



**DEPARTMENT OF
NATURAL RESOURCES**

**OFFICE OF THE
COMMISSIONER OF PUBLIC LANDS**

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November 27, 2024

The Honorable Bernard Dean
Chief Clerk of the House
338B Legislative Building
Olympia, WA 98504

The Honorable Sarah Bannister
Secretary of the Senate
312 Legislative Building
Olympia, WA 98504

Dear Chief Clerk Dean and Secretary Bannister:

Please accept the enclosed legislative report on State Lands Forest Health Treatment Prioritization, submitted on behalf of Department of Natural Resources (DNR), as required in RCW 79.10.530. The statute directs DNR to provide biennial progress reports towards treating state lands and state forestlands from the current prioritized list, provide a list of prioritized lands for the next biennium, recommended funding amounts for the next biennium, and summarize trends in forest health conditions. The statute and the ongoing report requirements were established in [E2SHB 1711](#) during the 2017 session. This is our fourth report under this statute, which is due to the Legislature, Office of Financial Management, and Board of Natural Resources by December 1st of each even-numbered year.

Should you have any questions, please contact me at 360-486-3469 or Brian.Considine@dnr.wa.gov.

Sincerely,

Brian Considine
Legislative Director
Office of the Commissioner of Public Lands

Enclosure: 2024 Legislative Report – State Lands Forest Health Treatment Prioritization

cc: Members of the Senate Agriculture, Water, Natural Resources, and Parks Committee
Members of the House Agriculture & Natural Resources Committee

Members of the Senate Ways and Means Committee

Members of the House Appropriations Committee

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Board of Natural Resources

Forest Health Treatment Prioritization and Implementation

On State Trust Lands in Eastern Washington

A Report to the Washington State Legislature

Prepared by
Washington State Department
of Natural Resources

Office of the Commissioner of Public Lands, Hilary Franz
Forest Resources Division
December 2024



WASHINGTON STATE DEPARTMENT OF
NATURAL RESOURCES

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Forest Health Treatment Prioritization and Implementation

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Acknowledgments

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All photos courtesy DNR

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Executive Summary

Wildfire, insects, and disease continue to pose a threat to the forests of eastern Washington. The 760,000 acres of forests managed by the Washington State Department of Natural Resources (DNR) east of the Cascades are no exception.

To manage these threats, DNR uses a variety of treatment options and management approaches to ensure these lands remain healthy and productive – whether that is through providing wood products for mills and nontax revenue for public services, or through fish and wildlife habitat and recreation opportunities.

Since the legislature passed Engrossed Second Substitute House Bill (E2SHB) 1711 during the 2017 session, DNR has developed and implemented a process to prioritize investment in forest health treatments to protect forested state lands and other values. As specified by the legislature, the process considers the value of the timber harvested in the treatments and the value of what the treatments aim to protect such as standing timber, infrastructure, ecosystem services and recreation. The bill directs DNR to report to the legislature every other year on progress to date and priorities for treatments for the next two years, six years, and 20 years.

Since E2SHB 1711 was enacted, a number of complementary laws and DNR strategic plans have provided additional tools and funding mechanisms for state lands management. Principally, Second Substitute House Bill (2SHB) 1168 (2021) provided crucial funding for forest health treatments on state-managed lands. These strategic investments by the legislature have simultaneously improved forest health and increased resilience on lands in Washington.

DNR has capitalized quickly on the availability of new funding, efficiently scaling the scope and reach of forest health treatments in accordance with prioritization plans. Since the previous edition of this report was submitted to the legislature in 2022, DNR has performed more than 50,000 acres of treatments on forested state trust lands it manages, with approximately 20% of treatment acres as commercial treatments and 80% as non-commercial treatments. For the remainder of the 2023-2025 Biennium and the upcoming 2025-2027 Biennium, DNR has plans to conduct forest health treatments on more than 90,000 acres, the majority in high- and medium-priority landscapes – those most in need of treatment.

Increasing and maintaining the health of eastern Washington's forests will require a concerted effort from all landowners, as forest health disturbances such as pests and wildfire do not acknowledge property boundaries. DNR is committed to partnering with public, private, and Tribal landowners to continue this vital work – that commitment includes the ongoing treatments of DNR-managed lands.

In addition to utilizing authorities granted by E2SHB 1711 to prioritize and treat state lands, DNR has generated and dispersed revenue from the Forest Health Revolving Account to trust beneficiaries for calendar years 2021, 2022 and 2023. This revenue is an important non-tax source of funds to the beneficiaries.

Introduction

DNR manages more than 1 million acres of state trust lands east of the Cascade Mountains. Roughly 760,000 acres of these lands are forested and interspersed among federal, private, Tribal, municipal, state, and commercial forestlands.

As a land manager DNR has a mandate to generate revenue for the trust beneficiaries while fulfilling obligations to provide recreational opportunities, fish and wildlife habitat, clean air/water, carbon sequestration, and other ecosystem services. The health of these forests is vital to meeting these objectives and supporting rural communities.

Forest health is defined in [RCW 76.060.020](#) as “the condition of a forest being sound in ecological function, sustainable, resilient, and resistant to insects, diseases, fires and other disturbance, and having the capacity to meet landowner objectives.”

This report is written to meet the requirements of [E2SHB 1711](#), which specifies that DNR will report to the legislature every even-numbered year on efforts to improve forest health on state trust lands in eastern Washington.

Image 1. Commercial Thinning; Fall Larch,

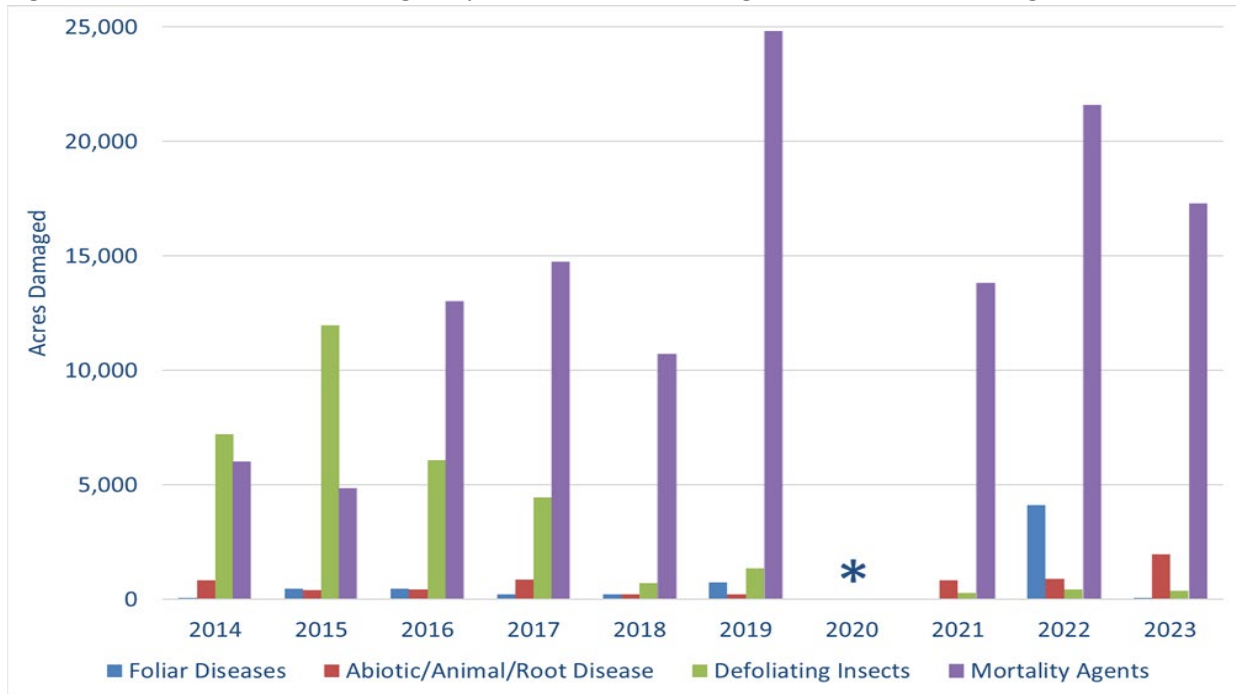


Trends in Forest Health Conditions

Over the past century, land use patterns and fire exclusion policies have altered natural fire regimes and ecosystem characteristics. Some forests have become more homogenized, with unnaturally high accumulations of live and dead vegetation, many have had species shifts away from more fire-tolerant early-seral trees, and many of the old fire-tolerant trees have been lost due to historic logging practices, wildfire and competition with shade-tolerant species. Forests with high stand densities on relatively dry sites use more water, increasing the effects of drought on resident flora and fauna.

These changes have led to forests that are less resistant to disease and insect outbreaks, and more susceptible to large wildfires.

Figure 1. State Trust Lands Damaged by Insects and Disease Agents in Eastern Washington 2014-2023.



Source: [USDA Forest Service in cooperation with DNR, April 2023](#)

* Due to the COVID-19 pandemic, aerial surveys were not conducted in 2020

In Figure 1, some of the damaged acres may have more than one pest or pathogen present, but the graph reports only the most damaging agent to eliminate double counting of affected forest acres. Annual surveys have been occurring for over 70 years, the impacted acres listed are specific to the year surveyed and are not cumulative with previous years. For a description of the detection surveys and categories of damaging insects and disease, please see Appendix H.

Figure 2. Large Fires in Eastern Washington on All Ownerships 2005-2024 (as of 9/23/2024)

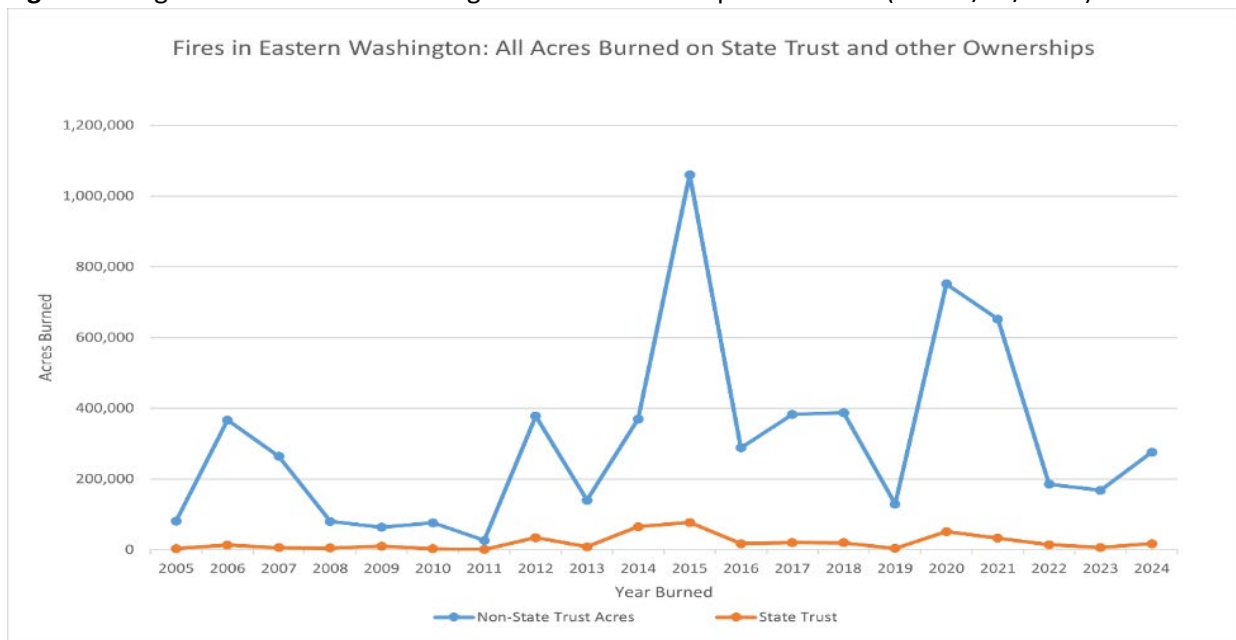
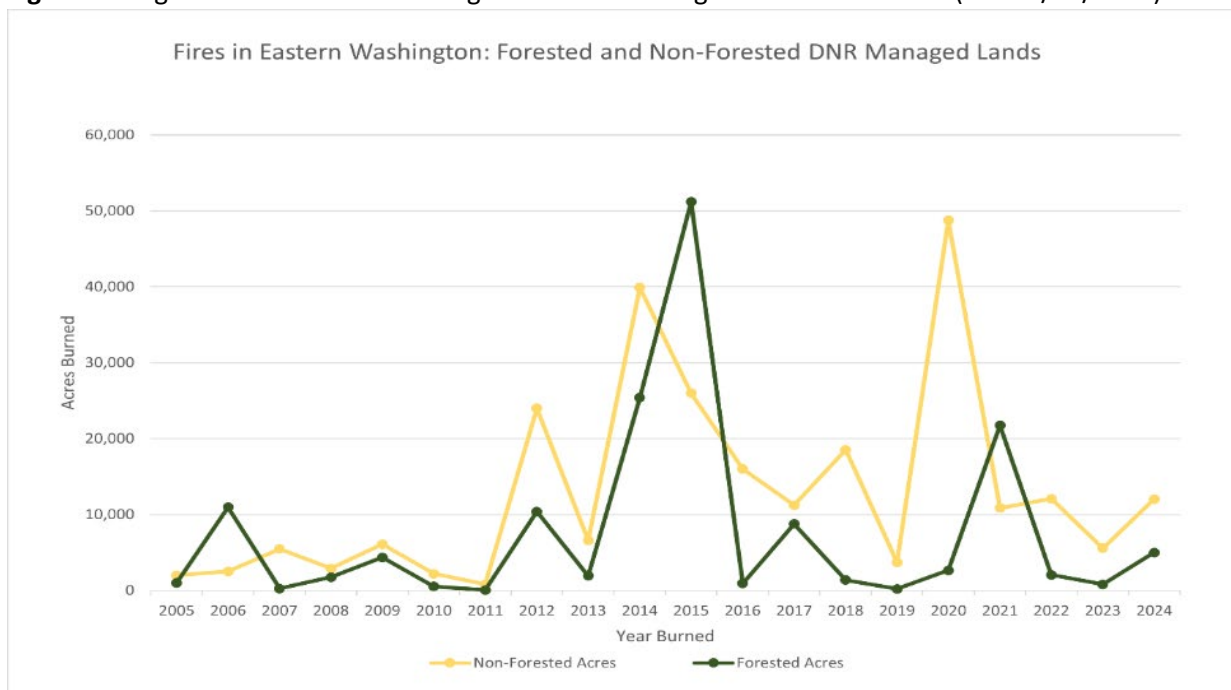


