

3.16 NOISE

3.16.1 Affected Environment

A description of the A-weighted decibel (dBA) scale used to describe sound and factors that affect sound levels can be found in Appendix K – Additional Air Quality and Noise Information.

3.16.1.1 Noise Standards and Regulations

State, county, and local noise regulations specify standards that restrict both the level and duration of noise measured at any given point within a receiving property. The maximum permissible environmental noise levels depend on the land use of the property that contains the noise source (e.g., industrial, commercial, or residential) and the land use of the property receiving that noise.

White Pass lies within both Lewis and Yakima counties, but only Yakima County has noise regulations. However, any expansion activity at White Pass would not be regulated by Yakima County Ordinances because sounds originating from construction or refuse removal equipment and sounds from any forest harvesting activity are exempt from Yakima County Ordinances. Therefore, the Washington State regulations would apply to the project. The Washington Administrative Code (WAC) establishes limits on the levels and duration of noise crossing property boundaries. Allowable maximum sound levels depend on the zoning of the noise source and the zoning of the receiving property, as shown in Table 3.16-1.

**Table 3.16-1:
Maximum Allowable Noise Levels**

Environmental Designation for Noise Abatement of Noise Source	Environmental Designation of Noise Abatement of Receiving Property		
	Class A (dBA)	Class B (dBA)	Class C (dBA)
Class A (residential/recreational)	55	57	60
Class B (commercial)	57	60	65
Class C (industrial)	60	65	70

Source: WAC 1975

The WAC noise code also identifies a number of noise sources or activities that are exempt from the noise limits described above (WAC 1994):

- Sounds created by traffic on public roads;
- Sounds created by warning devices (such as back-up alarms); and

- Sounds from blasting and from construction equipment are exempt from the standards during the day (7:00 a.m. to 10:00 p.m. weekdays and from 9:00 a.m. to 10:00 p.m. on weekends) in rural and residential districts.

3.16.1.2 Existing Noise Sources and Levels

The White Pass Study Area is in a relatively remote forested area, is sparsely populated, and has no sensitive receptors nearby. The largest noise impact within the White Pass Study Area is the passing traffic on US 12. Its level varies with traffic density and can be heard on the upper slopes of the existing ski area. This traffic noise can rarely be heard in Pigtail or Hogback Basin, where solitude remains. The most apparent non-natural noise in Pigtail and Hogback Basins is the occasional noise from low-level U.S. Army helicopters, U.S. Navy jets, and other military aircraft passing through the area.

Typical background noise levels in coniferous recreational areas range from 35 to 45 dBA in the summer daytime and 30 to 35 dBA in the winter daytime (Harrison 1980). Sound levels within the existing SUP are not uncharacteristic for this type of land use, as vegetation and snow cover absorb nearly all of the human caused noise. Even during winter operations, the noise level in the existing SUP area remains near background. Electric motors used on the lifts and limited snowmaking increase noise levels above background in the vicinity of these facilities. In addition, the passing of snow groomers and snowmobiles used for administration and maintenance occasionally breaks the natural silence.

3.16.2 Environmental Consequences

Information about construction site noise levels and the noise levels from snowmaking can be found in Appendix K – Additional Air Quality and Noise Information.

3.16.2.1 Alternative 1

Construction Impacts

Under Alternative 1, no new construction-related noise impacts would occur at White Pass. Any future project proposal presented to the Forest Service would be evaluated under the NEPA process.

Operational Impacts

The typical operational noise impacts during the winter under Alternative 1 would include normal ski area operations, limited snowmaking, occasional avalanche control, and auxiliary diesel backup. During the summer, the typical operational noise impacts would be associated with operating and maintaining the existing ski trail network and infrastructure for short periods of time. Maintaining ski trails and lift corridors would require periodic brushing or mowing to exclude trees and reduce the height of shrubs. Such activities would not be expected to have significant noise impacts, so overall noise levels currently experienced at White Pass would not increase.

