

### BC Timber Sales Environmental Management System

### ENVIRONMENTAL FIELD PROCEDURE

# **EFP 04 ROADS, BRIDGES AND MAJOR CULVERTS**

## **Purpose and Scope**

This EFP applies to all BCTS Licensees, Permittees and Contractors, including their employees, agents, and subcontractors, involved in road, bridge and major culvert construction, maintenance, inspection and deactivation within the scope of the BCTS EMS. It describes procedures to reduce the risk of negative impacts of these field activities on the environment. This EFP does not replace the requirements of legislation, licences, permits and contracts.

# Road, Bridge and Major Culvert Inspections

- 1. **Understand** all applicable inspection and engineering requirements. Know which sites and structures require assessments, and who is qualified to do them. Only conduct assessments that you are qualified to do.
- 2. **Review** all relevant assessments before conducting the inspection. Understand those assessments and their management implications.
- 3. **Review or walk** the project area, as well as the surrounding area of influence, to ensure complete collection and reporting/mapping of all relevant field information.
- 4. **Understand and use** the appropriate inspection form. Record all inspection results, identifying any deficiencies or additional inspection requirements, and submit to the project supervisor.

## **Road Construction, Maintenance and Deactivation**

- 1. Have a Project Plan.
- 2. **Construct and maintain** the road to ensure the structural integrity of the road prism and clearing width are protected, the drainage systems are functional and the road can be used safely by industrial users.
- 3. Maintain natural surface drainage patterns.
- 4. **Minimize** the impact on water quality and site productivity:
  - Operate during favourable weather conditions,
  - Utilize **sediment control** measures as required, including silt fences, hay bales, rock armouring, swales, water bars, or sediment ponds as appropriate,
  - **Clean** introduced debris from ditches, streams and culverts on an on-going basis before any impact can occur, and
  - Minimize erosion potential of exposed soil surfaces by seeding of disturbed areas.
- 5. When working on crossings, **know the stream classification** and prescription, including timing windows and other specifications.
- 6. **Install** appropriate water control measures on roads at locations where there is a risk of erosion.
- 7. Ensure that **road surface drainage** is directed to drainage structures and is not impeded.
- 8. **Avoid** directing water onto unstable slopes or erodible soils; direct water to stable slopes and / or armour outfalls with rock.
- 9. When re-establishing natural drainage patterns during **road deactivation**, the road fill should be removed down to the natural ground level. Cut and fill slopes must be left in a stable condition.
- 10. **Control** blasting to minimize fly-rock damage and slope instability.
- 11. Know the locations of end-haul and spoil sites.
- 12. Ensure **signage and notification requirements** are followed.

## Bridge or Major Culvert Installation, Maintenance and Removal

### 1. Have a Project Plan.

- 2. **Construct and maintain** bridges and major culverts associated with the road so that they are structurally sound and safe for use by industrial users.
- 3. Ensure the work complies with **timing windows** and other specifications.
- 4. Know the stream classification and prescriptions for the watercourses affected by the works.
- 5. **Minimize** the impact on water quality and site productivity:
  - Operate during favourable weather conditions. Know the project shut-down criteria,
  - Utilize **sediment control** measures as required, including silt fences, hay bales, or sediment ponds as appropriate,
  - **Clean** introduced debris from ditches, streams and culverts on an on-going basis, and before any blockages can occur, and
  - Minimize erosion potential of exposed soil surfaces by seeding of disturbed areas.
- 6. Avoid placing erodible materials on bridge decks, in stream channels or on flood plains.
- 7. Avoid **directing water** onto unstable slopes or erodible soils; direct water to stable slopes and / or armour outfalls with rock.
- 8. **Armour** culvert inflows, outflows and fill slopes to minimize erosion, as required. It is a good practice to pre-mark inlet and outlet culvert locations to ensure appropriate road prism fit. Culvert installation should consider skew, slope and % of embedment as designed.
- 9. **Dispose** of wood culvert/bridge debris in designated sites, outside riparian management areas, or according to pre-work instructions.
- 10. Prepare professional conformance/assurance statements as required.

## Fire Hazard Assessment and Abatement

- 1. Complete **Hazard Assessments** at prescribed intervals and complete abatement, if required, in accordance with the Wildfire Act and Regulation.
- If burning is part of the plan for abatement, ensure required notification is made, approvals
  received and conditions followed. Ensure burn area is safe from escape and clear of hazardous or
  sensitive areas. Monitor burned sites for extinguishment.



### **STOP WORK**

### and contact your project supervisor and the BCTS representative if:

- You are uncertain of the Project Plan, your responsibilities, or the location of hazardous/sensitive areas.
- A previously unidentified resource feature, resource value (e.g. cultural) or sensitive area is found.
- You experience unfavourable weather or site conditions that could cause environmental damage.
- You observe conditions that have the potential for immediate environmental damage.
- You believe the Project Plan will not work.