SHORE ACRES ESTATES WOODLANDS ASSESSMENT

By Washington State Department of Natural Resources

April 29, 2022 site visit of Shore Acres Estates

Stand Overview

The ownership is comprised of 2 parcels located in central Stevens County on the west side of Loon Lake. The large parcel is 38.6 acres and the smaller parcel is 5.1 acres. The stand lays on a north to southeast aspect and has an elevation in the 2600' range. It is dominated by Douglas-fir trees with smaller numbers of Ponderosa pine, lodgepole pine and tamarack. Harvesting has occurred about 22 years ago?

Fuels Management

We started off the walk through by boring into a co-dominant ponderosa pine tree that was about 15" in diameter and approximately 75' tall. The age of the tree was counted at 60 years old. At this site, we discussed fuels management and saw a need for some pre-commercial thinning of the pine thickets in the draw in the SE corner. As we moved around the property in a counter-clockwise circle we saw fewer thickets and a more Douglas-fir forest type. Brush patches were quite dense, but there were openings of pine grass in places. Brush species included snowberry, ninebark and ocean spray. The smaller thickets could have some trees removed, especially the suppressed trees and dead ones. Thickets do provide good habitat for birds and small mammals.

Overall, I don't see any places that are "emergencies". I'd recommend doing some light thinning in the southeast corner and developing a walking trail as time allows. Remember to focus pine tree thinning in the fall to minimize pine beetle activity. November is a good month to burn slash, too.

Forest Health
Ponderosa pine stand

In general, the health of the ponderosa pine at this site looked good. There was no evidence of bark beetle activity and no evidence of root disease, which would be two of the more detrimental forest health issues to affect ponderosa pine. There was evidence of needle cast (spores on defoliated needles), but this fungal defoliator is native and prevalent in ponderosa pine; it does not typically cause much damage. This stand could benefit by a light thinning to decrease the risk of bark beetle infestation. Typically, ponderosa pine become at risk for bark beetle infestations when they reach a density of about 120 ft^2 of basal area per acre (see picture below).

A stand of ponderosa pine at 120 ft^2 of basal area per acre

A young, dense stand of mixed conifer was located in a draw within this stand of ponderosa pine. Bark beetle risk is typically minimal for trees of this size. Sometimes we see fir engraver infest grand fir or *Scolytus monticolae* (no common name) infest Douglas-fir saplings, but this is typically in relation to drought stress. Regardless, this understory stand could also benefit via a light thinning in order to ensure all trees within the draw are receiving the proper amount of water to reach maturity.

Mature Douglas-fir Stand

Evidence of *Armillaria ostoyae* was prevalent within this stand. *Armillaria osto*yae is a native pathogen that causes root disease in conifers. Douglas-fir and grand fir tend to be the most susceptible species in eastern WA. Evidence of root disease includes thinning crowns, chlorosis (yellowish-coloration of needles), rounded tops of crowns, stress cone crops and Douglas-fir beetle infestation. In Douglas-fir stands infected by Armillaria, it is best ***not*** to thin or harvest the stand if possible. When you harvest a Douglas-fir stand that is infected with Armillaria and leave the stumps/ roots, the Armillaria tends to proliferate, particularly during dry periods, and the situation becomes worse. In Armillaria infected stands, it is best to let trees die out slowly. As these infected trees die, it would be best to plant a species more tolerant of Armillaria within the gaps created. At this site, ponderosa pine would be the best choice.

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