



Legacy Forest Defense Coalition

P.O. Box 715

Tacoma, WA 98417

Phone: (360) 989-8067

Email: joshua@wlfdc.org

Dear DNR officials of the Olympic Region,

On May 10 2024, I visited unit four of the "Power Station" timber sale. My goal was to survey the forest association in the area to determine if it represented a G1/S1 imperiled forest type based on the International Vegetation Classification System ([CEGL002848](#)). This association (Thuja plicata - Pseudotsuga menziesii - Abies grandis / Mahonia nervosa / Polystichum munitum Forest) is an association that primarily occurs in the Georgia Basin of British Columbia and adjacent Washington. Below is the Floristic Summary of this plant community provided on the nature serve website:

This plant community is characterized by a closed canopy and an overstory dominated by high cover of Thuja plicata, Pseudotsuga menziesii, and/or Abies grandis. Low to moderate cover of Acer macrophyllum and Cornus nuttallii are sometimes present in the overstory. Tsuga heterophylla occasionally occurs but is subordinate in importance to Thuja plicata and Abies grandis. The moderately well-developed shrub layer is dominated by moderate cover of Mahonia nervosa and Gaultheria shallon together with low cover of Rosa gymnocarpa and Vaccinium parvifolium. Sometimes there is moderate cover of Holodiscus discolor and low cover of Frangula purshiana (= Rhamnus purshiana). The moderately well-developed herb layer is dominated by low to moderate cover of Polystichum munitum, and often Achlys triphylla as well in British Columbia, with low cover of Trientalis borealis, Rubus ursinus, Galium triflorum, Festuca subulata, and Trillium ovatum. Often there is low to moderate cover of Linnaea borealis and low cover of Tiarella trifoliata, Pteridium aquilinum, Mycelis muralis (= Lactuca muralis), and Lathyrus nevadensis. The moderately well-developed moss layer is dominated by high cover of Eurhynchium oregonum, sometimes with low cover of Leucolepis acanthoneuron and Hylocomium splendens.

In my survey, I conducted point-line intercept transects (100') at a northward bearing from four plot points across the northern section of the unit (see Figure 3), with a measurement interval of 1'. I documented all vegetation directly below and up to 4 m above each point on the transect. All species that I encountered are listed on Figure 1, apart from the moss layer which was generally co-dominated by Eurhynchium oregonum and Hylocomium splendens. In instances where a species was present along the transect but not measured in the transect I recorded the species as "PRESENT <1."

Figure 1 - Point line intercept transects					
Species	Plot 1	Plot 2	Plot 3	Plot 4	Average Cover
<i>Polystichum munitum</i>	39	38	53	39	35.28%
<i>Mahonia nervosa</i>	24	53	9	39	26.10%
<i>Thuja plicata</i>	8	42	16	0	13.78%
<i>Gaultheria shallon</i>	8	24	18	2	10.86%
<i>Tsuga heterophylla</i>	4	8	0	0	2.51%
<i>Abies grandis</i>	0	9	0	0	1.88%
<i>Claytonia perfoliata</i>	7	0	0	0	1.46%
<i>Holodiscus discolor</i>	0	3	2	4	1.88%
<i>Rubus ursinus</i>	1	1	3	1	1.25%
<i>Rosa gymnocarpa</i>	0	2	2	0	0.84%
<i>Nemophila parviflora</i>	0	3	1	0	0.84%
<i>Pteridium aquilinum</i>	0	0	3	0	0.63%
<i>Viola glabella</i>	2	1	0	0	0.63%
<i>Galium aparine</i>	0	1	0	0	0.21%
<i>Alnus rubra</i>	0	2	0	0	0.42%
<i>Achlys triphylla</i>	PRESENT <1	PRESENT <1	PRESENT <1	2	0.42%
<i>Trillium Ovatum</i>	PRESENT <1	PRESENT <1	PRESENT <1	2	0.42%
<i>Galium triflorum</i>	PRESENT <1	PRESENT <1	PRESENT <1	1	0.21%
<i>Rhododendron macrophyllum</i>	PRESENT <1	PRESENT <1	PRESENT <1	2	0.42%
<i>Vaccinium parvifolium</i>	PRESENT <1	PRESENT <1	PRESENT <1	3	0.63%
<i>Trientalis borealis</i>	PRESENT <1	PRESENT <1	PRESENT <1	PRESENT <1	

The results of my point line intercept transects show a clear dominance of *Polystichum munitum* in the herb layer. The shrub layer was co-dominated by *Mahonia nervosa* representing 26.10% cover and *Gaultheria shallon* representing 10.86% cover. Consistent with the description of the CEGL002848 community, *Rosa gymnocarpa* and *Vaccinium parvifolium*, and *Holodiscus discolor* were all present with low cover in the shrub layer. *Thuja plicata* clearly dominated understory regeneration with 13.78% cover, *Abies grandis* and *Tsuga heterophylla* were also present in understory regeneration.

I conducted the point-line intercept transects at plots 1-3 on March 29, 2024, and thus they under represent the diversity in the herb layer as certain species, namely *Galium Triflorum*, *Achlys triphylla*, *Trientalis borealis* and *Trillium Ovatum* had not emerged for the season. When I returned to the site on May 10 I, in addition to conducting another point-line intercept transect at Plot 4, documented the presence and ubiquity of these species at all plot locations. I have attached images of these species occurring in the herb layer across the observed extent of the EO at the end of this letter.

