

APPENDIX B

Table V. Environmental Effects and Mitigation Measures:
Small Bridge and Culvert

Table V. Environmental Effects and Mitigation Measures: Small Bridge and Culvert Rehabilitation and Replacement

SMALL BRIDGE AND CULVERT REHABILITATION OR REPLACEMENT 8 (ONLY PROJECTS THAT DO NOT REQUIRE DFO AUTHORIZATION)		
<i>VECs</i>	<i>Description of Effects</i>	<i>Mitigations</i>
(1) Air Quality: air quality and noise levels.	<input type="checkbox"/> Decreased ambient air quality <input type="checkbox"/> Increased ambient noise levels	<input type="checkbox"/> Ensure materials being stored/transported are covered. <input type="checkbox"/> Confine “noise” activities to daytime hours.
(2) Land Resources: soils, topography and landscape.	<input type="checkbox"/> Changes in slopes, landforms, and landscape <input type="checkbox"/> Soil compaction and rutting <input type="checkbox"/> Slope instability, due to increased spoil exposure and improper excavation and storage <input type="checkbox"/> Soil contamination	<input type="checkbox"/> Avoid activities with steep and/or sensitive slopes. <input type="checkbox"/> Keep site clearing to a minimum (maintain vegetated buffer wherever possible) and restore vegetation as soon as possible to minimize duration of soil exposure. <input type="checkbox"/> Hand clear steep slopes when possible. If prolonged exposure is expected, stabilize surface using temporary cover (i.e. grass, mulch, erosion blanket, etc.). <input type="checkbox"/> Implement Sediment /Erosion Control measures where applicable. Phase work to minimize duration of exposure of disturbed areas. <input type="checkbox"/> Maintain a consistent access route. <input type="checkbox"/> Halt construction during excessive rainfall events. <input type="checkbox"/> Capture, contain, and clean up spills and leaks immediately.
(3) Water: Resources surface water hydrology, surface water quality, aquatic sediments, and groundwater quality and quantity	<input type="checkbox"/> Adverse modifications to surface drainage patterns <input type="checkbox"/> Reduced water quality due to increased erosion, sedimentation, transportation of debris and contamination, etc.	<input type="checkbox"/> Retain vegetated buffer around water bodies. <input type="checkbox"/> Minimize changes to the ground surface that affects its infiltration/runoff characteristics and maintain effective surface drainage upon completion of project. <input type="checkbox"/> Water quality is to be maintained at all times. Only clean building material, free of particulate matter, shall be placed in water. Any equipment operating in water bodies must be cleaned prior to entering the water and inspected daily for leaks; never leave equipment in water overnight. <input type="checkbox"/> Sedimentation and erosion control mechanisms shall be installed around work area to prevent sediments from silt from entering watercourse. Periodically inspect and repair, if necessary, these structures. <input type="checkbox"/> Filter/settle out sediment before allowing water to enter any drainage pathway. <input type="checkbox"/> Capture, contain, and clean up spills and leaks immediately.
(4) Flora and Fauna: aquatic and terrestrial species /population and communities/habitats	<input type="checkbox"/> Damage to/and or removal of vegetation in immediate or adjacent areas <input type="checkbox"/> Introduction of invasive species <input type="checkbox"/> Sensory disturbance causing displacement/habitat avoidance <input type="checkbox"/> Impeded/alterd wildlife movement <input type="checkbox"/> Habitat loss/fragmentation	<input type="checkbox"/> Use existing roadways/disturbed areas for site access and travel within the site. <input type="checkbox"/> Minimize removal of vegetation and disturbance to natural banks and streambed. When possible use hand clearing as it minimizes erosion and siltation. <input type="checkbox"/> Re-establish native vegetation where has been removed/damage and return all areas in and adjacent to the watercourse to their original form. <input type="checkbox"/> Only clean building material shall be placed in water. <input type="checkbox"/> According to wildlife present, schedule high noise level activities and other intrusive construction

		<p>activities to avoid critical life stages and critical times for wildlife.</p> <ul style="list-style-type: none"> ❑ Construct and orient fences/temporary dams, etc. in a manner that reduces impact to wildlife movement.
<p>(5) Anthropogenic/Human Environment: socioeconomic, public health, and cultural/heritage resources</p>	<ul style="list-style-type: none"> ❑ Disruption to park visitors, residents, and businesses due to changed noise, air and water quality, and traffic and changed aesthetics ❑ Injuries to public and workers arising from project activities ❑ Potential damage to unknown cultural/archaeological resources 	<ul style="list-style-type: none"> ❑ Evaluate site layout, access routes, and construction activities to minimize their visual impact. ❑ Use appropriate signage/fences for closed areas and identify detours/alternatives. ❑ If archaeological resources/cultural artifacts are discovered, immediately cease work, and alert archaeologist.
<p><i>* Also see relevant mitigations listed in Table I and Table II</i></p>		