



Oregon

Tina Kotek, Governor

Department of Forestry

State Forester's Office
2600 State Street
Salem, OR 97310-1336
503-945-7200
FAX 503-945-7212
www.oregon.gov/ODF



*"STEWARDSHIP
IN FORESTRY"*

To: Mike Wilson, State Forests Division Chief
Don Everingham, Northwest Oregon Area Director
Dan Goody, Astoria District Forester

Cc: Nick Palazzotto, State Forests Deputy Division Chief

From: Kate Skinner, Interim Oregon State Forester

Date: April 15, 2025

Subject: Astoria District Implementation Plan for the Northwest
Oregon State Forests Management Plan.

Introduction

This memo documents my review and approval of the revision to the Astoria District Implementation Plan. At the direction of the Board of Forestry, the State Forests Division is continuing the development of the draft Western Oregon State Forests Habitat Conservation Plan and new Forest Management Plan for Western Oregon State Forests. At the time of developing this revised Implementation Plan, an updated draft of the Habitat Conservation Plan has been submitted to the Services. Over the coming year, Division staff will be engaging with the Services to arrive at a final Habitat Conservation Plan, and anticipates that a Final Environmental Impact Statement, Biological Opinions and Incidental Take Permits will be issued by late spring or early summer of 2026.

The Division is also focusing resources on the development of the new Forest Management Plan and supporting Implementation Plans. These plans are going through a staggered development process as the details of each planning level feed into the next. The new Forest Management Plan process is expected to be completed in 2026 and the supporting Implementation Plans for the new Forest Management Plan are expected to be completed in 2027. Until a new Forest Management Plan has been adopted, the Division is obligated to continue to implement the current Northwest Oregon State Forests Management Plan. Take avoidance measures that include surveys for northern spotted owls and marbled murrelets will be continued in order to comply with the Endangered Species Act until the Incidental Take Permits are issued.

Implementation Plan Revision

The current Implementation Plan for the Astoria District expires June 30th, 2025. This creates a transition period for fiscal years 2026 and 2027 (July 1, 2025 to June 30, 2027) before the Habitat Conservation Plan, new Forest Management Plan and accompanying Implementation Plan are in place. The revised Astoria District Implementation Plan guides management activities that will be undertaken to implement the strategies described in the Northwest Oregon State Forests Management Plan. This Implementation Plan has been revised to include new information on the district land base and forest resources, updated Species of Concern strategies, and changes to the mapped landscape design of the desired future condition to align with Division policy and draft Habitat Conservation Plan objectives.

It is important that timber harvest objectives under this Implementation Plan revision be met, and that all associated primary timber sale operations planned in the associated annual operations plans to meet this objective be auctioned. If it is not feasible to auction a primary timber sale, an alternate timber sale of similar volume should be offered if available.

Public Comment

The Astoria District Implementation Plan revision underwent a 30-day public comment period from February 20, 2025 to March 21, 2025. During the public comment period, 28 written comments were received. These comments were considered, and some refinements were made to this implementation plan as a result. A summary of the comments received, and the Division's responses can be found in Appendix F. I reviewed this Implementation Plan and found it to be consistent with the Northwest Oregon Forest Management Plan (2010). The activities conducted under this implementation plan are consistent with state forests operational policies and strategies, the Coho Lawsuit Settlement Agreement (2023), draft Habitat Conservation Plan, and Stewardship Agreement. Therefore, I approve the revised Astoria District Implementation Plan.

Sincerely,

Kate Skinner

Kate Skinner
Interim Oregon State Forester



Astoria District

Implementation Plan

April, 2025



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Executive Summary

In October of 2020, the Board of Forestry gave direction to the State Forests Division to continue the development of a draft Western Oregon State Forests Habitat Conservation Plan and Western Oregon State Forests Management Plan. While the draft Habitat Conservation Plan is going through the National Environmental Policy Act process, the Division is focusing resources on the development of the Western Oregon State Forests Management Plan and supporting Implementation Plans. These plans are following a staggered development process as the details of each planning level feed into the next. The draft Habitat Conservation Plan process has been extended and is expected to be completed in 2026. The Western Oregon State Forests Management Plan final draft rule is expected to be prepared for adoption by the Board of Forestry in 2026 and the new Implementation Plans for the Western Oregon State Forests Management Plan are expected to be completed in spring 2027.

The current Implementation Plan for the Astoria District expires June 30th, 2025. This creates a transition period for fiscal years 2026 and 2027 (July 1, 2025, to June 30, 2027) where the current Forest Management Plan strategies are being implemented and the draft Habitat Conservation Plan may be approved. At the time of developing this Implementation Plan revision, the Habitat Conservation Plan is a formal public draft document with an accompanying draft Environmental Impact Statement in the federal National Environmental Policy Act process. Finalization of this process and issuance of Incidental Take Permits is expected to occur within fiscal year 2026. In order to cover this transition period, the existing Implementation Plan has been revised and extended two years, through June 30th, 2027. In order to address the planning uncertainty and risk of timeline adjustments to the long-term planning processes these Implementation Plan revisions can be extended through an extension memo signed by the State Forester. In addition to the expiration dates, this Implementation Plan has been revised to include new information on the district land base and forest resources, updated Species of Concern strategies, and changes to the mapped landscape design of the desired future condition to align with Division policy and draft Habitat Conservation Plan objectives. As this ongoing policy work evolves, ODF will also evaluate new information or changes in direction to determine if adjustments need to be made.

Introduction

The Oregon Department of Forestry (ODF) manages approximately 756,000 acres¹ of forestland throughout the state. Of these lands, 730,000 acres¹ are

¹ These acres are legal acres. All other acres referenced in this document are based on GIS for analysis purposes.

Board of Forestry lands, which are managed to secure greatest permanent value by maintaining healthy and productive forests, providing clean air and water, recreation and outdoor learning opportunities, and diverse native fish and wildlife habitat. Timber from state forests provides local governments with much-needed revenue and supports family-wage jobs. The remaining 26,000 acres¹ are Common School Forest Lands. ODF manages these lands for the Department of State Lands to provide the greatest benefit to Oregonians, consistent with resource conservation and sound land management strategies. Among these lands is the Astoria District.

The Northwest Oregon State Forests Management Plan, adopted by the Board of Forestry in 2010, is the policy document that guides how these forests will be managed to secure greatest permanent value and support the Common School Forest Lands goals. This Implementation Plan revision characterizes the overall framework for implementing the Forest Management Plan during this time of transition.

The Astoria District Implementation Plan guides forest management for all forest resources on the Astoria district beginning July 1, 2025. This implementation plan is a major revision of the plan approved by the State Forester in 2023. It is prepared to broadly characterize forest operations, activities and projects that will achieve the intent of the long-range vision of the April 2010 Northwest Oregon State Forests Management Plan and the provisions of the draft Habitat Conservation Plan over the next few years.

In summary, this implementation plan was developed to:

- Implement current Forest Management Plan strategies.
- Implement requirements outlined in the Coho Lawsuit Settlement Agreement (2023);
- Implement the draft Habitat Conservation Plan requirements and provisions of the Incidental Take Permits;
- Incorporate new information on the districts land base and forest resources;
- Incorporate updated Species of Concern strategies;
- Adjust the mapped landscape design of the desired future condition to align with Division policy and draft Habitat Conservation Plan objectives;
- Develop a sustainable and predictable harvest level;
- Contribute to financial sustainability necessary to meet plan goals;
- To cover the two-year period of transition between Forest Management Plans and new Implementation Plans (July 1, 2025 to June 30, 2027), with the option to extend them if needed.

In addition, the management activities conducted under this plan will be consistent with the management strategies in the State Forests Operational Policies and

Bulletins. The specific operations and management activities necessary to carry out this Implementation Plan will be described in annual plans, beginning with the fiscal year 2026 Astoria District Annual Operations Plan.

District Overview

Land Ownership

Astoria District is comprised of approximately 136,855 acres of state forest lands, the vast majority (more than 98 percent) of which are within Clatsop County, at the northwest corner of Oregon. Also, 1,227 acres are in Tillamook County, and 39 acres are in Columbia County, as shown in Table 1 below. The lands within Clatsop and Columbia counties are part of the Clatsop State Forest. The state forest lands located in the southeastern corner of Clatsop County (Sunset Wayside Area) and remaining state lands in Columbia County are technically part of the Clatsop State Forest but are administratively managed from the Forest Grove District. In addition, the state lands located in the Cronin Creek area of south Clatsop County are technically part of the Clatsop State Forest, but are administratively managed from the Tillamook District.

About 98.5 percent of these lands are Board of Forestry lands, with the remainder being Common School lands. State forest lands are interspersed among other forest lands throughout the county, in ownership blocks ranging from several hundred to over 50,000 acres. Other forest lands in the county are predominantly held by large private timber companies: Lewis and Clark Timberlands, Longview Timberlands, Hampton Tree Farms, Weyerhaeuser Co., Matoaka & PH Timber (Managed by FAI/MB&G), NW Timber Holdings LLC and Stimson Lumber Company. Individuals and families (non-industrial private landowners) hold a small percentage of the forest lands. The Clatsop State Forest surrounds agricultural lands located in the Nehalem Valley (central, east Clatsop County) and Columbia River Area (north, east Clatsop County).

In addition, state forest lands border the city of Astoria and rural residential areas in: lower Highway 53 area, the Elsie-Jewell area along the Nehalem River Valley, and the northeast county area in the Knappa-Brownsmead-Wauna communities.

Table 1. Astoria District Acreage and Percent by County and Fund

County	Admin Site	Board Of Forestry	Common School	Total
Clatsop	16 (<0.1%) ¹	133,584 (97.6%)	2,005 (1.5%)	135,589
Tillamook	-	1,227 (0.9%)	-	1,227
Columbia	-	39 (<0.1%)	-	39
Total Acres	16	134,850	2,005	136,855

¹Percent of total district acres

Physical Elements

Topography

The majority of the district lies on low, rolling topography on the western and northern flanks of the Coast Range. Elevation ranges from sea level in the Astoria area to over 3,000 feet on Nicolai Ridge. Approximately 49% of the district is below 1,000 feet, 46% lies between 1,000 and 2,000 feet, 5% lies between 2,000 and 3,000 feet, and less than 1% is above 3,000 feet. The district is dominated by gentle to moderate slopes with steep slopes generally associated with incised stream channels. Steep slopes are more widespread in a few areas including the Fishhawk Creek watershed and along the Nehalem River in the southern portion of the district. Approximately 67% of the district has slopes less than 30 percent, 29% has slopes between 30 and 60 percent, and 4% has slopes over 60 percent (USGS 10m DEM).

Climate

West of the Coast Range summit, the climate is characterized by cooler summer temperatures and frequent fogs during the growing season. The remaining half of the district is east of the Coast Range and mostly in the Nehalem Valley; this area is dominated by Douglas-fir and hardwoods, and warmer, drier summers, with less fog. Rainfall averages 80 inches annually in lower elevations and 120 inches annually in the Coast Range area. Heavy rainstorms and windstorms are common occurrences during the winter and cause significant natural disturbances. There has also been an increase of extreme weather events throughout the seasons in recent years.

Water

Major streams that drain these forest lands are: Gnat Creek, Plympton Creek, and the Klaskanine River, which flow into the Columbia River; and the Nehalem, North Fork Nehalem, and Necanicum Rivers, which flow directly into the Pacific Ocean. Some of the larger streams that feed the Nehalem and North Fork Nehalem Rivers include: Fishhawk Creek, Beneke Creek, Northrup Creek, Sager Creek, Buster Creek, Fall Creek, and Sweethome Creek. These major watershed basins define the basin planning areas in the section entitled Management Basins. There are also several shallow lakes on state forest lands, the largest of which is Lost Lake. Beaver ponds and other wetlands are scattered throughout the district. One community watershed is located in the northeast corner of the district encompassing about 1,300 acres of state forest land, serves the Columbia River community of Westport. The Fishhawk Basin contributes to the Fishhawk Lake community water system. Some springs in the Osweg Creek Area of the Buster Basin, supplies the community water for the Elderberry Area residents.

Municipal and/or domestic water systems exist throughout the forest. ODF utilizes the Oregon Water Resources Department website to access the most current information for identification of domestic water systems when reviewing planned timber sales, which allows for protection of these sites.

Geology and Soils

The Astoria District is located in the northern Oregon Coast Range. The geologic formations in this part of the Coast Range were generally formed by volcanic eruptions associated with the creation of an offshore volcanic island chain and by deposition of marine sediments in the surrounding shallow seas. These materials have since been accreted to the continent, uplifted, and eroded to form varied terrain from lower-elevation rolling topography to the rugged, steeper parts of the District.

Predominate rock types on the district are basalt flows and breccias and tuffs of the Tillamook Volcanics and Cole Mountain (extrusive igneous rocks), marine mudstones and siltstones and sandstones (sedimentary rocks), and Columbia River Basalt flows (invasive intrusive igneous rocks). The rocks are mostly Eocene and Miocene in age and were formed 15 to 45 million years ago. They have experienced significant amounts of folding and faulting since then due to tectonic activity. The erosion-resistant Columbia River Basalt flows cap many of the high ridges in the Astoria District.

The rugged topography and wet climate combined with the forces of ongoing tectonic uplift and stream down-cutting make the Coast Range inherently prone to landslides. Deep-seated landslides are common on the Astoria District given the predominance of weak marine sedimentary rocks prone to such landslides. Shallow landslides are common on those portions of the district dominated by steep slopes. The dominant soil associations within the Astoria District include Astoria, Mist, Aldrich, Wauna, Tillamook, Grindstone, and Pinochle (ODF Soil

Survey, 1978). The majority of these soils are deep, well-drained, colluvial soils, characterized by high clay content and very high productivity. The average site index for the district is 130 (high Site II). Some of the higher elevation soils have a high rock content and exhibit poorer productivity.

Scenic Resources

Areas deemed scenic resources can include lands with established, high public use vistas, viewpoints, or significant natural features; lands immediately adjacent to scenic highways; lands immediately adjacent to scenic waterways; areas adjacent to campgrounds; or lands visible from urban centers. Known scenic resources in the Astoria District include:

- Highway 101 (Forest Practices Act Scenic Highway)
- Highway 26 (Forest Practices Act Scenic Highway)
- Highway 30 (Forest Practices Act Scenic Highway)
- Highway 103
- Highway 202
- Nehalem Scenic Waterway
- City of Astoria Viewshed
- Astoria Column Viewshed
- Arch Cape Viewshed
- Hugpoint State Park
- Gnat Creek Campground
- Northrup Creek Campground
- Spruce Run Campground

Biological Elements

Vegetation

The Astoria District is located within the hemlock zone, in which western hemlock, western red cedar, and Sitka spruce are the major climax tree species. Within this zone are large stands of Douglas-fir, hemlock, hemlock/spruce, Douglas-fir/spruce, Douglas-fir/hemlock, and Douglas-fir/spruce/western red cedar. There are also numerous acres of hardwood-dominated stands, characterized mainly by red alder.

Most of these hardwood stands also have clumps of conifers and large, individual, emergent conifers intermixed. In the western part of the district, Sitka spruce, western hemlock, and western red cedar commonly grow beneath red alder stands and emerge gradually into the overstory once the alder are about fifty years old and begin to decline.

The eastern portion of the district is characterized by pure stands of Douglas-fir and mixed stands of Douglas-fir and hardwoods. Once again, these hardwoods are dominated by red alder, but big leaf maple can also make up a large component of hardwoods.

At the higher elevations of the Coast Range, noble fir and silver fir stands are found. These species are also found in association with hemlock and Douglas-fir stands at the mid and higher elevations, generally above 1,500 feet.

Understory species range from dense salal and salmonberry near the coast to vinemapple, sword fern, huckleberry, elderberry, cascara, and bitter cherry over much of the district.

The District Plant List (Table 2) includes threatened, candidate, and special concern plants that are, or have the potential to be found on the district. This list is an expanded version of the list found in the Forest Management Plan.

Table 2. Astoria District Endangered, Threatened or Candidate Plant Species¹

Genus	Species	Common name ²	Status ³	Record exists ⁴	Potential to be present
Threatened and Endangered Plants					
<i>Erythronium</i>	<i>elegans</i>	Coast Range fawn-lily	ST, FSOC		✓
<i>Silene</i>	<i>douglasii</i> var. <i>oraria</i>	Cascade Head catchfly	ST, FSOC	✓	
Plants of Special Concern					
<i>Castilleja</i>	<i>chambersii</i>	Chamber's paintbrush	SP, FSOC	✓	
<i>Dodecatheon</i>	<i>austrofrigidum</i>	Frigid shootingstar	SP, FSOC	✓	
Candidate Plants					
<i>Cardamine</i>	<i>pattersonii</i>	Saddle Mt. bittercress	SC	✓	
<i>Delphinium</i>	<i>oreganum</i>	Willamette Valley larkspur	SC, FSOC		✓
<i>Filipendula</i>	<i>occidentalis</i>	Queen-of-the-forest	SC	✓	
<i>Saxifraga</i>	<i>hitchcockiana</i>	Saddle Mt. saxifrage	SC	✓	
<i>Sidalcea</i>	<i>hirtipes</i>	Bristly-stemmed sidalcea	SC	✓	

¹Data Source: Oregon Biodiversity Information Center Database - 2022

²Plant names in bold are on the Northwest Forest Management Plan list of plants.

³Status: SE – State Endangered; ST – State Threatened; SC – State Candidate; SP – Special Concern; FE – Federal Endangered; FT – Federal Threatened; FSOC – Federal Species of Concern

⁴Plants have been observed on or within ¼ mile of state forestlands.

Forest Health

Most insect, invasive weeds, disease and abiotic forest threats are best handled through prevention via management for forest resilience. Forest health surveys and monitoring help to identify areas to evaluate for insect, disease and forest

health issues. Healthy trees are well-defended and able to resist or tolerate these forest threats. Silvicultural methods will be used to enhance tree and stand resiliency to ensure forest health and sustainability.

Climate change, drought, wildfire, poor site quality or suitability for tree species can predispose trees to damage caused by insects and disease. Silvicultural activities that may be utilized to address forest stressors include:

- Planting native species in locations most suitable for their growth, accounting for changing temperature and precipitation;
- Widening spacing to reduce competition for soil moisture and mitigate reduced or inconsistent precipitation;
- Increasing tree species diversity to inhibit the spread of host-specific insects and diseases;
- Avoiding planting host tree species in known root disease pockets;
- Utilizing preventive techniques during operations to prevent the spread of invasive weeds and diseases; and
- Removing marketable timber in a timely manner to avoid defect-causing agents such as wood boring beetles and fungi.

ODF may look into opportunities to partner with other agencies and landowners to leverage collaborative efforts to improve forest health when working along ownership boundaries. In addition to these techniques forest managers are also working to address several forest health concerns on the Astoria District that are described below.

Insects and Disease

Phellinus weirii - is a root disease that affects Douglas-fir trees severely, and western hemlock moderately. The disease is spread when uninfected roots of a susceptible tree grow into contact with infected roots and are colonized by *Phellinus weirii*. For most of the Astoria District, root disease is of moderate concern although the exact amount of the disease is unknown at this time.

Swiss needle cast - is a native fungal disease of Douglas-fir. This disease, which causes the premature shedding of needles, has resulted in severe growth reductions in some stands, particularly stands between 10 and 30 years old within 15 miles of the coast. In addition to the growth loss, there is concern that this disease will limit the development of complex forest structures in severely infected stands. For most of the Astoria District, Swiss needle cast is of moderate concern although the exact amount of the disease is unknown at this time.

Spruce tip weevil (*Pissodes strobi*) - is an insect that periodically kills the upper two years of growth on spruce trees that are 5-50 feet in height, forcing the tree to produce a new leader. This results in short trees with multiple tops and deformed growth. Mature spruce trees do not seem as susceptible to tip weevil as younger trees. Some reforestation success occurs where spruce grows under other trees

like alder or as a second cohort in conifer stands. In the Astoria District, spruce tip weevil is of low concern although the exact amount of presence in the Astoria District is unknown at this time.

Emerald ash borer (*Agrilus planipennis* Fairmaire) – is an insect that primarily targets ash trees. The insect consumes a tree's cambium and restricts the tree's ability to transport nutrients and water until the tree dies. Emerald ash borer is of high concern for areas where it is discovered. The exact amount of presence in the Astoria District is unknown at this time. Survey and monitoring efforts are underway across the state involving numerous agencies and landowners with project coordination through the Emerald Ash Borer Task Force, led by the Oregon Department of Agriculture.

Invasive Weeds

Integrated pest management principles to address incidences of invasive, non-native plants will be applied on state forest land. ODF will coordinate with other agencies and landowners in efforts to address such problems. The district will take steps to ensure that management activities are not contributing to existing or new invasions of non-native plant species. These steps will include vegetation management efforts to control such species on state forest land, and the use of native plant species in re-seeding projects on state forest lands.

Most noxious weeds or invasive plants are found along roads and have spread into young stands. The main sources for the weed introduction into the forest are vehicle traffic, equipment moved into and out of district, and where soil disturbance occurs. Oregon Department of Forestry requires 100% weed free grass seed and certified weed-free straw used for mulch for forest projects. Equipment washing is required in timber sale contracts to prevent the introduction of weed seed from other sites.