Figure 3. Large Fires in Eastern Washington on DNR Managed Lands 2005-2024 (as of 9/23/2024)

Healthy, productive forests in eastern Washington provide many benefits, including timber, recreation, clean water, and other ecosystem services. To improve overall health and protect forests from catastrophic fire and other disturbance, treatments such as variable retention harvest, partial harvests, thinning (commercial and non-commercial), prescribed fire, selective competition control, and planting of resilient site adapted tree species are needed to reduce and maintain forest density at ecologically appropriate levels and develop a balanced distribution of desirable species across the landscape.

Legislative Direction

E2SHB 1711

In 2017, the legislature passed [E2SHB 1711](#) *Prioritizing lands to receive forest health treatments*, directing DNR to develop and implement a policy for prioritizing investments on forest health treatments to protect state lands and state forestlands. The intent of the legislation and corresponding work is to reduce wildfire risk and losses from wildfire, reduce insect infestation and disease, and achieve the goal of improved forest health and resilience at a landscape scale.

The prioritization policy must consider whether the state lands are within an area subject to a forest health hazard warning or order pursuant to RCW 76.06.180.

The prioritization must be based on an evaluation of the economic and noneconomic value of:

- Timber or other commercial forest products removed during mechanical treatments.
- Timber or other commercial forest products likely to be spared from damage by wildfire.
- Homes, structures, agricultural products, and public infrastructure likely to be spared from damage by wildfire.
- Impacts to recreation and tourism.
- Ecosystem services such as wildlife habitat, water quality, air quality, or carbon sequestration.

DNR also was directed to identify state lands and state forestlands that would benefit from forest health treatments at the landscape level for the next 20 years, lands that would benefit most during the following six years, and to prioritize and list specific lands for treatment during the subsequent biennium. DNR was directed to update the list by November 15 of each even-numbered year (see Appendices A, B and C).

2SSB 5546

Also passed in 2017, [Second Substitute Senate Bill \(2SSB\) 5546](#) *Concerning proactively addressing wildfire risk by creating a forest health treatment assessment* directed DNR to establish a forest health assessment and treatment framework designed to proactively and systematically address the forest health issues facing the state across all land ownerships.

As part of 2SSB 5546, DNR’s Forest Resilience Division is required to identify and select statewide forest health planning areas each biennium for landscape evaluations and treatment prescriptions.

Appendix E shows the overlap of the DNR trust lands prioritized landscapes under E2SHB 1711, and the 20-Year Forest Health Strategic Plan Priority Planning Areas identified under 2SSB 5546. For more information on the progress of this legislation and greater details about the work, please see DNR’s 2024 legislative report “[Forest health assessment and treatment framework \(RCW 76.06.200\)](#)”.

2SHB 1784

In 2019, the legislature passed [2SHB 1784](#) *Concerning wildfire prevention*. DNR was tasked with an initial goal of developing an assessment and treatment framework with a focus on land vulnerable to wildfire that is protected by DNR or land posing a threat to department protected land. This all-lands-focused legislation supported the 20-Year Forest Health Strategic Plan, expanded upon 2SSB 5546, and directed DNR to consider the dual benefit of forest health treatments for wildfire response. This dual benefit component is included in the landscape evaluations conducted under the 20-Year Forest Health Strategic Plan. State trust lands prioritization includes wildfire risk as a component of the scoring matrix to develop priority areas.

2SHB 1168

In 2021, the legislature passed [2SHB 1168](#) *Concerning long-term forest health and the reduction of wildfire dangers*. This historic legislation significantly increased available resources to address wildfire risk and the forest health crisis facing Washington State. The legislation states that “it is the intent of the legislature to take immediate action to increase the pace and scale of forest management across different land ownerships and fully fund the 20-Year Forest Health Strategic Plan and activities developed to facilitate implementation of the Washington State Forest Action Plan.”

To fulfill this legislation, the legislature provided \$125 million in new biennial operating budget funding to Washington State Parks, Washington State Department of Fish and Wildlife, Washington State Recreation and Conservation Office, and DNR. A key component of 2SHB 1168 is the establishment of a Wildfire Response, Forest Restoration, and Community Resilience Account (WRFRCRA) in the state treasury, where monies can be spent after appropriation for the sole purpose of fulfilling this legislation. The bill states that appropriations for forest health activities funded by this new account shall not be less than 25 percent of the funding appropriated each biennium.

2SHB 1168 builds on previous legislative direction (see 2SSB 5546, E2SHB 1711, 2SHB 1784), which established DNR’s Forest Health Assessment Framework and set the goals that drive Washington’s [20-Year Forest Health Strategic Plan](#), [10-Year Wildland Fire Protection Strategic Plan](#), and the [2020 Washington State Forest Action Plan](#).

Climate Commitment Act (CCA) Funds

In the 2023 and 2024 legislative sessions, the above package of forest health plans and activities was further strengthened by capital and operating budget appropriations ([ESSB 5200/ESSB 5949/ESSB 5950](#)) from the Natural Climate Solutions Account to improve forest health, increase resilience to wildfire and reforest burned areas across the state. While not all of this funding is allocated directly to prioritized lands in eastern Washington, it bolstered DNR’s silvicultural and forest health programs, leading to benefits across the state.

DNR’s History of Forest Health Management Activities

The legislature defines forest health treatments as “actions taken by the department to restore forest health including, but not limited to, sub-landscape assessment and project planning, site preparation, reforestation, mechanical treatments including timber harvest, road realignment for fire protection and aquatic improvements, and prescribed burning” ([RCW 79.10.520](#)).

Although forest health continues to be a concern for the whole of Washington, some forests have been restored or have been maintained in a healthy condition. DNR has been working to build on those healthy forests and continues to improve conditions for increased forest resilience and ecosystem health. Washington forests are a complex interaction of biotic and abiotic variables

that require sustained monitoring and treatment over time. Achieving and maintaining healthy forests is generally not limited to a one-off treatment - it requires multiple treatments over time.

DNR has implemented a variety of treatments and silvicultural techniques to reduce fuels and competing vegetation, thin overstocked stands, and promote resilience to disturbance. These treatments have reduced stand densities and promoted appropriate species to increase the forests' resilience to wildfire and pathogens while also improving future revenue potential for trust beneficiaries. These treatments take into account stand conditions and objectives while complying with DNR's [*Policy for Sustainable Forests*](#), the [*State Trust Lands Habitat Conservation Plan*](#), the [*Lynx Habitat Management Plan*](#), the [*Loomis State Forest Final Landscape Plan*](#), the [*Teanaway Community Forest Management Plan*](#), the [*Klickitat Canyon Community Forest Management Plan*](#), trust manager responsibilities, and other relevant regulations.

The various treatments and silvicultural techniques fall into two main categories: commercial activities and non-commercial activities. Commercial treatments generate revenue from the forest products harvested from the forest (though sometimes they can lose money or just break-even). Non-commercial treatments produce little or no valuable products that can offset the costs of treatments, yet they are designed to move a forest stand towards a more desirable future condition that has higher forest product value and is more resilient against disease, insects, and wildfire.

FOREST IMPROVEMENT TREATMENT ACTIVITIES

From fiscal years (FY)¹ 2005-2017, DNR completed roughly 60,000 acres of forest health treatments (both commercial and non-commercial) on state trust lands through the Forest Improvement Treatment (FIT) program. The FIT program leveraged DNR's contract harvest revolving account to fund treatments that would not normally be financially viable due to the low or negative value of the commercial products. The FIT program was additive to other treatment activities through this period. This program was discontinued after the legislature created the Forest Health Revolving Account (FHRA) in 2017.

DNR used trust management funds, capital funding from the legislature, the FHRA, granted funds from the federal government, and other operating funds to complete an additional 294,000 acres of forest health treatments from FY 2005 through FY 2017.

Together, these treatments have reduced tree densities and promoted appropriate species to increase the forests' resilience to wildfire and pathogens while also improving future revenue potential for beneficiaries. It should be noted that often non-commercial treatments occur within

¹ DNR's fiscal year begins on July 1 of the previous calendar year and ends on June 30 of the stated year. For example, FY 2023 began on July 1, 2022, and ended on June 30, 2023.

the same footprint as FIT treatments and commercial harvests. This is because managing for forest health and resilience requires systematic treatment steps over time and space.

FOREST HEALTH ACTIVITIES

Starting in FY 2018 under E2SHB 1711, nearly all revenues generated by forest health treatment activities on state trust lands in eastern Washington have gone into the FHRA. This funding has been used to cover commercial and non-commercial treatment costs. Since FY 2018, DNR has completed more than 189,000 acres of forest health treatments on prioritized landscapes in eastern Washington.

Table 1 lists the acres of commercial treatments and non-commercial treatments on prioritized state trust lands in eastern Washington from FY 2018 through FY 2025.

Table 1. Commercial and Non-Commercial Forest Health Treatments, FY 2018-2025 (as of 11/01/2024)

Fiscal Year	Commercial Treatment Acres*	Non-Commercial Treatment Acres	Total Treatment Acres
2018	7,480	20,193	27,673
2019	6,237	25,214	31,451
2020	6,760	20,921	27,681
2021	7,608	19,779	27,387
2022	6,812	14,321	21,133
2023	5,492	13,577	19,069
2024	7,063	28,977	36,040
2025** (completed and planned activities)	5,209	28,858	34,067
Total	52,661	171,840	224,501

Source: DNR's Land Resource Manager System. Numbers may fluctuate as reporting is refined.

*Commercial treatment deliverables are tracked by date of auction and completion. The reported numbers for latter years will include sold in the FY but not yet completed acres.

**Activity acres for 2025 displayed are mostly planned and not yet completed acres.

DNR'S Prioritization Process

To implement E2SHB 1711, DNR developed a prioritization process for state trust lands.

The first step in this process was to group blocks of forested state trust lands into landscape planning units. Due to ownership distributions and mixed jurisdictional responsibilities, DNR landscape planning units are different than the 20-Year Forest Health Strategic Plan Priority Planning Areas, which are identified and prioritized under 2SSB 5546. See Appendix D for a map of DNR's prioritized landscapes, see Appendix E for a map of Priority Planning Areas.

The second step was to develop a geographic information system (GIS) model and use it to prioritize each landscape in a way that reflects DNR's management objectives. For example, as a

trust lands manager, DNR is concerned with the value of timber as well as forest health. DNR designed a model that computed individual, weighted scores for threats such as forest health and wildfire and overlaid with values at risk:

- Forest health scores were computed from individual, weighted scores for threats from insects, diseases, and wildfire risk (including both the probability of a wildfire occurring and the potential severity should it occur), forest stand condition, and climate change influences.
- Values at risk represents criteria such as the timber value of commercial forest products, proximity of public and private infrastructure, and ecosystem services such as community watersheds, recreation opportunities, and fish-bearing waters. Each criterion also had an individual, weighted score.

