



United States  
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Forest  
Service

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# Environmental Assessment

## Mission Ridge Ski Area Parking Lot Expansion

Wenatchee River Ranger District, Okanogan and Wenatchee National Forests  
Chelan County, WA

T21N, R19E, Section 24 W.M

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reduction in erosion upon completion of the project is expected. However, expected sediment reductions are not quantified.

**The affect of the site design on snow removal operations:** Under the snow removal plan for alternative B, snow would be plowed off the parking surface to create a snow road around the perimeter of the parking lot for groomer equipment access to the mountain at night. The remaining snow would be cleared from the existing second tier parking lot by pushing it over the embankment and onto the third tier lot. The snow pushed off of the existing second tier parking lot would need to be cleared a second time along with the snow from the new third tier lot. Some minor modification of existing parking lot use and maintenance may minimally reduce fines mobilized from the surface of the existing parking lot structure.

### Alternative C

Under Alternative C, the second tier parking lot would be extended at the same level as the existing second tier lot. The footprint of the proposed project is 1.2 acres, including 0.4 acres of previously disturbed sideslope fill of the existing parking area, and 0.8 acres of undisturbed forest within the riparian area of Squilchuck Creek. The project would remove approximately 247 trees > 8-inch dbh, and none > 27-in dbh (See Table 2.2 in Chapter 2).

**Mass Movement:** Construction of the project as described in Chapter 2 following standard geotechnical guidelines would have low risk of mass movement. (Nelson Geotechnical Associates, Inc., 2006). U.S. Forest Service review agrees with this finding (project record).

**Water Routing:** Alternative C would convey approximately 201 feet of Squilchuck Creek through a culvert. The smaller footprint of Alternative C would avoid riparian conversion of Lake Creek. Drainage channels lined with rock would be placed along the slope at the base of the parking lot extension. Construction methods following design criteria, engineering design, and revegetation prescription would minimize erosion on the expansion. Qualitatively, a reduction in erosion upon completion of the project is expected. However, expected sediment reductions are not quantified.

**Woody Debris Delivery:** Upslope woody debris delivery would be the same as Alternative A. Trees removed from the existing riparian would not be available to fall naturally into the stream. Although some organic input would be lost at a site specific level, stream function would be converted to water conveyance through a culvert. The culvert addition would function as a surrogate for stream stability provided by woody debris.

**Water Quality/Temperature:** Stream temperature regimes would be minimally altered from current existing conditions, and would likely be incrementally cooler when compared against Alternative A. Although trees would be removed, conveying the stream through a culvert would reduce some solar radiation reaching 201 feet of Squilchuck Creek when compared against light filtering through a tree canopy. Lower temperatures would minimally reduce productivity for non-native fish that potentially could be present immediately downstream of the project area. Temperature reductions were not estimated downstream of the project area.

**Water Quality/Fine Sediment:** Immediately downstream of the proposed parking lot expansion, fine sediments are present and naturally occur. The origin of fine sediments in Squilchuck Creek has not been conclusively identified. It is possible that some of the