The Astoria District is an active member of the North Coast Cooperative Weed Management Area. The primary species known on the district include Knotweed, Scotch broom, orange hawkweed, yellow flag iris, garlic mustard, and false brome. Early Detection and Rapid Response is a strategy for identifying the infestations at their earliest stages, preventing the establishment and spread of invasives. State Forest staff regularly participate in trainings to recognize and monitor invasive species, including best practices for preventing their introduction and spread. This information is shared across all district staff to ensure coordinated efforts. Effective communication has led to the control of orange hawkweed in the Nicolai area. Moving forward, active control measures are being planned and prioritized for roadside, in-unit, and trail treatment.

Fish and Wildlife

The Astoria District provides habitats for most native species found in forests in the Coast Range (*Johnson and O'Neil 2001*). Appendix E of the Forest Management Plan contains lists of native fish and wildlife species that are currently known or are likely to exist within the area covered by the FMP. The

Oregon Conservation Strategy², developed by the Oregon Department of Fish and Wildlife (ODFW), provides a list of species of concern for each ecoregion of the state. Many of the species listed as “Conservation Species” for the Coast Range ecoregion are likely to be present on the Astoria District. In addition, many game and furbearer species occur on the district. Some of the most common game species are black-tailed deer, Roosevelt elk, black bear, ruffed grouse and mountain quail. Also common are American beavers, mountain beavers, cougars, bobcats, and coyotes.

The streams, rivers, lakes, and other water bodies on the Astoria District provide habitat for a variety of fish and amphibian species. These aquatic species use habitats in or downstream of the plan area for part or all of their life history.

The integrated forest management strategies, as well as aquatic and riparian strategies, will contribute to diverse habitats that are likely to accommodate most native wildlife species and contribute to the maintenance and restoration of habitat.

Species of Concern

Opportunities for additional conservation measures for “species of concern” have been identified on the Astoria District. Species of Concern are listed in Table 3 for the Astoria District. The list includes those on federal or state Endangered Species Act lists, state sensitive species, and Oregon Conservation Strategy species for the Coast Range. Information regarding limiting factors and habitat needs was taken directly from ODFW’s *Oregon Conservation Strategy* for most species. For species not addressed in the Oregon Conservation Strategy, general habitat needs were described based on available research and monitoring. The results of the assessment and development of Species of Concern “course” strategies for the District are presented in Appendix B. Strategies in addition to the *Northwest State Forests Management Plan (2010)* to address these species are identified in policy and in the Habitat Conservation Plan. Some of these strategies include:

- The application of silvicultural tools to attain an array of forest stand structures and habitat types across the landscape, in a functional arrangement, and the production of stand structural components (e.g. canopy layering, understory development).
- The application of landscape design principles: The landscape design developed for this Implementation Plan applied landscape design principles to provide a functional arrangement of stand types considering characteristics such as patch size and distribution, fragmentation, corridors, and interior habitat. The result is a landscape design that includes 30% percent of the landscape designated for complex forest structure. See additional information in the “Landscape Design Overview” section of the Implementation Plan.

² Oregon Department of Fish and Wildlife. February 2016. The Oregon Conservation Strategy, Salem, OR. <http://www.oregonconservationstrategy.org/>

- Habitat Conservation Areas are designated areas that will be conserved, maintained, and enhanced to provide habitat for the terrestrial covered species in the draft Habitat Conservation Plan. Forests within Habitat Conservation Areas will be managed to maintain and develop late-seral structure stands as they relate to specific habitat needs for individual covered species in the draft Habitat Conservation Plan. See additional information in the “Habitat Conservation Areas” section below.
- Terrestrial Anchors are areas designated to benefit terrestrial wildlife species of concern, especially those associated with older forest or interior habitat conditions, sensitive to forest fragmentation, or do not readily disperse across younger forest conditions. Management within Terrestrial Anchors is intended to be limited, to emulate natural small-scale disturbance patterns, and to minimize short-term negative impacts to habitat. Harvest will likely be limited to thinning projects with some small retention cuts. ODF biologists will be involved in development of management prescriptions within Terrestrial Anchors. See additional information in the “Terrestrial Anchor” section below.
- Aquatic Anchors are watersheds where additional stream and riparian protections are applied to meet or exceed standards in the Forest Management Plan to maintain and enhance habitat for salmonids and headwater amphibians. See additional information in the “Aquatic Anchors” section below.
- Strategies for northern spotted owls and marbled murrelets are described in State Forest Division Operational Policies.
- Snags, green trees, and downed wood: The Forest Management Plan, draft Habitat Conservation Plan and related strategies, call for active forest management for retention and development of key structural components such as snags, green trees, and downed wood, and the application of targets for these components at landscape scales.
- Riparian and aquatic strategies: The application of Forest Management Plan and draft Habitat Conservation Plan riparian management standards as well as upslope components such as roads and slope stability strategies. Stream restoration projects will be undertaken as resources allow and focus on high priority areas identified by the staff Aquatic and Riparian Specialist and/or in coordination with ODFW.
- Site-specific plans, or modified practices: In addition to the above “coarse filter” strategies, some species may need additional “fine filter strategies.” If these species are identified on the district, this will be accomplished through the development of site-specific plans. Fine filter strategies in site plans, or otherwise recommended for consideration, may include modified harvest prescriptions or practices, seasonal restrictions, site specific actions such as leaving slash piles, buffers and resource site protection.

Table 3. List of Fish and Wildlife Species of Concern for Astoria District¹

#	Species	Regulatory Status ²
AMPHIBIANS		
1	Clouded Salamander	SS
2	Coastal Tailed Frog	FSOC, SS
3	Columbia Torrent Salamander	FC, SS
4	Cope's Giant Salamander	SS
5	Northern Red-legged Frog	FSOC, SS
6	Western Toad	SS
REPTILES		
8	Northwestern Pond Turtle	FC, SSC
7	Western Painted Turtle	SSC
BIRDS		
9	Bald Eagle	FSOC, FPA
10	Band-tailed Pigeon	FSOC, FPA
11	Great Blue Heron	FPA
12	Harlequin Duck	FSOC, SS
13	Marbled Murrelet	FT, SE
14	Northern Goshawk	FSOC, SS
15	Northern Spotted Owl	FT, ST
16	Olive-sided Flycatcher	FSOC, SS
17	Osprey	FPA
18	Peregrine Falcon	SS
19	Purple Martin	FSOC, SSC
20	Willow Flycatcher	FSOC, SSC (WV)
MAMMALS		
21	Long-legged Myotis	FSOC, SS
22	Red Tree Vole	FC, SS
23	Silver-haired Bat	FSOC, SS
24	Townsend's Big-eared Bat	FSOC, SSC
FISH		
25	Chinook, Lower Columbia, Fall	FT, SSC
26	Chinook, Oregon Coast, Fall	SS
27	Chinook, Coastal, Spring	SS
28	Chinook, Lower Columbia, Spring	SS
29	Chum, Coastal	SSC
30	Chum, Lower Columbia	FT, SSC

Table 3. List of Fish and Wildlife Species of Concern for Astoria District¹

#	Species	Regulatory Status ²
31	Coastal Cutthroat, Coastal	FSOC, SS
32	Coastal Cutthroat, Lower Columbia	SS
33	Coho, Coastal	FT, SS
34	Coho, Lower Columbia	FT, SE
35	Eulachon	FT
36	Western Brook Lamprey	SS
37	Pacific Lamprey	FSOC, SS
38	Western River Lamprey	FSOC
39	Steelhead, Lower Columbia, Winter	FT, SSC
40	Steelhead, Coastal, Winter	SS
41	Steelhead, Lower Columbia, Summer	SSC
MOLLUSKS		
42	Western Ridged Mussel	FC

¹Strategy Species are those identified in The Oregon Conservation Strategy (ODFW, 2016).
<http://www.oregonconservationstrategy.org/>

²Regulatory Status:

FSOC – Federal Species of Concern

FPA – Forest Practices Act

FT – Federal Threatened

FE – Federal Endangered

SE – State Endangered

SSC – State Sensitive Critical

SS – State Sensitive

ST – State Threatened

FC – Federal Candidate (Distinct Population Segment Only)

WV – Willamette Valley Ecoregion

Habitat Conservation Areas

Habitat Conservation Areas are areas that are designated to provide habitat for the terrestrial covered species in the draft Habitat Conservation Plan. They comprise 48% of the Astoria District. The overall purpose of these Habitat Conservations Areas includes the following.

- Conserve, maintain, and enhance existing habitat for the terrestrial covered species in the draft Habitat Conservation Plan permit area over the permit term.
- Improve lower quality and develop new habitat in Habitat Conservation Areas, where necessary and where such treatments can be implemented effectively and efficiently, including expanding and connecting existing habitat to improve landscape-level habitat function.

- Limit management activities in Habitat Conservation Area to those necessary and prudent to improve habitat quantity and quality over the permit term.

In addition to benefiting the terrestrial covered species in the draft Habitat Conservation Plan these areas provide additional benefits to terrestrial species of concern, including vertebrates, mollusks, insects, and plants as well as a broader range of more common wildlife and plants. Habitat Conservation Areas can also provide additional benefit to aquatic species in locations where Riparian Conservation Areas overlap or are adjacent to these Habitat Conservation Areas by increasing habitat connectivity, protecting stream temperatures, and providing late-seral conditions for species that prefer that habitat type. Habitat Conservation Areas will also help ensure longer term carbon storage and sequestration as stands develop into older age classes.

The primary purpose for Habitat Conservation Areas are to conserve, maintain, and enhance habitat in and adjacent to existing occupied habitat, as well as to increase overall habitat at the landscape level over time. In the long term, Habitat Conservation Areas will provide interconnected blocks of habitat to help meet the goals and objectives stated in the draft Habitat Conservation Plan.

Habitat Conservation Areas were established by considering the following criteria and available data.

Occupied habitat: Areas where covered species in the draft Habitat Conservation Plan are known to currently exist, including nesting locations and occurrence data for northern spotted owl, marbled murrelet and, where available, red tree vole.

Historically occupied habitat: Areas where covered species in the draft Habitat Conservation Plan have been documented in the past 30 years and where habitat remains, but where status is currently unoccupied (i.e., inactive) or unknown. Historic sites with documented occupancy or occurrence over multiple years were identified as a priority for conservation.

Suitable habitat: Areas that contain habitat suitable for covered species but that are currently surveyed or unoccupied.

Future habitat adjacent to suitable habitat: Areas that do not currently contain suitable habitat but are adjacent to or close to areas with suitable habitat, and that can become suitable habitat efficiently and effectively, either passively or through active management. Over time, this will increase late-seral habitat amount, patch size, and connectivity, creating larger and better-connected blocks of suitable habitat than exist today.

Patch size: Areas that already contain larger blocks of suitable habitat, as well as occupied habitat that is fragmented but that could be consolidated through long-term habitat development in areas between habitat patches.

Edge: Habitat Conservation Areas were designed to minimize the edge-to-area ratio to reduce “edge effects” on covered species in the draft Habitat

Conservation Plan, particularly marbled murrelets. This includes both patch Habitat Conservation Areas shape configuration and the inclusion of unsuitable habitat adjacent to designated occupied habitat.

Proximity: Areas that are in proximity to other Habitat Conservation Areas and/or suitable habitat managed by federal entities.

Adjacency: Areas that are adjacent to covered species in the draft Habitat Conservation Plan occurrences and habitat located on other ODF districts or federal lands.

Geographic representativeness: Areas that could serve to create an Habitat Conservation Areas network that is distributed across ODF ownership to maintain habitat availability across the full range of each terrestrial covered species in the draft Habitat Conservation Plan.

Table 4. Acres of Habitat Conservation Areas in Astoria District by Age Class

Age Class						Total Acres
0-29	30-59	60-89	90-119	120-149	150+	
17,086	10,943	31,959	4,284	1,538	31	65,840

Forests within portions of Habitat Conservation Area will be managed to maintain and develop late-seral structure stands as they relate to specific habitat needs for individual terrestrial covered species in the draft Habitat Conservation Plan. The overarching management objective is to increase the quality and quantity of habitat for these species. While passive management may be used in some areas in others targeted silvicultural activities will be used to increase the quality and quantity of habitat over time. Typically this will include a variety of density management prescriptions in healthy conifer forests to ensure that late-seral structure develops more quickly. In some cases, such as stands that are dominated by hardwoods or infested with Swiss needle cast it will be more efficient to conduct regeneration harvests and replant a species mix that will develop into habitat in a shorter time frame. All management activities within the Habitat Conservation Areas will be designed to follow the requirements outlined in the draft Habitat Conservation Plan. See the “Timber Harvest Operations” section below for more information on management activities.

Aquatic Anchors

Aquatic Anchors are watersheds intended to maintain and enhance habitat to benefit fish and amphibian species of concern. These are watersheds where additional stream and riparian protections are applied to meet or exceed standards in the Forest Management Plan. These watersheds are managed in accordance with strategies in the draft Habitat Conservation Plan that prioritize salmonid recovery while balancing multiple purposes of state forest. The strategy is accomplished by minimizing the potential for adverse effects to aquatic and riparian habitats and maintaining key ecological functions and processes required

to create and maintain functional habitat. Aquatic Anchors were selected through a collaborative effort with ODFW District Fish Biologists, the State Forests Aquatic and Riparian Specialist, and district staff during the 2011 Implementation Plan development and will remain in place through this transition period.

Table 5. Astoria District Aquatic Anchors

Name	Total Acres
Buster Creek	10,866
Coal Creek	183
Northrup Creek	7,208
Upper N. Fork Nehalem River	9,911
Upper Rock Creek	3,498
Total Aquatic Anchors	31,666

Terrestrial Anchors

Terrestrial Anchors are intended to benefit terrestrial wildlife species of concern, especially those associated with older forest or interior habitat conditions, sensitive to forest fragmentation, or that do not readily disperse across younger forest conditions. The Terrestrial Anchor locations were selected through a collaborative effort with biologists and district staff during the 2011 Implementation Plan development. As part of this Implementation Plan revision, adjustments to the Terrestrial Anchor locations were made to align with the Habitat Conservation Areas while maintaining the original intent of Terrestrial Anchor designations and management. All of the Terrestrial Anchor location updates were completed in partnership between ODF and ODFW biologists, and district staff. Terrestrial Anchor location adjustments will remain in place through this transition period. Additional details about these changes can be found in Appendix C.

Table 6. Astoria District Terrestrial Anchors

Name	Total Acres
Buster	3,942
Plympton	3,540
Sweethome	3,671
All Terrestrial Anchors	11,153

Forest Structure

The foundation of the current Forest Management Plan is to create a diverse set of forest conditions over time and across the landscape. These forest conditions are described as stand structure types described below.

- **Regeneration (REG):** This stand type occurs when a disturbance such as timber harvest, fire, or wind has killed or removed most or all of the larger

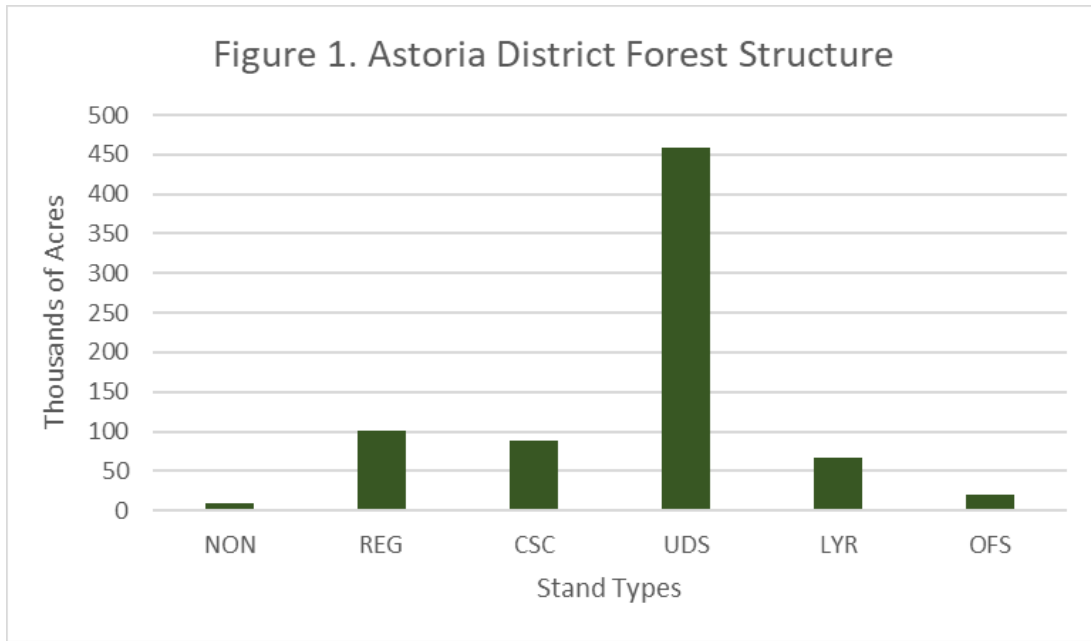
- trees, or when brush fields are cleared for planting
- Closed Single Canopy (CSC): This stand type occurs when new trees, shrubs, and herbs no longer appear in the stand, and some existing ones begin to die from shading and competition, in a process called stem exclusion.
- Understory (UDS): This stand type occurs after the stem exclusion process has created small openings in the canopy, when enough light and nutrients become available to allow herbs, shrubs, and new trees to grow again in the understory.
- Layered (LYR): This stand type occurs as the process of understory reinstitution progresses where openings in the canopy persists. Shrub and herb communities are more diverse and vigorous, and two or more distinct layers of tree canopy appear.
- Older Forest Structure (OFS): This stand type occurs when a forest stand attains structural characteristics such as numerous large trees, multi-layered canopy, substantial number of large down logs, and large snags.

Current Forest Structure

The current stand condition is displayed in the graphs that follow, and on a map in the Map Section. Figure 1 shows the current stand structure and acreage, using the structure-based management definitions for structure types. In order to determine the current condition of the stand structure array on the district, Stand Level Inventory was used to identify stand characteristics such as diameter, heights, trees per acre, density, snags, downed wood, and understory vegetation to determine stand structures.

Currently, 75 percent of the stands on the Astoria district have been inventoried. Information for unmeasured stands is generated by imputation. Imputation uses specific information from a single measured stand to represent similar unmeasured stands.

All silvicultural prescriptions will be based on actual field reconnaissance during pre-operational analysis and planning, in conjunction with Stand Level Inventory data.



Figures 1 & 2. Based on 2021 SLI data.

Note: Non-Forest (NON) lands are those areas, greater than 5 acres that are maintained in a permanently non forest condition.

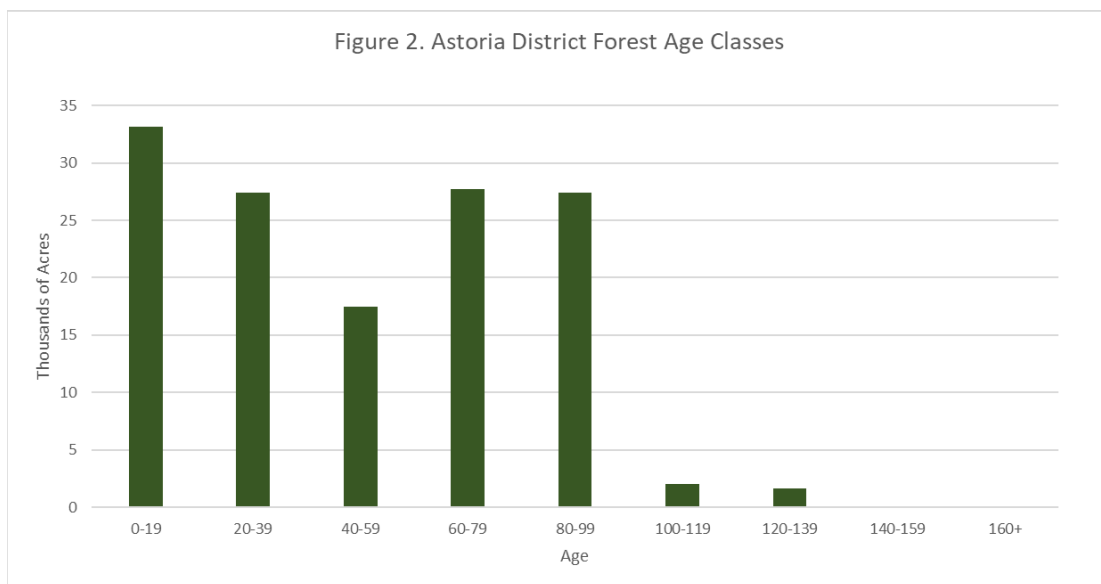


Table 7. Management Basin by Acres and Current Stand Condition

Management Basin	ACRES	NON	REG	CSC	UDS	LYR	OFS
Astoria	4,258	289	1,715	408	1,196	599	50
Beneke	9,936	8	2,646	1,538	4,649	872	223
Buster	18,832	24	3,653	1,891	9,477	3,195	592
Crawford	4,266	-	189	11	2,545	725	796

Management Basin	ACRES	NON	REG	CSC	UDS	LYR	OFS
Davis	7,049	123	425	1,363	3,517	1,620	-
Fishhawk	5,107	-	1,131	599	2,866	379	132
Gnat	9,997	158	1,962	1,584	3,807	2,147	339
Hamilton	6,850	25	1,521	541	3,166	1,432	165
Klaskanine	6,761	28	1,513	1,134	3,790	271	25
Louisignot	4,543	-	1,095	556	2,696	181	15
North Fork	8,272	58	1,107	686	5,158	889	373
Northrup	7,191	51	1,961	819	3,509	508	343
Plympton	10,467	125	654	1,912	6,168	1,480	128
Quartz	8,595	29	1,960	1,064	3,948	1,593	-
Sager	10,430	-	1,691	490	6,799	720	730
Scattered	2,939	501	897	284	1,187	-	69
Sweethome	11,363	216	2,799	306	5,401	1,816	827
District Total	136,855*	1,637	26,919	15,186	69,879	18,428	4,806

*Acreage's are not exact due to rounding errors.