Forest threats and values at risk scores were combined into a single score for each pixel (1/10 acre in size) in each landscape. These scores were then aggregated to derive a final priority index score for each landscape, enabling DNR to rank all landscapes into an order of priority from most at risk to least at risk. The higher the index score the higher the potential treatment need within the landscape.

The third step was to prioritize landscapes within each of DNR's two eastern Washington regions (Northeast Region and Southeast Region). Within each region, the landscapes were divided into three prioritization categories (high, medium, and low priority) based on their priority index scores and on the total landscape acreage in each region (Table 2).

It is important to note that the priority ranking is only relative in comparison to other DNR landscapes on this list, and the landscape priority is only in comparison to the other landscapes within the same region. In Table 2, each region's landscapes are collated and sorted by priority. Landscape priorities are based on index scores, included in the table is the relative change in index score for each landscape a negative value indicates a relative increase in resilience. These scores drive priorities, as a result there have been priority shifts since 2018.

Table 2. Eastern Washington DNR Trust Lands - Landscape Priority and Ranking by Region

DNR Landscape	Region	2024 Landscape Priority	2024 Priority Ranking	2024 Priority Index Score	Index Score Change 2018-2024***	Total Landscape Acres**	Forested Landscape Acres**
Marble	Northeast	High	1	5.41	0.23	5,647	4,940
Little Pend Oreille*	Northeast	High	2	5.20	0.32	17,598	16,513
Dunn	Northeast	High	3	5.09	0.12	21,765	19,003
Rice	Northeast	High	4	4.94	0.01	11,028	9,545
Cottonwood	Northeast	High	5	4.86	-0.07	8,768	8,154
Douglas	Northeast	High	6	4.83	0.07	6,043	5,281

DNR Landscape	Region	2024 Landscape Priority	2024 Priority Ranking	2024 Priority Index Score	Index Score Change 2018-2024***	Total Landscape Acres**	Forested Landscape Acres**
Evans	Northeast	High	7	4.74	-0.26	11,912	10,731
Elk	Northeast	High	8	4.73	0.11	10,398	9,451
Furport	Northeast	High	9	4.72	0.14	3,512	3,257
Orient	Northeast	High	10	4.67	0.25	6,296	5,087
Patterson	Northeast	High	11	4.65	-0.22	5,058	4,470
Lime	Northeast	High	12	4.63	-0.38	8,469	8,027
Narcisse*	Northeast	High	13	4.61	-0.23	7,839	7,430
Usk	Northeast	High	14	4.59	-0.03	10,501	9,127
Carrs Corner	Northeast	High	15	4.48	-0.38	4,465	4,080
Three Forks	Northeast	High	16	4.46	-0.34	2,479	2,353
Bodie	Northeast	High	17	4.44	-0.35	15,150	10,387
Republic	Northeast	Medium	18	4.38	-0.69	13,483	10,065
Curlew	Northeast	Medium	19	4.37	-0.14	11,634	9,372
Boyds	Northeast	Medium	20	4.33	-0.14	1,782	1,370
Orin	Northeast	Medium	21	4.28	-0.37	2,518	2,167
Leadpoint	Northeast	Medium	22	4.27	0.11	1,812	1,685
Jumbo	Northeast	Medium	23	4.25	-0.25	8,872	7,389
Molson	Northeast	Medium	24	4.15	-0.11	6,160	3,381
Rockford	Northeast	Medium	25	4.14	0.04	8,716	3,639
Fruitland	Northeast	Medium	26	4.12	0.02	21,732	20,271
Ione	Northeast	Medium	27	4.12	-0.50	5,461	5,199
LeClerc	Northeast	Medium	28	4.11	0.01	10,757	10,250
Aeneas	Northeast	Medium	29	4.01	-0.75	8,832	5,852
Twisp	Northeast	Medium	30	3.94	-0.48	8,359	2,965
Cayuse	Northeast	Medium	31	3.88	-0.31	6,956	850
Tonasket	Northeast	Medium	32	3.86	-0.67	7,657	1,828
Loomis*	Northeast	Low	33	3.85	0.13	134,526	114,353
Nighthawk	Northeast	Low	34	3.80	0.06	1,986	276
Tum Tum	Northeast	Low	35	3.75	-0.57	9,655	8,267
Loup Loup	Northeast	Low	36	3.71	-0.18	56,907	46,606
Espanola	Northeast	Low	37	3.65	-0.01	5,224	2,376
Knowlton	Northeast	Low	38	3.54	0.10	30,847	9,652
Riverside	Northeast	Low	39	3.48	0.13	5,991	939
Miles	Northeast	Low	40	3.44	0.16	11,469	4,590
Pateros	Northeast	Low	41	3.43	-0.16	3,239	390
Brewster	Northeast	Low	42	3.25	-0.02	8,836	1,690
Synarep	Northeast	Low	43	3.05	-0.76	13,154	5,658
Buck Creek*	Southeast	High	1	7.31	0.00	21,688	20,562

DNR Landscape	Region	2024 Landscape Priority	2024 Priority Ranking	2024 Priority Index Score	Index Score Change 2018-2024***	Total Landscape Acres**	Forested Landscape Acres**
Trout Lake*	Southeast	High	2	7.05	0.21	18,549	17,157
Rattlesnake Creek*	Southeast	High	3	6.09	0.01	9,887	9,401
Cabin Creek*	Southeast	High	4	5.87	0.75	3,885	3,595
Appleton	Southeast	High	5	5.34	-0.18	15,287	12,944
Wenatchee*	Southeast	High	6	4.90	0.00	27,280	14,642
Glenwood*	Southeast	High	7	4.86	-0.16	36,434	35,387
Stemilt	Southeast	High	8	4.70	0.28	4,570	3,468
Taneum*	Southeast	High	9	4.59	-0.63	8,341	7,117
Teanaway*	Southeast	Medium	10	4.58	-0.28	52,507	48,967
Blue Mountains	Southeast	Medium	11	4.14	-0.06	15,805	2,406
Ahtanum*	Southeast	Medium	12	4.12	0.39	82,635	58,166
Colockum	Southeast	Low	13	4.08	0.36	61,002	33,021
Naches/Wenas*	Southeast	Low	14	3.94	-0.49	90,857	48,906
Naneum*	Southeast	Low	15	3.94	0.55	29,009	24,806
Klickitat East****	Southeast	Low	16	3.90	-	18,986	3,029
Palouse Pine****	Southeast	Low	17	2.75	-	3,348	982
Grand Total						1,063,564	763,478

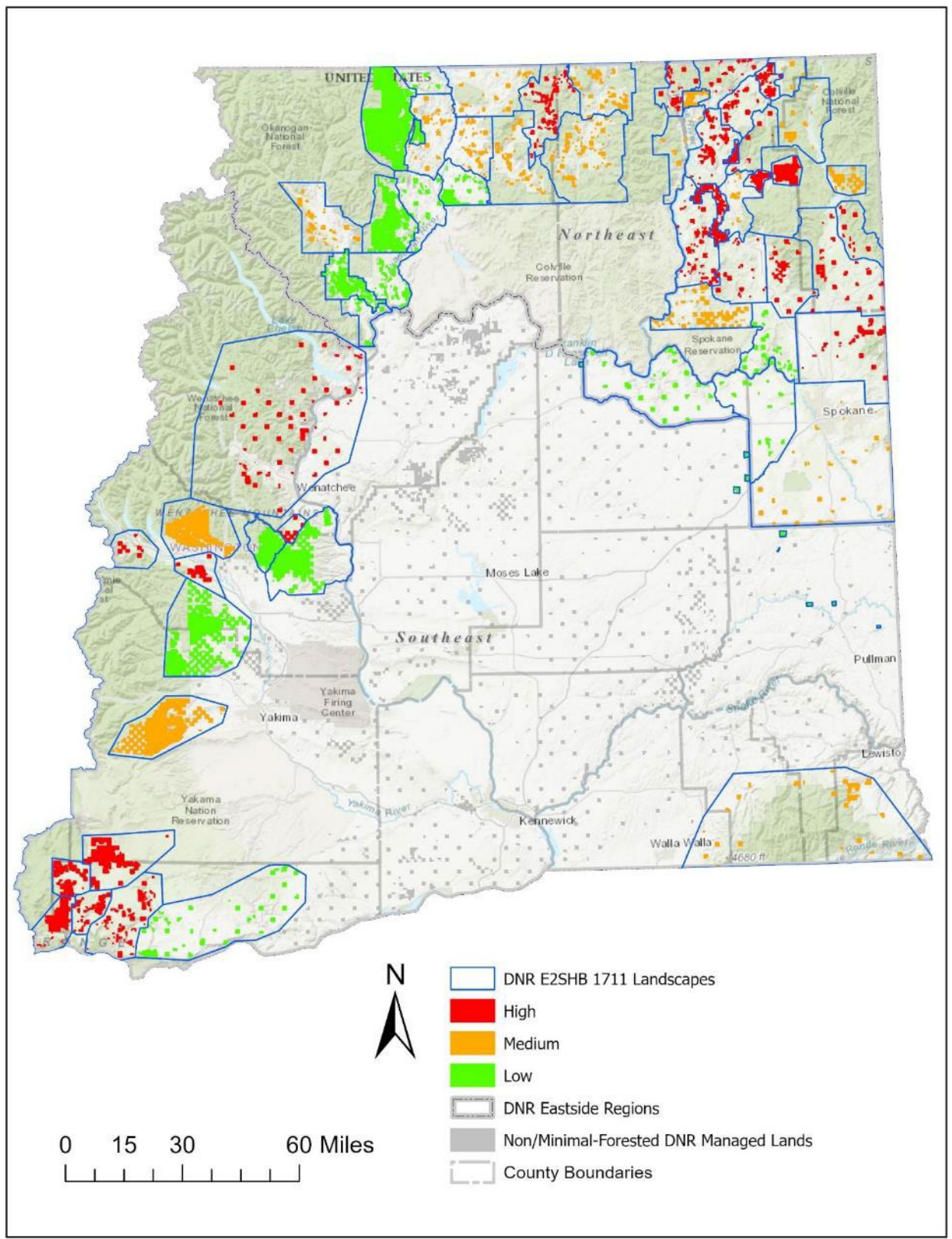
* Achieving FH objectives constrained by habitat requirements - HCP and Lynx Management Plan.

** Since 2018, there have been changes in acreage - land transactions and improved land classifications.

*** Index score values indicate a relative change in conditions within individual landscapes. A negative value indicates an improvement in forest health condition as compared to 2018 GIS model.

**** Landscapes added to prioritization since 2022 report

Figure 4. DNR Trust Lands High, Medium, and Low 2024 Priority Landscapes



Another important factor to understand is that the landscape priority, priority index score, and priority ranking do not necessarily reflect the potential diversity of the on-the-ground forest health conditions across the landscape. Also, these landscapes have been compared to forested lands under ownership other than DNR. However, the primary focus of this prioritization is on the forest condition of state lands. As a result, state lands may have high-priority landscapes that are not within the 20-Year Forest Health Strategic Plan planning areas. Likewise, the state lands priorities may be low within a 20-Year planning area due evaluated current condition of state lands.

The fourth step was to assess forest structure and conditions to determine the areas with the highest priority for treatment within each landscape. DNR assessed forest structure using forest metrics from its forest inventory program, Remote Sensing – Forest Resource Inventory System (RS-FRIS) data. Gradient nearest neighbor (GNN) data was used for a small percentage of the total areas that lacked RS-FRIS data (Ohmann et al. 2013²). The combined data enabled DNR to categorize state trust lands by forest structure category, such as open or closed canopy. Closed canopy stands are usually considered higher priority for treatment as those stands are typically most at risk of loss from pests, pathogens, and catastrophic wildfire.

The fifth and final step was to prioritize treatment needs for the next 2, 6, and 20 years (Appendices A, B, and C, respectively). The schedule of treatments for the next biennium (July 2025 through June 2027) was done using forest surveys of stand conditions along with the landscape and treatment needs prioritizations. Although these forest surveys are an important part of the development of the prioritized treatment list for the next biennium, they are not included as treatment acres in this report.

Determining Forest Health Treatments

FOREST STRUCTURE CLASSES

As discussed in the fourth step in the prioritization process above, forest structure and conditions on DNR trust lands were assessed to help prioritize areas for treatment. Forest structure and conditions change over time due to a number of factors, including natural growth, completed commercial and non-commercial forest health treatments, mortality from insects and disease, and natural disturbance, such as wind throw and wildfire. Additionally, advances in survey technology and updates to forest inventory and conditions will be reflected in the number of forested acres in each structure category.

