

Highway 742 – Snow Avalanche Area South Of Three Sisters Dam – Km 16.3 To 17.4

This segment of the highway a short distance southbound from the Three Sisters Dam is signed as “Avalanche Area, No Stopping”. Avalanche paths on the slopes of the “Big Sister” mountain extend across the highway in this area. Personnel from Alberta Parks, Tourism and Recreation (Parks Division, Kananaskis Country) report that:

- Avalanches with the potential to reach the highway occur relatively infrequently in this area.
- One avalanche in recent years crossed the highway and ran out for approximately 200 m onto the frozen surface of the Spray Lakes Reservoir. It is understood that this avalanche occurred at a time when the highway was impassable due to snowfall conditions and therefore there was no traffic, however it carried the potential for a vehicle to be swept off the highway.
- Avalanche control measures have been applied at this site on one occasion in the past (the same “heli-bombing” of avalanche source zones as performed for the Km 4.8 to 6.0 segment of Highway 742).

The recommended Risk Level for this segment of the highway, based on AT’s snow avalanche risk matrix, is as follows:

- Probability Factor of 7 because there is a record of an avalanche extending across the highway on at least one occasion, however such avalanches are not probable each year.
- Consequence Factor of 6 based on the report of an avalanche crossing the road in recent years with the potential to sweep a vehicle off the highway.

Therefore, the recommended Risk Level for this site is 42.

The following measures are recommended to manage the avalanche risk at this site:

- Maintain the warning signage posted along the highway.
- Continue the current avalanche forecasting and control work by the Parks Division.
- Assess the avalanche hazard conditions at this site in order to determine if the current level of avalanche forecasting and control work is sufficient or if additional work is required. The assessment should be done in conjunction with the same assessment recommended for the Km 4.8 to 6.0 segment of the highway. The

assessment should be in accordance with the Canadian Avalanche Association's recommended standard of practice for avalanche hazard identification and management for resource and transportation industries. This assessment should be done collaboratively between AT and the personnel performing the current avalanche forecasting and control work, and may also require the participation of a specialist consultant with suitable training and experience in assessing avalanche conditions (for example, the requirements for managing avalanche safety programs for highway operations as listed for the Qualified Avalanche Planner designation proposed by the Canadian Avalanche Association).