

**PSEUDOTSUGA MENZIESII – TSUGA HETEROPHYLLA /
GAULTHERIA SHALLON – MAHONIA NERVOSA**

Douglas-fir – western hemlock / salal – dwarf Oregongrape

Abbreviated Name: PSME-TSHE/GASH-MANE

Synonym: *Pseudotsuga menziesii* – *Tsuga heterophylla* /
Gaultheria shallon – *Berberis nervosa*

Sample size = 14 plots

DISTRIBUTION: This widespread association occurs uncommonly throughout much of the Puget Trough ecoregion. Area of greatest historic abundance appears to have been the eastern portion of the ecoregion in Snohomish, King, and Pierce counties. Also occurs in adjacent ecoregions within Washington and in northwestern Oregon and southwestern British Columbia.

GLOBAL/STATE STATUS: G4S4. Natural-origin occurrences in the Puget Trough are rare due to historic logging and much of the type has been converted to development. In adjacent ecoregions, it is more common and has been less impacted by development and logging.

ID TIPS: Salal typically occupies >10% cover and always >5%. Oregongrape, red huckleberry, or vine maple usually present. Sword fern, evergreen huckleberry, oceanspray, and Pacific rhododendron are absent or in low abundance (refer to key).

ENVIRONMENT: These sites are moderately dry to mesic and appear to be relatively nutrient-poor. Sampled sites are flat to gently sloping, on a variety of aspects. Slope position is most frequently plain/plateau and does not include lower slopes or bottoms (mesic to dry positions). Parent material is most often glacial till (with restrictive soil layer), but also includes glacial outwash and probably other types. Soil textures are mostly gravelly or very gravelly loams or sandy loams.

Precipitation: 27-62 inches (mean 44)

Elevation: 100 - 1900 feet

Aspect/slope: various/ 0-15% (mean 8)

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

Soil series: Everett, Neilton, Alderwood, Elwha, Hoypus,

Kapowsin, Revel, Salkum, Sinclair, Swinomish, Tenino, Whidbey

DISTURBANCE/SUCCESSION: Fire is the primary natural disturbance. Old-growth stands show evidence of past low- to

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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	<i>Pseudotsuga menziesii</i> var. <i>menziesii</i>	100	67
western hemlock	<i>Tsuga heterophylla</i>	79	38
western redcedar	<i>Thuja plicata</i>	57	19
Shrubs and Dwarf-shrubs			
salal	<i>Gaultheria shallon</i>	100	43
red huckleberry	<i>Vaccinium parvifolium</i>	93	4
dwarf Oregongrape	<i>Mahonia nervosa</i>	86	12
trailing blackberry	<i>Rubus ursinus</i> ssp. <i>macropetalus</i>	64	2
baldhip rose	<i>Rosa gymnocarpa</i>	57	1
oceanspray	<i>Holodiscus discolor</i>	43	2
vine maple	<i>Acer circinatum</i>	14	11
Forbs and Ferns			
bracken fern	<i>Pteridium aquilinum</i> var. <i>pubescens</i>	71	3
sword fern	<i>Polystichum munitum</i>	71	2
twinflower	<i>Linnaea borealis</i> ssp. <i>longiflora</i>	43	9
western starflower	<i>Trientalis borealis</i> ssp. <i>latifolia</i>	43	+

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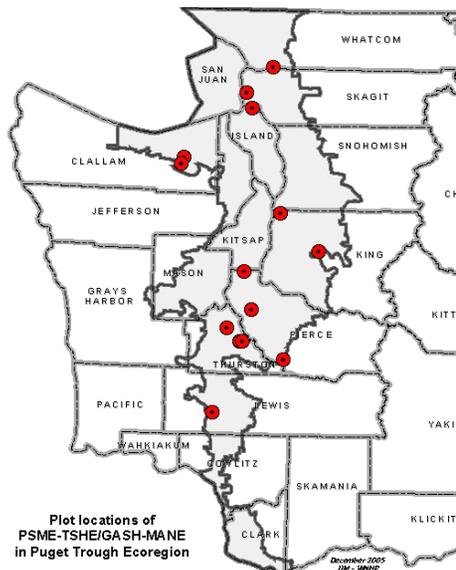
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moderate-severity fire (underburns). Western hemlock and/or western redcedar increase over time in the absence of disturbance, Douglas-fir decreases, though still remains prominent after hundreds of years. Young stands may have little hemlock or redcedar.

VEGETATION: This is a forest where Douglas-fir tends to dominate the uppermost canopy layer. Western hemlock or western redcedar often co-dominate the canopy with Douglas-fir or dominate tree regeneration. The well-developed shrub layer is dominated by salal. Dwarf Oregongrape is usually present to prominent, occasionally co-dominant. Vine maple is occasionally prominent to co-dominant as a very tall shrub, especially in moist climatic areas near the edge of the ecoregion. Other frequently occurring shrubs and vines are trailing blackberry, red huckleberry, and baldhip rose. The typically depauperate herb layer usually has small amounts of sword fern and bracken fern. Twinflower is sometimes prominent.

CLASSIFICATION NOTES: Also described by Chappell (1997, 2001). NatureServe classification will soon be revised to include this type as part of much broader association with same name as this one. This association is similar to TSHE/GASH-BENE of Mount Baker-Snoqualmie and Olympic National Forests (Henderson et al. 1989 & 1992) and TSHE/BENE-GASH of Gifford Pinchot National Forest (Topik et al. 1986).

MANAGEMENT NOTES: Stands that have not been previously harvested should be considered for conservation status. These sites appear to be moderately low in productivity for tree growth.



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).