In addition to point line intersect transects I also conducted variable radius basal area surveys using a BAF 10 angle gauge at each plot point. Consistent with the NatureServe description of Thuja plicata - Pseudotsuga menziesii - Abies grandis / Mahonia nervosa / Polystichum munitum Forest, Thuja plicata, Pseudotsuga menziesii and Abies grandis co-dominated the overstory with Acer macrophyllum and Tsuga heterophylla present in small amounts. The results of my BAF 10 angle gauge surveys at each plot point were clearly consistent with the NatureServe description of the CEG002848 association. See Figure 2.

Species	Plot 1	Plot 2	Plot 3	Plot 4	Average Basal Area
Abies grandis	14	9	5	8	23.73%
Thuja plicata	3	10	25	13	43.22%
Pseudotsuga menziesii	2	12	5	13	27.12%
Tsuga heterophylla	1	0	2	0	2.54%
Alnus rubra	0	0	2	0	1.69%
Acer macrophyllum	1	0	0	1	1.69%

In conclusion, the results of my survey were entirely consistent with the Thuja plicata - Pseudotsuga menziesii - Abies grandis / Mahonia nervosa / Polystichum munitum Forest Association as described by NatureServe. Thuja plicata, Pseudotsuga menziesii and Abies grandis were clearly codominant throughout the stand with Thuja plicata dominating regeneration. Polystichum munitum dominated the herb layer with other herbaceous species including Galium Triflorum, Achlys triphylla, Trientalis borealis and Trillium Ovatum present throughout the surveyed area. Mahonia nervosa and Gaultheria shallon co-dominated the shrub layer with other species including Rosa gymnocarpa and Vaccinium parvifolium, and Holodiscus present in small quantities.

Natureserve describes the Thuja plicata - Pseudotsuga menziesii - Abies grandis / Mahonia nervosa / Polystichum munitum Forest Association as primarily occurring below 190 m in elevation, this site is located at 450 m elevation. Given the small sample size caused by the rarity of this forest association (less than 10 documented sights) it is entirely possible that this association could occur at a variety of elevations that are outside of its previously documented range.

This association (CEGL002848) is listed as G1/S1. It is imperative that this imperiled forest association is excluded from the Power Station timber sale and that the Washington State Natural Heritage Program visit this site to verify my findings. Moving forward with plans to harvest this area as part of the Power Station timber sale would be entirely inconsistent with DNR's commitments under the sustainable forestry initiative and entirely inconsistent with DNR's mandate to manage trust lands for the public good.

I am freely available to join members of the Washington State Natural Heritage Program in a site visit to this forest if desired.

Below I have attached a map showing the locations of the plots, the estimated extent of the EO and photos that show the presence of Galium Triflorum, Achlys triphylla, Trientalis borealis and Trillium Ovatum in the herb layer.

Sincerely,



Joshua Wright
Legacy Forest Defence Coalition
Campaigner

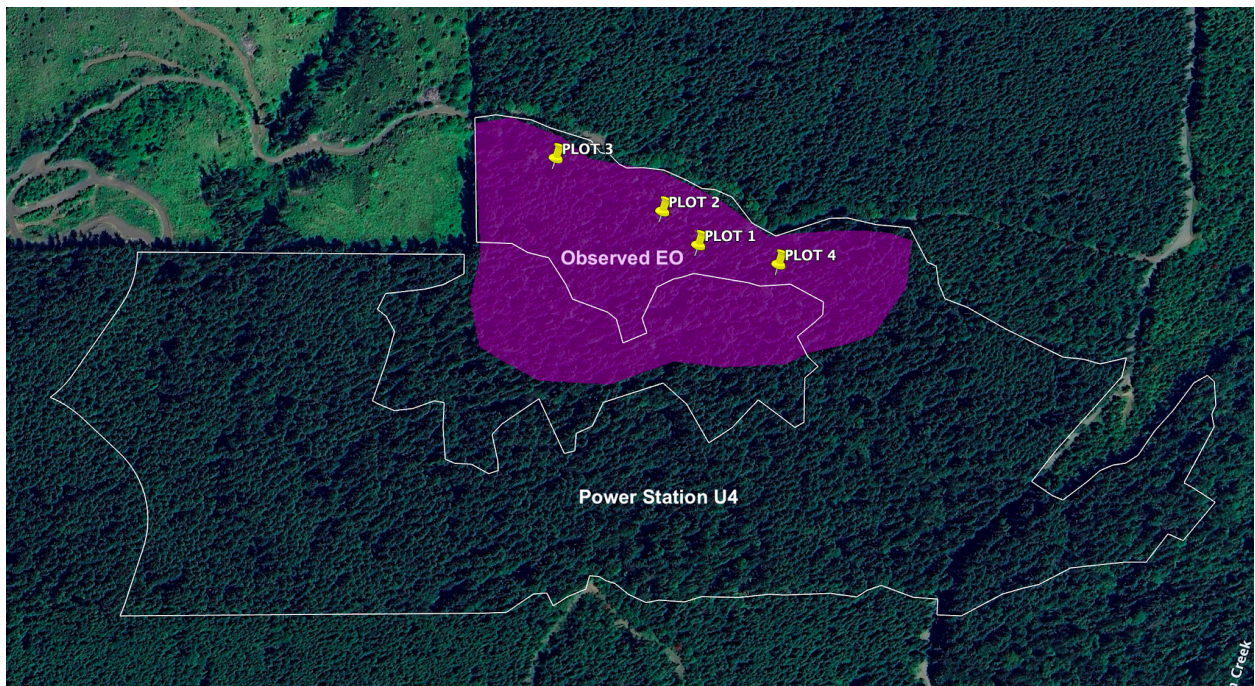


Figure 3







