

2. *Parallel high flow culvert – directional drilled* – similar to the concept listed above; however, Crescent Road would be able to remain open during construction. Estimated cost is \$90,000.
3. *Box culvert installation* – this option would see the replacement of the existing culvert with a concrete box culvert at a lower elevation and milder slope. The box culvert would be sized to allow for a natural creek bed in the bottom of the culvert. The installation of the box culvert will require the isolation of creek flows, and total closure of Crescent Road for a minimum of 4-5 days. Estimated cost is \$150,000.
4. *New bridge* – this option is significantly more expensive than the others with minimal additional benefit for fish passage compared to the box culverts. Crescent Road would need total closure for 2 to 3 weeks. Estimated cost is \$500,000 to \$700,000.

CONCLUSION

At the present time, staff are recommending Option 3, should appropriate credits be granted by DFO, because it has the best benefit cost ratio for fish passage and long-term infrastructure replacement. However, it will require a complete closure of Crescent Road for at least 4-5 days. A temporary road detour route is proposed as shown in Figure 1. Construction will have to take place during the fisheries window between August 15 and September 15, with the preference for September after the peak use of the beach area is over.

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PH/VL/CAB/brb
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