Landscape Design Overview

The Forest Management Plan establishes targets for how much of the forest landscape will be managed to create each of the five structure classes. Expressed as percentage of the landscape, the targets describe a long-range desired future condition, with upper and lower limits (Table 8).

Table 8. Desired future condition (targets) for the proportion of stand structure types across the landscape on each District

Stand Type	Range
REG	15-25%
CSC	5-15%
UDS	30-40%
LYR	15-25%
OFS	15-25%

Together, layered and older forest structure are considered complex stand structures and are designated in a functional arrangement across the landscape resulting in a “mapped landscape design” or desired future condition complex. A desired future condition map is in the Map Section. While desired future condition complex is mapped, targets for regeneration, closed single canopy and understory stands are not mapped, but rather are expressed as a desired range that accounts for changes across the landscape from management during the duration of the Implementation Plan.

The district intends to achieve the desired future condition of 30 percent complex stands on the district by designating areas for older forest structure and layered stand structures across the landscape, ensuring a variety of forest patch sizes and dispersal habitat for wildlife. It is important to note that the mapped desired future condition complex does not represent the current amount of complex forest structure on the landscape. It represents the long-term target and location that will be achieved through active management, which is estimated to take 50-70 years to achieve.

As part of this Implementation Plan revision, adjustments have been made to the landscape design to align with the Habitat Conservation Areas. This landscape design process was a collaborative effort between the district staff, and ODF and ODFW biologists. These updates adhered to criteria outlined below and will remain in place through this transition period. Additional details about these changes can be found in Appendix D.

These landscape design updates aligned the desired future condition designations with the Habitat Conservation Areas while giving consideration to the following:

- Stands within updated Terrestrial Anchors locations inside the Habitat Conservation Areas;
- Stands with currently designated Northern Spotted Owl cores areas or within the 0.7 mile circle and designated marbled murrelet management areas inside the Habitat Conservation Areas;
- Existing layered and older forest structure stands inside Habitat Conservation Areas;
- Older stands inside Habitat Conservation Areas while considering:
 - Stands that cover one or more conservation values and/or harvest constraints such as scenic river corridors, inoperable areas, etc;
 - Stands that maintain or improve significant blocks of desired future condition within the Habitat Conservation Areas to support connectivity, configuration and other patch dynamics that maintain and promote landscape function. This included individual younger stands inside the desired future condition configuration to maintain a contiguous block.

The contribution that each selected stand provided to the overall distribution of habitats, and to patch sizes, interior habitat, and connectivity was considered, as well as known or suspected potential to harbor Species of Concern. Identification and protection of key habitat areas (known occupied, suitable, or important for larger landscape connectivity) for Species of Concern will help support species persistence and allow for colonization of new habitat as it develops over the longer term. This landscape design, along with the Habitat Conservation Areas, is a foundational strategy for providing habitat to a diversity of wildlife species including Species of Concern. In addition to the development of complex structure, corridors of the more complex stand structure types will be provided along

streams. These corridors can provide some connectivity between the complex stands within basins, and among adjacent federal lands where available.

Table 9. Mapped Desired Future Condition Complex (Targets) by Management Basin

Management Basin	Total Basin Acres	LYR	OFS
Astoria	4,258	0%	0%
Beneke	9,952	5%	24%
Buster	18,811	17%	23%
Crawford	4,277	4%	24%
Davis	7,049	2%	5%
Fishhawk	5,106	10%	5%
Gnat	9,997	2%	3%
Hamilton	6,850	9%	31%
Klaskanine	6,761	15%	10%
Lousignot	4,543	0%	0%
North fork	8,273	9%	14%
Northrup	7,191	17%	14%
Plympton	10,467	36%	22%
Quartz	8,595	32%	8%
Sager	10,423	3%	11%
Scattered	2,939	23%	6%
Sweethome	11,366	42%	24%
District Total	136,855*	15%	15%

*Acreage's are not exact due to GIS rounding errors.

The landscape design map represents the current vision of where complex structures will be developed over time under the current Forest Management Plan and can be seen in the Desired Future Condition Map in the Map Section. The district will use this map in the planning of harvest operations and the designing of silvicultural prescriptions. Through the course of implementation, however, refinements to the landscape design map are likely to occur due to stand conditions, harvest efficiency and operability concerns, or new information.

Changes to the landscape design will be fully described in an Annual Operations Plan. The landscape design map will be fully reviewed with any major revision of the district IP.

Forest Land Management Classification System

The Forest Land Management Classification System is a method of describing the management emphasis of parcels of state forest land and has been implemented in accordance with Oregon Administrative Rule 629-035-0055. The management emphasis identifies the extent to which a parcel of land can be managed for a variety of forest resources. It also identifies when a particular forest resource may need a more focused approach in its management, or possibly an exclusive priority in its management. Below are tables summarizing the district's Forest Land Management Classifications.

The framework of the Forest Land Management Classification System places all state forest land within one of four land management classifications. The classifications are: (1) General Stewardship, (2) Focused Stewardship, (3) Special Use Areas, (4) High Value Conservation Areas. Subclasses are assigned for the specific forest resources that require a Focused Stewardship, Special Use Classification, or High Value Conservation Area Classification.

The definition of land management classifications as defined by Oregon Administrative Rule are:

On General Stewardship lands, all forest resources are actively managed using integrated management strategies, techniques, and practices to meet forest management planning goals. Strategies, techniques, and practices that are used may vary spatially and temporally.

On Focused Stewardship lands, integrated management practices are performed in a manner that is intended to accomplish forest management planning goals, and are compatible over time and across the landscape when actively managed, but for which a forest management plan, habitat conservation plan, or other legal requirement identifies a requirement for one or more of the following for a specific resource: supplemental planning, before conducting management practices, that helps to achieve identified goals for the specific resource; modified management practices that help achieve the identified goals for the specific resource; or, compliance with legal or contractual requirements above those required on lands classified as General Stewardship.

On lands classified as Special Use, a forest management plan, or other legal requirement identifies one or more of the following: a legal or contractual constraint dominates the management of the lands and precludes the integrated management of all forest resources; lands are committed to a specific use and management activities are limited to those that are compatible with the specific use.

On lands classified as High Value Conservation Areas, a forest management plan, habitat conservation plan, or other legal requirement identifies areas in the landscape that need to be appropriately managed in order to maintain, enhance, or restore important conservation values and one or more of the following: a legal or contractual constraint dominates the management of the lands and directs the management of forest resources; lands are committed to a specific conservation value and management activities are limited to those that are compatible with achieving goals for the specific conservation value.

Forest Land Management Classifications

Tables 10 and 11 below reflect the district's land management classifications. Table 10 shows the classified acres in each of the four management classes. Table 11 shows the number of subclass acres located in the Focused Stewardship Areas, Special Use Areas, and High Value Conservations Areas. Both tables include overlapping acres.

Table 10. Astoria District Acres, by Stewardship Class and Fund*

Classification	Board of Forestry	Common School	Total Acres
Focused Stewardship	97,019	2,172	99,191
Special Use	2,900	173	3,089
High Value Conservation Area	26,903	301	27,204
General Stewardship	45,853	272	46,126

*Acres in Table 10 and Table 11 include overlapping classifications.

Table 11. Forest Land Management Classifications for Astoria District - Stewardship and Subclasses (Acres)

	Focused Stewardship	Special Use	High Value Conservation Area
Administrative Sites	0	85	0
Agriculture, Grazing	0	12	0
Aquatic & Riparian	47,641	0	13,815
Cultural Resource	8	11	0
Deeds	0	0	0
Domestic Water Use	100	0	0
Easements	0	0	0
Energy & Minerals	0	242	0
Operationally Limited	0	2,196	0
Plants	0	0	55
Recreation	1,194	72	0
Research/Monitoring	224	91	0

	Focused Stewardship	Special Use	High Value Conservation Area
Transmission Unique, Threatened or Endangered Plants	0	245	0
Visual	9,189	136	55
Wildlife Habitat	40,835	0	0
			13,334

Integrated Forest Management Activities

The Astoria District forests are actively managed to provide a mixture of environmental, economic, and social benefits. The following sections describe the general forest operations, activities and projects that will provide a balance of these benefits as required by Oregon Administrative Rule (OAR 629-035-0020) and will honor the current planning process and commitments made to the Habitat Conservation Plan during this transition period.

Timber Harvest Operations

Management Activities

Different types of management activities will be used to implement the Forest Management Plan and draft Habitat Conservation Plan strategies. Multiple factors apply to selecting stands for management and prescribing silvicultural prescriptions and their relative importance may change from year to year. Additional factors that affect these annual decisions include the overall objectives identified in this Implementation Plan, the Annual Harvest Objective, recent harvest activity in the area, results of threatened and endangered species surveys, condition of the transportation system, current market conditions, division revenue forecasts.

Described below are the different types of management tools that will be used during this Implementation Plan as needed and where appropriate. The specific operations and management activities necessary to carry out this Implementation Plan will be described in the Annual Operations Plans starting in fiscal year 2024.

Partial Cut Harvests (Thinning)

Past management experience found that when timed correctly most stands respond well to thinning. Partial cutting improves forest health by increasing stand vigor and lowering susceptibility to damage from insects, disease, and windthrow, capture natural competition mortality, etc. Partial cutting also produces timber, yields revenue, and enhances scenic and wildlife resources.

Partial cuts in areas not planned to be developed into complex forest conditions will have a silvicultural thinning prescription that reduces stocking enough to increase or maintain individual tree growth. Trees are left evenly-spaced over the stand. The goal is to produce high quality, high volume stands at final harvest.

In areas planned to be developed into complex forests, thinning prescriptions will be utilized that are intended to increase or maintain individual tree growth and promote complex forest conditions. Reducing the stocking will encourage larger canopies, diameters, and limbs on the residual trees. In addition, more sunlight will reach the forest floor, which will enhance understory development. These types of harvest prescriptions will be developed in conjunction with ODF biologists with the goal of creating better quality habitat in the future.

Regeneration Harvests (Clearcuts and Retention Cuts)

Regeneration harvest removes most trees, but leaves specified numbers of green trees, snags, and down wood to provide structure (habitat) in the new stand. These types of harvest will pre-dominantly be focused in stands that are located outside of the mapped landscape design of desired future condition complex and the draft Habitat Conservation Areas.

Some stands that are alder or have forest health issues may be considered for regeneration harvest inside of the mapped landscape design of desired future condition complex and Habitat Conservation Areas. These types of harvest prescriptions will be developed in conjunction with ODF biologists with the goal of improving habitat quality overtime. In these cases, the result will be to create a new conifer stand of vigorously growing trees while maintaining many of the structural components of the previous stand. These structural components include remnant trees, live green trees, snags, and downed wood.

Overview of Structural Components

The Forest Management Plan, draft Habitat Conservation Plan and related strategies, describe retention requirements of key structural components such as snags, green trees, and downed wood. The techniques used to develop snags and downed wood will vary according to tree size, age, species, and type of management activity.

In first entry commercial thinnings (generally between ages 25 and 40), no prescriptions will be used to develop snags and downed wood, as trees this size do not make long-lasting snags or downed wood. Some of the trees left in the thinning will naturally become snags, due to top breakage. This would also be the case in younger stands harvested early because of Swiss needle cast infections, storm damage, hardwood mix, etc. In older partial cuts, if pre-harvest stand examinations do not indicate enough snags, then some trees may be topped or girdled during the operation to become snags. Harvest prescriptions may be modified to provide contributions to landscape level goals for downed wood.

In clearcuts, to obtain downed wood and snag objectives pre-harvest estimates and harvest prescriptions must be used to assure these levels are attained. If

snags or downed wood are found to be deficient in an area, additional leave trees may be retained with the assumption that due to natural causes a certain percentage of these will become snags and/or downed wood. In hardwood stands, it is often difficult to find enough large downed wood and snags after the operation. Therefore, these structural elements must often come from conifer trees that are present in the stand.

Planned Annual Harvest Objectives

This section describes the management activities that will be conducted during the duration of the Implementation Plan period. All management activities will be designed consistent with Forest Management Plan strategies, draft Habitat Conservation Plan objectives, and Coho Lawsuit Settlement Agreement (2023).

The Annual Harvest Objective identifies the sustainable and predictable timber volume (forest products) to be offered for sale from the district as a yearly average for the Implementation Plan period. The Annual Harvest Objective was determined through the 2023 district harvest modeling analysis described in Appendix A and will continue to be used due to the short-term timeframe of this Implementation Plan. This analysis identified a range of sustainable volume that can be produced to meet the goals of the Northwest Oregon State Forest Management Plan and draft Habitat Conservation Plan as applied through the Implementation Plan. The upper end of this range will be used to establish the Annual Harvest Objective of 52 MMBF. This will minimize impacts to counties and local communities while allowing for flexibility in sale planning and to incorporate additional harvest within the Habitat Conservation Areas where possible.

The Annual Harvest Objective is the average target volume that is planned to be prepared for sale each year of this Implementation plan. The Annual Harvest Objectives. This volume objective will be implemented through the harvest operations described in the district's Annual Operations Plan which identifies the planned quarter that a timber sale contract is prepared and then is auctioned in the following quarter. Timber sale contracts generally allow for the harvest of a timber sale to occur any time within a three-year period after a timber sale is sold. This gives the purchasers and operators flexibility to schedule work, adjust for market fluctuations, complete project work, as well as adjust for weather and/or other unforeseen circumstances. Actual volume that is harvested in any given year is the result of harvesting sales in different phases of timber sale contracts that were planned within multiple Annual Operation Plans.

The goal is to be close to the average of the Annual Harvest Objective over the expected duration for the Implementation Plan. Under normal circumstances, the volume proposed in an Annual Operations Plan will be near the target. However, some events may result in an Annual Operations Plan volume that is higher or lower than the Annual Harvest Objective target. These events may consist of, but are not limited to storm damage, fire, insect and/or disease outbreaks, prepared timber cruise results versus Annual Operations Plan volume estimates, timber market conditions or other significant events. For example, catastrophic events

may lead to emergency salvage operations that result in harvesting above the Annual Harvest Objective, or market conditions preclude meeting Annual Harvest Objective targets. The Annual Operations Plan will describe how the volume relates to the Annual Harvest Objective volume identified in the Implementation Plan and will also track averages across planning years.

Harvests that occur to meet the Annual Harvest Objective target may move some stand types to other stand types during this Implementation Plan period. Clearcut and retention cut harvest would move stands from their current stand condition into the Regeneration stand type while partial cutting may maintain a stand's current stand condition or could provide improved growing conditions to allow for increased stand diversity over time to move into another more complex stand type. Due to the short duration of this Implementation Plan, impacts to the amounts of different stand types will be relatively minor and will be described in the Annual Operations Plan.

Young Stand Management

Reforestation

Reforestation promptly follows all regeneration harvests and patch-cut harvests as per the Oregon Forest Practice Rules. ODF plants native tree species that are grown from seed that is considered to be suited to future conditions. This seed is produced from traditional crossbreeding of trees from a variety of seed zones to improve resiliency emphasizing beneficial traits such as desirable growth characteristics, disease tolerance, and adaptability to changing climate conditions.. Individual reforestation strategies are developed for harvest units. These strategies take into consideration elevation, aspect, disease, desired future stand conditions, and anticipated drier, hotter future conditions resulting from climate change. These strategies include site preparation, species, stock type and tree spacing tailored to each unit. A variety of species may be planted during reforestation, with Douglas-fir being the primary species. Western hemlock, Sitka spruce, red alder, and western redcedar will also be planted if the site is appropriate for those species. In areas where pathogens affecting Douglas-fir are present, resistant species such as red alder or western redcedar may be planted in higher percentages. Tree planting, site preparation, vegetation management, and tree protection activities are important for successful stand establishment. Site-specific prescriptions may include, but are not limited to slash piling, prescribed burning, herbicide treatments, manual release, and tubing (of seedlings to protect them from animal damage).

Pre-commercial Thinning

Pre-commercial thinning is an important density management practice in young, dense stands. Pre-commercial thinning generally occurs in stands between 13 and 17 years old and removes non-merchantable small or defective trees, in order to

provide more water, light, and nutrients to increase the growth of the healthy residual trees. These treatments also provide an opportunity to select trees for stand health and resiliency. In addition, pre-commercial thinning delays the canopy from closing, thus preserving the growth of herbaceous vegetation to maintain plant species diversity and forage opportunities for wildlife and to contribute to species diversity through density management tree selection.

Forest Road Management

Overview

The district's total road system consists of mainlines, collectors and spurs: in total 1,055 miles of mostly single-lane roads with turnouts. Many of the district's main roads (collectors and mainlines) were originally built in the 1940s and 1950s to standards that are not the same as those identified in the *ODF Forest Roads Manual* (September 2006). However, most of these roads have been upgraded or vacated and now meet the more recent standards of improved drainage structures, rock surfacing, width, and alignment.

Fish passable structures have been installed on nearly all streams that have been classified as fish streams. There are a few streams in the upper reaches of drainage basins where structures may need to be replaced. There are still a few roads that are a legacy from those earlier decades and need improvement, access restriction or vacating.

Table 12. Astoria District Surfaced Road System

Road Classification	Miles
Mainline	42
Collector	253
Spur	760
Total Miles	1,055

Not all surfaced roads are suitable for all-weather haul. Surfaced roads not suitable for all-weather haul will be improved as needed for timber sale access.

Hydrological connectivity surveys are performed on haul routes during sale layout. The District prioritizes road improvement projects that reduce hydrologic connectivity and culvert replacements that are barriers to fish migration on active or planned haul routes and sites of opportunity near active or planned haul routes. Road maintenance investments are made to support forest operations, protect existing road infrastructure and water quality, and provide for safety improvements. The District also closely monitors road conditions on active operations and performs additional patrols and assessments during and after inclement weather events.

Potential Road Activities

Roads will be constructed and maintained as necessary to protect water quality and the road system asset value. Road maintenance activities will follow the maintenance guidance in Chapter 7 of the ODF *Forest Roads Manual* (September 2006) and the Oregon Forest Practices rules. Road maintenance, like road construction and improvement, is primarily accomplished under timber sale contracts, work order contracts or with district equipment and staff.

Road construction and improvement will be primarily achieved through project work connected with timber sales or through work order contracts. The majority of roads to be constructed will be single lane spur roads that are within or access timber sale areas. Collector roads may be built to connect sale areas to the mainline system, and in most cases, will access other future timber sales. Many of these same roads will be used for numerous management activities over the next several decades.

Following timber harvest, roads are evaluated for their public access benefits and costs. Some roads are closed and vacated to reduce the maintenance costs and to minimize impacts to the environment. The Department retains the option of gating roads for vandalism concerns, neighbor concerns, excessive road damage from public use or for travel management areas in conjunction with the Oregon Department of Fish and Wildlife and other agencies or organizations. The public may still access these areas on foot, bicycle or horseback.

Recreation, Education, and Interpretation Management

The Recreation, Education, and Interpretation program manages and maintains over seventy-five recreation facilities, including campgrounds, picnic areas, trailheads, boat launches, river access areas, target shooting lanes, interpretive sites, and viewpoints. The program also manages close to 500 miles of off-highway vehicle trails and just over 145 miles of non-motorized trails across five districts (Astoria, Forest Grove, North Cascade, Tillamook, and West Oregon).

Recreation, Education, and Interpretation opportunities on state forests create pathways and opportunities for visitors to explore, learn about, enjoy, and connect with Oregon's state forests.

These opportunities and the connections they create foster stewardship and partnership, support community health and wellbeing, and promote understanding of the value of the environmental, economic, and social benefits that flow from management of state forests, including clean drinking water, healthy resilient forests for recreation opportunities and wildlife, jobs and revenue for local communities, and forest products we use daily.

Through recreation opportunities, Recreation, Education, and Interpretation program services, and community engagement, the program introduces people to

Oregon Department of Forestry. This work highlights the program's role in achieving the agency's overall mission: *"To serve the people of Oregon by protecting, managing, and promoting stewardship of Oregon's forests to enhance environmental, economic, and community sustainability."*

Recreation Resources

Existing forest recreation opportunities on the Astoria District are diverse and include angling, foraging, hiking, horseback riding, off-highway vehicle use, mountain biking, and target shooting. There are additional opportunities to learn about the forest and active forest management through interpretive and educational programs. These activities will continue to be integrated into the overall planning and forest management activities.

Facilities (Campgrounds, Viewpoints, Trailheads, etc.)

Existing facilities include campgrounds, Off-Highway Vehicle staging areas, designated dispersed campsites, interpretive sites, and trailheads.

