



Legacy Forest Defense Coalition
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September 13, 2025

Jay Guthrie, Northwest Region Manager
Via: SEPA Center
P.O. Box 47015
Olympia, WA 98504-7015

Re: G1/S1 Association Present in Parasol Timber Sale (CEGL000468)

Hello Mr. Guthrie,

I recently visited the site of DNR's "Parasol" timber sale in Olsen Creek State Forest. While hiking through the proposed harvest area, I observed the presence of *Thuja plicata* - (*Abies grandis*) / *Polystichum munitum* Forest, a Critically Imperiled G1/S1 forest association.

Regarding the association (Element Code CEGL000468), [NatureServe](#) states that "*Diagnostic of this forest association is the dominance of Thuja plicata and Abies grandis in the tree canopy and Polystichum munitum in the understory.*" My observations in Parasol were consistent with both this description and the following summary provided by NatureServe:

This forest association is dominated by the evergreen needle-leaved trees Thuja plicata and Abies grandis. These species have average densities of 148 and 90 trees per hectare (>10 cm in diameter), respectively. Pseudotsuga menziesii is often present as scattered large individuals in the upper canopy, and may be codominant in some stands, but is never regenerating. Tsuga heterophylla is occasionally present with low cover. Tree regeneration may be relatively sparse, with the dominant trees each having an average of 64 saplings and seedlings per hectare. The understory is strongly dominated by the perennial fern Polystichum munitum, which averages 43% cover or more, and often the fronds have a 2-m spread. Scattered individuals of several shrub species occur, but none have greater than 2% cover. Mosses are abundant on logs, and average 15% cover. Stands that have been disturbed by logging often have an abundant tree subcanopy and shrubby layer of the seral, broad-leaved deciduous trees Acer macrophyllum and Alnus rubra.

In addition to collecting photographs which clearly illustrate this forest type, I conducted a survey of tree species and understory composition in Parasol (see attached map). Tree basal areas were determined using a BAF 10 angle gauge at three points within the area where I believed the association to be present (Table 1). At each plot point, I conducted a point-line

intercept 100' long at a westward bearing and recorded all vascular species present at one foot intervals (Table 2).

This survey showed that *Thuja plicata* and *Abies grandis* dominate the observed area, representing 35.48% and 33.06% of basal area respectively. *Pseudotsuga menziesii* was found to be present only as scattered individuals in the upper canopy (6.45% of basal area) and *Tsuga heterophylla* was similarly sparse (5.65% of basal area). *Alnus rubra* and *Acer macrophyllum* accounted for 10.48% and 8.87% of basal area across the three survey points. Tree regeneration was noted to be very minimal throughout the stand.

In the understory, *Polystichum munitum* was strongly dominant at 56% of total cover. I only counted vascular plants in this survey, however mosses were abundant on logs and woody debris throughout the observed area (see photographs).

According to NatureServe, “*This forest association occurs primarily in the Puget Sound Basin in northwestern Washington and adjacent British Columbia. Stands are relatively small in area and are restricted to very specific environments in the rainshadow of the Olympic Mountains and Vancouver Island.*” While the Parasol timber sale is located outside of the Olympic rainshadow, it is within the Puget Sound Basin. I believe that this element occurrence, once verified, would represent the easternmost EO of CEGL000468 in Washington State based on WNHP data.

Note that the observed EO outlined in the attached map is approximate and based on a limited field survey. It does not represent the association’s full extent in Parasol or in the surrounding Olsen Creek State Forest, where I suspect it is likely to be found.

Given the information included here, I kindly request that DNR and the Northwest Region work with the Washington State Natural Heritage Program to verify my findings, conduct a more extensive survey of the Parasol timber sale and Olsen Creek State Forest, and adjust timber sale boundaries to exclude CEGL000468 and any other rare forest associations.

Please me know if you have any questions and I will assist however I can. Thank you.

