

Steep Slope Logging – Risk Assessment and Site Pre-Work

Date				Licensee/Owner			
Cutting Permit				Contractor			
Block				Steep Slope % (range)		Location within Block	
Machine		Max Slope % allowed		Operator		Estimate of hours to do work	
Machine		Max Slope % allowed		Operator		Estimate of hours to do work	
Appropriate Information Supplied by Owner (map, slope %, hazards)					Yes <input type="checkbox"/>		
Assessor Qualified to Conduct Steep Slope Assessment					Yes <input type="checkbox"/>		
Risk Assessment of Steep Slope				Site Specific Procedures (Refer to Part 2 – Safe Work Practices for Steep Slope Operations)			
Note: Site specific procedures must be developed for each type of machine that is operating on the steep slope.							
Slopes greater than 35% for wheeled machines				Yes <input type="checkbox"/>	N/A <input type="checkbox"/>		
Slopes greater than 40% for tracked machines				Yes <input type="checkbox"/>	N/A <input type="checkbox"/>		
Unstable Ground (slumps, Terrain Stability Field Assessment, talus)				Yes <input type="checkbox"/>	N/A <input type="checkbox"/>		
Ground Roughness (boulders, rock outcrops, hummocks, gulleys)				Yes <input type="checkbox"/>	N/A <input type="checkbox"/>		
Unsafe slopes below operating area				Yes <input type="checkbox"/>	N/A <input type="checkbox"/>		
Shallow Soil Depth over Bedrock				Yes <input type="checkbox"/>	N/A <input type="checkbox"/>		
Soil conditions (sandy or saturated organic soils, consider how logging may affect water flow and soils on site)				Yes <input type="checkbox"/>	N/A <input type="checkbox"/>		
Poor winter ground conditions (poor snow, minimal frost depth on site)				Yes <input type="checkbox"/>	N/A <input type="checkbox"/>		
Slash (amount, elevated, size)				Yes <input type="checkbox"/>	N/A <input type="checkbox"/>		
Poor visibility (snow, fog, night shift)				Yes <input type="checkbox"/>	N/A <input type="checkbox"/>		
Harvest Plan Requirements (reserve areas, leave trees, planned skid trails)				Yes <input type="checkbox"/>	N/A <input type="checkbox"/>		
Oversized Trees (size, weight and species)				Yes <input type="checkbox"/>	N/A <input type="checkbox"/>		
High Stumps (what is the allowable stump height)				Yes <input type="checkbox"/>	N/A <input type="checkbox"/>		

Isolated Work (how close is machine assistance to overcome a difficulty)	Yes <input type="checkbox"/>	N/A <input type="checkbox"/>	
Other:	Yes <input type="checkbox"/>	N/A <input type="checkbox"/>	
Steep Slope Pre-Work			Check that the following requirements are in place and communicated with all workers on site.
Steep slopes and No Go areas are easily identified, mapped and map provided to workers.	Yes <input type="checkbox"/>	N/A <input type="checkbox"/>	
Manual Tree Falling Required	Yes <input type="checkbox"/>	N/A <input type="checkbox"/>	
Duration of Exposure minimized (consider shift length, # of breaks, # of consecutive days on shift)	Yes <input type="checkbox"/>	N/A <input type="checkbox"/>	
Machine capabilities appropriate for timber type (tree size and weight)	Yes <input type="checkbox"/>	N/A <input type="checkbox"/>	
Confirm good working condition of machine(s) (hydraulics, tires/tracks, ROPS, guarding, seatbelts, escape hatches)	Yes <input type="checkbox"/>	N/A <input type="checkbox"/>	
Operator Competency (check experience and training)	Yes <input type="checkbox"/>	N/A <input type="checkbox"/>	
Operator State of Mind – alertness, understanding of plan – Avoid fatigue, rushing, complacency	Yes <input type="checkbox"/>	N/A <input type="checkbox"/>	
Operator – can measure slope %, stop operations if unsure/uncomfortable and contact supervisor	Yes <input type="checkbox"/>	N/A <input type="checkbox"/>	
Skid trail construction (locations and specs discussed)	Yes <input type="checkbox"/>	N/A <input type="checkbox"/>	
Supervision and Man-check frequency	Yes <input type="checkbox"/>	N/A <input type="checkbox"/>	Who: How Often:
Emergency Response Plan in place	Yes <input type="checkbox"/>		
Reassessment Date and Update to Site Specific Procedures:			
Date:	Updates:		
Date:	Updates:		
Signatures:			
Operators			
Qualified Assessor			
Supervisor			

Using the Steep Slope – Risk Assessment and Site Pre-Work Form

Who – As described by WorkSafeBC Regulation 26.16, the steep slope hazard assessment must be completed by a *qualified* person. WSBC OHS Regulation Part 1 provides the following definition of a qualified person: “*being knowledgeable of the work, the hazards involved and the means to control the hazards, by reason of education, training, experience or a combination thereof*”.