The sounds of human activities usually go unheard within Pigtail and Hogback Basins. Occasionally during the winter months the distant sounds of the *Paradise* lift operation and skiers using the present permit area would be heard in the Pigtail Basin. In addition, there would be infrequent sounds created by passing backcountry skiers and overhead aircraft. Sounds of vehicle traffic other than an occasional snow groomer would not be heard within the basins. Occasionally during the winter months, the muffled boom from ski patrol avalanche control would be heard (White Pass Ski Area, however, uses explosives infrequently for avalanche control). These conditions would continue under Alternative 1. These ongoing effects are consistent with state, county and local regulations governing the levels and duration of noise.

3.16.2.2 Alternative 2

Construction Impacts

Under Alternative 2, noise associated with excavation and construction of new chairlifts, trails, and the mid-mountain lodge would be the most noticeable impacts associated with the Proposed Action, and would occur over the period of one summer. Noise impacts from construction activities would be temporary and would occur throughout the expanded SUP area and nearby parts of the adjacent Goat Rock Wilderness Area. **During construction, there would be a temporary increase in noise levels in Hogback and Pigtail Basins, as well as in adjacent areas of the Goat Rocks Wilderness, due to the use of various types of construction equipment and the hauling of materials within the project area. Construction noise impacts would be localized, short-term, and generally limited to daytime hours during the summer of construction.** The exact noise levels would depend on the type of equipment being used and the duration of use. **A helicopter would be used for the installation of chairlift towers and upper terminals over a ten day period. During helicopter usage, the localized noise levels would be quite high relative to other times of the year. Daytime construction noise levels from helicopter use is estimated to be approximately 65 dBA at 350 feet, which is higher than typical daytime background levels of 35-45 dBA.** The types of ground equipment used for this project would typically generate noise levels between 80 and 90 dBA at a distance of 50 feet while equipment is operating. **During the ten days of helicopter use in the project area, the noise level would periodically be quite high in Hogback and Pigtail Basins, as well as in the adjacent portions of Goat Rocks Wilderness. The pristine noise level experienced by those using the PCNST and Wilderness areas during this period would also be altered during the use of ground equipment within the project area, but the audible noise would not be expected to travel as far.** Construction would be limited to daytime hours only and would be expected to occur over one summer season only. Notices would be posted on the trail or at the trailhead to alert PCNST travelers about the possible construction noise that might be audible to them (refer to Mitigation Measure MM16 in Table 2.4-2).

During this construction period sounds would be local and would have little effect on other resource values, including wildlife. Big game and other wildlife may be affected and choose to temporarily move to more quiet areas in the surrounding forestlands during the period of helicopter and/or other

construction operation. It is unlikely that there would be any long-term adverse impact from this noise source (refer to Section 3.6 –Wildlife).

Operational Impacts

Under Alternative 2, operational noise levels during the winter time would be slightly increased over existing conditions due to the more developed nature of the site.

Winter time operational noise level differences under Alternative 2 would result in more traffic on US 12, increased operation of maintenance vehicles (e.g., groomers), and increased operation of chairlifts. Chairlift noise levels are difficult to discern, as there are many factors that influence noise (drive/return terminal, snow, detachable vs. non-detachable, etc.). Doppelmayr has recorded noise levels between 73-78 dBA when standing underneath a chairlift drive terminal with no snow or people around (Doppelmayr, pers. comm.). Occasional avalanche control and auxiliary diesel backups are temporary noise impacts that would also occur during normal winter operations at White Pass.

Ski trails would be mechanically groomed and the periodic sounds of snow groomers would be heard in both Pigtail and Hogback Basins and in adjacent portions of the Goat Rocks Wilderness during operations (generally at night and in the early morning). The mid-mountain day lodge and the upper chairlift terminal would be serviced by over-snow machines whose sound would occasionally be audible to those in the basin. The use of existing snowmaking equipment in the base area would not be audible in the expansion area.