In general, closed forest structure classes are considered to be at somewhat higher risk of impacts from forest stand disturbances such as wildfire, pests, and disease. This does not mean that all

² Ohmann, J. L., M. J. Gregory, E. B. Henderson, and H. M. Roberts. 2011. Mapping gradients of community composition with nearest-neighbor imputation: Extending plot data for landscape analysis. *Journal of Vegetation Science* 22:660-676.

closed forests are considered unhealthy; field surveys are needed to make site-specific forest condition assessments and to develop appropriate treatment prescriptions if needed.

Table 3 shows the approximate acres of state trust lands in each forest structure category by landscape prioritization. See Appendix F for a more in-depth discussion of the factors that help determine forest structure.

Table 3. Forested State Trust Lands Acres by Forest Structure Category and Landscape Priority (see Appendix F for description of forest structure)

Landscape Priority	Early Open	Mid Open	Late Open	Early Closed	Mid Closed	Late Closed	Grand Total*
High Priority	58,652	108,903	180	3,644	86,837	3,895	262,111
Medium Priority	56,105	110,951		689	28,080		195,825
Low Priority	104,905	178,756	18	3,177	18,686		305,542
Grand Total	219,662	398,610	198	7,510	133,603	3,895	763,478

Source: RS-FRIS Forest Inventory System (07/29/2024), WA DNR Forest Resources Division

COMMERCIAL AND NON-COMMERCIAL TREATMENTS

As discussed previously, DNR uses a variety of commercial and non-commercial treatments to meet landscape and forest health objectives. Table 4 lists some example forest health treatments that may be used on DNR-managed lands. This list is not exhaustive of all treatment types. For descriptions of commercial and non-commercial treatments, please see Appendix G.

Table 4. Commercial and Non-Commercial Treatments

Commercial Treatments	Non-Commercial Treatments	
	Fuels	Other
Commercial thinning Variable density thinning Seed tree Uneven-aged management Variable retention harvest	Pruning Broadcast burning Pile and burn Mastication Shaded fuel break/hazard abatement	Pre-commercial thinning Reforestation Site preparation Vegetation management Biomass removal* Slashing

* This activity in some cases is commercial

Other Trust Lands Management Objectives and Constraints

State trust lands are managed to achieve multiple objectives, including generating trust revenue, protecting water quality, providing fish and wildlife habitat, offering public access and recreation opportunities, as well as attaining overall forest health and environmental health goals.

In managing lands in eastern Washington, DNR has and will continue to implement a variety of treatments and silvicultural techniques to reduce fuels, competing vegetation, stand densities, and risk from disturbances. These treatments take into account current stand conditions and objectives while also considering [*Washington Forest Practice Rules \(Title 222 WAC\)*](#), [*State Environmental Policy Act*](#), DNR's [*Policy for Sustainable Forests*](#), [*State Trust Lands Habitat Conservation Plan*](#), [*Lynx Habitat Management Plan*](#), [*Loomis State Forest Final Landscape Plan*](#), [*Teanaway Community Forest Management Plan*](#), [*Klickitat Canyon Community Forest Management Plan*](#), and fiduciary responsibilities, which incorporate the common law duties of a trustee.

Each DNR landscape has a unique mix of management objectives, as well as policy, legal, and operational constraints. Examples include riparian areas, fish and wildlife habitat objectives, and areas that are deferred from harvest, such as natural areas, legacy trees, research plots, and areas without operational access.

It is important to understand the conditions and the various objectives and constraints of a given forest stand because they directly affect the locations and types of forest health treatments that can be implemented. Stands with closed canopy structure are typically more at risk of pests, pathogens, and large wildfires. Treatments in the “mid-closed” and “late closed” structure classes are generally considered to have greater commercial potential than those in the mid-open and late open classes. Treatments in the early classes are typically considered non-commercial. See Appendix F for forest structure descriptions.

Unless there is a specific habitat or land management directive, forest management objectives on trust lands are not designed to maintain any specific type of forest structure because forest stands shift over time from one structure class to another (early to mid to late). DNR attempts to identify and conduct treatments across landscapes and within forest stands that will increase forest health while increasing the value to the trust beneficiaries. For example, in many cases, a late open forest structure created through timber harvest is also an early open forest structure due to the configuration of large open-grown leave trees with a recently regenerated young stand of future crop trees. DNR will often tend the young stand of trees while allowing the large trees to grow free and assume legacy tree characteristics. Given time and intensive management, this same stand will develop a mid-closed forest structure, at which point DNR may manage that stand, which has developed commercial products. Depending on the management strategy, this is

the next opportunity to recruit new legacies and protect existing legacies. The result is a continuous management of trust lands forests through forest structure classes over time and space. The change in forest structure is a function of the canopy cover and tree size of the existing stand. As forest stands grow, the canopy closes and diameters increase. When two or more cohorts exist within a stand, the metrics used for defining forest structure will drive classification.

NORTHERN SPOTTED OWL MANAGEMENT

One notable example among these various objectives and constraints are the habitat requirements for the northern spotted owl. The northern spotted owl is strongly associated in much of its range with late successional and old-growth forest habitats with higher canopy closure. Areas of state trust lands identified for development and retention of northern spotted owl habitat may be intentionally managed to maintain or develop a closed canopy structure. This can significantly limit the types and amounts of forest health treatments that can occur in these areas.

Table 5 shows the landscapes where DNR manages to provide northern spotted owl habitat in the Southeast Region and the acres of northern spotted owl management areas. DNR's State Uplands Habitat Conservation Plan (HCP) defines three main types of northern spotted owl management areas:

- *Nesting, Roosting, and Foraging (NRF)* – These management areas are intended to provide the appropriate cover and stand conditions for owls and their prey. Nesting, roosting, and foraging management areas typically require 50 percent of the area to be in a suitable habitat condition. In the Klickitat HCP planning area, the target is two-thirds of the area in a suitable habitat condition. These conditions account for much of the mid-closed and late closed canopy stands in these landscapes.
- *Dispersal (DISP)* – These management areas are found in stands between areas of nesting, roosting, and foraging areas and large federal reserves, and they are managed to provide enough cover from predation to protect owls traveling (or dispersing) through these areas. Half of the acres in these areas are required to meet habitat conditions, which is a condition generally between mid-open and mid-closed forest structure.
- *Desired Future Conditions (DFC)* – These management areas seek to provide a modified dispersal condition that is tailored to be ecologically stable based on forest cover types. Desired future conditions areas provide cover for owls from predation and require a 50 percent habitat condition. This condition can be found in both the mid-open to mid-closed forest structure.

Additionally, DNR manages *Ponderosa Pine Desired Future Condition (PPDFC)* areas in these landscapes. Although they are described in the HCP amendment, these stands generally do not support owl habitat. They are actively managed for long-term ecologically stable conditions for the ponderosa pine.

Table 5. DNR Landscapes with Northern Spotted Owl Habitat Management Areas in Southeast Region

DNR Landscape Name	Landscape Priority	DFC	DISP	NRF	PPDFC	Total Acres Managed for NSO*	Percent of the Acres in a Closed Forest Class
Ahtanum	Medium		31,676	2,085		33,761	22%
Buck Creek	High	489		19,089		19,578	91%
Cabin Creek	High		624	534		1,158	94%
Glenwood	High	7,463		7,883	15,965	31,311	21%
Naches/Wenas	Low			2,427		2,427	12%
Naneum	Low			4,014		4,014	1%
Rattlesnake Creek	High	3,951			16	3,968	76%
Taneum	High			309		309	52%
Teanaway	Medium		1,252	1,861		3,114	34%
Trout Lake	High	4,077		12,357		16,434	83%
Wenatchee	High			4,404		4,404	48%
Grand Total		15,981	33,552	54,964	15,981	120,478	

Source: Large Data Overlay Layer (07/29/2024), WA DNR Forest Resources Division

*Though exact targets vary by landscape and northern spotted owl management category, in general the objective is to maintain 50 to 67 percent of the total northern spotted owl management acres in a habitat condition. Forest health treatments can be conducted within some of these habitat areas, though there are limits on how much live and dead woody material can be removed.

Image 2. Northern Spotted Owl

Photo: Danielle Munzing

Image 3. Canada Lynx

CANADA LYNX MANAGEMENT

In Northeast Region, DNR landscapes with lynx habitat objectives may also have significant constraints on the locations, timing, and types of forest health treatments that may be implemented. Constraints associated with lynx habitat management per the [Lynx Habitat Management Plan for DNR-Managed Lands, April 2006](#) include maintaining ratios of different lynx habitat components, limitations on how much forested lynx habitat can be converted out of habitat status within a 10-year period, restrictions on harvest size and configuration, surveying of habitat conditions prior to harvest activities, and pre-commercial thinning restrictions that effectively prohibit this non-commercial treatment in some locations. In addition, there is interim guidance ([Okanogan Lynx Management Zone Interim Management Guidelines and Recommendations](#)) within the Okanogan Lynx Management Zone that requires additional management considerations prior to forest management activities to ensure there is no net loss of high-quality foraging habitat.

To begin addressing the inherent conflicts associated with restrictions in density management and forest health in managed lynx habitat, DNR is funding a research project in conjunction with Washington State University to test different young stand density management techniques and their effects on lynx forage habitat. This four-year research project started in 2022, is being managed by a Ph.D. student, and is exploring how snowshoe hare, the primary food source for Canada lynx, interact with young stand thinning. For more information see the case study description later in this document (page 29). DNR is interested in using this information to inform silvicultural prescriptions and management options going into the next revision of the Lynx Habitat Management Plan.

Table 6. DNR Landscapes with Lynx Habitat Management Areas in Northeast Region

DNR Landscape Name	Landscape Priority	Total Acres Managed for Lynx	Percent of the Acres in a Closed Forest Class
Little Pend Oreille	High	14,484	35%
Loomis	Low	92,305	15%
Narcisse	High	769	14%
Grand Total		107,558	

Source: Large Data Overlay Layer (07/29/2024), WA DNR Forest Resources Division

For more information on habitat requirements and management actions associated with the northern spotted owl, see the [1997 State Trust Lands Habitat Conservation Plan \(HCP\)](#) and [HCP Amendment No. 1 – Administrative Amendment to the Northern Spotted Owl Conservation Strategy for the Klickitat HCP Planning Unit](#). For more information on lynx habitat and management requirements, please see the [Lynx Habitat Management Plan for DNR-Managed Lands, April 2006](#) and the [Okanogan Lynx Management Zone Interim Management Guidelines and Recommendations](#).

The northern spotted owl, Canada lynx, and other landscape/habitat objectives and constraints present challenges in meeting forest health goals, which will require DNR to work to resolve conflicts and synergize goals as opportunities present themselves. DNR will continue to implement forest health treatments as appropriate and look for new ways to simultaneously improve forest health and meet other land management goals.

Progress on the 2023-2025 Biennium Prioritization List

As directed in E2SHB 1711, this report provides a brief summary of the department's progress toward treating the state lands included in the previous biennium's prioritization list. The 2-year prioritization list from the 2022 report is summarized in Table 7.

Table 7. Acres of Commercial and Non-Commercial Treatments Planned for the 2023-2025 Biennium (As shown in the [2022 Forest Health Treatment Prioritization and Implementation Legislative Report](#))

Fiscal Year	2022 Landscape Priority	Planned Commercial Treatment Acres	Planned Non-Commercial Treatment Acres	Planned Total Treatment Acres	% of FY Planned Treatment Acres
2024	High	4,545	7,420	11,965	36%
	Medium	2,268	13,564	15,831	48%
	Low	217	5,174	5,391	16%
	Total	7,030	26,157	33,188	
2025	High	2,395	10,510	12,905	52%
	Medium	1,695	4,949	6,644	27%
	Low	1,843	3,211	5,054	21%
	Total	5,933	18,670	24,603	
Planned Biennium Total		12,963	44,827	57,791	

Table 8 provides a summary of the progress made towards the 2023-2025 Biennium's planned forest health activities. The data collection for this progress summary was completed on November 1, 2024, a third of the way through fiscal year 2025. Much of the planned treatment acres for FY 2025 (shown in Table 1) will occur throughout the remainder of the fiscal year.

