

December 17, 2020

John Laufenberg
Wetland Resources, Inc.
9505 19th Ave. SE
Suite 106
Everett, WA
98208

RE: Tree Inventory and Impact Assessment Report - Sky Valley PUD Switching Station. Monroe, WA.

John:

This report is provided to address the tree inventory I conducted on the site of the proposed Snohomish County PUD Sky Valley switching station in Monroe, WA and to address management of the slope beneath the proposed transmission lines to the east of the proposed switching station. See the accompanying Tree Inventory Map and Tree Evaluation data spreadsheet for reference to this report.

We met on the property back in September of this year for an initial discussion of the extent of the inventory and this report. I visited the site again in October to gather information on the trees in the area of impact. This report only addresses the trees in the areas of impact including the overhead transmission lines to the substation, one location of proposed grading and tree removal for landscaping along the perimeter of the station.

1.0 Professional Experience and Credentials

Following is a summarization of my experience and credentials as a consulting arborist:

- Master of Science in Urban Horticulture from Center for Urban Horticulture, University of Washington, 1996. Focus of study and thesis was nursery production of Pacific madrone (*Arbutus menziesii*) and establishment into a natural/urban ecosystem.
- ISA Certified Arborist since 1996.
- Tree Risk Assessment Qualified since 2012.
- Consulting arborist, 1996-present.
- Wetland Biologist, 1996-1998
- Other related experience: City of Everett Urban Forestry, summers 1989-1992; Natural Resource Management staff and Bellevue Botanical Garden staff, City of Bellevue, 1996-1997.

2.0 Existing Conditions

The property of the proposed Sky Valley switching station is located at the junction of Woods Creek Road and Tjerne Pl. SE in Monroe, WA. It is undeveloped, however, the majority of it is clear of any significant vegetation. In the area of the proposed overhead transmission lines to the switching station (on the slope along Woods Creek Road), the

conditions are wooded with native trees, both evergreen and deciduous, most of which are small and young.

The understory is well shaded in some areas and varies in vegetation composition based upon light availability. In the majority of the understory, towards the center of the slope where the understory is well shaded, the vegetation composition is sparse and the species are largely native.

Towards the base of the slope along Woods Creek Road and towards the top adjacent to the open area of the site where the light availability is greater, the understory vegetation also includes Himalayan Blackberry (*Rubus armeniacus*) in denser stands.

3.0 Tree Inventory Methods and Results

I conducted visual evaluations of the trees according to ISA standards and based upon many years conducting such evaluations on trees in the Pacific Northwest. I observed the tree up close to inspect conditions of the trunk and from afar to inspect conditions in the crown. All assessments were conducted according to the methods specified in the ISA Tree Risk Assessment Manual (Dunster, Julian A., E. Thomas Smiley, Nelda Matheny, and Sharon Lily. 2013. Tree Risk Assessment Manual. Champaign, Illinois: International Society of Arboriculture) and on nearly 20 years experience conducting such evaluations.

The investigations involved the gathering of the following information:

- Tree species
- Trunk diameter
- Crown spread diameter
- Location factors
- Health and condition notes (general level of vigor, defects, disease or pest problems)

Most of the trees in the study area are small, not significant, and therefore not included on the survey or in this report. Only those trees that meet the City of Monroe's definition of a tree at 6" dbh are included on the survey and in this inventory report.

In total, 25 trees within the areas of impact were included in the inventory. Following are the species inventoried:

- Bigleaf maple (*Acer macrophyllum*)
- Bittercherry (*Prunus emarginata*)
- Black cottonwood (*Populus trichocarpa*)
- Red alder (*Alnus rubra*)
- Western red cedar (*Thuja plicata*)

Trunk diameters range in size from 6" black cottonwoods to a multi-trunked 18" bigleaf maple. All of the trees were found to be in good condition and health as all are young and vigorous.

4.0 Tree Removal Proposed and Recommendations

To clear for the overhead transmission lines and two areas within the property boundary, a total of 25 trees are proposed to be removed. The City of Monroe Municipal Code does not specify requirements for tree retention or replacement.

Following are two approaches to removal:

- Complete Removal - Complete removal of the trees will require removal of the stumps to eliminate re-growth and continued maintenance. This action will result in more disturbance of the slope and will remove the stabilization contributions of the root systems. This approach will open up the exposure allowing the Himalayan blackberry to spread along the slope into the area below the transmission lines.
- Trunk Removal - The approach of just removing the trunks and flush cutting the stumps will leave the root systems and their stabilization contributions. This will also open up the exposure allowing Himalayan blackberry to spread into the area below the transmission lines. The coppiced stumps of the bigleaf maples and the black cottonwoods will produce re-growth over time, eventually requiring maintenance to remove the new stems to prevent contact with the overhead lines.

I recommend the second approach as it will decrease the direct impact to the slope below the transmission lines and will retain the roots maintaining a degree of stabilization for the slope. I also recommend dropping the trunks and leaving them in place eliminating the disturbance associated with their removal from the slopes.

Maintenance intervals for removing the re-growth will need to be every five years minimum. The removed re-growth can also be left in place to eliminate the slope disturbance associated with hauling it off.

5.0 Tree Replacement

Although replacement is not required, restoring cover to the slope to provide soil cover to decrease erosion caused by rainfall is recommended. Any species used to enhance the slope will need to be small and preferably evergreen to provide year round cover. I recommend planting the newly exposed surface with salal (*Gautheria shallon*) and Oregon grape (*Mahonia nervosa*), both native species that grow well in exposed environments, maintain low heights, readily spread rhizomatously and will require no maintenance.

6.0 Use of This Report

This report is provided to Wetland Resources, Inc. as a means of providing an inventory of the trees subject to removal for construction of the Sky Valley PUD property as required by the City of Monroe. This report addresses only those trees in the areas of impact. Trees are dynamic and their conditions and health can be quickly affected by environmental events such as weather and the clearing of surrounding forest cover. Shoffner Consulting cannot be held liable for the failure of any retained trees. The health and condition warranted is only that on the day of the original assessment.

Cordially,

A handwritten signature in black ink, appearing to read "Tony Shoffner". The signature is fluid and cursive, with the first name "Tony" and last name "Shoffner" clearly distinguishable.

Tony Shoffner
ISA Certified Arborist #PN-0909A, TRAQ