Typical operational noise impacts during the summer would be associated with maintaining the existing ski trail network and infrastructure in distinct locations, which could potentially be audible to PCNST travelers and users of the adjacent Goat Rocks Wilderness Area during working hours for two to three days each summer.

Overall, it is not expected that daytime operation levels would increase by more than 3 dBA with the project, and therefore no audible impact is expected (a 3dBA increase is the doubling of sound energy, which is generally considered the level of human perception). These effects are consistent with the state, county and local regulations governing the acceptable levels and duration of noise.

3.16.2.3 Modified Alternative 4

Construction Impacts

Under Modified Alternative 4, noise associated with excavation and construction of new chairlifts, trails, and buildings would be the most noticeable impacts associated with the project, and would be similar to the impacts described under Alternative 2. Notices would be posted on the trail or at the trailhead to alert PCNST travelers about the possible construction noise that might be audible to them (refer to MM16 in Table 2.4-2). In addition, terrain modification on Holiday and trail construction in the *Paradise* pod

would temporarily increase noise levels in the vicinity of these projects during construction due to the use of heavy equipment and hauling of materials. The actual sound level would depend on the type of equipment being used, the duration of use, weather conditions and individual human perception of the noise. **Noise impacts from construction activities under Modified Alternative 4 would be temporary and would occur throughout the project area in the summer time.**

Operational Impacts

Sound levels under Modified Alternative 4 would be similar to those described for Alternative 2, in Hogback and Pigtail Basins. Within the existing SUP area, the improvements to terrain (i.e., Holiday, Paradise pod) would not result in a noticeable increase in machinery operation or associated noise. Thus, Modified Alternative 4 would be consistent with the state, county and local regulations governing the levels and duration of noise.

3.16.2.4 Alternative 6

Construction Impacts

Under Alternative 6, noise associated with excavation and construction of the new *Basin* lift, the associated trails, the proposed mid-mountain lodge, and new road would be the most noticeable impacts associated with the project. These noise impacts would likely be less than the expected noise impacts that are described under Alternative 2 because the *Hogback Express* would not be built, therefore limiting noise impacts to the Pigtail Basin. Notices would be posted on the trail or at the trailhead to alert PCNST travelers about the possible construction noise that might be audible to them (refer to MM16 in Table 2.4-2). During construction there would be a temporary increase in sound levels due to the use of heavy equipment and hauling of materials. The actual sound level would depend on the type of equipment being used and the duration of use. **Noise impacts from construction activities under Alternative 6 would be temporary, slightly less than as described under Alternative 2, and would occur throughout the project area in the summer time.**

Operational Impacts

Following build-out of the proposed project, noise levels under Alternative 6 would be similar to those that are currently experienced in the existing SUP area during the winter time, including the operation of chairlifts, snow groomers, and vehicle traffic on US 12. Sound levels would be elevated over existing conditions due to the more developed nature of the site and would be less than the impacts described under Alternative 2 because the *Hogback Express* would not be built. **It is not expected that daytime operation levels under Alternative 6 would increase by more than 3 dBA with the project, and therefore no audible impact is expected. These effects are consistent with state, county and local regulations governing the acceptable levels and duration of noise.**

3.16.2.5 *Alternative 9*

Construction Impacts

Under Alternative 9, noise associated with excavation and construction of the new *PCT* chairlift and corresponding trails would be the most noticeable impacts associated with the project and would be similar to the expected noise impacts that are described under Alternative 2, except that all noise generation would occur within the existing SUP Area. During construction there would be a temporary increase in noise levels due to the use of heavy equipment and hauling of materials within the existing SUP. The actual noise level would depend on the type of equipment being used, the duration of use, weather conditions and individual human perception of the noise. Noise impacts from construction activities under Alternative 9 would be temporary and would occur throughout the project area during the summer time. Under Alternative 9, no new noise impacts are expected in Pigtail and Hogback Basins since the SUP boundary would not be expanded. Noise impacts to PCNST travelers and Goat Rocks Wilderness users under Alternative 9 would be similar to Alternative 2 due to the proximity of construction activities to the Wilderness boundary, even though the PCNST is affected in a different location than under Alternative 2. Notices would be posted on the trail or at the trailhead to alert PCNST travelers and Wilderness area users about the possible construction noise that might be audible to them (refer to MM16 in Table 2.4-2).