Table 8. Progress on Forest Health Treatment Acres on DNR Trust Lands for the 2023-2025 Biennium by 2024 Landscape Priority

Fiscal Year	2024 Final Landscape Priority	Completed/Sold Commercial Treatment Acres	Completed Non-Commercial Treatment Acres	Total Treatment Acres	% of FY Treatment Acres
2024 (as of 11/01/2024)	High	4,024	8,979	13,003	36%
	Medium	1,414	7,615	9,029	25%
	Low	1,625	12,383	14,008	39%
	Total	7,063	28,977	36,040	
2025 (as of 11/01/2024)	High	14	522	536	11%
	Medium	765	465	1,230	25%
	Low		3,114	3,114	64%
	Total	779	4,100	4,879	
Grand Total		7,842	33,077	40,919	

E2SHB 1711 also directed DNR to provide a new 2-year prioritization for the 2025-2027 Biennium, as shown in Table 9. A list of planned commercial and non-commercial forest health treatments for the 2025-2027 Biennium by DNR landscape and treatment type is provided in Appendix A.

Table 9. Planned Commercial and Non-Commercial Forest Health Treatment Acres on DNR Trust Lands for the 2025-2027 Biennium by 2024 Landscape Priority

Fiscal Year	2024 Landscape Priority	Planned Commercial Treatment Acres	Planned Non-Commercial Treatment Acres	Planned Total Treatment Acres	% of FY Planned Treatment Acres
2026 (as of 11/01/2024)	High	3,111	8,986	12,097	36%
	Medium	1,319	7,341	7,341	22%
	Low	1,985	13,836	13,836	42%
	Total	6,415	30,626	37,089	
2027 (as of 11/01/2024)	High	2,627	7,475	10,103	40%
	Medium	2,209	6,635	8,844	35%
	Low	558	6,014	6,572	25%
	Total	5,395	20,124	25,519	
Planned Biennium Total		11,810	46,983	58,793	

Some of the treatment acres reported in Tables 7 through Table 9 may include multiple treatments on the same area of land. For example, a variable retention harvest may occur with a follow-up site preparation and planting on some or all of the same treatment footprint.

Coordination with Nearby Landowners and Statewide DNR Assessments

Consistent with direction in E2SHB 1711, DNR has consulted with and considered the land management plans and activities of nearby landowners in planning, collaborative implementation, and monitoring of forest health work.

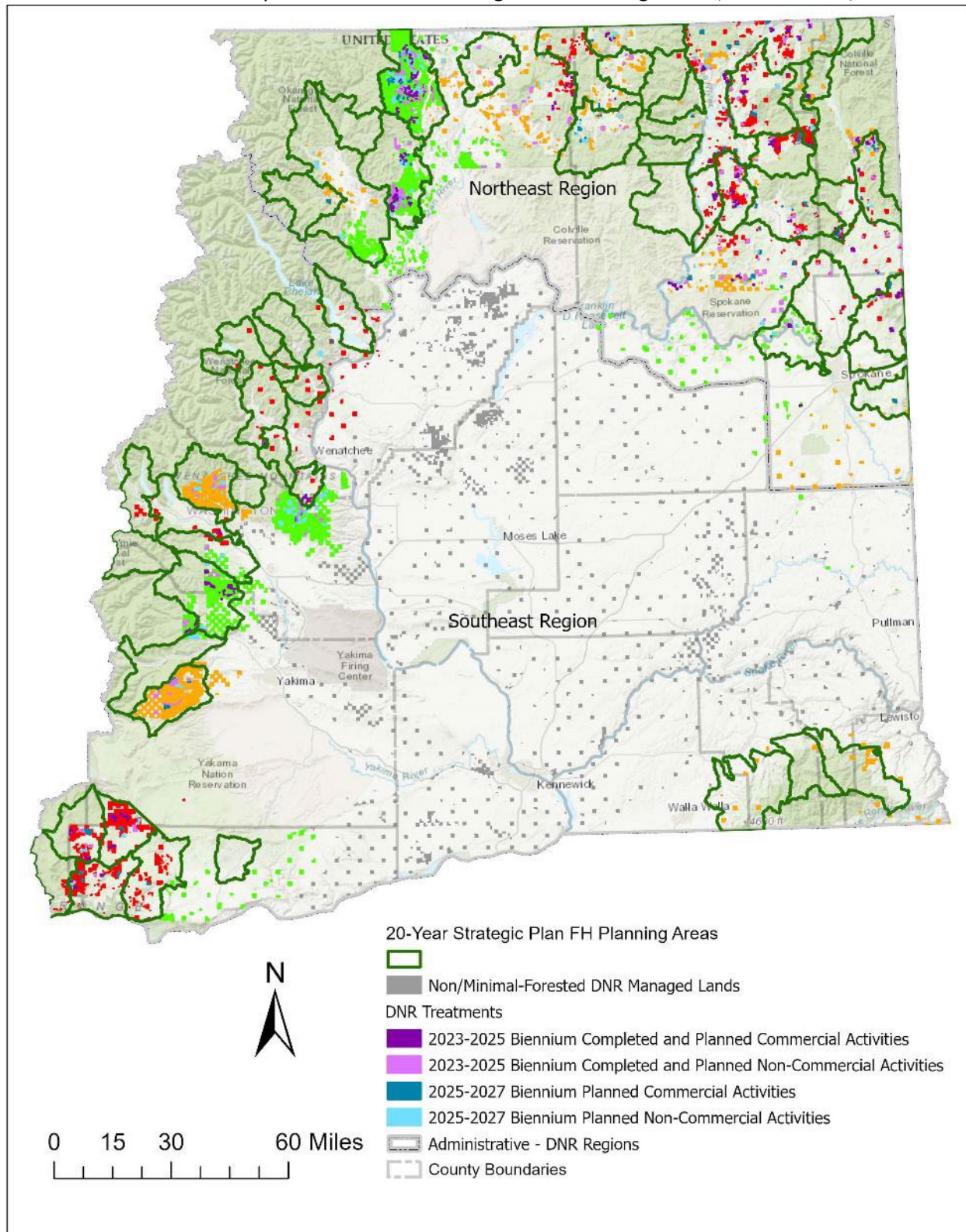
DNR's [20-Year Forest Health Strategic Plan](#) for eastern Washington takes an all-lands, all-hands approach that integrates the management of DNR state trust lands and provides a collaborative setting for forest health prioritization and treatments on state trust lands. The forest health assessments at the regional and priority planning area scale identify and prioritize the treatment need across all land ownerships. The monitoring and treatment tracking for the 20-Year Forest Health Strategic Plan for eastern Washington also increases agency awareness of planned and completed forest health treatments on adjacent state, federal, private, municipal, and Tribal lands.

In addition, DNR staff at the division and region level engage directly with partners in forest collaboratives, fire-adapted communities, and direct partner coordination. For example, DNR is a founding signatory organization to the Tapash Sustainable Forest Collaborative in Southeast Region alongside Washington Department of Fish and Wildlife, Yakama Nation, USDA Forest Service, and The Nature Conservancy. DNR's work with its partners – whether through a formal collaborative body, community engagement, or direct coordination – informs and integrates the work on state lands into a collective strategy to increase forest health and reduce wildfire risk across eastern Washington.

Since the last report DNR state lands in coordination with Forest Resilience Division staff have conducted several cross-boundary projects utilizing prescribed fire to reduce fuels and increase resilience in partnership with other agencies. Notably, DNR has developed burn plans and implemented prescribed fire with Washington Department of Fish and Wildlife, Bureau of Land Management, and USDA Forest Service. These projects have resulted in more acres treated, reduced risk and efficiencies in resource use though working cooperatively rather than independently.

For further information on DNR's all-lands approach to forest health, see DNR's legislative report [Forest Health Assessment and Treatment Framework 2024 \(RCW 76.06.200\)](#).

Figure 5. Forest Health Treatments on DNR State Trust Lands for the 2023-2025 Biennium and the 2025-2027 Biennium with the 20-year Forest Health Strategic Plan Planning Areas (planned and completed activities)



Forest Treatment Case Study in Canada Lynx Habitat

Dense, overstocked conifer forests provide ideal habitat conditions for the snowshoe hare, leading to high abundance of this important wildlife species in regenerating stands 20-30 years post-disturbance. As a result, these young stands are important components of a shifting landscape mosaic, representing critical foraging habitat for species of concern like Canada lynx (a specialist predator on hares). However, stands in this condition pose a substantial risk to forest resilience and future timber volume due to stem competition and contiguity of fuels, increasing the risk of disease outbreaks and wildfire. While silvicultural techniques such as pre-commercial thinning (PCT) can benefit stands of this age through release of crop trees and alteration of fuel structure, previous literature indicates PCT treatments tend to have negative impacts on hares due to reduction in cover availability. Evidence suggests that “wildlife-friendly” PCT treatments can help mitigate impacts, and there is a need to develop options that balance the positive effects of thinning with the habitat needs of important wildlife species on DNR-managed lands.

In collaboration with Washington State University, DNR has launched a multi-year study examining the impacts of two PCT treatments on snowshoe hare habitat and population ecology in overstocked stands within the Loomis State Forest. Four clusters of sites were established in stands with high conifer density and high snowshoe hare use. Treatments are designed to provide more cover than traditional PCT through (one) retention of un-thinned patches (see images 5 and 6) and (two) construction of slash piles. Researchers are studying important ecological variables in treated and untreated control sites including hare survival, abundance, and space use, as well as vegetation structure and composition, with the goal of identifying a treatment option that balances habitat and forest management objectives.

After a year of pre-treatment monitoring, thinning treatments were implemented in October 2023. So far, researchers have captured and marked over 800 individual hares, monitored over

Image 4. Snowshoe hare



Image 5. Pre-Treatment: W Rabbit Unit 3



Image 6. Post-Treatment: un-thinned patches



250 hares fit with tracking collars, and have measured vegetation characteristics and hare relative abundance at 576 permanent plots. Data collection will continue through 2025, providing biologists with a detailed understanding of hare responses to PCT for the first two years post-treatment. Preliminary results indicate similar space use and survival patterns in hares before and after treatment, likely due to ground cover availability in the form of slash. Future monitoring and abundance estimation will help paint a more complete picture of hare responses in the short term as forest structure changes over time.

Updating and Adjusting Prioritization

The DNR trust lands forest health landscape prioritization in this report reflects new information based on completed forest health activities, updated forest inventory, and changing conditions in forest health measurement criteria. Because of these updates, landscapes may have changed priority or rankings since 2018, 2020, and 2022.

As forest health treatments continue and new information becomes available, future reports will likely also have adjustments to the DNR trust lands forest health prioritization. Forest conditions can also change due to a number of factors outside of DNR's control, such as climate change, wildfire, and storm events. Future 6-year and 20-year prioritization lists are also likely to reflect these changes.

Funding

E2SHB 1711 ([RCW 79.64.130](#)) created the Forest Health Revolving Account, which directed all receipts from the proceeds of forest health treatment sales (as defined in the bill) and legislative transfers, gifts, grants, and federal funds to be deposited into the account.

Table 10 displays a summary of forest health related revenues and expenses, including those in the Forest Health Revolving Account, for FY 2018-2025.

Table 10. Forest Health Budget FY 2018-2025 (As of 09/23/2024)

Forest Health Revolving Account	FY18/19/20 (combined)	FY21	FY22	FY23	FY24	FY25 (projected)
Starting balance	\$15,682,669	\$14,256,326	\$22,333,599	\$26,285,353	\$26,505,241	\$21,674,085
Gross revenue*	\$46,647,017	\$18,543,811	\$14,549,492	\$14,972,912	\$11,493,644	\$16,900,000
Commercial harvest contractor	\$20,388,082	\$3,299,841	\$1,995,636	\$4,931,098	\$3,700,241	\$5,300,000
DNR commercial	\$7,494,186	\$3,419,338	\$3,853,295	\$4,618,215	\$5,538,709	\$5,451,250
DNR non-commercial	\$2,244,807	\$2,065,561	\$2,359,713	\$2,452,309	\$4,619,969	\$5,593,350
Agency overhead	\$2,263,617	\$1,681,797	\$2,389,094	\$2,751,402	\$2,465,881	\$2,673,400
Ending balance	\$29,938,994	\$22,333,599	\$26,285,353	\$26,505,241	\$21,674,085	\$19,556,085
Operating (RMCA/FDA/AG/WRFRCRA/NCSA)	FY18/19/20	FY21	FY22	FY23	FY24	FY25 (projected)
DNR commercial	\$2,043,930	\$72,256	\$72,256	\$107,034	\$228,268	\$659,932
DNR non-commercial	\$2,539,989	\$40,873	\$7,808	\$54,290	\$25,782	\$199,018
1168 Commercial	-	-	\$165,568	\$4,528	\$15,553	\$99,047
1168 Non-commercial	-	-	\$655,129	\$926,497	\$714,688	\$1,332,201
1168 Division FH	-	-	\$135,334	\$199,006	\$24,293	\$63,707
CCA Commercial	-	-	-	-	\$5,382	\$94,618
CCA non-commercial	-	-	-	-	\$485,824	\$1,140,000
Capital - State Building Construction Account	FY18/19/20	FY21	FY22	FY23	FY24	FY25 (projected)
DNR commercial	\$366,635	\$5,109	\$2,195	\$30	-	-
DNR non-commercial	\$4,628,498	\$1,239,811	\$598,107	\$926,782	\$914,967	\$1,021,900

*Gross revenue includes earnings from commercial activities and earned interest as reported by the State Treasurer

Also directed in E2SHB 1711 ([RCW 79.64.130](#)), any unobligated amounts less than \$10 million at the end of the *calendar year* are not subject to disbursement, but any unobligated amounts in excess of \$10 million at the end of the calendar year must be disbursed to the appropriate trust beneficiaries.