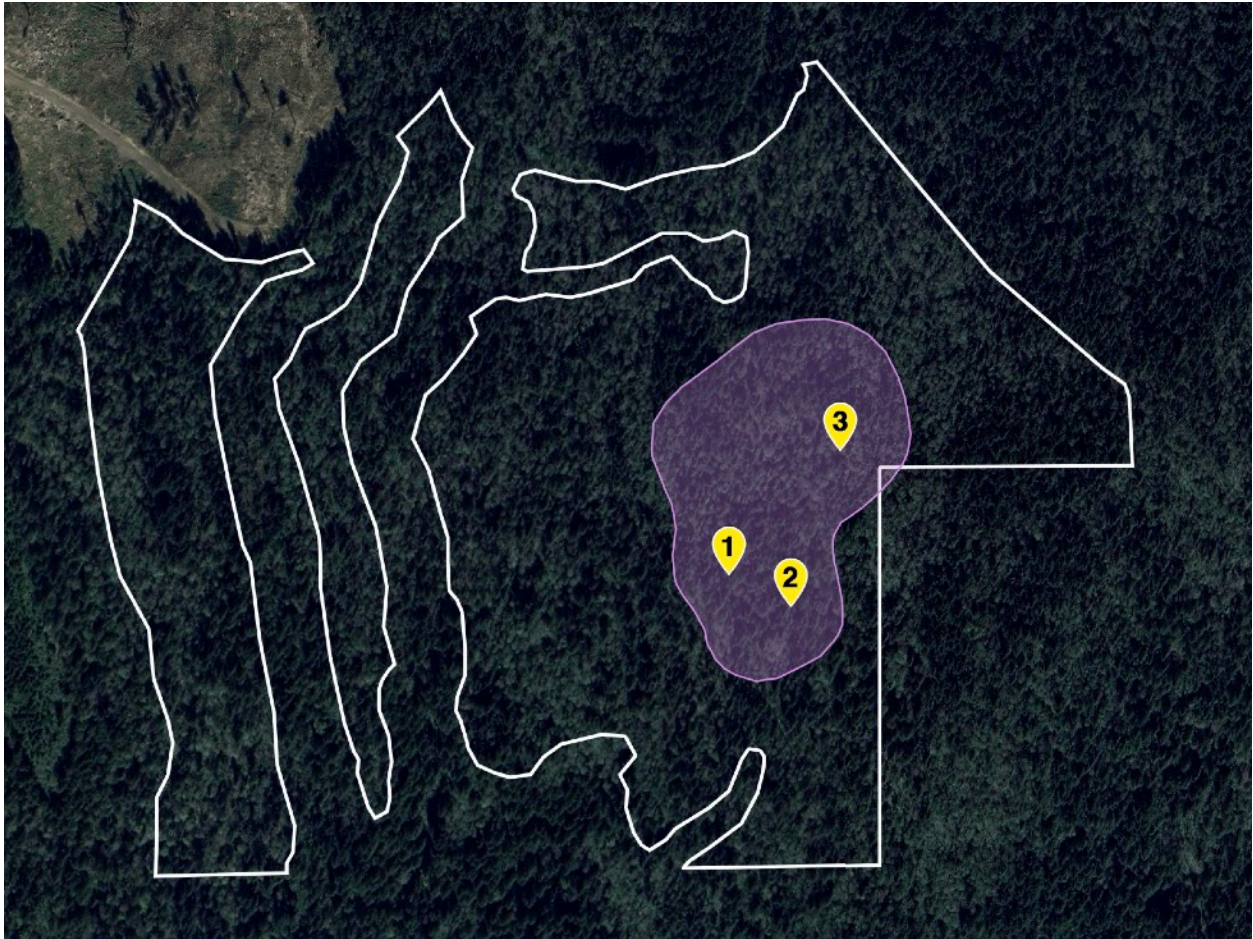
Sincerely,

A handwritten signature in black ink, appearing to read 'K. Krakow', with a long, sweeping horizontal line extending to the right.