Existing developed facilities on the Astoria District:

- 5 Campgrounds
- 1 Off-Highway Vehicle Staging and Day use Area
- 6 designated dispersed campsites
- 2 interpretive sites
- 7 Trailheads

In addition to the existing facilities dispersed camping continues to be popular and tends to be concentrated along rivers and streams. Fishing and hunting are also popular throughout the forest. In general, the district's recreation use is seasonal with the most activity occurring in the late spring, summer, and fall, but more use is occurring district-wide and all year round.

Motorized Trails

Motorized use includes motorcycles, quads, side-by-sides, and four-wheel drive vehicles. Trails may be designated for all three activities or for specific types of motorized vehicles. There are approximately 30 miles of motorized trails in the Astoria District.

Non-Motorized Trails

Non-Motorized use includes hiking, mountain biking and equestrian uses. Trails may be designated for all three activities or for specific types of non-motorized activities. There are approximately 21 miles of non-motorized trails in the Astoria District.

Planned Recreation Activities

Over the course of this implementation plan the Recreation, Education, and Interpretation program will focus on conducting an inventory and assessment of existing opportunities, development of best management practices, updating

recreation facility design standards, and developing recreation management and trail system plans in collaboration with the use community consistent with the goals and strategies of the *Recreation, Education, and Interpretation Program Strategic Plan*. These plans will inform management, future improvements, development, and distribution of recreation opportunities across the state forests and ultimately lead to more welcoming, accessible, and accommodating recreation opportunities for all visitors.

Recreation Program projects over the course of this implementation plan will focus on maintenance of existing infrastructure, and operations and enhancement (improvement and development) of recreation facilities and trail networks consistent with the goals and strategies of the Recreation, Education, and Interpretation Program Strategic Plan. More specifically, Recreation Annual Operations Plan projects will be prioritized and advanced when the project will:

- Improve public safety and reduce user conflict
- Enhance facility and trail system access for all visitors
- Improve recreation facility and trail system sustainability
- Improve operational efficiency and reduce facility and trail system maintenance need and costs
- Improve trail system connectivity, diversity, and flow
- Address and minimize resource impacts
- Align with the timing of operational activity and reduce the potential for future interactions with timber harvest, reforestation, and roads management operations
- Align recreation program trail and facility infrastructure with future vision

Volunteer Program and Partnerships

Oregon's state forests embody the Oregon Way of shared ownership, resiliency, and compromise. Volunteerism and a sense of individual stewardship of state forests are part of what makes these lands special for many Oregonians. The Recreation, Education, and Interpretation program is committed to maintaining volunteer program efforts and developing partnerships that provide opportunities for all Oregonians to get involved while stewarding state forests.

Focus over this implementation plan will be on updating and expanding Recreation, Education, and Interpretation's Volunteer Stewardship and Partnership Programs. Recreation, Education, and Interpretation program staff will create uniform policies and procedures to guide volunteer program efforts and develop a Community Engagement Plan that will help guide partnership efforts.

Activities associated with the volunteer program include the recruitment, selection, and management of campground hosts, planning and management of trail maintenance, trail development, and special volunteer projects. Updates to the

current volunteer manual, policies, and best management practices will be developed to guide volunteer activity across state forests.

The Recreation program will continue to look for opportunities to develop new partnerships and to enhance existing partnerships that will increase our collective capacity to meet program and project goals and objectives.

Other Integrated Forest Management Activities

Climate Change and Carbon

Climate change and carbon sequestration are generally topics related to higher-level goals and strategies in a Forest Management Plan. While the current Forest Management Plan doesn't address carbon or climate change directly, the main strategies of the Climate Change and Carbon Plan (2021) are being implemented during this transition period through the implementation of the draft Habitat Conservation Plan strategies combined with the current Forest Management Plan requirements and will result in a variety of forest stand conditions that maintain healthy, multi-species, vigorously growing forests, which will contribute to resilient healthy forests into the future.

Under these current plans, large portions of the landscape provide carbon storage and will continue to do so long into the future. Areas that have high carbon storage potential, especially for those that can provide benefits for threatened and endangered species habitat, water quality, and educational and recreation opportunities for Oregonians have been identified. These include areas that have a desired future condition of Layered or Older Forest Structure, draft Habitat Conservation Areas, Riparian Conservation Areas, no harvest wildlife areas, high value conservation areas, other sensitive areas, and forested areas that are inoperable, etc. In addition, existing old growth trees are also protected and are generally scattered individual trees or occasional small, isolated patches. Legacy structures retained (green trees, snags, down wood) within harvest areas will continue to store carbon while the seedlings regenerating around these structures will accumulate carbon. Carbon is also stored in harvested wood products removed during the Annual Operation Plan implementation, as trees are converted to lumber for houses or other various products a percentage of this carbon is stored until it decays or is replaced.

In addition to these strategies, several silvicultural systems and prescriptions that take into consideration climate-informed forest principles and practices are being utilized to adapt the forest for climate change and mitigate the amount of greenhouse gases in the atmosphere. These include but are not limited to: planting multiple tree species, utilizing varied planting spacings and densities, and utilizing thinning, longer rotations, and passive management in areas that align

with the Forest Management Plan and Draft Habitat Conservation Plan goals and objectives.

Forest health strategies are also being addressed to restore areas impacted by insect pests and diseases to productive forests through the removal of susceptible species and use of site appropriate species. For areas impacted by insects and diseases such as Swiss needle cast, site specific reforestation plans are developed for planting and other young stand management treatments. Site specific prescriptions consider target species, aspect, elevation, soil types, Swiss needle cast risk where applicable, *Phellinus weirii* (laminated root rot) presence, required stocking guidelines, natural advanced regeneration, and the desired future condition of the stand. This will provide for a diverse, healthy, productive, and sustainable forest ecosystem over time that will be more resilient to change.

The division is continually assessing additional practices to address climate change and carbon storage in an informed way that aligns with the Forest Management Plan and draft Habitat and Conservation Plan goals and objectives. This includes practices such as methods of maintaining slash post-harvest which will increase soil carbon while supporting reforestation efforts. The division is also conducting research projects around assisted species migration to assess using alternative species and seed from different seed zones to address climate concerns.

Aquatic & Riparian Management

An objective of State Forests' aquatic resources management is to maintain, enhance, and restore aquatic habitat. Strategies are employed during harvest activities and include but are not limited to: leave trees adjacent to streams to protect stream temperature, provide nutrients, protect stream banks, and eventually provide wood to improve fish habitat. This is achieved primarily through riparian buffer strategies specific to the aquatic resource characteristics such as presence of fish, size of stream, and flow duration.

Stream Enhancement Projects

State Forests has been committed to implementing stream enhancement work on ODF-managed lands for more than two decades as a partner in the *Oregon Plan for Salmon and Watersheds* and in partnership with ODFW, local partners, and adjacent land managers. Stream enhancement, fish passage, and ODF's current riparian management area standards are designed to collectively improve processes and function of aquatic ecosystems over time, and ultimately benefit resident and anadromous aquatic-dependent species.

The overarching approach to habitat restoration is described in the Forest Management Plan and is summarized below:

- Eliminate human-induced conditions on the forest that may contribute to aquatic habitat deficiencies, or that may limit the timely recovery of desired aquatic habitat conditions.
- Promote aquatic habitat conditions that will support the short-term survival needs of depressed salmonids, in order to reduce the potential for further declines in these populations.
- Attain properly functioning aquatic habitat conditions in a timely manner.
- Encourage forest conditions that will support the ecological processes necessary to naturally create and maintain complex aquatic habitats on a self-sustaining basis.

When preparing the Annual Operation Plans the district and the staff Aquatics and Riparian Specialist will work together to assess stream enhancement opportunities. Where feasible, the district intends to combine large wood placements and other stream enhancement projects in high priority stream reaches with the timing of an adjacent or nearby timber sale in order to recognize the benefits of onsite equipment, operators, and available trees. Additionally, and when available, specialists work with ODFW and/or watershed councils, access other local prioritization information such as Coho Strategic Action Plans, Rapid Bio-assessments, Watershed Assessments, etc. to inform where to focus efforts.

Model and GIS data will be utilized to develop a first screening and initial prioritization of potential projects for each Annual Operation Plan. Once this initial list has been developed there are still several remaining factors to consider, including but not limited to: stream access, species and size of trees within harvest units, harvest mechanisms (i.e., ground or cable), and stream specific characteristics such as current wood loading amounts, valley configuration, gradient, stream size and power, nearby infrastructure, land ownership upstream/downstream, domestic water sources, etc. This work will be conducted during the Annual Operations Plan process or during sale layout depending on workloads and efficiency.

Land Exchanges and Easements

In order to maintain or improve access to land parcels and potentially consolidate lands the district will continue to pursue land exchange and easement opportunities that are consistent with current Board of Forestry policy to achieve greatest permanent value.

Property Lines and Corners

The establishment and maintenance of property corners and lines will be prioritized and scheduled through the Annual Operations Plans. Survey work may be accomplished through methods such as service contracts with licensed professional land surveyors or cost sharing with adjacent landowners.

Special Forest Products

The Astoria District currently administers a Special Forest Products program which consists of issuing permits to individuals who wish to collect larger quantities of various forest products. There is a fee charged to individuals for a permit, which is based on the type of forest product and quantity. Special Forest Products include: Firewood, mushrooms, salal, moss, and ferns. Additionally, the public has the ability to gather smaller quantities of these forest products, free of charge, for personal use.

Cultural, Archeological, and Historical Resources

It is the policy of the Oregon Department of Forestry, State Forests Division, to preserve and protect archaeological and cultural resources and sites during forest management activities according to state law. In order to protect any potential cultural resources during forest management activities, planned operations areas are screened for the presence of cultural resources. Areas where cultural resources may be present receive further review and avoidance measures where appropriate. Consultation with the State Historic Preservation Office or a qualified archaeologist shall occur if any cultural or archaeological resources are inadvertently discovered on State Forest lands during the course of management activities.

Energy and Mineral Resources

Most of the Clatsop State Forest has been surveyed for the presence of natural gas reserves, and a few wells have been drilled. However, commercial quantities of natural gas or other minerals have not been removed from these state forest lands. If commercial quantities are discovered, they will be available for sale and removal, under strict controls by the Department of Forestry for the protection of forests, soils, water quality, fish, wildlife, and other surface resources.

Hard rock is removed from state forest lands for road surfacing on an ongoing basis. These sites, called rock pits or quarries, are in specific locations, generally less than three acres. They are used for ten or more years before being exhausted of suitable surfacing rock. Most often the hard rock from these sites is crushed to produce surfacing rock of specific size and grade for forest roads. This crushed rock is either applied directly to existing or newly constructed roads, or is stockpiled at a nearby location for future application. When quarry sites are exhausted, they are vacated by providing water drainage, reducing the slope of the quarry walls, and sometimes filling them in with topsoil and reseeding the surface with annual and perennial plants.

The potential for wind energy exists on the District. No sites are proposed at this time.

Map Section

Astoria District: Overview

Astoria District: Current Condition Stand Structure

Astoria District: Desired Future Condition

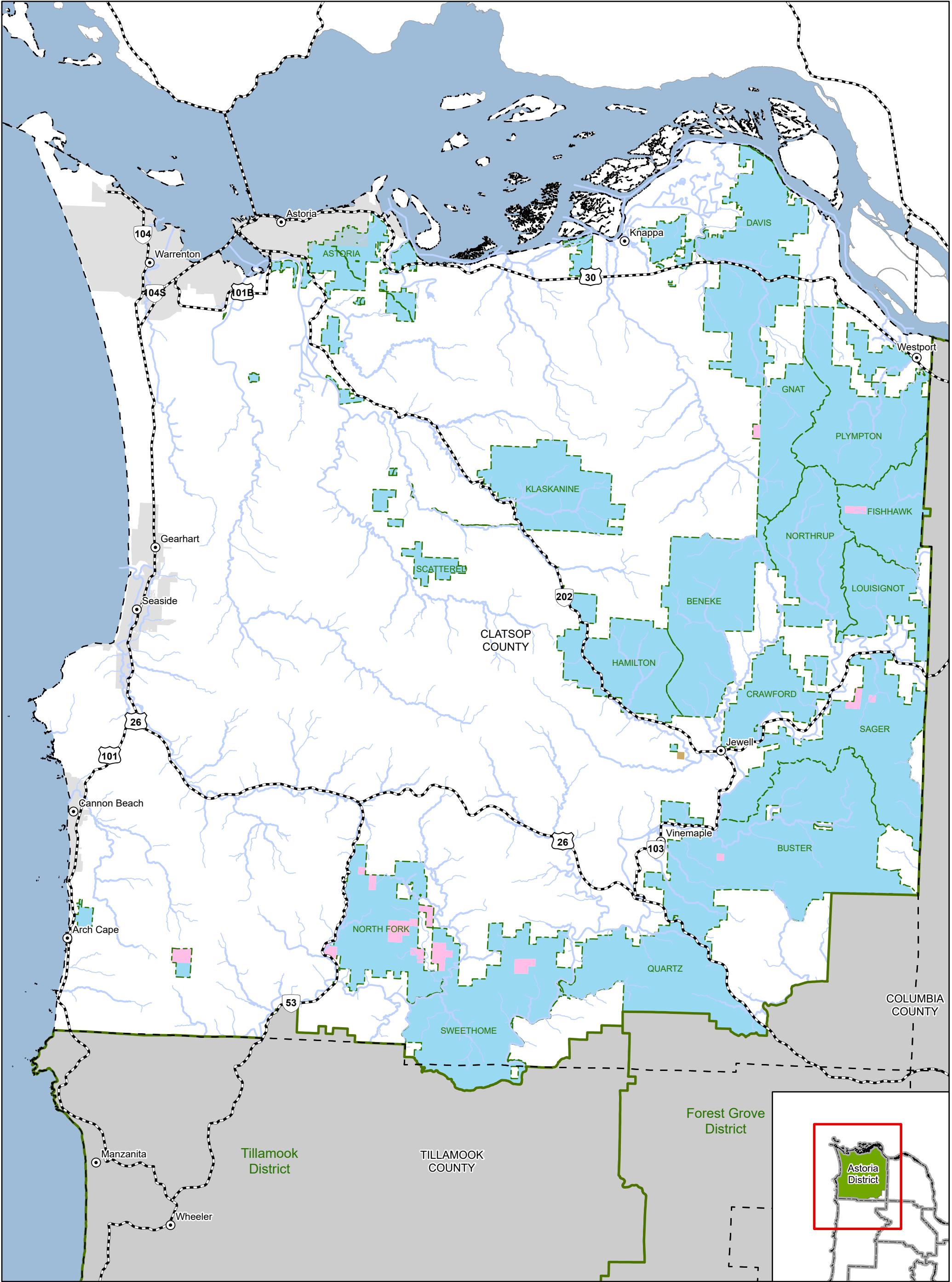
Astoria District: Forest Land Management Classification – Stewardship Classes

Astoria District: Forest Land Management Classification – Biological Subclasses

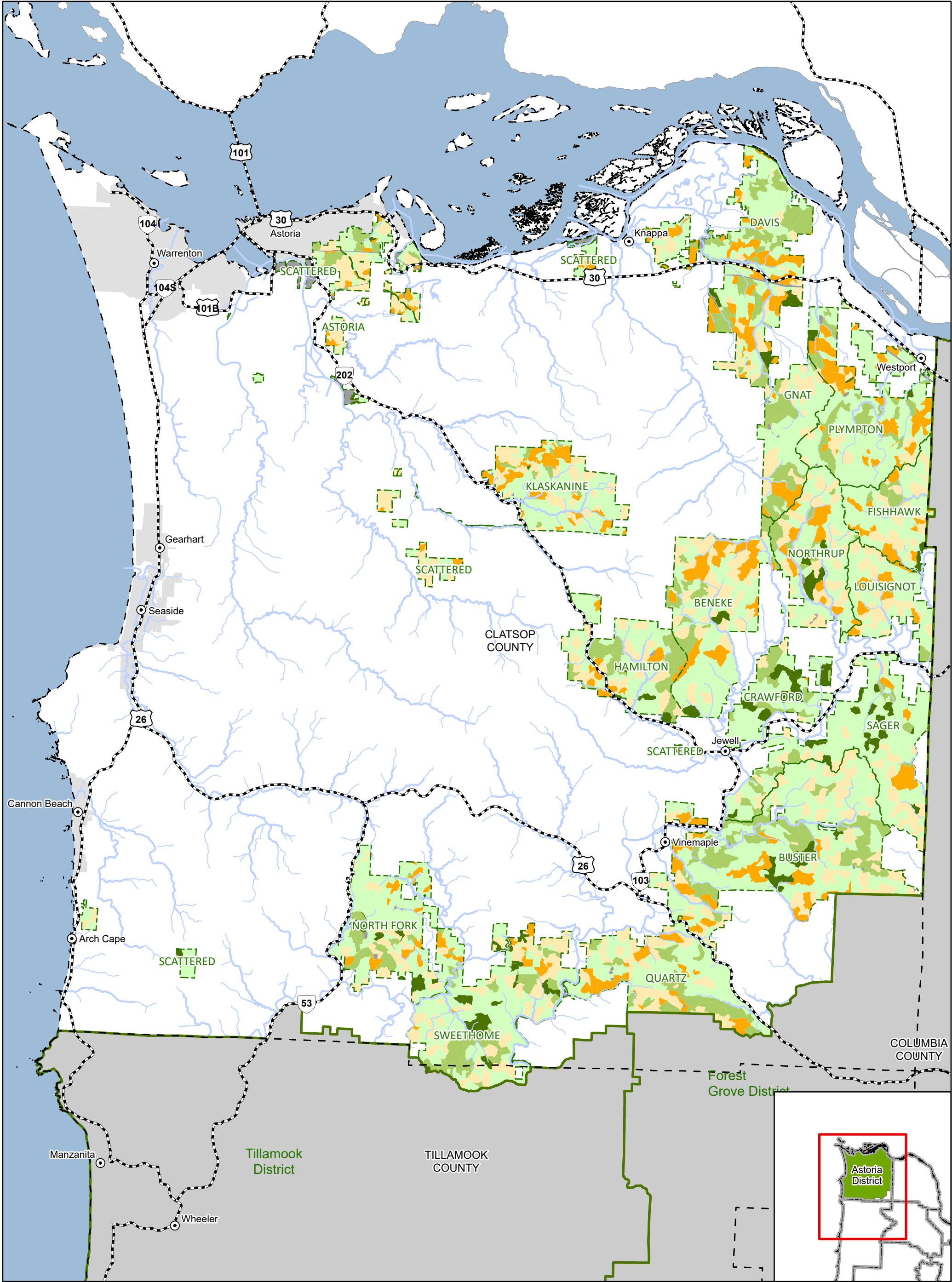
Astoria District: Forest Land Management Classification – Management Subclasses

Astoria District: Forest Land Management Classification – Social Subclasses

Astoria District Overview



Astoria District Current Condition



Current Condition

- Non-Silviculturally Capable
- Regeneration
- Closed Single Canopy
- Understory
- Layered
- Older Forest Structure

- Streams, Large
- Streams, Medium
- Management Basins
- Adjacent Districts

- Counties
- City Limits
- Roads
- Towns

0 2 4 6 Miles

Forest Grove District

Tillamook District

TILLAMOOK COUNTY

COLUMBIA COUNTY

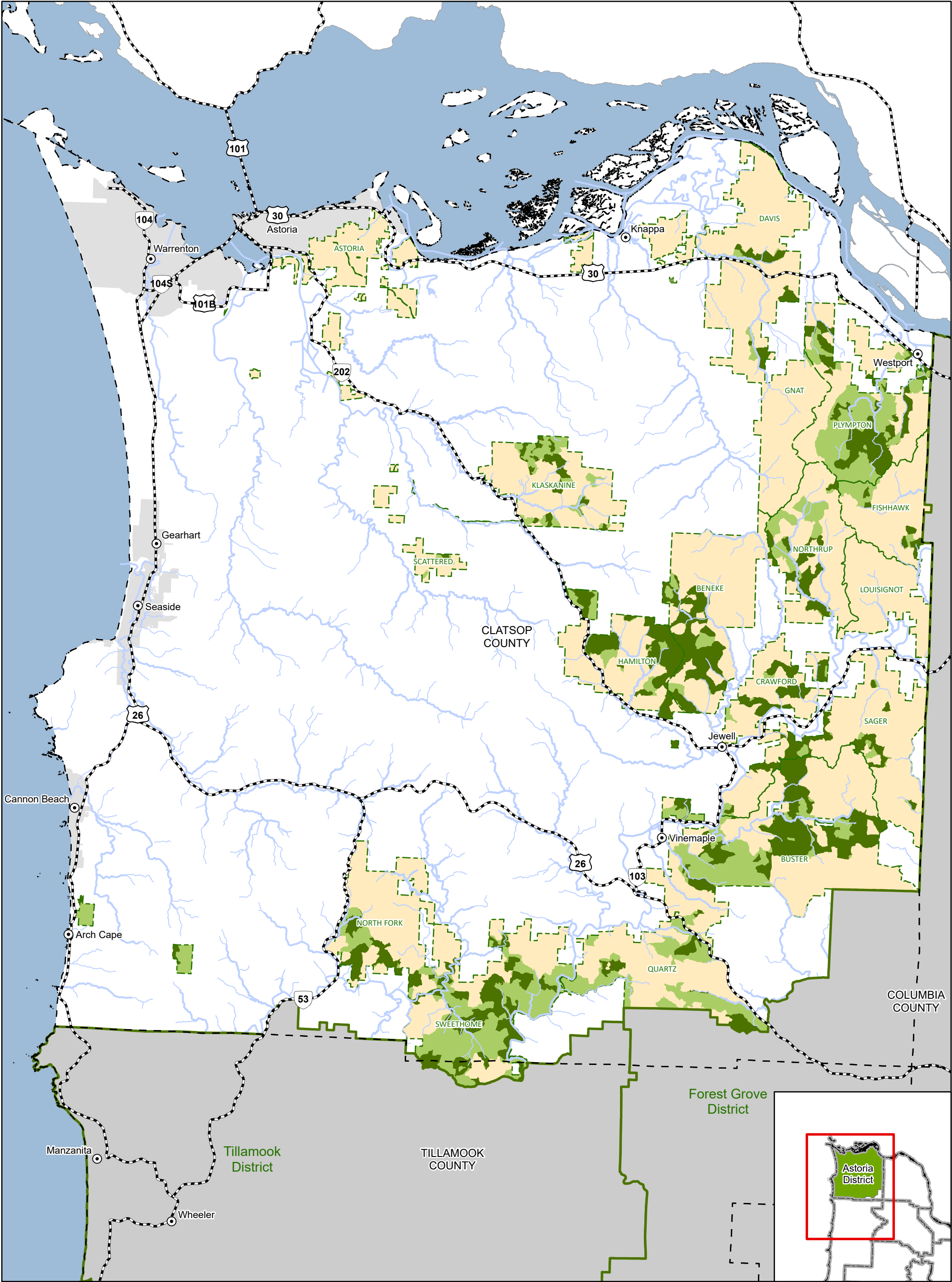
CLATSOP COUNTY

Forest Grove District

Astoria District

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Astoria District Desired Future Condition



