

## STANDARD SEDIMENT AND EROSION CONTROL PLAN (SECP) FOR LOW RISK ROAD DEACTIVATION

TABLE 1 – SECP BMPs for low risk roads

DEACTIVATION						
TECHNIQUE	LEGEND	REF.	OBJECTIVES	BMP	LOCATION	TIMING OF INSTALLATION
LIMIT SITE DISTURBANCE		1	Protect soil from unnecessary disturbance which creates potential for erosion processes.	No grubbing outside of the road prism. When clearing vegetation within the road right-of-way, cut off (prune back) vegetation leaving root mass intact in soil. Vegetation promotes rainfall interception and infiltration. Store equipment and materials away from existing vegetation where possible.	Along the entire right-of-way.	During road deactivation.
DRAINAGE MANAGEMENT		2	Prevent water from collecting within ditch lines.	Installation of wing ditches will direct water out of the deactivated ditch lines, off the road and into surrounding vegetation for natural filtration.	Wherever road gradients have established high velocity flows within ditches.	As deactivation activities proceed.
		3	Direct water off road surface.	Install water bars/cross ditches to carry water into ditch lines and prevent accumulation of flow down deactivated road.	Install along deactivated road where grade promotes overland flow.	Prior to leaving the deactivation site.
		4	Prevent accumulation of ditch flow.	Remove existing culverts along road and replace with cross drains. Construct berms and ditch blocks near the new cross drains to prevent surface flow from mobilizing sediments.	Along deactivated road where culverts were removed.	Carried out sequentially as deactivation moves towards the POC of the road.
		5	Prevent accumulation of water and substantial deposition of sediments below the road due to natural drainages or seepages in the area.	Deposit clean substrates (gravel), if readily available, within the bottom of cross ditches which exhibit substantial flows.	All cross ditches which are likely to exhibit substantial flows.	As soon as ditches are constructed.
		6	Promote vegetation growth on newly deactivated road surface.	Decompact and loosen road surface to increase success of seeding and establishment of seedlings if deactivation prescription involves planting trees.	All areas which are scheduled to be planted.	As road deactivation procedures are systematically carried out.
		7	Prevent rill/gully formation on the road running surface.	Slope deactivated road surface so that surface flow will drain off the running surface.	Any road with significant slope and on side slopes.	During road deactivation.
EROSION CONTROL		8	Recontour to decrease erosion potential. Re-establish stable grades to allow for establishment of vegetation.	Construct stable cut and fill slopes at designed angles. Consider terracing steep cut slopes. Slopes should be constructed based on soils, aspect, moisture content and climatic conditions.	Any cut or fill slope created during deactivation.	Carried out sequentially as deactivation moves towards the POC of the road.
		9	Protect unstable or erodible fill at cross drain outlets with rock, flumes or other erosion-resistant material.	Install erosion-resistant measures at the outlet of cross drains with highly erodible material.	At the outlet of the cross drain. If water is discharged down an erodible slope, additional armouring may be required down to the toe of the slope.	In conjunction with the installation of the cross drain.
		10	Slow water velocity and limit down-cutting within the ditch lines.	Armour steep, erodible ditch lines with gravel and cobble to minimize erosive potential due to water velocity and volume.	Any erodible ditch line with high gradient should be armoured with hard materials.	Upon completion of ditch deactivation.
		11	Temporarily prevent rain splash erosion while the site is exposed during deactivation.	Temporarily cover exposed soils if heavy rainfall is encountered. Tarps, geotextile, hay or logging slash may be utilized.	Any exposed soils that may erode and be carried towards a watercourse.	If heavy rainfall is expected or long deactivation delays are anticipated.
		12	Provide seeding catchment areas to aid in germination/infiltration. Re-vegetate all exposed soils.	Surface roughening on all cut slopes and fill slopes. Do not backblade when finishing slopes. Seed all exposed soils.	All exposed soils in ditches and cut/fill slopes.	During final site contouring and after slopes are finished to grade.
SEDIMENT CONTROL		13	Provide cover for newly deactivated road surface and protect unstable soils during rain events prior to establishment of vegetation.	Pullback woody debris from below the road and place materials on the deactivated road surface.	The pullback of debris can occur wherever there is excess in areas where removal of these materials will not jeopardize terrain stability.	As deactivation activities are carried out sequentially.
		14	Reduce ditch water velocity to aid in sediment deposition and stop down-cutting.	Install rock check dams. Constructed of non-erodible material tightly packed together with ends higher than the center.	Install in highly erodible ditch lines with high gradient where water cannot be discharged from the ditch line (i.e. large through cut).	As deactivation activities are carried out.
		15	Provide areas for sediment deposition by temporarily slowing water velocity.	Construct settling basins with wing ditches as required.	Install at the bottom of slopes and prior to any watercourse where there is a direct connection with the ditch line.	As road is deactivated.
		16	Slow the flow of runoff water and aid in sediment deposition by temporarily slowing water velocity.	Install silt fences as required.	At the discretion of the contractor as deemed necessary. Install along contours of grade. Do not install in locations where heavy flows are anticipated.	As deactivation for a specific location or feature is completed.

### 1.0 Objectives

The primary objective of this SECP is to provide a generic plan for low risk road deactivation projects. Erosion, which causes sediment delivery into the aquatic environment, will be minimized during road deactivation by: (1) drainage management, (2) erosion control, and (3) sediment control (in descending priority). Low risk road deactivation typically includes: stable soils, gentle grades and moderate cuts/fills.