Kyle Krakow
Field Biologist
Legacy Forest Defense Coalition

Parasol Timber Sale - Olsen Creek State Forest

Thuja plicata - (*Abies grandis*) / *Polystichum munitum* Forest (CEGL000468)



Observed EO (approximate) in purple

Survey Point Locations

Point 1: 48.74444, -122.30139

Point 2: 48.74417, -122.30056

Point 2: 48.74555, -122.29989

Table 1: Tree Species (BAF 10 Angle Gauge)

Species	Plot 1	Plot 2	Plot 3	Total Count	% Basal Area
<i>Thuja plicata</i>	17	15	12	44	35.48%
<i>Abies grandis</i>	10	13	18	41	33.06%
<i>Alnus rubra</i>	4	4	5	13	10.48%
<i>Acer macrophyllum</i>	5	3	3	11	8.87%
<i>Pseudotsuga menziesii</i>	4	2	2	8	6.45%
<i>Tsuga heterophylla</i>	2	1	4	7	5.65%

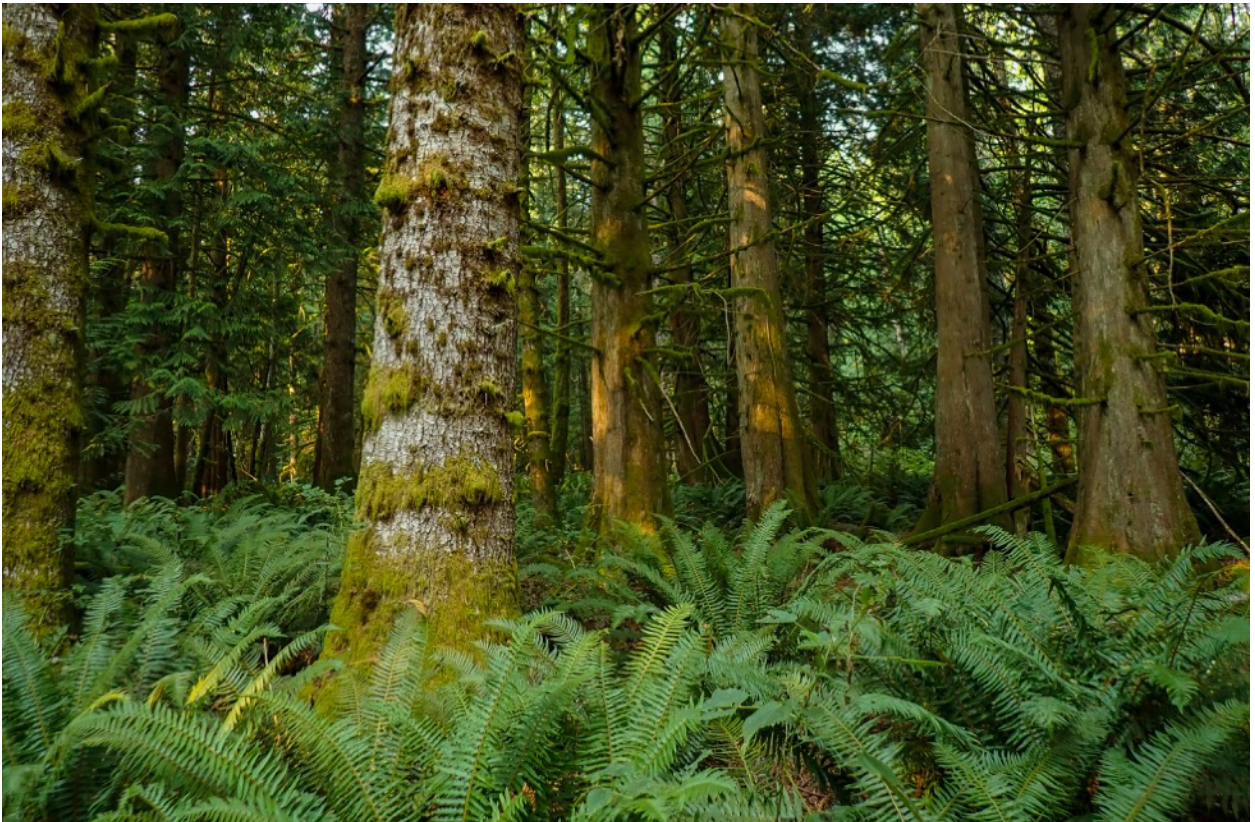
Table 2: Understory Species (Point-Line Intercept)

