Arborist Report

36202 249th Ave SE Enumclaw, WA 980222

Prepared for:

Jason and Janel Snow

Prepared by:

Alan Haywood
Certified Arborist, PN-0330AM
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Alan Haywood – Arborist & Horticulturist, LLC
PO Box 1086
Enumclaw, WA 98022
253-259-4474

alan@haywoodarborist.com

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Introduction

Background and History

I was contacted by Janel Snow in October of 2023 regarding the need for an arborist report for a tree clearing project that she and her husband had begun on their property located at 36202 249th Ave SE outside of Enumclaw, Washington. The goal was to remove trees that posed a risk of falling onto their house. She explained to me that King County had put a stop work order on the project and required them to get a clearing and grading permit to resume the work. To get the permit, an arborist report and replanting plan would be required.

Assignment

My assignment was twofold. First, I was to provide an inventory of all the trees that had been removed. The stumps would be measured and identified as to their species. Second, I would develop a replanting plan with native plants to replace the forested area that had been cleared.

Purpose and Use of this Report

This report is for the sole use of my client and may not be reproduced, used in any way, or disseminated in any form without prior consent of the client and Alan Haywood – Arborist & Horticulturist, LLC. It is intended to provide the information needed by King County to allow the Snow family to obtain their clearing and grading permit.

Observations

I visited the site on November 1st and met with Ms. Snow. She showed me around the property and the areas that had been cleared. The clearing had been done on virtually all sides of the house to provide a fall zone. One section to the northwest of the house still had standing trees of various heights. They had been limbed up and topped and were ready to be removed. This area did not have much soil disturbance from heavy machinery. I revisited the site on November 14, 2023, and inventoried and assessed the stumps and topped trees. I counted 42 stumps and topped trees. The species breakdown of the trees was:

Douglas fir – 26
Bigleaf Maple – 12
Western Hemlock – 4

There was still a significant amount of understory plants present in the cleared area. Sword ferns, trailing blackberry, etc., were present. The surface of the soil was disturbed where the heavy equipment drove, but many of the understory plants were still present. There was a large brush pile present from the clearing activity in the southeast area.

The existing forest appears to be a second growth forest consisting primarily of Douglas fir. The trees are closely spaced, resulting in tall, relatively slender trunked trees. The trees have a low live crown ratio (percent of trunk with live branches) due to the crowding and shading. The understory is relatively sparse for the same reason.

Discussion and Recommendations

The Snow property (parcel #2621069052) measured 216,929 square feet according to King County records. According to my measurements using aerial photographs found on the King County Parcel Viewer ap on the King County Government website, approximately 15% of the property had been cleared and was covered by the house, driveway and landscape. It is assumed that the entire parcel was in a forested condition at one time. The newly cleared area is approximately 20% of the total square footage of the lot, based on my rough measurements taken onsite during my second site visit. It is this 20% that is required to be restored to a more natural condition with native vegetation.

The details on the individual trees are found in Appendix A – Tree Table. The stump diameters ranged from 8 to 34", with most being in the 15-30" range. Only one stump was found to have any decay or hollow in it. All of the stumps and topped trees appeared to be live wood at the time of cutting.

The ground had been driven on by a piece of tracked equipment, but it had not been graded. Vegetation and soil had not been scraped off. There were track marks present, but it appeared that the work had been done when the soil was relatively dry. There was no puddling/standing water present in the tracks or anywhere else on the property when I visited. I asked Ms. Snow about this just this week and if she said that there was never any standing water on the site, including in the track marks. This indicates that any soil compaction from the heavy equipment was not significant and did not justify any rototilling or further soil disturbance. Light raking would be all that I would recommend. Covering the disturbed area with wood chips or bark as a mulch would reduce weed germination and soil moisture loss. No other soil preparation is recommended.

The cleared areas are located:

- to the northwest of the house, west of the driveway,
- northeast of the house, east of the driveway,
- east of the house,
- south of the house.

The northeast east and south cleared areas are all connected and wrap around the house and landscape. The northwest area is separated by untouched forest to the southwest and to the north. Most of the cleared areas can be replanted with full sun tolerant plants. The areas that would do best with more shade tolerant plants would be the south half of the south section (where there is

shade most of the day from the existing forest) and the south half of the northwest section (where the same shading exists).

The replanting would ideally be done during the dormant season – October thru March. Planting in the Spring (April – May) can also be done, but more supplemental watering will probably be required to keep the plants alive during the summer dry season (June - September).