Table 11 shows the ending balances of the Forest Health Revolving Account for calendar year (CY) 2017-2023. Beginning in CY 2021, the ending balance exceeded \$10 million after accounting for obligated funds. In CY 2021 and subsequent years the fund balance has allowed disbursement to beneficiaries.

Table 11. Forest Health Revolving Account End of Calendar Year Balances

Calendar Year	Forest Health Revolving Account ending balance	Obligated Funds towards the following calendar year	Unobligated Funds subject to disbursement
2017	\$0	N/A	N/A
2018	\$9,121,372	N/A	N/A
2019	\$15,051,210	\$7,630,933	N/A
2020	\$18,734,168	\$13,049,300	N/A
2021	\$27,363,733	\$12,295,952	\$5,067,781
2022	\$33,701,028	\$14,129,828	\$9,571,200
2023	\$30,807,553	\$14,256,341	\$6,551,212

Table 12 provides recommended funding amounts required to carry out the listed planned treatment acres for the 2025-2027 Biennium, including non-timber revenue sources.

Table 12. Forest Health Budget Requests and Projected Costs for the 2025-2027 Biennium*

Forest Health Revolving Account	FY26	FY27
Starting balance	\$19,556,085	\$18,086,085
Gross revenue	\$16,200,000	\$16,300,000
Commercial harvest contractor	\$4,500,000	\$4,500,000
DNR commercial	\$5,500,000	\$5,500,000
DNR non-commercial	\$5,100,000	\$5,100,000
Agency overhead	\$2,570,000	\$2,570,000
Ending balance	\$18,086,085	\$16,716,085
Operating (RMCA/FDA/AG/WRFRCRA/NCSA)	FY26	FY27
DNR commercial	\$444,000	\$444,000
DNR non-commercial	\$112,000	\$112,000
1168 commercial	\$57,000	\$57,000
1168 non-commercial	\$1,022,000	\$1,022,000
1168 Division FH	\$88,000	\$88,000
CCA non-commercial	\$40,000	\$40,000
Capital - State Building Construction Account	FY26	FY27
DNR non-commercial	\$850,000	\$850,000

Total (Operating and Capital)	\$2,613,000	\$2,613,000
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*it is very early in the budget process for the 2025-2027 Biennium. All numbers are subject to change.

Next Steps

DNR will continue to implement forest health treatments, conduct surveys, update data, and coordinate with nearby landowners to achieve better forest health conditions on state trust lands and throughout eastern Washington as a whole. With continued resolve, hard work, and collaboration, DNR strives toward a future with healthy forests, robust rural economies, and valuable partnerships that benefit all Washingtonians.

APPENDIX A: 2-Year Forest Health Treatments Prioritization

Forest health treatments on state trust lands in eastern Washington prioritized in the 2025-2027 Biennium as of 11/01/2024, listed by landscape, landscape priority, treatment type, and acres. Appendix D graphically displays all DNR Landscapes.

DNR Landscape	2024 Landscape Priority	Commercial Treatment Acres Total	Non Commercial Treatment Acres		Non-Commercial Treatment Acres Total
			Fuels	Other	
Appleton	High			168	168
Bodie	High	180		1,593	1,593
Buck Creek	High	436			
Carrs Corner	High	194	1	158	159
Cottonwood	High	290		182	182
Douglas	High	198	198	0	198
Dunn	High	1,010	459	434	893
Elk	High	376		1,603	1,603
Evans	High	356	305	921	1,225
Furport	High			25	25
Glenwood	High	264	765	1,395	2,161
Lime	High	157		226	226
Little Pend Oreille	High	366		1,079	1,079
Marble	High		54	109	163
Narcisse	High		603	391	993
Orient	High			<1	<1
Patterson	High	397	461	618	1,079
Rattlesnake Creek	High	365			
Rice	High	389		748	748
Stemilt	High	59	378	434	812
Taneum	High		183		183
Three Forks	High			224	224
Usk	High	369	254	1,533	1,787
Wenatchee	High	335	589	371	961
Aeneas	Medium			573	573
Ahtanum	Medium	1,268		457	457
Boyds	Medium	120		278	278
Cayuse	Medium			233	233
Curlew	Medium	117	295	1,356	1,650
Fruitland	Medium	1,410	105	3,025	3,130

DNR Landscape	2024 Landscape Priority	Commercial Treatment Acres Total	Non Commercial Treatment Acres		Non-Commercial Treatment Acres Total
			Fuels	Other	
Jumbo	Medium			258	258
LeClerc	Medium	500		366	366
Molson	Medium			291	291
Orin	Medium	2			
Republic	Medium		796	2,180	2,976
Rockford	Medium			117	117
Teaway	Medium			1,778	1,778
Tonasket	Medium		144		144
Twisp	Medium	111		407	407
Colockum	Low	605	709	1,268	1,977
Espanola	Low			238	238
Knowlton	Low			520	520
Loomis	Low	1,354	1,239	3,990	5,230
Loup Loup	Low	585	2,590	360	2,950
Naches/Wenas	Low		1,120	1,671	2,792
Naneum	Low		433	1,637	2,070
Synarep	Low			628	628
Tum Tum	Low		689	690	1,379
Pateros	Low			80	80
Grand Total		11,810	12,371	34,611	46,983
All Activities	58,793				

APPENDIX B: 6-Year Prioritization

State Lands landscapes in eastern Washington prioritized for forest health treatments over the next six years (FY 2026-2032). Appendix D graphically displays all DNR Landscapes.

DNR Landscape	Landscape Acres	Forested Acres	2024 Priority Ranking*	2024 Landscape Priority (By Region)	20-Year Forest Health Priority Planning Areas**
Buck Creek	21,688	20,562	1	High	Little White/Trout Lake/White Salmon
Trout Lake	18,550	17,157	2	High	Glenwood, Trout Lake, White Salmon
Rattlesnake Creek	9,887	9,401	3	High	Republic, Toroda-Tonata
Marble	5,647	4,940	5	High	Mill Creek
Appleton	15,287	12,944	6	High	Klickitat, White Salmon
Little Pend Oreille	17,598	16,513	7	High	Mill Creek, Little Pend Oreille, Meadow
Dunn	21,765	19,003	8	High	Chewelah, Stranger
Rice	11,028	9,545	9	High	Stranger, Gifford
Wenatchee	27,280	14,642	10	High	Chumstick/Mad Roaring Mills/Nason Creek/Entiat/Stemilt/Tillicum/Upper Wenatchee/Chelan/Mission
Glenwood	36,434	35,387	11	High	Glenwood, Klickitat, Trout Lake
Cottonwood	8,768	8,154	12	High	Chewelah, Deer Park
Douglas	6,043	5,281	13	High	Mill Creek
Evans	11,912	10,731	14	High	Mill Creek
Elk	10,398	9,451	15	High	Mt. Spokane, Deer Park
Furport	3,512	3,257	16	High	Trail
Stemilt	4,570	3,468	17	High	Stemilt
Orient	6,296	5,087	18	High	Orient/Kettle
Patterson	5,058	4,470	19	High	
Lime	8,469	8,027	20	High	
Narcisse	7,839	7,430	21	High	Mill Creek/Little Pend Oreille
Taneum	8,341	7,117	22	High	Cle Elum, Teanaway, Manastash Taneum
Usk	10,501	9,127	23	High	Chewelah/Deer Park/Usk

Teanaway	52,507	48,967	24	Medium	Cle Elum/Teanaway/Upper Swauk
Carrs Corner	4,465	4,080	25	High	Chewelah, Stranger
Three Forks	2,479	2,353	26	High	Mill Creek
Bodie	15,150	10,387	27	High	Toroda-Tonata
Republic	13,483	10,065	28	Medium	Republic, Toroda-Tonata
Curlew	11,634	9,372	29	Medium	Toroda-Tonato
Boyds	1,783	1,370	30	Medium	Dollar/Kettle
Orin	2,518	2,167	31	Medium	Chewelah/Mill Creek/Stanger/Little Pend Oreille
Jumbo	8,872	7,389	33	Medium	
Molson	6,160	3,381	34	Medium	Mt Hull, Toroda-Tonata
Rockford	8,716	3,639	36	Medium	Mica/Spokane North
Fruitland	21,732	20,271	37	Medium	
Ahtanum	82,635	58,166	38	Medium	Ahtanum, Tieton
LeClerc	10,757	10,250	40	Medium	Trail
Colockum	61,002	33,021	41	Low	Stemilt
Aeneas	8,832	5,852	42	Medium	Republic
Twisp	8,359	2,965	43	Medium	Methow Valley, Twisp River
Naches/Wenas	90,857	48,906	44	Low	Tieton, Manastash Taneum, Naches-Wenas
Naneum	29,009	24,806	45	Low	Stemilt
Cayuse	6,957	850	47	Medium	Mt. Hull, Loomis
Tonasket	7,657	1,828	48	Medium	Mt Hull
Loomis	134,527	114,353	49	Low	Loomis
Tum Tum	9,655	8,267	51	Low	Long Lake/Deer Park
Loup Loup	56,907	46,606	52	Low	Methow Valley/Conconully
Espanola	5,224	2,376	53	Low	Long Lake
Knowlton	30,847	9,652	54	Low	Methow Valley
Miles	11,469	4,590	56	Low	
Pateros	3,239	390	57	Low	Methow Valley
Synarep	13,154	5,658	60	Low	Stemilt

*Shows priority ranking by eastern Washington. This ranking is based on total eastside ranking regardless of region.

**Indicates an overlap between DNR-managed landscapes and completed or planned 20-Year Forest Health Strategic Plan Priority Planning Areas, which are watersheds prioritized under 2SSB 5546.

APPENDIX C: 20-Year Prioritization

DNR landscapes in eastern Washington prioritized for forest health treatments over the next 20 years.

Appendix D graphically displays all DNR Landscapes.

DNR Landscape	Region	2024 Landscape Priority	Priority Rank*	Landscape Acres	Forested Acres	20-Year Forest Health Priority Planning Areas**	Sum of Closed Forest Structure Acres
Buck Creek	Southeast	High	1	21,688	20,562	Little White, Trout Lake, White Salmon	18,767
Trout Lake	Southeast	High	2	18,549	17,157	Glenwood, Trout Lake, White Salmon	14,465
Rattlesnake Creek	Southeast	High	3	9,887	9,401	Republic, Toroda-Tonata	7,164
Cabin Creek	Southeast	High	4	3,885	3,595	Cle Elum/U. Yakima	3,239
Marble	Northeast	High	5	5,647	4,940	Mill Creek	1,636
Appleton	Southeast	High	6	15,287	12,944	Klickitat, White Salmon	5,881
Little Pend Oreille	Northeast	High	7	17,598	16,513	Mill Creek, Little Pend Oreille, Meadow	6,090
Dunn	Northeast	High	8	21,765	19,003	Chewelah, Stranger	6,513
Rice	Northeast	High	9	11,028	9,545	Stranger, Gifford**	1,595
Wenatchee	Southeast	High	10	27,276	14,642	Chumstick/Mad Roaring Mills/Nason/Entiat Creek/Stemilt/Tillicum/U. Wenatchee/Chelan/Mission	3,099
Glenwood	Southeast	High	11	36,434	35,387	Glenwood, Klickitat, Trout Lake	7,738
Cottonwood	Northeast	High	12	8,767	8,154	Chewelah, Deer Park	837
Douglas	Northeast	High	13	6,044	5,281	Mill Creek	1,469
Evans	Northeast	High	14	11,912	10,731	Mill Creek	2,228
Elk	Northeast	High	15	10,398	9,451	Mt. Spokane, Deer Park	1,855
Furport	Northeast	High	16	3,512	3,257	Trail	375
Stemilt	Southeast	High	17	4,570	3,468	Stemilt	546
Orient	Northeast	High	18	6,295	5,087	Orient/Kettle	540
Patterson	Northeast	High	19	5,058	4,470		1,858
Lime	Northeast	High	20	8,469	8,027		3,063
Narcisse	Northeast	High	21	7,839	7,430	Mill Creek/Little Pend Oreille	1,642
Taneum	Southeast	High	22	8,340	7,117	Cle Elum, Teanaway, Manastash Taneum	481
Usk	Northeast	High	23	10,501	9,127	Chewelah/Deer Park/Usk	2,062