- Stand Structure Type
- Layered
 - Older Forest Structure
 - General
 - Streams, Large
 - Streams, Medium
- Management Basins
- Management Basins
 - Adjacent Districts
 - Counties
 - City Limits
 - Roads
 - Towns

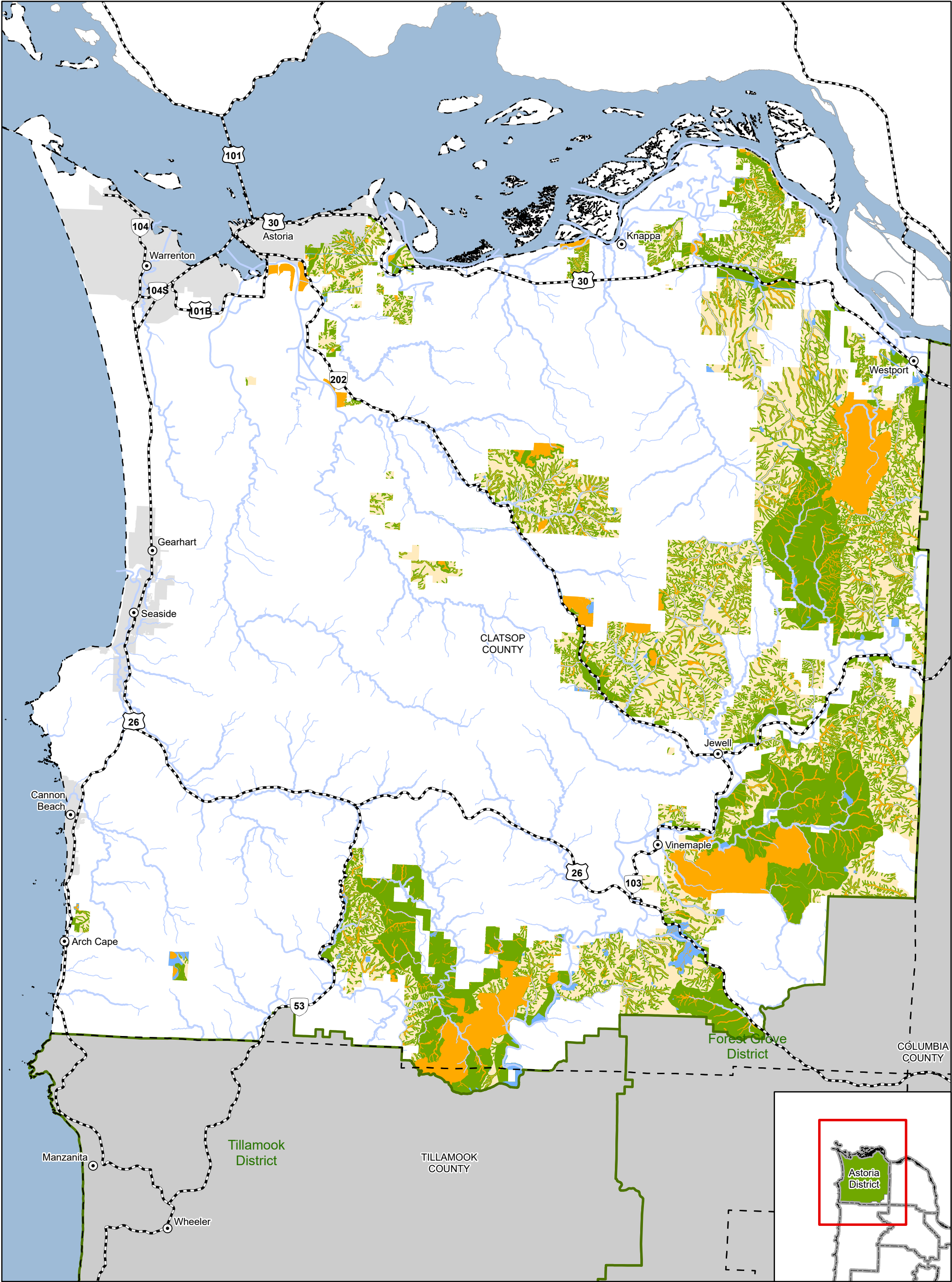


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Astoria District
Forest Land Management Classification
Stewardship Classes

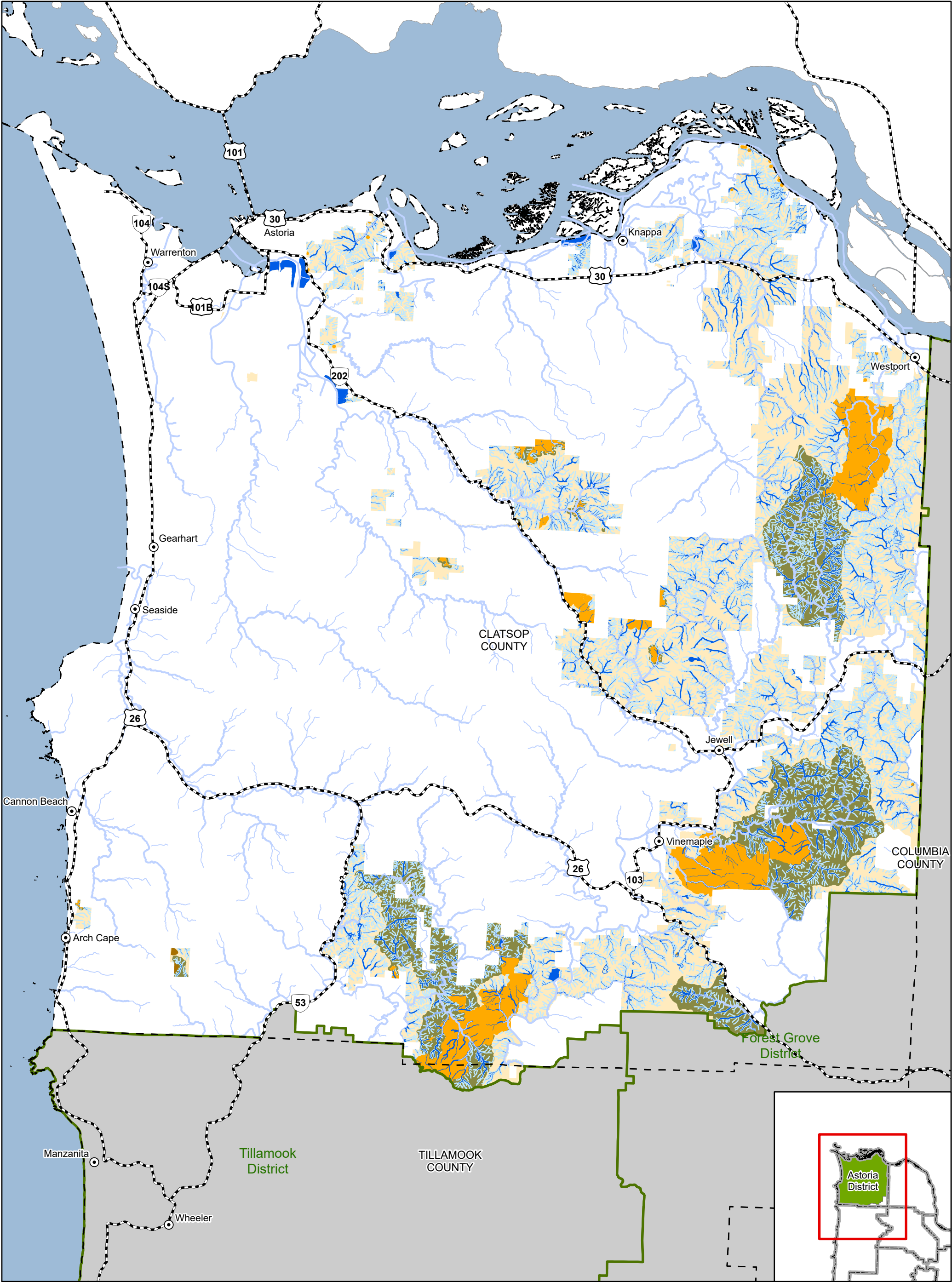


- | | |
|------------------------------|--------------------------|
| Stewardship | ODF Managed Lands |
| High Value Conservation Area | ODF Managed Lands |
| Special Use | Adjacent Districts |
| Focused Stewardship | Counties |
| Streams, Large | City Limits |
| Streams, Medium | Roads |
| | Towns |

0 2 4 6 Miles

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Astoria District
Stewardship Classifications
Biological Subclasses



Stewardship Classifications

HVCA Subclasses

- Aquatic and Riparian Habitat
- Plants
- Wildlife Habitat

Special Subclasses

- Agriculture, Grazing or Wildlife Forage

Focused Subclasses

- Aquatic and Riparian Habitat
- Wildlife Habitat

Streams, Large

Streams, Medium

ODF Managed Lands

Adjacent Districts

Counties

Roads

Towns



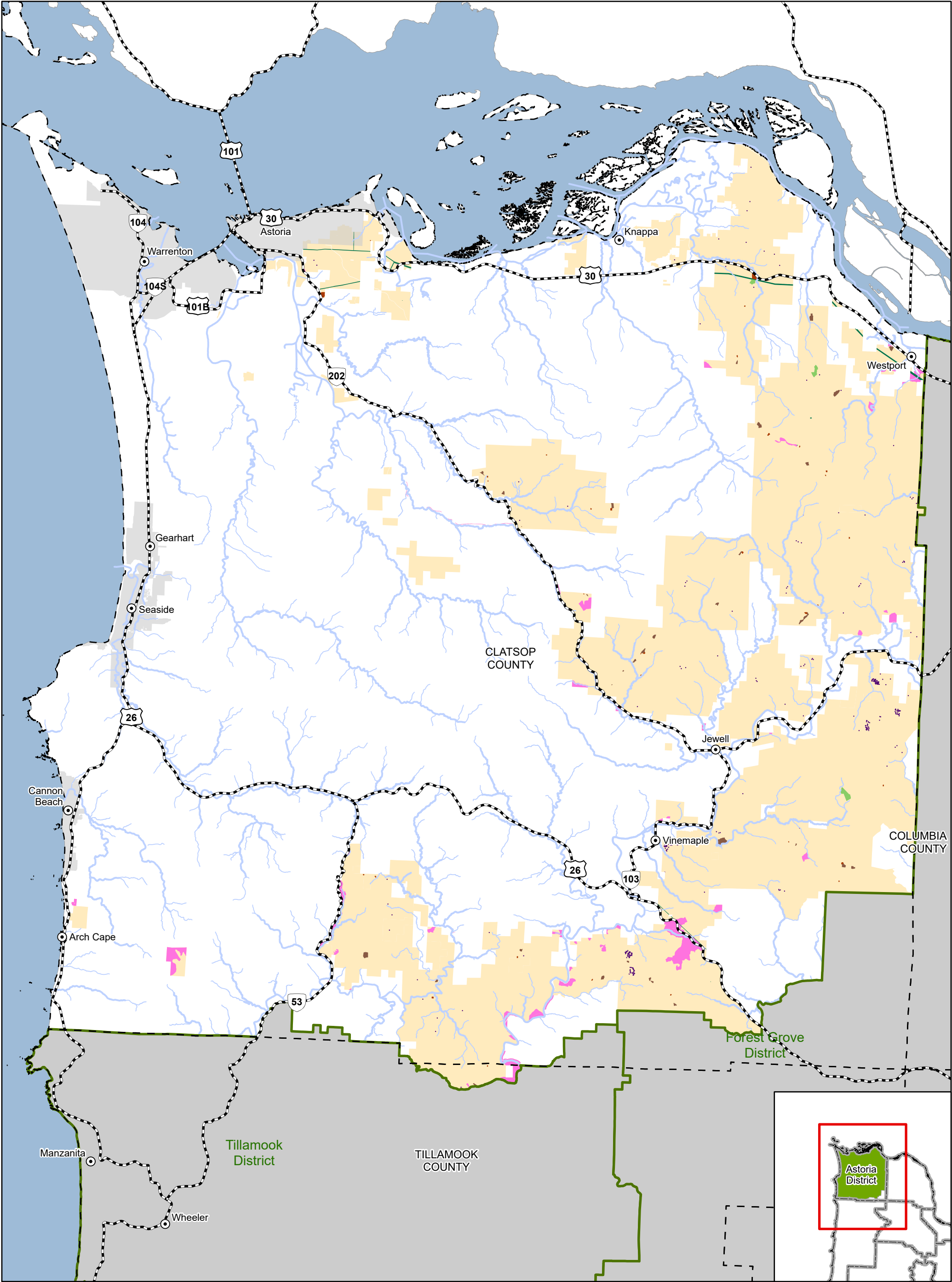
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Astoria District
Stewardship Classifications
Management Subclasses



- Special Subclasses
- Administrative Sites
 - Research/Monitoring
 - Energy and Minerals
 - Transmission
 - Operationally Limited

- Focused Subclasses
- Focused Research/Monitoring
 - Streams, Large
 - Streams, Medium
 - ODF Managed Lands
 - Adjacent Districts

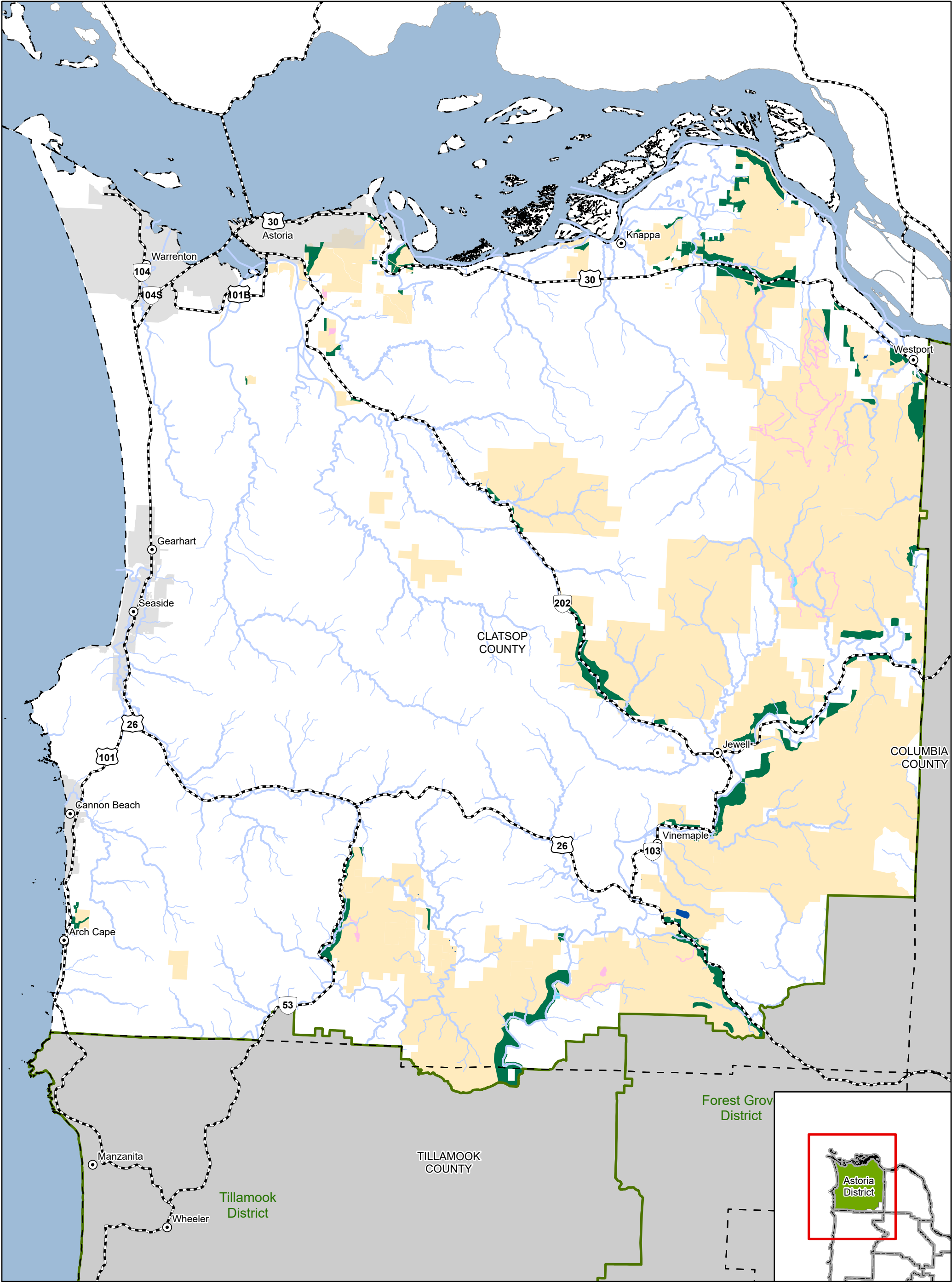
- Counties
- City Limits
 - Roads
 - Towns



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0 2 4 6 Miles

Astoria District
Stewardship Classifications
Social Subclasses



Stewardship Classifications

Special Stewardship

- Recreation
- Visual

Focused Stewardship

- Domestic Water Use
- Visual
- Recreation

- Streams, Large
- Streams, Medium
- ODF Managed Lands
- Adjacent Districts

- Counties
- City Limits
- Roads
- Towns



0 2 4 6 Miles



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Appendix A

Harvest Modeling Analysis

This appendix describes the 2023 Implementation Plan Harvest Modeling Analysis the district used to determine the Annual Harvest Objective resulting from the strategies described in this Implementation Plan, the Northwest Oregon State Forest Management Plan, the draft Habitat Conservation Plan requirements, the Species of Concern strategies, and the other plans, policies or strategies listed in this Implementation Plan.

The analysis is based on the volume, stand structure and wildlife habitat outputs produced utilizing a harvest scheduling model called Patchworks. These outputs were then reviewed and adjusted as necessary using expert opinion from the district. This model uses spatial inputs and a set of rules to find a solution that optimizes multiple goals across a 150-year timeframe. There are three primary inputs to the harvest model: (1) a growth-and-yield model, in this case the Forest Vegetation Simulator, (2) a detailed spatial representation of the landscape, using thousands of polygons in GIS, and (3) a set of rules and weighted goals.

The primary competing goals in the model are (1) timber harvest in the short- and long-term; (2) landscape design in the short-term and complex structure requirement in the long-term and (3) wildlife habitat development in the short- and long-term.

Some of the other rules followed by the model include:

- Ensure sustainability of both long-term timber harvest and inventory on the landscape: Harvest volume is held to even-flow through the entire 150 years and volume of growing stock is not allowed to decline after year 100. Even-flow means that the harvest volume is not allowed to decrease or increase but must remain the same during the 150-year timeframe.
- No regeneration harvest within the mapped landscape design for desired future complex stands for the first five years, then the landscape design is allowed to move around the landscape.
- No regeneration harvest in Terrestrial Anchors for the first five years.
- Regeneration harvest is allowed within the Habitat Conservation Areas to treat Swiss needle cast and alder stands for wildlife habitat improvement as allowed by the draft Habitat Conservation Plan for the first 30 years.
- Thinning of healthy conifer stands within the Habitat Conservation Areas for the first 30 years to improve wildlife habitat as allowed by the draft Habitat Conservation Plan.
- A minimum of 40% estimated northern spotted owl dispersal habitat was maintained outside of Habitat Conservation Areas as required by the draft Habitat Conservation Plan.

- Patches of regen harvest were not allowed to exceed 120 acres in a single five-year model period.