### 2.0 Critical Areas

Critical areas relating to erosion control with respect to road deactivation include; cut slopes, natural seeps, right-of-way clearing, ditch lines and terrain which drains toward any stream crossing.

### 3.0 Timing

All road deactivation should proceed in appropriate dry weather conditions. Mitigation measures and deactivation techniques must be implemented as the road is sequentially deactivated (i.e. not waiting until deactivation is completed before going back to install erosion control measures), or as soon as soil conditions allow. Drainage systems should also be constructed, as much as practicable, concurrently with subgrade deactivation. Once commenced, all road works will proceed to completion as soon as practicable. Additional timing windows apply to working around all fish bearing waters. Refer to the Reduced Risk Timing Windows and Measures for the Conservation of Fish and Fish Habitat for the Omineca Region.

### 4.0 Accountability

It is the responsibility of the contractor to ensure that this SECP is followed in conjunction with the BC Timber Sales Prince George Business Area Environmental Management System.

Should an emergency occur (i.e. significant erosion event due to forestry road deactivation activities), the event must be dealt with in accordance with the BC Timber Sales Environmental Management System, including site specific Emergency Response Plans and the Emergency Response Manual. Contact numbers and instruction for documentation of the incident are available in these plans.

### 5.0 Best Management Practices (BMPs)

While it is impossible to prevent sediment from leaving recently deactivated roads due to rainfall and snow melt, significant reductions can be realized. This plan does not address all possible mitigation measures that are available to implement; however, information has been incorporated to increase the effectiveness of the most common BMPs found in forestry road deactivation. Refer to Table 1 for recommended BMPs. For additional information, refer to the BC Timber Sales Environmental Field Procedures and the Forest Road Engineering Guidebook. All BMPs will be installed as per specifications in the BC Timber Sales Sediment and Erosion Control Field Guide.

### 6.0 Contingency Plans

Contingency plans are additional mitigation measures that will be employed if unforeseen environmental concerns are encountered during road deactivation. These plans include having extra sediment/erosion control materials on-site and halting operations if heavy or persistent rainfall is encountered.

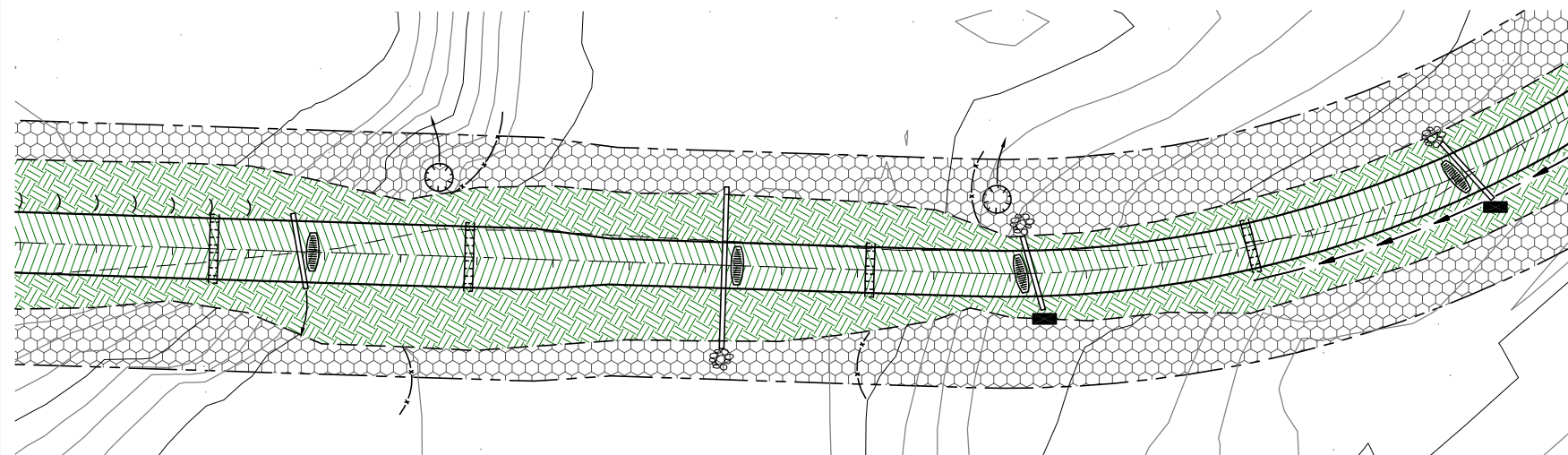
An emergency supply of sediment control materials must be available on-site which may include; silt fencing, tarps, sandbags, seed and straw bales. In addition, stockpile an adequate supply of culverts, riprap and geotextile on-site for immediate and future use, should the need arise.

If works are temporarily suspended due to heavy precipitation, the site must be monitored during the shutdown period to ensure environmental concerns are adequately addressed.

Should unanticipated site conditions (i.e. significant seeps flowing out of cut slopes or hidden layers of highly erodible, fine textured soils) or extreme weather be encountered during deactivation, the BC Timber Sales representative must be immediately contacted to reassess the project. If increased environmental risk is perceived, site specific plans/measures may be required.

### 7.0 Inspection and Maintenance

During deactivation, inspections of the BMPs must be made, especially after heavy precipitation events. If any measure is not functioning as intended, it must be immediately repaired/replaced. All inspections and actions shall be documented.



PROJECT TITLE	BCTS-SECP-R		DESIGNED BY: BAA, RPBio
PROJECT LOCATION(S)	DRAWING NAME:	REV.:	CHECKED BY: RT, BCTS E.O.
DATE	08/06/06		DRAWN BY: WG
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