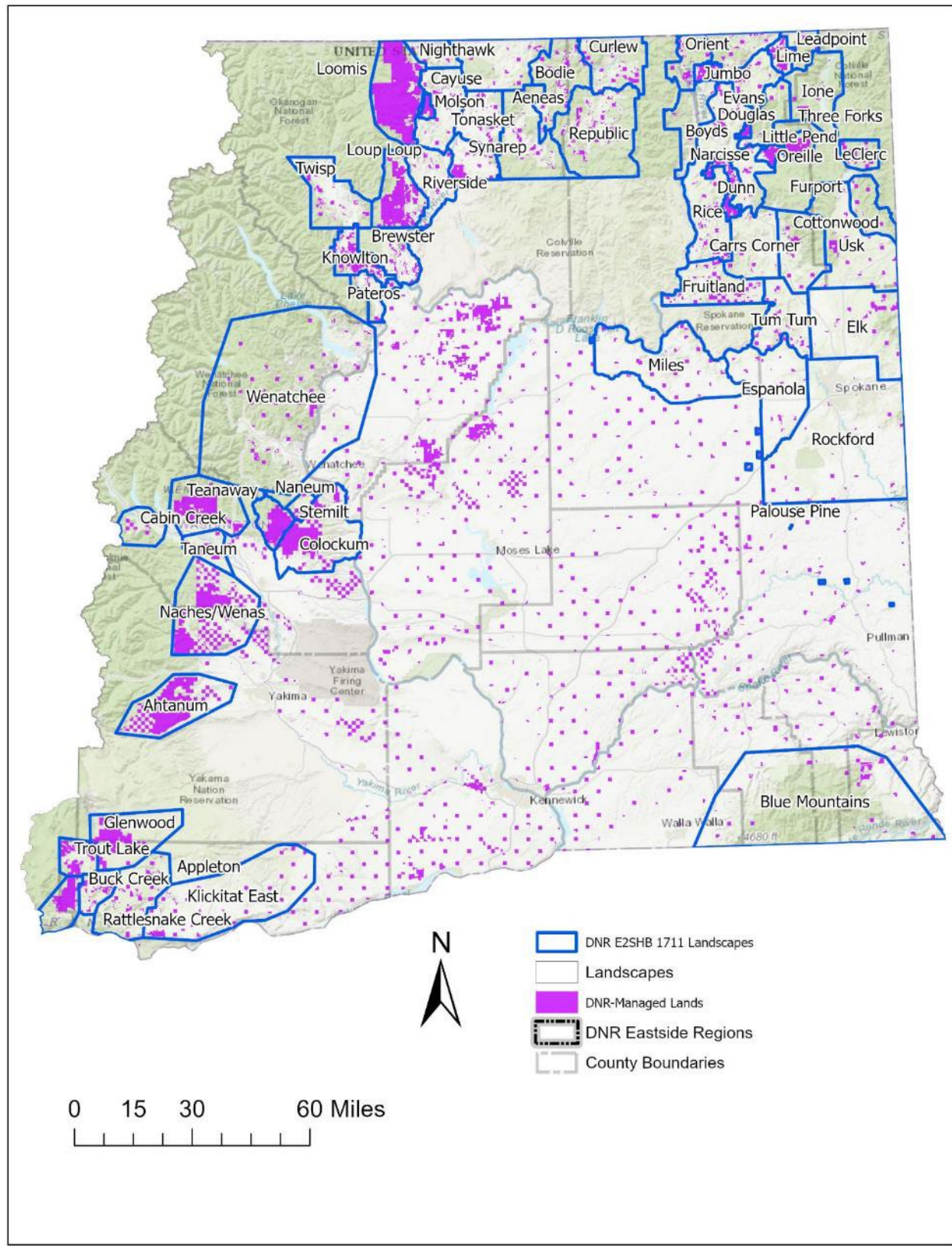
DNR Landscape	Region	2024 Landscape Priority	Priority Rank*	Landscape Acres	Forested Acres	20-Year Forest Health Priority Planning Areas**	Sum of Closed Forest Structure Acres
Teanaway	Southeast	Medium	24	52,507	48,967	Cle Elum/Teanaway/Upper Swauk	8,457
Carrs Corner	Northeast	High	25	4,465	4,080	Chewelah, Stranger	748
Three Forks	Northeast	High	26	2,479	2,353	Mill Creek	243
Bodie	Northeast	High	27	15,150	10,387	Toroda-Tonata	244
Republic	Northeast	Medium	28	13,483	10,065	Republic, Toroda-Tonata	512
Curlew	Northeast	Medium	29	11,634	9,372	Toroda-Tonato	1,233
Boyds	Northeast	Medium	30	1,782	1,370	Dollar/Kettle	179
Orin	Northeast	Medium	31	2,518	2,167	Chewelah/Mill Creek/Stanger/Little Pend Oreille	194
Leadpoint	Northeast	Medium	32	1,812	1,685		413
Jumbo	Northeast	Medium	33	8,873	7,389		1,800
Molson	Northeast	Medium	34	6,160	3,381	Mt Hull, Toroda-Tonata	51
Blue Mountains	Southeast	Medium	35	15,805	2,406	Asotin/Tucannon/Touchet-Mill	710
Rockford	Northeast	Medium	36	8,716	3,639	Mica/Spokane North	344
Fruitland	Northeast	Medium	37	21,731	20,271		1,641
Ahtanum	Southeast	Medium	38	82,635	58,166	Ahtanum, Tieton	9,628
Ione	Northeast	Medium	39	5,461	5,199	Ione, Meadow	828
LeClerc	Northeast	Medium	40	10,757	10,250	Trail	2,473
Colockum	Southeast	Low	41	61,002	33,021	Stemilt	904
Aeneas	Northeast	Medium	42	8,832	5,852	Republic	33
Twisp	Northeast	Medium	43	8,359	2,965	Methow Valley, Twisp River	162
Naches/Wenas	Southeast	Low	44	90,857	48,906	Tieton, Manastash Taneum, Naches-Wenas	4,139
Naneum	Southeast	Low	45	29,009	24,806	Stemilt	890
Klickitat East	Southeast	Low	46	18,986	3,029	HWY 97, Klickitat	263
Cayuse	Northeast	Medium	47	6,956	850	Mt. Hull, Loomis	110
Tonasket	Northeast	Medium	48	7,657	1,828	Mt Hull	0
Loomis	Northeast	Low	49	134,527	114,353	Loomis**	15,191
Nighthawk	Northeast	Low	50	1,986	276		0
Tum Tum	Northeast	Low	51	9,655	8,267	Long Lake/Deer Park	59
Loup Loup	Northeast	Low	52	56,907	46,606	Methow Valley/Conconully	303
Espanola	Northeast	Low	53	5,226	2,376	Long Lake	11

DNR Landscape	Region	2024 Landscape Priority	Priority Rank*	Landscape Acres	Forested Acres	20-Year Forest Health Priority Planning Areas**	Sum of Closed Forest Structure Acres
Knowlton	Northeast	Low	54	30,847	9,652	Methow Valley	21
Riverside	Northeast	Low	55	5,991	939	Conconully	0
Miles	Northeast	Low	56	11,469	4,590		1
Pateros	Northeast	Low	57	3,239	390	Methow Valley	0
Brewster	Northeast	Low	58	8,836	1,690	Methow Valley	0
Synarep	Northeast	Low	59	13,154	5,658	Stemilt	82
Palouse Pine	Southeast	Low	60	3,348	982		0

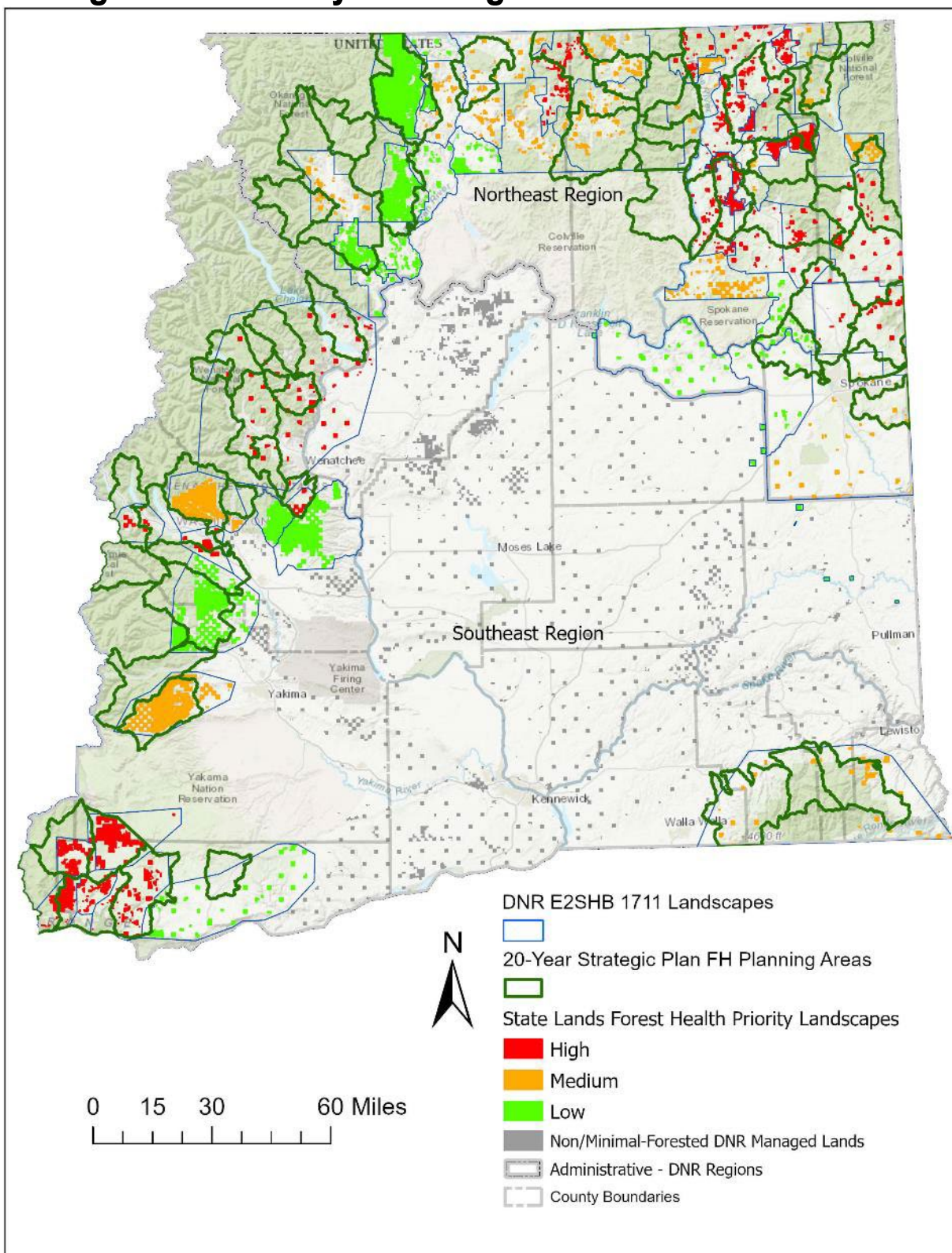
*Shows priority ranking by eastern Washington. This ranking is based on total eastside ranking regardless of region.

**Indicates an overlap between DNR-managed landscape and completed or planned 20-Year Forest Health Strategic Plan Priority Planning Areas, which are watersheds prioritized under 2SSB 5546.

