



**1256 Mt. Hood Lane**

**Mt. Hood, OR**

## **Tree Report**

**April 10, 2022**





# Introduction

In October 2021, Jill and Jack Jones purchased 4 acres at the end of a private road in Mt. Hood, OR. I visited the site on March 28<sup>th</sup> 2022, to meet Jill and Jack and walked the property with them answering as many questions as possible. Their questions primarily centered on whether any trees posed high or extreme risk and what features could be identified visually that increase likelihood of failure.

The house and other structures are on the northern end of the lot surrounded by turf, Japanese maple and rhododendron dominated traditional landscape (see key landscape plant list). This landscape blends into a native forest dominated by Doug-fir and western hemlock (see key forest plant list). The traditional landscape creates a wide buffer somewhat separating the living spaces from the forest.

The neighboring properties are privately held and densely forested to the north and west of the property. The properties to the south and east are publicly held and are sparsely forested after logging operations.

**Key birds:**  
pacific wren  
spotted towhee  
red-breasted nuthatch  
rufous hummingbird



**Key amphibians:**  
pacific chorus frog



## Key forest plants:

*Acer macrophyllum* – big leaf maple  
*Ilex aquifolium* – English holly  
*Mahonia aquifolium* – Oregon grape  
*Polystichum munitum* – western swordfern  
*Pseudotsuga menziesii* – Douglas-fir  
*Thuja plicata* – western red cedar  
*Tsuga heterophylla* – western hemlock



## Key landscape plants:

*Acer palmatum* – Japanese maple  
*Aucuba japonica* 'Variegata' – gold dust plant  
*Fatsia japonica* – Japanese aralia  
*Pieris japonica* – lily of the valley  
*Rhododendron* cvs. – rhododendrons  
*Sequoiadendron giganteum* – giant sequoia  
*Taxus* sp. – yew





# Tree Risk

Because Jill and Jack's questions centered around risk and trees failing, I performed a Level 1 Risk Assessment for any trees that were High or Extreme risk as outlined in the *Tree Risk Assessment Best Management Practices* (Smiley et al 2017). I did not observe any High or Extreme risk trees.

Tree risk is the combination of the likelihood of a tree failure occurring, impacting a target and the consequences of that impact. See Matrix 2 from the Best Management Practices below. Qualitative risk ratings range from Low to Extreme and encompass all three of these factors.

Risk Assessments cannot and are not designed to predict all tree failures, but they are a framework to assess the relative risk of observable tree structural weaknesses. The information provided here is designed to help the risk managers (Jill and Jack) to make difficult decisions about whether the benefits of the trees on their property outweigh the risks.

		Consequences of Failure			
		Negligible	Minor	Significant	Severe
Likelihood of Impact & Failure	Very Likely	Low	Moderate	High	Extreme
	Likely	Low	Moderate	High	High
	Somewhat Likely	Low	Low	Moderate	Moderate
	Unlikely	Low	Low	Low	Low



A Level 2 Risk Assessment would provide more tree specific information to help manage tree risk. It would likely identify a handful of trees with moderate risk to consider for removal. Due to the nature of the site, I believe that rather than individual trees with identifiable structural weaknesses being the largest risk to manage, the biggest risk at this site is the large number of low risk trees. While you could have an arborist perform a Level 2 Risk Assessment, I recommend a general management approach.



The trunk wounds extending from the base to 10 feet high on both stems of this tree is concerning, especially because the swing would likely be impacted by a stem failure. But the occupancy rate of this swing is likely rare, especially in bad weather. The risk of this tree is Low to Moderate.



# Tree Management

The buffer of turf and small non-native trees around the structures limits the likelihood that any individual tree failure will strike the structure and people using the structure.

Trees can fail in three main ways that should concern risk managers: branch failure, stem failure and root failure.

While all trees can fail in these ways, Doug-fir and western hemlock (the two dominant large tree species on this property) tend to fail in different ways. Doug-firs have more branch failures or stem failures high in the crown.

Hemlocks tend to have more full tree failures involving a stem failure near the base or root failures.

Full enjoyment of this property requires the understanding and accepting of the risk inherently linked to the benefits of the trees. A few ideas for reducing this risk without compromising too many benefits are:

- Limit time outside during high winds, especially in the unmanaged forest section.
- Remove hanging branches such as in the Doug-fir that we looked at.
- Consider removing the three trees that we discussed (1 alder, and two conifers with large trunk wounds).
- Consider removing the tops of the hemlocks growing out of the nursery log (cover photo).
- Consider having a climbing arborist inspect the crowns of large trees near use areas for structural weakness.



Tree Management extends beyond risk. We also discussed the giant sequoia near the front door.

This tree lost its top and will likely be a large-growing, difficult to manage tree. I recommend removing it, but a skilled climbing arborist may be able to restructure it. Many species would likely perform well and be great additions to your landscape as a replacement tree, but a few species that you could consider are: Oregon white oak (*Quercus garryana*), quaking aspen (*Populus tremuloides*), red horse chestnut (*Aesculus x carnea*), and western larch (*Larix occidentalis*).

Irrigating the turf around the property probably is not hurting the trees. In Oregon's latest heat waves and reduced precipitation, Doug-firs and (especially) western hemlocks, probably benefit from some summer irrigation.

Future monitoring visits could focus on a variety of factors. Consider a future visit during summer to see if any recommendations change in the dry season.

Please contact me with any questions or comments about my observations and recommendations.



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