The model suggests a volume output where the long-term integrity of both the desired future condition and the draft Habitat Conservation Plan implementation requirements remain intact at the end of the Implementation Plan timeframe (2-3 years). The Implementation Plan volumes need to accommodate several scenarios during this transition period as ODF works towards getting an approved Habitat Conservation Plan and developing a new Western Oregon Forest Management Plan. These scenarios include:

- Current Forest Management Plan with species of concern protections, take avoidance strategies and Threatened & Endangered species surveys while implementing the draft Habitat Conservation Plan (period 1 only);
- Current Forest Management Plan while implementing the draft Habitat Conservation Plan requirements with an incidental take permit (after period 1);
- Allow for the planning process needed to determine where up to 1,500 acres per year of thinning of healthy conifer stands within the Habitat Conservation Areas will occur across the draft Habitat Conservation Plan permit area.

Table 1. Modeled Harvest Volume Per Year

Total Harvest Volume (MMBF)
61

Harvest models are limited by the model's inputs, and uncertainty in the inputs should be noted. Initial stand measurements are taken from a stand inventory that inherently has uncertainty for inventory, stand age, etc. From that initial inventory, stands are projected using the Forest Vegetation Simulator growth model, which introduces additional uncertainty pertaining to current and future forest conditions. Spatial information is based on current GIS layers where uncertainty occurs from using modeled streams and roads layers and predicted steep slope and inner gorge areas.

The model solution was reviewed by the district to ensure that model rules were being followed across the landscape and that the solution is implementable. The district also reviewed a sub-set of harvest units within the first ten years of the model to evaluate age at harvest, harvest volume, inventory growth rates, and if model rules were being followed at the operational level. The model solution review also looked at impacts to recreation, wildlife, district workload and finances.

There were issues identified within the model solution:

- Volume per acre was too high
- Stream data shows some inconsistencies

- Thinning ranges inside/outside Habitat Conservation Areas were not working correctly within the model

To account for the over optimistic harvest volume per acre, a volume reduction (determined by the district using cut out data during the district model solution review) was applied to the total volume from the model output as shown below.

Table 2. Adjusted Volume Per Year

Unadjusted Total Volume	District Volume reduction based on model solution review		Adjusted Total Volume
	Regen	Thin	
61	19%	37%	47.5

This becomes the base amount of harvest volume per year that may be realized during this Implementation Plan duration. To allow flexibility for sale planning and to incorporate additional harvest within Habitat Conservation Areas when the Incidental Take Permit takes effect, volume for the Implementation Plan duration is being expressed as a range presented below.

Table 3. District Harvest Volume Per Year

Volume Range (MMBF)
48 - 52

Appendix B

Species of Concern Limiting Factors Coarse Evaluation and Additional Strategies

Common Name	Limiting Factors (LF)*	Forest Management Plan Strategies that Protects or Maintains LF or Habitat	Additional Species of Concern Strategies to address LF
Clouded Salamander	Limited range (occurs primarily in Oregon). Loss of large logs.	Landscape Management Concepts 1-3 and Management Strategies 1-4, particularly Landscape Management Strategies (LMS) 3 (retention of snags and downed wood in harvest units)	None at this time
Coastal Tailed Frog	Limited range (Pacific Northwest endemic), Low reproductive rate. Low dispersal ability. Sedimentation & increases in water temperature.	Aquatic and Riparian Management Strategies	None at this time
Columbia Torrent Salamander	Highly sedentary with limited dispersal capability. Sensitive to desiccation and changes in stream flow.	Aquatic and Riparian Management Strategies	None at this time
Cope's Giant Salamander	Limited range in Oregon. Vulnerable to channel dewatering and stream barriers. Sensitive to temperature and sediment.	Aquatic and Riparian Management Strategies	None at this time
Northern Red-legged Frog	Loss of egg-laying habitat. Predation & competition from bullfrogs and invasive fish.	Aquatic and Riparian Management Strategies	None at this time
Western Toad	Loss of breeding habitat, siltation, and recreational impacts.	Protect wetlands, road BMPs reduce siltation	None at this time
Northwestern Pond Turtle	Loss of aquatic & nesting habitats (conversion and invasive species). Road Mortality. Predation.	Aquatic and Riparian Management Strategies	Site Plans for riparian areas at known sites
Western Painted Turtle	Loss of aquatic & nesting habitats (conversion and invasive species). Predation.	Aquatic and Riparian Management Strategies	Site Plans for riparian areas at known sites
Bald Eagle	Loss of large nest trees.	Landscape Management Concepts and Strategies; Aquatic and Riparian Management Strategies	Site Plan/Forest Practices Act Rules
Band-tailed Pigeon	Reduction in quality and number of mineral sites. Large area requirements.	Landscape Management Concepts and Strategies; Aquatic and Riparian Management Strategies	Site Plan/Forest Practices Act Rules

Common Name	Limiting Factors (LF)*	Forest Management Plan Strategies that Protects or Maintains LF or Habitat	Additional Species of Concern Strategies to address LF
Great Blue Heron	Sensitive to disturbance at nesting rookeries.	Landscape Management Concepts and Strategies; Aquatic and Riparian Management Strategies	Site Plan/ Forest Practices Act Rules
Harlequin Duck	Narrow breeding habitat requirements, high breeding site fidelity, low reproductive rates, and delayed reproduction.	Aquatic and Riparian Management Strategies	None at this time
Marbled Murrelet	Reductions in late seral forest; low reproductive output & success. Habitat loss due to severe fire.	Landscape Management Concepts and Strategies; Aquatic and Riparian Management Strategies; State Forests Marbled Murrelet Operational Policy (1.1) and associated Procedures and Guidance	None at this time
Northern Goshawk	Large area requirements. Affected by reductions in amount of late successional and closed canopy forest.	Landscape Management Concepts and Strategies	Site Plan (already in existing SOC policy for other districts)
Northern Spotted Owl	Large home range, reduction in late seral habitat, habitat loss to severe fire, and competition with barred owls.	Landscape Management Concepts and Strategies; State Forests Northern Spotted Owl Operational Policy (1.2) and associated Procedures and Guidance	None at this time
Olive-sided Flycatcher	Relatively large area requirements. Increased predation rates in harvest units or fragmented forest.	Landscape Management Concepts and Strategies	Modified Practice: Structural retention strategies (number and location of green trees and snags) could be modified in known nest stands.
Osprey	Large snags and broken-topped trees in close proximity to water. Sensitive to disturbance at nest sites.	Aquatic and Riparian Management Strategies	Site Plan/Forest Practices Act Rules
Peregrine Falcon	Disturbance at nests.	Landscape Management Concept 2 - Landscape Design (maintain unique habitats and those of species at risk)	Site Plan near active nests.
Purple Martin	Disturbance at nests.	Landscape Management Concept 2 - Landscape Design (maintain unique habitats and those of species at risk)	Site Plan near active nests.
Willow Flycatcher	Declining populations, loss of nesting habitat.	Landscape Management Concepts and Strategies; Aquatic and Riparian Management Strategies	Modified Practice: Consider gap creation, heavy thinning, and intentional development of complex early seral habitat
California Myotis	Reduction of large snags, patchy distribution, low populations.	Landscape Management Concepts 1-3 and Management Strategies 1-4, particularly LMS 3 (retention of snags in harvest units)	None at this time

Common Name	Limiting Factors (LF)*	Forest Management Plan Strategies that Protects or Maintains LF or Habitat	Additional Species of Concern Strategies to address LF
Fringed Myotis	Disturbance at roosts, patchy distribution, reduction in snags.	Landscape Management Concepts 1-3 and Management Strategies 1-4, particularly LMS 3 (retention of snags in harvest units)	None at this time
Hoary Bat	Habitat loss.	Landscape Management Concepts 1-3 and Management Strategies 1-4, particularly LMS 3 (retention of snags in harvest units)	None at this time
Long-legged Myotis	Reduction of late seral conifer, loss of hollow trees and tall, newly dead snags, loss of healthy riparian habitat, untimely bridge replacement.	Landscape Management Concepts 1-3 and Management Strategies 1-4, particularly LMS 3 (retention of snags in harvest units); Riparian Management Strategies	None at this time
Silver-haired bat	Reduction of late seral conifer forests, loss of hollow trees and tall, newly dead snags.	Landscape Management Concepts 1-3 and Management Strategies 1-4, particularly LMS 3 (retention of snags in harvest units)	None at this time
Townsend's big-eared bat	Highly sensitive to disturbance at roosts; highly specific roost requirements (dependent on uncommon or at risk structures for habitat). Pesticides and related prey reduction.	Cultural resource protection may protect against destruction of some mines/buildings but not against disturbance	Site Plans for any mine or cave roosts or building maternal roosts
Red Tree Vole	Small home range, limited dispersal ability, low reproduction rate.	Landscape Management Concepts and Strategies	None at this time.
Chinook, Oregon Coast, Fall	Water quality. Alterations of hydrology and watershed function. Fish passage. Riparian Condition. Marine survival.	Aquatic and Riparian Strategies	Maintain or restore aquatic and riparian habitat. Continue ongoing restoration efforts involving partnerships.
Chinook, Lower Columbia, Fall	Water quality. Alterations of hydrology and watershed function. Fish passage. Riparian Condition. Marine survival.	Aquatic and Riparian Strategies	Maintain or restore aquatic and riparian habitat. Continue ongoing restoration efforts involving partnerships.
Chinook, Coastal, Spring	Water quality. Alterations of hydrology and watershed function. Fish passage. Riparian Condition. Marine survival.	Aquatic and Riparian Strategies	Maintain or restore aquatic and riparian habitat. Continue ongoing restoration efforts involving partnerships.
Chinook, Lower Columbia, Spring	Water quality. Alterations of hydrology and watershed function. Fish passage. Riparian Condition. Marine survival.	Aquatic and Riparian Strategies	Maintain or restore aquatic and riparian habitat. Continue ongoing restoration efforts involving partnerships.

Common Name	Limiting Factors (LF)*	Forest Management Plan Strategies that Protects or Maintains LF or Habitat	Additional Species of Concern Strategies to address LF
Chum, Lower Columbia.	Alterations of hydrology and watershed function. Fish passage. Marine survival. Loss of estuarine habitat.	Aquatic and Riparian Strategies	Maintain or restore aquatic, estuarine, and riparian habitat. Continue ongoing restoration efforts involving partnerships.
Chum, Coastal	Alterations of hydrology and watershed function. Fish passage. Marine survival. Loss of estuarine habitat.	Aquatic and Riparian Strategies	Maintain or restore aquatic, estuarine, and riparian habitat. Continue ongoing restoration efforts involving partnerships.
Coastal Cutthroat, Coastal	Habitat fragmentation or actions that increase population isolation. Water Quality. Alterations of hydrology and watershed function. Loss of estuarine habitat for rearing. Ocean productivity.	Aquatic and Riparian Strategies	Maintain or restore aquatic, estuarine, and riparian habitat, providing suitable water quality and habitat complexity. Continue ongoing restoration efforts involving partnerships.
Coastal Cutthroat, Lower Columbia	Habitat fragmentation or actions that increase population isolation. Water quality. Alterations to hydrology and watershed function. Loss of estuarine habitat for rearing. Ocean productivity.	Aquatic and Riparian Strategies	Maintain or restore aquatic, estuarine, and riparian habitat, providing suitable water quality and habitat complexity. Continue ongoing restoration efforts involving partnerships.
Coho, Coastal	Stream complexity. Water quality. Fish passage. Riparian condition. Altered watershed processes. Marine Survival.	Aquatic and Riparian Strategies	Implement measures identified in Coastal Coho Assessment with landowners and partners.
Coho, Lower Columbia	Stream complexity. Water quality. Fish passage. Riparian condition. Altered watershed processes. Marine Survival.	Aquatic and Riparian Strategies	Maintain or restore aquatic and riparian habitat. Continue ongoing restoration efforts involving partnerships.
Eulachon	Marine survival. Altered river flows. Bycatch in ocean fisheries	Aquatic and Riparian Strategies	Use species-specific habitat requirements to guide management actions.
Western Brook Lamprey	Habitat access (artificial obstructions), water quality (reduced flows, flow management), water quality, physical habitat (stream and floodplain degradation), and predation by other species	Aquatic and Riparian Strategies	Education and outreach; improved passage and screening; protect and restore habitat; water conservation; translocation of adults past artificial obstructions, establish BMPs for in-water work.
Pacific Lamprey	Habitat access (artificial obstructions), water quality (reduced flows, flow management), water quality, physical habitat (stream and floodplain degradation), and predation by other species	Aquatic and Riparian Strategies	Education and outreach; improved passage and screening; protect and restore habitat; water conservation; translocation of adults past artificial obstructions, establish BMPs for in-water work.
Western River Lamprey	Habitat access (artificial obstructions), water quality (reduced flows, flow management), water quality, physical habitat (stream and floodplain	Aquatic and Riparian Strategies	Education and outreach; improved passage and screening; protect and restore habitat; water conservation; translocation of adults past artificial

Common Name	Limiting Factors (LF)*	Forest Management Plan Strategies that Protects or Maintains LF or Habitat	Additional Species of Concern Strategies to address LF
	degradation), and predation by other species		obstructions, establish BMPs for in-water work.
Steelhead, Lower Columbia, Winter	Water quality. Alterations of hydrology and watershed function. Fish passage. Riparian condition. Marine survival.	Aquatic and Riparian Strategies	Maintain or restore aquatic and riparian habitat. Continue ongoing restoration efforts involving partnerships.
Steelhead, Lower Columbia, Summer	Water quality. Alterations of hydrology and watershed function. Fish passage. Riparian condition. Marine survival.	Aquatic and Riparian Strategies	Maintain or restore aquatic and riparian habitat. Continue ongoing restoration efforts involving partnerships.
Steelhead, Coastal, Winter	Water quality. Alterations of hydrology and watershed function. Fish passage. Riparian condition. Marine survival.	Aquatic and Riparian Strategies	Maintain or restore aquatic and riparian habitat. Continue ongoing restoration efforts involving partnerships.
Western Ridged Mussel	Water withdraw, diversion, and changes in hydrological regimes. Contamination, sedimentation, nutrient enrichment, and other impacts to water quality.	Aquatic and Riparian Strategies	Maintain water quality and availability.

* Limiting Factors information taken from the 2016 *Oregon Conservation Strategy* (ODFW 2016).

Appendix C

Changes to Terrestrial Anchors

The purpose of these revisions is to update the Terrestrial Anchors to continue to address current Forest Management Plan requirements, while also implementing the objectives of the draft Habitat Conservation Plan and aligning with Habitat Conservation Areas.

Reallocation of the revised Terrestrial Anchors were based on the following:

- Reallocating Terrestrial Anchors (or portions of sites) that are currently outside of Habitat Conservation Areas to inside these areas to align with draft Habitat Conservation Plan objectives and the updated Species of Concern policy;
- Keeping Terrestrial Anchors acreages similar to current levels;
- That contain a high proportion of complex structure and/or stands that are likely to achieve complex structure in a timely way, while balancing with other Forest Management Plan objectives;
- Considering the current condition of the forests focusing on late seral stages, the surrounding landscapes, species of concern present, and the habitat needs of those species;
- Terrestrial Anchors should be well-distributed and should be developed consistent with other resource goals.

Specific changes included:

- Buster - The current Terrestrial Anchor design covers most of the Buster Quarry northern spotted owl circle, where most of the historic observations have occurred. During this revision approximately 750 acres outside of Habitat Conservation Areas were removed, along with small stands of lower quality habitat. Lower quality stands within the Habitat Conservation Areas were located on the edge of the previous boundary and were swapped for older more complex stands. Swaps were avoided in the interior to maintain connectivity. Most of the acreage removed was added to the smaller Sweethome Terrestrial Anchor where there was contiguous older forest structure.
- Plympton - The current Terrestrial Anchor design covers most of the Plympton northern spotted owl inner circle (0.7-mile radius from the activity center), where most of the historic observations have occurred. It also includes the majority of remaining higher quality habitat in the outer circle (1.5-mile radius from the activity center). During this revision, approximately 500 acres outside of Habitat Conservation Areas were removed, along with small stands of lower quality habitat. Lower quality stands were located on

the edge of the previous Terrestrial Anchor boundary and were swapped for older more complex stands. Swaps were avoided in the interior to maintain connectivity. The remaining acreage removed was added to the smaller Sweethome Terrestrial Anchor where there are larger blocks of contiguous older forest structure.

- Sweethome - This reconfigured Terrestrial Anchor design incorporates the entirety of the original boundary except for one younger stand. The original design overlapped several historical northern spotted owl and marbled murrelet observations. In this revision, it was expanded to include additional historic northern spotted owl observations and a northern goshawk observation. It also includes the Boulder Candyflower, Puma, and Sweethome Marbled Murrelet Management Areas. The acreage added better balances the 3,000-acre size goal mentioned in the Species of Concern Operational Policy (3.10.3) across the district.

The resulting total district acreage within the Terrestrial Anchors is 11,153 acres (8%). A summary of the changes in size of the Terrestrial Anchors can be found in Table 1, a comparison of current forest condition of the original and revised Terrestrial Anchors is shown in Figure 1, and a comparison of the current stand age classes of the original and revised Terrestrial Anchors is shown in Figure 2.

Table 1. Astoria District Terrestrial Anchors (TA) Acreage Changes

Name	Original TA	Revised TA
Buster	4,599	3,942
Plympton	4,077	3,540
Sweethome	2,282	3,671
All Terrestrial Anchors	10,958	11,153

Figure 1. Current stand condition of the original Terrestrial Anchors and revised Terrestrial Anchors (TA).

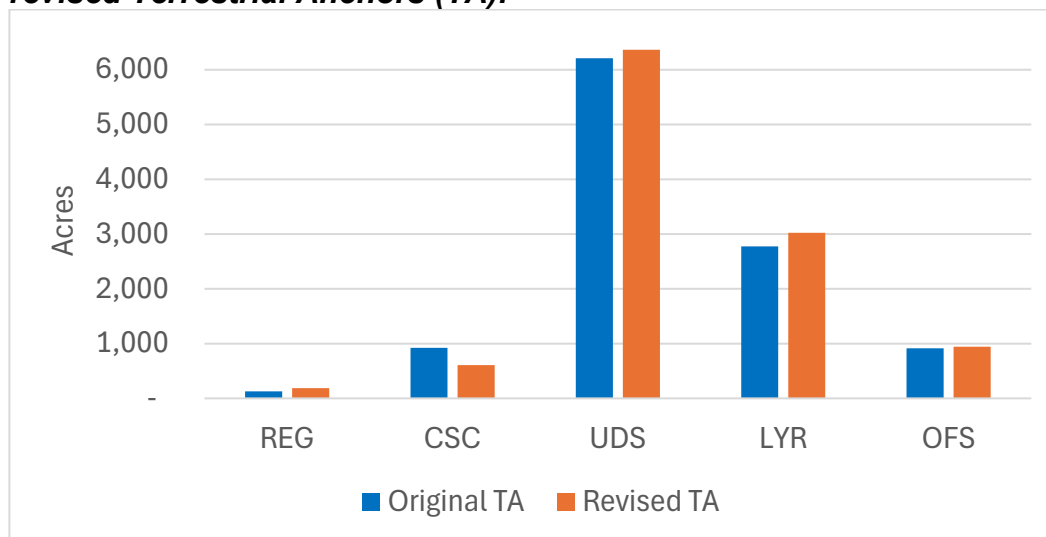
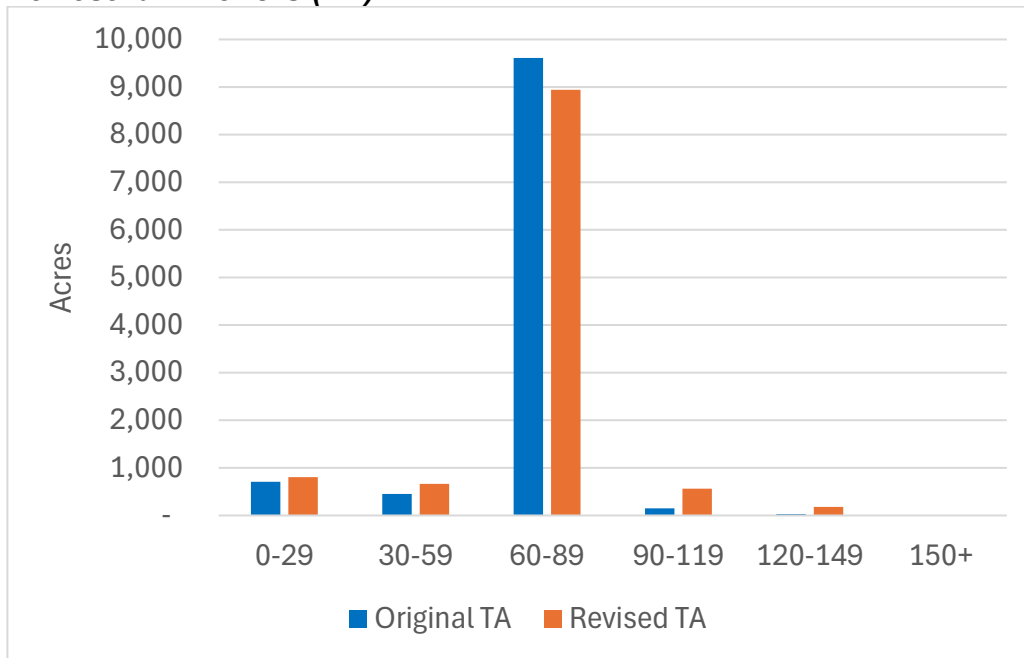


Figure 2. Age classes of the original Terrestrial Anchors and revised Terrestrial Anchors (TA).



