

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

Douglas-fir - western hemlock / evergreen huckleberry
Abbreviated Name: PSME-TSHE/VAOV

Sample size = 38 plots

DISTRIBUTION: Endemic to the Puget Trough ecoregion. Occurs only in the central Puget Trough, including Kitsap, western Pierce, northern Thurston, Mason, Jefferson, and Island counties. Also reported to occur rarely in southwestern BC.

GLOBAL/STATE STATUS: G2S2. There are only 8 known relatively good quality occurrences in Washington, and there are likely to be very few others in existence. The vast majority of stands have been altered by past timber harvest. Development has also significantly impacted this association and continues to be a threat.

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

ENVIRONMENT: These sites are moderately dry and appear to be relatively nutrient-poor. Slope and aspect is quite variable: east and west aspects are best represented in the plots. Parent material is usually glacial till, but also includes glacial outwash and volcanic residuum. About 90% of plots were on soils mapped as having a restrictive layer of hardpan or bedrock. Soil texture is usually gravelly or very gravelly sandy loam. This association is most common in portions of the ecoregion with over 45 inches of mean annual precipitation.

Precipitation: 27-70 inches (mean 49)

Elevation: 40-1200 feet

Aspect/slope: all/ 0-67% (mean 15%)

Slope position: short, plain, upper, mid, ridgetop

Soil series: Shelton, Alderwood, Harstine, Whidbey, Grove, Swinomish, Hoodspout, Hoypus, Kilchis, Poulsbo, Ragnar, Salkum, Sinclair

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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	60
western hemlock	Tsuga heterophylla	89	37
western redcedar	Thuja plicata	82	9
western white pine	Pinus monticola	45	14
Shrubs and Dwarf-shrubs			
evergreen huckleberry	Vaccinium ovatum	100	28
salal	Gaultheria shallon	97	27
dwarf Oregongrape	Mahonia nervosa	53	3
red huckleberry	Vaccinium parvifolium	42	2
trailing blackberry	Rubus ursinus var. macropetalus	32	+
Pacific rhododendron	Rhododendron macrophyllum	16	3
Forbs and Ferns			
bracken fern	Pteridium aquilinum var. pubescens	68	2
sword fern	Polystichum munitum	37	1
twinline	Linnaea borealis ssp. longiflora	16	4
western starflower	Trientalis borealis ssp. latifolia	16	+

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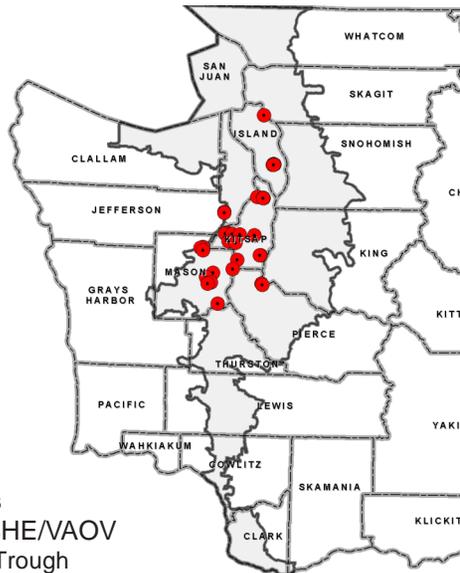
DISTURBANCE/SUCCESSION: Fire is the primary natural disturbance. Old-growth stands show evidence of past low- to moderate-severity fire (underburns). Western hemlock and/or western redcedar increase over time in absence of disturbance, Douglas-fir decreases. Young stands may have little hemlock or redcedar.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

VEGETATION: Douglas-fir tends to dominate the uppermost canopy layer. Western hemlock, or infrequently western redcedar, typically either co-dominates the canopy or dominates 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 and salal typically co-dominate the well-developed shrub layer. The herb layer is low in diversity and cover. Bracken fern and dwarf Oregongrape are frequently present.

CLASSIFICATION NOTES: Also described by Chappell (1997, 2001). A few plots were sampled by Henderson et al. (1989) and called TSHE/GASH-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 moderate 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/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>.