## AVALANCHES IN NATIONAL PARK PLANNING

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## Abstract1

Avalanches are as basic to planning in snowy mountains as floods are to planning in river valleys. In National Parks, however, it is the job of planning to preserve not only human safety but the integrity of the park's biology, including avalanches and the ecosystems dependent upon them. One simple solution is to control avalanches that threaten life and property outside the wilderness and let avalanches run inside the wilderness. However, this solution sometimes fails at the wilderness boundaries where the prose and cons of access methods (roads vs tramways) must be weighed, taking into account park preservation as well as avalanche control.

The author is studying the planning at the Hurricane Ridge area of Olympic National Park which has a road crossed by 10 major avalanche paths, a lift skiing area that could expand into avalanche terrain, nordic skiing that certainly will, and potential for aerial tramway sites that could influence both snow safety and planning for retention of natural avalanche ecology.

## Discussion

LAURENT: Is it an assumption, or do you have evidence, that the highway protects the trees below it from avalanches?

BURR: It is basically an assumption, but the highway is the largest obstacle.

LACHAPELLE: I wonder if the greatest ecological impact on the vegetation beneath the road is caused by the rotary snowplows, rather than the avalanches.

BURR: There is some dieback due to the action of plows, but at Hurricane Ridge, the damage caused by plows does not seem to be large, at least in comparison to what I have observed at other areas, for example, Lake Tahoe, California.

Full-length paper available by writing to author who is interested in exchanging information on the subject of wilderness edge design.

HETHERINGTON: It would seem that the greatest ecological impact is caused by the road itself, and the effect of avalanches is minimum in comparison.

BURR: Perhaps, but the road is in place, and now it is necessary to make a decision as to whether or not the road should be left opened in the winter. Avalanches, with all of their effects, including the ecological effects, are an important consideration.