Operational Impacts

Following build-out of the project, sound levels under Alternative 9 would be similar to those that are currently experienced in the SUP area during the winter time, including the operation of chairlifts, snow groomers, and vehicle traffic on US 12. Sound levels would be elevated over existing conditions due to the more developed nature of the site and would also be the same as described under Alternative 2. **It is not expected that daytime operation levels under Alternative 9 would increase by more than 3 dBA with the project, and therefore no audible impact is expected. Under Alternative 9, no new noise impacts are expected in Pigtail and Hogback Basins because the SUP boundary would not be expanded. As with the other Action Alternatives, these effects are consistent with state, county and local regulations governing the acceptable levels and duration of noise.**

3.16.3 Cumulative Effects

A cumulative effects analysis was performed for each watershed at the site scale (White Pass Study Area). Past, present and reasonably foreseeable projects occurring within each watershed area are included in the analysis. Within the discussions below, cumulative impacts to noise are considered for short-term and long-term impacts. The cumulative effect on noise is a short-term increase in noise levels due to construction and maintenance activities, and a long-term noise increase due to the operation of ski facilities and increased activity within the White Pass Study Area.

A list of past, present and reasonably foreseeable projects occurring within the Upper Clear Fork Cowlitz River watershed (refer to Table 3.16-2) and the Upper Tieton River watershed (refer to Table 3.15-3) that affect noise are presented below. For a description of project actions, refer to Table 3.0-FEIS1 in Section 3.0 – Introduction.

**Table 3.16-2:
 Cumulative Effects of Past, Present, and Reasonably Foreseeable Projects in the Upper Clear Fork Cowlitz River Watershed on Noise**

Project Number	Project Name	Cumulative Effects
UCFC-16	Highway 12 Hazard Tree Removal	Hazard tree removal along the US 12 corridor will result in periodic increases in noise levels within the White Pass Study Area. This project overlaps spatially and temporally with the White Pass expansion. Combined with the White Pass expansion and the other projects listed in this table, this project will add to the cumulative increase in short-term periodic noise within the White Pass Study Area. No long-term noise impacts will result from this project.
UCFC-20	Benton Rural Electric Association (REA) Power Line Maintenance	Power line maintenance will result in periodic increases in noise levels within the White Pass Study Area. The effects of this project overlap spatially with the White Pass Study Area. Temporally, the effects of periodic powerline maintenance overlap with the White Pass expansion. Combined with the White Pass expansion and the other projects listed in this table, this project will add to the cumulative increase in short-term periodic noise within the White Pass Study Area. No long-term noise impacts will result from this project.

**Table 3.16-3:
 Cumulative Effects of Past, Present, and Reasonably Foreseeable Projects in the Upper Tieton River Watershed on Noise**

Project Number	Project Name	Cumulative Effects
UT-2	White Pass Ski Area Sewer Line Replacement	Approximately 0.4 mile of existing sewer line from the condominiums to the drainfield will be replaced, resulting in a short-term increase in noise levels within the White Pass Study Area during construction. The effects of this project overlap spatially with the White Pass expansion and temporally during the construction phase of the project. Combined with the White Pass expansion and the other projects listed in this table, this project will add to the cumulative increase in short-term construction noise within the White Pass Study Area. No long-term noise impacts will result from this project.
UT-3	White Pass Ski Area Generator, Shed and Propane Tank	The generator and propane tank installed near the condominiums in 2001 will result in increased noise levels when the generator is in use. The effects of the project overlap spatially and temporally with the White Pass expansion. Noise created by the periodic use of the generator during power outages will be localized and infrequent. Combined with the White Pass expansion and other projects identified in this table, this project will add to the cumulative, short-term increase in noise within the White Pass Study Area.