Appendix D

Changes to Landscape Design

The updated Landscape Design for the Astoria District consists of 30 percent of the land base which is designated to achieve a desired future condition of either Layered or Older Forest Structure.

The purpose of these revisions is to update the mapped landscape design to continue to address current Forest Management Plan requirements, the revised Terrestrial Anchors, while also implementing the objectives of the draft Habitat Conservation Plan and aligning with Habitat Conservation Areas.

Reallocation of the desired future condition designation were based on the following:

- Reallocating stands designated as desired future condition that are currently outside of Habitat Conservation Areas to inside these areas to align with draft Habitat Conservation Plan objectives and the updated Species of Concern policy;
- Prioritized moving desired future condition designations as follows:
 - Stands within updated Terrestrial Anchors locations inside the Habitat Conservation Areas;
 - Stands with currently designated Northern Spotted Owl cores areas or within the 0.7 mile circle and designated marbled murrelet management areas inside the Habitat Conservation Areas;
 - Existing layered and older forest structure stands inside Habitat Conservation Areas;
 - Older stands inside Habitat Conservation Areas while considering:
 - Stands that cover one or more conservation values and/or harvest constraints such as scenic river corridors, inoperable areas, etc;
 - Stands that maintain or improve significant blocks of desired future condition within the Habitat Conservation Areas to support connectivity, configuration and other patch dynamics that maintain and promote landscape function. This may include individual younger stands inside the desired future condition configuration to maintain a contiguous block.

The resulting total district acreage within the mapped desired future condition landscape design is 41,243 acres (30%). A comparison of the current stand structure of the 2023 version of the mapped desired future condition, the revised mapped desired future condition and the Habitat Conservation Areas is shown in Figure 1, and a comparison of the current age class of the 2023 mapped desired future condition, the revised mapped desired future condition and the Habitat Conservation Areas is shown in Figure 2. The spatial location of the revised

desired future condition is shown in MAP Astoria District: Desired Future Condition.

Figure 1. 2023 desired future condition, revised desired future condition (DFC) and Habitat Conservation Areas (HCA) by current stand condition.

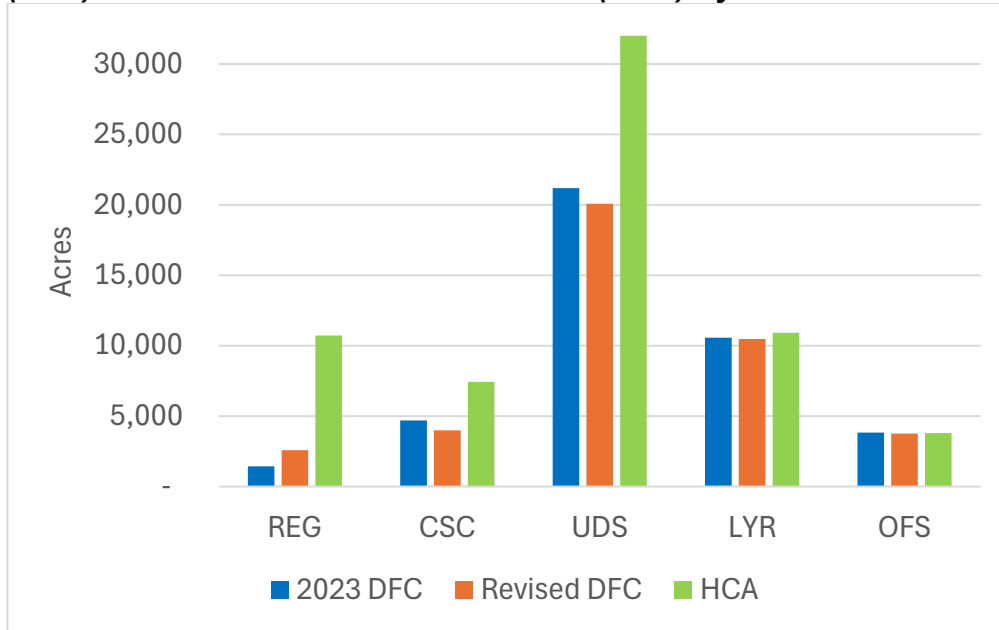
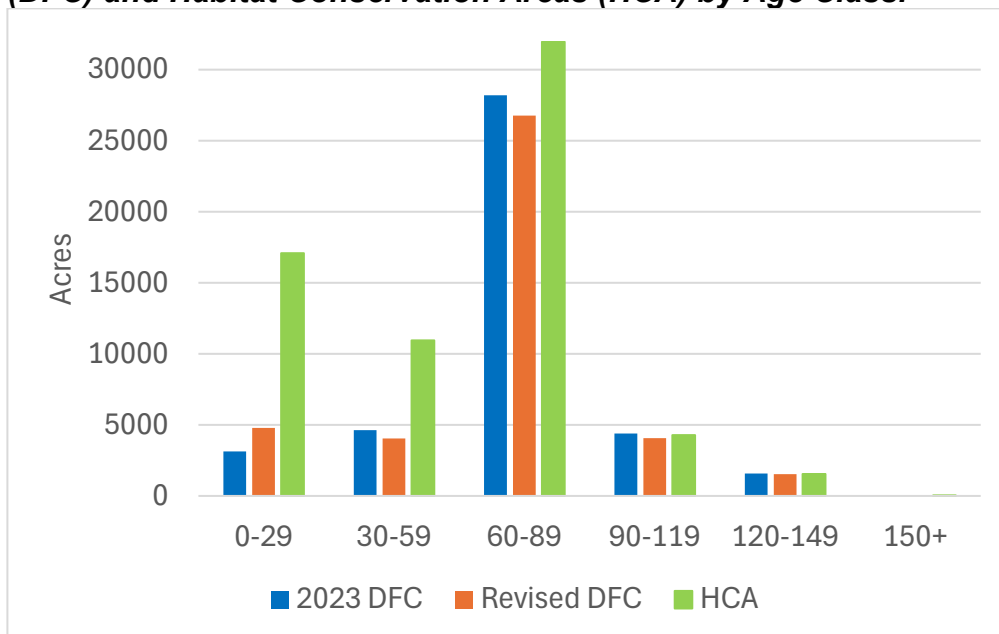


Figure 2. 2023 desired future condition, revised desired future condition (DFC) and Habitat Conservation Areas (HCA) by Age Class.



Appendix E

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Appendix F

Public Comment Summary

Public Involvement and Summary of Changes:

In order to engage with Oregonians, the Oregon Department of Forestry's (ODF) Implementation Plan revisions for the Astoria, Forest Grove, North Cascade, Tillamook, West Oregon and Western Lane districts had a 30-day public comment period, which began February 20, 2025. The public was notified via a statewide news release and subsequent media coverage, as well as emails to citizens and stakeholders on ODF's mailing lists, the ODF website, and posts on ODF's Facebook, Instagram & X platforms.

The purpose of the Public Comment Period was to provide an opportunity for the public to review the revised Implementation Plan, ask questions, make recommendations, and offer comments. As a public agency, ODF strives to operate in the best interest of Oregonians. We provide opportunities for public participation to assist us in securing the greatest permanent value from State Forests for all Oregonians.

In all, ODF received 28 individual written letters related to the Implementation Plan revisions for the Astoria, Forest Grove, North Cascade, Tillamook, West Oregon and Western Lane districts. Each comment received was reviewed and the feedback considered through the lens of aligning with State Forests current plans and policies. Changes to the Implementation Plans that were a result from comments received are detailed in the Implementation Plans and at the end of this document.

IMPLEMENTATION PLAN COMMENTS

Comments related to the Implementation Plan revisions include:

- *Support the inclusion of the requirements of the draft Habitat Conservation Plan in the proposed Implementation Plans. (multiple)*
- *Commend the realignment of Terrestrial Anchors with Habitat Conservation Areas, which allows for more efficient use of available acreage.*
- *It is premature to Implement draft Habitat Conservation Plan measures before the issuance of the Incidental Take Permits and final approval of the plan creates significant uncertainty and operational limitations.*
- *Evaluate the inclusion of additional landscape design targets and expansion of complex stand structures and consider a more balanced approach to forest structure development that allows for both ecological diversity and sustainable timber production. (multiple)*
- *The alignment of Terrestrial Anchors with Habitat Conservation Areas reflects a better balance between conservation goals and timber production.*
- *Supports the changes intended to alleviate unnecessary constraints. (multiple)*
- *Support the revisions to the Terrestrial Anchors and certain desired future condition stands as this will help better achieve Greatest Permanent Value at this time.*

- *Appreciates the need to align the draft Habitat Conservation Plan and the constraints of the current Forest Management Plan, in light of the extended timelines for the Habitat Conservation Plan, as a necessary step in order to avoid needless redundancies and burdensome process.*
- *Opposed to decision to implement the Habitat Conservation Plan prior to having Incidental Take Permits from the federal services.*
- *Supports these modest revisions intended to alleviate unnecessary constraints.*
- *Supportive of the revisions to Terrestrial Anchors and certain desired future condition stands.*
- *Appreciate the time and considerations made by ODF staff while drafting these Implementation Plans, and generally support the revisions that have been made.*
- *Concern that short-term Implementation Plans are needed again because the timelines keep getting extended to finalize the draft Habitat Conservation Plan and companion Forest Management Plan.*
- *These Implementation Plans should maximize the economic and ecological potential of Oregon's State Forest.*
- *Further adjustments are needed to the Implementation Plan to ensure that timber harvest levels align with operational needs and environmental goals.*
- *Aligning the Terrestrial Anchors and desired future condition with the Habitat Conservation Areas should have been done at the outset of designing the Habitat Conservation Areas within the draft Habitat Conservation Plan.*
- *Supports the alignment of the desired future condition and the Habitat Conservation Areas in order to meet harvest goals in the short term.*
- *Recommend that final plans support long-term health of Oregon's forests, the economic viability of rural communities, and the well-being of all Oregonians.*
- *Support these Implementation Plans as they are a first step in balancing management and durable conservation measures to achieve Greatest Permanent Value.*
- *Support efforts to protect Species of Concern, but are concerned with the operational impact of these extended protections.*
- *Concern that additional buffer zones and seasonal restrictions used to protect Species of Concern exceed federal requirements.*

IMPLEMENTATION PLAN RESPONSE:

At the direction of the Board of Forestry, ODF is continuing the development of a draft Western Oregon State Forests Habitat Conservation Plan and new Forest Management Plan for Western Oregon State Forests. At the time of developing the revised Implementation Plans, the Habitat Conservation Plan is a formal public draft document with an accompanying draft Environmental Impact Statement in the federal National Environmental Policy Act process. Finalization of the Environmental Impact Statement and Biological Opinions, and issuance of Incidental Take Permits is expected to occur within 2026. In order to continue this process the Implementation Plans must include all of the components of the draft Habitat Conservation Plan in order to cover the expected Habitat Conservation Plan approval timeline. Some adjustments were made to align the goals and strategies of the current Forest Management Plans where possible with the Habitat Conservation Plan goals and objectives, which helps forest management be more

focused, efficient, and effective. The alignment of the desired future condition locations and the Terrestrial Anchor sites with the Habitat Conservation Areas is the next step in this transition process. The Habitat Conservation Areas were designed by ODF biologists using species occurrence data, and contain the majority of complex, older, and high-quality habitat on each district. As this process evolves ODF will evaluate new information or changes in direction after they occur to determine if adjustments need to be made.

FOREST MANAGEMENT COMMENTS

Comments related to Forest Management on State Forests include:

- *Appreciate ODF's thoughtful approach to managing these public lands and encourage continued efforts to balance recreation, conservation, and economic sustainability.*
- *Ban clearcutting on State Forest and transition to selective cut harvesting using non-invasive methods such as helicopters and horses to protect the ecosystem, eliminate road building, and leave the most mature trees intact.*
- *People depend not only on predictable timber supply, but also on a steady flow of diverse contracts for reforestation, thinning, fuels mitigation, roadwork, planting, and prescribed fire.*
- *Understand that a Habitat Conservation Plan is, by very definition, a document centered on habitat conservation, it is imperative that staff work to compensate for this imbalance.*
- *The three pillars of Greatest Permanent Value must be rebalanced to the extent possible given these new, extremely robust and impactful constraints.*
- *Concerned regarding the lack of balance afforded in the current Forest Management Plan and the draft Habitat Conservation Plan.*
- *Appreciate the department's commitment to managing our State Forests for recreation, conservation, and economic sustainability.*
- *Concern that Greatest Permanent Value is unbalanced with focus on environmental interests at the expense of economic and social considerations.*
- *Livelihoods depend on stable and predictable flow of diverse forestry work across these public forests.*
- *The Department and the Board have been hyper focused on creating environmental protections these past several years, while far less attention and energy have been afforded to economic and social outcomes.*
- *Trees right to the edge of someone's residential property should not be cut.*
- *Appreciate the complexity of managing public forests, balancing diverse uses, and addressing the competing demands on these valuable landscapes.*
- *Opposed to clearcutting and spraying.*
- *Implement additional measures to restore complex layered forest stands into the landscape.*
- *Protect mature stands.*
- *Recommendation to implement additional measures to restore complex layered forest stands into the landscape, protect mature stands of forest, and implement the Climate Plan.*

- *Concern that ODF is not meeting the goal of 30% of forests in complex structure as there is currently only 13% in Layered structure on the North Coast Districts and 2% of that is Older Forest Structure.*
- *Recommend no harvest of mature healthy stands over 90 years old.*
- *Supports the move to fixed harvest targets at the higher end of the previous volume range. (multiple)*
- *Recommend reducing harvest targets in order to meet Forest Management Plan structure targets for Layered and Older Forest Structures across the landscape and to make up for overharvesting and to address the anticipated reduction in growth and yield resulting from climate change.*
- *Implementing the Habitat Conservation Plan before having Incidental Take Permits while also implementing the current Forest Management Plan has needlessly resulted in lower acres available for harvest.*
- *Recommendation to increase harvest levels. (multiple)*
- *Recommendation to reduce harvest of complex stands to address past overharvesting.*
- *Concern that State Forests have been and continue to be overharvested at the expense of age distribution and structural and species diversity due to overly optimistic modeling and effects of climate change.*
- *The unburned portion of the Santiam State Forest should be intensively managed to produce an annual harvest volume of 17.5 million board feet to protect the remaining infrastructure to manage land going forward.*
- *Recommendation to include additional volume to ease the transition of the draft Habitat Conservation Plan as per the 2023 State Forester letter.*
- *Recognize these Implementation Plans attempt to restore balanced management but don't address past imbalance that prioritized timber harvest.*
- *Harvest to the maximum amount allowed within the Habitat Conservation Areas. (multiple)*
- *Support for the move to fixed harvest targets. (multiple)*
- *Harvest levels should be reduced in order to achieve the desired future condition targets and make up for overharvesting in the past.*
- *Concerned about the low level of harvest inside of the Habitat Conservation Areas.*
- *Concerned that moving the desired future condition into the Habitat Conservation Areas may reduce the harvest in these areas in the short term.*

FOREST MANAGEMENT RESPONSE:

Greatest Permanent Value/Policy Framework: The agency has a legal obligation to manage State Forests for social, economic and environmental outcomes, a concept commonly referred to as Greatest Permanent Value. State Forests provide outdoor recreation, education and interpretation opportunities, essential fish and wildlife habitats, clean water, and sustainable harvest volume that produces jobs and revenue that funds vital services in rural counties, local districts, and schools throughout the state.

Greatest Permanent Value provides the foundation on which forest management plans are developed and provides the framework for how State Forests are managed. Forest management plans identify the resource goals and strategies intended to achieve an

appropriate blend of resources using the best available science. The Board of Forestry is responsible for reviewing and approving forest management plans to ensure the plan will secure the Greatest Permanent Value for Oregonians. The Northwest and Southwest State Forests Management Plans provide direction for these Implementation Plans. While the Forest Management Plans set certain management standards, primarily associated with resource protection, there are many instances where different management options may achieve Forest Management Plan goals and Implementation Plan objectives.

Operational policies guide decisions within this range of options by defining specific procedures and best management practices that allow for management flexibility, while ensuring sound management, resource protection, and compliance with required laws.

These Implementation Plans describe the management approaches and activities designed to achieve the Forest Management Plan goals and the draft Habitat Conservation Plan goals and objectives. Implementation of these plans will result in a variety of forest stand conditions across the landscape that maintain healthy, multi-species, vigorously growing forests, which will contribute to resilient healthy forests into the future. This will be achieved by both active and passive management of the forests using a variety of silvicultural prescriptions and tools.

Complex/Mature Forest Management: As described in the Implementation Plans, ODF does harvest complex older mature stands not included in the mapped landscape design for desired future condition complex stands or the Habitat Conservation Areas and will plan harvests in areas where the desired future condition has been changed. This decision was made in order to balance continued implementation of the current Forest Management Plans and honor the process of developing and implementing the draft Habitat Conservation Plan, while still meeting the harvest objectives within the Implementations Plans. The Implementation plans identify the targets for areas designated for complex structures that will be developed over the long term. The timeline to meet these targets is also outlined in each district's Implementation Plan. Areas designated as desired future condition complex and areas that have been designated as Habitat Conservation Areas have been identified as the highest priority locations where older trees and complex stands will be grown over time. Harvest of mature stands outside of these prioritized areas ensures that other aspects of Greatest Permanent Value and Implementation Plan objectives are being met while allowing younger stands to grow older and more complex in a sustainable matter.

Harvest Levels: Harvest levels were determined when the district Implementation Plans were revised in 2023 by modeling the requirements in the Forest Management Plans, draft Habitat Conservation Plan, operational policies, and current conditions. This modeling removed the rules for Terrestrial Anchor sites and the areas of desired future condition complex after the first period (5 years) with the assumption that the draft Habitat Conservation Plan and the draft Western Oregon Forest Management plan would be approved. As Terrestrial Anchors, desired future condition complex areas and Habitat Conservation Areas have similar objectives and allowed management activities, alignment of these areas are reflected in the harvest targets identified in each Implementation Plan. In addition, the model included current forest conditions and stand ages which reflect past management decisions, natural disturbances and forest growth to calculate sustainable harvest levels. At times direction can be given to harvest at higher or lower levels to

provide flexibility for a variety of scenarios such as market conditions or natural disturbances. Harvest modeling is conducted as needed to support policy and implementation decisions, analyze forest management approaches, update current forest conditions and recalibrate sustainable harvest outputs.

The majority of the harvested volume will come from lands outside of designated Habitat Conservation Areas, Riparian Conservation Areas, no harvest wildlife areas, forested areas that are inoperable, scattered remnant old growth trees, recreation and scenic areas. These lands are primarily managed for economic benefits but will contribute to other resource values. Some volume will result from habitat restoration or improvement projects within Habitat Conservation Areas.

Timing of harvest in the current Forest Management Plans or the Draft Habitat Conservation Plan is not set at a specific age, but rather is a product of stand condition, stand health, and annual harvest objectives. Areas designated as desired future condition complex and areas that have been designated as Habitat Conservation Areas have been identified as the highest priority for wildlife habitat across the landscape and are the location where older trees and complex stands will be grown over time. Focusing harvest in mature stands outside of these constrained areas ensures that other aspects of Greatest Permanent Value and Implementation Plan objectives are being met while allowing younger stands to grow older and more complex in a sustainable matter.

Harvesting within Habitat Conservation Areas: The draft Habitat Conservation Plan allows for an average of 1,500 acres of partial harvest and 1,000 acres of habitat restoration regeneration harvests within Habitat Conservation Areas per year. As the intention for management activities in these areas is to improve covered species habitat, stands that are already high-quality habitat will require little to no management. Stands that provide lower quality habitat or no habitat will be managed in order to increase the quality and quantity of habitat over time. Working with agency biologists, these areas will be field evaluated for threatened and endangered species required survey needs and habitat suitability to develop potential candidates for inclusion in an Annual Operations Plan. Appropriate management prescriptions will be developed to ensure compliance with the commitments set forth in the draft Habitat Conservation Plan. The Division's intent at the beginning of implementing these strategies is to ensure that the proper types of stands are being chosen to work in and appropriate prescriptions are applied for each stand while also considering survey costs for implementation prior to obtaining Incidental Take Permits. As more of this work is completed and once the Habitat Conservation Plan is approved, the pace and scale of the activities within the Habitat Conservation Areas will increase.

FOREST HEALTH COMMENTS

Comment received related to insect and disease management:

- *Restore areas impacted by insect pests and diseases to productive forests through removal of susceptible species and use of site appropriate species.*
- *Prioritize converting unproductive stands into healthy conifer stands like some hardwood stands, stands affected by Swiss needle cast and *Phellinus weirii* to*

increase carbon sequestration, improve forest health and wildlife habitat, and increase timber volume.

