

### 3.9 Noise

#### *AFFECTED ENVIRONMENT*

The predominant sources of noise within the project area at the present time include birds, distant traffic traveling on State and Interstate routes (such as SR 903 and I-90), and aircraft flyovers. The site is also used informally for recreation by people riding all-terrain vehicles (ATVs) and snowmobiles. These can generate considerable noise at times, though usually of a pass-by and intermittent nature. Existing sound levels on the site have not been quantified by measurement.

The City of Cle Elum does not have a Noise Control Ordinance, and Kittitas County Code regulates only public disturbance noises associated with human behavior (Kittitas County Board of County Commissioners 1999). The Washington State Environmental Noise Limits (WAC 173-60) would apply in either jurisdiction, subject to local (rather than State) enforcement. The State noise rule ensures that excessive noise does not impair permitted land uses in residential, commercial, and industrial land use districts. It establishes both limits on the levels and duration of noise crossing property boundaries, and hours when construction activities are not subject to these limits. Construction noise during daytime hours is exempt from the State noise limits, as is sound associated with motor vehicles operating on public roadways.

#### *POTENTIAL IMPACTS DURING CONSTRUCTION*

There would be temporary increases in sound levels during construction associated with the operation of conventional types of equipment such as bulldozers, hoe rams, rippers, excavators, loaders, backhoes, highway and off-road trucks, graders, compactors, and pavers. Sound levels associated with these types of equipment operating at a distance of 50 feet from the receiving source range from 76 to 89 dBA<sup>1</sup> (WSDOT, April 2008). The standard distance reduction for point source noise is 6 dBA per doubling of distance from the source where the intervening land use is predominantly a forested environment (as opposed to a hard-surface urban environment). The increase in sound levels would depend on the type(s) of equipment being used and the amount of time it is in use. Due to the large size and linear configuration of the City Heights site, it is expected that it would be a relatively infrequent occurrence for construction equipment to be working in such close proximity to sensitive receivers on adjacent properties.

Bedrock at the site is overlain in most places by unconsolidated sediments and bedrock residuum ranging from approximately 5 to 100 feet thick (see Draft EIS Section 3.1.1). However, where mechanical means of excavation by hoe rams and rippers prove to be ineffective, minor blasting techniques may be required to remove obstructions in areas planned for the construction of roads, utilities and home sites. The blasting method would generally consist of drilling shallow holes to the desired depth, loading holes with small amounts of explosives, connecting holes in a designed sequence, covering the area to prevent dispersion, and detonating explosives to fracture rock in localized areas for excavation. Blasting would be conducted to minimize construction-related loosening of the rock mass beyond the design excavation line. Blast mats would be used as necessary to prevent the occurrence of flyrock. Daytime blasting is exempt from the Washington State noise limits (WAC 173-60-050[c]).

The grading proposal for the site estimates that excavation and fill would be approximately balanced on-site; however, approximately 18 to 36 dump truck and trailer trips per day may be required (depending on

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<sup>1</sup> Environmental noise is commonly characterized using “A-weighted” decibels (dBA), which is a scale that reflects how an average person hears sounds. Baseline (ambient) noise levels vary greatly and depend on site-specific factors.

the alternative selected for implementation) to remove unsuitable material and import select fill (see Draft EIS Section 3.16). The average maximum sound level for dump trucks operating within 50 feet of receivers is 76 dB (WSDOT 2008). Construction trips using smaller trucks and private vehicles would also originate off-site for the transport of construction materials and workers to the City Heights site over the projected 6- to 12-year build-out period. Existing homes along hillside access routes (such as Stafford Avenue, Summit View Road, Montgomery Avenue, and Columbia Avenue) could be most affected by the noise of construction trips. As stated in paragraph 2 of the *Noise: Affected Environment* section (above), noise associated with construction and noise associated with motor vehicles operating on public roadways is exempt from regulation. No unusual or excessive noise is anticipated with City Heights construction traffic.

