

## Geologic Hazards

Per SCC 30.62B, Snohomish County regulates geologic hazards, including: landslide, seismic, tsunami, erosion, mine, and volcanic hazards. Since the site is located at a great distance from any known mine and volcanic hazards, the risk for these particular hazards is considered low for the site and these hazards are not discussed in this section. The other geologic hazards on and adjacent to the site are described below. See **Figure 3.1-1**, Geologic Hazards, for a depiction of these hazard areas on and in the vicinity of the site.

### Onsite

#### Landslide Hazards

SCC 30.91L.040 defines landslide hazard areas as “areas potentially subject to mass earth movement based on a combination of geologic, topographic, and hydrologic factors, with a vertical height of 10 feet or more.” This includes areas with:

- Slopes that are steeper than 33 percent;
- Where the geologic contacts are susceptible to landslide activity;
- Where springs or groundwater seeps are present;
- Areas of historical landslide activity, and
- Areas susceptible to undercutting by waves.

SCC 30.62B.340 establishes requirements for A-structural setbacks is required from the top and bottom of a steep slope unless the County approves a deviation. Point Wells has vesting to the 2007 version of SCC 30.62B.340 which was still in effect at the time of project application in 2011. Under former SCC 30.62B.340, the minimum top of slope setback is was the greater of 50 feet, or the height of the slope divided by three. The and the minimum toe of slope setback is was the greater of 50 feet, or the height of the slope divided by two.<sup>1</sup>

The steep slopes along the east side of the Upper Bench onsite are ~~considered~~ a landslide hazard area. Landslide hazard areas are also present on the slope to the east of the site. The setbacks from the landslide hazard areas extend onto both the Upper and the Lower benches.

~~(see Figure 3.1-1, depicts Geologic Hazards as assumed for this Draft Environmental Impact Statement, and Appendix C for includes details on existing-assumed landslide hazards) for the DEIS. Informative as they are, these documents and the project application are inadequate for the project to receive approval. Figure 3.1-1 depicts approximate landslide hazard areas based on LiDAR remote sensing. This approximation shows slopes greater than 33% that also have at least a 10-foot elevation change. Some features in Figure 3.1-1, such as the existing seawall at Point Wells are not landslide hazards. Conversely, the actual~~

<sup>1</sup> Under present-day SCC 30.62B.340, adopted in 2015, the setback to the top of slopes is equal to the height of the slope and the setback from the toe is twice the height.

landslide hazard area on the slope above Point Wells is larger than depicted in Figure 3.1-1 because the localized areas with less than 33% slope are still landslide hazard areas if the overall slope exceeds 33%. The basis of final calculations and depiction of landslide hazard areas by the applicant must use elevations across the entire slope and should not include non-landslide hazard features such as the seawall. Nothing in the project record indicates that the applicant has provided this required information to Snohomish County. Publication of a Final EIS for Point Wells cannot take place without the required depiction of landslide hazard areas. Supplemental draft environmental review may be necessary because of the incomplete nature of this current draft.

The project application incorrectly depicts a 50-foot landslide hazard setback at the toe of the slope in the Upper Bench. This toe area is at approximately 50-feet in elevation and top of the slope at the highest point is at 220-feet elevation. Under the requirements of former SCC 30.62B.340, this 170-foot height difference requires a setback of 85 feet.

The application does not show any landslide areas on the Lower Bench; however, near the Lower Bench, the toe of the slope is at 20-feet in elevation on the east side of the railroad tracks and the highest point of the top of the slope is at 250-feet in elevation. Where this slope is approximately 230-feet, it will have a setback of approximately 115-feet that extends across the railroad tracks onto the Lower Bench. This setback intersects portions of buildings proposed in the North Village.

The application proposes underground parking garages – including entrance points to the garages – in both the Upper Bench and the North Village that are partially within the landslide hazard setback area. On the Upper Bench, the application proposes to place a trenched “Service Drive” in the landslide hazard setback. This Service Drive would provide the sole access to an underground fire/police station, which would also be in the landslide hazard setbacks.

**Shortcomings in how the application handles the landslide hazard requirements of former SCC 30.62B.340 are one of several reasons why the application cannot be approved until it is revised.** A revised application must properly depict the requirements of former SCC 30.62B.340. Further, when revising the application, the applicant must include a request to deviate from the setback requirements or provide a revised site plan that avoids landslide hazard setbacks.

**Commented [CR1]:** Comment to EA, this DEIS must include mitigation measures to protect these features.