

Upper Wenatchee Planning Area Landscape Evaluation Summary

Total Acres	Forested Acres	Treatment Goal (Acres)
74,778	67,109	15,500 - 27,000



Landscape Highlights

The Upper Wenatchee planning area is one of the highest fire risk areas in eastern Washington. Recent treatments on US Forest Service and private land have begun to reduce risk, yet more treatments are needed around homes and communities. Forest land is 85% USFS, 13% private, and 2% DNR and State Parks. Treating an estimated 15,000 - 25,000 acres of dense forest is recommended to move the landscape into a more resilient condition while also maintaining sufficient dense forest to help meet Late Successional Reserve objectives. Maintenance treatments on 500-2000 acres of currently open forest are also recommended. Treatment needs equate to **23-40%** of the forested area. Recommendations are based on WA DNR's update of a landscape evaluation conducted by the Forest Service using 2014 current conditions data. NEPA planning is underway for all Forest Service land in the project area.

20 Year Plan Landscape Goals

Overarching:

- Improve safety and fire protection for people and homes.
- Increase resilience to drought and wildfire by creating open canopy forest with resistant tree species and a large tree component
- Maintain large tree, dense forest for wildlife in the least fire and drought prone areas.

Reduce wildfire risk:

Extensive treatments on private parcels are needed to reduce the high level of risk to communities (Fig. 1), as well as on adjacent Forest Service land to create defensible space. In forest areas away from homes, risk of a large crown fire is high to extreme due to both high fire probability (3-4.5% per year) and high fuel loading. Treatments that increase the amount and patch size of fire resistant forest are recommended. Not all high risk forest needs to be treated to significantly reduce overall risk, however. Many recently treated areas are predicted to burn as low-intensity ground fires, which will have beneficial effects by consuming fuels.

Prepare for climate change:

Projected warming will increase moisture stress and probability of wildfire and insect outbreaks. By mid-century, only north slopes and higher elevations are projected to have moisture stress levels currently associated with moist and cold forest (Fig. 2), while levels associated with woodland and shrub-steppe are projected to increase from 0 to 20% of the planning area. Treatments to reduce density and favor fire and drought-tolerant species will help forests adapt.

Sustain wildlife habitat:

Maintaining a substantial portion of the planning area in large tree, dense forest is necessary to provide northern spotted owl habitat and meet Late Successional Reserve (LSR) objectives on Forest Service land. Yet risk of habitat loss from fire is very high across most of the LSR. Thus treating a significant portion of the LSR is recommended to reduce risk. By creating a mosaic of large dense and open patches with large trees, treatments can reduce long term risk of habitat loss by slowing spread of crown fires and providing patches of replacement habitat.

Enhance rural economic development:

A large portion of the potential treatment areas have road access and are likely to be commercially viable. Treatments have the potential to provide meaningful volume for existing or new wood processing facilities. Reducing fire risk will help maintain recreational values and associated economic activity in the Wenatchee valley.

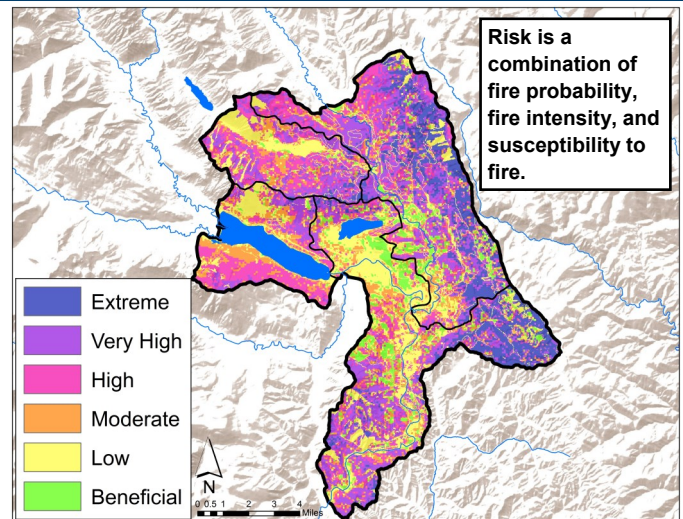


Figure 1. Wildfire risk to homes, infrastructure & forests.

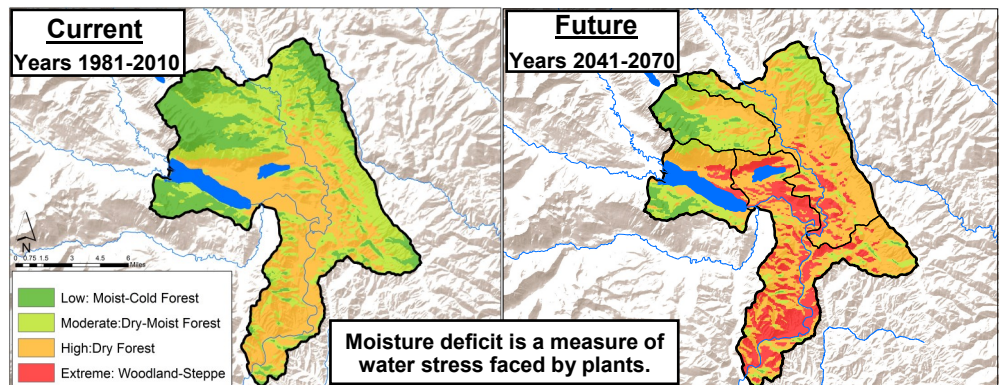


Figure 2. Current and future moisture deficit levels.

