

**PSEUDOTSUGA MENZIESII - TSUGA HETEROPHYLLA /  
RHODODENDRON MACROPHYLLUM -  
VACCINIUM OVATUM**

Douglas-fir - western hemlock / Pacific rhododendron -  
evergreen huckleberry

Abbreviated Name: PSME-TSHE/RHMA-VAOV

Sample size = 28 plots

**DISTRIBUTION:** Endemic to the Puget Trough in Washington.  
Occurs in Kitsap, Mason, Jefferson, and Island counties.

**GLOBAL/STATE STATUS:** G2S2. There are only 5 known  
relatively good quality occurrences, and there are likely to be very  
few others in existence. The vast majority of stands have been  
harvested in the past. Development has also impacted this type  
and continues to be a threat.

**ID TIPS:** Evergreen huckleberry and Pacific rhododendron each  
provide >5% cover, and sword fern <3% cover. Salal usually co-  
dominates with evergreen huckleberry and rhododendron.

**ENVIRONMENT:** These sites are moderately dry and appear to  
be relatively nutrient-poor. Slope and aspect is quite variable.  
Parent material is usually glacial till, but also includes glacial  
outwash and volcanic residuum. Soil texture is usually gravelly or  
very gravelly sandy loam. This association occurs on sites with a  
very wide range of precipitation for this ecoregion, though it is  
most common in areas with greater than about 45 inches of mean  
annual precipitation.

**Precipitation:** 22-77 inches (mean 52)

**Elevation:** 60-1200 feet

**Aspect/slope:** all/ 0-90% (mean 21%)

**Slope position:** short, upper, plain, mid, lower

**Soil series:** Shelton, Alderwood, Grove, Hoypus, Clallam, dystric  
xerorthents, typic udorthents, Carlsborg, Fidalgo, Kilchis,  
Hoodsport, Triton

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**Vegetation Composition Table (selected species):**

Con = constancy, the percent of plots within which each species was found;  
Cov = cover, the mean crown cover of the species in plots where it was found;  
+ = trace (< 0.5% cover).

Trees	Kartesz 2005 Name	Con	Cov
Douglas-fir	Pseudotsuga menziesii var. menziesii	100	58
western hemlock	Tsuga heterophylla	86	37
western redcedar	Thuja plicata	79	13
western white pine	Pinus monticola	50	15
Pacific madrone	Arbutus menziesii	14	5
<b>Shrubs and Dwarf-shrubs</b>			
evergreen huckleberry	Vaccinium ovatum	100	26
Pacific rhododendron	Rhododendron macrophyllum	100	25
salal	Gaultheria shallon	96	31
dwarf Oregongrape	Mahonia nervosa	54	4
red huckleberry	Vaccinium parvifolium	43	1
oceanspray	Holodiscus discolor	18	3
<b>Forbs and Ferns</b>			
bracken fern	Pteridium aquilinum var. pubescens	43	3
sword fern	Polystichum munitum	32	2
rattlesnake-plantain	Goodyera oblongifolia	21	+

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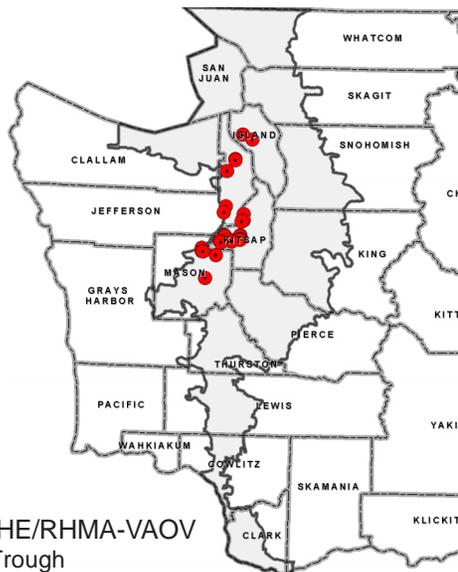
**DISTURBANCE/SUCCESSION:** Fire is the primary natural disturbance. Old-growth stands show evidence of past low- to moderate-severity fire (underburns). Western hemlock and/or western redcedar increase over time in absence of disturbance, Douglas-fir decreases. Young stands may have little hemlock or redcedar. If a high-severity fire occurs where there is a lodgepole pine seed source, the post-fire association may convert to PICO-PSME/GASH. Pacific madrone can also become more important in early-successional stands after fire.

**VEGETATION:** Douglas-fir tends to dominate the uppermost canopy layer. Western hemlock or western redcedar usually either co-dominate the canopy with Douglas-fir or dominate tree regeneration. Western white pine is present in about half the plots and is occasionally prominent to co-dominant (the latter only seen in young previously-logged stands). Evergreen huckleberry, Pacific rhododendron, and salal typically co-dominate the well-developed shrub layer. The herb layer is low in diversity and cover. Dwarf Oregon grape, bracken fern, and red huckleberry are often present.

**CLASSIFICATION NOTES:** Described originally by Chappell (1997). NatureServe (2005) calls it PSME-TSHE/RHMA-VAOV-GASH and also includes part of the PSME-THPL/RHMA association that is described herein. Future NatureServe name will be PSME-TSHE/RHMA-VAOV.

**MANAGEMENT NOTES:** Stands that have not been previously harvested, especially mature and old-growth, should be considered for conservation status. These sites appear to be low or moderately low productivity for tree growth.

**BIODIVERSITY NOTES:** State candidate Vancouver ground-cone (*Boschniakia hookeri*) has been recorded in this plant association.



Plot locations of PSME-TSHE/RHMA-VAOV in the Puget Trough

Chappell, C.B. 2006. Upland plant associations of the Puget Trough ecoregion, Washington. Washington Department of Natural Resources, Natural Heritage Program, Olympia, WA. [\[http://www.dnr.wa.gov/nhp/refdesk/communities/pdf/intro.pdf\]](http://www.dnr.wa.gov/nhp/refdesk/communities/pdf/intro.pdf).