

Site 30 – Lantern Creek

There are two large culverts (greater than 2 m diameter) at the Lantern Creek crossing. Each of the culverts has a series of vertical wood posts in place along their length in order to support the roof and prevent the culverts from deforming under the weight of the overlying fill.

Both culverts were clear of debris at the time of the inspection in August 2005. A minor accumulation of wood debris and rocks was noted on the upstream side of one of the wood posts, however it would likely wash away under high flow conditions without any problem.

The creek channel was traversed for a distance of approximately 300 m upstream of the highway crossing. The areas around the channel consists of a thickly-vegetated fluvial fan with a single, well-incised creek channel. It is expected that channel shifting will occur gradually in the future but will not be a short-term hazard to the highway.

AMEC recommends the following Risk Level factors for this site using the debris flow frequency-severity matrix:

- Probability Factor of 1 based on the appearance of the creek channel upstream of the highway crossing.
- Consequence Factor of 1 based on the size of the existing culverts. It is judged that the existing culverts will be large enough to convey potential debris flow volumes below the road without problem, although some debris may accumulate within the culverts and would need to be cleaned out afterwards.

Therefore, the recommended Risk Level for this site is 1.

It is recommended that the maintenance contractor visually inspect the site for future debris accumulation around the culvert inlets and clean debris as necessary. The condition of the wood posts supporting the culverts should also be checked in the future.



Photo 1 (top) – Culvert inlets at the Lantern Creek crossing. Both of these culverts have a series of vertical wood posts along the length of the culvert to prevent the culverts from being deformed by the weight of the overlying fill.

The culverts were clear of debris at the time of the inspection, although a few pieces of wood debris and rocks had accumulated on the upstream side of one of the wood posts near the inlet of the east culvert.