

5.12 Road Works Shutdown Indicators

Several visible weather- and soil-related conditions can be used on site to help determine when forest road operations are to be shut down because the works are causing, or may imminently cause, environmental damage. Refer to the BC Timber Sales [Environmental Management System Manual \(PDF\)](#), which contains information on environmental policy, training, awareness and competence, emergency preparedness and response and records, among other items.

Be prepared to shut down or alter construction activities during periods of adverse weather to avoid uncontrolled soil erosion and sediment transport. In general, work on earth materials in environmentally sensitive areas only during favourable soil moisture conditions. Consider maintaining a rain gauge at the work site and keeping a written record of rainfall levels.

The objective is to reduce potential adverse impacts on forest resources such as:

- erosion of exposed soils;
- sediment transport to fish streams; and
- slope failure originating within the limits of the construction site or in the adjacent terrain.

When a qualified registered professional develops a prescription for a road-related activity in areas having a moderate or high likelihood of landslides, ensure that the prescription contains site-specific, weather-related shutdown indicators and start-up requirements.

In general, and where predictable, shut down work before the following happens:

- sediment transport cannot be controlled;
- slope stability is in question, or landslides occur;
- windfall is happening around or near the site;
- the road surface deteriorates and vehicle traffic damages the road;
- activities damage adjacent stands and plantations;
- activities damage soils and inhibit future reforestation; and
- spills of fuel or explosives occur.

5.12.1 Procedures for Shutting Down Operations

1. Stop the activity. Cease works before soils are visibly soft or muddy and associated silty waters or sediment are flowing toward streams, lakes, or marine-sensitive zones or where such conditions are reasonably anticipated to develop. Equipment operators are usually in a position to first recognize signs of pending soil erosion on site. Emphasize the need for them to communicate their observations to the site supervisor during the project pre-work phase.

2. Take steps necessary to avoid impacts. Before shutdown, control drainage to ensure that subsequent damage does not occur. Carry out protective measures in the work area, primarily on sites where works are not at a completed and controlled stage. Consider the following general practices:

- minimize sediment delivery from stockpiled erodible soils;
- ensure that drainage systems are functional;
- add water control measures (such as cross-ditches and waterbars) and other soil erosion and sediment control measures where appropriate.

3. Document and report the shutdown to the supervisor.

4. Account for all people working in the area before leaving the site.

5. Restarting the works. Establish and convey to the road crew the criteria for restarting works, including any further required mitigation measures.

5.12.2 Limiting Road Use to Minimize Adverse Impacts

Restrict traffic where works are shut down because of saturated soil conditions. Post temporary signs warning of the danger, and advise the appropriate managers, agencies, and local residents of the necessity to close/restrict the road to traffic.

5.12.3 Emergency Road Maintenance

Only in emergencies is it appropriate to carry out maintenance during high water flow or saturated soil conditions because of the potential for creating an adverse impact. For example, if a culvert is plugged or will imminently plug and wash out a road fill or drainage structure, then rectify the problem immediately. Failure to carry out such works may result in the loss of infrastructure and unacceptable impacts to other resources. If adverse impacts indeed occur during such maintenance work, notify the appropriate agencies at the earliest possible time.