My replanting/restoration recommendations would be to keep a 100' area clear of large trees around the house. That area would include the existing landscape and lawn area. This will provide protection from both tree windfall and wildfire spread. Smaller trees, shrubbery and groundcover should predominate the 100' zone around the house, beyond the lawn and landscape. Existing native understory plants should be retained. Any noxious weeds or invasive species should be removed. Native shrubs and groundcover plants should be used to supplement the existing native plants. Large trees should be planted in the space between the 100'zone and the existing forest. The bigleaf maples that have been cut down should be allowed to resprout and grow into new trees. After a year or two of growth, they should be thinned to a single or a few well-spaced trunks. Otherwise, they will regrow with multiple crowded trunks that will have structural problems over time and be more prone to failure.

Planting 30 large growing conifer trees will replace the cut Douglas firs and western hemlocks at a one-one ratio. They should be planted 15 to 20' apart. Douglas firs, Ponderosa pines and shore pines in sunny locations would be appropriate. Western redcedars and grand firs would be the best choice for a large native conifer in the shady areas. The bigleaf maples do not need to be replaced, as they will regrow. Appropriate large deciduous trees to use would be bigleaf maple, Garry oak and paper birch, if that were desired.

The area with the large trees and the area between the large trees and existing landscape could be interspersed with smaller trees and shrubs, planted 5-10' apart. Appropriate small trees to be used would be:

Pacific Yew
Bitter Cherry
Red Elderberry/Red Elder
Sitka Mountain Ash
Black Hawthorn
Serviceberry/Saskatoon
Scouler's Willow
Cascara
Beaked Hazelnut
Vine Maple
Douglas Maple/Rocky Mountain Maple

Appropriate large shrubs would be:

Black Twinberry
High-bush Cranberry/Mooseberry
Oceanspray

Indian Plum/Osoberry
Nootka Rose
Salmonberry
Oregon Grape
Red Flowering Currant
Red Osier Dogwood/Red Twig Dogwood
Mock Orange
False Azalea
Pacific Rhododendron
Pacific Ninebark
Pacific Wax Myrtle
Nootka Rose

Appropriate Low Shrubs and Groundcovers would be:

Salal
Kinnikinnick
Western Honeysuckle
Common Snowberry
Baldhip Rose
Thimbleberry
Hardhack spirea
Subalpine spirea
Evergreen Huckleberry
Low Oregon Grape
Red Huckleberry

Appropriate Herbaceous Plants and Wildflowers would be:

Western Swordfern
Deer Fern
Lady Fern
Yarrow
Goat's Beard
Canada Goldernrod
Douglas Aster
Western Columbine
Pearly Everlasting
Pacific Bleeding Heart
Western Trillium
Redwood Sorrel

Many of the native plants listed here are used as ornamentals and make a nice transition from the more formal homeowner landscape to the more natural forest and forest edge landscape. The flowers of the native plants are important food sources for native pollinators and the fruit

produced by many of them are important for native birds and animals. By creating a more diverse native landscape, the natural ecology of the area is enhanced. Planting the shrubs and groundcovers in clusters of the same species grouped together is advised

I would recommend planting some small (5'x5' – 10'x10') native wildflower plots on the edge of the cleared areas and in some sunny areas in the small tree/shrub areas as well. There are specialty PNW wildflower mixes available. You can use some ornamental trees and shrubs as a border on your existing landscape to transition into the newly planted restoration area. Trees such as mountain hemlock and weeping Alaska cedar are commonly used in ornamental landscapes, but they are actually native, high elevation native trees here in Washington.

The topped trees can remain as is as wildlife habitat snags, or reduced lower to be shorter snags, or cut entirely to the ground. No heavy equipment should be used to remove any of the topped trees. A combination of climbing and piecing them down or felling them and cutting them up for removal is recommended. The stumps can also be cut lower, closer to ground lever, if so desired.

Conclusion

The information in this report is based on my site visit and inspection on

It does not provide any guarantees or implications that the conditions of the trees on the site won't change as time passes. All trees eventually fail and even sound, healthy trees fail during severe weather events, such as high winds, heavy wet snow or ice.

Thank you for the opportunity to be of service to you with this project. Please feel free to contact me if you have any questions or if you have any further need for my services.

Sincerely,

Alan Haywood – Arborist & Horticulturist, LLC.

ISA Certified Arborist/Municipal Specialist – PN 0330-AM
ISA Qualified Tree Risk Assessor
ASCA Qualified Tree and Plant Appraiser
WSNLA Certified Professional Horticulturist - 2332
ecoPRO Certified Sustainable Landscape Professional – 6017
WSDA Licensed Pest Control Consultant – 7627