**Table 3.16-3:
 Cumulative Effects of Past, Present, and Reasonably Foreseeable Projects
 in the Upper Tieton River Watershed on Noise**

Project Number	Project Name	Cumulative Effects
UT-18	Benton Rural Electric Association (REA) Power line Maintenance	Power line maintenance will result in periodic increases in noise levels within the White Pass Study Area. The effects of this project overlap spatially with the White Pass Study Area. Temporally, the effects of periodic powerline maintenance overlap with the White Pass expansion. Combined with the White Pass expansion and the other projects listed in this table, this project will add to the cumulative increase in short-term periodic noise within the White Pass Study Area. No long-term noise impacts will result from this project.
UT-19	Highway 12 Hazard Tree Removal	Hazard tree removal along the US 12 corridor will result in periodic increases in noise levels within the White Pass Study Area. This project overlaps spatially and temporally with the White Pass expansion. Combined with the White Pass expansion and the other projects listed in this table, this project will add to the cumulative increase in short-term periodic noise within the White Pass Study Area. No long-term noise impacts will result from this project.
UT-30	US Cellular Backup Power at White Pass Communications Site	The generator and propane tank installed on Pigtail Peak will result in increased noise levels when the generator is in use. The effects of the project overlap spatially and temporally with the White Pass expansion. Noise created by the periodic use of the generator during power outages will be localized and infrequent. Combined with the White Pass expansion and other projects identified in this table, this project will add to the cumulative, short-term increase in noise within the White Pass Study Area.
UT-31	Cellular Phone Carrier Improvements at White Pass Communication Site	The replacement of a cell tower and building addition in Pigtail Peak will result in a short-term increase in the noise level within the White Pass Study Area. This project will overlap spatially and temporally with the implementation of the White Pass expansion. Combined with the White Pass expansion and other projects listed in this table, this project will add to the cumulative increase in short-term construction noise within the White Pass Study Area.

The cumulative effect of the projects listed in the tables above, coupled with the effects of the White Pass expansion, is a short-term increase in the noise levels within the White Pass Study Area. This short-term noise level increase will be periodic and localized, and will result from construction and maintenance activities. These short-term noise level increases, however, are expected to remain consistent with noise levels and duration limits set by any state or local regulations.

The cumulative, long-term noise effect resulting from the White Pass expansion will be similar and additive to that created by the current recreational use of White Pass. This noise includes lift operation, limited snowmaking, occasional avalanche control and diesel backup during the winter, as well as ski trail and infrastructure maintenance during the summer. Additionally, noise generated by lift operation would extend into a larger area not previously subject to mechanical noise (i.e., the Hogback Basin). However, the most noticeable would be the additional vehicle noise created by the projected growth in traffic over

time (refer to Section 3.12 – Transportation). This increase in traffic noise would not be readily apparent in Pigtail Basin, Hogback Basin, or the Goat Rocks Wilderness Area due to their distance from US 12. Occasional noise from U.S. Army helicopters, U.S. Navy jets, and other military and private aircraft would continue to be heard in the Hogback Basin. Increased noise levels are not expected to be noticeable, as they will increase by less than 3 dBA, as described in Section 3.16.2 – Environmental Consequences. This long-term noise level increase would remain consistent with state and local regulations governing acceptable levels and duration of noise.

In summary, the effects of the White Pass expansion, coupled with the past, present, and reasonably foreseeable projects described above, would cumulatively increase noise levels in the short-term due to construction and maintenance, and in the long-term noise due to operations. As described above, this cumulative increase in long-term noise levels is generally expected to be inaudible (less than 3 dBA), and both short-term and long-term noise increases would remain within the requirements of state and local noise regulations.