Definitions (see Appendix for data sources and methods):

Dry: Ponderosa pine and Douglas-fir dominated forests that historically supported ground fires every 5-25 years. **Moist:** forests that historically had mixed severity fires and were dominated by fire resistant species on sites with more frequent fire (~30-80 years) and fire intolerant species such as grand fir on sites with less fire. **Cold:** Upper elevation mixed conifer forests with high severity fires every 80-200+ years. **Woodland/Steppe:** Grass and shrublands that may have up to 10% cover of conifer trees. **Size classes:** Large: overstory diameter (OD) > 20"; Medium: OD 10-20"; Small: OD <10". **Canopy cover classes:** Open: <40%; Dense: >40%. **Fuels:** shrubs, grasses, small trees, duff, & dead woody material.

Treatment Needs: Upper Wenatchee Planning Area

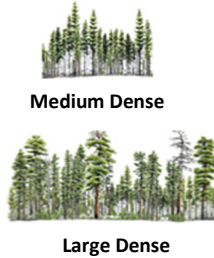
Dry forest:

Treating 12,000 - 18,000 acres of dense, dry forest (Table 1, Fig. 3) is recommended to flip the dry portion of the landscape from being dominated by large patches of dense forest to open forest with a large tree component. Treatments are needed in large, medium and small forest structure classes. Large tree structure exists in most places, and could be converted to more fire and drought resistant forest by removing smaller trees and treating fuels with prescribed fire or mechanical methods. The highest priority treatments are on private and USFS land near homes.

Moist and Cold forest:

Treating 3,000-7,000 acres of dense, moist forest is recommended to break up some of the large patches of dense, high fire risk forest. Density reduction and shifting species composition will also help forests adapt to a warming climate. If a fire burns up existing large-tree, dense forest, treated areas can be left to develop into and replace this important habitat. Sites with low and moderate moisture deficit projected in the future offer the most sustainable locations to maintain and grow large tree, dense forest. Treatments in offsite ponderosa pine plantations are also recommended. No treatments in cold forest are needed.

Pre-treatment forest structure types



Post-treatment forest structure types

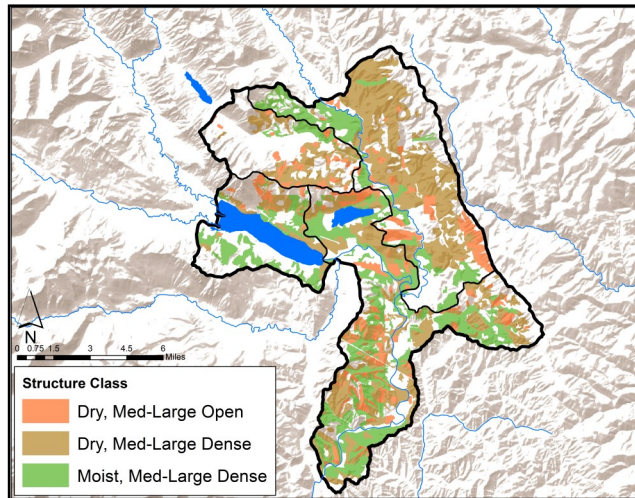


Figure 3. Potential Treatment Areas. Total area of target structure classes is shown. Only a portion needs to be treated (See Table 1).

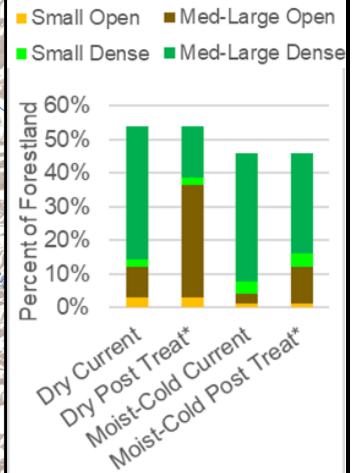


Figure 4. Current & post treatment percent of forest types. * mid-point of treatment range

Maintenance treatments: A portion of existing open forests need prescribed fire or mechanical methods to maintain open conditions by reducing ground fuels and excessive small trees that have grown in. The US Forest Service has already burned many of their recent treatments. An estimated 500-2,000 of additional treatments are recommended.



Overall treatment needs: Shifting an estimated 15,000 to 25,000 acres from dense to open forest is recommended (Table 1). A combination of treatments will be needed to accomplish this treatment goal, including commercial and non-commercial thinning, prescribed fire, regeneration harvests and managed wildfire. Based on tree size class, many acres are commercially viable. However, road access, logging systems, aquatic impacts, habitat issues, timber markets and other factors will determine treatment type. Maintenance treatments on 500-2,000 acres are also recommended. Individual landowners (Fig. 5), including the US Forest Service, will conduct their own planning and decision-making processes to determine acres and types of treatments they can implement to meet overall landscape goals while achieving their own legal mandates and management objectives.

Table 1. Forest Health Treatment Need

Forest Conditions to Treat		Treatment Need Acres	Current Acres by Major Landowner*		
Type	Size Class		USFS	Private	State
Dry Dense	Med. -Large	12000-18000	21230	2386	830
Moist Dense	Med. -Large	3000-7000	13156	1686	240
Dry Open	Med. -Large	500-2000	5007	707	4
Total		15,500-27,000	*These are total current acres, not targets		
Anticipated Treatment Type	Commerical thin + fuels treatment where possible. May be non-commercial, fire only, or regeneration harvest				
	Maintenance: prescribed fire or mechanical fuels treat.				

Figure 5. Land Ownership.