- Support prioritizing treatment of unproductive stands such as those affected by Swiss needle cast and laminated root rot to ensure long-term sustainability of State Forests.*
- ODF should work with federal partners in the Wildland Urban Interface to create fire resilient landscapes.*
- Please continue to rehabilitate and replant the Santiam State Forest for future generations' benefit.*
- Pockets of old growth ponderosa pine in the Shady Cove area are being encroached upon due to the disrupted natural fire cycle.*
- The forest structure of the Shady Cove parcels is declining from beetle, drought, and overstocking of trees and brush components.*
- Active forest management of the Shady Cove parcels is needed for fire mitigation.*
- The Shady Cove parcels need fuel reduction work planned out and started immediately to protect forests and infrastructure such as cell towers on adjacent lands.*
- Insect mortality is in an advanced stage and these forests in the Shady Cove parcels are converting to hardwood stands with a very limited merchantable component.*
- The Shady Cove parcels are within a 3-mile radius ember fallout zone from our communities.*
- Concern that the State of Oregon is directing liability and responsibility for wildfires on homeowners by not managing and increasing restrictions.*

FOREST HEALTH RESPONSE:

Managing for diverse, healthy, sustainable and resilient forests is utilized as the primary approach to prevent and mitigate insect, disease, and abiotic forest threats such as wildfire. Active management to improve forest health in conjunction with conservation will not only promote biodiversity and address issues such as insects and disease, it will also help mitigate future fire risk. Current forest health strategies are addressed through site specific mitigation to restore areas impacted by insects, diseases such as Swiss needle cast and laminated root rot. Site specific harvest and young stand management prescriptions consider target species mix, aspect, elevation, soil types, Swiss needle cast risk where applicable, *Phellinus weirii* (laminated root rot) presence, wildfire risk, required stocking guidelines, natural advanced regeneration, and the desired future condition of the stand.

Forest health surveys and monitoring help to identify areas to evaluate for insect, disease and other forest health issues. Areas identified for treatment or rehabilitation are gradually incorporated into the Annual Operations Plan due to the high cost of the rehabilitation of these areas. ODF is looking into partnerships and alternate funding such as grants to help defer some of the cost to rehabilitate these areas and work efficiently and effectively near ownership boundaries where applicable.

WILDLIFE COMMENTS

Comments received on wildlife include:

- *Species of Concern strategies should be based on sound science, ensuring that they align with both the biological needs of the species and the practical realities of forest management.*
- *Recommend that ODF consult with forest operators and wildlife experts to refine the species of concern strategies and minimize operational disruptions.*
- *All older stands in the Santiam, especially near areas impacted by the Beachie Creek fire, should be retained to ensure availability of suitable habitat for spotted owls and other species dependent on mature forests.*
- *Recommendation to protect fungi and wildlife as we all are all interconnected.*
- *Concerned that existing Terrestrial Anchors in the North Cascade District will be eliminated and exchanged for burned-over stands within Habitat Conservation Areas.*
- *Recommendation to retain existing Terrestrial Anchor locations pending further analysis of the impacts to listed species.*

WILDLIFE AND AQUATIC RESPONSE:

State Forests provide habitats for a wide variety of native wildlife, fish, amphibians, fungi, and plant species across the landscape. A combination of strategies are used to address habitat needs including: the use of silvicultural tools to attain an array of forest stand structures and habitat types across the landscape; development of key structural components such as snags, green trees, and down wood; riparian and aquatic management standards, stream restoration projects, and upslope components such as road and slope stability strategies; and site-specific plans such as modified harvest prescriptions or practices, seasonal restrictions, site specific actions such as leaving slash piles, buffers, and resource site protection.

In addition to the strategies described above, the Habitat Conservation Areas, updated Terrestrial Anchor sites, and updated desired future condition locations were delineated using current stands characteristics, connectivity principles, species of concern information, current and historic locations and habitat for marbled murrelets, northern spotted owls, and other covered species to protect existing habitat. Riparian Conservation Areas were designed to conserve and maintain riparian habitat for protection and persistence of amphibian and aquatic covered species. The conservation strategies in the draft Habitat Conservation Plan were developed by a team with representatives from ODF, Oregon Department of Fish and Wildlife, Oregon Department of Environmental Quality, Oregon Department of State Lands, Oregon State University, U.S. Fish and Wildlife Service and NOAA Fisheries.

The Terrestrial Anchor in the North Cascade District was not adjusted during the Implementation Plan revisions. This anchor was already located within a Habitat Conservation Area. The primary species of concern expected to benefit from the Terrestrial Anchor in the North Cascade District are species associated with high elevation ponds, lakes, wetlands, and talus slopes. Although the Terrestrial Anchor is located within a portion of the district that was burned, the habitat for the targeted species was not degraded to the point that it has become unusable. This burn area will continue to contribute to habitat complexity over time within the Terrestrial Anchor as new growth and

key structural components, such as snags and downed wood, increase the availability of food and cover sources for the targeted species.

CARBON/CLIMATE COMMENTS

Climate change and the appropriate role of State Forests continues to be a topic of concern. Comments received in this theme include:

- *Prioritize climate-informed forest principles and practices such as longer rotations and passive management that align with the draft Habitat Conservation Plan.*
- *Consider the option of carbon credits for sensitive areas to help mitigate climate change and maintain revenue flow.*
- *Recommend setting an internal carbon pricing process to guide planning decisions.*
- *Cutting of mature trees 80-years and older is not in alignment with climate smart forestry as these trees are the best sequesters of carbon.*
- *Support emphasizing that active forest management – including thinning, regeneration, and reforestation – supports climate goals by increasing carbon sequestration and forest health.*
- *Appreciate the recognition of the contribution of forest products in climate change and carbon storage conversations.*
- *Focus on the role of forest products in addressing climate change is an important step in reinforcing the ecological value of sustainability manage forests.*
- *Appreciate the notion that ODF is already managing State Forests in a way that is climate-friendly.*
- *Appreciate the recognition of harvested wood products as a way to store carbon and that seedlings will accumulate carbon as they grow from regenerated stands.*
- *Recommend identification of areas to increase soil carbon and maintain forest carbon in stands post-harvest.*
- *The public needs to understand that a majority of state forestland has been set aside under the draft Habitat Conservation Plan and that they will be contributing to carbon sequestration and storage in perpetuity.*
- *Implement the Climate Plan.*
- *Because of these massive commitments of the Habitat Conservation Areas, there is no need for additional carbon storage "on the stump" in areas otherwise available for timber harvests.*
- *Recommend identification of areas that have high carbon storage potential and establish priorities for these areas that include long-term carbon storage.*
- *Support the recognition that harvested wood products contribute to carbon sequestration and that carbon storage is not limited to "on-the-stump" retention.*
- *No clearcutting and very limited thinning for the purposes of carbon sequestration.*
- *Recommend harvest rotations that increase carbon.*
- *Support the inclusion of the Climate Change and Carbon section in the interim Implementation Plans they need to include the Goals and Strategies of the Climate Change and Carbon Plan. (Multiple)*
- *Recommendation to follow Climate Change and Carbon Plan to incorporate specific management climate mitigation and adaption practices.*

- *Forest products serve a vital role locally and worldwide in alleviating carbon emissions both through long-term storage as well as reducing the impacts from less sustainable alternatives.*
- *Recommend identification and conservation of areas particularly susceptible to the deleterious effects of climate change.*
- *Implement all aspects of the Climate Change and Carbon Plan by establishing longer rotations on lands outside of the Habitat Conservation Areas and developing a carbon market system, to establish ODF as a national leader in climate-smart forest practices.*
- *Recommend that improvements to carbon storage should be above Endangered Species Act compliance levels to become a national leader.*

CARBON/CLIMATE RESPONSE:

State Forests are currently managed to provide for a diverse, healthy, productive, and sustainable forest ecosystem over time that will be more resilient to climate change. While many of the goals and practices outlined in the Climate Change and Carbon Plan are currently being implemented, some higher level topics like harvest rotation age outside of Habitat Conservation Areas and carbon pricing/carbon credits are still being considered by the BOF. BOF direction will be incorporated into the draft Western Oregon Forest Management Plan and associated Implementation Plans. This process is currently underway but in the short-term has left a transition period until those plans are finalized and adopted. During this transition period the majority of the goals and supporting actions identified for State Forests in the ODF Climate Change and Carbon Plan are met through implementing the current Forest Management Plans and incorporating the draft Habitat Conservation Plan.

As outlined in these Implementation Plans, the goals and supporting actions of the Climate Change and Carbon Plan will be implemented in multiple ways including: landscape-level habitat protections and legacy structures (i.e., old growth, green trees, snags, down wood) within harvest units that store carbon in standing trees; carbon stored in harvested wood products; silvicultural systems and prescriptions such as planting multiple tree species, utilizing varied planting spacings and densities; and addressing forest health issues such as insects and disease to provide for a diverse, healthy, sustainable and resilient forest ecosystem over time.

RECREATION, EDUCATION AND INTERPRETATION COMMENTS

Comments received around public engagement in recreation development include:

- *Opposed to the use of any class of e-bike on non-motorized trails.*
- *E-bikes should only be allowed in motorized recreation areas.*
- *Recommend the REI program focus resources on the Master Planning process for the Tillamook and Forest Grove district instead of focusing on maintaining existing facilities.*
- *Recommend focusing on altering the recreation direction rather than continuing business as usual.*

- *The current draft Implementation Plans should be revised from focusing on maintaining existing recreation facilities to include supporting new opportunities like the Salmonberry Trail as this aligns with ODF's strategic goals and ensures that future recreation planning meets community needs.*
- *Recommendation to prioritize the Salmonberry Trail in future recreation planning. (multiple)*
- *ODF's long-term vision should support the Salmonberry Trail as well as adjacent new hiking trails that could use the Salmonberry Trail to provide trailhead access.*
- *Support a planning process that integrates the Salmonberry Trail with the current ODF Recreation program and Recreation Plan. (multiple)*
- *Concern that Western Oregon is lacking in dedicated bike/hiking trails.*
- *Thoughtful integration with the Salmonberry Trail will maximize the value of Tillamook State Forest's recreation assets and ODF's mission of enhancing social, economic, and community values.*
- *Recommend prioritizing the Salmonberry Trail planning and opening which will align with ODF's mission and will support future fundraising.*
- *A well-structured funding model that supports all recreation in Northwest Oregon can be best developed when recreation resources are integrated and cross-ownership and land managers work together.*
- *Participation in the Salmonberry Trail project will help ODF collaborate with regional partners on sustainable recreation funding and long-term planning. (multiple)*
- *The Salmonberry Trail will support economic development and tourism in Tillamook and Washington Counties and help restore natural habitat and appreciation of the environment. (multiple)*
- *Recommends taking advantage of opportunities to educate, help local economies, and work with other organizations in order to support future generations (multiple)*
- *The Salmonberry Trail project has gained the support of local governments including Tillamook and Washington Counties and cities, outdoor enthusiasts, and conservation groups.*
- *A funding model that supports all recreation in Northwest Oregon can be best developed when recreation resources are integrated and cross-ownership land managers work together.*
- *The Salmonberry Trail project link between all the recreation providers, and being well-integrated together can best position the NW to develop a model that supports everyone and show integration across land ownership and managers.*
- *The Salmonberry Trail proposal directly connects underserved communities in Tillamook, Cornelius, Forest Grove, and the greater Portland metro area, enhancing community equity and access. (multiple)*
- *The Salmonberry Trail is needed to provide an area to bike safely as roads have become more congested with vehicle traffic.*
- *Support sustainable recreation by creating the Salmonberry Trail into a world class trail that connects urban and rural Oregon, draws people from all over the world and provides education opportunities to Oregonians. (multiple)*
- *The Salmonberry Trail would be a long-term investment, but it will be an incredible asset on-par with the Columbia Gorge trails and lasting legacy for the State of Oregon. (multiple)*

- *The Salmonberry Trail would run through ODF-managed lands and presents a once-in-a-generation opportunity to expand access to public lands, connect communities, build a through route to the coast, and enhance conservation efforts. (multiple)*
- *The Salmonberry Trail aligns with ODF's mission to provide outdoor recreation and education opportunities in our State Forests. (multiple)*
- *The Salmonberry trail could be a piece of history which tells the story of Indigenous Peoples, settlement and expansion in the coastal mountains, and the history of historical fires.*
- *The Salmonberry Trail could educate future generations about recreational activities, such as fishing and hunting, plus how these are accomplished to benefit wildlife and fisheries.*
- *The Salmonberry Trail would enhance outdoor recreation and educational opportunities for Oregonians such as another model for Outdoor School or a Salmonberry History/Environmental Center. (multiple)*
- *The Salmonberry Trail could be a teaching environment for all things biological and a resource to teach students about careers in natural resources, forestry, agriculture and more.*
- *Imagine a learning center where students as well as adults come from all over the world to study the forests, streams and resources along the Salmonberry Trail.*
- *The Salmonberry Trail project would improve habitat restoration for fish, wildlife and forests by removing or mitigating railroad infrastructure in the Salmonberry River. (multiple)*
- *The Salmonberry Trail would lead to conservation of the local lands to maintain their natural habitats.*
- *The Salmonberry Trail project would enhance habitat restoration efforts for fish, beavers, and other wildlife along the Salmonberry and Nehalem Rivers.*

RECREATION, EDUCATION AND INTERPRETATION RESPONSE:

Recreation Planning: The ODF Recreation Program is undertaking a largescale planning process, that will be reflected in plans and policies governing the program's work. The program will focus on improving current facilities, trails, and operational procedures, while also addressing needs associated with emerging trends in recreational use and other recreational development in areas surrounding State Forest land. Among the many factors to be considered are projected staffing and funding levels, recent usage patterns of different groups, and the ability to provide uninterrupted recreational access during other forest management activities.

Funding: Similar to other public agencies managing recreation, it is extremely important to be cost-effective and develop a strong funding model with a diverse structure. Currently, ODF's Recreation Program has a funding structure built on timber sale revenue, ATV permit disbursements, and internal program revenue from campgrounds and other rentals. Moving forward, the program will continue to look for additional opportunities to expand the funding base through partnerships with other recreation providers, sponsorships with local companies, increasing internal revenue opportunities, and working with the program's supporting non-profit, the State Forests Trust of Oregon.

Salmonberry Trail: Since its creation, ODF has been a member of the Salmonberry Trail Intergovernmental Agency (STIA). As a STIA member, ODF is aware of the work taking place to advance planning for the trail's next phase of development and will continue to be at the table during all discussions regarding future work. Being the land manager with the largest ownership adjacent to the proposed trail, the agency has an interest in ensuring that trail development is congruous with other ODF management objectives, such as fire protection, natural resource protection, and ODF's own recreational plans and operations.

On the ground, ODF is focused on completing work on the Wilson River Trail, a nearly 40-mile-long trail that will connect ODF's westernmost campground (Keenig Creek Campground) and easternmost campground (Reehers Camp Campground) when complete. All told, the connection will allow hikers, bikers, and equestrian users to travel nearly the entire Tillamook State Forest, while passing through six of the program's campgrounds and many different forest habitats and management strategies.

E-Bikes: As with any new or developing technology, ODF's Recreation Program is working with our land managing partners to develop consistent policies to properly address the usage of e-bikes on State Forest land. Currently, Oregon Parks and Recreation Department, our closest partner for recreation management in Oregon, is reviewing comments from their re-examination of e-bike regulations and will be providing an agency recommendation in the coming months. ODF will review their recommendation and move forward with internal rulemaking for trails managed by the department across its State Forests.

ROADS COMMENTS

Comments around public access and new road construction include:

- *Access should be maintained for recreation and fire protection.*
- *Road-building and clearcut timber harvest on steep slopes above salmon-bearing streams must be avoided or risk violating the Endangered Species Act.*
- *Recommend no new road building within Riparian Conservation Areas and Habitat Conservation Areas.*
- *In 2024 new roads were proposed within Habitat Conservation Areas and Riparian Conservation Areas which is likely inconsistent with the Habitat Conservation Plan and long-term covered species protection.*
- *Recommendation to decommission roads in Habitat Conservation Areas rather than constructing new roads that don't add to conservation.*
- *Concern that too many roads are being built on State Forests and are causing landslides that adversely affect salmon habitat.*

ROADS RESPONSE:

Roads: A well-maintained road system is necessary to ensure resource protections, fire protection, and public access. The road system on State Forest lands is managed to keep as much forest land in a natural, productive condition as possible while limiting impacts to resources in accordance with the Oregon Forest Practices Act and other applicable laws, current Forest Management Plans, draft Habitat Conservation Plan (where applicable), ODF guidance, and best management practices. The draft Habitat Conservation Plan

does not prohibit road building inside Habitat Conservation Areas. Road construction in Habitat Conservation Areas will occur where economically or operationally feasible options outside of Habitat Conservation Areas are not available, or to support management activities within them. Road construction within Riparian Conservation Areas is limited to where upland road placement options don't exist, are infeasible or cost prohibitive. Road design specifications and best management practices will be followed to minimize impacts from roads.

Slopes: The Forest Management Plans, draft Habitat Conservation Plan, and associated policies are designed to ensure forest resources are protected and that natural processes fundamental to healthy forest ecosystems continue. Best management practices are followed during forest operations, such as road building, to ensure that new roads are built in the best locations to meet forest management needs and minimize impacts to natural resources. All planned road construction is reviewed by a licensed geologist or engineer to ensure that the roads are located in stable locations and to provide the best protection for natural resources and public safety. Where older roads will be used, legacy features such as old fills or failing cut-slopes will be removed or repaired, and sections may be relocated away from sensitive areas.

DOCUMENT IMPROVEMENT COMMENTS

Comments include:

- *The Forest Grove District's desired future condition percentages are not aligned with the Forest Management Plan requirements.*
- *Include forest health priorities such as conversion of Swiss needle cast and root disease stands more explicitly in the final Implementation Plans.*
- *Provide more specifics on monitoring/detection for the Emerald Ash Borer in the Implementation Plans.*
- *Include information in the Implementation Plans on planned or potential use of seasonal road closures for wildlife management, protection from overuse of roads and security reasons.*
- *Recommendation to Include information from ODFW's State Wildlife Action Plan (formerly the Oregon Conservation Strategy currently cited in the Implementation Plans) which is currently being updated and includes updated species of greatest conservation and information need.*
- *Recommendations to consider fire mitigation on parcels near Shady Cove and begin a partnership with the Upper Rogue Forest Collaborative to work on plans for the Shady Cove area together.*
- *Encourage ODF to finalize and approve Implementation Plans quickly in order to not delay the Fiscal Year 26 cycle and get behind like the Fiscal Year 25 situation.*

DOCUMENT IMPROVEMENT RESPONSE:

ODF strives to provide useful and detailed information during for the public to review and provide feedback. All of the comments that target process and document improvements have been evaluated and considered for improvements during this Implementation Plan revision process. Several of the recommendations have been incorporated in these revised Implementation Plans. These changes are outlined in the Change Section at the

end of this document and the Public Comment Summary of the individual Implementation Plans. The remaining recommendations will be considered during the implementation planning process that will be completed for the new Forest Management Plan.

OUT OF SCOPE COMMENTS

Comments that were out of scope, which related to the draft Habitat Conservation Plan, new Forest Management Plan, grants, legislation, or other topics:

- *Forget the wildfire map.*
- *The acreage inside the proposed Habitat Conservation Plan should have Implementation Plans that are flexible to address environmental harm from natural causes such as wildfire, disease, insect infestation and floods.*
- *The Board of Forestry voted 4-3 to place 57+% of its lands off limits to harvesting timber for 70 years jeopardizing the ODF's budgets and increasing the certainty of future conflagration.*
- *The Board of Forestry has done a huge disservice to the citizens of Oregon by passing the Habitat Conservation Plan and discontinuing management on over one half of its lands under management.*
- *Since the Board of Forestry made its decision last year to keep the draft Habitat Conservation Plan as-is, we hoped the process would have moved more quickly.*
- *The Shady Cove parcels are not well marked with the proper boundary best management practices.*
- *The Shady Cove parcels are candidates for conversion to working community forests through real estate procedures.*
- *Recommends implementing the Oregon plan that the Government and Industry envisioned 100 years ago.*
- *Concerned that department is mismanaged.*
- *Recommendation to find other uses for the forest to replace jobs lost to mechanized logging equipment.*
- *Supports working together on the updated Forest Management Plan and associated Implementation Plans to include perspectives on conservation and dispersed recreational use.*
- *Oregon should find a different school funding model like Washington and the Elliott.*
- *Concerned that ODF focus is on Wildfire Map, mandates, controls, and restrictions instead of mitigating risk to adjacent landowners.*
- *Concerned that wildlife and environmental conservation measures applied in the last 10 years have made the forests more susceptible to catastrophic fires.*
- *Request that ODF review any wildlife or environmental protection changes made in the last 10 years to determine if they make forest fires more difficult to manage.*

CHANGES TO IMPLEMENTATION PLANS

The following is a summary of the changes that have been made to the Implementation Plans based on the feedback that was received and new information that we have learned:

Changes in the Implementation Plans included:

- “Forest Health”
 - Added information on surveys, monitoring and current conditions.
 - Added information regarding the emerald ash borer to Forest Grove and North Cascade districts.
- “Desired Future Condition”
 - The Forest Grove District’s desired future condition landscape design has been updated to be in alignment with the Forest Management Plan. There is now desired future condition of Layered stands at 15% and Older Forest Structure stands at 15%.
- “Planned Annual Harvest Objectives”
 - Updated wording to clarify language pertaining to Annual Harvest Objectives.
- “Forest Road Management”
 - Added information about road access management and travel management areas to all districts.
- “Appendix C - Changes to Terrestrial Anchors”
 - Added information into Astoria, Forest Grove, Tillamook and West Oregon district Implementation Plans for adjustments made for each Terrestrial Anchor where applicable.