Refer to the Steep Slope Logging Resource Package for more information on qualified assessors.

Where – As specified by WorkSafeBC OHS Regulation 26.16, on all slopes over 35% (wheeled equipment) or 40% (tracked equipment) where mechanical harvesting is planned and the manufacturer’s maximum slope operating stability limit is not known.

What – Complete the Steep Slope Hazard Assessment, develop site-specific Steep Slope Procedures and conduct a Pre-Work Meeting to brief operators on those procedures.

When – Before harvesting operations commence.

How:

Follow these steps:

1. Page 1 - Complete the top part of the form to identify the area / unit under the assessment and plan.
2. Use a map that shows block boundaries, roads, steep slope sites, riparian areas, sensitive soils, etc. Consult other key information (e.g. preliminary steep slope assessment map, Terrain Stability Field Assessment map, etc.).
3. Field review (walk) the area planned for mechanical harvesting operations. Identify sites with slopes / characteristics that pose machine stability risks. If site conditions change during the operation, it may be necessary to re-evaluate and complete another assessment.
4. On the form, check off those conditions that pose a risk for machine stability. For each condition with a “Yes” checked, write the site specific procedures that will be followed to allow safe operations on that slope.
5. Consider State of Mind, Operator Competency and Duration of Exposure for operators that will conduct the work.
6. Consider other Site Features (e.g. convex slopes, bluffs, gullies, benches, escape routes) plus operational constraints (e.g. soil disturbance limits, retention strategy, danger trees, upslope terrain stability or avalanche risk). Identify each one; consider how they will affect operations.
7. If stability risks cannot be adequately controlled, designate and map area as “No Go”. Develop an alternate harvest plan or amend boundaries to exclude (e.g. designate as WTP).
8. Conduct a pre-work meeting to communicate the hazards site specific procedures to all the workers and supervisors who will be involved in the steep slope operation.

Steep Slope Logging Legal Responsibilities

Before starting steep slope logging operations it is important to review the legal responsibilities for the owner, employer, prime contractor (if it is a multi-employer worksite), supervisor and operators. Review the list below to see if these requirements have been met.

Owner Responsibilities

- Provide all of the known information to the employer/prime contractor so they can eliminate or control steep slope hazards (e.g., maps with slopes and related information).
- Conduct and plan for steep slope operations and acceptable safe work procedures that are consistent with the Occupational Health and Safety Regulation.
- Ensure steep slope plans have been reviewed and acknowledged, and that a system is in place to ensure compliance.
- Identify conditions and activities that are associated with known or foreseeable risks to workers.
- Conduct and document advance planning for the work.

Prime Contractor Responsibilities

- Establish and maintain a system to ensure compliance with the Act and OHSR, and coordinate health and safety at the workplace.
- Conduct and plan for steep slope operations that are consistent and compliant with the OHSR.
- Ensure acceptable safe work procedures are in place that meet guideline requirements.
- Identify conditions and activities that are associated with known or foreseeable risks to workers.
- Ensure advance planning has been conducted and documented for the work.

Employer Responsibilities

- Ensure the health and safety of your workers as well as the other workers onsite.
- Adequately instruct, train, and supervise workers in steep slope operations.

Supervisor Responsibilities

- Actively supervise and monitor steep slope operations
- Not knowingly allow a worker to operate mobile equipment in a way that could create an undue hazard.

Operator Responsibilities

- Follow acceptable safe work procedures.
- Report any hazards encountered to the supervisor.
- Stop work if the plan uncovers any high risk issues (e.g., the machine slips down the hill or equipment is being pulled with attachments).
- Operate the mobile equipment safely.

References: The Workers Compensation Act, Occupational Health and Safety Regulation and WorkSafeBC's Steep slope logging checklist.