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Technical Memorandum

To: **Ben Varin, Avenue 55** **File Number: 1184.0010**

From: **Alex Murphy, Soundview Consultants LLC** **Date: March 19, 2024**

Re: **Response to City Comments Regarding OHWM Verification**
DuPont Business Park – DuPont, Washington

Dear Mr. Varin,

Soundview Consultants (SVC) completed an Ordinary High Water Mark (OHWM) verification of Sequalitchew Creek south of the 5.64-acre site located at 1700 Center Drive in DuPont, Washington (Pierce County Tax Parcel Number 0119266007). The verification was performed in response to the City's planning and SEPA review as documented in their January 8, 2024, letter *Review Comments and Request for Additional Information* for the DuPont West (formerly DuPon 234) PLNG 2022-031 (Type III Site Plan Review and PLNG 2022-032 (SEPA). Below are the City's applicable critical area comments (italicized) followed by SVC's response.

1. *Per DMC 25.105.050(2)(g) a 100-foot buffer is required on each side of a stream as measured from the ordinary high water mark (OHWM). In the Request for Additional Information Letter from the City dated September 22, 2023, it was requested that the OHWM be shown on the civil plans and to extend the 100-foot Sequalitchew Creek buffer from the OHWM. It was also requested that documentation is provided to verify the OHWM location by a qualified biologist. In the most recent submittal on November 13, 2023, the OHWM was depicted on the civil plans and was used as the starting point for the 100-foot Sequalitchew Creek buffer. However, verification by a qualified biologist was not provided and the survey referenced on the civil plan cover sheet is dated May 2011.* ***Provide documentation that the OHWM has been field verified by a qualified biologist.***

   On March 7, 2024, qualified SVC biologists completed a site investigation to verify the northern ordinary high water mark (OHWM) of Sequalitchew Creek depicted on the most recently submitted plans. The OHWM line that appears on the plans is a surveyed line from May 2011.

   Sequalitchew Creek originates from a culvert under a walking trail to the south of the site. The area upgradient and east of the culvert crossing appears to act as a swale and flood storage area, but does not exhibit any indication of stream channel criteria such as defined bed or bank. Rather, the upgradient area is vegetated by upland plant species and mosses, and shows little to no evidence of flowing water, even during the wet season. Scouring and sorting of

substrates was observed immediately upgradient of the culvert inlet, but still lacked channel definition, and was dry during this investigation.

Flow for Sequalitchew Creek appears to originate largely from underneath the culvert itself, as the upgradient area and the culvert were dry, but flow was observed trickling in from under the culvert pipe. The beginning of the channel is relatively low flow, with poorly defined bed and bank. However, evidence of historical manipulation was observed in the upstream portions of the stream, including what appeared to be the remnants of an old boardwalk or wooden trail of some kind situated north of and parallel to the channel. Due to its location situated within a ravine feature and the presence of the old trail which creates a nearly vertical drop, the channel is relatively well defined. As the channel continues west and flow velocity increases and the wooden trail feature recedes, the bed and bank become more well defined, and habitat features such as riffles and pools become more prevalent.

Sequalitchew Creek ranges from approximately 2 feet wide to 15 feet wide throughout the observed reach, with an average of approximately 8 feet. Substrate includes cobble, gravel, and sand, with some areas exhibiting higher silt and organic matter accumulations. Big leaf maple (*Acer macrophyllum*), vine maple (*Acer circinatum*), osoberry (*Oemleria cerasiformis*), swordfern (*Polystichum munitum*), and English icy (*Hedera helix*) are dominant throughout the ravine and lining the creek. Many seeps were also observed discharging groundwater to the stream along the northern bank. Given its width, suitable potential habitat, and surface water connection directly to the Puget Sound, Sequalitchew Creek is a Type F water per WAC 222-16-030 and would be regulated as a stream and subject to a 100-foot buffer under DuPont Municipal Code (DMC) 25.105.050(2)(g).

In preparation for the site investigation, the OHWM utilized on the civil site plans was converted to a shapefile and uploaded to a mobile GIS application to verify in the field. As the OHWM line feature data had to be converted from CAD to GIS and potentially across different datum and/or projections, some margin of error in the conversion is expected, but is likely minimal. SVC found that once translated into GIS, the OHWM line generally aligned with the topographic low point that correlates to the stream on topographic maps and lidar data.

Once onsite, the biologist used a handheld GPS device to co-locate their physical location in comparison to the OHWM line feature. Various colored flagging was observed at several locations throughout the ravine and along the channel, however, it was not consistently present, was not labeled, and did not necessarily appear to correlate with OHWM. As such, the observed flagging was not considered to represent the OHWM and was not assessed as part of the OHWM verification. Based on these conditions, biologists walked the stream and continued to co-locate the OHWM with their location throughout the entire reach of the stream that parallels the site. Furthermore, the channel does not appear to have moved significantly over the past 13 years since the original survey data was collected in 2011. Given its location within the ravine, its shallow depth, and relatively low flow, no major changes to the channel would be expected unless abnormal or historical flows or flooding had occurred.

Only one location was noted to deviate from the original OHWM line. This area is situated south of approximately the middle of the site, where Sequalitchew Creek turns north and then abruptly west. The OHWM line depicted on the plans appears to cut across a slope to the

south of the channel. The most likely cause of this difference in the OHWM is due to a missed OHWM flag situated at the north corner of the channel meander during the original delineation. This location can easily be rectified utilizing topographic maps or lidar for a more reliable OHWM location, or utilizing the GPS data SVC collected at this location. Rectification of this OHWM point location is not anticipated to result in any buffer impacts or major modifications to the site design. Furthermore, a 50-foot steep slope setback extends beyond the 100-foot stream buffer in this location, even with this adjustment to the OHWM, providing addition insulation and protection to Sequalitchew Creek.

Conclusion

As requested by the City of Dupont, SVC field verified the location of Sequalitchew Creek's OHWM. SVC converted available CAD data of the prior OHWM line feature for the northern bank of Sequalitchew Creek into GIS. Utilizing a handheld GPS device, qualified SVC biologists compared the location of Sequalitchew Creek in the field with the OHWM surveyed in 2011. With the exception of one location near a bend in the channel, the OHWM line feature generally aligns with the northern OHWM of Sequalitchew Creek. Please feel free to contact me at (253) 514-8952 or amurphy@soundviewconsultants.com if you have any questions.

Sincerely,

Alex Murphy, AICP
Project Manager / Senior Environmental Planner