Under the No Action Alternative, the property would temporarily remain in its undeveloped condition; therefore, there would be no construction noise associated with the site.

#### *POTENTIAL DEVELOPED-CONDITION IMPACTS*

The completed condition of the project will alter the natural environment of the site and create a residential neighborhood. No unusual or notable sources of noise would be expected. With the predominant use being residential with a large percentage of open space, parks and trails, and two nodes of neighborhood commercial development under Alternative 1, 2, or 3A, typical sources of noise would include vehicles traveling on local streets, yard maintenance equipment, recreational equipment, children at play, and other voices.

If Alternative 3B were selected for implementation, the lower residential density, unimproved open space, no developed trail system, and less coordinated road system would likely result in somewhat lower noise levels than the more urban development alternatives.

Under the No Action Alternative, there would be no change in existing sound levels emanating from or received on the site. At times, this includes relatively noisy use by all-terrain vehicles.

#### *MITIGATION MEASURES*

*Mitigation Measures Included in the Development Proposal.* The proposal includes maintaining an existing natural buffer in an area 20 to 80 feet wide along most of the south boundary of the site. In addition to visual screening, this buffer may help dampen noise generated within the project.

A detailed blast specification would be prepared, as needed, by a Project Engineer to integrate the findings and recommendations of the *Geotechnical Report* (Aspect Consulting 2009) and the *Coal Mine Hazards Risk Assessment* (Subterra 2009), and to outline blasting objectives and activities. A Blasting Contractor would prepare a site-specific blast plan, as needed, that identifies all details and procedures for blasting on-site.

*Applicable Regulations.* The City of Cle Elum regulates nuisance noise through Cle Elum Municipal Code (CEMC) Chapter 8.12. These provisions would be applicable to Alternative 1 or 2. Kittitas County regulates nuisance noise through Kittitas County Code (KCC) Chapter 9.45, including but not limited to operating motors, engines, motorcycles and snowmobiles in a capricious manner, to be plainly audible within any dwelling unit that is not the source or which is generated within 200 feet of any dwelling unit; playing amplified or otherwise loud music and voice amplification either live or recorded; yelling or shouting at a continuous loud level of sound; allowing domestic animals to bark, howl, or otherwise make noise either on private or commercial premises for extended periods of time; and use of noise-making fireworks except for duly authorized or approved public displays. These provisions would be applicable

to Alternative 3A or 3B. Either the City or County could also enforce the Washington State Environmental Noise Limits (WAC 173-60) during construction and in the developed condition of the project.

Noise associated with nighttime construction could be avoided by adhering to hours of construction indicated in the Washington State Environmental Noise Limits (WAC 173-60).

Blasting (if any) shall be performed consistent with the requirements of the Washington Department of Labor and Industries, Washington Administrative Code (WAC) Chapter 296-52, and other applicable regulations. Blast monitoring shall be performed as necessary according to WAC 296-52 to record vibration and sound levels.

*Other Recommended Mitigation Measures.* Noise reduction occurs with increasing distance from the source; as a result of atmospheric absorption, structural or topographic obstructions; and/or as a result of absorption for soft intervening ground. Several of the Other Recommended Mitigation Measures for Air Quality listed in Draft EIS Section 3.2 would also be effective at minimizing temporary construction noise impacts on adjoining properties. To the extent that these practices are implemented by construction contractors – like using only equipment and trucks that are maintained in good operational condition, limiting the idling of construction equipment and vehicles to a maximum of 15 minutes, and locating construction equipment and staging areas as far away from people as practicable – construction noise impacts to sensitive receivers could also be minimized.

The City could consider specifying construction access routes to the site that would minimize noise, vibration, and dust impacts along roadways that are presently used predominantly for access to residential neighborhoods.

If unusual circumstances require occasional nighttime construction activities, the contractor could be required to notify adjoining property owners in advance.

#### *SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS*

No significant unavoidable adverse noise impacts would be anticipated with the development.