APPENDIX D: DNR's Landscapes in Eastern Washington



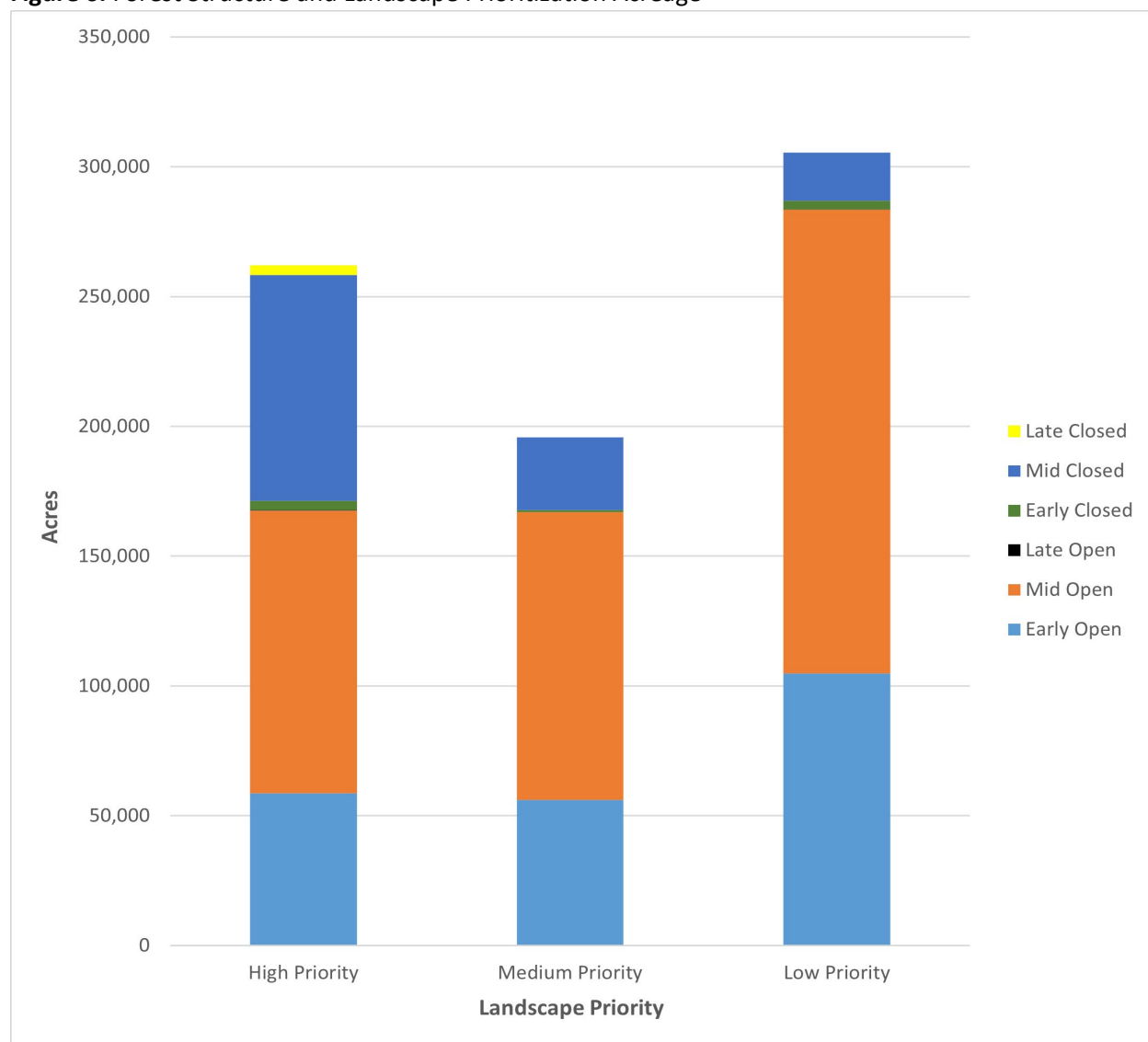
APPENDIX E: DNR's Landscapes and 20-Year Forest Health Strategic Plan Priority Planning Areas



APPENDIX F: Forest Structure

The first factor used to determine forest structure is canopy cover. An “Open” canopy is defined as having less than 60 percent canopy cover, and “Closed” is defined as stands with greater than 60 percent canopy cover. Canopy cover is a measure of the proportion of ground surface area that contains tree canopy directly above the ground at any height, with a maximum value of 100 percent. Stands with greater canopy cover often contain larger trees and/or a greater number of trees per acre. In both cases, as the canopy cover increases, the between-tree competition for resources in the stand increases, which can lead to decreased growth, increased risk of mortality, and decreased resilience to pathogens.

Figure 6. Forest Structure and Landscape Prioritization Acreage



Source: RS-FRIS Forest Inventory System (07/29/2024), WA DNR Forest Resources Division

Canopy cover can be reduced with various commercial and non-commercial treatments, including variable retention harvest, pre-commercial thinning, commercial thinning, variable density thinning, and shaded fuel breaks. The use of pruning or prescribed fire may also reduce canopy cover, though canopy cover reduction is generally not the primary goal of these treatments.

Another key element in determining forest structure in this analysis is the stage of forest succession. Forest succession is a natural process of growth and change after a major disturbance, such as timber harvest or wildfire. This analysis measures the quadratic mean diameter (QMD) of all trees in the stand six inches or larger at breast height (4.5 feet above soil surface). QMD can be used as a surrogate for age as it reflects the biologic condition of the forest when used with other metrics such as canopy cover.

Stands with a QMD less than 10 inches are considered “Early” and are generally only suitable for non-commercial treatments such as pre-commercial thinning, pruning, and possibly prescribed burning. Currently, the small size of the trees in these stands does not allow for commercial use of logs from these treatments. Stands with a QMD between 10 inches and 20 inches are considered “Mid” while stands with a QMD greater than 20 inches are considered “Late”.

Stands in the “Mid” and “Late” categories are more likely to be suitable for commercial treatments, such as commercial thinning, variable density thinning, and regeneration harvest. They might also be suitable for non-commercial treatments, such as prescribed burning, road realignment and maintenance, or shaded fuel breaks. Stands in the “Early” categories are more likely to be considered for non-commercial treatments. Proper treatment selection within these categories relies upon the knowledge of local field staff to assess the stand condition, species present, and forest health concerns, as well as operability and market feasibility.

APPENDIX G: Commercial and Non-Commercial Forest Health Treatment Descriptions

Commercial thinning – A commercial thinning reduces stand density before competition-induced mortality occurs within the stand. Trees removed are of commercial value and are removed from the site. In general, commercial thinnings either remove the smaller trees, leaving the biggest and healthier crop trees, or remove trees of all size classes. Residual trees are selected based upon species priorities, individual tree health, and growth potential, as well as habitat potential.

Pest management – Monitoring and managing forest pests using preventative, biological, cultural, and/or chemical techniques to reduce pest damage below levels of concern.

Pre-commercial thinning (PCT) – Stand density reduction treatment conducted in young stands that do not yet contain merchantable-size trees (generally less than 6-inch diameter at stump height), with the objective of removing trees that will likely succumb to competition-induced mortality and allow for greater resource allocation (water, nutrients, and sunlight) to remaining trees.

Prescribed burning – The intentional, controlled application of fire to a forested area to accomplish specific objectives, including site preparation, understory maintenance, influencing overstory species composition, and reducing fuels.

Pruning – Removing branches flush with the tree trunk to improve tree health, increase commercial value, hasten maturity, and reduce certain forest health and ladder fuel risks.

Reforestation – Following a stand-replacing disturbance, the stand will often be “regenerated” through natural or artificial methods. Natural regeneration relies upon residual trees and seed banks to populate the freshly bare ground with seedlings. Although natural regeneration uses seed from local trees, the seed distribution and seed germination success can be highly variable. Following timber harvest, the most common method of regeneration is hand planting of seedlings. Foresters choose seedling species based upon the natural conditions of the site to ensure success in obtaining stand objectives. Seeds for the planted seedlings are from a similar geographic location and elevation to ensure genetic resources that are consistent with local conditions. Although natural regeneration results in a range of <50 trees per acre to more than 1,000 trees per acre, artificial regeneration, usually requires hand planting of 150 to 350 trees per acre, depending upon species and site conditions.

Shaded fuel breaks/hazard abatement – Used to mitigate the threat of wildfire in areas where natural fire regimes have been suppressed, leading to a dangerous buildup of combustible vegetation. This can be described as a strategically located wide block or strip in which dense, heavy, or highly flammable vegetation is removed or changed to one of lower fuel volume or reduced flammability. This can be done by altering surface fuels, increasing the height to the base of the live crown, and opening the tree canopy. These are different from a firebreak, which tends to be narrower than a shaded fuel break.

Site preparation – Site preparation is used to prepare planting spots and control competing vegetation to allow for increased water, nutrients, and light to planted trees to increase survival and growth in the first two to three years after planting. Site preparation can include manual weed cutting, mechanical treatments such as mastication, tilling, or brush pulling, as well as herbicide treatments.

Uneven-aged management – A silvicultural system in which multiple thinning treatments are implemented over several decades with the intent of managing for total stand density to reduce competition-induced mortality while providing openings for natural or planted seedlings to grow with an end goal of a stand with multiple age classes, crown levels, and species.

Variable density thinning – Variable density thinnings can be an intermediate treatment when using even-aged or uneven-aged management. Variable density thinnings are often conducted after trees have reached at least 40 years old and are designed to reduce stand density while encouraging vertical and horizontal heterogeneity by leaving “skips” in which no trees are removed and “gaps” in which all trees are removed with the intent of reforestation or recruitment of desired shrub species within the “gap.” Residual trees are generally selected to retain desired species, larger trees, and trees with potential wildlife habitat value. Variable density thinnings often result in removal of merchantable pulp and saw logs.

Variable retention harvest – Harvest technique based on the natural model of biological tendencies that are typically left behind following natural disturbances such as wildfire, wind, and flood. It is a primary silvicultural approach used by DNR, which emphasizes retaining at least 20 trees per hectare (6 trees per acre) in a mix of dispersed and aggregated spatial patterns, providing no major voids within timber units. The overall objective is to maintain and promote large, structurally unique trees, snags, and down wood over time.

Vegetation management – Vegetation management is the removal of competing species from young stands to allow for increased water, nutrients, and light for planted and naturally regenerated trees, usually conducted within the first decade after a regeneration harvest.

APPENDIX H: Aerial Insect and Disease Detection Survey

Methods and Reporting Categories

The USDA Forest Service, in cooperation with DNR, conducts an annual insect and disease aerial detection survey (ADS) in Washington state, which has been ongoing since 1947.

From a fixed-wing aircraft, observers record polygons (fixed areas) or points where recently killed or defoliated trees are visible from the air. Polygons are coded with the most likely damage-causing agent and a measure of damage intensity. Some polygons may be coded with more than one damage agent. The damage codes assigned are inferred from “signatures” of tree size, species, crown color, and pattern of damage. Signature recognition is developed through training and ground observations. Unknown signatures are prioritized for ground-checking, but most damage polygons are not ground-checked. Some damage signatures attributed to a specific pest may have other causes. It is challenging to accurately identify and record damage observations at this large scale. Mistakes can occur, and sometimes the wrong pest may be identified.

For reporting purposes, damage agents are assigned to four damage type categories: mortality agents, defoliating insects, foliar diseases, and abiotic/animal/root disease.

Mortality agents are primarily nine different species of tree-killing bark beetles that include mountain pine beetle, western pine beetle, Douglas-fir beetle, fir engraver, spruce beetle, and others. This category also includes mortality in tree species that are rarely killed by bark beetles that can’t be attributed to a specific causal agent. These include the “dying hemlock” and “dying cedar” codes. Balsam woolly adelgid is an aphid-like sucking insect that is sometimes categorized as a mortality agent.

Defoliating insects are a wide variety of insect pests that feed on tree foliage by chewing, sucking sap, or mining inside foliage, causing enough damage and discoloration to the crown that it is visible from the air. Chewing defoliators are primarily moth caterpillars such as western spruce budworm, Douglas-fir tussock moth, larch casebearer, western hemlock looper, and tent caterpillars, but also include sawfly larvae. Sucking defoliators include aphids, scale insects, and adelgids such as spruce aphid, black pineleaf scale, and balsam woolly adelgid. Leaf or needle miners include aspen leaf miner and ponderosa needle miner.

Foliar diseases include needle casts, needle blights, and rusts caused by fungal pathogens that discolor foliage, such as Swiss needle cast, larch needle cast, pine needle casts, larch needle blight, poplar rust, and white pine blister rust. This category also includes hardwood declines that cause crown dieback attributed to more than one agent, such as Pacific madrone decline, maple decline, aspen decline, and oak decline.

The **abiotic/animal/root disease** category includes several weather-related or non-biological causes of tree mortality, such as windthrow, flooding, frost damage, hail damage, landslides, and wildfire. Wildfire damage is often only recorded in aerial survey if it is associated with other damage agents, such as bark beetles. This category also includes a “young conifer mortality” code where scattered mortality in young conifer stands is observed; the two most common causes being bear damage and root disease. Mortality from root diseases in mature stands is difficult to detect from the air, but is also included in this category. Damage polygons coded as bark beetles may sometimes be related to root disease centers.