Appendix A: Tree Table

No.	Name	Species	Diameter	Comments
1	Douglas Fir	*Pseudotsuga menziessii*	27 “	Tall snag – partially cut down, located on southwest side of house
2	Douglas Fir	*Pseudotsuga menziessii*	22”	Tall snag – partially cut down, located on southwest side of house
3	Douglas Fir	*Pseudotsuga menziessii*	24”	Tall snag – partially cut down, located on southwest side of house
4	Douglas Fir	*Pseudotsuga menziessii*	17”	Tall snag – partially cut down, located on southwest side of house
5	Douglas Fir	*Pseudotsuga menziessii*	25”	Tall snag – partially cut down, located on southwest side of house
6	Douglas Fir	*Pseudotsuga menziessii*	15”	Tall snag – partially cut down, located on southwest side of house
7	Douglas Fir	*Pseudotsuga menziessii*	8”	Tall snag – partially cut down, located on southwest side of house
8	Douglas Fir	*Pseudotsuga menziessii*	22”	Tall snag – partially cut down, located on southwest side of house
9	Douglas Fir	*Pseudotsuga menziessii*	25”	Tall snag – partially cut down, located on southwest side of house
10	Douglas Fir	*Pseudotsuga menziessii*	14”	Tall snag – partially cut down, located on southwest side of house
11	Douglas Fir	*Pseudotsuga menziessii*	21”	Tall snag – partially cut down, located on southwest side of house
12	Douglas Fir	*Pseudotsuga menziessii*	19”	Tall snag – partially cut down, located on southwest side of house
13	Douglas Fir	*Pseudotsuga menziessii*	27”	Tall snag – partially cut down, located on southwest side of house
14	Douglas Fir	*Pseudotsuga menziessii*	30”	diameter measured at 19”, located on east side of house

15	Douglas Fir	*Pseudotsuga menziessii*	34”	diameter measured at 2 ½’, located on east side of house
16	Douglas Fir	*Pseudotsuga menziessii*	27”	diameter measured at 26”, located on east side of house
17	Douglas Fir	*Pseudotsuga menziessii*	29”	diameter measured at 22”,
18	Bigleaf Maple	*Acer macrophyllum*	17, 15, 17 & 14”	diameters measured at 4’, located on east side of house, located on east side of house
19	Douglas Fir	*Pseudotsuga menziessii*	41”	diameter measured at 2’, located on east side of house
20	Douglas Fir	*Pseudotsuga menziessii*	33”	diameter measured at 21”, located on east side of house
21	Douglas Fir	*Pseudotsuga menziessii*	19”	diameter measured at 1’, located on east side of house
No.	**Name**	**Species**	**Diameter**	**Comments**
22	Bigleaf Maple	*Acer macrophyllum*	12”	diameter measured at 21”, located on southeast side of house
23	Bigleaf Maple	*Acer macrophyllum*	15”	diameter measured at 34”, located on southeast side of house
24	Douglas Fir	*Pseudotsuga menziessii*	11”	diameter measured at 2’, located on southeast side of house
25	Western Hemlock	*Tsuga heterophylla*	27”	diameter measured at 2’, located on southeast side of house
26	Douglas Fir	*Pseudotsuga menziessii*	27”	diameter measured at 30”, located on southeast side of house
27	Bigleaf Maple	*Acer macrophyllum*	20, 19 & 16”	diameter measured at 3’, located on southeast side of house
28	Douglas Fir	*Pseudotsuga menziessii*	26”	diameter measured at 30”, located on southeast side of house
29	Western Hemlock	*Tsuga heterophylla*	29”	diameter measured at 26”, located on east side of house
30	Douglas Fir	*Pseudotsuga menziessii*	33”	diameter measured at 28”, located on east side of house

31	Bigleaf Maple	*Acer macrophyllum*	20”	diameter measured at 20”, located on east side of house
32	Bigleaf Maple	*Acer macrophyllum*	15”	diameter measured at 31”, located on east side of house
33	Bigleaf Maple	*Acer macrophyllum*	29”	diameter measured at 28”, located on east side of house
34	Bigleaf Maple	*Acer macrophyllum*	30, 27 & 21”	diameters measured at 32”, 4.5’ and 21” respectively, located on northeast side of house
35	Bigleaf Maple	*Acer macrophyllum*	16 & 24”	diameters measured at 2’, located on northeast side of house located on northeast side of house
36	Bigleaf Maple	*Acer macrophyllum*	38”	diameter measured at 4’, forks at 5’, located on north side of house
37	Bigleaf Maple	*Acer macrophyllum*	13”	diameter measured at 22”, located on north side of house
38	Western Hemlock	*Tsuga heterophylla*	32”	diameter measured at 2’, located on north side of house
39	Bigleaf Maple	*Acer macrophyllum*	23”	diameter measured at 2’, located on north side of house
40	Bigleaf Maple	*Acer macrophyllum*	29 & 15”	diameters measured at 2’ and 18” respectively, located on north side of house
41	Western Hemlock	*Tsuga heterophylla*	8”	diameter measured at 2’ with hollow and decay, located on north side of house
No.	**Name**	**Species**	**Diamtr**	**Comments**
42	Douglas Fir	*Pseudotsuga menziessii*	15”	diameter measured at 18”, located on north side of house

Appendix B: Site Map