

**PSEUDOTSUGA MENZIESII / GAULTHERIA SHALLON -  
HOLODISCUS DISCOLOR**

Douglas-fir / salal - oceanspray  
Abbreviated Name: PSME/GASH-HODI

Sample size = 35 plots

**DISTRIBUTION:** Most frequent in the Olympic Mountains rainshadow (especially San Juan, western Skagit and Island counties), this association occurs, at least sporadically, more or less throughout the Puget Trough. Also occurs in southwestern BC.

**GLOBAL/STATE STATUS:** G2G3S2. Few occurrences of relatively good quality remain (17 are known in Washington). Most examples have been altered by past timber harvest.

**ID TIPS:** Dominated by Douglas-fir with little to no western hemlock, western redcedar, or grand fir present. Understory dominated by salal, with sword fern, if present, less than 5% cover. Oceanspray abundant, or western fescue or other dry-site indicator present. (Refer to Key)

**ENVIRONMENT:** These are mostly either moderately dry sites within dry climatic zones or very dry sites elsewhere, and they appear to be relatively nutrient-poor. Occurs most frequently on soils that are relatively shallow to bedrock (outcrops sometimes visible on sample plots), but also on glacial outwash, glacial till and other parent materials. Most soils where it occurs have high coarse fragment content (gravel or stones). Aspects are more commonly south to west, but include the entire spectrum. Most frequent in dry climatic areas (Olympic Mountains rainshadow).

**Precipitation:** 21-70 inches (mean 40)

**Elevation:** 50-2300 feet

**Aspect/slope:** all/ 3-84% slope (mean 33)

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

**Soil series:** Rock outcrop, Everett (Grove), Pickett, Roche, Fidalgo, andic xerochrepts, lithic haploxerolls, Guemes, Hoypus, Lystair, Keystone, dystic xerochrepts

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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	73
Pacific madrone	Arbutus menziesii	31	4
western hemlock	Tsuga heterophylla	26	2
lodgepole pine	Pinus contorta var. contorta	23	9
western redcedar	Thuja plicata	17	3
Grand fir	Abies grandis	14	2
<b>Shrubs and Dwarf-shrubs</b>			
salal	Gaultheria shallon	100	58
baldhip rose	Rosa gymnocarpa	97	3
oceanspray	Holodiscus discolor	89	14
dwarf Oregongrape	Mahonia nervosa	89	7
trailing blackberry	Rubus ursinus var. macropetalus	74	3
red huckleberry	Vaccinium parvifolium	49	2
orange honeysuckle	Lonicera ciliosa	49	2
serviceberry	Amelanchier alnifolia	40	2
tall Oregongrape	Mahonia aquifolium	40	1
beaked hazelnut	Corylus cornuta var. californica	31	10
hairy honeysuckle	Lonicera hispidula	29	2
common snowberry	Symphoricarpos albus var. laevigatus	29	1
evergreen huckleberry	Vaccinium ovatum	20	8
spreading snowberry	Symphoricarpos hesperius	20	3
pipsissewa	Chimaphila umbellata ssp. occidentalis	14	3
<b>Graminoids</b>			
western fescue	Festuca occidentalis	60	2
Coast Range fescue	Festuca subuliflora	26	2
<b>Forbs and Ferns</b>			
sword fern	Polystichum munitum	77	2
bracken fern	Pteridium aquilinum var. pubescens	60	5
western starflower	Trientalis borealis ssp. latifolia	54	1
twinline	Linnaea borealis ssp. longiflora	43	3
rattlesnake-plantain	Goodyera oblongifolia	43	1
licorice fern	Polypodium glycyrrhiza	34	+

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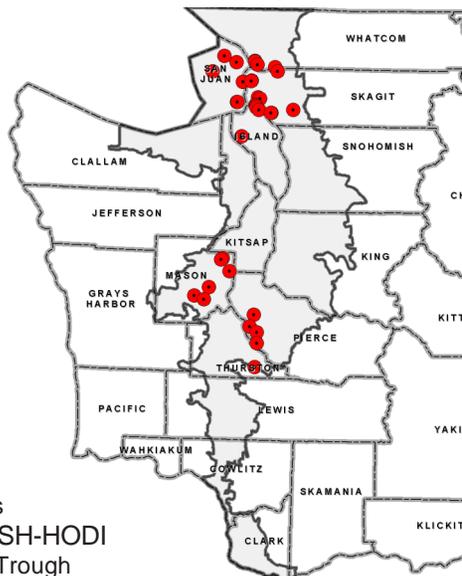
**DISTURBANCE/SUCCESSION:** In the pre-Western settlement landscape, a moderate-severity fire regime likely prevailed (variable severity, intermediate frequency). Douglas-fir regeneration is especially abundant after fires, but also occurs at other times. More shade-tolerant conifers are largely absent and do not appear capable of becoming important in late-seral stands under present conditions. If a lodgepole pine seed source is available after a high-severity fire, the PICO-PSME/GASH association is likely to develop.

**VEGETATION:** Forest dominated by Douglas-fir. Western hemlock, grand fir, or western redcedar are occasionally present in small amounts, mainly as regeneration. The understory is dominated by salal. Oceanspray usually forms a prominent tall shrub layer. Baldhip rose, dwarf Oregongrape, and trailing blackberry are important shrubs that are usually present. Beaked hazelnut is sometimes prominent. The herb layer is usually rather depauperate. Western fescue, sword fern, bracken fern, and western starflower are often present in small amounts. Western fescue, serviceberry, tall Oregongrape, pipsissewa, and other dry-site indicators are more frequent in this association than in closely related associations with more hemlock and redcedar.

**CLASSIFICATION NOTES:** Also described in Chappell (1997, 2001). Fonda and Bernardi (1976) described the same type and called it PSME/GASH on Sucia Island. Chappell (1997) also recognized a PSME/GASH-VAOV association, which has here been subsumed into PSME/GASH-HODI and PICO-PSME/GASH. On the Olympic National Forest, a somewhat similar, but more montane, association is called PSME/GASH (Henderson et al. 1989).

**MANAGEMENT NOTES:** Stands that have not been previously harvested, especially mature and old-growth, should be considered for conservation status. Timber productivity is likely to be low on these sites. Sites that have already been harvested would be well suited to uneven-aged management.

**BIODIVERSITY NOTES:** State candidate yerba de selva (*Whipplea modesta*) has been recorded in this plant association.



Plot locations  
of PSME/GASH-HODI  
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>.