Species	Plot 1	Plot 2	Plot 3	Total Count	% Cover
<i>Polystichum munitum</i>	69	47	52	168	56.00%
<i>Urtica dioica</i>	1	8	2	11	3.67%
<i>Achlys triphylla</i>	6	2	1	9	3.00%
<i>Dicentra formosa</i>	0	5	4	9	3.00%
<i>Mahonia nervosa</i>	3	5	0	8	2.67%
<i>Athyrium filix-femina</i>	3	4	1	8	2.67%
<i>Thuja plicata</i>	0	3	5	8	2.67%
<i>Tsuga heterophylla</i>	0	3	2	5	1.67%
<i>Abies grandis</i>	0	0	3	3	1.00%
<i>Lysimachia latifolia</i>	0	0	3	3	1.00%
<i>Sambucus racemosa</i>	2	0	0	2	0.67%
<i>Vaccinium parvifolium</i>	0	0	2	2	0.67%
<i>Ilex aquifolium</i>	0	0	1	1	0.33%

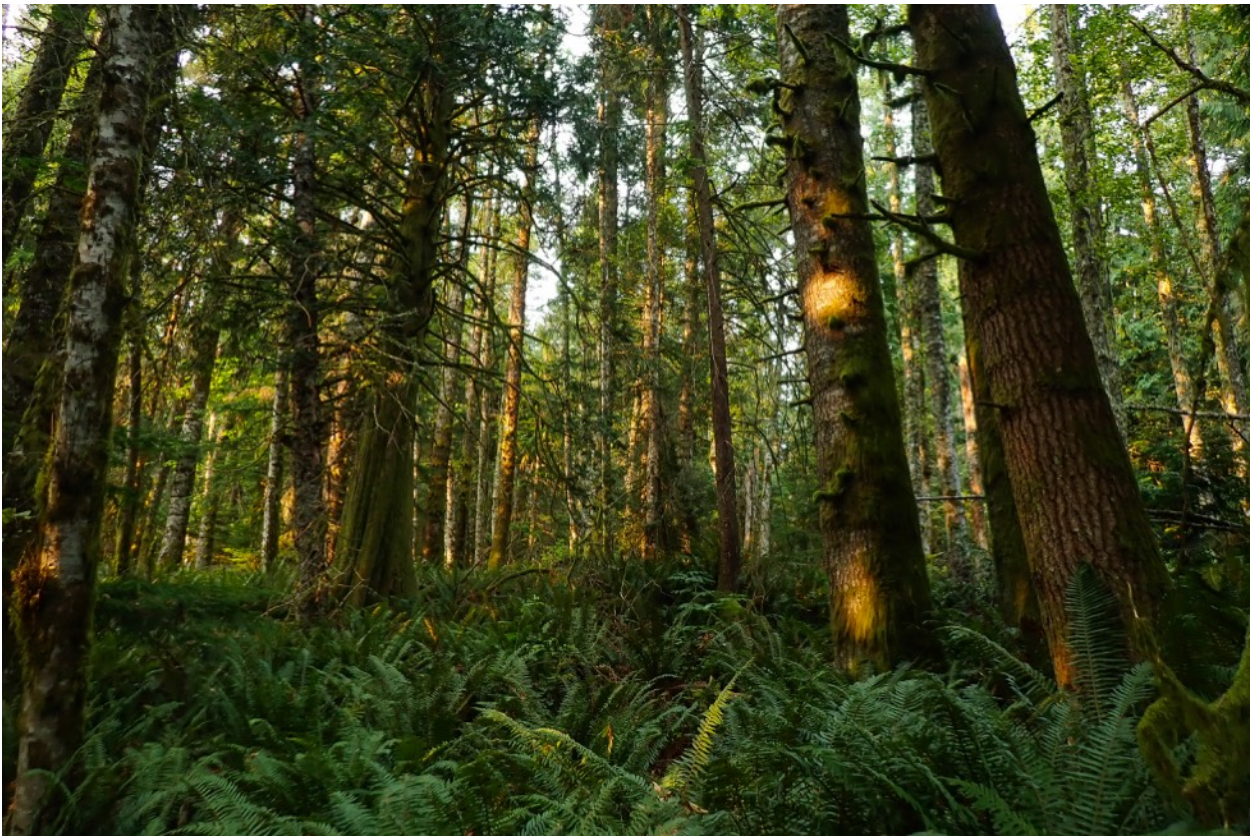
Point 1 Photographs



Point 2 Photographs



Point 3 Photographs



Additional Photographs

