS 26.12.1
Stump anchors must be notched to retain the strap or line	OHS 26.40(2.1)
Standing trees used as anchors or to deflect lines must be tied back	OHS 26.40(1)
A block must be used if a tree or stump is used to deflect a running winch line	OHS 26.42

Safe work areas	Reference
No workers except the operator are permitted within the active falling area (2 tree lengths) of mechanized felling equipment	OHS 26.29.4
Identify the hazard area around steep slope equipment & communicate to crew	OHS 26.14.1
No workers are permitted to enter the hazard area of a machine without getting clear permission from the equipment operator	OHS 26.14.1(3)
Workers must not be positioned where they could be struck by a moving line or where they could be struck by the line if it breaks or comes loose	OHS 26.39(1)
Workers must be positioned in the clear of moving logs, saplings, root wads, chunks, or other materials	OHS 26.39(2)
Workers must not be on or in a stationary machine used for winching or as an anchor during winching operations or while lines are under tension	OHS26.12.1(2)

Rollover or tipover and fire preparedness (feller bunchers, timber harvesters, and timber processors operating on sloped ground)	Reference
Powered cutting tool is available and secured in cab to cut through steel and polycarbonate	OHS 16.38(2)(a)
Fire extinguisher is in good working order, secured outside of cab	OHS 16.38(2)(b)
Effective engine fire suppression system is in place (for equipment manufactured after September 1, 2023)	OHS 16.38(2)(c)

Emergency preparedness and response	Reference
First aid assessment and procedures consider incidents due to steep slope risks	OHS 3.16(2)
Rescue procedures consider rescue from equipment on steep slopes	OHS 4.13(2)
Workers instructed in fire prevention and emergency evacuation procedures specific to steep slope conditions	OHS 4.16(1)
An emergency drill specific to steep slope conditions is conducted at least once per year	OHS 4.14(3)